SINHALESE MATERIA MEDICA

Compiled by :

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Retired Colonial Surgeon, Surgeon Major, C.L.I.

About the book

The author has put together, in a concise and convenient form, as would facilitate reference and identification, the various drugs used by the Vedaralas (native medical men) of Ceylon in the practice of their profession. They contain all the drugs mentioned in the two Sanscrit *Nigandus*, "*Saraswati*" and "*Mahausada*", the contents of which the Vedaralas have to learn by heart as the first step in their medical education and training.

To the drugs mentioned in the several *Nigandus* used by the Vedaralas, the author has added many more which, though not in use among the Vedaralas, are very popular with the Kavirajas of India, who are practitioners of the same system of medicine. These latter are to be found in their *Nigandus* and works of Ayurvedic medicine. The author has further included in these lists of drugs several others that are met with in prescriptions given in old native medical books, though they do not find a place in the Ceylon *Nigandus* themselves.

By the side of the drugs mentioned in these pages, the author has given everywhere, except in a few cases, their respective botanical, Sinhalese, Tamil and Sanscrit names, adding at the same time short descriptions of their economical and medicinal properties and uses.

In the case of the more important drugs, the author has also found place for prescriptions in which they are found as ingredients in the treatment of various diseases. The Rishis, as the old Hindu writers on medicine are called, would appear to have made extensive investigation into the properties and uses of plants. The very names given to the medicinal plants, fanciful as many of them are, bear strong evidence of this. Compared with the botanical names assigned to them by present-day explores, the older nomenclature seems to be far more scientific than that of Western botanists. The knowledge of the therapeutical properties of these plants as shown by these Rishis appeared to later writers almost intuitive, and led to the notion that the older investigations had been divinely inspired. This

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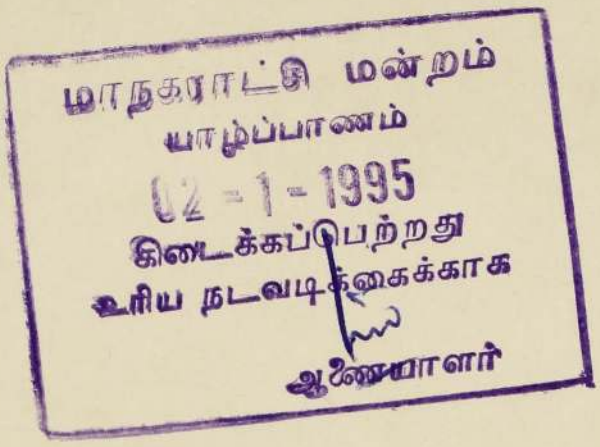

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JOHN ATTYGALLE, M.D.

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DEDICATED

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TO

HIS EXCELLENCY SIR JOHN ANDERSON,
G.C.M.G., K.C.B., K.C.M.G.

Hon. LL.D., Aberdeen and Edinburgh Universities,
Governor and Commander-in-Chief in and over the Island of Ceylon
and the Dependencies thereof,
in grateful appreciation of His Excellency's profound interest in and sympathy with
the People of this Country.

COMPILER.

INTRODUCTION

IN the following pages I have endeavoured to put together, in a concise and convenient form such as would facilitate reference and identification, the various drugs used by the Vedaralas (native medical men) of Ceylon in the practice of their profession. They contain all the drugs mentioned in the two Sanscrit *Nigandus*, "*Saraswati*" and "*Mahausada*", the contents of which the Vedaralas have to learn by heart as the first step in their medical education and training.

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Fearing to strike out on independent lines of their own these later writers became mere compilers and commentators who dare not add anything original to the stock of medicinal knowledge, and left the science of medicine at the point where the Rishis of old had left it.

The only additions that had in the course of time forced a way into their Materia Medica were a few drugs like opium. Degeneracy was inevitable, and this is especially noticeable in surgery, although it can be shown that there was a time in its history when such delicate and difficult operations as laporatomy, Caesarian section, etc., were performed by native surgeons.

It is much to be regretted that the practitioners of Western medicine in Ceylon have paid so little attention, if any, to the many useful drugs employed by our native medical men. In India, on the other hand, the interest of such practitioners in these drugs has been most marked, and since the publication of Sir William Jones' *Select Plants of India* and subsequently Fleming's *Catalogue of Medicinal Plants* (1812–1818) and Ansle's *Materia Medica of India* (1826), Western practitioners of medicine have from time to time come before the public as authors of books treating on indigenous Indian drugs. Not very long ago the Government of India itself appointed a committee of eminent medical men to inquire into, and report upon, the indigenous drugs used by native medical men. Of the several works on indigenous drugs compiled in India, the most important and informative are :—The *Bengal Dispensatory*, published by Dr. O'Shaugnessy in the early part of the forties of the last century, which was followed by Dr. Waring's *Bazaar Medicines*, Dr. Watt's *Economical Plants of India*, Dr. Dutt's *Hindu Materia Medica*, Dr. Kannylal Dey's *Indigenous drugs of India*, and, last but not least, that monumental work, the *Pharmacographia Indica*, the result of the combined labour of Doctors Dymock, Hooper and Warden. Dr. O'Shaugnessy was the first to make a systematic investigation of the drug plants used in India, and at his suggestion, I believe, more than one drug was introduced into the British Pharmacopœia and has become officinal since. All the works I have mentioned, the last one especially, treat of many drugs used by Ayurvedic physicians in the greatest detail, reference being made to their histories, properties, and uses. Medical men in Ceylon would find these books helpful in any investigations they may desire to make of the drugs employed by our Vedaralas. Unfortunately, however, the absence in these books of the vernacular names by which the drugs are locally known, except in the case of a few drugs whose Tamil names are given, detracts very much from their usefulness. All standard works on native medicine being written in Sanscrit are also sealed books to our medical men, for the reason that most of them have no proper acquaintance with that ancient language in which many a valuable work on native medicine is written. The costliness of these Indian books, too, stands very much in the way of their coming into general use.

It was partly with a desire to remedy these drawbacks and partly to afford Western practitioners of medicine in Ceylon a convenient and ready means of gaining a knowledge of the drugs used by native Vedaralas and their methods of treating diseases that I have been led to undertake the preparation of these pages. I would fain hope that my labours might prove useful in some measure to those in whose interest they have been undertaken.

Medicine was one of the four sciences which, in the olden days, every Sinhalese of gentle birth was expected to know. As a result it attained a high degree of efficiency in both its branches of medicine and surgery in those early times. Instances can be cited even of Sinhalese kings who showed much skill as surgeons and physicians, and who, presumably, engaged in their practice in the hope of "gaining merit" thereby. Among these royal practitioners the most renowned were Budhadasa, who reigned at Anuradhapura (330–400 A.D.), and Parakrama Bahu the Great, who reigned at Polonnaruwa. If the two oldest Sinhalese chronicles extant, the *Dipawansa* and *Mahawansa*, are to be trusted, King Budhadasa was, judging by the operations which he is said to have performed, a most skilful surgeon, in no way inferior to the average of the best Western surgeons of the present day.

Of several operations mentioned in *Mahawansa* as having been performed by this king, one was upon an old "Naga", which means the snake cobra, whom he found writhing in pain as he (the king) was taking one of his usual walks round the city. He is said to have opened the Naga's belly and removed some obstruction in the bowels, thus restoring him to health, for which the Naga presented him with a "Naga Manikyaya" (cobra jewel) which he carried in his throat.* It is mentioned of the same King Budhadasa that he opened the skull of a Buddhist priest and removed a young brood of toads that had got in there when he was drinking some water from a stagnant pool. At first sight the operations described in the *Mahawansa* as having been performed by this king seem to partake of the nature of legend rather than of sober truth. Closer and careful scrutiny, however, accompanied with due allowance for oriental imagination and the fondness of Eastern writers for hyperbole soon shows that the operations described are easily recognizable as very similar to those performed almost daily by Western surgeons of the present day. Evidently the first operation was one for appendicitis or some obstruction or other lesion in the intestines. The second might have been cephalotomy, for the removal of a hydatid tumour, occasionally met with as we know within the cranium, and it is not a little interesting to observe that the cluster of hydatid growths, when seen under the microscope, is not unlike a group of young or half-grown toads after they have shed their tails. We also know, on the authority of Scobold, that one medium by which the echinococci find their way into the human frame is by the drinking of foul water.

Budhadasa, we are told, caused many hospitals to be built in different parts of the Island for the treatment not only of human sick but even of dumb animals. To bring the advantages of medicine within easy reach of his subjects a medical man was put in charge of each village. This king was also the author of a book on medicine called *Sarartha Sangrahaya*, the earliest work of its kind compiled in Ceylon.

Parakrama Bahu mentioned above was more a physician than a surgeon. He too caused several hospitals to be built in different parts of the Island. At Polonnaruwa, his capital, stood the largest and most extensive hospital, at which the king himself attended and treated those who resorted to it for relief. When not

*There is a popular and curious belief among the natives of Ceylon and the neighbouring continent to the effect that certain cobras carry in their gullets a gem possessed of miraculous properties.

engaged in his wars this king spent every *Uposatha* or *Poya* day in going round the wards with his attendant physicians, advising them as to the course of treatment to be followed in cases that seemed to call for such consultation. The restoration of sight by him to a blind "Kakka" or crow (Pali *Káko*)* would justify a claim to a knowledge of even opthalmic surgery.

It is not my intention to enter in this introduction into a detailed account of the system of medicine practised by the Vedaralas in Ceylon, but the ignorance which exists on this subject, even among people who might be expected to be better informed regarding it, is so great that I have felt constrained to undertake, even in small outline, some description of it. It is very probable that most of my readers find it very difficult to understand, without some explanation, the principles on which the Rishis of old founded their methods of treatment and discovered the therapeutical properties they have attributed to the drugs used by them.

The system of medicine practised by the Vedaralas of Ceylon is none other than the Ayurvedic system of India that has been in force there for the last three thousand years or more. This system appears to have found its way to Ceylon simultaneously with, or shortly after, the Vijayan invasion of the Island in the fifth century B.C. Ayurveda, it must be explained, formed a part of the Atharva Vedas, a branch of the sacred writings of the Hindus. As a result the inevitable mythological origin has been assigned to it by its Eastern votaries. It is said to have originally consisted of 100,000 *slokas*, written by Brahma the Creator himself, which were subsequently reduced to 10,000 to suit the poverty of human intellect. This later compilation was divided into the following eight parts :—

1. *Salaya* or surgical treatment.
2. *Salakaya* or diseases of the head, eyes, ears and face.
3. *Kayachikitsa* or treatment of general diseases.
4. *Bhutavidya* or diseases caused by evil spirits.
5. *Kaumara Bhritya* or the treatment of infants and of the puerperal state.
6. *Agada* or antidotes to poison.
7. *Rasayana* or medicines which promote health and longevity.
8. *Vajakaruna* or aphrodisiacs.

The Ayurveda of 100,000 *slokas* was doubtless a myth ; but as to the actual existence of a work of 10,000 *slokas* we have, apart from all considerations of authorship, sufficient proof in the references to it in such early medical works as *Charaka*, by which it seems to have been completely superseded. According to the introductory chapter of this treatise, medicine was originally taught by one Atreya, who composed a *Samhita* or treatise of 46,500 *slokas*. This sage had pupils, Agnivesa, Bhela, Satakarna, Parasara, Harita and Kharapani, who are each said to have written a work on medicine. Agnivesa's alone finds a place now in *Charaka*, though in this form the work is regarded as a redaction of the work of Agnivesa by an unknown author whose date and birth-place are unknown. The

* It is possible. by the way, that the subject of this operation was a resident of Kaka Dwipa (Crow Island), which is frequentiy spoken of in the old Pali works, such as *Rasawahini*, as lying to the north of the Island, and not an actual crow. Similarly in the case of Budhadasa's operation recorded in the *Mahawansa*, the "Naga" operated upon may have been a man of the Naga Dwipa, which has been recently identified by Dr. Paul Pieris as the Jaffna Peninsula.

book itself, however, supplies sufficient evidence to show that it was compiled before the Indians adopted the Puranic form of Hinduism. The mention in it of beef as an article of diet is clear proof that the compilation must have taken place before the bull became sacred to Iswara and the killing of bulls was, in consequence, most strictly prohibited. *Charaka* treats chiefly of medicine distinguished from surgery, the subject dealt with almost exclusively in *Susruta*. This latter work is much later in composition than *Charaka*, though undoubtedly written some centuries before the Christian era. As in the case of *Charaka*, a mythological origin has been found for the *Susruta* also. Dhanvantari, the surgeon of the gods, is described as having in the person of Devadasa, a king of Benares, descended to earth for the instruction of mankind in surgery ; and Susruta, with five other pupils, is said to have sought instruction at his hand. On their being asked by Devadasa what was to form the subject of his discourses or lectures to them, they replied, surgery and kindred branches of medicine, whereby the gods preserved themselves from decay, disease and death. Notes of these lectures were taken down by Susruta and the book now known as *Susruta*, only second in age to *Charaka*, is thus regarded as the product of the lectures said to have been dictated to Susruta and the other pupils by Dhanvantari, who appeared in the guise of king Devadasa. It treats chiefly of surgery and anatomy and contains, in addition, a description of the surgical instruments used at that time. In the olden days no one person practised both the arts of surgery and medicine. Men who were physicians only were known by the name of *Kayachikitsa* or "healers of bodily diseases", whilst those who practised surgery alone were called *Salaya Chikitsa* or *Dhanvantariya Sampradaya*. Of these the former were held in greater honour as it has been the case even in the West up to a comparatively recent period.

It may be interesting to inquire at this point why the native system of medicine, with such a history at its back, has fallen into so much disfavour with practitioners of Western medicine. To my mind this disfavour is not due to any grave defects in the doctrines or theories of native medical science itself, or to any impossibility of those doctrines and theories being accepted as credible and capable of proof in the light of the facts of modern science. It is rather due to a misconception in some cases, and an utter ignorance in others, of the theory of *Vayu* (wind), *Pita* (bile), and *Kapha* (phlegm), on which the Ayurvedic theory of causation of disease is founded. With the meagre acquaintance that practitioners of Western medicine have with the teachings of old Hindu Physicians (Rishis) regarding the causation of diseases, they have been led to confound it with the ancient and long exploded humoral pathology of the old Greek and Roman physicians, prominent among whom was Galen, who was practising medicine with an European reputation in Asia Minor about the early part of the 2nd century of the Christian era, and is regarded as the father of modern medicine in Europe. Indeed, that great medical luminary appears to have been so obsessed with the literal meaning of these words that he named the vessels that carried red blood "arteries" (from Greek *aer*, signifying air), in the belief that they contained *Vayu* (wind). This doctrine of humoral pathology held the field for a considerable time with the Western practitioners of medicine, echoes of which are still noticeable in the writings of the older generations of medical men. That the old Greek and Roman physicians derived

much of their knowledge of medicine from India, and borrowed the idea of humoral pathology from the doctrine of the *dhoses* or forces of the Ayurvedic physicians does not to my mind admit of any doubt. But whilst adopting the theory, they failed to grasp its true meaning. In Ayurvedic literature, *Vayu*, *Pita* and *Kapha* are mere technical terms, used to connote three conditions of forces, or *dhoses*, as they are technically called, that are supposed to exist in the animal frame, and which can only be recognised by the phenomena they exhibit, as the forces themselves are intangible and unperceivable to the senses. They should not, therefore, be understood in their literal sense. *Vayu* accordingly does not mean "wind", but signifies all the phenomena that come under the functions of the central and sympathetic nervous system. *Pita* does not mean "bile", but signifies all the functions of thermogenesis or heat production, and comprehends in its scope the process of digestion, the formation and discoloration of blood, and all the secretions and excretions, which are either the means or the ends of tissue combustion. *Kapha* does not mean "phlegm", but primarily implies the functions of thermotaxis or heat regulation, and the formation of all preservative fluids or secretions, such as mucus synovia.

I may here mention, in passing, that from certain passages in both *Charaka* and *Susruta* it would appear that the circulation of the blood was known to Ayurvedic physicians long before its alleged discovery by Sir William Harvey during the early part of the 17th century. According to the Ayurvedic theory of causation of diseases by *Vayu*, *Pita* and *Kapha*, health is maintained so long as these forces or *dhoses* retain their normal equilibrium in the body. As soon as one or more of them are disturbed or vitiated, it gives rise to disease, the nature of which is determined by the particular exciting, vitiating or disturbing cause, and the severity depends upon the number of the forces or *dhoses* disturbed or vitiated. When a disease is brought about by any cause or causes that disturb or vitiate all the three *dhoses* or forces, the disease soon passes into what the Vedaralas call *Sannipata* (typhoid state) ; and continued fevers are looked upon as such. This typhoid state or *Sannipata* is not confined to fevers only, but may be met with in any acute disease, such as cholera, acute diarrhoea, etc. It is obvious then that there is nothing irrational in the Ayurvedic theory of the causation of diseases when explained as above; and it cannot be said, with any regard to truth, that the diseases treated on the methods indicated by this theory are not mastered or that the sufferers are not restored to health.

To my mind this theory does not conflict even with the latest theory of causation of diseases, *i.e.*, the germ theory of Western medical men, which obtains with them at the present day. The Ayurvedic theory has, moreover, the merit of having stood the test of practice for ages, whilst the theories of Western medical men have time after time been hopelessly supplanted. Within my own experience three such theories have held the field and ceased to be, and it will be perhaps unsafe to predict for the much lauded germ theory a longer duration than that of its predecessors.* Be that as it may, I wish to add here that a close study of the native system of medicine for many years enables me to say that the system is not that effete and useless anachronism which many people, both professional and lay,

* If I mistake not there are many medical men of great learning who do not believe in this theory in its entirety.

consider it to be, but one that is quite as successful as the Western practice of medicine for the successful treatment of many a disease, though not, of course, for all. To my mind it is a well arranged and coherent system, guided by whose teachings I have seen scores and scores of patients, suffering from various diseases, successfully treated by Vedaralas ; and truth compels me to add that among them were many patients that had been previously treated and given up as hopeless by some of the most skilful Western practitioners in the Island.

The bulk of the indigenous people, in spite of the establishment of many hospitals and dispensaries where Western medical aid is available and within easy reach, have great confidence in the treatment of native medical men and the usefulness and efficacy of their remedies. In many parts of the Island, the only medical aid available and within easy reach of them in their hour of need is that rendered by their Vedaralas ; and further, owing to their poverty and the expensiveness of skilful Western medical aid, they are compelled to have recourse to the latter. In these circumstances it is quite manifest that the presence of Vedaralas in the country is a sheer necessity, and that their services cannot be dispensed with for many generations to come without great prejudice to the people's interests. It cannot be gainsaid that with all the defects of the native practice of medicine, these men have efficacious and really valuable remedies for the successful treatment of many diseases, the knowledge of which should be preserved and not be allowed to die out by neglect, in the interests of suffering humanity. Native practice of medicine has a vitality that the extensive spread of Western medicine has not been able to crush. This is obvious from the fact that it flourishes nowhere so well as in Colombo, where most skilful Western practitioners abound ; and, be it added, this enviable position the Vedaralas have attained without State aid in any form and without the facilities open to the students of Western medicine to acquire a sound practical knowledge of their calling. There is no doubt as to the usefulness of native medicine to relieve suffering humanity. Nor am I singular in holding this opinion in that respect. Among several notable Western medical men whose testimony might be cited, Dr. George Clarke, M.D., M.A., of Philadelphia, says, after reading what he describes as a half-done translation of *Charaka* : " As I go over each fasciculus (of *Charaka*) I come to the conclusion that if the present-day physicians drop all modern drugs and chemicals from their Pharmacopœia, and adopt methods of *Charaka* in treating diseases, there will be less work for undertakers, and fewer chronic invalids in the world." Surely there is nothing derogatory in the use of indigenous drugs by practitioners of Western medicine in the treatment of their patients, when they are convinced of their usefulness and efficacy in any particular disease. It is a well-known and common practice among many licentiates of Western medicine in India to stock their dispensaries with Western and indigenous drugs in juxtaposition and to practise both systems, to the great advantage of their patients, adding at the same time not a little to their own reputation as successful practitioners of the healing art.* The great drawback to the use of these indigenous drugs is the crude and inelegant forms in which they are directed to be administered to patients, but I observe some enterprising native pharma-

* I believe in several places in India the Government have established indigenous drug *depots* from which supplies may be obtained by Government medical men who may desire to use them in their practice.

ceutical chemists in India have recently begun to manufacture indigenous drugs into tinctures and alcoholic extracts.

It is a singular fact that the Vedaralas very rarely compose their prescriptions guided by a knowledge of the therapeutical properties of the different ingredients comprising them. They use the prescriptions found in the old works for the particular ailment that happens to be under treatment, and regard any deviation from them as interfering with their curative effects on the disease for which they were intended by the masters ; consequently they will carry out to the very letter the directions for their preparation set down by these old masters. That being so, their skill in the treatment of any particular disease depends more on their ability to select the best prescription among many given in the old books for disease than on any skilled knowledge of the profession.

Of surgery the native Vedaralas know nothing worth speaking of. This branch of medical science has so steadily deteriorated that it may be said, with safety, that there is hardly a man among native Vedaralas who is able to open even a simple abscess neatly. And yet, there was a time, as I have previously shown, when difficult operations such as opening the abdomen, cephalotomy, Cæsarian section and the like were successfully performed by native surgeons. As their successors we have now, alas ! a class of so called "specialists", who undertake to treat boils, ulcers, fractures, wounds, etc., but are very much like the old, " herbalists " and " bone-setters " of England and elsewhere in the West. One or more of these are found in nearly every part of the Island. These local specialists know nothing beyond a few remedies for the treatment of the particular ailments they profess to cure. The knowledge of these remedies is preserved as family secrets from generation to generation and is seldom or never imparted to outsiders. The treatment followed by these men is more correctly described as medical than surgical. The people of the country, as a rule, have such a dread of the knife that they are ready to submit to the tedious and painful treatment of these " specialists " rather than resort to Western surgeons. Considering too the entire want of cleanliness and the utter disregard of antiseptic or asceptic methods in their treatment of surgical lesions, the wonder to me is that blood-poisoning or other ill-results do not occur oftener in cases treated in this manner. And yet, it must be admitted that in spite of these unfavourable conditions many of the patients recover in the end. The conclusion warranted by this fact is that the remedies employed possess antiseptic properties. In treating abscesses the chief aim of the Vedaralas is to prevent suppuration, and this they seek to ensure by the administration of medicines internally and the applications of what are called *Pattus*, a sort of paste, over the abscesses.* Many such cases have come under my observation both in my own practice and in that of native practitioners, where the object in view was achieved, even after, as I thought, the matter had collected. It is, however, in the tedious treatment that follows the formation of matter that the Vedarala loses much favour. These men very rarely, if at all, open an abscess with the knife. Their method is to plunge a thin, red-hot iron into the abscess or apply to it some caustic preparation to effect an opening, and to treat it afterwards by introducing medicated tents into the opening thus formed, to act as drainage tubes for the flow

* *Vide* Appendix E, where several formulae of remedies are given for repelling abscesses and boils.

of matter. The treatment of the abscesses by this laborious process is often prolonged to weeks, whereas had a Western surgeon been called in, the period might have been shortened to days. Some men specialize mostly in treating wounds, fractures, both simple and compound, and dislocations. In cases of compound fractures of the extremities, every effort is made to save them, and I can vouch from personal observation that limbs, which in my opinion would have been subjected to immediate amputation by Western surgeons, have been not infrequently restored whole under the treatment of these much despised "native surgeons". It is true that at their hands it often happens that the restored limbs are disfigured by ugly and even inconvenient deformities. But to the sufferer a limb saved, however deformed it may be, is a far lesser evil than a limb lost altogether. The treatment of incised wounds by these men is the least satisfactory feature of their practice. The lips of a wound are seldom brought together by sutures or plasters and allowed to heal by what is termed in Western practice "first intention". On the contrary the Vedaralas invariably stuff the wounds with medicines, whether they are simple or lacerated, which as a matter of course brings on inflammation; and sooner or later they form into open ulcers.* For the treatment of contusions and compound fractures they are known to possess very effective applications, and they are also credited with securing the union of the bones in simple fractures in an incredibly short space of time, by external medicament. But to this latter achievement I can bear no personal testimony, nor do I think there is any foundation for entertaining a belief in its possibility. They have medicinal oils, and other preparations for relieving even excruciating pain in injuries, without resorting to opium and other anodyne remedies.

There are also specialists reputed to treat venomous snake-bites successfully, but my own personal knowledge of their cures is far too scanty to entitle me to express an opinion on it. I may however mention that I was once acquainted with a Mudaliyar in the Southern Province, who professed to cure venomous snake-bites successfully and had acquired a great reputation in that respect. He used to say that the knowledge of it was originally imparted to his father in a dream.† The medicine used by him was in the form of pills, of which two were used at a time: one to be swallowed and the other to be dissolved in human urine and applied to the bite, after it was scarified with a knife. The composition of the pill was a secret with him and a knowledge of it he would on no account impart to another. I learnt on enquiry some years after, that he had died suddenly without informing even a child of his of the composition of his remedy, and it is to be feared that this has been the fate of many a valuable remedy for other diseases too.

There are other Vedaralas who have made diseases of the eye and similar organs a speciality. In the olden days there were men who even operated for cataract, but at the present day I am not aware of the existence of a single man of that kind

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* There are some remedies among Vedaralas that have highly styptic properties, the application of which to fresh wounds stops haemorrhage and heals them without further trouble.

† This is not the only instance that I have heard of remedies, whose knowledge was divulged to people in dreams. I was once treating a lady for a very acute attack of cystitis. On my visiting her one morning, she told me that her dead mother-in-law appeared to her in a dream the previous night and asked her to take certain drugs which she named, and wished to know from me whether she could take them. I told her that there was no objection to her taking them, and I was much surprised to learn subsequently that she was quite relieved of her ailment after taking two or three doses.

in any part of the Island. The present day treatment of the diseases of these organs is limited to medical treatment, and all those who need surgical aid have to have recourse to Western specialists, of whom happily there are now several in the Island.

There are also persons who have set themselves up as specialists for the treatment of persons bitten by mad dogs. I have referred to their treatment under the heading Datura Fastosa, which is one of the remedies frequently employed by them, and no further mention need be made of it here, except to say that it is not impossible that the active principle of Datura Fastosa, and other drugs employed by these men in such cases, do really possess some antidotal effect on the rabies poison. Otherwise it is not easy to account for the persistence with which specifics for the prevention of hydrophobia have been used for ages by the people in Ceylon.* A strong conviction of their unfailing curative effect could alone explain the great confidence reposed in them by the bulk of the people, and, I think, such confidence is not altogether unwarranted, when judged by the results of the cases treated by these "mad-dog-bite doctors".

The medical profession was held in the highest esteem in the old Ayurvedic times, and its votaries practised it more for the opportunities it afforded them to " gain merit " and secure thereby a place in heaven, than for the worldly benefits that might accrue to them from it. Their watchword ever was, " Relieve suffering humanity at all costs." For instance, Charaka tells his pupils : " Not for self, not in the fulfilment of any desire for earthly gain, but solely for the good of suffering humanity, should you treat your patients and so excel all your fellows. Those who sell the cure of diseases as merchandise gather the dust and neglect the gold." It would indeed be idle to expect the Vedaralas or any other class of medical men to carry out old Charaka's injunction in its entirety in these materialistic days. Competition among the healers of disease is too keen and the general struggle for existence too fierce for them to take such an altruistic view of their calling, but all the same, it shows the high estimation in which the profession of medicine was held by old Hindu physicians, and how great a contrast it presented to the practice of medical men of the present day, be they Eastern or Western. It is very much to be regretted that of late many men, both here and in India, with a meagre knowledge of their calling, and probably imitating the Western quacks and impostors, have set themselves up as Ayurvedic physicians, professing to cure any and every disease under the sun. They offer to sell their marvellous cures at so much a bottle, by daily advertisement in the newspapers, oblivious of the fact that their calling is not a mere means of making money or a trade, but a humane and honourable profession, the votaries of which are expected to relieve suffering wherever it may be found, whether in the king's palace or the poor man's hut. It is such men that bring the native practice of medicine into disrepute, and their action is truly a slur on the great departed, the old Rishis, whose sole object, as already pointed out, was to relieve suffering humanity and to " gain merit " in keeping with their religious beliefs, whether Hindus or Buddhists.

In view of the danger to unsuspecting and credulous communities on whom these

* There is a man, I learn, in Hapitigam Korale, whose treatment for rabies poison consists of the administration of some kind of powder for three successive mornings and nothing more, except that a vegetable diet has to be strictly observed for about three months.

designing men prey, it is to my mind highly incumbent on the authorities to devise some means for putting an end to their practice. It is doubtless a difficult matter to deal with this daily growing evil, but yet every endeavour should be made to limit the practice of native medicine, as in the case of the Western practitioners of medicine, to men of respectability, who are recognised as really competent to exercise their calling with efficiency.

I feel that I have, in the course of the above remarks, trenched on matters not quite germane to an introduction of this kind, but I have been anxious to place before my readers as exhaustive a statement as possible of everything that relates to native medicine. Hence I have not allowed myself to be deterred by what seems to me, after all, a mere academic consideration.

Without taking any undue credit to myself, I think I may fairly claim that the experience of over half a century as a medical man in nearly every part of the Island has afforded me an understanding of native medicine and its methods of treatment which might without presumption be regarded as unique. This is my justification for presenting the system of native medicine in so favourable a light.

I claim no originality for the contents of these pages, except in so far as I have stated certain results of my personal knowledge and experience. For much of the information herein given I am indebted to Dr. Watt's "*Economic Products of India*", Dr. Dutt's "*Hindu Materia Medica*", Dr. Kannylal Dey's "*Indigenous Drugs of India*", "*Pharmacographia Indica*", by Drs. Dymock, Hooper and Warden, Dr. Trimen's "*Handbook of Ceylon Plants*", Clough's "*Sinhalese-English Dictionary*", and several other publications of a like kind that need not be enumerated in detail. Among the native works on medicine that I have consulted are the several *Nigandus* or Glossaries, *Saraswati*, *Mahausada*, which mentions all the important drugs with their numerous synonyms, *Sárásanséṗa*, *Sárártha Sangrahawa*, *Manjuse*, *Yógaratnákara*, and other works, both of local and Indian compilation.

I feel that despite all my endeavours to be strictly accurate in the information afforded in these pages there may still be found many errors, for which I must crave the indulgence of my readers. At the same time I am sanguine enough to think that such errors will not detract from the usefulness of this work to those who desire to obtain some knowledge of the drugs used by our Vedaralas and the methods they adopt in the treatment of the various diseases.

The following appendices are attached to this work :—

(*A & B*) A description of the forms of medicine used both externally and internally and the way they are to be prepared by practitioners of native medicine.

(*C*) A classification of drugs based on their therapeutical properties.

(*D*) A list of the books in use among the native medical men, both of local and Indian compilation.

(*E*) A number of prescriptions obtained from various sources and said to be of great efficacy for the cure of the particular diseases for which they are intended.

(*F*) A table of weights and measures used in weighing drugs.

The list of books, it will be noticed, is a comprehensive one, dealing with every branch of the native system of medical practice. The most important works of local compilation are :—*Sárártha Sangrahawa*, *Manjuse* and *Yógaratnákara*. Another important work, which is not included in the list, is *Bhaisajja Nidhane*.

Sárártha Sangrahawa is the oldest work compiled in Ceylon ; its authorship is attributed to the royal surgeon Buddhadasa, referred to in a previous portion of these introductory remarks. It is very similar in its arrangement to *Susruta*, and, like the latter, gives a description of the surgical instruments used at that time. It is composed in Sanskrit *slokas*, like most of the other standard works on medicine, and till recently its contents were not available to the average practitioner of native medicine, the latter not having a knowledge of that ancient language. An attempt has been made by the vernacular press to publish a Sinhalese translation, but unfortunately it appears to have been given up after the publication of a few chapters.

Manjuse is a work compiled about the seventh century of the Christian era, by a Buddhist priest who resided at Anuradhapura. It treats of all the diseases then known, except those peculiar to women. These he says were purposely omitted as being unsuited to be treated by Buddhist priests. The Buddhist priests of the present day, however, are not so squeamish, and I have known several skilful priests who treated patients of both the sexes without distinction ; one of them even had a great reputation for his successful treatment of uterine tumours and other diseases peculiar to women. *Manjuse* was originally composed in Pali stanzas, but a Sinhalese translation has been added to it by a later writer on medicine.

Yógaratnákara is also one of the standard works on medicine and is composed in Sinhalese verse. The name of the author is not given, but he calls himself, in one of the closing verses, *Veda kivindu* (physician poet), and he also says that its compilation was commenced in the 12th year of king Buwaneka Bahu, who reigned in Kotte, and completed six years after. In Dr. Paul Pieris' *History of the Portuguese Rule in Ceylon*, mention is made, on the authority of a Jesuit priest who wrote a history of the Portuguese in Ceylon, of information which the latter gathered from a Sinhalese ambassador sent to the king of Portugal to the effect that one Romansura Aratchi was at that time engaged in compiling an important work on native medicine. This embassy was in the time of king Buwaneka Bahu, the last king of that name who ruled at Kotte. I am therefore inclined to think that in all probability the work referred to by the Sinhalese ambassador was *Yógaratnákara*, and that its author was this Romansura Aratchi.

Bhaisajja Nidhane is a comparatively recent work, compiled in Ceylon. It is a very rare work and does not appear to have got into general circulation among native medical men. I have seen only two copies of it : one was in my possession for some time, and, judging from the contents, it seemed to be a very valuable compilation, and would prove highly useful to the practitioners of native medicine. The book is replete with prescriptions of every description : *churnas*, *ghritas*, and *rasa* preparations for every disease known to medical men. It is said to have been compiled about the year 1760 A.D. by one Don Simon Tillekeratne, Mudaliyar, a member of the highly respected and well-known family of that name in the Matara District. It is the only work on native medicine in which Parangi is mentioned in

detail, and the first menton of this disease, now identified with the yaws of the West Indies, is found in *Yógaratnákara*. This fact and the name Parangi, which is the popular designation of the Portuguese, would go to show that the disease was introduced into Ceylon by the Kaffir soldiers who were brought to Ceylon by the Portuguese.

In conclusion I have to tender my acknowledgments to Mr. A. C. Van Cuylenberg and Mudaliyar A. M. Goonesekera, of the Educational Department, for assistance received at their hands in the preparation of these pages, and to my grand-daughter, Miss Daisy Dunuwilla, who acted as my amanuensis. My thanks are especially due to Rev. J. S. De Silva, B.A., of the Wesleyan Mission, whose services to me in the work of correcting proof-sheets and otherwise have been most invaluable.

JNO. ATTYGALLE, M.D.

Sinhalese Materia Medica

RANUNCULACEÆ NATURAL ORDER.

වච්චනාභි.

Aconitum Ferox.—Indian Aconite.

VERNACULAR.—Sinhalese : *Wachchanávi.* Sanskrit : *Vatsanábha* or *Vishá.* Tamil : *Vashanavi* or *Vachhanávi.*

HABITAT.—Northern parts of India, Himalaya mountains. Not found in Ceylon.

PROPERTIES AND USES.—This is one of the eight poisons mentioned by old Sanskrit writers as those that may be administered internally.

Wachchanávi is sold in the native drug stores mixed with other varieties of Aconitum, such as : A. Luridum, A. Lycoctonum, A. Napellus and A. Palmatum. *Wachchanávi* is used frequently in native medicine, invariably in combination with other drugs and after purification. This is done by steeping the roots, or rather rhizomes, in cow's urine for three days. It is given in fevers and neuralgia and other nervous affections, and also as an antidote to snake poison. It is also an ingredient in many medicinal preparations for cough and other diseases.

අතිඋඩයන්

Aconitum Heterophyllum.—Indian Attis.

VERNACULAR.—Sinhalese : *Atiudayan.* Sanskrit : *Ativishá.* Tamil : *Ativudayan.*

HABITAT.—Northern parts of India. Not found in Ceylon. Parts used are tubers imported from India and sold in native drug shops.

PROPERTIES AND USES.—This is also known as *Iwada* and is regarded as a tonic and astringent. It is very largely used in native medicine, especially in the treatment of fevers and dysentery. Here is a prescription containing it for what the native Vedarálas (medical men) call *Jwara Atisáraya,* i.e., fever attended with derangement of the bowels, as in some cases of enteric fever.

Take of :—Atiudayan (Aconitum Heterophyllum).
Rasakinda (Tinospora Cordifolia).
Iriwériya (Plectranthus Zeylanicus).
Inguru (Ginger).
Belimul (Aegle Marmelos—root).

Prepare a decoction in the usual way.* About half a tea cup for a dose.

I am not sure that the medical men in Ceylon use A. Heterophyllum for *Ativishá.*

Dr. Trimen gives the name Lagenandra Lancifolia for *Atiudayan,* which is a plant of the natural order Araceæ.

නරමැල්

Clematis Trilobus.—Parts used : The whole plant.

This is called *Narawel* in Sinhalese and *Laghukarni* " light-ear " in Sanskrit, and is used as a remedy in leprosy, blood diseases and fevers. This is not found in Ceylon, but another species, Naraveliya Zeylanica, is found in the maritime districts, Uva, and in and about Lunugala. In the Concan the juice of the leaves of the plant, mixed with that of Holarrhena anti-dysenterica (*Kelinda*), is dropped into the eyes for the cure of staphy-loma ; about two drops are used at a time.

කළුදුරු.

Nigella Sativa.—Small fennel flowers and fruits are used medicinally.

VERNACULAR.—Sinhalese : *Kaluduru.* Sanskrit : *Krishnajiraka.* Tamil : *Karun Shiragam.*

HABITAT.—Mediterranean countries. Cultivated in India.

PROPERTIES AND USES.—This is used both as a condiment and a medicine and is regarded as a carminative. It is prescribed with other drugs for dyspepsia and is also said to possess emmenagogue properties. I have seen it used with other medicines, made into a syrup, with much benefit in cases of whooping cough. Chakkradatta recommends Nigella seeds, Sonchal Salt (impure Carbonate of Potash) and long pepper in some wine for puerperal fever and suppression of lochia.

The following confection is also recommended by the same author, according to Dr. Dutt, for the same affections.

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*In the Appendix A will be found described the various forms in which medicines are administered to patients by Vedarálas and how they are prepared. The usual way of making a decoction is to pound or cut the ingredients into small pieces, put them into a pot, add eight parts of water, and reduce to one, by boiling over a slow fire. The total quantity of drugs in a decoction of eight *patas* of water reduced to one should be 12 *kalans,* whatever their number might be.

Take of :—Nigella seeds (Kaluduru).
Cummin seeds (Sududuru).
Coriander (Kottamalli).
Ajwan seeds.
Anise seeds or Pimpinella Asinum.
Anethum sowa or Peucedanum Graveolens (Dill—Satapushpa).
Trigonella fœnum (Uluwá).
Ginger (Inguru).
Long pepper root (Tippili mul).
Plumbago Rosea root (Ratnitul mul).

These are to be made into a confection in the usual way with the addition of the dried pulp of the Zizyphus Jujuba (*Debara* or *Masan*) and the root of Aplotaxis Auriculata (*Kushtha* or *Tebu*) and Nelubium Spinosa (*Kamala*) powder, one tola each (about twelve drachms), treacle one hundred tolas, one seer clarified butter. Boil them down to a decoction first, add the treacle and clarified butter afterwards, and reduce it to the consistence of a confection.

N.B.—It should be mentioned here that no species of the genus Aconitum of this order grows in Ceylon ; it is found only in temperate climates. Of the two drugs described above Aconitum Indica alone is poisonous. The other, A. Hetrophyllum, is not poisonous, and, as its Sanskrit name implies, is an anti-poison.

MAGNOLIACEÆ NATURAL ORDER.

චම්පකා.

Michelia Champaca.—Yellow Champa.

HABITAT.—Ceylon and India.

VERNACULAR.—Sinhalese : *Sapu.* Sanskrit : *Champaka.* Tamil : *Chanpang.*

PROPERTIES AND USES.—This plant is extensively cultivated in India, more for the sake of its flowers, used for making garlands by Hindus, than for any medicinal virtues it possesses. The flowers are said to be astringent and diuretic, and the root is said to act as an emmenagogue.

Michelia Nilagirica is called *Wal-sapu* (Wild champac) and is indigenous to Ceylon. M. Champaca is found more or less cultivated and is not indigenous to Ceylon.

ANONACEÆ NATURAL ORDER.

අනෝසා.

Anona Squamosa.—Custard apple.

Parts used are : Seed, leaves, and bark.

HABITAT.—Tropics.

VERNACULAR.—Sinhalese : *Anóná.* Sanskrit : *Gandhagátra* Tamil : *Sitapullum* or *Sittapan.*

PROPERTIES AND USES.—The custard apple, of which there are two or three varieties, is not indigenous to the Middle East, but has been long cultivated there and has received the Sanskrit name of *Gandhagátra.* The seeds and the immature fruit contain an acrid substance detrimental to insect life and hence they are largely used by the natives in some parts of India to remove lice from the heads of children. In using the remedy care should be taken to prevent particles getting into the eyes. The root is regarded as a diuretic, but is seldom or never used as such.

MENISPERMACEÆ NATURAL ORDER.

දියමිත්ත

Stephania Hernandifolia.

VERNACULAR.—Sinhalese : *Diyamitta.* Sanskrit : *Ambashthá* or *Páthá.* Tamil : *Patha.*

PROPERTIES AND USES.—According to Dr. Dymock, this is a variety of *Páthá* or *Ambashthá,* which is given by Dr. Dutt as Cissampelos Pareira. However, the medicinal properties and uses of the two plants are almost the same. They are regarded as bitter, tonic, and diuretic, and are prescribed for fevers, bowel affections and several other diseases, in combination with other drugs. In cases of fever with derangement of the bowels the following decoction containing *Diyamitta* is a favourite one with many native medical men.

Take of :—Diyamitta (Stephania Hernandifolia).
Kalánduru (Cyprus Rotundus).
Pepiliya (Oldenlandia Herbacea).
Rasakinda (Tinospora Cordifolia).
Inguru (Zingiber Officinalis).

Prepare a decoction in the usual way. In phosphatic deposits in urine a decoction of *Páthá* (*Diyamitta*) is recommended as a useful remedy.

රසකිඳ.

Tinospora Cordifolia. (Stem).

HABITAT.—Tropical India.

VERNACULAR.—Sinhalese : *Rasakinda.* Sanskrit : *Gudúchi.* Tamil : *Shíndil-kodi.*

PROPERTIES AND USES.—This is one of the most valued and frequently used drugs among the native medical men. It is regarded as a tonic and alternative, and is used in general debility, fever, jaundice, skin diseases, rheumatism, urinary diseases, irritability of the stomach, and, in short, there is hardly a disease in which it is not employed in combination with other drugs. In chronic fever with cough a decoction of *Rasakinda* or the fresh juice of it with long pepper and honey, or a compound decoction containing *Rasakinda* such as the following, may be given with advantage.

Take of :—Rasakinda (Cordifolia).
Pepiliya (Oldenlandia Herbacea).
Kalánduru (Cyprus Rotundus).
Bin Kohomba or Bhúnimba (Ophelia Chirata).
Inguru (Zingiber Officinalis).

Prepare a decoction in the usual way. This is found, very useful in chronic fever. A preparation containing *Rasakinda* is *Dhátrimódaka.* This is a confection made with *Rasakinda*, chebulic and embilic, myrobalans, ginger and long pepper, and is recommended for enlarged spleen, chronic fever, cough, and loss of appetite. A decoction of *Rasakinda* or the fresh juice is given in skin diseases with *Gugulu* (Bdellium or Balsomodendron mukul) whilst an oil, prepared with *Adathoda* Vasica and Datura (*Attana*) leaves and aromatics, is recommended in *Charaka* for skin diseases accompanied with troublesome itching.

වෙනිවැල්.

Coscinium Fenestratum.

The Sanskrit names of Coscinium Fenestratum are *Katankatéri, Dáruharidrá, Dárvi* and *Hémaharítaki,* and it is called *Weniwel* or *Bángeta* by the Sinhalese.

According to Dr. Trimen this is what is used by Vederalas for *Dáruharidrá,* but the real *Dáruharidrá* is Berberis Aristata, which also, according to him, grows in Ceylon and is found largely in the maritime districts. *Weniwel* is a creeper, used by natives to make ropes to tether cattle. The Tamils call it *mára manjal.* The chief use of this is as a remedy for tetanus (*vide* Berberis Asiatica) and fever, and it is also found as an ingredient in many of the compound preparations, *chúrnas,* pills and *kalkas.*

තිත්තවැල්

Anamirta Cocculus.—*Vel* Paniculata.

Cocculus Indicus.

VERNACULAR.—Sinhalese: *Tittawel.* Sanskrit: *Kákaphalá.* Tamil: *Kakkollivirai.*

HABITAT.—Found in Ceylon and India.

PROPERTIES AND USES.—This is used in skin diseases and internally; it has a narcotic effect and at one time was used in India to catch wild buffaloes, it being mixed with jak fruit and left to be eaten by the animals. The fruit is also used for killing fish in some parts of India and it is said that the fish is not rendered unwholesome by it. It has been long used in India for diseases of the skin. I have found it mentioned in some of the native medical works in Ceylon as a remedy for such diseases. Dr. Dymock has isolated from its seeds an active principle, Picrotin, which, judging from the experiments he made with it, is found to stimulate all the inhibitory centres in the medulla, and he thinks it would make a good antidote to poisoning by morphia.

Dr. Trimen does not mention Cocculus Indicus as a native of Ceylon. According to him *Tittawel* is Tinospora Crispa, which belongs to another genus though of the same order. On the other hand, Clough's dictionary gives *Tittawel* as Anamirta Paniculata.

ලුණුකැටියාවැල්.

Cocculus Villosus.

Parts used are roots and leaves.

VERNACULAR.—Sinhalese: *Lunuketiyáwel.* Sanskrit: *Pátalá, Gárudi, Vásadáni* and *Vasanávalli.* Tamil: *Kattukkodi.*

HABITAT.—Found in Ceylon between Jaffna and Trincomalie.

PROPERTIES AND USES.—I am not quite sure of the Sinhalese name of this plant, but it is among the plants in Dr. Trimen's enumeration of Ceylon plants. In India the juice of the leaves is regarded as a good remedy for Gonorrhæa and old venerial pains. According to the editors of Clough's dictionary *Lunuketiyá-wel* is Stephania Hernandifoloia, in which case Cissampelos Pareira would be *Diyamitta* as given by, Drs. Dymock, Warden, and Hooper.

According to Dr. Trimen too *Lunuketiyá-wel* and *Diyamitta* are S. Hernandifolia and Cissampelos Pareira respectively. Their therapeutical properties seem to be similar, one may be substituted for the other.

Tiliacora Racemosa is a creeper similar to Cocculus Anamirta and of the same natural order. It is likewise poisonous, and is one of three ingredients of a remdy used by Southern Indians for snake bites. The other two are Strychnos Colubrina (*Nága musti*) and Strychnos nux vomica, *musti* or *Vishamusti*. These are known as Múshádis in India and are regarded as antidotes to snake poisons. Dr. Dymock's experiments, however, did not show that they are of such use though they are highly poisonous in themselves, when taken internally, to animal-life. This is found in Ceylon near about Kantale and other drier parts, but I have not been able to ascertain its Sinhalese name or the Tamil, unless it be *Kúddú Koddi*, a name given to it by an early collector of Ceylon plants.

Limana Cuspidata.—This is called *Niriwel* (නිර වැල්) in Sinhalese and is said to be used medicinally in prescriptions for fever in combination with other drugs. It is similar in its properties to *Diyamitta*.

Cyclea Burmanni.—The Sinhalese name of this plant is *Kehipittan* or *Kesi pissan*. I have not been able to ascertain the Sanskrit or the Tamil name of this plant. It is a small woody twiner. It is common in the low and moist country, grows both in cultivated and waste ground, and has a white fruit (Dr. Trimen). One peculiarity of this plant is that while other creepers twine as a rule round their host from left to right this turns from right to left. The bruised leaves are not unlike matico, and are highly styptic. It is used by Sinhalese Vedarálas for stopping bleeding from fresh wounds and frequently it makes the wound heal by first intention.

BERBERIDEÆ NATURAL ORDER.

රසදුන්.

Berberis Asiatica.—Indian Berbery.

Berberis Aristata.

VERNACULAR.— Sinhalese : *Rasadun*. Sanskrit : *Dáruharidrá* Tamil : *Mullukulla Puttai*.

HABITAT.—India and Ceylon.

PROPERTIES AND USES.—The several varieties of Berberis yield what is sold in the Indian drug stores as *Rusot* and what in Ceylon is called *Rasadun*. It is employed as a tonic, astringent and febrifuge. *Rusot* mixed with alum, opium, rock-salt and chebulic myrobalan is much used as an external application for inflammatory swellings. The use of *Dáruharidrá* among Ceylon Vedarálas is as a prophylactic for tetanus, but they use *Weniwel* (Coscinium Fenestratum) which is given with

coriander and apparently answers the purpose well. *Dáruharidrá*, Indian Berbery, and its extract are regarded as alternative, deobstruent, and are given in jaundice and, above all, in affections of the eyes. There are several compound preparations of *Dáruharidrá* mentioned by Sárangadhara and other writers on native medicine in India. It is met with in the higher elevations both in India and Ceylon.

It should be noted that the native Vedarálas have good reason, though they might not be aware of it, for using Coscinium Fenestratum as a substitute for *Dáruharidrá*, for on chemical analysis it is found to contain Berberine the active principle, as much as, if not more than, in Berberis Asiatica.

NYMPHACEÆ NATURAL ORDER.

නෙළුම්.

Nelumbium Speciosum.

VERNACULAR.—Sinhalese : *Nelum.* Sanskrit : *Padma, Kamala.* Tamil : *Tamarai.*

Nymphæ Lotus.

VERNACULAR.—Sinhalese : *Ólu* or *Et-ólu.* Sanskrit : *Kumudu.* Tamil : *Ampal.*

Nymphæa Stellata.

VERNACULAR.—Sinhalese : *Mánel.* Sanskrit : *Nílótpala.*

The above are the only plants of the order Nymphæaceæ described by Dr. Trimen in his work on Ceylon plants. The Nymphæa Lotus, or Nymphæa Pubescens, is common *Ólu* or *Et-ólu* found in almost all the streams, ponds and tanks in the low country and up to an elevation of 1,000 feet. The small seeds of this are nutrient and eaten by the natives. All the plants are used medicinally, but Nelumbium Speciosum, called also *Padmini*, is the most important and the most largely used as such. It is the chief classical plant of the Hindus and was the Cyamus or the " sacred bean " of the ancient Egyptians. It is called Lotus by the Europeans in the East and was termed Egyptian Lotus by the old Greeks. The Hindus liken the world at the creation to a lotus floating on water ; and it is emblematic of the heavens. Brahma is supposed to sleep on a bed of lotus six months of the year and to watch the other six months, in allusion to the seasons, Brahma standing for the sun.

Saraswati Nighantu mentions several varieties of *Nelum* with several synonyms for each. They are :

Nelum (නෙළුම්) : Mahótpala, Kamala, Padma.
Hela-Nelum (හෙළ නෙළුම්) : Pundaríka, Sítámbuja
Ratupul (රතුපුල්) : Raktótpala, Kókanada.
Nilupul (නිලුපුල්) : Nílótpala, Indívara.

The Nelumbium is described in great detail by the old Sanskrit writers and I quote the following from Dr. Dutt's work on Hindu Materia Medica :—

" These beautiful acquatic plants had attracted the attention of the ancient Hindus from a very remote period, and obtained a place in their religious ceremonies and mythological fables ; hence they are described in great detail by Sanskrit writers. The flowers of Nelumbium Speciosum, called *Padma* or *Kamala*, are sacred to *Lakshmí*, the goddess of wealth and prosperity. The white variety of this plant is called *Pundaríka*, the red, *Kokanáda*, and the blue, *Indívara*. The entire plant including root, stem and flower is called *Padminí*. The torus or receptacle for the seed is called *Karnikára*, and the honey formed in the flowers, *Makaranda*. The filaments round the base of the receptacle pass by the name of *Kinjalka* and the leaf-stalk by that of *Mrinála*."

Properties and Uses.—Lotus or Nelumbium is largely used in native medicine and its products are frequently found as ingredients in many prescriptions for various diseases. Different portions of it are supposed to possess therapeutical properties peculiar to each but the whole plant is regarded as cooling and astringent and is prescribed for bloody discharges from the bowels and for Gonorrhœa in combination with other drugs. The flowers are regarded as especially cooling and are prescribed in diseases supposed to be caused by " heated humours " or *dos*, as they are called by the native Vedarálas, concerning which a great misconception obtains among practitioners of Western medicine. The following is a decoction containing the rhizomes of N. Stellata as an ingredient for dysentery :—

Kernel of mango seed—Amba mada.
Rhizome of Nelumbium—Nelum.
Flowers of Myristica Horsfieldia—Rukmal.
Pulp of Beli fruit—Beli mada.

Make a decoction in the usual way, or administer in the form of a powder or paste.

PAPAVERACÆ NATURAL ORDER

අබින්

Papaver Somniferum.—The opium or white poppy plant. Garden Poppy.

VERNACULAR.—Sinhalese : *Abin.* Sanskrit : *Ahiphena.* Tamil : *Apin.*

PROPERTIES AND USES.—Opium was unknown to the ancient writers on Sanskrit medicine, though it was known to the Greeks so early as the third century B.C. The Greeks seem to have been the first discoverers of its narcotic properties and they called it *Opion*, derived from the Greek diminutive *Opos*, meaning the juice ; but it is also regarded by some writers as signifying soporific. The Arabians and Persians appeared to have soon learnt the narcotic properties of *Opion.* They called it *Afyun*, which is obviously a corruption of *Opion.* And the present day Sanskrit name *Ahiphena* (අහිඵේන) is doubtless derived from the Persian *Afyun*, though some writers have attempted to connect it with *Ahiphena*, " venom of snake". Dr. Watt observes that it is more often written *Ahipena* (අහිපේන) * by many authors, than *Ahiphena.* Opium was doubtless brought to the East by the Arabian traders, and the opium plant (Poppy) was known in China so far back as the ninth century A.D. Though the date of the introduction of opium to the East cannot be determined exactly, there is reason to think that its medicinal use was made known to the Hindus by the Arabian physicians that followed in the wake of the Mohammedan conquerors who invaded India in the twelfth century. It is interesting to note that all the Eastern countries adopted the name *Afyun* in its original form, with little or no change, to their own languages, which in itself is proof of its having been an article new to them. The capsules of the poppy are called *Khakhas* and the seeds *Khasatila* respectively.

Both capsules and seeds are eaten by the people ; the former in the form of a curry, and the other spread over sweetmeats. The poppy seeds are demulcent, nutritive and useful in cough and asthma. The

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* According to some authorities the correct Sanskrit term for opium is *Ahiphena* and this is what H. H. Bhagvat Sinh Jee, M.D., etc., says in his *Short History of Aryan Medical Science* : It is evident that during the time of the Mohammedan rule there were introduced into India some new drugs from Arabia, Persia and Afghanistan. Opium for instance appears to be a native of western Asia. It was first imported into this country from Arabia. Its spread in India is synchronous with the advent of the Mohammedans who had adopted it as a suitable substitute for fermented liquors which their religion discountenances. Sharngdhara and Vagbhata refer to the medicinal use of this article which they call "Ahi-phena" or snake-foam, believing it to be inspissated saliva of snakes, probably from the symptoms of opium poison resembling those produced by the venom of snakes. It is used in diarrhœa, chronic dysentery, for allaying pain and producing sleep. The European doctors seem to have learnt the therapeutic use of opium from Indian practitioners."

capsules are light, astringent, and narcotic. The opium is the product of an exudation obtained by scarifying the capsules at a certain stage, *i.e.*, just before the petals of the flowers fall off. The cultivation of opium has till recently been a great industry in certain provinces or districts in India, where the manufacture and sale of opium is a Government monopoly. It used to be largely consumed by the Chinese in smoking, and the habit had become a great curse to them. In recent years every endeavour has been made by the Chinese Government to put down its use by the people. Opium smoking is a most degrading vice, and injurious to the health of its victims.

In India there is very little smoking of it, but a good many people take it internally, the drug being as a rule mixed with aromatics and other substances and made into a sort of confection called *Legium*. In Ceylon too opium is largely eaten, although not so much as a vice as for the relief of certain ailments, especially chronic rheumatism. The habitual use of opium is also somewhat of a prophylactic for malarial fever. So far as my experience and observations are concerned, the use of opium in moderation, by the mouth, does not, unlike smoking the drug, seem to affect a person's health at all, and I have seen people who have taken it daily for forty or fifty years without any injurious effect on their health. But unfortunately, as the habit is continued, a larger quantity is often found to be necessary to produce the desired effect. Hence it should not be taken even medicinally for any length of time if it can be helped. Medicinally, opium is one of the most useful drugs in the armament of a medical man, be he Eastern or Western.

An extract of opium and its products morphia and codeia are largely used by Western practitioners, but the native medical men use only the crude opium, which enters into the composition of their pills and confections for dysentery, acute diarrhœa, cholera and other diseases of the bowels. I have been told by many opium eaters that it prevents fatigue, and that they can do a greater amount of work and for a longer period with it than would otherwise be possible. This is quite different from the effects produced in smoking the drug which renders the victim quite helpless and leaves him in a half-comatose state.

There are many valuable preparations among native medical men containing opium for dysentery, especially in its later stages. A connection which has acquired a reputation all over the maritime districts is composed of opium as one of its ingredients, and I myself have seen it used with very great success in scores of cases which had been even given up as hopeless by Western practitioners. Some of the other chief ingredients of this preparation are flowers of Gmelina Arborea (*Demata*), the seeds of Holarrhena Antidysenterica and Acacia Catechu, with some aromatics.

In Ceylon opium appears to have come into use as a medicine not much more than five hundred years ago.* The earliest book in which I have seen it mentioned is *Yógaratanákara*, referred to in the introduction to these pages. Here is a prescription taken from it for dysentery and for administration at its latest stages.

Take of :—Aegle marmelos—Beli.
Plumbago Rosea—Rat-nitul.
Aconitum Heterophyllum—Atis.
Gum of Feronia Elephanta—Divul.
Bombax Malabaricum—Dimbul.
Seeds of Mimusops Elangi—Múnamal.
Seeds of Holarrhena Antidysenterica—Kelinda eta.
Ginger—Inguru.
Black Pepper—Gammiris.
Long Pepper—Tippili.
Red Sandal—Rat-Handun.
White Sandal—Sudu-Handun.
Flowers of Woodforida Floribunda—Malita.
Cummin—Duru (white).
Embilia ribes—Valangasál.
Sonchal Salt—Sahindalunu.
Carraway—Asamódagam.

in equal parts, opium as much as all of them ; grind for three days with the juice of Cyprus Rotundus (*Kalánduru*) and make into pills to the size of a pepper. Two or three pills for a dose, given with lime juice, will remove all pains and tenesmus. If there be blood and frequent motions, give a pill or two in whey (*kiri móru*). For all complications of dysentery, viz., tenesmus and frequent motions with blood and mucus, a pill is to be given with the juice of Bombax Malabarica and honey, when, it is said, all these will disappear. The pill is called "Sómánanda pill". Opium is also the sheet anchor, so to say, for diabetes. A preparation which I have found useful in my own practice is a pill composed of camphor, musk, one part, and opium and mace four parts, made into two-grain pills, a pill for a dose. I have noticed that the addition of about two grains of *Silájatu*, a sort of bitumen that exudes from the fissures of rocks during hot weather in the northern parts of India or sub-Himalayan regions, improves the action of these pills, in that it reduces the quantity of sugar in urine sooner ; or a grain or two of sulphate of iron might be added to the pills in place of *Silájatu* when kidneys are not diseased.

A simple and convenient preparation which I have seen to be frequently useful in cases of dysentery of long standing is the following : Nutmeg, Borax, prepared Talc, Datura (*Attana*) seeds, each one part, opium two parts, made into two-grain pills. A pill for a dose, to be

* In a book called Parangi Hatana, descriptive of the wars between the Portuguese and the Sinhalese, the author speaks of Portuguese soldiers indulging in opium and ganja.

administered with the juice of *Apasumadu* or *Prasárini* (Pædiria Fœtida). For acute diarrhœa and cholera, Dr. Dutt mentions the following preparations called " Amarakshasa ".

Take of :—Opium.
Nutmeg.
Cloves.
Cinnabar—Red Sulphide of Mercury (*Hingul*).
Camphor.

equal parts, beat them into a mass with water, and make into four-grain pills. One for a dose. In chronic diarrhœa and dysentery with anasarca, according to the same authority, a preparation called *Dugdhavati* is used by the Kavirájas in India.

Take of :—Opium and Aconite twenty-four grains each.
Prepared iron ten grains.
Prepared talc twelve grains.

Beat them into a mass with milk and make into four-grain pills. One pill is to be given every morning with milk. The diet is restricted, to milk alone, water and salt being prohibited. This preparation, I think, will prove useful in spruce. Opium is used in fever with diarrhœa, as in the following preparation, *Sambhunátha Rasa*, taken from a medical work called *Bhaisajyakalpa*.

Take of :—Orpiment—Hiriyal.
Realgar—Manósilá.
Cinnabar—Sádilingam.
White Arsenic—Sudu Pásánam.
Borax—Suwasa Lunu.
Aconite—Wachchanávi.
Alum—Sínakkáram.

Each one part, Mercury, Sulphur and Opium each seven parts. Soak them for seven days in each of the following fluids : namely, —juice of the leaves of Cannabis Sativa, Vitex Negundo, Datura and Nim, (margosa). Make into two-grain pills. These are given with ginger juice in diarrhœa with high fever. Opium is also used as an aphrodisiac in combination with all the aromatics. In addition to opium—

Take of :—Nutmeg—Sádikká.
Cloves—Karábu.
Ginger—Inguru.
Pellitory root—Akkrapattá.
Long pepper—Tippili.
Saffron—Kaha.
Red sandal wood—Rat handun.

Legium, which is said to be used by some Mohammedans of Ceylon, is a preparation of this kind if not identical with it.

Papaver Rhœas.—Red poppy or corn rose.

VERNACULAR.—Sanskrit : *Raktaposta.*

PROPERTIES AND USES.—This is found in Cashmere and is used as a remedy for cough in children, but chiefly as a colouring agent.

Argemone Mexicana.

VERNACULAR.—Sanskrit : *Srigála Kantaka.*

PROPERTIES AND USES.—An American plant originally, but now grown wild all over India. It yields a large quantity of oil, of a disagreeable smell. The seeds are laxative, stomachic, emetic, expectorant and demulcent. Applied to herpetic eruptions, it exercises a soothing effect on skin affections. Is useful as a local application to indolent ulcers.

N.B.—No plants of the order Papaveracæ are mentioned by Dr. Trimen in his work on Ceylon plants.

CRUCIFERÆ NATURAL ORDER.

එල අබ

Sinapis Alba.—Or Brassica Iuricea, the White Mustard.

VERNACULAR.—Sinhalese : *Ela-aba.* Sanskrit : *Siddhártha.* Tamil : *Venkaduku.*

වල් අබ

Brassica Campestris.—Rape seed.

VERNACULAR.—Sinhalese : *Wal-aba.* Sanskrit : *Sarshapa.*

කළු අබ

Brassica Nigra.—The Black Mustard.

VERNACULAR.—Sinhalese : *Kalu-aba.* Sanskrit : *Asuri.* Tamil : *Chirukaduku.*

අබ

Brassica Juncea.—Indian Mustard.

VERNACULAR.—Sinhalese : *Aba.* Sanskrit : *Sarshapa.* Tamil : *Kaduku.*

PROPERTIES AND USES.—This is not a plant indigenous to India but appears to have been brought there, at a very remote period, from Western Asia, for it is mentioned in *Charaka* and *Susruta*, the oldest extant medical works in India. It is used more as a condiment than as

a medicine and that too externally than as an internal medicine for any particular disease. It enters into the composition of medicines for dyspepsia and is also used as an emetic. Its importance medicinally among Vedarálas is due to its being the main or basic ingredient of a medicinal oil called *Siddártha*, from its Sanskrit name.* It is a very useful oil, used largely by native medical men as an external application for all rheumatic and other pains and in case of feelings of oppression. The application usually gives immediate relief. It is found in nearly all houses of natives for use in cases of emergency. In convulsions of children a few drops are poured into the ears and a drop or two given even internally with certain relief.

Lepidium Sativum.

The common cress is called *Chandrasúrya* in Sanskrit. Its Tamil name is *Alivirai*. It is regarded as a diuretic and as an aphrodisiac, and also as a tonic and alterative. Mr. Goonesekere gives no Sinhalese name for this in his dictionary and only says it is a herb used as a salad.

Bhávaprakása, an Indian work on medicine, recommends this to be given with mucilage for hiccup.

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Raphanus Sativus.

VERNACULAR.—Sinhalese : *Rábu.* Sanskrit : *Múlaka.* Tamil : *Mullangi.*

PROPERTIES AND USES.—This is the common garden radish and is largely cultivated all over India and also in Ceylon. Its seeds are regarded as diuretic, laxative and lithontriptic. The juice of the leaves has the same properties.

CAPPARIDÆ NATURAL ORDER.

දුණුවරණ

Cratœva Religiosa.—Holy Garlic Pear.

VERNACULAR.—Sinhalese : *Lunuwarana.* Sanskrit : *Varuna Asmarighna* Tamil : *Mávilankai.*

PROPERTIES AND USES.—This is a very important drug in native medicine. Its chief use is in decoctions for affections of the urinary organs. One of its synonyms, *Asmarighna*, means destroyer of gravel and is a very useful lithontriptic. It is administered in all forms, from a

* This is quite an erroneous notion. The oil is so called on account of its excellent effects. *Siddartha* (*lit.*, that 'which has accomplished its object', 'successful') means excellent or complete, not on account of any mustard in it. The basic drug of *Siddartha* is Asparagus Racemosus and according to a prescription given for it in *Yógaratnákaraya*, there is no mustard at all in it. Oil extracted from mustard is known as *aba-tel* or *sudupat-tel*.

simple decoction of the leaves and bark with treacle to a *Ghrita* composed of nearly a score of other drugs with it. A very efficacious compound decoction in combination with an equally powerful lithontriptic remedy is composed of Tribulus Terrestris, *Gokshura* or *Gokatu* of the Sinhalese, and ginger, in equal quantities. Make a decoction and administer with the addition of *Yavakshára* (impure carbonate of potash) and honey. In ascites the bark is reduced to ashes, which contain a quantity of alkaline matter. It is made into a solution and boiled down again with the powedered bark, to which is added impure carbonate of potash (*Yavakshára*) ; the solution is evaporated and the resulting powder is given with treacle in ascites, calculus and enlargement of the abdominal viscera. The leaves or their juice are used in the form of a decoction for swelling, and for burning sensation of the soles of the feet—a common one among natives. This complaint is called *Váta Rakta*, for which I have found Western treatment to be very unsatisfactory.

වේලඟිරිය

Capparis Horrida.

VERNACULAR.—Sinhalese : *Vélangiriya.* Sanskrit : *Ardanda.* Tamil : *Kilácchedi.*

Capparis Zeylanica is a variety of the same plant (Capparis Horrida). and it is called *Venachcha Authondai-káy* in Tamil and *Karira* in Sanskrit.

These two plants are more or less allied and have the same medicinal properties and uses. They are not much used medicinally. The fruits are used for making pickles and are also cooked and eaten by natives. Clough's dictionary gives Paramignya monophylla, a plant of the natural order Rutaceæ, as *Wellangiriya* or *Wélangiriya*, but I have followed Dr. Trimen who gives *Wélangiriya* as Capparis Horrida and *Wellangiriya* as Paramignya monophylla. Apparently the author of Clough's dictionary has thought the Sinhalese names *Wellangiriya* (වැල්ලඟිරිය) and *Wélangiriya* (වේලඟිරිය) are one and the same plant. It should be noted that the fruits of both the plants are very much alike and one could be easily mistaken for the other.

PROPERTIES AND USES.—This is said to be a cooling remedy. The green fruit is cooked and eaten.

Cleome Viscosa.

VERNACULAR.—Sanskrit : *Adittyabhakta* or *Arkabhakta.* Tamil : *Naivela.*

Dr. Trimen gives the name *Wal-aba* or *Rammanissa* as Sinhalese names of Cleome Viscosa. The real *Wal-aba* I think is Brassica Campestris. Clough's dictionary says *Rammanissa* is the name of Xyris Indica, which seems to agree with the Sanskrit names given in *Saraswati Nigandu* such as *Tajo wati Taruni Barbarika, Rama, Arkalata,* and it is not impossible Dr. Trimen was misinformed in that regard.

PROPERTIES AND USES.—This is considered to be a carminative and anthelmintic. The juice of the leaves is poured into the ear to relieve pain, and also in cases of purulent discharge, and hence it is called *Kanphúti*.

In *Sárasansépa* and other native medical works, I have seen *Adittyabhaktá* rendered into Sinhalese by the term *Kobowakká* or *Kóvakká* and *Súryakántá ;* but this could not be Cleome Viscosa, which differs in its description entirely from what we know of *Súryakántá* or sunflower. Dr. Kaneylal Dey gives the name of *Súryakántá* as the Sanskrit name and its botanical name as Helianthus Annus, but Clough's dictionary says *Kobowakká* is Ventilago madraspatan, which is a plant of the natural order Rhamnaceæ and could not by any possibility be *Súryakántá* It has the Sanskrit name *Raktawalli*, which means red creeper. On the other hand *Wanawása Nigando* gives the names *Súryakántá* and *Súryabhakta* for *Kobówakká*, *Kobówakká* has also the names of *Bánubhakta* and *Suwarchala*.

Dr. Trimen does not give the name *Kobówakká* to any plant mentioned by him in his work on Ceylon plants, but mentions *Kowakká*, which is Cephalandra Indica. There is also Phyllanthus Madras patenensis, a plant allied to *Ratpitawakká*, (P. Niruri) and *Pitawakka* (P. Urinaria).

It is difficult to say which is *Súryakántá* and which is *Kobówakká*, but it is clear that, though Cleome Viscosa has the name of *Adittya-bhaktá*, it is not *Súryakántá*. I am inclined to think with Dr. Kaneylal Dey that Helianthus Annus is *Súryakántá* or Sunflower, that *Kobówakká* is Ventilago Madraspatan though it has the Sanskrit names of *Adittya-bhaktá* and *Súryalakta*, for it is not at all uncommon to find the same Sanskrit name given to several plants of different properties and characteristics as a synonym. All the prefixes *Adittya*, *Surya* and *Bhanu* mean sun.

Capparis Spinosa.—Vel **Aphylla.** True Caper Berry is chiefly found in Punjab or Central Districts in India.

PROPERTIES AND USES.—Same as the last (Cleome Viscosa), but hardly used in medicine. This is the source of the true " Caper " which are known as Carawella seeds.

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Gynandropsis pentaphylla.

Is called *Súryawarta*. Arka-phus-phika in Sanskrit, in Sinhalese

Wéla, Tamil *Taiwela.* Recommended for convulsions and enteric fever and is also regarded as an anthelmintic.*

BIXINÆ NATURAL ORDER.

මකුළු

Hydnocarpus Wightiana or Whitania.—Jungle Almond.

VERNACULAR.—Sinhalese : *Makulu.* Sanskrit : *Matsyamaraka Kodichanatha.* Tamil : *Niradimutu.*

PROPERTIES AND USES.—This is a plant much allied to Gynocardia Odorata and is useful in skin diseases. The oil may be applied to cases of leprosy in the same way. Chaulmúgra is used in that disease and is a good substitute for it.

චෞල්මූග්‍රා

Bixinæ Odorata Vel **Gynocardia Odorata.**—*Chaulmúgra.*

PROPERTIES AND USES.—This is a plant from the seeds of which *Chaulmúgra* oil was long supposed to be extracted and is a drug much used by Kavirajas of Bengal as a remedy for leprosy, both externally and internally. It is not a native of Ceylon. This is also used in secondary syphilis, rheumatism and bronchial affections. The above is given on the authority of Dr. Dymock and other older writers. It is now found that the true source of *Chaulmúgra* oil is Freutogenos Kuruza, grown chifly in Chitagong, Burma, and neighbouring countries. Phillipine medical men report that *Chaulmúgra* oil is the best remedy they have found for the treatment of leprosy in the large leprosy camp there and that several have been cured and discharged.

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* I have found the following curious prescription in an old ola book of prescriptions directing that this drug, Gynandropsis Pentaphylla *Wéla,* be used for severe colic, apparently in infants, and I quote it in full in the original itself as the meaning is not apparent on the face of it.

අනේ දෙවියනේ මට මතක නැති කොං	ව
වනේ ලා කොටා වේලා ඔතෙ සොදු	ව
තනේ මවුන්ගේ කිරි සමඟ එක්කොං	ව
කනේ වක්කරන් තදු බඩ රුජාව	ව

The literal meaning of the above is :—

"Oh god I have forgotten. Pound *Wela* well in a mortar, mix the Juice with human milk (mother's milk), and pour it into the ear for severe colic."

I am assured by a proctor friend of mine that once a servant of his having taken ill with a severe attack of colic and after several Vedarálas had failed to effect a cure, a bystander suggested the use of *Wéla* as directed above, with the result that he was immediately relieved of the ailment.

කිනිහිරිය

Cochlospermum Gossipyum.—Golden silk cotton tree.

VERNACULAR.—Sinhalese : *Ela-imbul Kinihiriya.* Sanskrit : *Katira Kathira.* Tamil : *Tanaku Konge.*

HABITAT.—Found in rocky hills in dry districts of Ceylon and in western parts of India.

PROPERTIES AND USES.—It is the gum exuded from this plant that is used medicinally and is a substitute for gum Tragacanth. The tender leaves boiled in water make a good cooling wash for the hair. In Persian it is called *Kathira.*

Scholaris Gaertnere is *Katukurundu* of the Sinhalese.

රත උඟුරස්ස

Flacourtia Cataphracta.—Many Spined Flácourtia.

VERNACULAR.—Sinhalese : *Rata-uguressa.* Sanskrit : *Prachinamalaka.* Tamil : *Shemae Katukali.*

PROPERTIES AND USES.—This is the *Prachinamalaka* of Sanskrit writers. It appears to be doubtful whether it is a native of India, as it is generally met with in a cultivated state. The fruit is like a plum but different from it in having five to six stones instead of one. Dalzell and Gibson consider the tree to be truly wild in the southern Concan.

The fruit is recommended as being useful in bilious conditions and, like most acid fruits, it no doubt relieves the nausea and checks purging.

HABITAT—Introduced into Ceylon from Malaya and is cultivated.

උඟුරස්ස

Flacourtia Ramontchi.—Flácourtia.

VERNACULAR.—Sinhalese : *Uguressa.* Sanskrit : *Kinkini.* Tamil : *Katukali.*

PROPERTIES AND USES.—The fruit is edible and is cultivated. Seldom used medicinally.

PORTULACEÆ NATURAL ORDER.

ගෙදඟකොල

Portulaca Oleracea.—Purslane.
Do Quadrifida.

VERNACULAR.—Sinhalese : *Gendakola, Hín-genda-kola.* Sanskrit : *Lonika, Lamba.* Tamil : *Pulikkerai.*

PROPERTIES AND USES.—This is the annual climbing Purslane. It has been long used both in Ceylon and India as a domestic remedy. A decoction of the leaves is given as a diuretic and is also applied to bruises and burns. They are also applied externally to all eruptive diseases of the skin. It is also regarded as a febrifuge. It is procurable in most of the vegetable markets as it is used by the natives as a vegetable.

GUTTIFERÆ NATURAL ORDER.

නාගසෙසර

Mesua Ferrea.—Iron wood tree.

VERNACULAR.—Sinhalese : *Nagaha.* Sanskrit : *Nagakesara.* Tamil : *Nagacuram.*

PROPERTIES AND USES.—Regarded as astringent and stomachic. A paste of the flowers is applied to bleeding piles, or burning of the feet ; the same mixed with clarified butter washed a hundred times is said to be a most useful remedy for burning of the feet. It is also administered in cases of irritability of the stomach and is frequently used as an adjunct with other drugs to prepare medicinal oils.

කනගොරක

Garcinia Indica and **Garcinia Morella.**—Red mango.

Are two allied species of Garcinia.

VERNACULAR.—Sinhalese : *Kana-goraka.* Sanskrit : *Tamala.* Tamil : *Korakapuli.*

Garcinia Indica produced what is called Kóram butter of commerce, a sort of fatty substance obtained from the seeds.

PROPERTIES AND USES.—Although Dr. Dymock says that the dried rind of the Garcinia Indica is sold on a large scale to acidulate curries, it is G. Morella that is utilised in that way. Medicinal properties of both are nearly the same, although the resin is not collected. Hooker considered this as the Gamboge producing tree, and that G. Spirata is the *Gonapana* of the Sinhalese and *Kokottái* of the Tamils. Vedarálas seldom use either the fruit or the resin, which is a purgative, in their practice. The yellow resin is made into a pigment by some Hindus to make sectarial marks. Dried rind of the fruit, Acorus Calamus, *Wadakahá,* and some salt mixed with water and boiled for a few minutes, is a useful application for bruises and contusions

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Garcinia Mangostana.—Mangosteen.

Is not used medicinally and has been introduced to Ceylon lately from the Malay Peninsula. Its taste is delicious and it is largely used as a table fruit.

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Ochrocarpus Longifolius.

Calophyllum Inophyllum.—Alexandrian Laurel.

VERNACULAR.—Sinhalese : *Domba.* Sanskrit : *Punnága Kesava.* Tamil : *Punnaigam.*

PROPERTIES AND USES.—These are similar in their properties. Calophyllum is the *Punnága* of the old Sanskrit writers. Ochrocarpus Longifolias is not unlike Mesua Ferrea in some respects and is also called *Punnága* in Sanskrit, but the true *Punnága* is Calophyllum Inophyllum. The fruit has a hard shell and the kernel yields an oil which is used as a medicine for rheumatic pains and is also one of the five kinds of oil known as *Pas-tel.* It is an article of commerce and large quantities of it are exported from India, where the oil extracted from it is used as a lamp oil by the poorer classes of people. In some parts of India the oil has a reputation as a cure for Scabies.

කීන

Calophyllum Walkerii.

Do Tomentosum.

C. Walkerii and C. Tomentosum are allied to C. Inophyllum, and both are given as *Kína* by Dr. Trimen, but they have no economic or medicinal value.

Calophyllum Burmani is *Chira-Púnnái* of the Tamils and *Gurúkína* of the Sinhalese.

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C. Bracteatum is *Walukína* and C. Walkerii is *Kína* according to Dr. Trimen, and C. Spectable is *Dombakína, Sura Punnága* or *Champayah* of the Sanskrit writers. Medicinal properties are similar to those of Mesua Ferrea. Ochirocarpus Longifolia is known as red *Nága Késera* in commerce and *Punnága* in Sanskrit.

DIPTEROCARPÆ NATURAL ORDER.

හල්: සල්

Shorea Robusta.—The Saul tree.

VERNACULAR.—Sinhalese : *Hal* or *Sal.* Sanskrit : *Sala, Aswakarna.* Tamil : *Kungiliyam.*

PROPERTIES AND USES.—The bark is astringent and bitter, and is used in medicine in combination with other drugs. A gum resin exuded from the trunk bark is also astringent and emollient and is used in dysentery and, like many other gum resins, is used for fumigating sick rooms. Powdered resin is given with good results in cases of dysentery. Shorea Robusta is not mentioned by Dr. Trimen as growing in Ceylon. Its representative here is Vateria Indica *Vel* Acuminata. Piney tallow tree is called *Hal* by the Sinhalese and *Vellai Kungiliyam* by the Tamils and *Dupada* by the old Sanskrit writers. The bark, cut into small pieces, is put into toddy pots to prevent fermentation instead of the pots being limed, with is generally done where *Hal* bark is

not available. It yields a gum resin not used medicinally, burns with a clear light, combines with oil and is used with other drugs to add consistency to ointments.

The gum resin of this is the Rosin of commerce and *Ral* of Hindu writers.

ගස් කපුරු

Dryobalanops Aromatica.

Borneo Camphor.

VERNACULAR.—Sinhalese : *Kapuru.* Sanskrit : *Karpura.* Tamil : *Kapuran Shudan.*

PROPERTIES AND USES.—This is the tree from which Borneo camphor is produced. It is the variety known as *Apakva*, uncooked camphor, to which reference will be made under the head Camphor Cinnamomum which produces the *Pakva* or cooked camphor—Camphor Vera.

දෙරණ

Dipterocarpus Glandulosus.

VERNACULAR.—Sinhalese : *Dorana.* Sanskrit : *Guga.* Tamil : *Yennai.*

PROPERTIES AND USES.—The last-mentioned tree yields a balsam or oil known in Sinhalese as *Dorana-tel* and in Tamil *Yennal*, and is used for varnishing furniture and also for dissolving paints. Medicinally it is applied externally to rheumatic swellings and chronic inflammatory enlargements.

D. Turbinatus, D. Incasus and D. Alatus (oil trees) yield the garjan balsam or wood oil of commerce, used for varnishing furniture. This does not appear to have been used medicinally by the ancient Hindus, but a few years ago it attracted some notice in the profession by reason of an alleged success in the treatment of leprosy by Dr. Dongall of the Andamans. Subsequent trials by other medical men however were not attended with similar success and it is now seldom used medicinally.

It is similar in its action to Copaiba and might prove useful in the treatment of Gonorrhœa and other affections of the urinary tract and bladder. It was suggested as a substitute by Dr. O'Shaunesay for copaiba.

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Dipterocarpus Zeylamus.

VERNACULAR.—Sinhalese : *Hora.*

PROPERTIES AND USES.—This is more of a timber tree than a medicine but still the heart wood is sometimes used as an ingredient in decoctions for fever.

MALVACEÆ NATURAL ORDER.

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Gossyplum Stocksil or **Herbaceum.** (Cotton tree).

VERNACULAR.—Sinhalese : *Kapu.* Sanskrit : *Karpasi.* Tamil *Paruhti.*

PROPERTIES AND USES.—This cotton tree is now cultivated in all tropical countries for the sake of the wool which its pods yield and which is used in the manufacture of cotton fabrics. A mixture of it with real wool is regarded by the Hindus as healthier to wear than simple calico cloth. The tree appears to have been known and made use of by the Hindus long before the Western people came to adopt it. As a medicine the seeds of this as well as Eriodendron Anfractuosum (which see) are frequently used by Vedarálas in the treatment especially of urinary diseases. In orchitis, a poultice made of cotton seed, ginger and water is applied. The therapeutical effects of this are similar to those of Eriodendron Anfractuosum, the seed of which, however, is richer in nitrogenous matter than those of Gossypium Herbaceum. Gun cotton is manufactured by steeping cotton in a mixture of equal parts of strong nitric and sulphuric acid for some time and washing and drying it well afterwards. The cotton seed is largely used for feeding milk cows ; and lactogen, so much advertised recently as a lactologogue, is made more with the seeds of E. Anfractuosum than of those of this tree.

බෑවිල

Sida.

VERNACULAR.—Sinhalese : *Bevila.* Sanskrit : *Bálá.* Tamil : *Mayanmakkan.*

Sida Humilis.

VERNACULAR.—Sinhalese : *Bevila.* Sanskrit : *Bálá.* Tamil : *Palamadu.*

Sida Cordifolia.

VERNACULAR.—Sinhalese : *Wal-Bevila.* Sanskrit : *Bálá.* Tamil : *Mayirmanikham-Podi.*

Sida Rhomboidea.

VERNACULAR.—Sinhalese : *Gas-Bevila.* Sanskrit : *Mahabálá.* Tamil : *Mayirmanikkam.*

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Sida Alba.

VERNACULAR.—Sinhalese : *Girivedi bevila.* Sanskrit : *Nágabálá.* Tamil : (*Unascertained.*)

PROPERTIES AND USES.—Five kinds of *Bálá* or *Bevila* are mentioned by Sanskrit writers and which I have identified as above, but there is another variety indigenous to Ceylon, Sida Spinosa, and doubtless used by our native medical men medicinally. I believe several of the

varieties are used indiscriminately one for another, and as their medicinal properties seem almost the same no harm is done by this indiscriminate use of the different varieties. *Bevila* is considered cooling, astringent and tonic, and is prescribed in fevers, and urinary complaints, whilst a decoction of *Bevila*, singly or in combination with other drugs, is given by native medical men to women during the whole period of gestation, sometimes as a preventive of miscarriages and abortion.

For frequent micturition, lencorrhœa and gonorrhœa, the powder of the root bark with milk and sugar is given.

The following is a decoction for pregnant women prescribed by Vederálas : *Mashavaladi Kwatha*, recommended by Chakradatta (Dr. Dutt).

Take of :—Sida Cordifolia—Bevila—Bálá.
Phaseolus Roxburghii—Muneta—Máshá.
Ricinus Communis root—Erandu—Eranda.
Hygrophila Polysperma—Mudugetakola—Katrina.
Vanda Roxburghii—Retta (aratta)—Rasna.
Whitania Somnifera—Amukkará—Aswagandha.
Mucuna Prurient Wandurume.

Prepare a decoction in the usual way and administer it with Assafœtida and rock salt in Hemiphlegia.

For external application an oil called *Balátaila* is prepared with *Bevila* root, milk and sesamum oil.

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Eriodendron Anfractuosum.—White Silk Cotton Tree.

VERNACULAR.—Sinhalese : *Imbul.* Sanskrit : *Salmali.* Tamil : *Illanku.*

PROPERTIES and USES.—Same as Bombax malabaricum. The bark and the gum of this may be substituted for the latter in all the medicinal preparations. This is the *Pulun* or *Imbul* tree of the Sinhalese and yields Kapok or pillow cotton. This is the chief ingredient in many prescriptions for urinary complaints and that of a patent remedy recently come into use under the name of Glactogen, which is highly spoken as a glactagogue.

Cotton seed is frequently prescribed by Vedarálas for diseases of the urinary organs and the following is a prescription given in *Sárásansépa* for diabetes and other urinary troubles.

Carpasabija chúrnancha takrénacha pivetnarah.
Maduyuktan payechchighran pramehan sakalanapi.

The meaning of the above is, give powdered cotton seed, whey and honey, and all urinary troubles will disappear.

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Bombax Malabaricum.—Red silk cotton tree.

VERNACULAR.—Sinhalese : *Katu Himbul* (Dr. Trimen). Sanskrit : *Salmali ; mocha.* Tamil : *Panette mocharas.*

PROPERTIES AND USES.—The bark is astringent and the gum exuded from it is demulcent and astringent ; largely used in cases of dysentery and hæmorrhages of all sorts. The gum is called *Mocharasa* in Sanskrit and *Himbul* or *Imbul latu* in Sinhalese and is considered tonic, alterative and astringent. In dysentery of children, the following is a very useful prescription, and I myself have frequently used these drugs but in different and more elegant ways than those employed by native medical men in several such cases.

Take of :—Mocharasa—Himbul latu—Bombax Malabaricum.
Dhataki—Malita—Woodfordia floribunda.
Lajjalu—Nidikumba—Mimosa Pudua.
Filaments of the flowers of Nymphæa lotus—Nelum-mal renu.

Take in all about one *Palam*, powdered rice one *Palam*, and water eleven, and boil down to the consistence of a gruel. For adults Aegle marmelos with goat milk, into which some Mocharasa or *Imbul latu* is added, is administered in the later stages of the disease.

Hibiscus Moschatus is only used to perfume medicinal oils. The parts used are the fragrant roots ; they are also given internally in combination with other drugs and are regarded as cooling, astringent and tonic. According to Dr. Dutt, *Lata Kasturika* (Abelmoschus moschatus) is only a synonym for H. Moschatus, but Dr. Dymock gives Psoralia Corylifolia as *Lata Kasturi* or *Kasturik.* Tamil : *Kattuk Kashturi.* Sinhalese : *Takul.*

පුෂප බෙහිල

Pavonia Odorata.

VERNACULAR.—Sinhalese : *Pushpabevila.* Sanskrit : *Hrivera.* Tamil : *Peramutiver.*

The fragrant roots of this plant are considered cooling, aromatic and stomachic. They are largely used in combination with other drugs for fever and affections of the chest. This is also called *Bálá* in Sanskrit and is a variety of *Bevila* (Sida).

I have not been able to ascertain its Sinhalese name, but I have called it *Pushpabevila* (fragrant Sida). It is found in drier parts of Ceylon according to Dr. Trimen. Pavonia Odorata is of importance as an ingredient of the dasa-mula decoction like Sida Cordifolia (*Bálá*). Pavonia Odorata is also an ingredient in *Shadanga Paneya* and is a very favourite drink used in all cases of fever. (See Andropogon muricatus)

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Abutilon Indicum.—Marsh mellow.

Do Asiaticum.

VERNACULAR.—Sinhalese : *Anodá.* Sanskrit : *Kalikanghi ; Balbija.* Tamil : *Tuttial.*

PROPERTIES AND USES.—The leaves are smashed and boiled with rice flour and used as a poultice to sores. They are as good as linseed meal for that purpose. They are also boiled and used to foment painful joints and sore eyes, but are not used internally to my knowledge. A decoction of the root is recommended by the Indian Kavirajas for gonorrhœa.

Adansonia Digitata.—This is the boab tree of India and has been introduced to the East from the Western coast of Africa, where it is said to grow to an immense size both in girth and height, and the natives use the trunk for constructing huge canoes which can carry several tons of goods or fifty or sixty persons at a time. The only place in Ceylon where this tree is found is at Mannar. It is supposed to have been brought there by the early Arab traders, and it grows there more in girth than in height. The largest tree found there, according to a report made by the late Mr. S. Crawford of the Civil Service in 1890, was 61 feet in girth and 30 feet in height. Medicinally the bark is used in cases where an astringent is required. It is called by the Tamils *Papparappuli* or *Anaipuliya-maram* and Juda's Bag by the Roman Catholics. The Indian physicians have given it the name of *Gorakh-amli* in Sanskrit.

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Thespesia Populnea.—Tulip tree.

VERNACULAR.—Sinhalese : *Suriya.* Sanskrit : *Parisa* or *Gandhabhanda.* Tamil : *Pursha-maram.*

PROPERTIES AND USES.—A decoction of the bark is given as an astringent, tonic and alterative. Not much used medicinally. The heart wood is strong and durable, and used for making articles of all sorts.

Hibiscus Cancellatus. බන්ඩක්කා. Is the common *Bandakka* of the Sinhalese and *Tindisha* of the Sanskrit writers. Its Tamil name is *Vendaikkai.*

සපත්තු මල් : වද මල්

Hibiscus Rosasinensis.

VERNACULAR.—Sinhalese : *Sappattu-mal ; Wada-mal.* Sanskrit : *Java.* Tamil : *Shappattupu.*

PROPERTIES AND USES.—Astringent, used in uterine hæmorrhage. I have seen a prescription of *Wada-mal* and cocoanut flower given more than once by Vedarálas for menorrhagia, and with marked benefit.

විසදුලිය

Wisadulia Zeylanicus.

VERNACULAR.—Sinhalese : *Wisaduliya.* Sanskrit : *Vishaduliya.* Tamil : *Vishadulia.*

PROPERTIES AND USES.—This is, as the name implies regarded as an antidote to snake poison. By some botanists Cyrubidum crasifolius plant is regarded as *Wisaduliya.* Dr. Trimen gives *kirikaju* as the Sinhalese name of this plant.

STERCULIACEÆ NATURAL ORDER.

වෙලඟ

Pterospermum Suberifolium.

VERNACULAR.—Sinhalese : *Velanga.* Sanskrit : *Muchukunda.* Tamil : *Vinanku.*

PROPERTIES AND USES.—The flowers of this tree ground with Kangika (made of powdered paddy) is an ancient and well-known application for Hemicrania.

Sterculia Urens.

VERNACULAR.—Sinhalese : (unascertained.) Sanskrit : *Balika* or *Kavala.* Tamil : *Vellayputali ; Kavali.*

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Sterculia Foetida.

VERNACULAR.—Sinhalese : *Telambu.* Sanskrit : *Ashtakshara.* Tamil : *Kudrap dukku.*

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Sterculia Balang.

VERNACULAR.—Sinhalese : *Nává.* Tamil : *Vellai Puttalai.*

PROPERTIES AND USES.—All these plants yield, more or less, a gum resin, which is collected and sold in the Indian bazaar in place of Tragacanth for making sweetmeats. *Nává* and other species of Sterculia yield a fine fibre from the inner bark which is used by natives for making ropes.

බඳුවද

Pentapetes Phœnicea.

VERNACULAR.—Sinhalese : *Banduwada.* Sanskrit : *Arkayallabha.* Tamil : *Nágapu, Bandujiva* (beloved of the sun), *Pushparakta* (Red flowers).

PROPERTIES AND USES.—Used medically, on account of its mucilaginous properties, with other drugs, for disesases of the bowels.

There is some confusion with regard to the Sinhalese names of Pentapetes Phœnicea and Hibiscus Rosasinensis. I have heard many call the latter *Baduwada* (බදුවද). The author of Clough's dictionary gives බදුවද (*Baduwada*) and *Badaelakaha* (බදඵලකහ) as names for Hibiscus Rosasinensis, shoeflower or *Sapattumal*. This is wrong. Pentapetes Phœnicea and Hibiscus Rosasinensis are two different plants. Hibiscus Rosasinensis is *Wadamal* (වද මල්) or *Sapattumal* (සපත්තු මල්), and its Sanskrit names are : *Rudrapushpan*, *Japapushpan* and *Siva-pushpan*.

Pentapetes Phœnicea is *Banduwada* (බඳුවද) not *Baduwada* (බදුවද) and its Sanskrit names are :—*Bandhuka*, *Bandhujiva* and *Raktaka*. The confusion has arisen probably in not observing the difference between the Sinhalese names, *Baduwada* (බදුවද) and *Banduwada* (බඳුවද), for Clough gives බඳු (*Bandu*) rightly enough for the Sinhalese name of Pentapetes Phœnicea and yet he says *Bandhuka* and *Bandhujiva* are the names of shoeflower. *Saraswati Nigandu* however gives the two plants separately with their respective synonyms and *Bandhuka* and *Bandhujiva* are the names of *Banduwada* (බඳුවද) and not of *Baduwada* (බදුවද).

Helicteres Isora.

VERNACULAR.—Sinhalese : *Líniya*. Sanskrit : *Avartani*. Tamil : *Valumbirikai*.

PROPERTIES AND USES.—The bark root is used in some parts of India for diabetes. This is the screw tree of India.

TILIACEÆ NATURAL ORDER.

දමනිය

Grewia Tiliæfolia.—Vel Asiatica.

VERNACULAR.—Sinhalese : *Damaniya*. Sanskrit : *Dharmana*. Tamil : *Thada ; Tharra*.

PROPERTIES AND USES.—It is astringent and cooling, prescribed in dysentery.

Grewia Scabrophylla.—A species of the same *Damaniya* family ; is a remedy for leprosy.

Grewia Asiatica.

This is a plant allied to *Damaniya* and Harman calls it *Hín-Damaniya*. I have not been able to ascertain its correct name. It is called *Parusha* in Sanskrit and is one of the Phalatraya fruit tried of Sanskrit writers.

ජලදර

Corchorus Trilocularis.—Jews' Mallon.

VERNACULAR.—Sinhalese : *Jaladara*. Sanskrit : *Nadika*. Tamil : *Peratti-kirai*.

This is called also *Wanuk* in Sinhalese.

PROPERTIES AND USES.—This is used medicinally by the Hindus. The plant is burnt and reduced to ashes and administered in obstructions of the abdominal viscera. An infusion of this plant is used as a beverage in fevers.

Corchorus olitorius and C. Capsularis are extensively cultivated in Bengal for the sake of the well-known jute fibre, which forms an important article of the commerce of India. Medicinally an infusion of the leaves with coriander and ani-seed is used as a domestic remedy for colic.

GERANIACEÆ NATURAL ORDER.

අඹුලැඹිලිය

Oxalis Coiniculata.—Horned wood sorrel.

VERNACULAR.—Sinhalese : *Embulembiliya*. Sanskrit : *Amlalonika*. Tamil : *Puliyarai*.

PROPERTIES AND USES.—It is regarded as a tonic and stomachic. The fresh juice is given to remove the effects of intoxication from datura. It is also prescribed in dysentery and prolapse of the rectum.

Dr. Dutt says that Chakkradatta recommends the following ghrita for dysentery, piles, prolapse of the rectum and difficult micturition.

Take of :—Clarified butter—Cow ghee, four seers.

Fresh juice of *Embulembiliya*—Oxalis Corniculata, four seers.

Its leaves reduced to a paste, one seer.

Prepare a ghrita in the usual way.

The other plants of this order not mentioned in Sanskrit *Nigandus*, but occasionally used medicinally, are :

Biophytum Sensitivum—*Gas-nidikumba* (ගස්නිදිකුම්බ).
Impaticus repens—*Gal-demta* (ගල්දෙමඩ).
Hydrocera Augustifolia—*Diya-Kúdalu* (දිය කුඩලු).
Averrhoa Carambola—*Karamba* (කරඹ).
Averrhoa Bilimbi—*Bilin* (බිලින්).

PROPERTIES AND USES.—The last two are used for pickles, preserves and in native cookery. *Bilin* fruit smashed is a domestic remedy for whitlow ; it is tied over the finger to relieve pain. These are plants introduced to the Mid-East by the Portuguese from Moluccas and other islands in the Indian Archipelago.

LINEÆ NATURAL ORDER.

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Linum Usitatissimum.—Common flax.*

VERNACULAR.—Sinhalese : *Hana.* Sanskrit : *Atasi.* Tamil : *Alishivirai.*

PROPERTIES AND USES.—The parts used medicinally are the seeds and the oil extracted from them. These do not appear to have been used by the ancient Hindus medicinally. The oil is much used for various purposes but chiefly to dissolve paints. The fibre is used in the manufacture of what are called linen clothes and the seeds are used as food for cattle ; and the linseed meal makes one of the best materials for poultices and was largely used in Western practice of surgery in the days when poultices were the usual dressing to begin with for foul ulcers and to promote suppuration of abscesses. The oil, mixed with honey, treacle or syrup, is recommended for painters, a colic and for cough ; mixed with lime water it makes a good dressing for burns. The linseed oil is frequently used as the basic drug for our carron oil applied to burns and scalds.

බටකිරිල්ල

Erythroxylon Lucidum.

VERNACULAR.—Sinhalese : *Batakirilla.* Tamil : *Chiruchenatti.*

PROPERTIES AND USES.—Erythroxylon Lucidum is the *Batakirilla* of the Sinhalese and is about the best and most effective anthelmintic they have. It is given in various forms, but the usual mode is to mix the powder of dry leaves with flour and honey and made into what is termed *Aggala* (a sort of bolus) which is given to children to eat. It is not always reliable and of late natives give their children santonine. It is my belief that an equally satisfactory vermifuge might be found in the active principle of this plant if isolated.

Erythroxylon Monogynum.—I have not been able to ascertain the Sinhalese name of this plant. Tamils call it *Chemmanatti*, *Tevatarum* or *Devadarum*, on account of the fragrant smell of its wood and leaves ; it is also for the same reason known as Bastard Cedar or Sandal. The leaves are eaten and said to allay hunger. They were largely consumed by the starving people of the Madras Presidency during the famine in 1877. In that respect they resemble E. Coca, and it was thought at one time that they contained an anæsthetic alkaloid like that obtained from that plant. However, on analysis no such alkaloid was found in its leaves or wood and only a bitter tonic principle which strengthens people. The plant grows abundantly both in Ceylon and some parts of India. An oil extracted from the wood of this tree is used for preserving books and also fishing nets. Dr. Watts says that this is called *Dummala* in Ceylon ; but the true *Dummala* so far as I know is a gum resin which

* Dr. Trimen gives *Hana* as Crotalaria Juncea, which is a plant of the natural Leguminoral.

like coal is found buried in lumps underground in some parts of Ceylon. The oil resembles tar and is extracted from the wood which is cut into small pieces, and packed into a narrow-mouthed earthen pot inverted over another. On applying fire around them, the oil collects in the lower pot.

ZYGOPHYLLEÆ NATURAL ORDER.

ඉකිරි ගොකටු

Tribulus Terestris.—Small caltrops.

VERNACULAR.—Sinhalese : *Gokatu.* Sanskrit : *Gokshura.* Tamil : *Nerunji.*

PROPERTIES AND USES.—The fruit and the root are used medicinally. They are regarded as cooling, diuretic, tonic and aphrodisiac. A decoction prepared of this and Nermuli Hygrophila Spinosa is an excellent diuretic in dropsy arising from heart disease and in all cases where the kidneys are not extensively damaged. *Gokshura* (*Gokatu*) fruit with *Silajatu* and impure carbonate of potash is highly recommended for painful micturition. For impotence caused by malpractices and in old age a preparation made of equal parts of *Gokatu* and *tala* (Sesamum seed) with goat milk is recommended in old works of medicine, but I have not seen it used by Vedarálas nor have I had any opportunity to give it a trial. But as the disease is not an uncommon one it is worth giving it a trial.

This is an ingredient in the *Dasamula* or ten root decoction—the last resort of native Vedarálas in severe cases of illness of any sort, especially in continued and puerperal fever. It is composed of the following drugs :—

Desmodium Gangeticum—salaparni—*Aswenna.*
Uraria Lagopoides—prisniparni—*Puswenna.*
Solanum Jacquinii—kantakari—*Katuwel-batu.*
Solanum Indicum—vrihati—*Ela-batu.*
Tribulus Terrestris—gokshura—*Gokatu.*
Aegle Marmelos—vilva—*Beli.*
Calosanthes Indica—syonika—*Totila.*
Gmelina Arborea—gambhari—*Et-dematta.*
Stereospermum Suaveolens—patala—*Palol.*
Premna Spinosa—ganikarika—*Midi.*

It should be mentioned here that Uraria Lagopoides is not found in Ceylon and that the native medical men use Aerualanata (*Polkudupala*) in its place and for Desmodium Gangeticum (*Aswenna*), which is Alyssicarpus Vaginalis according to Dr. Trimen.

Fagonia Arabica.

VERNACULAR.—Sanskrit : *Dusparsha.*

PROPERTIES AND USES.—This plant is mentioned here as the Sanskrit name of it is *Dusparsha*, which means " painful to the touch ", whilst the signification of *Duralabha* is : " difficult to be got hold of ", and one may be misused for the other. It is used and has a great reputation in some parts of India as a suppurative for abscesses from thorns. The juice is also used as a cooling gargle for sore mouth in stomatitis. This is not in the list of Ceylon plants nor have I been able to ascertain its Sinhalese or Tamil name.

RUTACEÆ NATURAL ORDER.

අරැද

Ruta Graveolens.—Garden Rue.

VERNACULAR.—Sinhalese : *Arúda.* Sanskrit : *Aruda.* Tamil : *Arvada.*

HABITAT.—Cultivated in Ceylon.

PROPERTIES AND USES.—This is the common Rue, and is a native of Europe introduced to the East with all the superstitions attached to it in the Middle Ages. Rue was then used like an amulet as a protection against poison and as a preventive of epilepsy and vertigo. It was said to be a protection against sorcery and was termed *aňganapriya*—a herb dear to women. Among the people in the East the leaves are burnt and children fumigated when suffering from catarrh and a common practice among native mothers is to heat a few leaves crushed in a teaspoonful of oil and rub over the chest and forehead for infantile catarrh. It is a resolvent, a diuretic and an irritant both externally and internally, and is used for criminal abortion. Western practitioners regard this as a stimulant anti-spasmodic and emmenagogue ; it is also regarded as anti-aphrodisiac—a rare quality in a drug, but the effect on females is said to be quite the reverse.

කටුකීණ

Zanthoxylum Hamiétoneanum.
Do Budrunga.

VERNACULAR.—Sinhalese : *Katukína* Sanskrit : *Tumburu.* Tamil : *Rhetsa maram.*

Several species are included under this term. *Tumburu* (Sanskrit). The seeds, or rather the fruits, resemble coriander and are hardly distinguished from them.

PROPERTIES AND USES.—Stimulant and astringent, useful in dyspepsia.

Zanthoxylum Tetraspermum is found in Ceylon.

PROPERTIES AND USES.—Stimulant, astringent and digestive. Prescribed in dyspepsia and some forms of diarrhœa.

කුඹු මිරිස්

Toddalia Aculeata.

VERNACULAR.—Sinhalese : *Kudumiris.* Sanskrit : *Kanchana* or *Dhana.* Tamil : *Milakaram.*

HABITAT.—Found in Ceylon.

PROPERTIES AND USES.—The root and oil pounded together and applied externally for rheumatic swellings. Is of great value in constitutional debility and in convalescence after exhausting diseases. The fruit makes an excellent pickle and the root is given in decoction, especially for intermittent fever.

වෙල්ලන්ගිරිය

Paramignya Monophylla.

VERNACULAR.—Sinhalese : *Wellangiriya.* Sanskrit : *Karuwageti.*(?) Tamil : *Katillinsechan.*

PROPERTIES AND USES.—This is used as a diuretic and alterative. It is given to cattle suffering from bloody urine.

යකිනාරන්

Atlantia Zeylanica.

VERNACULAR.—Sinhalese : *Yakinaran.* Tamil : *Pekurundu.*

පඹුරු

Atlantia Missionis.

VERNACULAR.—Sinhalese : *Pamburu.* Tamil : *Kurundu.*

PROPERTIES AND USES.—The leaf juice of these two plants, especially of the first, is used for administration of pills and is an empirical remedy to prevent attacks of ague.

රට අරුඳ

Peganum Harmala.—Syrian Rue.

VERNACULAR.—Sinhalese : *Rata-arúda.* Sanskrit : *Harmala.* Tamil : *Shimai Azhavanaiverai.*

PROPERTIES AND USES.—This is mentioned by Dr. Dymock as a very highly thought of remedy for use as a substitute for ergot. It is a foreign plant and called by the South Indian Tamils *Shimai-Azha-Vanai-Verai.* It is not among Dr. Trimen's list of Ceylon plants.

Citrus.—*Dodan.*

There are several species of citrus used in native medicine. They are mentioned by Dr. Dymock to be the following :—

Jambira, Citrus Acida Roxb.
Limpaka ,, ,, ,,
Nibuka ,, ,, ,,
Vijapura ,, ,, ,,
Madhukarkatika ,, ,,
Matalunga Citrus Medica.
Karuna ,, ,,
Nagaranga Citrus Aurantium or Jambira.

There are several varieties, such as *Hín-náran, Jama-náran,* etc., the juice of which is very frequently used in native medicine. In some instances, for cases of fever and derangement of the bowels, unripe limes with the seeds are used, whilst a decoction, which I have seen used for dissolving pills for acute diarrhœa, is made with the whole unripe fruit including the seeds. Lime juice is also used by native medical men for what is called purifying mineral ores. This is done by soaking them in lime juice for three or more days as directed in their books. The juice is also used for grinding some of their stock pills. For rheumatism, sciatica, pleurodynia and pains in the hip joints, the juice is recommended to be taken mixed with honey and rocksalt (impure carbonate of potash). Lime juice is also regarded as an antidote to snake poison, especially for cobra poison. The root of *Lap-náran* (matalanga) is given for fever in combination with other drugs, as in the following decoction :—

Take of :—Lapnáran root—Matalanga.
Ginger—Inguru.
Embilic myrobalan—Nelli—Long Pepper root.

Make a decoction in the usual way and administer with rocksalt.

බෙලි

Aegle Marmelos.

Vernacular.—Sinhalese : *Beli.* Sanskrit : *Bilva.* Tamil : *Vilva.*

Properties and Uses.—This tree is considered sacred to Siva and the leaves are used by his votaries in their religious festivals and ceremonies. The parts used in medicine are chiefly the root and the fruit. Leaves are sometimes boiled and used for fomenting inflammatory swellings and also for bathing puerperal women. *Beli* (*Bilva*) is an ingredient in many decoctions for diarrhœa and dysentery and various other complaints. The half ripe fruit is regarded as an astringent, digestive, and stomachic, and is prescribed in dysentery and diarrhœa. The root bark is regarded as a corrector of deranged air (*wáta*) and is prescribed in cases of melancholia, heart disease and fever. It is also an ingredient in the *dasamul* decoction. (See Tribulus Terrestris.)

The fresh juice of the leaves is prescribed in some medical works to be given with honey as a febrifuge and laxative, but at present they are seldom used as such. The root is given with other drugs for fever and dysentery. In some parts of India half ripe fruit and some curd with roasted rice is given for piles. Of the following decoctions the first is for fever and the other for dysentery, containing *beli* root in one and the half ripe fruit pulp in the other respectively.

I.

Take of :—Inguru—Ginger.
Suduhandun—White Sandalwood.
Upulkola or Tebu—Costus Speciosus.
Beḷimul—Root of Aegle marmelos.
Mí—Bassia Longifolia.
Dévadára—Cedrus Longifolia. Vel Deodora.

Make a decoction in the usual way. Half a tea-cup for a dose.

II.

Take of :—Gammiris—Black pepper.
Kaluduru—Nigella Sativum.
Malita—Woodfordia Floribunda.
Belimada—Pulp of half ripe Beli fruit.
Inguru—Ginger.

Make a decoction in the usual way. Half a tea-cup for a dose.

The dried pulp, called *Bilva Pishaka*, is given with treacle in chronic and sub-acute dysentery. In the dysentery of children the following decoction is recommended :—

Take of :—Dried pulp of Aegle marmelos.
Gajatippili fruits—Pothos officinalis.
Root of Pavonia Odorata—Hirwera or Suganda Bala.
Flowers of Woodfordia Floribunda—Malita or Dhataki.
Bark of Symplocos Racemosa—Lotsumbulu.

Take equal parts, make a decoction in the usual way.

In gastric irritability of children with diarrhœa a decoction of the Beli root with fried Rue is given. For thirst in severe cases I have frequently used, with satisfactory results, an infusion of Beli root and roasted paddy (*Vilanda*) with sugar *ad libitum*.

දිවුල්

Feronia Elephantum.—Wood apple.

VERNACULAR.—Sinhalese : *Diwul.* Sanskrit : *Kapittha.* Tamil *Nilavilam.*

PROPERTIES AND USES.—The properties and uses of Feronia Elephantum are very similar to those of Aegle marmelos. The half-ripe fruit is very astringent and is prescribed in cases of dysentery to be taken with honey.

The leaves are carminative and aromatic. The ripe fruit is given in severe throat troubles and affections of the mouth. The pulp of the fruit is edible and is eaten by the natives and a sort of sherbet is also prepared with it and taken as a cooling drink. A *chúrna* called *Kapittha Ashtaka chúrna* for chronic dysentery and diarrhœa is made with unripe fruit, and the following are its ingredients :

Take of :—Pulp of unripe fruit eight parts.
Sugar six parts.
Pomegranate juice—Delumishma.
Tamarind pulp (ripe)—Siyambalá.
Beli fruit—Belimada.
Woodfordia Floribunda—Malita, each three parts.
Black pepper—Gammiris.
Cummin seeds—Duru (white).
Coriander—Kottamalli.
Long pepper root—Tippili.
Root of Pavonia Odorata—Suganda Bala—Ranwan bevila
Sonchal salt (impure carbonate of potash)—Sahindalunu.
Cinnamon—Kurundu.
Cardamon—Ensál.
Cinnamónum—Tamalá—Tejapatra.
Mesua Ferrea—Nágakésara.
Ginger—Inguru.
Plumbago Rosea—Ratnitol root, each one part.
Asamodagan—Carum Roxburghianum, and Long Pepper each three parts.

Powder and mix. Dose about a drachm. The ripe fruit is given mixed with honey in chronic dysentery and diarrhœa with loss of appetite. This is found very useful to form motions after a prolonged attack of dysentery.

කරඹිංච

Murraya Koenigil.

VERNACULAR.—Sinhalese : *Karapincha.* Sanskrit : *Saurabhi Nimba* Tamil : *Kamveppilai.*

PROPERTIES AND USES.—Several Sanskrit names are given for *Karapincha* or *Karambebiya*, one of which, *Katphala*, is more often interpreted by Vedarálas as *Et-demata* than as *Karapincha.* This is regarded both as carminative and astringent. *Katphala* (*Karapincha*) is a good remedy for dysentery at the outset. Roasted leaves are given for vomiting.

A Congee made with leaf stalks is an effective remedy for dysentery. Leaves are very largely used as a condiment by natives in their curries.

අංකෙන්ද

Acronychea Laurifolia.

VERNACULAR.—Sinhalese : *Ankenda.*

PROPERTIES AND USES.—The whole plant when bruised has a warm terebinthinate scent. The bark is used as an application to sores and ulcers.

The following plants of this order are also said to be used medicinally. apparently empirically, for different ailments, but I have not been able to gather any further information with regard to them.

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Euodia Roxburghiana.

VERNACULAR.—Sinhalese : *Lunu Ankenda.*

දොඩම් පනා

Glycosmis Pentaphylla.

VERNACULAR.—Sinhalese : *Dodanpana.* Tamil : *Kulapannai.*

වල් කරපිංච්

Micromelum Pubescens.

VERNACULAR.—Sinhalese : *Walkarapincha.* Tamil : *Kakaipalai.*

මීගොන් කරපිංච

Clausena Indica.

VERNACULAR.—Sinhalese : *Migon Karapincha.* Tamil : *Purankai nari pannai.*

SIMARUBACEÆ NATURAL ORDER.

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Samadera Indica.

VERNACULAR.—Sinhalese : *Samadará.* Sanskrit : *Lokhandi.* Tamil : *Niepa.*

PROPERTIES AND USES.—The bark of this tree is a bitter tonic and a febrifuge. It is very much like Quassia and is a good substitute for it. The late Dr. Ondatjie brought it to the notice of the medical profession in Ceylon for that purpose, but it was soon forgotten and did not come into any use as a medicine with Western practitioners in Ceylon, but it is used in some hospitals in India as a substitute for Quassia and as a

vehicle for the administration of various remedies for fever. It is used as an ingredient in some of the decoctions of our Vedarálas for fever; like Quassia and Calumba, it has no tannin and mixes well with preparations of iron.

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Balanites Roxburghil.

VERNACULAR.—Sinhalese: *Ingudi*, Sanskrit: *Ingudi, Tapastaru.* Tamil: *Nanjundi.*

PROPERTIES AND USES.—This plant is not found in Ceylon and, I believe, the dried fruit is imported from India and used by the Vedarálas, who call it by the same Sanskrit name *Ingudi.* In Senegambia the leaves are used as a vermifuge and the fruit as a purgative. The tree is called *Tapastaru* for the reason that an oil prepared from the seeds is used by the Hindus in the ceremony called *Guru-upavasam*, which is the initiation of a young Hindu by a spiritual guide in the studies to be followed by him. The leaves are the *Hingu-patri* of the modern Sanskrit writers, but the true *Hingu-patri* are the leaves of the Asafœtida tree. This is also called *welangune.*

කුඹලු වල්බිලින්

Ailanthus Excelsia Vel Malabarica.

VERNACULAR.—Sinhalese: *Kumbalu Walbilin.* Sanskrit: *Majala Tapastaru.* Tamil: *Perumaram.*

Bark and leaves are used in Bengal for debility after childbirth.

Ailanthus Malabarica.—A variety of the above.

Used as a febrifuge and tonic. These two plants are the varieties of one and the same species.

OCHINACEÆ NATURAL ORDER.

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Ochina Squamosa and **Ochina Wightiana** are called in Sinhalese *Mal-kira* and *Bó-kira* respectively and in Tamil *Chilanti* and *Kat-kari.* They are said to be used medicinally, but I have not seen them mentioned as such in any of the native medical works that I have read.

BURSERACEÆ NATURAL ORDER.

ගුගුළු

Balsamodendron.—Indian Bdellium.
Frankincense.—Kattakumunjal.
Balsamodendron Mukul.—Gum Gugul.

VERNACULAR.—Sinhalese : *Gugul.* Sanskrit : *Guggulu.* Tamil : *Vellaippolam.*

PROPERTIES AND USES.—There are several varieties of Balsamodendron Mukul derived from various sources and included under the general term Frankincense, and used largely for fumigating sick rooms, at religious ceremonies and deodorizing purposes generally, before carbolic acid and other disinfectants of the present day were discovered.

Balsamodendron Mukul is a tree growing in Persia and other neighbouring countries. *Gugul* or *Gugulu* in Sanskrit is a gum resin exuding from the tree. It is collected and imported to India and other countries from its native habitat, Persia. It is called Indian Bdellium and is used medicinally, in combination with other drugs, for various diseases, such as rheumatism and catarrhal affections. It has been lately introduced into British pharmacopœia and a preparation of Tincture Mukul is now available for use by our practitioners. The following are some of the compound preparations in which *Gugul* is an ingredient. It is given chiefly in chronic ailments. *Yogaraja Guggulu, Vatari Rasa, Kaisara Guggulu, Sadanga Guggulu* (Dutt) are some of the preparations in which *guggulu* is an ingredient.

Boswellia Serrafa. Sanskrit : *Sallaki*—a plant allied to B. Mukul.

කැකුණ

Canarlum Zeylanicum.

VERNACULAR.—Sinhalese : *Kekuna.* Tamil : *Pakkilipal.*

PROPERTIES AND USES.—An oil extracted from the kernel is used by poorer classes of natives as lamp oil and is occasionally used in the preparation of medicinal oils.

MELIACEÆ NATURAL ORDER.

කොහොඹ : කොසඹ

Azadirachta Indica.—Margosa tree or Indian Lilac.

VERNACULAR.—Sinhalese : *Kohomba.* Sanskrit : *Nimba.* Tamil : *Vembu, Veppan.*

PROPERTIES AND USES.—This is the well-known margosa or Nim-tree of the East and has been used medicinally from the remotest times. It grows in almost every part of the Island, but is largely found in the Northern Province. The root, bark, leaves and the oil of the seeds and flowers are all used medicinally. It is regarded as an antiseptic, astringent and a tonic, and is given frequently in decoctions for fever.

Here is a very useful decoction for fever with *Kohomba* (margosa) :—

Take of :—Margosa bark.
Coriander.
Dummella or Momordica Dioica.
Rasakinda—Tinospora Cordifolia.
Ginger—Inguru.
Kalánduru—Cyperus Rotundus.
Three Myrobalans—Tippal—equal parts.

Make a decoction in the usual way. Dose:—Half a tea-cup twice a day.

Azadclarrachta Ghrita is made of five bitters :

Momordica Dioica—Dummella.
Solanum Jacquini—Katuwel-batu.
Adatoda Vesica—Van-epala.
Rasakinda—Tinospora Cordifolia.
Kohomba—Margosa.

Add a swig of three Myrobalans—Tippal in the form of a paste. *Kohomba-tel*, extracted from the seeds, is an indispensable article in the lying-in-rooms of native women. A dose of the oil is given internally to the mother soon after delivery of the child and the oil is applied to the parts, and the lying-in-room is fumigated daily with it. I have seen hundreds of instances in which this procedure was adopted and the impression left in my mind is that it acts as a powerful and effective antiseptic. Thus only could the comparatively very small number of puerperal fever cases we meet with in native women after confinement be explained, considering the utter want of cleanliness on the part of native midwives. Even in cases of instrumental delivery, after prolonged ineffectual labour pains and with lacerations of the parts, cases of severe puerperal fever are comparatively few. It is very seldom that among women of poorer classes, their friends would allow European treatment in such cases and yet without any douching or employment of antiseptics they make very satisfactory progress. Even if puerperal fever sets in, as it does sometimes, the mortality is not very high according to my experience.

The bark and leaves are largely used in the treatment of skin diseases of every sort. A very useful wash for eczema is an infusion of Margosa, *Lunuwila* (Herpestis Monieria), *Siressa* (Vitis Quadrangularis) and *Kawàdu Kekiri* leaves (Zehneria Hastata).*

ලුණුමිදෙල්ල

Mella Azederach.—The Persian lilac.

Vernacular.—Sinhalese : *Lunumidella.* Sanskrit : *Mahanimbha Hemadruma.* Tamil: *Malai Veppan.*

* Whight says, "The leaves beaten to a pulp and externally applied acts like a charm in removing the most intractable forms of Psora and other pustular eruptions of the skin." The efficacy of margosa oil in skin diseases is regarded as being due to the presence of sulphur organically combined.

PROPERTIES AND USES.—It is used as a diuretic, antilithic, anthelmintic and emmenagogue. The flowers and leaves are applied to relieve nervous headaches. A poultice of the leaves is an effective application to the head to kill lice ; they are also used to cure itch and other affections of the skin.

බින් කොහොඹ

Munronia Pumila. This is a plant of the natural order Meliaceæ, called *Bin Kohomba* (Sinhalese) by Dr. Trimen, and should not be confounded with *Bunimba* (Sanskrit), which is also termed *Bin Kohomba* and identified by Dr. Dymock, Dr. Dutt and others as Ophelia Chirata or Swertia Chirata.

රෝහන

Soymida Febrifuge, called *Róhana* in Sanskrit, is similar in its properties to *Walsúra* and is prescribed in cases of fever. The Tamil name is *Shemmaram* according to Dr. Dymock, who says it is an useful astringent tonic.

කිරිකොන්

Walsura Piscidia.

VERNACULAR.—Sinhalese : *Kiri-kon.* Sanskrit : *Walsura.* Tamil : *Walsura* and *Chadawakka.*

PROPERTIES AND USES.—The bark is regarded as a powerful emmenagogue. It also acts as an emetic. An ointment prepared with its fruit is used to cure itch.

සිඟුල්

Amoor Rohituka.

VERNACULAR.—Sinhalese : *Hingul.* Sanskrit : *Rohituka Rohini.* Tamil : *Rakta Rohita.*

PROPERTIES AND USES.—This is regarded as a remedy for enlarged glands, spleen and liver, and also against corpulence. It is thought to be of peculiar efficacy in enlarged spleen ; hence it has the Sanskrit names of *Plihaghna*—spleen destroyer and *Plihashatru*—enemy of the spleen. This plant grows in Ceylon and is well worth a trial in enlarged spleen—an affection very commonly met with in many people in certain parts of the Island after repeated attacks of malarial fever. The fruit of *Rohini* or *Hingul* is a purgative and the bark is astringent.

පුවඟු

Aglaia Roxburghiana.

VERNACULAR.—Sinhalese : *Puwangu.* Sanskrit : *Priyangu.* Tamil : *Kannakompu.*

PROPERTIES AND USES.—This is said to be cooling and astringent and useful in febrile and inflammatory affections. This is a drug for which I think a wrong plant is used by our Vedarálas. They use Myristica Horsefieldia, the properties and uses of which are quite different. The description given of *Priyangu* in Sanskrit books is quite poetical and might be quoted here as given by Dr. Dymock in his *Pharmacographia Indica* : "Like a slender maiden of golden complexion, elegant, graceful, a fruit-bearing tree with drooping branches." This description is so real that the botanists have given to the genus the name of Aglai, signifying "Bright one". What the Vedarálas use for *Priyangu* is Ruk Myristica Horsefieldia, to which this description of the Sanskrit writers does not apply at all ; and, moreover, all the native medical men in India invariably use Aglaia for *Priyangu*. Aglaia is also found growing in Ceylon, and therefore it is difficult to say why Vedarálas should use Ruk for *Priyangu*, unless it were through sheer lack of any knowledge of botany.

CELASTRINEÆ NATURAL ORDER.

එඹුඵ : එඵ

Celastris Paniculata.

VERNACULAR.—Sinhalese : *Duhudu, Duduwel.* Sanskrit : *Jyótishmatí.* Tamil : *Atiparicham.*

PROPERTIES AND USES.—This is called by Sanskrit writers *Vanhiruchi Kanguni*, and *Jyótishmatí*, and is supposed to strengthen the memory and thinking faculties ; for this purpose the oil extracted from the seed is applied to the head and is also given internally.

It is largely used as a hair oil scent by students attending schools and colleges in India. There is a regular treatise, *Jyótishmatí Kalpa*, dealing with the uses of this oil. It is prescribed in rheumatism, gout, paralysis, leprosy, and other disorders, and is used both externally and internally in diseases which are supposed to be caused by "cold humours". The seed is also given internally, and the mode of administering it is by commencing with a dose of one seed and increasing by one daily until thirty are taken, and then, for another thirty days, reducing the dose by a seed a day. Leaf juice is given as an antidote to opium smoking.

කොකුම්

Kokuna Zeylanicum.

VERNACULAR.—Sinhalese : *Kokum.*

PROPERTIES AND USES.—The powdered bark is of a bright yellow and is mixed with water and made into a paste and dried in the sun and formed into flat pieces, which are largely used by native women like soap for cleansing the body in bathing. It has a fine smell and makes the skin smooth and fine. This is called *kila* or *kunkuma* in Sanskrit.

හින් හිඹුටු වැල්

Salacia Prinoides.

VERNACULAR.—Sinhalese : *Hínhimbutuwel.* Sanskrit : *Kushan.*

කොතලා හිඹුටු වැල්

Salacia Reticulata.

VERNACULAR.—Sinhalese : *Kotaláhimbutuwel.* Sanskrit : *Kinjalaka.*

HABITAT.—Common in the low-country and in the drier parts of the Island.

PROPERTIES AND USES.—*Kotaláhimbutu* is very frequently used to allay thirst in cases of diabetes. An infusion of the roots is very useful for that purpose. I have seen that the administration of a decoction of the root had a very marked effect in a case of constant micturition attended with hæmaturia, after all the usual remedies both native and Western had failed to effect a cure. One case is not sufficient to form an opinion as to the value of a drug in any disease, but it is worth while giving it further trial in like cases.

නෙරළු

Elaeodendron Glaucum.

VERNACULAR.—Sinhalese : *Neralu.* Sanskrit : *Bhutapála.* Tamil : *Chellupamaram, Piyari.*

PROPERTIES AND USES.—Parts used are bark and leaves. The leaves are burnt and the smoke used to rouse hysterical women who are supposed to be under demoniacal possession, and hence it is called *Bhuta-pála.* The leaves, rubbed into a paste, are supposed to remove every sort of swelling. It is also regarded as an antidote to snake poison. Many natives still believe that diseases like hysteria are caused by evil spirits.

RHAMNACÆ NATURAL ORDER.

ඩබර, මසන්

Zizyphus Jujuba.—The Jujuba fruit.
Do Vulgaris.

VERNACULAR.—Sinhalese : *Debara, Masan.* Sanskrit : *Vadari, Badari.* Tamil : *Ilantai.*

PROPERTIES AND USES.—These are very frequently used in native medicine. The parts used are the dried fruit and the bark. They are regarded as astringent.

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Zizyphus Oenoplia.

VERNACULAR.—Sinhalese : *Hín-eraminiyá.* Tamil : *Perilantai-churai.*

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Zizyphus Napeca.

VERNACULAR.—Sinhalese : *Yak-eraminiyá.*

මහ එරමිණියා

Zizyphus Rugosa.

VERNACULAR.—Sinhalese : *Maha-eraminiyá.* Tamil : *Churai.*

PROPERTIES AND USES.—These varieties of *eraminiyá* are similar to those of Z. Jujuba. The bark of the *Hín-eraminiyá-wel* is very astringent and is given in cases of dysentery.

Rhamnus Wightii.—This is a plant used in some parts of India for its astringent qualities and called *Rakta-Rohida,* a name which, however, properly belongs to *Amoor Rohituka* (Rhamrues Cohihtii). It is regarded as an astringent and tonic.

තෙල් හිරිය

Columbrina Asiatica.

VERNACULAR.—Sinhalese : *Telhiriya.* Tamil : *Mayir Manikkam.*

PROPERTIES AND USES.—This is astringent and used in decoctions for which an astringent is indicated.

කොබොවක්කා

Ventilago Madras Patana.

VERNACULAR.—Sinhalese : *Kobowakká.* Tamil : *Vampadam.*

PROPERTIES AND USES.—There is a good deal of confusion as to the Sinhalese name *Kobowakká* as was remarked under Cleome Viscosa. Dr. Trimen gives the name of *Yakade-wel* and says in some parts of the Island he heard it named *Patambara* and in others *Wembodi-wel.* Moon, in his catalogue of Ceylon plants, calls it *Kolawakká*—a misprint evidently for *Kobowakká.* This is a high-climbing plant and the bark and stem are used medicinally. It is a powerful astringent used for tanning and the bark is exported to India from Trincomalie to some extent. It is pounded with gingelly oil and applied to itch and other irritant eruptions.

AMPELIDEÆ NATURAL ORDER

මුද්දරප්පලම්

Vitis Vinifera.—The grape vine.

VERNACULAR.—Sinhalese : *Muddrappalam.* Sanskrit : *Mridika* Draksha.* Tamil : *Diraksha Pazham.*

PROPERTIES AND USES.—Grapes have been known in India from the time of Charaka and Susruta. The dried fruit, raisin, is frequently

* "Mridika" is often spelled in Ceylon as "Mudrika".

used in native medicine in combination with other drugs and is an ingredient in several *ghritas*, *churnas*, confections and other preparations used in native medicine. It is also frequently prescribed in conjunction with other drugs administered for fever and various diseases. An *arishta* or a medical wine prepared with raisins in combination with other drugs is used in cough, phthisis, difficult breathing and hoarseness. It is directed to be prepared as follows :

Take of :—Raisins, dried, six seers ; water, one hundred and twenty-eight seers ; boil them down till reduced to a fourth and strain. To the strained decoction add twenty-five seers of treacle ; also eight tolas or phalams of each of the following drugs in the form of powder :

Vitis Vinifera—Muddrappalam.
Cinnamomum Zeylanicus—Kurundu.
Cinnamomum Tamala—Tejapatra.
Mesua Ferrea—Nagakesaru.
Aglaia Rox-Burghiana—Puwangu.
Piper Nigrum—Gammiris.
Piper Longum—Tippili.
Ribes Emblia—Walangasál.

හිරැස්ස : සිරැස්ස

Vitis Quadrangularis.

VERNACULAR.—Sinhalese : *Hiressa, Siressa.* Sanskrit : *Asthi-Sandhana.* Tamil : *Pirandai.*

PROPERTIES AND USES.—This is frequently used in native medicine for various diseases. An infusion with *Hiressa*, Margosa leaves, *Lunuwila* and *Kaudu-kekiri* makes a good wash for affections of the skin.

The young leaves and tender shoots are eaten by the natives as a vegetable. When old they become acrid and seem to possess medicinal properties. The expressed juice of the stem and leaves is a remedy for ottorrhœa and earache and is said to be a good remedy for colic in horses. It is an ingredient in a confection for dysentery, which was mentioned previously under the head of Opium as a very efficacious remedy for dysentery all over the maritime districts.

මුරැළෙ : මුරැළෙ

Leea Sambbucina.

Do Macrophylla.

VERNACULAR.—Sinhalese : *Burulla.* Sanskrit : *Nalagu.*

PROPERTIES AND USES.—These are two allied plants of the same genus Leea. The first is called *Burulla* or *Gurulla* in Sinhalese and is used medicinally at times ; and Macrophyla is called *Dolasa Mudrika* in Sanskrit. Used by natives of India for the cure of guineaworm and obstinate sores. The Sinhalese use the pulp substance enclosed in the stem of *Burulla*, fried in gingelly oil, for burns.

Vitis Pedala is the *Mediya-wel* of the Sinhalese and is called *Godapáda* in Sanskrit, from the fancied resemblance of the leaves to the inguana's foot.

තෝවැල්

Vitis Indica.

VERNACULAR.—Sinhalese : *Tówel* or *Ratabulat-wel.*

Is occasionally used in medicine.

SAPINDACEÆ NATURAL ORDER.

පෙණෙලවැල්

Cardiospermum Halicacabum.

VERNACULAR.—Sinhalese : *Penela-wel.* Sanskrit : *Karnasphota.* Tamil : *Mudukottan.*

PROPERTIES AND USES.—This plant, which is a climbing annual, is also called *Jyotishmati* and *paravata pádi* (pigeon's foot). It is described as emetic, laxative, stomachic and rubefacient, and is prescribed in rheumatism, nervous diseases, piles, etc. The leaves are used in amenorrhœa, and the following prescription is taken from "*Bawaprakasa*"—an Indian work on medicine—with *Wel-penela* as one of the ingredients for that disease :—Impure carbonate of potash (*Sahinda Lunu*), Acorus Calamus (*Vadakaha*), Terminalia Tomentosa root bark (*Hin-kumbuk*) in equal parts and reduced to a paste with milk; a drachm of the compound may be taken as a dose for amenorrhœa The leaves are used externally for painful swellings, rheumatic or traumatic. This is a favourite and very useful remedy with our bone-setters or fracture doctors. I have seen them using it to allay pains in sprains and contusions about the joints with very good results.

The juice of the leaves is also used by our Vedarálas to bring on menses.

The plants of this family, which are used medicinally in the same kind of diseases as *Wel-penela*, are :—

කහ පෙණෙල

Sapindus Lancifolius and **Emarginatus.**

VERNACULAR.—Sinhalese : *Kaha-penela.* Tamil : *Ponnankottai.*

පෙණෙල

S. Trifoliatus.—Soap nut tree.

VERNACULAR.—Sinhalese : *Penela.* Sanskrit : *Phenila, Arushta.* Tamil : *Ponnankottai.*

PROPERTIES AND USES.—This has been used by the Hindus as a detergent from the earliest times and is still used as such in preference to soap, just as soap woorts were formerly used by the people of the West. Medicinally it is regarded as hot and alexipharmic. Four grains in wine cure colic.

It is also given in cases of venomous snake bites.

Other plants of this order that are occasionally empirically used by natives for bruises and such like complaints are :—

වල් කොබෙ

Allophylus Zeylanicus.

VERNACULAR.—Sinhalese : *Walkobo.*

කොබෙ

Allophylus Cobbe.

VERNACULAR.—Sinhalese : *Kobo, Bukobo.* Sanskrit : *Kapolawattha.* Tamil : *Amarai.*

PROPERTIES AND USES.—Tonic Alexipharmic. Fumigations with this are useful in cases of hysteria and it is also an emenagogue. This mixed with Scammony makes a good purgative.

කෝස්

Schleichera Trijuga.

VERNACULAR.—Sinhalese : *Kón.* Tamil : *Púmaram Kula, Pumaram.*

This has an acid fruit which is eaten by natives. The seed yields a fixed oil said to be the original Macasor oil.

මෙර

Nephelium Longanum.

VERNACULAR.—Sinhalese : *Mora.* Sanskrit : *Pilu.* Tamil : *Nurai.*

Similar to the last but sweeter and largely eaten when in season.

ANCARDIACEÆ NATURAL ORDER.

කකුළුසුන්

Rhus Succedanea.

Pistacia Integerrima.—The Galls.

VERNACULAR.—Sinhalese : *Kakulusun.* Sanskrit : *Karkatasringi.* Tamil : *Kakkata Sringi.*

PROPERTIES AND USES.—This is a horn-like excrescence growing on the branches of the Rhus Succedanea and Pistacia Integerrima or Integerifolia, similar to Gall-nuts, and produced on oaks by an insect. This drug is imported to Ceylon from India, brought thither from Asia

Minor or sub-Himalayan regions. *Karkata Sringi* is regarded as a tonic and expectorant prescribed in cases of cough, pthisis, asthma, fever and irritability of the stomach. It is sometimes given by itself and the dose is about twenty grains powdered. The following is a preparation in which *Karkata Sringi* is an ingredient.

Take of :—Karkata Sringi—Rhus Succedanea.
Clerodendron Siphonanthus—Gas-pinna.
Raisins.
Ginger.
Long pepper.
Curcuma Zedoaria—Haran-kaha.

Powder well and mix in equal parts.

Dose.—About a drachm in honey or treacle in dry cough. In catarrhal fever with difficulty of breathing, a powdered compound of equal parts of *Karkata Sringi*, bark of Myrica Sapida (*Katphala*) and long pepper is recommended to be given in thirty grain doses.

Another powder for the same affection is *Karkata Sringi* and long pepper made into a linctus with honey for catarrhal affections of children.

Magnifera Indica.—Mango tree.

Vernacular.—Sinhalese : *Amba*. Sanskrit : *Amra*. Tamil : *Mankai*.

Properties and Uses.—Mango has several Sanskrit names, such as *Amba*, *Chuta*, *Sahakara*, and according to Hindu mythology it is a transformation of Prajapati, the lord of creation. A sprig of mango leaves forms one of the five sprigs *Pancha Pallava* used in Hindu ceremonials. All the parts of the tree are used medicinally. It is described by Hindu writers as the " pride of the garden, the choicest fruit of the fruits of Hindustan." The ripe fruit is laxative and diuretic, the unripe fruit is astringent, and so is the seed kernel which is frequently used as an ingredient in decoction for dysentery. The ripe fruit is largely used to manufacture chutney and the dried fleshy part makes a good pickle, and it is also a favourite table fruit with many people. There are nearly a score of varieties of this met with here. Magnifera Zeylanica or *Etamba* is indigenous to Ceylon.

For chronic eczema, take the juice of the bark, about a seer or two quarts, and put into this a quantity of Chebulic Myrobalan, and keep it for 12 hours. Apply the juice twice a day for two or three days and the disease will disappear entirely by that time. It may also be prepared by adding some water to the juice containing the Myrobalan and boiling it down till all the water is evaporated. The addition of some alum is said to improve the action of the preparation and hasten the cure greatly.

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Ancardinum Occidentale.—The Cashew nut.

VERNACULAR.—Sinhalese : *Kaju.* Sanskrit : *Kajutaka.* Tamil : *Kottai mundiri*

PROPERTIES AND USES.—This is now cultivated more or less all over the Middle East and it is a tree brought thither by the Portuguese from the West Indies, which is its native habitat. It is not mentioned in the old Sanskrit works nor is it a medicinal plant. The nut has a shell which yields an acrid juice which is more or less a vesicant and an irritant.

An oil extracted from the shell is a sort of tar and is destructive to vermin. The kernel is used for making confectionary and is like almond in some respects. The kernel of the tender nuts makes a good and tasty curry. And the juice extracted from the thick torus is refreshing and is given to allay thirst. It is found to be a good remedy in some instances for dyspepsia. The acrid juice and the oil of the shell are used for hoof disease in cattle. Of late I note the kernel is recommended by some Western practitioners of medicine to be eaten by diabetic patients.

සෙන් කොට්ටන්

Semicarpus Anacarium.—Marking nut tree.

VERNACULAR.—Sinhalese : *Senkottan.* Sanskrit : *Bhallataka, Arushkara.* Tamil : *Shenkottai.*

PROPERTIES AND USES.—This is known as the marking nut tree of India. The acrid juice of the nut leaves an indelible dark stain on cotton fabrics and was also used in the olden days by native medical men as a vesicant and a counter-irritant. It is given medicinally in combination with other drugs in various diseases, such as dyspepsia, leprosy, skin disease and nervous disorders.

A preparation called Amrita Bhallataka is given to promote appetite and nutrition and also as a remedy for piles.

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Semicarpus Gardneri.
„ Obscura.
„ Coriacea.

VERNACULAR.—Sinhalese : *Badulla.* Sanskrit : *Bahllataka.*

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Semicarpus Subpeltata.

VERNACULAR.—Sinhalese : *Maha Badulla.*

කළු මිදුල්ල

Semicarpus obovata.

VERNACULAR.—Sinhalese : *Kalu Badulla.*

All these are varieties rather than separate species of the same plant and are similar to *Bhallataka* in their properties and uses. The plant is known in Sinhalese as *Badulla.* It yields an acrid juice, is a great irritant to the skin, and is used for destroying warts. Some plants of this order yield a gum resin containing a large percentage of tannin.

හික්ගස්: හිග්ගස්

Odina Wodier.

VERNACULAR.—Sinhalese : *Hikgas* or *Higgas.* Sanskrit : *Jingini Ajashringi.* Tamil : *Odiya maram.*

PROPERTIES AND USES.—The bark juice is used as a collyrium for sore eyes, hence one of its synonyms, *Netraushadhi.* The bark powdered and mixed with margosa oil, is used as an application for old and incurable ulcers, and, it is said, with very good results.

Buchanania Latifolia.—*Piyala* (පියල) called in Sanskrit *Piala* or *Tapasa-priya*—" dear to hermits "—is a plant of this order. Though not much used by native medical men here, it is used by Indian Kavirajas as a demulcent in cough mixtures and the kernel is used for making sweetmeats. Its Tamil name is *Moreda* and the Sinhalese name *Piyala.* It is like our *Kottamba* (Indian Almond tree), which, however, is Terminalia Catappa and of a different natural order. The Sanskrit name of this is *Kottamba ayana.*

අඹඹුල්ලා

Spondias Magnifera.—Wild mango.

VERNACULAR.—Sinhalese : *Embrella.* Sanskrit : *Amrataka* Tamil : *Ampallai, Marimanchedi.*

PROPERTIES AND USES.—This tree is called in Sanskrit *Adhvaga-bhogya*—"Travellers' delight". The pulp of the fruit is astringent and useful in dyspepsia and is on that account called *Pita-vriksha*—Bile tree. It is also used by the natives as an acid vegetable and made into preserves and pickles.

Pestacia Leulicus, Pestacia Teribeuttus, and Pestacia Vera are three other plants of this order, which yield a gum resin containing a large percentage of tannin. The Terebinth tree was known to the ancient Greeks and is the Alak of the Old Testament. It is called *Mistaka* in India. Is astringent, detergent and alterative.

MORINGEÆ NATURAL ORDER.

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Moringa Pterygosperma.—Horse Radish tree.

VERNACULAR.—Sinhalese : *Murunga.* Sanskrit : *Sobhanjana* Tamil : *Murungai.*

PROPERTIES and USES.—This is called *Danshamula,* Pungent root ; is described as diuretic and astringent and is used in a variety of diseases, both internally and externally. The seeds are said to be stimulant. The bark is given in combination with other drugs in cases of ascites arising from enlarged spleen and liver. The bark juice is used to dissolve pills given for acute diarrhœa and cholera. The bruised bark is applied to the calves in cases of convulsions in children. The root has somewhat the smell of horse radish and has been at times used by some people as a substitute for it. The root bark is given as a decoction with leaves of Rumex Vesicarius, with the addition of black pepper, long pepper and rock salt, in ascites and enlarged spleen.

BROMELEACÆ NATURAL ORDER.

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Ananas Sativa.—Pine apple.

VERNACULAR.—Sinhalese : *Annási.** Tamil : *Anasaphalam.*

PROPERTIES AND USES.—This is a most delicious table fruit used by natives and Europeans alike. Medicinally it is seldom or never used, but the fresh juice is regarded as anti-scorbutic and of late a sort of alcoholic beverage is made with the ripe fruit juice which is supposed to aid digestion.

OLACINEÆ NATURAL ORDER.

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Olax Zevlanica.

VERNACULAR.—Sinhalese : *Mella.*

PROPERTIES AND USES.—This is a small shrub indigenous to Ceylon and is very commonly met with in the low-lying parts of it. It is used very largely by the natives as a salad or *Melluma* (Sinhalese) and *Chundi* (Tamil). For frequent and painful micturition, the leaves are fried with ghee and red onions and eaten, it is said, with excellent results.

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* *Annási* is supposed by some authorities to be a pure Sinhalese word and they try to derive it from *Anna,* food, and *Asi,* sword, because it aids digestion. Goonesekere Modliar)

LEGUMINOSÆ NATURAL ORDER.

නිල් අඳුන්කිරිය

Crotalaria Verrucosa.

VERNACULAR.—Sinhalese : *Nilandunhiriya.* Sanskrit : *Dhavam, Sana-pushpi.* Tamil : *Kilvenlappa.*

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Crotalaria Juncea.

VERNACULAR.—Sinhalese : *Hana.* Sanskrit : *Sana.* Tamil : *Shanal Imappu.*

PROPERTIES AND USES.—The seeds and leaves are used medicinally and are said to be cooling ; a purifier of blood. Given in cases of fever and skin diseases. Crotalaria Verrucosa is called in Sanskrit *Sana-Pushpi* and *Dhavani* and is described in *Nigandus* as bitter and expellent of bile. It is more often used medicinally than Juncea. It is also called in Sanskrit *Ghantarava*, in allusion to the rattling noise made by the seeds in the pod. In the same way the general name Crotalaria is derived from the Greek *Crotalon*—a rattle. The juice of the tender leaves is used both internally and externally for scabies and impetigo. The leaves are also made into a sort of poultice and applied to eruptions of the skin with a tendency to collect matter, so as to clean them before applying curative medicines. The bark yields a fibre which is largely used for the manufacture of fishing nets, ropes, &c., and, according to the instructions of Manu, the Hindu law-giver, the sacred thread of the Kshatriya caste is directed to be made with the fibres of Crotalaria.

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Entada Scandens.—The Gilla nuts.

VERNACULAR.—Sinhalese : *Pus-wel.*

PROPERTIES AND USES.—This is a thick, large climber, remarkable for its long legumes which contain ten to twelve heart-shaped seeds. The kernel of the seed ground down to a paste with honey is applied to the eyes for venomous snake bites and is also said to be used as an emetic.

අසෝක, හෝපළු

Saraca Indica.—The Asoka tree.

VERNACULAR.—Sinhalese : *Asóka, Hopalu Diya-ratmal* or *Diya-ratambala.* Sanskrit : *Asóka.* Tamil : *Ashogan.*

PROPERTIES AND USES.—Asoka tree when in flower, Dr. Roxburgh says, " affords the most glorious sight in the vegetable kindgom". It is connected largely with the mythology of Hindus. It is said that Sita was protected from the importunities of Ravana by an Asoka grove in which she was hidden ; it is also the Anthropogonic tree of the Vaisya

caste and a branch of it is brought to the house at their marriage festivals. The tree is an emblem of love and one of the Sanskrit names, as in the case of *Arúda*, is "*Angana-priva*"—dear to women or the delight of women. One of the many absurd notions entertained by Eastern people is connected with this tree, viz., that when the foot of a woman touches it, it blossoms. As a medicine it is very frequently used by Vedaralas as an astringent, especially for uterine hæmorrhage. The properties of Asoka are purely astringent.

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Glycyrrhiza Clabra.—Liquorice.

VERNACULAR.—Sinhalese : *Welmí.* Sanskrit : *Yashti-Madhukam, Madhuku.* Tamil : *Ati-Maduram.*

PROPERTIES AND USES.—This has been used in medicine from a remote period and is prescribed in inflammatory affections, thirst and hoarseness. It is an ingredient in decoctions for fever, dysentery and many other ailments ; it is also cooling and demulcent. Its chief habitat is Khorasan and other parts of Persia, whence it is exported to other countries.

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Trigonella Fœnum Græcum.

VERNACULAR.—Sinhalese : *Uluwá.* Sanskrit : *Methi.* Tamil : *Vendayam.*

PROPERTIES AND USES.—This is regarded as diuretic, aperient and as an emmenagogue, but it is used more as a condiment than a medicine. An infusion is given to pregnant women to allay "false pains". Aveciana mentions this (Arabic : Santonea) and lupin as remedies for diabetes. Recently a French surgeon in Algeria appears to have tried these in the manner prescribed by the old Arabian physicians and speaks very highly of their great usefulness in arresting the disease and effecting a marvellous improvement in the patients, both reducing sugar and improving their general health, even in a very advanced stage of the disease.

වැල් කහඹිලියා

Alhagi Maurorum.—The Persian Manna tree.

Alhagi Camelorum.—Camel Thorn.

VERNACULAR.—Sinhalese : *Welkahambiliyá.* (See Tregia Involucrata.) Sanskrit : *Yáváso Duralabha.* Tamil : *Janappa.*

PROPERTIES AND USES.—I have not been able to ascertain the Sinhalese name of Alhagi (*Yáváso*). The native medical men use *Welkahambiliyá* (Tregia Involucrata) for *Yáváso*, which I think is wrong, because all the Indian authorities, as well as native medical men there, use Alhagi for *Yáváso*, which produces a manna sold in the Indian

bazaars under the name of *Taranjabin*. Alhagi is now cultivated in India, though originally a native of Persian Khorasan and the countries of Western Asia. Properties and uses of *Yáváso* are described as laxative, diuretic and expectorant. It is frequently prescribed in cases of fever attended with diarrhœa or what the native medical men call *Jwara-atísáraya*. It enters into the composition of many decoctions for various diseases and is an ingredient in the *Dasamula* decoction referred to under Tribulus Terrestris.

Here is a prescription for fever with *Yáváso*.

Take of :—Ginger.
Alhagi—Yáváso (Welkahambiliya).
Oldenlandia Herbacia—Pepiliya.
Aegle Mermelos—Beli.
Cyprus Rotundus—Kalánduru.
Ophelia Swertiana—Bhúnimba.
Tricosanthes Dioica—Dummélla.

Make a decoction in the usual way.

Dose :—Half a tea-cup twice a day.

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Desmodium Trifolis.
Do Heterophyllum.

Vernacular.—Sinhalese : *Maha*-and *Hín-undupiyali*. Sanskrit : *Amalána*. Tamil : *Serupillady*.

These are *Hín-undupiyali* and *Maha-undupiyali* respectively. The first is frequently used in medicine, especially in cases of dysentery. It is called *Serupillady* in Tamil. The leaves are taken by native women after confinement to increase the flow of milk. The juice of the *Hín-undupiyali* leaves are frequently used with other ingredients to dissolve pills. They are called *anupána*, which means, literally, " taken with a drink".

අස්වැන්න

Desmodium Gangeticum.

Vernacular.—Sinhalese : *Aswenna*. Sanskrit : *Sálápárni*.

I have given the name *Aswenna* as the Sinhalese term for this plant, because it is the drug used by Vedarálas for *Sálápárni*, the meaning of which is, having leaves like that of *Sal* (Shorea Robusta). The botanical name of *Aswenna*, however, according to Dr. Trimen, is Allysicarpus Bupleurifolius or Vaginalis, which is also a plant of the same natural order as D. Gangeticum. According to *Saraswati Nigandu* there are several kinds of *Wenna*, of which the chief ones I have grouped together below for convenient reference, though they are of different orders.

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Munwenna.— Phaseolus. Tribolius.
Sanskrit : *Mudge parni.*
Tamil : *Pacchapayaru.*

මස්වැන්න

Maswenna.— Drymoglossum Hetrophyllum.
Sanskrit : *Masa parni ; Masapatri.*

අස්වැන්න

Aswenna.— Desmodium Gangeticum. Allysicarpus, Bupleurifolius.
Sanskrit : *Sálaparni.*

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Puswenna.— Uraria Lagopoides.
Sanskrit : *Prusna parni.*

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Valá or Veli wenna.—Demorphocalyx Glabellus.
Sanskrit : *Hansa pádi.*

මකුළුවැන්න

Makuluwenna.— Hydrocotyle Asiatica.
Sanskrit : *Pruthak parni.*

කිඹුල්වැන්න

Kimbulwenna.— Polygonum Barbatum. P. Tinctora.
Sanskrit : *Swastika.*

According to the author of Clough's dictionary, *Puswenna* is Plectranthus Scutellaroides. Besides the above there is also *Mukunuwenna* (Alternanthera Triandra), which doubtless is *Bemitiriya* of *Saraswati Nigandu* ; and it gives the name of *Brahmi* as one of its synonyms. There is also a small shrub called *Menikwenna* used medicinally. It is the Ionidium Suffruticosum—a plant of the natural order Violaceæ—and is called *Padma Charini* and *Padmakassiya* in Sanskrit, *Oritad-tamarai* in Tamil. It is diuretic and tonic and given as a demulcent in gonorrhœa. In one of the prescriptions given in *Sarasansepe*, *Padma-kassiya* is rendered into Sinhalese by *Menikwenna*. It is not impossible that this is used by Vedarálas for the *Padma Kasta* of the old Sanskrit writers.

PROPERTIES AND USES.—*Aswenna* (*Sálaparni*) is largely used in native medicine in combination with other drugs for many diseases but more so for fevers of all sorts. *Aswenna* and *Puswenna* are both ingredients in the following decoction called *sulupas-mula*, composed of :—

Desmodium Gangeticum—Salaparni—Aswenna.
Uraria Lagopoides—prisniparni—Puswenna.
Solanum Jacquinii—Katuwel-batu.
Do Xanthocarpum—Ela-batu.
Tribulus Terrestris—Gokatu, used in fever and other diseases.

It seems to me that there is a great confusion among the Vedarálas of Ceylon with regard to the use of *Sálaparni* and *Prisniparni*, which are identified by the Indian authorities as Desmodium Gangeticum and Uraria Lagopoides. For these they use *Aswenna* and *Puswenna* which, according to Dr. Trimen, are respectively Allysicarpus Bupleurifolius and Aerua Lanata. But as already remarked Clough's dictionary gives Plectranthus Scutellaroides. Both these drugs enter into the composition of a decoction called *Ashtadasanga*, which is given in cases of *Sannipáta Jwara* (enteric) when accompanied with delirium, and also in cases of Pneumonia.

Uraria Lagopoides.

VERNACULAR.—Sinhalese : *Puswenna*. Sanskrit : *Prisniparni*. Tamil : *Surupilai*.

PROPERTIES AND USES.—It is doubtful whether the native medical men in Ceylon are correct in using *Puswenna*, the botanical name of which is Plectranthus Scutellaroides, for Logopoides, which is the *Prisniparni* of Sanskrit writers ; for Uraria Logopoides is not found growing in Ceylon. It is described as a tonic and anti-catarrhal, but is seldom used alone. This is an ingredient in the *Dasamula* decoction and the *Mahapasmula* decoction referred to under Tribulus Terrestris and Desmodium Gangeticum respectively.

Uraria Picta is a plant allied to Uraria Lagopoides and is also called by the same Sanskrit name, *Prisniparni*. It is supposed by the Hindu physicians to be an antidote to the poison of Echis Carinata but the medicinal properties attributed to this plant are considered by Dr. Dymock and other Indian Pharmocologists to be fanciful. Could this be *Puswenna* (*Prisniparni*), for which Vedarálas have been long using Aerua Lanata or Plectranthus Scutellaroides ? This and two other species of this genus are found in Ceylon. They are U. Hamosa and U. Crinata ; the latter is always found cultivated.

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Cassia Auriculata.

VERNACULAR.—Sinhalese : *Ranawará*. Sanskrit : *Akuli Saradi*. Tamil : *Avirai*.

PROPERTIES AND USES.—This is frequently used in native medicine in diseases of the urinary organs in particular. It is diuretic and is an ingredient in prescriptions for scanty urine and also in cases of consti-

pation of the bowels. Powdered *Ranawará* seed with *Sílájatu* and honey is recommended highly for all cases of diabetes, and the leaves are dried and sold in the bazaars under the name of *Ranawará* tea. Many natives use it in place of real tea.

කවරෑළු

Clitoria Ternatea.—Winged leaved Clitoria.

VERNACULAR.—Sinhalese : *Katarolu.* Sanskrit : *Aparajita Girikarni.* Tamil : *Kakkanankodi.*

PROPERTIES AND USES.—This is regarded as a laxative and diuretic and is generally given in combination with other drugs, but it is also a safe and good purgative by itself and is supposed to be an useful drug in cases of snake bites.

The following is a decoction containing *Aparajita* root :—

Take of :—Clitoria Ternatea—Katarolu.
Pladera Decussata—Goda-mánel.
Baliospermum Montanum—Dhantí, Detta.
Indigofera Tinctoria—Avari.

DOSE.—Half a tea-cup thrice a day. Or rub them into a paste in equal parts and administer with cow's urine in enlargements of the abdominal organs and general anasarca.

වඳුරාළු

Mucuna Pruriens.—The cowhage plant.

VERNACULAR.—Sinhalese : *Wandurumé, Achárìyapalu.* Sanskrit : *Atmagupta.* Tamil : *Punnaikkali.*

PROPERTIES AND USES.—This plant is indigenous to India and Ceylon and has been used medicinally from the time of Susruta, who mentions the seeds as a powerful aphrodisiac and gives the following formula :—

Take the seed of Mucuna Pruriens and the fruit of Tribulus Terrestris and reduce them to powder and administer in drachm doses with milk and sugar.

Another preparation called *Vanari-vati* is prepared as follows and is regarded as one of the best aphrodisiacs :—

Take the seed of Mucuna Pruriens, thirty-two tolas, and boil them down in four sears of cow milk till the latter becomes thick. The seeds should now be decorticated and fried in clarified butter and made into a confection with double their weight of sugar.

DOSE.—About a tola to be taken in boluses, steeped in honey.

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Butea Frondosa.—Bastard oak.

VERNACULAR.—Sinhalese : *Kela.* Sanskrit : *Palasha, Kinsuka.* Tamil : *Purashu, Murukkan-Maram.*

PROPERTIES AND USES.—This is the Dhák tree of India and when in flower Dr. Hooper says : "it is a gorgeous sight". The masses of flowers resemble sheets of flame, their bright orange red petals contrasting brilliantly against the jet black velvety calyx.

The seeds of Butea Frondosa are said to be laxative and anthelmintic and are used both alone and in combination with other drugs for expelling intestinal worms. The gum of the tree is now used as a substitute for Kino. For Pterygeum and opacity of the cornea, the following preparation is recommended :—

Take of :—Red Sandalwood one part.
Rock salt two parts.
Gum of Butea Frondosa four parts.

Powder and mix and apply to the affected part. Powdered seed mixed with lime-juice is an efficacious remedy for what is known as Dhobies itch.

එරබදු

Erythrina Indica.—Coral tree.

VERNACULAR.—Sinhalese : *Erabadu.* Sanskrit : *Parijata* or *Pari jataka Mandara.* Tamil : *Mullu-murukku.*

PROPERTIES AND USES.—This is similar to Butea Frondosa. The plant is concerned with a Hindu mythological episode in which a quarrel between Rakhmini and Satyabhama occurred for the possession of its flowers stolen by Krishna from the garden. Its leaves are said to represent the Hindu triad. The middle leaflet is Vishnu, on his right is Brahma, and Siva is on the left. Its Sinhalese name is *Erabadu* and it is called *Parijata* in Sanskrit and in Tamil *Mullu-murukku.* The juice of *Erabadu* leaves is applied to syphilitic buboes. The bark is febrifuge, its juice kills maggots in foul ulcers. *Gaskela* or *Erabadu* is astringent and is given in combination with other drugs in dysentery and diarrhœa. It is also used both as a lactogogue and an emmenagogue. It is an ingredient in many decoctions.

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Abrus Precatorius.—Jequitry.

VERNACULAR.—Sinhalese : *Olinda.* Sanskrit : *Gunja.*

PROPERTIES AND USES.—Seeds are poisonous, but are used internally in nervous affections in combination with other drugs and also in skin diseases. The seeds are bright red with a dark speck at one end and

used as a weight by jewellers ; an average size seed is about two grains and is called *Rati* by the Hindus. Ninety seeds are equal to a tola—a rupee weight. The weight of a tola is 180 grains.

There is a compound preparation called *Gunjabhadra Rasa*, composed of Olinda seeds, mercury, sulphur and some other drugs, given in cases of Paraplegia. For sciatica, stiffness of the shoulder joint, paralysis, headaches, and other various diseases, seeds reduced to a paste are applied externally. In white leprosy (Leucoderma), a paste composed of Olinda seeds and plumbago roots (*Rat-nitul*) is recommended as a stimulant dressing for baldness. In skin diseases an oil is prepared with *Gunja* (Olinda) seeds, Sesamum seeds, the juice of Wedelia Calendulacea (*Ran-wankikirindiya*) and coconut milk. This oil is also a useful remedy for premature greying of hair.

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Pongamia Glabra.

VERNACULAR.—Sinhalese : *Karanda, Magulkaranda.* Sanskrit : *Karanja.* Tamil : *Punku, Pungam-maram.*

PROPERTIES AND USES.—This is very largely used in native medicine for many diseases, but chiefly in combination with other drugs in dysentery and skin diseases. The root bark is taken for dysentery cases and used as a decoction with other drugs, and an oil extracted from the seeds is used in skin diseases. It is also given as an ingredient in decoctions for fever. An excellent preparation for eczema and other diseases of the skin is the following :—

Take of :—Karanda seeds, Cassia Tora (Chakramarda).
Karavera (Nerium Odorata).
Kottan (Aplotaxis Auriculata).
Make into a paste to be applied over the diseased part.

The following is a very useful decoction for dysentery after the acute stage has passed and which I have often given to my patients with very satisfactory results.

Take of :—Ginger, Kalanduru (Cyperus Rotundus) four kalans, Pongamaia Glabra Karanda each with seven tea-cups (*pata*) of water, one of goat or cow milk, and reduce to one part,—that is till the water is evaporated.

DOSE.—Half the quantity twice a day.

For fever give the following decoction :—

Take of :—Karanda Pongamia Glabra Rat-nitul—Plumbago root.
Lunuwila—Herpestis Monniera.
Velmadata—Rubia Cerdifolia.
Belimul—Aegle marmelos.

Make a decoction in the usual way. For sloughing ulcers a very common and useful remedy is the root bark of this tree. It is pounded well and the ulcer is covered over with two or three layers of it and it soon puts on a healthy aspect.

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Pterocarpus Santalinus.—Red Sandal.

VERNACULAR.—Sinhalese : *Rat-sandun ;* Sanskrit : *Rakta-chandana.* Tamil : *Shen-shandanam.*

PROPERTIES AND USES.—Although this has been classed under *Sandun* by Sanskrit writers it has no smell like the true *Sandun,* a product of the sandalwood tree (Santalinus Alba). However, the medicinal uses of this are similar to it. It is regarded as cooling, astringent and tonic, and enters into the composition of many medicinal preparations. It is also used as a colouring substance.

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Pterocarpus Marsupium.—Indian Kino.

VERNACULAR.—Sinhalese : *Gamalu.* Sanskrit : *Bija.* Tamil ; *Venkai.*

PROPERTIES AND USES.—This was not known to the ancient Hindus as a medicine. The gum which this tree yields is of a blood red colour. It has been collected and exported to Europe in recent years as Indian Kino, or rather as a substitute for Kino Vera, and is now an article of commerce.

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Cassia Fistula.—Indian Laburnum.

VERNACULAR.—Sinhalese : *Ehela.* Sanskrit : *Aragbadha.* Tamil : *Tirukkontai, Mambalakonnai.*

PROPERTIES AND USES.—This is also known in Sanskrit as *Suwarnaka* (golden), in allusion to the colour of its flowers, and *Rajataru,* Royal tree, on account of the beauty of its long racemes of yellow flowers. Properties and uses of this plant are similar to those of Senna. It is likewise regarded as laxative and is given in many diseases where the bowels are required to be moved and is an ingredient in many decoctions for fever, rheumatism and anasarca. For habitual costiveness of the bowels, the leaves are baked and eaten with the usual meals. A prescription like our Cathartic mixture is *Arogbadhadi.* It is composed of Cassia Fistula root, *Ehela* Picrorrhiza Kurroa (*Katukarósana*), Chebulic Myrobalan, long pepper root and tubes of Cyperus Rotundus (*Kalanduru*). Prepare a decoction in the usual way ; for an adult, sixty-four grains of each of the drugs and water eight cups. Reduce to one cup and take one dose or two doses according to the age of the patient.

The other species of Cassia are the following :—

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Cassia Tora.

VERNACULAR.—Sinhalese : *Penitóra.* Sanskrit : *Chakramarda.* Tamil : *Vaduriakarai.*

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Cassia Sophera.

VERNACULAR.—Sinhalese : *Urutóra.* Sanskrit : *Kasamarda.* Tamil : *Takarai.*

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Cassia Alata.

VERNACULAR.—Sinhalese : *Et-tóra.* Sanskrit : *Dadrughna.* Tamil : *Pannan Takarai.*

PROPERTIES AND USES.—The uses of these plants are more or less alike ; they are chiefly used in the treatment of skin diseases and catarrhal affections. Cassia Sophera, as its Sanskrit name implies, is a destroyer of cough, *Chakramarda, Dadrughna,* destroyer of ring-worm (Sinhalese *Dada*) a parasitic skin affection in thick patches. For Pityriasis and Psoriasis, a thick paste prepared with Cassia Sophera, Raphanus Sativus and sulphur in equal parts is recommended. For destroying keloid tumours, a paste prepared with Cassia Tora and Pongamia Glabra (*Karanda*) seeds is spoken of very highly in some of the *Wattoru* books that I have read. The above drugs are to be taken in equal parts with a fourth part of *Rasakinda* (Tinospora Cordifolia) added to it. Rub together into a paste with cow's urine and apply to *dada* patches. The very name *Dadrughna* signifies curer of ring worm, and a common application for these ring worms or other localised skin affections is smashed up leaves of either Cassia Tora or Cassia Alata.

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Tephrosia Purpurea.

VERNACULAR.—Sinhalese : *Pila.* Sanskrit : *Serapunkha* Tamil : *Kolluk-kayvillai.*

PROPERTIES AND USES.—This is considered to be diuretic and deobstruent and useful in cough, tightness of the chest, and kidneys ; and the native medical men recommend it for bilious febrile attacks, and obstructions of the liver, spleen ; a purifier of blood. It is given with Cannabis Indica for bleeding piles. Given with black pepper it is said to be a diuretic and it is used in cases of Gonorrhœa.

Tephrosia Villosa. *Bupila.* A variety of Purpurea is given in dropsy. I have also seen a Conge made with *Pila* leaves given in cases of jaundice with very satisfactory results.

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Indigofera Aspalathoides. Awari.

VERNACULAR.—Sinhalese : *Rat-kohomba.* Tamil : *Chivanarvempu.*

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Indigofera Tinctoria.

VERNACULAR.—Sinhalese : *Nil-awari.* Sanskrit : *Nila.* Tamil : *Nilam.*

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Indigofera Enneaphylla.

VERNACULAR.—Sinhalese : *Bin-awari.* Sanskrit : *Bhui-guli.* Tamil : *Cheppunerinchi.*

These plants of the genus Tinctoria contain more or less colouring matter and possess nearly the same medicinal properties. Indigofera Tinctoria produces the indigo of commerce and is called *Banigbandhu* in Sanskrit, "the traders' friend". It is prescribed in affections of the chest and whooping cough and is regarded as a diuretic. It is prescribed for dropsy in combination with other drugs in enlargement of the spleen or liver, and is also applied to the hypogastrum in the form of a poultice made with smashed up leaves in cases of retention of urine. It is also regarded as an antidote to hydrophobia poison. A wineglassful of juice is given every morning with milk for three days. In addition to the internal administration of the leaf juice, the smashed up leaves are applied to the bites for several days. A tincture made by steeping the leaves in arrack is used to kill lice in the head.

The leaves (Indigofera Aspalathoides) are regarded as demulcent, cooling and alterative. A preparation made with the burnt ashes of this plant is used for removing dandruff from the head.

Indigofera Paucifolia is regarded as antisyphilitic, antiphylogistic and deobstruent, and a decoction of the leaves, stem and root is applied externally as a fomentation to rheumatic swellings. Indigofera Enneaphylla is considered an alterative, antiscorbutic and diuretic.

Indigofera Trifoliata is used as a restorative.

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Arachis Hypogæa.—The ground nut or earth nut.

VERNACULAR.—Sinhalese : *Kirikaju* or *Binkaju.* Sanskrit : *Buchanaka.* Tamil : *Verk-Kadalai.*

PROPERTIES AND USES.—The legumes ripen under the surface of the soil and yield a very useful oil which is known in commerce as nut oil. The oil is edible and may be used as a substitute for olive oil for all purposes. It is purgative and emollient.

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Sesbania Grandiflora.

VERNACULAR.—Sinhalese : *Katuru-murunga.* Sanskrit : *Agasti, Sthula-pushpa.* Tamil : *Agatti.*

PROPERTIES AND USES.—In Sanskrit this is termed *Agasti* after the great sage and civilizer of South India whose works on various subjects, including one on medicine, are held in great veneration by the Tamils of all classes. The flowers are sacred to Siva. The leaves are considered as a very useful remedy for sores, and one of the Sanskrit names of the tree is *Vranri, i.e.,* "enemy to sores". The bark is very astringent and is used in decoctions for dysentery and other derangements of the bowels. The leaves have been found very useful for a sort of sore-mouth (not spruce) which people suffer from at certain seasons, the chief symptom of which is inability to eat hot curries. This used to be very common among prisoners during hot weather and the only remedy then used for it was an allowance of *Agasti* leaves with bullock's liver, and the patients got well in a few days. This was not scientific, but all the same it was found to be satisfactory. It had been the routine treatment for this complaint among prisoners for many years previously. It was said to have been first adopted by a Dr. Peris, who was in medical charge of the jails in Colombo in the fifties of the last century when there were few qualified and properly trained medical men in Government service, not a few of whom combined their little knowledge of Western medicine with native remedies.

Sesbania Aegyptiaca.

VERNACULAR.—Sinhalese : *Wel-murunga.* Sanskrit : *Jayanti.* Tamil : *Chittakatti.*

PROPERTIES AND USES.—Said to possess emmenagogue properties ; the leaves are used to promote discharge of lochia.

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Bauhinia Variegata.—*Vel* Purpurea.

VERNACULAR.—Sinhalese : *Kobalila, Ela-kobalila.* Sanskrit : *Kanchanara, Kovidara.* Tamil : *Tiruvatti, Katatti.*

PROPERTIES AND USES.—This is described as a tonic and an alterative by Dr. Dymock and other Indian Pharmocologists and is employed in the treatment of glandular swellings and skin diseases and ulcers. There are three varieties or species of Bauhinia in Ceylon, they are : B. Tomentosa, B. Anguinea and B. Racemosa. The last of these is the *Myla* of the Sinhalese, *Atti* of the Tamils, but it is wrongly used by some native medical men for *Dhataki*, which is Woodfordia Floribunda and *Malitta* of the Sinhalese and a plant of the natural order Lythraceae. The Sanskrit name of *Myla* is *Gairi.*

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Bauhinia Tomentosa.

VERNACULAR.—Sinhalese : *Petan* or *Kaha-petan.* Tamil : *Tiruvatti.*

PROPERTIES AND USES.—Used by South Indian practitioners in dysenteric affections. A decoction of root bark is sometimes administered in hepatitis.

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Tamarindus Indica.—Tamarind tree.

VERNACULAR.—Sinhalese : *Siyambala* Sanskrit : *Tintidi, Amlika·* Tamil : *Puli.*

PROPERTIES AND USES.—Cooling, astringent and laxative. The pulp covering the seed is acid and is largely used in native cookery as a substitute for lime. The root bark is astringent and is used in decoctions for dysentery. The shell covering the pulp is also used medicinally. The pulp is regarded as a carminative and digestive. A cooling drink called *Amlika Pána* is prepared with it and used largely by certain classes of natives in India and is said to promote the appetite and digestion. Powdered seed made into a paste is applied to incipient boils with very good results.

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Mimosa Pudica.—Sensitive plant.

VERNACULAR.—Sinhalese : *Hín-nidikumba.* Sanskrit : *Khadiri Anjalikarika.* Tamil : *Total-vadi.*

PROPERTIES AND USES.—This is the common sensitive plant. It is much used in native medicine and is regarded as an alterative and resolvent and is given in cases of corrupted blood and bile. The juice is applied to fistulous sores.

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Acacia Arabica.—Gum Arabic.

VERNACULAR.—Sinhalese : *Babbula.* Sanskrit : *Vabbula.* Tamil : *Karuvel.*

There is a large number of varieties or species of Acacia all of which yield a gum resin which is used both medicinally and for various economic purposes. Acacia gum has astringent, styptic, and tonic properties, and of these varieties Acacia gum and Acacia Catechu are much used in medicine.

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Acacia Sundra.

VERNACULAR.—Sinhalese : *Rat-Kihiriya* or *Kihiri.* Sanskrit *Khadira Vel Raktha Chandana.* Tamil : *Kodalimurunkai.*

PROPERTIES AND USES.—Tonic, astringent and cooling, similar to Acacia Catechu in properties and uses.

Acacia Catechu.—This is the Catechu tree of India, and what is called *Khadira*, used in medicine, is obtained from it by boiling the wood in water and inspissating the decoction. This is the *Kaippu* of the Sinhalese. Its chief use till lately and even now with the generality of natives who have not yet adopted Western habits, is as an ingredient in their packet of betel which they chew as a habit in the same way as tobacco is used in smoking. Medicinally it is used as astringent, cooling and digestive. It is used in diseases of the mouth and hoarseness ; it also enters into the preparation of many remedies used in cases of dysentery. Catechu is also used in skin diseases in a variety of forms. The following decoction called *Khadirasta-kása* is recommended to be taken internally for boils, prurigo, measles and other affections of the skin.

Take of :—Kaippu—Catechu.
Tippal—The three myrobalans.
Kohomba-potu—Márgósá bark.
Patola—Tricosanthes Dioica.
Rasakinda—Tinospora Cordifolia.
Adáthóda—Justicia Vesica.

Take equal parts and make a decoction in the usual way.

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Phaseolus Aconitifolius.

VERNACULAR.—Sinhalese : *Mákushtha.* Sanskrit : *Mákushtha.* Tamil : *Kollu.*

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Phaseolus Mungo.

VERNACULAR.—Sinhalese : *Mun.* Sanskrit : *Mudga.* Tamil : *Payaru.*

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Phaseolus Trilobus.

VERNACULAR.—Sinhalese : *Munwenna.* Sanskrit : *Mudgaparni.* Tamil : *Pachapayaru.*

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Dolichos Uniflorus.

VERNACULAR.—Sinhalese : *Kollu.* Sanskrit : *Kulattha.* Tamil : *Kollu.*

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Cicer Arietinum.

VERNACULAR.—Sinhalese : *Kadala.* Sanskrit : *Chanaka.* Tamil : *Kadalai.*

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Vigna Luteola.—The field bean.

VERNACULAR.—Sinhalese : *Límekaral.* Sanskrit : *Masura.* Tamil : *Kodeṟpayam.*

PROPERTIES AND USES.—These are all more or less articles of diet, eaten by the natives of the East ; and during famine times the poorer classes almost entirely live on them. Some of them, such as *Kulattha*, *Mun*, and *Masha*, are frequently used medicinally and many of these varieties are given to the sick as articles of diet during their convalescence. A favourite Decoction of a native medical man who some years ago had earned a great reputation for the treatment of enteric and other continued fevers was one composed of the five kinds of *Mí* (two of Phaseolus and three of Dolichos). He gave little or no other medicine, and I think the good effect of the medicine is easily explainable, for it was nothing but keeping up the strength of the patient without causing any irritation of the bowels. So that it is even better than a pure milk diet on account of the Hydrocarbonous and Nitrogenous food required by the human system.

Phaseolus Adenanthus is known as *Wal-mí* in Sinhalese. Like *Masha* it is much used in medicine both internally and externally in paralysis, rheumatism and affections of the nervous system.

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Cæsalpinia Bonducella.

VERNACULAR.—Sinhalese : *Kumburu-wel.* Sanskrit : *Putikaranja.* Tamil : *Gech-chakkay.*

PROPERTIES AND USES.—The seeds are used chiefly in medicine, and they are vulgarly called " devil's testicles " by Arabian and Mohammedan physicians. They have been long used both by Hindu and Mohammedan physicians for several diseases. The seeds are regarded as anthelmintic. The roots and leaves as deobstruent, emmenagogue and febrifuge. The seed rubbed into a paste is given in colic, and with long pepper for malarial fever. The seeds roasted and powdered are given internally for the cure of hydrocele and the same spread over castor oil leaves are applied externally. They are also given internally for Leprosy and are thought to be anthelmintic. A very common remedy with the people in several districts of this country is to give tender leaves of Cæsalpinia Banducella fried in ghee (cow) to children for colic and vomiting and when there is a suspicion of the presence of worms. An oil extracted from the seeds is used to promote cicatrization of fistulous sores.

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Cæsalpinia Digvna.—This is known as *Vákirimul* and is astringent. It is given with milk and carminatives in Pthisis and Scrofulous, affections.

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Cæsalpinia Sappan.—Sappan wood.

VERNACULAR.—Sinhalese : *Patangi.* Sanskrit : *Pattanga.* Tamil : *Vattangi.*

PROPERTIES AND USES.—This is very little used medicinally except as a colouring adjunct to medicinal oils.

කටු අන්දර

Dichrostachys Cinera.

VERNACULAR.—Sinhalese : *Andara, Vel Katuandara.* Sanskrit : *Sarawirataru Dirgamula.* Tamil : *Vadatará, Vidáttál.*

PROPERTIES AND USES.—This is sometimes given for fever in combination with other drugs, and used also in venomous snake bites.

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Trigonella Carniculata.

VERNACULAR.—Sinhalese : *Pikmal.* Sanskrit : *Madya.* Tamil : *Sheeakai.*

It is used as a vegetable, similar to spinach.

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Psoralia Corylifolia.

VERNACULAR.—Sinhalese : *Bódi.* Sanskrit : *Lata-kasturi* or *Lata-kasturika.* Tamil : *Karpo-karishi.*

PROPERTIES AND USES.—Dr. Dymock, the author of *Pharmacographia Indica*, is of opinion that this is the true *Lata Kasturi* or *Lata Kasturika* of the Sanskrit writers and not Hibiscus Abelmoschus which is *Kapukinissa* of the Sinhalese. The seeds are used in preparing perfumed oils but they are also used medicinally in the treatment of several diseases, especially in cases of Leprosy and in what is called in Sinhalese *Kabara*, or in English White Leprosy, Leucoderma.

Dr. Kanny Lall Dey (my old teacher of practical chemistry at the Calcutta Medical College in the sixties of the last century) speaks very highly of Psoralia Corylifolia as almost a certain cure for Leucoderma (*Phaarm Journal*, September 24th, 1881). An oleoresinous extract is first prepared and then mixed with simple ointment or *chaulmugra* oil added to it. This is applied to the white patches for two or three days, when they become red and a slightly painful sensation is felt or a few pimple-like vesicles appear in them. When these heal dark specks appear at their sides and from these the dark colour spreads to the edges and meets the extension of the dark margin towards the centre. And coalescing with the former, the whole patch assumes a normal colour. The process is similar to what takes place in cases of skin grafting. This process is not however confirmed by the experience of

other practitioners. This should not be confounded with Vernonia anthelmintica, which is called *Bodi-ata* in Sinhalese, the therapeutical properties of which are very much like those of *Bodi*, and which is said to be likewise a remedy for Leucoderma.

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Albizzia Odoratissima.

VERNACULAR.—Sinhalese : *Súriyamárágas.* Sanskrit : *Sirisa.* Tamil : *Ponnai-murunkai.*

PROPERTIES AND USES.—This is also called *Sukapriya, Suka-pushpa, Suka-druma,* " dear to parrots," and is regarded as having tonic and alterative properties. Powdered bark with melted butter is an excellent tonic and alterative and is said to strengthen the body. The seeds are prescribed for spermatorrhœa and malaria. Adenanthera Pavonina is called *madatiya* and *mahari* in Sinhalese and *Anaikuntumani* in Tamil. *Tilaka* or *Raktaya* in Sanskrit is similar to the above in its properties and uses. This is also used in rheumatism. The seeds of this tree are used as weights by goldsmiths and native apothecaries. Each seed is equal to about three grains. The bark is used in decoctions for fever and other diseases.

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Lens Esculenta.—The Lentil.

VERNACULAR.—Sinhalese : *Masura.* Sanskrit : *Masura.* Tamil : *Misur-purpur.*

This is cultivated largely in some parts of India as a foodstuff. This is the chief basis of Ravalenta Arabica of commerce.

ROSACEÆ NATURAL ORDER.

Prunus Pudum.

VERNACULAR.—Sanskrit : *Padma-kashtha.*

I have not been able to ascertain the Sinhalese name of this drug nor do I think it has any, as the tree does not grow in the tropics. Its Sanskrit name is *Padma-kashtha* and it is sold in the Indian bazaars under that name in small pieces about ¾ of an inch in diameter with the bark adhering to it. It is a native of Central Asia and brought from there to India. It is met with as an ingredient in prescriptions given in old Sanskrit works on medicine, and is said to be "cooling and tonic".

In some Sanskrit works *Padma-kashtha* is given as one of the ingredients in prescriptions especially for diseases of the skin. To my knowledge it is not sold in the native drug stores nor found in Ceylon, and I do not know what is used by Vedarálas in its place.

SAXIFRAGACEÆ NATURAL ORDER.

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Saxifraga Ligulata.

VERNACULAR.—Sinhalese : *Pahanabe.* Sanskrit : *Páshánabhéda.*

This is a well-known drug among native medical men. As its Sanskrit name *Páshána-bhéda*, "stone breaker", indicates, it is supposed to be a very effective remedy for gravel and even stone in the bladder, but in the Sinhalese works on medicine *Páshána-bhéda* is rendered as *Pol-palá* or *Polkudu-palá*, which is Aeura Lanata and is the drug used by native medical men for it. This, I think, is wrong. In the same way, till lately, the native medical men used *Pol-palá* or *Polkudu-palá* for *Prisnipárni*, which is Uraria Lagopoides.

Saxifraga Ligulata is not found in Ceylon, so that it is clear that whatever plants they are, they are not *Prisnipárni* and *Páshána-bhéda* of the Sanskrit writers. S. Ligulata is also regarded as an astringent and used in diarrhœa and pulmonary affections in combination with other drugs. Of late I understand the Vederálas have taken to use *Puswenna* for *Prisnipárni*, which may be right if they use, as the author of Clough's Dictionary gives, Plectranthus Scutellaroides as *Puswenna*, but the latter says the colloquial name of it is *Pol-palá* and at the same time renders Aerua Lanata as *Pol-palá* or *Polkudu-palá*. It is difficult to say which is *Páshána-bhéda*, which is *Puswenna* and which is *Polkudu-palá*, but there is no confusion as to their Sanskrit names : *Prisnipárni* is Uraria Lagopoides, *Pahánabe* is Saxifraga Ligulata, and *Polkudu-palá* or *Pol-palá* is Aerua Lanata, for which Rhede gives *Scherubala* as the Sanskrit name. Tamils call it *Pulai*, or *Sirru-pulai*. In Nortnern India it is known as *Kumára-pindi*.

COMBRETACÆ NATURAL ORDER.

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Terminalia Chebula.—Chebulic Myrobalan.

VERNACULAR.—Sinhalese : *Aralu.* Sanskrit : *Harítaki.* Tamil : *Kadukkay.*

PROPERTIES AND USES.—Terminalia Chebula is one of the three myrobalans (Chebulic, Beleric and Emblis) known in native medicine as *Tippal*, which is largely used by native medical men for nearly or, I may say, for all the diseases which human flesh is heir to, Chebulic myrobalan, besides being used as an ingredient in *Tippal*, enters into the combination of many of their stock preparations. *Aralu* is one of the most important ingredients in all these and has earned the name of *Pránada*, " life giver," with a mythological origin attached to it. It is said that when the Gods were drinking nectar (*Amrita*) which they obtained after churning the ocean, using *Maha-meru* as the churning sticks, seven drops

fell on the earth and produced seven kinds of *Aralu*. There is, however, no actual difference save in the form of the nuts, which I think is more accidental than due to any intrinsic difference in the trees themselves, for the the differently formed nuts are found on the same trees. *Aralu* is regarded as tonic, alterative and laxative. As a laxative it is given either singly, in the form of *Tippal*, or in combination with other drugs. Its action is very much like that of Rhubarb, in that it first acts as a purgative and that is followed by confinement of the bowels. To avoid its laxative effect when required, the fruits should be roasted or rather baked until they assume a darkish brown colour. It is invariably given in dysentery when it is thought desirable to expel any scybalæ that might be in the bowels, and the decoction which is as a rule given for that purpose is composed of *Aralu* (Chebulic Myrobalan), *Beli-mul* (Aegle-Marmelos), *Tippili* (Long pepper root), four kalans or drachms each : prepare a decoction in the usual way. In the later stages of the disease the following is recommended and I have myself given it with very good results in many cases. Roasted *Aralu* powder about a teaspoonful or a drachm administered every morning in cow milk or coconut milk is an excellent remedy for dysentery in all its stages, chiefly in chronic cases. I have cured more than a score of these cases with this remedy, and a preparation containing opium is given at night to control the too frequent passing of motions by the patient. In cases where goat's milk is not procurable fresh coconut milk might be substituted.

Aralu is regarded as a powerful alterative, and is given internally for many diseases. To improve the appearance of the complexion I have seen it given daily, about a teaspoonful of the powder for six or seven mornings, with young king coconut water, and it then acts like a mild cathartic. For diseases of the eye, the three myrobalans are given in the form of a decoction and the belief is that it braces up the retina and improves the sight. For ordinary sore eyes a collyrium prepared with it and alum is a very common remedy and answers better I think than the zinc lotion of the Western medical men. *Aralu* has no less than 20 synonyms, which are more or less met with in prescriptions given in works on native medicine.

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Terminalia Belerica.

VERNACULAR.—Sinhalese : ***Bulu***. Sanskrit : *Vibhitaka*. Tamil : *Tanti*.

PROPERTIES AND USES of *bulu* are nearly the same as those of *aralu*. It is an ingredient in many decoctions, *ghritas* and *churnas* for a variety of diseases. The kernel of the seed is very astrignent and is used in eye diseases It is an ingredient in a very useful preparation I have seen employed for sore eyes of all sorts, even after white spots appear on the cornea with collection of matter. It is composed of:–Long pepper (*tippili*), *bulu* (kernel), black pepper (*gammiris*), margosa leaves (*kohomba*),

aralu, all of with are reduced to a fine paste with cow's urine and made into pellets which are dried in the shade. In a native medical work that I have read, this preparation is directed to be made up with the addition of orpiment and powdered chalk, which I think is an improvement on the other. For this, I have observed, keeps without deterioration for a long time, by reason of the presence of orpiment, whereas the other gets mildewed and spoiled in a few days. The pellets prepared with orpiment I have used after a year and they had the same effect as if they had been just prepared.

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Terminalia Arjuna.

VERNACULAR.—Sinhalese : *Kumbuk.* Sanskrit : *Arjuna.* Tamil : *Vellai maruda maram.*

PROPERTIES AND USES.—The bark of the tree is said to be astringent and alterative. It is used internally in cases of dysentery, fever, and heart disease. The bark decoction is used as a wash for foul ulcers. The native surgeons have an idea that the administration of a decoction of the bark, apart from its application to a fractured limb externally, has the effect of hastening the union of the broken bones by the dispersion of the callus and inflammatory products around them. The root bark is said to be lithon-triptic, and is given in cases of gravel, and it has been found that the burnt ashes of the bark contain an unusually large quantity of carbonate of potash. Whether that has anything to do with the results that the native medical men obtain by the administration of the drugs in cases of gravel I cannot say.

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Anogeissus Latifolia.

VERNACULAR.—Sinhalese : *Dáwa.* Sanskrit : *Dhavala.* Tamil : *Vakkali.*

PROPERTIES AND USES.—This is the crane tree of India, so named from the similarity of the fruit to the head of a crane, and is not of much use medicinally. A gum collected from the flowers is used as a mordant by calico printers for fixing colours.

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Terminalia Tomentosa.

VERNACULAR.—Sinhalese : *Asaná.* Sanskrit : *Asaná.* Tamil : *Maruta-maram.*

PROPERTIES AND USES.—Astringent powdered bark mixed with oil is used to remove apthæ.

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Terminalia Catappa is I think our *kottamba*, which is a corruption of the Malay term *catappa*. The kernel is very similar to that of almond except in its size, and is largely consumed by the natives, especially children. The bark is astringent and is recommended for gonorrhœa and leucorrhœa. This is known as the almond tree of India.

MYRTACEÆ NATURAL ORDER.

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Barringtonia Acutangula.

VERNACULAR.—Sinhalese : *Ela-midella.* Sanskrit : *Hijia* or *Hijjala, Saniúdra-phalá.* Tamil : *Kadapum.*

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Barringtonia Zeylanica.

VERNACULAR.—Sinhalese : *Goda-midella.*

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Barringtonia Racemosa.

VERNACULAR.—Sinhalese : *Diya-midella.*

PROPERTIES AND USES.—This is also called *Samudrá-phala* and *Dhatri-phala* in Sanskrit ; the latter signifies nurse's fruit, for it is said to be one of the best known domestic remedies in India. When children suffer from a cold in the chest, the seed is rubbed down on a stone with water into a paste and applied over the sternum, and if there be dyspnœa a few grains administered with ginger juice seldom fails to bring on vomiting, which clears the tubes of accumulated phlegm.

To reduce the enlarged abdomen of children two or three grains of the powdered seed are given in milk.

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Caryophyllus Aromaticus.—Clove tree.

VERNACULAR.—Sinhalese : *Karábu.* Sanskrit : *Lavanga.* Tamil : *Ilavangap-pu, Karuvap-pu.*

PROPERTIES AND USES.—This is not indigenous to India, but appears to have been cultivated there from a very early period of its history, for it is mentioned under the name *Lavanga* in *Charaka*. *Lavanga* or *Karábu* or Clove in English is regarded as a carminative, stomachic and stimulant, and is used in many diseases in combination with other drugs, but seldom by itself. It allays thirst and nausea, and I have often given the children an infusion of cloves and mace to allay these, especially when they suffer from worms ; it is found to answer the purpose well. A pill called *Chatuhsamaváti*, commonly used for indigestion, is composed of ginger, rocksalt, cloves and ajowan taken in equal quantities and made into eight grain pills. A pill for a dose. There are two kinds of cloves, male and female, and there is a curious notion amongst the natives that a male clove eaten daily by a woman for some time prevents conception.

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Careya Arborea.

VERNACULAR.—Sinhalese : *Kahata.* Sanskrit : *Kumbhi.* Tamil : *Kachaddai.*

PROPERTIES AND USES.—The bark is very astringent as the very name in Sinhalese indicates, and is used as a remedy for dysentery and fever accompanied with loose bowels.

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Eugenia Jambolana.

VERNACULAR.—Sinhalese : *Maha-dan* or *Jambu*. Sanskrit : *Jambu, Rájaphala, Méghewarna*. Tamil : *Naval, Peru naval*.

This tree produces a large crop of sub-acid fruits. The thick covering of the seeds is eaten and a spirit can be distilled from its juice. The bark is astringent and is given in combination with other drugs for diarrhœa and dysentery. For dysentery, *Bhava-Prakasa*, an Indian work on medicine, recommends the fresh juice of the leaves of *jambu*, mango, and embelic myrobalan, about a drachm each, with goat's milk and honey. For children the fresh juice of the bark is given with goat's milk in cases of diarrhœa and dysentery.

A few years ago the seeds of the *jambu* fruit attracted some notice in the profession as a cure for diabetes. I have seen it taken by two patients who were under my treatment. They took it in the form of a decoction boiled in water, and the remedy seemed to allay the thirst very much, but as they were taking other medicines as well it could not be determined with certainty whether it really did any good or not ; but a third who took only this for some time told me that he felt very much better.

Judging from some experiments made by Dr. C. Graeser of Bonn with the seeds of *jambu*, they ought to prove useful in cases of diabetes. He observed that the formation of sugar in dogs when phloridzin was administered for some time was arrested when an extract of Jambolanum was given to the animals at the same time. The remedy should I think be given further trial in cases of diabetes.

Má-dan of the Sinhalese is a variety of Jambolana or it may be a different species of the same plant. It has like therapeutical properties, but the fruits are smaller. The bark is astringent and is used as an ingredient in some compound preparations.

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Eugenia Zeylanica or **Spicata.**

VERNACULAR.—Sinhalese : *Maranda*. Tamil : *Marungi*.

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Eugenia Corymbosa.

VERNACULAR.—Sinhalese : *Dan, Hín-dan*. Sanskrit : *Swetha Jambu*. Tamil : *Marungi*.

PROPERTIES AND USES.—Not used in medicine except occasionally. The properties are nearly the same as those of Eugenia Jambolana.

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Psidium Guyava.

VERNACULAR.—Sinhalese : *Péra.* Sanskrit : *Parála.* Tamil : *Velláigoyya-pazham.*

PROPERTIES AND USES.—This is a native of America, but now naturalized in India ; is recommended of late as a remedy for chronic diarrhœa of children. The part used is the bark. It is not mentioned in old Sanskrit works on medicine.

CRASSULAEÆ NATURAL ORDER.

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Kalanchœ Laciniata.

VERNACULAR.—Sinhalese : *Akka-pána.* Sanskrit : *Asthibhaksha, Parna-vija.* Tamil : *Mala-kulli.*

PROPERTIES AND USES.—It is regarded as an excellent application for wounds and contusions. It prevents swelling and discolouration and heals the wound rapidly.

MELASTOMACEÆ NATURAL ORDER.

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Memecylon Edule, Vel Tinctoria.

VERNACULAR.—Sinhalese : *Dedi-kaha.* Sanskrit : *Anjani.* Tamil : *Kashamaram.*

PROPERTIES AND USES.—A yellow dye is obtained from it which is its chief use. It is astringent and used in cases of diarrhœa and dysentery.

LYTHERACEÆ NATURAL ORDER.

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Woodfordia Floribunda.—Downy Grislea.

VERNACULAR.—Sinhalese : *Malitta.* Sanskrit : *Dhátaki.*

PROPERTIES AND USES.—This is a drug largely used in native medicine. It has a host of synonyms, such as *Angijvala* (fire-flame), *Tamara-pushpi* (red-flowered), *Guchchha-pushpi* (cluster-flower), *Darvati* (hill-born). As in the case of some drugs previously mentioned, such as *Prisnipární, Sálapární* there is also some confusion in the use of this drug. Under the Sanskrit name *Dhátaki*, native medical men frequently prescribe this drug for which however they use *Myla* flowers almost invariably but they are the product of Bauhinia Racemosa, a plant of

the natural order Leguminosae. *Myla* is the term by which the word *Dhátaki* is often rendered into Sinhalese from the old Sanskrit works that I have read, but in some books it is given as *Malitta*. The native medical men I believe more often use *Myla* for *Dhátaki* than *Malitta* flowers (Woodfordia Floribunda). This enters into the composition of many preparations, decoctions, *churnas* and *ghritas* for various diseases, but chiefly dysentery and diarrhœa by reason of its being highly astringent. Possibly the therapeutic properties of *Myla* and *Malitta* are the same.

Here is a prescription for a *churna* (powder) or a decoction for dysentery in which *Myla* or *Malitta* is an ingredient. I have found it very useful in a form of dysentery in which fæces, blood and mucus are passed mixed and technically called *Prabahika* by native medical men

Take of :—Piper Nigrum (Black pepper).
Nigella Sativum (Kalanduru).
Woodfordia Floribunda (Dhátaki).
Rock salt (Sahindalunu).
Aegle Marmelos (Beli.)
Ginger (Inguru).

Pound well and give the powder with butter milk (*Kirímóru*). The above is taken from *Sarasensapa*, a standard work on medicine. In the *Sanne* or Sinhalese translation *Dhátaki* is rendered *Myla*, which is Bauhinia Racemosa, but according to Indian authorities *Dhátaki* is Woodfordia Floribunda, which is a plant of quite a different order to Lytheraceæ. According to Mr. Gunasekera's Dictionary apparently *Myla* and *Malitta* are synonyms and applied to Bauhinia Racemosa.

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Lawsonia Alba.

VERNACULAR.—Sinhalese : *Maritondi*. Sanskrit : *Raktagarbha* or *Mendika*. Tamil : *Maritondi, Aivanam*.

PROPERTIES AND USES.—This is the Henna in English and is much esteemed by the Mohammedans on account of some tradition connected with it and their prophet having called it the best of herbs. Medicinally it is used by the people of India for a variety of diseases, such as leprosy, and to cure headaches and enlargement of the spleen. Native medical men of Ceylon seldom use it in their decoctions, but it has a great reputation for relieving that obscure disease called burning of the feet, and the leaves are applied in the form of a poultice to the soles of the feet. This is also the *henna* used by Mohammedan women to colour their finger nails.

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Lagerstroemia Flos-reginae.

VERNACULAR.—Sinhalese : *Muruta*. Sanskrit : *Hayakarni, Dírga-patra*. Tamil : *Kadalapuva*.

PROPERTIES AND USES.—This is used in native medicine in combination with other drugs for various diseases.

දෙළුම්

Punica Granatum.

VERNACULAR.—Sinhalese : *Delum.* Sanskrit : *Dadima.* Tamil : *Madalai.*

PROPERTIES AND USES.—This is largely used in native medicine. The rind, fruit and root bark are all used in the treatment of many diseases. The rind of the fruit is very astringent and used in the treatment of dysentery in combination with other drugs. The juice of the pulp covering the seeds is considered cooling, and is given as a cooling medicine mixed with saffron. The root bark is used as an anthelmintic by Mohammedan physicians. For piles the juice of the green fruit is given rubbed with gall, cloves and ginger in honey as a remedy. The following is a preparation containing the rind of the pomegranate fruit for dysentery. Take of :—Pomegranate rind one seer, bamboomanna two phalams, ajwan-coriander, cummin seeds, long pepper root, long pepper, black pepper and ginger, each eight phalams, sugar one seer. Powder the ingredients and mix. Dose : about a drachm for chronic bowel complaints. The root bark is considered almost a specific for tape worm. It is given in decoction, two ounces of the root bark boiled in one and a half pints of water until reduced to $\frac{3}{4}$ of a pint.

ONAGRACEÆ NATURAL ORDER.

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Jussiaea Suffruticosa.

VERNACULAR.—Sinhalese : *Bera-diamilla.* Sanskrit : *Bhallávi-anga.* Tamil : *Nir-kirambu.*

PROPERTIES AND USES.—Is regarded as a powerful astringent and is used in spitting of blood and flux. Rheede says that this plant is called *Hoemarago* by the Sinhalese, but I have not heard of it.

PASSIFLOREÆ NATURAL ORDER.

පැපොල්

Carica Papaya.—Papayá or Papaw tree.

VERNACULAR.—Sinhalese : *Pepol.* Tamil : *Pappalimaram.*

PROPERTIES AND USES.—This is not indigenous to Ceylon and India It is doubtless a native of the Western hemisphere brought here by the Portuguese. It is regarded medicinally as a remedy for hæmoptysis, bleeding piles and ulcers of the urinary organs. It is the milk of the

tree or the latex that is used for medical purposes. It has been found to contain an active principle that has been named Papain, similar in action to Pepsin, and having the property of digesting meat. Some time back it was much talked of in the medical journals and is still used by some medical men in their practice for dyspepsia. The natives use the milk juice to remove warts and it is also regarded as an useful anthelmintic. It has also been used with good results in the treatment of spleenic and hepatic enlargements. The ripe fruit makes a good table fruit and is a favourite with many Europeans.

SAMYDACEÆ NATURAL ORDER.

වල් වරකා

Casearia Esculenta.

VERNACULAR.—Sinhalese : *Wal-waraká.* Sanskrit : *Sataganda.* Tamil : *Kaddlashingi.*

PROPERTIES AND USES.—In western India the root of this plant has a great reputation as a remedy for hepatic enlargements and for piles. Is considered a specific for diabetes by native medical men of western India. The leaves are edible and eaten boiled by the natives ; the root is purgative. It is found in Ceylon and is mentioned in Dr. Trimen's list of Ceylon plants. Moon gives *Wal-Mánel* as the native name of this plant.

CUCURBITACEÆ NATURAL ORDER.

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Citrullus Colocynthis.

VERNACULAR.—Sinhalese : *Yakkomadu.* Sanskrit: *Indravaruni Vishala.* Tamil : *Tumatti, Peykomatti.*

PROPERTIES AND USES.—Is described by Sanskrit writers as bitter, acrid and cathartic, and is useful in biliousness, constipation, fever and worms. Both the fruit and the roots are used medicinally ; the roots and long-pepper are given in rheumatism.

කොමඩු

Citrullus Vulgaris.

VERNACULAR.—Sinhalese : *Komadu.* Sanskrit : *Tarambuja.* Tamil : *Pitcha-pullum.*

PROPERTIES AND USES.—The seeds are said to be cooling, strengthening and diuretic. The juice of the melon is used with sugar and cummin as a cooling drink.

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Lagenaria Vulgaris.

VERNACULAR.—Sinhalese : *Diyalabu.* Sanskrit : *Alábu.* Tamil : *Shorakai.*

PROPERTIES AND USES.—The fruit grows to a considerable size and the dried fruit cleaned of its contents serves as a good vessel for carrying fluids, and is used as such especially by toddy drawers who find it a convenient vessel in which to bring toddy down from the trees. The pulp is used in native medicine as a cathartic.

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Cucumis Trigonus.—Variety C. Pubescens.

VERNACULAR.—Sinhalese : *Gon-kekiri.* Sanskrit : *Urwaru.* Tamil : *Kattut-tumatti.*

PROPERTIES AND USES.—The seeds are considered cooling and are applied to herpetic eruptions.

පුහුල්

Benincasa Cerifera and **Cucurbita Pepo.***

VERNACULAR.—Sinhalese : *Puhul.* Sanskrit : *Kushmánda.* Tamil : *Kumbuli.*

PROPERTIES AND USES.—Benincasa Cerifera is the well-known **Ash-**pumpkin and is used largely in native medicine. It has a peculiar action on the circulatory system in that it rapidly puts a check to hæmorrhage ; it is therefore very useful in all forms of hæmorrhage from the alimentary canal. The fruit is eaten by the natives as a vegetable, and is given to sick patients. The root, with an equal quantity of the root of Colocynth, is rubbed on a stone to a paste and applied to carbuncles. The pulp of the fruit is used also for making preserves.

දුම්මැලේ

Trichosanthes Cucumerina and **Dioica.**

VERNACULAR.—Sinhalese : *Dummella* or *Patóla.* Sanskrit : *Patóla* Tamil : *Kattup-pepudal.*

PROPERTIES AND USES.—These two plants, T. Cucumerina and T. Dioica are indiscriminately used for *patóla* of the Sanskrit writers, but the true *patóla* is Trichosanthes Dioica. *Dummella* is largely used in native medicine, especially in cases of fever, and it is almost a constant ingredient in all the decoctions for fever. Here is a decoction for fever with *Dummella.*

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* These are two different plants but are called in Sanskrit by the same name *Kushmánda,* and are very similar in their medicinal properties and uses.

Take of :— Dummella (Trichosanthes Cucumerina).
Sandalwood.
Raisins.
Pepiliya (Oldenlandia Herbacea).

Make a decoction in the usual way for fever caused by derangement of bile.

The snake gourd, known as *patóla* in Sinhalese, is Trichosanthes Angvina, and is a very common vegetable used as a curry by all classes of people.

තිත්තකොඩිල

Trichosanthes Palmata

VERNACULAR.—Sinhalese : *Titta-hondala.* Sanskrit: *Mahakala.* Tamil : *Koratti.*

PROPERTIES AND USES.—For offensive discharges from the ear the fruit powdered and mixed with oil is used. The root is used as a remedy for inflammation of lungs in cattle. The dried shell is powdered and smoked in a pipe like tobacco for asthma.* The root is said to be poisonous if taken in large quantities.

තුම්කරවිල

Momordica Cochinchinensis vel **Dioica.**

VERNACULAR.—Sinhalese : *Tumba-karavila.* Sanskrit : *Vahasa.* Tamil : *Tumpai, Paluppakai, Palupaghel-kalung.*

PROPERTIES AND USES.—The wild variety of this is bitter, but under cultivation it loses much of its bitterness. It is a wholesome vegetable usually given to patients convalescing. It is a domestic remedy for sores caused by the urine of the house lizard. It is also an useful remedy for cephalalgia, applied externally with pepper, coconut milk and sandalwood.

කරවිල

Momordica Charantia

VERNACULAR.—Sinhalese : *Karavila, Batu-karavila.* Sanskrit: *Ugralata* or *Kandira.* Tamil : *Pava-kai, Nutipakal.*

PROPERTIES AND USES.—The leaves are used externally for skin affections of parasitic origin. The root is a febrifuge and the seeds are anthelmintic.

* At the time of the visit of the Crown Prince of Germany to India, Sir Madava Row recommended him to use this for a severe attack of asthma, which he contracted there, on the authority of some old Sanskrit writer, and he is said to have derived great relief from it.

නියන් වැටකොලු

Luffa Aegyptiaaca

VERNACULAR.—Sinhalese : *Niyan-weta-kolu*. Sanskrit : *Koshataki*. Tamil : *Pikku, Pichukku.*

වැටකොලු

Luffa Acutangula.

VERNACULAR.—Sinhalese : *Weta-kolu, Dára-weta-kolu.* Sanskrit : *Dalika, Ghoshaka, Jhingaka.* Tamil : *Peypichukku.*

PROPERTIES AND USES.—These plants are two varieties of *weta-kolu* found in Ceylon, *Dára-weta-kolu* and *Niyan-weta-kolu* ; they are used by natives as vegetables made into curries. The fruit when dried exhibits a shining, somewhat coarse, fibrous net-work and is used for rubbing the body when bathing. This is also one of the vegetables given to convalescing patients.

දේවදාලි

VERNACULAR.—Sinhalese : *Dévadáli.* Sanskrit : *Dévadáli.* Tamil : *Deodali.*

PROPERTIES AND USES.—This is used in native medicine and occurs not infrequently as an ingredient in decoctions for fever.

It has several Sanskrit synonyms, such as *Vrata-kosha, Akhu-vishaha, Jalani*, etc., and is described in Sanskrit books as expelling bile and phlegm and as a remedy for piles, swellings, jaundice, phthisis, fever, hiccough and worms. It occurs as an ingredient in decoctions for bilious fever. In some parts of India the bitter fibrous contents of the fruit are given in cases of snake bite and cholera ; in the latter disease the medicine is repeated after each stool.

කෝවක්කා

Cephalandra Indica.

VERNACULAR.—Sinhalese : *Kówakka.* Sanskrit : *Vimbaja, Tundkeri, Tundika, Bimbi.* Tamil : *Kovvai.*

PROPERTIES AND USES.—The juice of the fibrous roots is used in snake bites and also as an adjunct to metallic preparations given by Indian native medical men for diabetes. Dr. Dutt says he had seen several cases benefitted by its use.

කැකිරි

Cucumis Melo.

VERNACULAR.—Sinhalese : *Kekiri.* Sanskrit : *Kharvyá.*

PROPERTIES AND USES.—This is described as cooling, diuretic, edible and nutritive. Is used in painful micturition and suppression of urine.

The following is a prescription in which the seeds of Cucumis Melo are given as an ingredient for difficult micturition.

Take of :—Cucumis melo—Kekiri.
Impure carbonate of potash—Sahindalunu.
Elaterium cardamomum—Ensal-eta.
Long pepper—Wagapul
and powder. To be taken in the morning in fermented toddy.

වට්ටක්කා : රටලබු

* **Bryonia Laciniosa.**—This is known as *Wattakka* or *Rata-labu*, well-known as a vegetable, which being plentiful and cheap is largely used by the poorer classes of people. It is called *Baja* in Sanskrit. The juice of this is given with milk and honey or sugar at the commencement of bilious fevers. It acts as a cathartic, cleans the bowels and is suited to cases in which there is flatulence with constipation. The late Dr. White, who commanded a large practice at one time in Colombo, used a poultice of this as an external application in cases of pneumonia and he informed me that when at Hongkong he observed that the Chinese doctors used it in such cases.

Bryonia Grandis is *Kemwel* in Sinhalese and in Sanskrit *Bimbi*.

හීන් කැකිරි

Mukia Scabrella is *Hín-kekiri* of the Sinhalese and *Mosumuski* of the Tamils. It is called *Ahilekhana* in Sanskrit, signifying, " marked like a snake". Another name for this as well as for Bryonia Lacinicasa is *ghantali*, "a row of bells", referring to a slit in the fruit like those in the leg bells of native dancers. It is a mild cathartic and is at times given to children.

කවුඩු කැකිරි

Zehneria Umbellata or **Hastata.**

VERNACULAR.—Sinhalese : *Kawudu-kekiri.* Sanskrit : *Karivi-valli.* Tamil : *Peyppudal.*

The leaves of this are used externally in skin diseases. (*Vide* Vitis Quadrangularis.)

පිපිඤ්ඤා

Cucumis Sativus.—Sanskrit *Trapusha.* This is the *Pipiññá* or the common cucumber used both for curries and salad. The word *Pipiññá* is evidently derived from Pipincha, the name first given to it by the Portuguese. The seeds and roots possess the same properties as most of the Cucumis family and they are used chiefly in cases of fever and diseases of the urinary organs. The following are two prescriptions, one containing *patóla* for fever and the other Cucumis Melo (*kekiri*) as an ingredient in a preparation for difficult micturition.

* Cucurbita Moschata. (Clough.)

Take of :—Bevila (Sida Sinosa).
Patóla or Dummella (Trichosanthes Cucumerina).
Tippal (three Myrobalans).
Welmé (Glycyrrhiza glabra).
Kalánduru (Cyperus rotundus).
Pepiliya (Oldenlandia Herbacea).

Make a decoction in the usual way. Dose :—Half a cup twice a day.

Kekiri-eta (seeds of Cucumis Melo).
Sahindalunu (Rock salt).
Ensal (Elettaria Cardamomum).
Wagapul (Long pepper).*

To be powdered and taken in the morning with fermented rice water in cases of difficult micturition and retention of urine.

Cucumis Trigonus.—Tamil *Metukku,* is a wild variety of Cucumis Sativus.

ගොන් කැකිරි

Cucumis Pubescens is the *Gon-kekiri* of the Sinhalese and *Urwasu* of the Sanskrit and is supposed to be the wild original of Cucumis Sativus and Cucumis Melo.

ගෝපලඟා

Corallocarpus Epigaea.

Vernacular.—Sinhalese : *Gópalangá.* Sanskrit : *Patalagaradan.* Tamil : *Gollan-kovaik-kizhangu.*

It is also called by the Sanskrit writers *Mahá-múla* or " great root", and is described as strengthening and as a begetter of phlegm and a valuable remedy for rheumatism.

වල් රසකිඳ

Zanonia Indica is the *Wal-rasakinda* of the Sinhalese and *Penarvalli* of the Malabars or Malayalams. The Sanskrit writers term it *Chirpota, Dirghapatra, Kuntali* and *Tiktaka ;* it is described as cold, aperient and beneficial in asthma and cough. It is used by Ceylon native medical men as a febrifuge.

CACTEÆ NATURAL ORDER.

කටු පතුක්

Opuntia Dillenii.

Vernacular.—Sinhalese : *Katu-patuk.* Sanskrit : *Vidara, Vishvasáraka.* Tamil : *Nága-kali.*

Properties and Uses.—This is a native of Central America introduced to the East by the Portuguese with the object of feeding the

* Irwaru bija makshancha saindhawailacha pippali.
Sauwirana pivat prato mutra ghata vikarajit.

cochineal insect upon it, but it is doubtful whether they carried that out into practice. Hindus have given it the name *Vidara*, "tearing asunder", and *Vishva-sáraka*, "having all essence".

The fruit of the Cactus is used as a remedy for whooping cough and asthma. A few years back Cactus came to be used by Western practitioners in the treatment of heart disease, and it is still used thus by some medical men, but so far as my experience is concerned it is not superior to other drugs such as digitalis and strophenthus.

UMBELLIFERÆ NATURAL ORDER.

හින් ගොටුකොල

Hydrocotyle Asiatica.

VERNACULAR.—Sinhalese : *Hín-gotukola.* Sanskrit : *Brahmi* or *Mandukapárni.* Tamil : *Vallarai.*

මහ ගොටුකොල

Hydrocotyle Javanica.

VERNACULAR.—Sinhalese : *Maha-gotukola.* Sanskrit : *Mandukapárni, Brahmi.* Tamil : *Vallari*

PROPERTIES AND USES.—This is frequently used in native medicine and is regarded as a diuretic and alterative. It is said to improve the understanding and memory. It is used as a remedy for leprosy in some parts of India, but trials made of it at the Madras leper hospital some years ago did not show any specific effect on the disease. It however ameliorated the symptoms, improved the general health of the patient, and appeared to have a stimulating effect on the cutaneous system generally. In Ceylon it is a sort of domestic remedy given in combination with *Kumbum Ðalu* (tender leaves of Cæsæpina Bonucela) and ginger to children for derangement of the bowels and vomiting arising from the presence of intestinal worms. It is also said to be useful for fever and hoarseness. For the latter it is recommended to be given with milk ; or the following decoction may be taken :—

Take of :—Gotukola (Hydrocotyle Javanica),
Vadakaha (Acorus Calamus),
Long pepper,
Rock salt and liquorice root.

Make the decoction in the usual way and take it for seven nights.

It must be noted here that our native medical men give *Mukunuwenna* (Alternanthera Triandra) for *Brahmi* or *Mandukapárni*, whilst those of Bengal give in its place Herpestis Monniera, which is *Lunuwilla* of the Sinhalese. This is confusing ; for the real *Brahmi* is not Herpestis which has the name of *Jala Brahmi* or water *Brahmi*. Dr. Dymock,

the author of "*Pharmacographia Indica*", distinctly says that Herpestis Monniera is not the real *Brahmi* or *Mandukapárni* of the Sanskrit writers. Whatever excuse the Calcutta medical men had for using *Jala Brahmi* for *Mandukapárni* (*Brahmi*), our medical men have none for giving *Mukunuwenna* for *Brahmi*. In many of the books *Brahmi* is rendered into Sinhalese as *Bemithiriya*, a term which Clough's Dictionary says is another name for *Lunuwilla*, but it is only a Sinhalese form of *Brahmi*. According to *Saraswati Nigandu*, *Mandukapárni* is *Makuluwenna*, which is not the same as *Mukunuwenna*, and again, according to the same authority, the latter is *Mandukapárni*. There is a good deal of confusion with regard to the use of these three plants. *Gotukola* (*Jala Brahmi*), *Mukunuwenna* and *Lunuwilla* are doubtless frequently used one for the other indiscriminately by the Vedarálas, who have no practical or botanical knowledge of them.*

දුරු

Cuminum Cyminum.

VERNACULAR.—Sinhalese : *Duru.* Sanskrit : *Jirana.* Tamil : *Shiragam.*

PROPERTIES AND USES.—This is largely used in native medicine and is also a condiment used in native cookery. It is regarded as carminative and stomachic and is employed in combination with other drugs for the preparation of many compound medicines for a variety of diseases. This is also called *Sudu-duru* in contrast to *Kalu-duru* (*Krishnagiaka* Nigella Sativum).

අජ මොණ

Ptychotis Ajowan.

VERNACULAR.—Sinhalese : *Ajawán.* Sanskrit : *Yamani.* Tamil : *Omum.*

PROPERTIES AND USES.—Similar to Cuminum.

Carum Carui.—This is the caraway seed which, though now used by the native medical men, does not appear to have been used by the ancient Hindu physicians. They used *Krishnajiraka* (Nigella-sativa) imported from the West, and the Sinhalese call it *Kaluduru* (Black Cumin). The properties and uses of this are the same as those of *Yavani*, *Ajawán*, etc.

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Foeniculum Vulgare.

VERNACULAR.—Sinhalese : *Máduru, Maha-duru.* Sanskrit : *Madhurika.* Tamil : *Shombu.*

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* Brahmamulí vashá suntií
Pippalímadhu saindawan.
Sapta rátri prayojna kinnara.
Saha jáya-te.

The meaning of the above is : Take this decoction with *Sahindalunu* for seven nights, when the voice will become as sweet as that of a *kinnara* (singing mermaid). *Mukunuwenna* (Alternanthera Triandra) is used as a rule by Ceylon Vedaralas for *Brahmi*, which I think is wrong.

PROPERTIES AND USES.—Similar to those of Cumin, caraway and *Yavani* or *Ajawán* and *Ajamóda.*

කොත්තමල්ලි

Coriandrum Sativam.

VERNACULAR.—Sinhalese : *Kottamalli.* Sanskrit : *Kusthumbari.* Tamil : *Kottamali.*

PROPERTIES AND USES.—This is also called *Dhanya* in Sanskrit and, is very largely used in native medicine. It is regarded as carminative diuretic and aphrodisiac, and is prescribed in dyspepsia. It is frequently given for fevers of all sorts and is an ingredient in decoctions for dysentery. It enters into the composition of many preparations for various diseases.*

Pamala, lately advertised as a remedy for malaria fever, is either *Kottamalli* itself or a plant allied to it. It is admitted by the advertisers of Pamala that it is a non-alcoholic extract or tincture of an umbelliferous plant, though they would have it that it is a native of the wilds of Central America.

අසමෝදගන්

Apium Graveolens.—Celery.

Carum Roxburghianum.

Apium Involucrata.—The fruits.

VERNACULAR.—Sinhalese : *Asamódagan.* Sanskrit : *Ugraganda.* Tamil : *Omam.*

PROPERTIES AND USES.—Used more as spice than medicine though they are also not infrequently used in domestic medicine as a carminative. I have seen *Asamódagan* and *Kelinda* seeds (Hollorrhena Anti Dysenterica) roasted, powdered and infused like coffee powder being given to children suffering from diarrhœa with satisfactory results. The root is regarded as diuretic and prescribed for anasarea. This plant does not appear to have been known to old Sanskrit writers on medicine and the knowledge of it they undoubtedly obtained at a later period from the Arabian physicians. An infusion of *Asamóda* is also a domestic remedy for flatulence ; it is also an ingredient in decoctions for fever and dysentery.

* I have been both surprised and interested to observe a practice that obtained in the Marawila District with regard to Coriandrum Sativum (*Kottamalli*). It is given in the form of an infusion sweetened with sugar to infants almost from the very first week of their birth as a substitute for breast milk by poor people who cannot afford to buy cow milk or infants' food of any sort. I have seen several infants from a few days to six or seven months old almost entirely brought up on an infusion of Coriandrum Sativum sweetened with sugar. It is put into a feeding bottle and the infants are regularly fed with it at intervals just as the better class people do with cow milk or patent infant food. I noticed that the infants were fairly healthy, though not as much as those brought up with breast or cow milk.

සතපුෂ්ප

Peucedanum Graveolens.—Dill.

VERNACULAR.—Sinhalese : *Satapushpa* or *Satakuppa*. Sanskrit : *Satapushpa* or *Misreya*. Tamil : *Satakuppi-virai*.

PROPERTIES AND USES.—*Satapushpa* is also called *Satakuppa*, which is the Sinhalese form of the Tamil name. It is used both as a condiment and a medicine by the natives of India, but in Ceylon it is used as a medicine and seldom as a condiment. It is usually given to women after confinement to promote the discharge of lochia and relieve after pains. I have myself frequently used it as such, following the practice of native medical men, and I really think it answered the purpose well and is a convenient method of relieving puerperal women of after-pains. It appeared to contract the uterus and expel clots which frequently gave rise to after-pains.

Pimpinella Anisum.—Anise.

Indian names for anise are the same as those for dill and similar in properties and uses to the latter.

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Ferula Foetida.—This is an exudation from the Asafœtida plant (Ferula Asafœtida) and is a native of Persia, Khorassan and countries in Western Asia.

It is called *Perun-káyan* in Sinhalese, *Hingu* in Sanskrit, *Perungayam* in Tamil.

Asafœtida is frequently used in native medicine for dyspepsia, flatulence, colic and diseases of the nervous system. It is also an ingredient in several medicinal oils. There is a *chúrna* called *Hing-rashtaka chúrna* composed of asafœtida, ginger, long pepper, black pepper, ajawán, cumin seeds, nigella seeds (*Kaluduru*) and rock salt. Take equal parts, reduce to powder and mix well. DOSE.—Twenty grains to be taken with the first morsel of rice and clarified butter at breakfast. This is administered it is said to produce appetite and increase digestive powers and to cure flatulence. It may be taken with lime juice in the form of a pill.

FICOIDEÆ NATURAL ORDER.

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Trianthema Monogyna.

VERNACULAR.—Sinhalese : *Hín-sárana*. Sanskrit : *Svéta Punarnavá*. Tamil : *Sharunnay*.

PROPERTIES AND USES.—This is regarded as diuretic, cathartic and emmenagogue. It is said to be an irritant to the uterus and is given to cause abortion. Young plants may be eaten as a vegetable being boiled well. It is believed to be useful in dropsy due to obstruction of the liver and is prescribed in cases of asthma and amenorrhœa.

මහ සාරණ

Trianthema Decandra is called *Maha-sárana* in Sinhalese.

PROPERTIES AND USES of it are similar to those of *Hín-sárana*. There is a third variety called Trianthema Crystallina, the properties and uses of which are similar to the other two. These are indiscriminately used one for the other.

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Mollugo Stricta.
Do Spergula.
Do Cerviana.

VERNACULAR.—Sinhalese : *Udetta*. Sanskrit : *Grishmasundaraka* and *Phani-ja*. Tamil : *Patpadakam*.

PROPERTIES AND USES.—These plants are varieties of the same species and called in Sanskrit *Grishma-sundaraka*. Medicinally they are considered stomachic, aperient and antiseptic, and are said to suppress lochia. The juice is said to cure itch and other skin diseases.

Gisekia Pharnaceoides.

VERNACULAR.—Sinhalese : Not ascertained. Sanskrit : *Balu, Baluka, Valuka*. Tamil : *Manalkirai, Manáli*.

PROPERTIES AND USES.—This is also called *Ela-valuka* in Sanskrit, and is regarded as aromatic, anthelmintic and aperient. It is prescribed in cases of Tænia.

CORNACEÆ NATURAL ORDER.

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Alangium Lamarokii.

VERNACULAR.—Sinhalese : *Álangá*. Sanskrit : *Ankóta, Nikóchaka*. Tamil : *Mul-anninchill, Alangi*.

PROPERTIES AND USES.—This is also called *Guptasúcha*, "the oil of which is hidden," and is described as demulcent, bitter, pungent, light and aperient. It expels worms, poison, phlegm and wind. The fruit is cold, sweet and aperient, and begets phlegm. The bark is emetic and is used in skin diseases. It is a good substitute for Ipecacuanha except in cases of dysentery, and is called Indian Ipecacuanha. This is supposed to be one of the ingredients of the secret remedies used by specialists in the treatment of snake and mad dog bites.

RUBIACEÆ NATURAL ORDER.

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Anthocephalus Cadamba and **Adina Cordifolia.**

VERNACULAR.—Sinhalese : *Embul-bakmí* or *Kolongas*. Sanskrit : *Dhara Kadamba*. Tamil : *Vellaikadampa*.

PROPERTIES AND USES.—This tree is sacred to Kali or Parvati, the consort of Siva, and is also called *Sisu-pála*, "children protecting". The fruit is about the size of a small orange, and is eaten by natives. It is sweet and a destroyer of phlegm. The bark is tonic and febrifuge.

The bark of A. Cordifolia is used more largely than that of Anthocephalus, and the yellow dye of the wood is considered to be antiseptic. It prevents the generation of worms in sores. This is also called in Sanskrit *Haliprivya*. Tamil : *Manfal Kadambe*.

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Oldenlandia Corymbosa.

Do Biflora.

Do Herbacea.

The last is the variety mostly used in prescriptions.

VERNACULAR.—Sinhalese : *Pepiliya*. Sanskrit : *Parpatá*. Tamil : *Parpadagam*.

PROPERTIES AND USES.—This is the drug *par excellence* of the native medical men for continued fevers. There is hardly a prescription for continued fevers without *Pepiliya* as one of its ingredients. It is cooling and is especially useful in fever with gastric irritability and in nervous depressions. It is also called *Kshetra-parpata* as it grows in fields and low grounds.

One of the common compound decoctions prescribed almost in every case of fever to begin with is what is called "five root decoction", *Pasmul* in Sinhalese and *Panchamuli* in Sanskrit.

Take of :—Parapata (Oldenlandia Herbacea).
Kalánduru (Cyperus Rotandus).
Rasakinda (Tinospora Cordifolia).
Bin-kohomba (Ophelia Chirata).
Inguru (Ginger).

Make a decoction in the usual way.

I have given this drug a trial in cases of fever, especially among poorer classes of people who could not afford to pay for Western medicine ; and, to my mind, the decoction just mentioned is as good as, if not better than, any fever mixture I could myself devise with our remedies. It also allays thirst in enteric cases. It is non-irritating ; and I have often treated continued cases of fever with nothing more than an infusion of *Pepiliya* with the addition of one or two drugs as indicated by the symptoms of the disease. Thus treated the disease more often than not ran its course without any complications.

Pepiliya is also given in skin diseases in combination with other drugs.

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Oldenlandia Umbellata.

VERNACULAR.—Sinhalese : *Sáya.* Tamil : *Chaya.*

This yields a red dye largely used by calico printers. Medicinally it has the same properties as O. Biflora and D. Corymbosa.

There are some other plants which go by the name of *Parpata* or *Patpadagam*, but this is the *Parpata* of Sanskrit writers.

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Ophiorrhiza Mungos.

VERNACULAR.—Sinhalese : *Retta* or *Aratha.* Sanskrit : *Rasna.* Tamil : *Kiri-purandan.*

HABITAT.—Found in India and in Ceylon.

PROPERTIES AND USES.—This is largely used in medicine, and Kæmpfer, who first brought it to the notice of the European medical men, called it the Radix Mungo. It is supposed to be eaten by the mongoose after its fight with a cobra. At one time many medicinal virtues were attached to this drug, but the investigations, experiments and analysis of the root by European Pharmacologists have long ago exploded its much vaunted virtues and now it is only regarded as a simple agreeable bitter tonic. In native medicine it is largely prescribed in cases of fever, and there is considerable doubt whether the generality of native medical men both in India and here use the right drug for the *Rasna, Nakuli*, etc., of the old Sanskrit writers. This drug has no less than ten names.* According to Dr. Dutt, Calcutta native physicians use the roots of Vanda, Roxburghii and Acampe papillosa which are epiphytic plants belonging to the natural order Orchidaceæ. The native medical men in Ceylon use what is called *Retta* or *Aratta* which, according to the editors of Clough's Dictionary, is Mimosa Octandra : it is also described as a root similar to the Saffron (Tumeric) which could not be a Mimosa plant of the natural order Leguminosæ.

I have examined the root sold in the drug bazaars as *Aratta.* It agrees with the description given of Ophiorrhiza Mungos in the *Pharmacographia Indica*, but a native medical man from whom I made inquiries tells me that it is a plant like ginger or Curcuma Aromatica (*Harankaha*). After considering all these conflicting views I am inclined to think that the tree *Rasna* is Ophiorrhiza, which I believe is the drug sold in the drug bazaars under the name of *Aratta*, but I cannot say whether it is the same as the Ophiorrhiza Mungos. It has a characteristic smell and the synonyms *Sugandha* and *Gandhana-kuli* clearly indicate that it is a drug with a smell. It should be mentioned that it is the opinion of the author of *Pharmacographia Indica* that Inula Helenium is the true *Rasna* of the old Sanskrit writers. *Retta* and

* Nakuli, Surasa, Rasna, Sugandha, Gandhanakuli, Nakuleshta, Bhujangakshi, Chhatrica, Suvaha, Nava.

Aratta are one and the same and the synonyms given in *Saraswathi* and other Sinhalese *Nigandus* are the same as those given in Hindu *Nigandus*. According to Dr. Trimen, *Dat-ketiya* is Ophiorrhiza Mungosa, and it is possible that *Aratta* or *Retta* of the Sinhalese is quite different from *Dat-ketiya*, which is also called *Ekawereye*. According to some pharmacologists, orris root, which is Iris Germaica imported into India from the West, is regarded as *Aratta*. The name of old Sanskrit writers for orris root is *Phuskaramula* and the description given of this by them is somewhat like that of *Aratta*. Orris root is a plant of the order Iridæ and is not at all unlike *Aratta* in its appearance and even in smell.

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Randia Dumetorum.

VERNACULAR.—Sinhalese : *Kukurumuwan*. Sanskrit : *Madana*. Tamil : *Marukkallankai*.

PROPERTIES AND USES.—Pungent and dry and beneficial in leprosy and phlegmetic swellings. It is regarded as the best and safest of emetics. One ripe fruit is said to be sufficient for a dose. In some parts of India the fruit, like Coceulus Indicus, is used to poison fish.

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Randia Uliginosa.

VERNACULAR.—Sinhalese : *Et-kukurumuwan*. Sanskrit : *Pindaluka*. Tamil : *Wagata*.

PROPERTIES AND USES.—Astringent, used in the treatment of diarrhœa and dysentery ; and the fruit is also cooked and eaten. This is called *Pindaluka* in Sanskrit and is described as cooling, sweet and diuretic.

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Sarcocephalus Cordatus.

VERNACULAR.—Sinhalese : *Bakmí*. Sanskrit : *Bhantriya*. Tamil : *Vammi*.

This is regarded as cooling and a destroyer of phlegm.

Gardenia Latifolia.—Vel **Cummifera.**

VERNACULAR.—Sinhalese : *Galis*. Sanskrit : *Nadi-hingu, Hingunadika*. Tamil : *Kumbai, Dikamali*.

PROPERTIES AND USES.—This is largely used by medical men in India and Ceylon for fever, dyspepsia, flatulence and chronic skin diseases. It is an exudation from the tree Gardenia Gummifera and other Gardenia trees of the same family of Rubiaceæ. It is used also by Cattle Doctors to keep away flies from sores. It is a remedy for headache. Native medical men in Ceylon began to use it only very recently.

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Pavetta Indica.

VERNACULAR.—Sinhalese : *Páwattá.* Sanskrit : *Tiryak-phala.* Tamil : *Pavuttay-vayr.*

This is the true *Páwattá* and should not be confounded with *Adatódá*, which also is called *Páwattá* in Sinhalese.

PROPERTIES AND USES.—This is described as bitter, diuretic and aperient and is regarded as a specific for jaundice. It is given as a decoction by itself, or in combination with other drugs, for drospy due to visceral obstructions. This term is frequently used erroneously for *Adátóda* or *Wan-epala.*

රත්මල්

Ixora Coccinea.

VERNACULAR.—Sinhalese : *Ratmal* or *Ratambala.* Sanskrit : *Ishvara.* Tamil : *Vitchi.*

PROPERTIES AND USES.—This is regarded by Hindus as a tree sacred to *Shiva* and the word Ixora itself is a corruption of *Shiva* or *Ishvara* by the Portuguese. The bright red flowers are used as a remedy for dysentery. The flowers are fried in melted butter, rubbed down with a little Cummin and *Nágakésara*, and made into a bolus with butter and sugar candy and administered in dysentery cases. Some time back a Dr. F. Willis brought the root of this to the notice of the profession as a remedy for dysentery and he further stated that it was a good stomachic and tonic useful in debility of the stomach. A very useful domestic remedy for catarrh of children attended with fever is a simple decoction composed of :—

Bark of Ixora Coccinea (Ratambala).
Flowers of Ixora Coccinea (Ratambala).
Allium Cepa (Red onion).
Cumium Cymium (White Cummin seeds).
Nigella Sativa (Black Cummins).

To be administered in two teaspoonfuls twice or thrice a day with a little ghee added, if required, to move the bowels.

දඹ

Morinda Citrifolia.
Do Tinctoria.

VERNACULAR.—Sinhalese : *Ahu.* Sanskrit : *Achchhuka.* Tamil : *Nuna-maram.*

PROPERTIES AND USES.—It is used as a dye and medicinally in combination with other drugs for fever, dysentery and diarrhœa ; also as a tonic. The juice is used externally to relieve the pains in gout and rheumatism. The fruit is regarded as an emmenagogue and deobstruent ; when unripe it is eaten in curries. This plant is extensively cultivated in some parts of India for the root, which is collected and exported for dyeing purposes.

අපසුමුදු

Paederia Foetida.

VERNACULAR.—Sinhalese : *Ápasumudu.* Sanskrit : *Prasarini.*

HABITAT.—Not found in Ceylon. Found in Central and Eastern Himalayas, Bengal and Western peninsula.

PROPERTIES AND USES.—This is also called in Sanskrit *Apchi-váta*, " expelling flatulence". Its chief use medicinally is as a remedy for rheumatism, for which it is regarded almost as a specific. A preparation for this disease is made by boiling down a strong decoction of the whole plant into a thick syrup with treacle.

ඇවණකොළ

Hedyotis Auricularia.

VERNACULAR.—Sinhalese : *Geta-kola.* Sanskrit : *Aladanaghanta.*

Spermacoce Hispida.

VERNACULAR.—Sinhalese : *Hín-geta-kola.* Sanskrit : *Madanaghanta.* Tamil : *Nattaichchuri.*

PROPERTIES AND USES.—There is a Hindu belief to the effect that an oyster will open its shell if touched by this plant. The seeds are thought to be aphrodisiac and the plant is prescribed to cure piles. The seeds are said to be cooling and demulcent. It is also regarded as a purifier of blood and an alterative. It is eaten as a vegetable by some people. It is named Hedyotis Auricularia by reason of its being regarded as a cure for ear-ache.

එරඳ මදරා

Rubia Tinctorium.
Do Cordifolia.

VERNACULAR.—Sinhalese : *Manda-madini-wel, Wel-maddeta.* Sanskrit : *Manjishtha.* Tamil : *Manjitti, Shevelli.*

PROPERTIES AND USES.—This is Madder and is used as a colouring matter in the preparation of native medical oils. It is also used externally in inflammations, ulcers and fractures and is regarded as an astringent. Chakradatta recommends the use of Madder as an external application to the brown spots of *pityriasis versicolor.* Arabian physicians recommend the application of a paste made from the roots with honey for discolourations of the skin. It is regarded as alexipharmic and is tied round the necks of children and animals to avert the " evil eye ". It is also recommended to be taken in the form of an infusion or decoction to promote the discharge of lochia when scanty.

Some of the plants of this order, though not mentioned in the *Nigandus*, used at times medicinally by the native medical men, are :—

(1) **Sarcocephalus Cordatus.**

VERNACULAR.—Sinhalese : *Bakmí.* Sanskrit : *Bhantriya.* Tamil : *Vammi.*

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(2) **Stephegyne Parvifolia.**

VERNACULAR.—Sinhalese : *Halamba.* Tamil : *Nirkadampa.*

කොතුරුබෙදිද

(3) **Geophila Reniformis** *vel* **Psychotria Herbacea.**

VERNACULAR.—Sinhalese : *Koturubedda.* Sanskrit : *Agukarni.*

රවන්දල

(4) **Wendlandia Notoniana.**

VERNACULAR.—Sinhalese : *Rawanidala.* Sanskrit : (Not known).

වැරණිය

(5) **Hedyotis Fruticosa.**

VERNACULAR.—Sinhalese : *Weraniya.*

පිවසුදුපලා

(6) **Hedyotis Nitida.**

VERNACULAR.—Sinhalese : *Pita-sudu-palá.* Sanskrit : *Atisaka.*

Pita-sudu-palá is very seldom used medicinally. This should not be confounded with Bœrhaavia Diffusa or *Sveta Punarnava,* which is called *Pita-sudu-kola* in Sinhalese, and is used largely in the treatment of rheumatism.

තරණ

Webera Corymbosa.

VERNACULAR.—Sinhalese : *Tarana.* Tamil : *Karanai.*

The fruit smashed up is applied to boils to promote suppuration.

මුසෑන්ද

Mussaenda Frondosa.

VERNACULAR.—Sinhalese : *Mussenda.* Sanskrit : *Nagavalli.* Tamil : *Vellœllay.*

PROPERTIES AND USES.—The Tamils call this " white-rag plant ". About eighty grains of the powdered fruit is said to be a good remedy for jaundice administered in cow's urine—not a very pleasant nostrum to drink by any means—or two *tolas* (360 grains) of the white leaves may be given in milk. This plant is also called *Srivati* in Sanskrit and is said to be a favourite of the goddess of fortune, from its bearing the white mark of Vishnu or Krishna. This is said to be attenuant, diuretic and tonic. The flowers are used in cough, asthma, ague and flatulence ; externally applied they clean foul ulcers, and cure skin eruptions.

VALERIANNEÆ NATURAL ORDER.

ජටාමාංසී

Nardostachys Jatamansi.

VERNACULAR.—Sinhalese : *Jatámánsa.* Sanskrit : *Jatamansi.* Tamil : *Jatamashi.*

PROPERTIES AND USES.—This is also called in Sanskrit *Mansi*, *Bhútakési*, " demon's hair ", and *Tapasvini*, and has been used in native medicine from a long period, and also as a perfume. It is contained in a prescription of Susruta for epilepsy and is used by native medical men chiefly as a nervine tonic and a carminative. It is regarded almost as a specific for rheumatism and the following is a prescription for it.

Take the whole of *Jatámánsa* two seers, water thirty-two seers, and boil down to one-fourth. Then strain and add two seers of treacle and again boil down to the consistency of a syrup, and to this add powdered—

Ratnitol (Plumbago Rosea).
Ginger.
Long Pepper.
Black pepper.
Root of Chaba (Siviya)

in equal parts, in all half a seer. DOSE.—About sixty grains.

In the *Nigandus* this is described as cooling and as a remedy for leprosy, morbid heat and erysipelas. Arabian physicians describe *Jatámánsa* as a deobstruent, stimulant, diuretic and emmenagogue and recommends it in the treatment of various disorders of the digestive and respiratory organs ; also as a nervine tonic in hysteria, *Jatámánsa* of the native medical men is a perfect substitute for Valerian of the *British Pharmacopœia* and is used in the same class of diseases. *Jatámánsa* (Valerian) has been useful in the treatment of both diabetes melitus and diabetes insipidus.

Valeriana Wallichii is a variety of Valeriana and is mentioned by Sanskrit writers under the name of *Tagara*, which is also called *Varhini*, and *Nandini*. This is used in the same class of diseases as the Western practitioners use Valeriana. This is also one of the varieties of *Kattakumanchal* of the Sinhalese (Frankincense). It is a remedy used in poison cases, suppression of urine, swoons, and headaches.

COMPOSITÆ NATURAL ORDER.

සන්නි නායන්

Vernonia Anthelmintica.

VERNACULAR.—Sinhalese : *Sanni-náyan.* Sanskrit : *Vakuchi*, *Somaraji* or *Somarajin.* Tamil : *Kattushiragam.*

PROPERTIES AND USES.—This is also called in Sanskrit *Avalguja* and in Sinhalese *Bodita*, and has a great reputation in India as a cure for Leucoderma (white leprosy) and Psoriasis. It is also used in combination with other drugs as an anthelmintic. In skin diseases it is directed to be given as follows :—

Powder the drug with an equal quantity of black sesamum and take a drachm of the powder in the morning with tepid water, after perspiration has been induced by exercise or exposure to sun. The diet should consist of milk and rice.

මොනර කුඩිමිඹිය

Vernonia Cinerea.

VERNACULAR.—Sinhalese : *Monarakudimbiya.* Sanskrit : *Sahadevi.* Tamil : *Sira-shengalanir.*

PROPERTIES AND USES.—This is said to be diaphoretic and is given in fever to bring on perspiration. It is also astringent and corrects the three vitiated humours or *dhóses*, but according to the experience of European practitioners who have experimented with it the medicinal virtues attributed to this plant are imaginary.

ඇත් අඹ

Elephantopus Scaber.

VERNACULAR.—Sinhalese : *Et-adi.* Sanskrit : *Go-jihva.* Tamil : *Ana-shovadi.*

PROPERTIES AND USES.—It is given in dysuria, diarrhœa, and dysentery.

හුලන්තලා

Ageratum Conyzoides.—Goat weed.

VERNACULAR.—Sinhalese : *Hulan-talá.* Sanskrit : *Sahadevi.* Tamil : *Pumpullu.*

PROPERTIES AND USES.—It is aromatic and the juice is said to be a good remedy for *prolapsus ani.* This is supposed to be a variety of Vernonia Cinerea.

අයිඤාපාන

Eupatorium Ayapana.

VERNACULAR.—Sinhalese : *Ayiyápána.* Sanskrit : *Ayiapana.* Tamil : *Ayapani.*

PROPERTIES AND USES.—*Ayiyápána* is a native of the Isle of France (Mauritius), but it is now cultivated in various parts of India, Java and Ceylon ; and like Afuin (Opium) of the Persians, it appears to have retained its native name in all the countries of its naturalization. Even the Sanskrit writers have not given it a new name. At one time it had

acquired a reputation for being possessed of great medicinal virtues, but later investigations have exploded the old belief in that regard, and it has now found its own true place as being nothing more than a simple tonic and diaphoretic. It is said to possess alexipharmic properties and is given in cases of dysentery. It may be compared with chamomile in its effects.

කුකුරු දුරු

Blumea Densiflora vel **Lacera.**

VERNACULAR.—Sinhalese : *Kukuru duru.* Sanskrit : *Kukundara* or *Kukura-dru.*

PROPERTIES AND USES.—This is called the " dog bush ", because of its pungent odour being attractive to dogs. It is used as an anthelmintic, deobstruent and resolvent, and is given in cases of dysentery and chronic discharges from the uterus. For renal dropsy a preparation called *Marana* is made by oxidising iron filings in the juice of this plant. This plant contains a volatile oil similar to camphor.

There are several species of Blumea and of these Blumea Lacera is used medicinally and is regarded as a valuable anti-parasitic. It is used in India for treating Tinia Tarsi, for which purpose the juice is employed. There are many species of Blumea in Ceylon, but Dr. Trimen does not give the Sinhalese or Tamil names of any of them. Blumea Lacera is found in Ceylon.

මුඩ මහන

Sphaeranthus Indicus.

VERNACULAR.—Sinhalese : *Muda-mahana.* Sanskrit : *Munditika* or *Mundi.* Tamil : *Kottak-karandai.*

PROPERTIES AND USES.—This has several other Sanskrit names such as *Bhikshu, Pari-vraji,* " mendicant ", *Tapodhana,* " rich in religious penance ". It is described as pungent, bitter, stomachic and stimulant, and is a remedy for glandular swellings in the neck, urethral discharges and jaundice. It is also used to cure itch.

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Epaltes Divaricata is called *Hin-muda-mahana* in Sinhalese, but I am not aware of its being used medicinally.

Inula Helenium.—This is not found in Ceylon nor do I think it has a Sinhalese name. It is only mentioned here as it is thought by Dr. Dymock and other Indian Pharmacologists to be the *Rasana* of the old Sanskrit writers and imported from Central India.

උඟරුකොස්ස

Xanthium Strumarium. Broad-leaved Burweed.

VERNACULAR.—Sinhalese : *Urukossa.* Sanskrit : *Shankhini* or *Shankhapushpi.* Tamil : *Marlumatta.*

PROPERTIES AND USES.—I have not been able to ascertain the exact Sinhalese name of this plant. *Úrukossa* is the term given for it by Herme. This is a powerful diaphoretic like jaborandi and is used as a prophylactic for hydrophobia. It is highly praised as a remedy for long standing malarial fever.

කිකිරිඳිය

Eclipta Erecta.

VERNACULAR.—Sinhalese : *Kikirindiya.* Sanskrit : *Kásaraja.* Tamil : *Kaivishi-ilai.*

PROPERTIES AND USES.—This is very frequently used as a remedy in native practice. It is an ingredient in many decoctions for various diseases. As its name indicates *Kásaraja* promotes the growth of hair and prevents its becoming prematurely grey. It is described as pungent, bitter, hot, and removing phlegm and bile ; also as increasing the appetite and curing diseases of the eye, skin, and head. In practice it is used as a tonic and deobstruent in hepatic and spleenic enlargements and in chronic skin diseases. It is used both externally and internally. The juice of the leaves contains a dark bluish colouring matter and is used for tattooing, as it leaves an indelible mark on the skin. Dr. Dutt mentions Wedeliya Calendulacea as the plant used in Bengal as *Kásaraja.* It possesses the same properties as Eclipta Erecta.

Wedeliya is a small plant erect, whereas Eclipta Alba is a climbing plant. The Sinhalese call Wedeliya *Ranwan Kikirindiya.* The juice of the plant Eclipta Alba is used for grinding stock pills and also for purifying the poisonous metallic ores. A very useful hair oil is prepared with the juices of Eclipta Alba, Asparagus Racemosus (*Hátawáriya*) and king-cocoanut milk, which are exposed to the sun until the oil separates from the mixture. I have found it very useful for preventing premature greying of hair in several cases that I treated, the oil thus prepared being used for the purpose.

ඇක්මැල්ල

Spilanthes Acmella. Para Cress.

VERNACULAR.—Sinhalese : *Akmella.* Sanskrit : *Pkachiphala, Nadekanta.* Tamil : *Akki-rakaram.*

PROPERTIES AND USES.—Not much used except as a sialogogue and is not mentioned in the old Sanskrit works on medicine. It is a native of South America, and is useful in toothache. A tincture of the flowers or the fresh juice is applied to the gums, when both pain and swelling are relieved. Dr. W. Farquhar considers this as a specific for toothache.

වල් කොළොන්ඩු

Artemiisia Vulgaris. Wormwood.

VERNACULAR.—Sinhalese : *Wal-kolondu.* Sanskrit : *Granthiparni, Nagadamani.* Tamil : *Machipattiri.*

PROPERTIES AND USES.—There is a difference of opinion as to the Sanskrit name of this plant. In Northern India and Bengal it is identified with *Nagadamani* or *Nagadhavani* of the *Raja Nigandus* and in Western India it is known as *Indhana*, but of late it has been known by the synonym *Granthiparni*, "spotted leaf". It is regarded as a valuable stomachic, deobstruent and anti-spasmodic. It is prescribed in cases of hysteria and obstruction of the menses. It is supposed to have emmenagogue, alexipharmic and anti-lithic properties. There is a popular belief in some parts of Europe that if a bunch of leaves of this plant be placed under the pillow of a sick patient unknown to him and if after this he sleeps he will soon recover.

Artemisia Maritima.—This is the source of our santonine. It has been introduced into India in recent years and its Sanskrit names are *Javaniya* and *Kirmala*. The use of santonine is now well-known to the natives of Ceylon, who come invariably to outdoor dispensaries to obtain it for their children when suffering from worms. The administration of santonine should be done in a particular way to obtain the best results, for it is now understood that it does not kill the lumbrocoides, but that its distaste drives them to the large intestines. A dose of castor oil should be given some time after the administration of santonine. The best way perhaps is to give half the dose the previous night and the other half with castor oil the following morning.

Carthamus Tinctorius.—This is a plant of the natural order Compositæ, which I think is not found in Ceylon, nor imported here from elsewhere. It is known to the Tamils of South India and is called by them *Kusumbha*, which is also the Sanskrit name for it. The seeds are said to be purgative and are given in cases of rheumatism.

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Emilia Sonchifolia is *Kadupára* in Sinhalese and is known in Bengal as *Shudi-mudi*. Is used as a substitute for Taraxacum.

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Anacyclus Pyrethrum.

VERNACULAR.—Sinhalese : *Akrapatta*. Sanskrit : *Akarakarabha*. Tamil : *Akki-rakaram*.

Artemesia Pyrethrum.—These are two varieties of the common Pellitory. The root is a good sialogogue. Powdered root is irritant and is used to allay toothache. Is used by Vedarálas as an ingredient in decoctions for rheumatism.

PLUMBAGINEÆ NATURAL ORDER.

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Plumbago Zeylanica රත් නිවුල් **Plumbago Rosea** එල නිවුල්

VERNACULAR.—Sinhalese : *Rat-nitul, Ela-nitul*. Sanskrit : *Chitraka*. Tamil : *Chittira*.

PROPERTIES AND USES.—There are two varieties of *Chitraka* and the variety mostly used is the *Ela* or white variety, i.e., Plumbago Zeylanica. It is described as hot, pungent, digestive and astringent. *Chitraka* is called "*Agni*" (fire), *Daruna*, *Dahana*, and is used in a great many diseases in combination with other drugs, especially for fever. There are many prescriptions for fever containing it and it is prescribed in flatulence, dyspepsia, dysentery and other diseases.

The following is an old prescription taken from *Susruta* called *Shaddharana Yoga*. It is a powder composed of :—

Rat-nitul mul (Plumbago root).
Kelinda (Holarrhena Antidysenterica).
Diyamitta (Cissampelos Periera).
Katukarósana (Picrorrhiza Kursoa).
Atiudyan (Aconitum Heterophyllum).
Aralu (Chebulic Myrobalan).

Powder well and mix. DOSE.—about one drachm. This may also be given in the form of a decoction prepared in the usual way.

Another preparation for dyspepsia is the following :—

Rat-nitul (Plumbago Rosea).
Sahindalunu (Rock salt).
Aralu (Chebulic Myrobalan).
Tippili (Long pepper).

Equal parts, powder and mix. DOSE.—About sixty grains.

The plumbago root is emmenagogue and is used to procure abortion by a piece of the root being introduced to Cervex Uteri. It is an ingredient in the *Dasamula* decoction (see Tribulus Terrestris). There are many prescriptions in standard native medical works containing Plumbago Rosea as an ingredient for various diseases.

MYRSINEÆ NATURAL ORDER.

වැල් ඉඹිල්ල

Embelia Ribes. The berries.

VERNACULAR.—Sinhalese : *Wel-embilla.* Sanskrit : *Vidanga.* Tamil : *Vayu-vilangam.*

PROPERTIES AND USES.—Described in the Sanskrit *Nigandus* as tonic, anthelmintic, diuretic and appetising. For expelling worms the powdered seed is given, about sixty grains for a dose.

The berries are sold in the bazaars under the name of *Valangasál* and is known as Barberang seed in India. Ribes enters into the composition of many decoctions for fever and other diseases. Here is a prescription for fever :—

Take of :—Valangasál (Ribes Embeliya).
Inguru (Ginger).
Kalánduru (Cyperus Rotundus).
Wel-kahambiliya (Yávásó) (Alhagi Camelorum).
Pepiliya (Oldenlandia Herbacea).
Diyamitta (Cissampelos Pereira).

Make a decoction in the usual way. This is given in diseases of the chest and also in skin diseases. A few years back it was much talked of as an efficacious remedy for tape-worm.

Eleagnus Latifolia.—This is a plant of the natural order Eleagnacea and is called *Wel-embiliya* or *Rata-embiliya*, order Eleagnacea, but it has no therapeutical properties and should not be confounded with the other (Embelia Ribes).

CAMPANULACEÆ NATURAL ORDER.

වල් දුන්කොළ

Lobelia Nicotianaefolia. Wild tobacco.

VERNACULAR.—Sinhalese : *Wal-dunkola.* Sanskrit (Marathi): *Dhavala* Tamil : *Kattu popillay.*

PROPERTIES AND USES.—It is said that no mention of this plant is made in the Sanskrit *Nigandus*, but the Marathi name *Dhavala* seems to be of Sanskrit origin. It is called wild tobacco and its chief value is as an useful remedy for asthma. A drachm or teaspoonful of the tincture is given for asthma in the morning and a like dose may be given at night until the desired effect is produced.

SAPOTACEÆ NATURAL ORDER.

Bassia Longifolia. *Mí.* මී
Do Latifolia. *Búmí.* බිම්මී
Do Neriifolia. *Gan-mí.* ගස් මී
Do Fulva. *Wana-mí.* වන මී

VERNACULAR.—Sinhalese : *Mí.* Sanskrit : *Madhuka, Madhudrúma.* Tamil : *Illupai.*

PROPERTIES AND USES.—The flowers of *Mí* yield a spirit described as tonic, astringent and appetising. They also enter into the composition of many preparations used in various diseases. In India, flowers, seeds, and oil are used as food and in many districts they are a great addition to their dietary. In Ceylon I am not aware of any products of *Mí* put to any use except medicinally. *Mí* oil is used as an external application for painful joints. The bark is astringent and forms an ingredient in several decoctions. It also enters into the composition of several medicinal oils.

From the flowers a spirit called *Mahwa, Madhaví* or *Madhvasava* is distilled in Bengal, and the art of distilling it was known even in the time of Susruta, who describes it as heating, astringent, tonic, and appetising. It is an excisable article and takes in Bengal the place of arrack in Ceylon.

මිණ මල

Mimusops Elengi.

VERNACULAR.—Sinhalese : *Múna-mal.* Sanskrit : *Vakula.* Tamil : *Mogadam.*

PROPERTIES AND USES.—This is also called *Késara* and *Sinha-késara*, " lion's mane " ; the bark and the unripe fruit are astringent and are recommended to be chewed for strengthening the gums and fixing loose teeth. They are much used as a gargle to wash the mouth with for soreness and spongy gums, also for relaxation of the gums. It also forms a good gargle in salivation. It is also an ingredient in certain decoctions for heart disease.

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Mimusops Hexandra.

VERNACULAR.—Sinhalese : *Palu.* Sanskrit : *Rajadani.* Tamil : *Palai.*

PROPERTIES AND USES.—The bark and the unripe fruit are astringent like those of *Elengi* but are seldom used medicinally. The wood is tough and makes good sleepers for railways. The ripe fruit is eaten and in India it is dried and sold in the bazaars ; it tastes not unlike figs but is less palatable. The wood is known as iron wood in Ceylon.

N.B.—The true iron-wood however is *Mesua Ferrea*, a plant of the natural order Guttiferæ.

PRIMULACEÆ NATURAL ORDER.

රෑමල

Cyclamen Indicum.

VERNACULAR.—Sinhalese : *Úrala.* Sanskrit : *Tala-mule.*

PROPERTIES AND USES.—This is frequently used in combination with other drugs. It is regarded as highly useful for *Wátarakta*, or what the Vedarálas call burning of the feet.

EBENACEÆ NATURAL ORDER.

තිඹිරි

Diospyros Embryopteris.

VERNACULAR.—Sinhalese : *Timbiri.* Sanskrit : *Tinduka.* Tamil : *Tumbilik-kay.*

PROPERTIES AND USES.—The fruit and bark are very astringent and so is a viscid exudation from the tree. It is a sort of antiseptic and is used for dyeing fishing nets to preserve them from decay and also in caulking boats as a protection against insects. Medicinally the bark and the fruit are used in combination with other drugs in bowel complaints and hæmorrhage from the internal organs. It is also given i bilious fever and gonorrhœa.

STYRACEÆ NATURAL ORDER.

ලොත් සුම්බු

Symplocos Racemosa.

VERNACULAR.—Sinhalese : *Lotsumbulu.* Sanskrit : *Lódhra.*

PROPERTIES AND USES.—This is also called *Srimata* (propitious) and *Tilaka,* because of its use by natives of India for making the *Tilaka* mark on their foreheads. It is described as hot and alterative and is used in phlegmatic diseases and leprosy. It is also used in many other diseases in combination with other drugs. Here is a prescription for dysentery, with *Lódhra* as one of the ingredients.

Take of :—Amba-eta-mada (Kernel of the mango seed).
Lódhra (Symplocos Racemosa).
Piumala (Tubers of Nelumbium).
Rukmal (Horsafieldia Myristica).

Make a decoction in the usual way.

And the following is for fever :

Take of :—Lódhra (Symplocos Racemosa).
Mahanil (Nelumbium).
Rasakinda (Tinospora Cordifolia).
Pium (Nymphæa Stellata).
Iramusu (Hemidesmus Indicus).

Make a decoction in the usual way.

A decoction of the wood or stem is given to strengthen the gums and make the teeth firm in their sockets. The bleeding from the gums is become a very common complaint of late among natives. I have observed a paste composed of *Lódhra* bark and tubers of Cyperus Rotundus and honey employed in this complaint with much benefit.

බෝඹු

Symplocos Spicata.

VERNACULAR.—Sinhalese : *Bómbu, Wal-bómbu.* Tamil : *Elumpunukkai.*

PROPERTIES AND USES.—This is the *Bómbu* or *Wal-bómbu* of the Sinhalese and *Elumpunukkai* of the Tamils. This might be substituted for Symplocos Racemosa, which is not indigenous to Ceylon.

Lot-sumbulu is imported from India and is procurable in native drug stores. Speaking of native drug stores, it may be stated here that of late, in many places such as Colombo and other towns, *Lot-sumbulu* is kept by Vedarálas, who are prepared to supply ingredients for decoctions properly weighed when prescriptions are sent to them, on a charge of 25 cents, the patients having only to get them boiled down to the quantity that is ordered.

OLEACEÆ NATURAL ORDER.

සඳපාලිකා

Nyctanthes Arbor-Tristis.—Weeping Nyctanthes, Night Jasmine.

VERNACULAR.—Sinhalese : *Sépaliká.* Sanskrit : *Sépalika, Parijátaka.* Tamil : *Manja-pu.*

PROPERTIES AND USES.—This is very largely cultivated for the sake of the flowers, which have a very agreeable smell ; the tree has received the additional names of *Rajanihasa*, " night smiling", and *Atyuha*, " very pensive ". There is a Hindu mythological legend attached to this tree to account for the dropping of all the flowers before sunrise. It is said that a certain Nága Prince called *Parijátaka* had a daughter of whom the sun became enamoured ; but after a time, like many lovers, he left her for another maid of whom he was greatly enamoured, whereat she pined away and died of grief. Upon the spot where she died this tree sprang up and was called *Parijátaka.*

The leaves are used in cases of fever and rheumatism. A decoction of the leaves, prepared over a gentle fire, is highly recommended by many Indian writers on medicine as a specific for obstinate sciatica. This is used more in the treatment of fever than of any other disease.

දැසමන්

Jasminum Grandiflorum.

VERNACULAR.—Sinhalese : *Desaman.* Sanskrit : *Jati.*

PROPERTIES AND USES.—This is a favourite flower with the natives of India. The oil prepared from it is one of their most used perfumes. The flowers are employed to perfume medicinal oils. The leaves are considered useful in skin diseases. Mohammedan writers attribute de-obstruent, diuretic and alcoholic properties to the leaves.

Jasminum Sambac is considered to have the same properties as the Jasminum Grandiflorum and is the common garden *Pichchamal*, සිරිමල් called *Varshiki* in Sanskrit.

SALVADORACEÆ NATURAL ORDER.

Salvadora Indica vel **Persica** (Persian tooth-brush tree).

VERNACULAR.—Sinhalese : *Pilu.* Sanskrit : *Pilu.* Tamil : *Uvay, Viyay.*

PROPERTIES AND USES.—There are two species, both of which grow near the sea coast in Ceylon and elsewhere, but were formerly brought to India from Persia. The drug is regarded as stimulant and tonic and is prescribed in cases of amenorrhœa. It has as synonyms in the *Nighandus* "*Sahasra*" "*Tatphala*" and "*Karambhá-priya*." I am not sure of its Sinhalese name, which may be the same as the Sanskrit; probably it has a different name in Sinhalese.

APOCYNACEÆ NATURAL ORDER.

රුක් අත්තන

Alstonia Scholaris.

VERNACULAR.—Sinhalese: *Ruk-attana*. Sanskrit: *Saptaparni*. Tamil: *Ezhilaip-palai*.

PROPERTIES AND USES.—This has also several other Sanskrit synonyms, such as *Sapta-chhada*, *Guchha-pushpa*, *Vrihat-tvak* and *Vishala tvak*, "having large or thick bark". It is useful in fever, dyspepsia, skin diseases and catarrhal affections. *Susruta* gives the following compound decoction for fever :—

Take of :—Bark of Alstonia Scholaris (Ruk-attana).
Tinospora Cordifolia (Rasa-kinda).
Azadirachta Indica (Kohomba).
Betula Bhojpatra (Bújapatra).

Equal parts (in all 360 grains).

This plant has been made officinal in the Pharmacopœia of India and is there described as tonic, astringent, anthelmintic and anti-periodic. It is said to be a powerful glactogogue and is well worth a trial by Western practitioners who are helpless in cases where mothers fail in milk. The name Scholaris has been given to it from the circumstance that the boards made out of it are used by natives in India to write upon, sand being spread on them.

Alstonia Scholaris (*Ruk-attana*) has been used by Ayurvedic physicians in cases of fever from the time of Susruta but in combination with other febrifuge drugs, and Susruta himself gives several prescriptions containing it as one of the ingredients for fever and other diseases. It is interesting to note that the natives of some of the Philippine Islands have been using it from time immemorial for malignant, remittent and intermittent fevers in the form of a decoction made out of the bark. This treatment was so successful that according to a report of the Centennial Exhibition furnished to the American Pharmalogical Chemists Association, it attracted the notice of the American physicians practicing there, who after giving the drug many trials with *ditain*, the active principle obtained from the bark and so named from *dita*, the native name for *Ruk-attana*, are said to have established the fact that

given case for case *ditain* was as efficacious as quinine in the worst forms of malarial fevers without any of the concommitant evils of the latter drug. Half a drachm of *ditain* was given for a dose. It seems to me that our medical men too may well give the drug a trial, for the tree grows abundantly in the low-lying districts of Ceylon. If *ditain* cannot be obtained the remedy might be administered in the form of a strong decoction made out of the dried bark.

කිරි වල්ලා

Holarrhena Antidysenterica.

VERNACULAR.—Sinhalese : *Kiri-walla, Kelinda.* Sanskrit : *Kutaja.* Tamil : *Kulappalai.*

PROPERTIES AND USES.—The seeds of Holarrhena Antidysenterica are called *Indrayava* and are largely used in native medicine for dysentery and fever in many decoctions in which they are included as an ingredient. The bark juice is given with honey. Both the bark and seeds are regarded as astringent and febrifuge. I have seen many cases of dysentery which failed to be cured under European treatment cured by native medical men, with preparations containing Holarrhena Antidysenterica. This drug is administered in various ways. A compound decoction called *Kutajashtaka* by Sanskrit writers is as follows :—

Take of :—Kelinda potu (Holarrhena Antidysenterica).
Atiudayan (Aconitum Heterophyllum).
Lunuketiya-wel (Stephania Hernandifolia).
Malitta (Woodfordia Floribunda).
Bómbu (Symplocos Spicata).
Lotsumbulu (Symplocos Racemosa).
Delum-leli (Punica Granatum), Pomegranate rind.
Kalánduru (Cyperus Rotundus).
Pushpa-bevila (Pavonia Odorata).

Three *kalans* (nearly three drachms) each, water eight seers, reduced to a fourth. DOSE.—Half a tea cup twice a day.

The *Kutajaleha* or confection of *Kutaja* is another good preparation for cases of dysentery.

Take of :—Holarrhena Antidysenterica bark (*Kelinda potu*) 12½ seers, water sixty-four seers, boil down to sixteen seers and strain. Boil the strained decoction till reduced to a thick consistency, then add sonchal salt (*Yavakshara*), vit-salt (a variety of common salt), rock salt, long pepper, flowers of Woodfordia Floribunda, Holarrhena Antidysenterica (*Kelinda*) seeds, and Cummin seeds, sixteen phalams each, in fine powder, and prepare a confection. DOSE.—About a drachm to be taken with honey. In India a popular remedy made with Woodfordia Floribunda is the following and it is called *Kutajarishta* :—

Take of fresh *Kelinda* (Antidysenterica) root bark 12½ seers, Raisins 6 seers, flowers of Bassia Latifolia (*Mí*) and bark of Gmelina Arborea each 80 *tolas*, boil them together in 256 seers of water till reduced to 64 seers, and strain. Then add Flowers of Woodfordia Floribunda (*Malitta*) 2½ seers, treacle 12½ seers and let the mixture ferment for a month in a cool place or buried under the ground. Draw off and bottle. This preparation has an agreeable flavour, is not bitter, and is an excellent remedy in chronic dysentery and diarrhœa. There are many other preparations containing this drug which are very useful in cases of dysentery, both acute and chronic. This is one of the most important of all drugs among native medical men for this disease. A preparation which I use with great success in dysentery cases of every stage is one composed of this drug and a few others to which opium is also added.

A mythological origin is assigned to this tree as in the case of *Aralu* : it is said to have sprung up from some drops of *Amrita* that fell from that given to Rama's monkeys by Indra to restore them to life, hence the seeds being called *Indrayava* seeds.

Holarrhena Mitis.—This is called *Kiri-wallá* in Sinhalese and is included by Dr. Trimen in his catalogue of Ceylon plants. I believe its action when administered is the same as that of Holarrhena Antidysenterica, which is not found in Ceylon. Mitis is a variety of it and requires no separate description here. It is frequently substituted for the other.

අලරිය

Nerium Odorum. Oleander.

VERNACULAR.—Sinhalese : *Alariya* or *Araliya*. Sanskrit : *Karavira*· Tamil : *Alari*.

PROPERTIES AND USES.—This is the Oleander in English and there are two varieties mentioned by Sanskrit writers, one with white flowers and the other with the red flowers, called *Svetapushpa* and *Raktapushpa* respectively. It is also called *Asvamaraka*, "horse killer", and *Praihasa*, "laughing". Both are described in the *Nighandus* as hot and poisonous. This is used externally more than internally and I do not know of any preparation for internal use in which it is an ingredient.*

දිවි කඳුරු

Tabernæmontana Dichotoma.

VERNACULAR.—Sinhalese : *Divi-kaduru*. Sanskrit : *Nandivriksha*. Tamil : *Nanthia-vattai*.

PROPERTIES AND USES.—There is some confusion in the Sanskrit name of this plant, but in Southern India in which Ceylon should be

* There is some confusion about the Sinhalese name of these plants (red and white) *Alariya*. In Clough's dictionary they are called *Allariya* or *Aralya* and *Kanaru*. They are of the same natural order and probably allied species, and they are both poisonous and possess the same therapeutical properties whatever these might be. The only difference between them is merely in the colour of the flower, which is white in one and red in the other.

included it has been given the name *Nandivriksha* which I have given above. This is used in affections of the eye as a cooling application. The root chewed relieves toothache. The milk is applied to wounds. The tender leaves and the milky juice are used largely by "boil doctors". I have seen it applied to a carbuncle and it had the effect of softening it very much and hastened suppuration to a marked degree. *

වතු සුද්ද

Tabernæmontana Coronaria.

VERNACULAR.—Sinhalese : *Watu-sudda.* Sanskrit : *Nandiyawathe.* Tamil : *Nandi-battai.*

PROPERTIES AND USES.—This is a common plant found in gardens in many parts of the Island. Its use is similar to *Divi-kaduru.* The milk of Tabernæmontana Coronaria is said to be cooling and applied to sore eyes. It is also used as a remedy for toothache. This is really a cultivated variety of Tabernæmontana Dichotoma, *Divikaduru.* *

එකා වේරිය

Rauwolfia Serpentina.

VERNACULAR.—Sinhalese : *Eká-weriya.* Sanskrit : *Sarpagandha.* Tamil : *Covannamilpori.*

PROPERTIES AND USES.—This is used by native medical men as a remedy for fever and an antidote to the poison of venomous reptiles. It is used in dysentery and is supposed to be emmenagogue. In Concan (India) the root of Aristolochia Indica (*Sapsanda*) is used with this for cholera and in colic. One part of the root with two parts of Holarrhena (*Kiri-walla*) or (*Kelinda*) and three parts of Jatropha Curcas root is given with milk. In fever the root with Andragraphis Paniculata (*Hín-bin-kohomba*), ginger and black salt is given. DOSE.—About three or four *kalans.*

මහ කරඹ

Carissa Carandas.

VERNACULAR.—Sinhalese : *Maha-karamba.* Sanskrit : *Karamardaka.* Tamil : *Kalaka.*

PROPERTIES AND USES.—This is also called *Krishna-phala* in Sanskrit and is described as hot, digestive and expellent of bilious and rheumatic humours. A decoction of the leaves is given at the commencement of all fevers. It is a fruit eaten both by Europeans and natives made into pickles and preserves and when ripe as a table fruit.

Plumeria Acutifolia.—This was not known to the old Sanskrit writers on medicine, but it is given the name of *Kshira-champa,* "milky champa," by later writers. It is cathartic and might be used as such.

* *Dirikaduru* is the "forbidden fruit" or Eve's apple of the English in Ceylon.

This is the *Araliya* or temple tree of the Sinhalese and it is also known as *Allariya*, a term applied to Nerium Odorum. Clough's Dictionary gives *Allariya* as the Sinhalese name of this plant, but I doubt its correctness. *Allariya* is Nerium Odorum.

Ichnocarpus Frutescens is *Kiri-wel* (කිරිවැල්) of the Sinhalese and it is called in Sanskrit *Krishna-sariva* or black creeper. The properties and uses of this plant are similar to those of Hemidesmus Indicus (*Iramusu*) and it might be substituted for the latter.

ASCLEPIADEÆ NATURAL ORDER.

වරා, එලවරා

Calotropis Gigantea.
Do Procera.

VERNACULAR.—Sinhalese : *Wará, Ela-wará.* Sanskrit : *Arka.* Tamil : *Erukku, Yercum.*

PROPERTIES AND USES.—These two plants are of the same species and one is only a variety of the other. They are distinguished by the colour of the flowers, being respectively *Arka* and *Alarka.* There are many other synonyms for *Wará*, such as *Rudra, Aditya, Suryapattra. Wará* is largely used in native medicine and it is said to promote secretions and to be useful in skin diseases and enlargements of the abdominal organs. The milky juice is a drastic purgative and caustic and is used as such in combination with Euphorbia Neriifolia. *Wará* is used in a variety of ways in the treatment of chronic ulcers, *Fistula in ano* and skin diseases. For the treatment of unhealing sinuses, tents are made with the milky juice of *Wará*, Euphorbia Neriifolia and the powdered wood of Berberis Asiatica (*Rasadun*) and introduced into them with very satisfactory results. This is an advantage where the sinuses cannot be opened up fully and treated, as is done by European surgeons.

An *Arka-taila* is made with *Arka* juice and sesamum oil. For asthma the flowering tops pounded and boiled with molasses are given in doses of about one drachm. For want of virility the following prescription is given by the Indian Kavirájas. Take 125 of the *Wará* flowers, dry and powder them, mix the powder with one *tola* each of the following :—cloves, nutmegs, mace and pellitory root, and make into pills of 6 *mashas* each (i.e., about 6 grains each). One pill may be taken daily dissolved in milk.

මුවකිරිය

Sarcostemma Brunonianum is *Muwa-kiriya* of the Sinhalese and is used medicinally as a tonic and alterative.

බින්-නුග

Tylophora Asthmatica.

VERNACULAR.—Sinhalese : *Bin-nuga.* Sanskrit : *Antrapachaka.* Tamil : *Pey-palai.*

PROPERTIES AND USES.—There is some doubt as to whether this is the *Antrapachaka* of Sanskrit writers. The expression *Antgirna* signifies "to suffer from dysenteric symptoms", literally, "to void the intestines"; and it is curious that it is found to answer in the treatment of dysentery as well as Ipecacuanha. This is said to be the experience of several medical men in India who have given this drug a trial and have found it a good substitute for Ipecacuanha. It is used as an expectorant and diuretic as well, and is prescribed in cases of fever and affections of the chest.

Tylophora Fasciculata is a plant allied to the above and is used to poison rats in some parts of India.

Tylophora Flava is the *Mudu-hinnuga* of the Sinhalese and is similar to Tylophora Asthmatica in its action.

මැඩහඟු

Dæmia Extensa.

VERNACULAR.—Sinhalese: *Medahangu.* Sanskrit: *Phalakantaka.* Tamil: *Veli-parutti.*

PROPERTIES AND USES.—This is also called *Ut-tara* in Sanskrit signifying "ejecting or vomiting". It is used in catarrhal affections of the chest, especially in children, and is said to be a good remedy for asthma. The juice is also applied to rheumatic swellings and is given internally with ginger for these affections. A writer in one of the newspapers mentions this as a remedy for plague, with what reason I cannot say.

කිරිඅඟුන

Dregea Volubilis.

VERNACULAR.—Sinhalese: *Kirianguna.* Sanskrit: *Watta, Kakakodi.* Tamil: *Kodi-palai.*

PROPERTIES AND USES.—The root has a great reputation as a remedy for snake bite and is given to women after child-birth for headache. In Ceylon this is used as a prophylactic for Hydrophobia.

බුවල් අඟුන

Chonemorpha Macrophylla.—This is the *Bú-wel-anguna* of the Sinhalese. I believe it has the same properties as *Kirianguna* and *Medanguna.*

Marsdenia Tenacissima.

VERNACULAR.—Sinhalese: *Muruva-dul.* Sanskrit: *Téjowapi.*
Is used in cases of Gonorrhœa.

ඉරමුසු

Hemidesmus Indicus.

VERNACULAR.—Sinhalese: *Iramusu.* Sanskrit: *Sariva, Anantamuli.* Tamil: *Nannari.*

PROPERTIES AND USES.—Under the head *Sariva* of the native medical men, two plants are to be met with, which are Hemidesmus Indicus and Ichnocarpus Frutescens (Apocynaceæ), and they have the same medicinal properties, though of different natural orders. They are both regarded as diuretic and blood purifiers and are also used in cases of fever. The following is a prescription for continued fever :—

Iriwériya (Plectranthus Zeylanicus).
Pium (Nelumbium Lotus).
Kalánduru (Cyperus Rotundus).
Sewendará (Andropogan Muricatus).
Iramusu (Hemidesmus Indicus).
Sandun (Sandalwood).

මස්බැද්ද

Gymnema Sylvestre.

VERNACULAR.—Sinhalese : *Masbedde.* Sanskrit : *Meshasringi.* Tamil : *Siru-kurinja.*

PROPERTIES AND USES.—There are several varieties of Gymnema and this variety is the "ram's horn" (*Meshasringi*) of the Sanskrit writers. It is described as bitter, astringent and stomachic. Is useful in cough, boils and diseases of the eyes. Dr. Dymock says that this is the *Bin-nuga* of the Sinhalese ; but according to Trimen Tylophora Asthmatica is *Bin-nuga.* A peculiarity of this plant is that if the leaves be chewed the tongue loses the power of tasting sweet and bitter things. Even raisins taste like chalk when taken after chewing the leaves.

Cryptolepis Buchanani.—This is called *Wel-rukattana* (වැල් රුක්අත්තන) by the Sinhalese and the stem wood is said to be used medicinally in combination with other drugs. But I have come across no mention of it in any of the *Nighandus* which I have consulted, and according to Dr. Trimen Allamenda Cathartæ is also called *Wel-rukattana*, which, however, is an exotic and a native of South America.

LOGANIACEÆ NATURAL ORDER.

ගොඩ කදුරු

Strychnos Nux-vomica.—Poison nut, False Angostura bark.

VERNACULAR.—Sinhalese : *Goda-kaduru.* Sanskrit : *Kupilu.* Tamil : *Yettie-kottai.*

PROPERTIES AND USES.—Nux-vomica is a recent introduction into the Hindu Materia Medica and is not mentioned in old Sanskrit works. *Sarangadhara* mentions a drug called *Vishamushti*, which, however, is a name given among others to *Rérugas* in "*Saraswati Nigandu*". According to "*Bawaprakasa*" *Kupilu* is the usual Sanskrit term given to

Strychnos Nux-vomica, with the synonyms *Kulaka*, *Kuchela* and *Viddhaparni*. The seed when taken internally produces a sort of intoxication, and some natives take it habitually as an aphrodisiac until they are able to take one full seed. Dutt mentions a prescription called *Samirágaga*, which is composed of Nux-vomica, opium and black pepper in equal parts made into two-grain pills and given in nervous diseases.

Strychnos Colubrina is very similar in its action to Strychnos Nux-vomica and is the true source of the *Lignum Colubrina* of commerce ; it is *Katukavalli* of the old Sanskrit writers and one of the three ingredients or *Mushadis* of a preparation used in South India as a cure for venomous snake-bites. Strychnos Zeylanica is a variety of this plant and is found in many parts of Ceylon. It is possible the Sinhalese Vedarálas make no distinction between Strychnos Zeylanicus and Strychnos Nux-vomica and I am inclined to think what they call *Rérugas* is the former. Though the author of Clough's Dictionary says it is a term for Strychnos Nux-vomica, they both have *Vishamushti* as one of the synonyms and probably *Reru* (Strychnos Zeylanicus) is the *Puskaramula* of the old Sanskrit writers.

ඉඟිනි

Strychnos Potatorum. Clearing nut.

VERNACULAR.—Sinhalese : *Ingini*. Sanskrit : *Kataka*. Tamil : *Tetran-kottai*.

PROPERTIES AND USES.—This is also called *Ambuprasada* in Sanskrit for the reason that if the seed is rubbed round the inside of an earthen pot and muddy water is afterwards poured into it, it has the quality of throwing down all the suspended matter and rendering the water clear and fit for use. Medicinally it is regarded as a diuretic and is prescribed with other drugs for suppressions of urine. It is a frequent ingredient in prescriptions for urinary diseases.

Yogaratnakaraya gives several prescriptions containing Strychnos Potatorum as one of the ingredients for retention of urine, and one of these is—

Take of :—Strychnos Potatorum seed, and
Ellatirium Cardamomum.*

One *kalan* (60 grains) each ; powder well and administer with sugar in young cocoanut water.

Strychnos Ignatii.—This is a variety or species of Strychnos found in the Philippine Islands and brought to the notice of Western medical men by a Jesuit missionary in the 16th century or later. It is now cultivated in India and is only used for the manufacture of strychnine.

* Some Vedarálas add Nitrate of Potash (*Wedilunu*) to these and it is said to improve their action.

GENTIANACEÆ NATURAL ORDER.

බින් කොහොඹ

Swertia Chirata vel **Ophelia Chirata.**

VERNACULAR.—Sinhalese : *Bin-kohomba.* Sanskrit : *Kirátatikta.* Tamil : *Nila-vempu.*

PROPERTIES AND USES.—This is called *Kiráta-tikta* to indicate that it was a root brought from the country of the *Kirátas*, a non-Aryan people, and for the same reason it is also called *Anárya-tikta*, "bitter of the non-Aryans". *Bin-kohomba* is largely used in native medicine, chiefly in the treatment of fever and dysentery. There are scores of decoctions described in old books with *Bin-kohomba* as one of the ingredients. It is also an ingredient in a compound *churna* with fifty-four other drugs ; a preparation directed to be given for many diseases. The following is a decoction for fever containing *Bin-kohomba* :—

Take of :—Bin-kohomba (Swertia Chirata).
Diamitta (Cissampelos Periera).
Pepiliya (Oldenlandia Herbacea).
Rasakinda (Tinospora Cordifolia).
Kalánduru (Cyperus Rotundus).
Inguru (Ginger).

Make a decoction in the usual way.

And for dysentery the following is a very useful decoction, to which I can testify from my own experience, having prescribed it on several occasions for those of my dysentery patients who preferred to be treated with native drugs :—

Diyamitta (Cissampelos Periera).
Kelinda (Holarrhena Antidysenterica).
Bin-kohomba (Swertia Chirata).
Kalánduru (Cyperus Rotundus).
Wélichcha Inguru (Dry Ginger).

Make a decoction in the usual way.

ගිනිහිරිය

Exacum Zeylanicum.—*Bindara* or *Ginihiriya* of the Sinhalese, is similar to *Muwakiriya* in its action.

සක්මල්

Canscora Decussata.

VERNACULAR.—Sinhalese : *Sakmal.* Sanskrit : *Dandotpala.* Tamil : Not known.

PROPERTIES AND USES.—This is said to be laxative and is prescribed in cases of insanity and other nervous disorders. This is also called *Shanka-pushpi.*

BORAGINEÆ NATURAL ORDER.

ලෝළු

Cordia Myxa. Small Sebesten Plum.

Cordia Oblequa. Large Sebesten Plum.

VERNACULAR.—Sinhalese : *Lólu.* Sanskrit : *Bahuvara.* Tamil : *Naruvili.*

PROPERTIES AND USES.—This is valued on account of its demulcent and mucilaginous properties and is used in cough and chest affections and also in irritation of the urinary organs. The fruits are eaten and if taken in large quantities act as a laxative. It is called *Sleshmataka* as it is supposed to destroy phlegm.

හින් තඹිල

Ehretia Buxifolia.

VERNACULAR.—Sinhalese : *Hín-tambala.* Sanskrit : Not known. Tamil : *Kuruvingi, Pakkuvetti.*

PROPERTIES AND USES.—This is said to be used medicinally but is not mentioned in the *Nigandus* I have consulted.

ඇත් හොඹ

Heliotropium Indicum.

VERNACULAR.—Sinhalese : *Et-honda.* Sanskrit : *Srihastini.* Tamil : *Tet-kodukki.*

PROPERTIES AND USES.—Not much used internally. It is very much used for applications to gum-boils and incipient abscesses and also to repel pimples from the face. The juice of the leaves is used in the latter case.

CONVOLVULACEÆ NATURAL ORDER.

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Ipomæa Turpethum.

VERNACULAR.—Sinhalese : *Trastawálu.* Sanskrit : *Trivrit.* Tamil : *Shivadai.*

PROPERTIES AND USES.—This is largely used in native medicine in the way that Jalap (a plant of the same natural order) is used by Western physicians as a purgative. It enters into the composition of many decoctions for various diseases. There are two varieties : *Ela* and *Kalu*, called *Kalaparni* and *Kalameshi* by Sanskrit writers. They are also called *Sveta* and *Krishna Trivrit* (*Trastawálu*). There are several species of Convolvulaceæ, some of which are used medicinally. They are :—

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Evolvulus Alsinoides.

VERNACULAR.—Sinhalese : *Vishnu-kránti.* Sanskrit : *Visnukránta.* Tamil : *Visnukrandi.*

PROPERTIES AND USES.—This is the *Vishnu-kránta*, "Vishnu's step", of Sanskrit writers. In the *Nighandus* it is called *Nila-pushpa* and *Parajitá*, is described as bitter, cephalic, anthelmintic, antiphlegmatic and antiphlogistic. In Vedic times it was thought to promote conception. At the present time it is extensively used as a febrifuge and tonic. An infusion of this is highly recommended for chronic malarial fever, to be taken twice a day for a week or two.

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Ipomæa Digitata.

VERNACULAR.—Sinhalese : *Kiribadu.* Sanskrit : *Vidari.* Tamil : *Nelli-kumbalu.*

PROPERTIES AND USES.—This is regarded as tonic, alternative, aphrodisiac. *Susruta* recommends it to be taken as such being the powder of the root macerated in its own juice and administered with honey and clarified butter.

මහ දුමුදු

Argyreia Speciosa.

VERNACULAR.—Sinhalese : *Maha-dumudu.* Sanskrit : *Samudrasosha.* Tamil : *Kadal-pala.*

PROPERTIES AND USES.—This is regarded as tonic and alterative and is used in cases of rheumatism and diseases of the nervous system.

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Argyroia Populifolia, Sinhalese *Giri-tilla*, is a variety of the above. I have seen the root of this pounded and boiled in cocoanut milk applied with excellent results to inflammation or swelling after dog bite. It is used also in cases of mad dog bites in order to prevent hydrophobia. The Sanskrit name of this plant is *Avegi.*

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Cuscuta Reflexa.

VERNACULAR.—Sinhalese : *Agamula-neti-wela.* Sanskrit : *Ameravalle.*

PROPERTIES AND USES.—The seeds are considered as carminative.

The following are plants of the Genus Ipomæa (Natural Order Convolvulaceæ). Some of these are eaten as they produce thick, starchy tubers like the country *Batala* or sweet potato.

Ipomæa	Grandiflora or Bona-nox—	*Alanga.*
Do	Uniflora—	*Potupala.*
Do	Repens—	*Bin-tamburu.*
Do	Tridentata—	*Hawarimadu.*
Do	Pestigridis—	*Divi-adiya.*
Do	Sepiaria—	*Rasatel-kola.*
Do	Aquatica—	*Kankun.*
Do	Cymosa—	*Kiri-madu.*
Do	Angustifolia—	*Hin-madu.*
Do	Biloba—	*Madu-biutamburu.*
Do	Kaladana—	*Kaladana.*

Ipomæa Sepiaria (*Rasatel-kola*) is regarded as an antidote to arsenical poisoning, and "*Sarartha Sangrahawa*" gives *Rasatel-kola* as one of two drugs in the following prescription. I only mention it here as one of the curiosities that not unfrequently are met with in native medical literature.

Lakshmnan Watasringanwa Pistawakshirana Bindukan
Chaturah Putrakamyeayah Sadyeanása Putáksepeth.

The meaning of the above is, Grind Ipomæa Sepiaria (*Rasatel-kola*) and *Nuga Aralu*, a fruit-like growth on the descending root of the Ficus Bengalensis, in milk and put four drops into the right nostril of a woman who desires to have a male child and to the left nostril, if a girl. The juice, which is strongly acid, is said by Rheede to be used as "*purificationem corporis*".

Ipomæa Kaladana is a purgative and may be substituted for Ipomæa Turpethum. Ipomæa Batata is the sweet potato or *Batala* of the Sinhalese, which bears a large, starchy tuber and is largely consumed as an article of diet by the natives.

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Ipomæa Biloba. Goat's foot.

VERNACULAR.—Sinhalese : *Múdu-bintamburu.* Sanskrit : *Vridáhadaraka.* Tamil : *Adapu-kodi.*

PROPERTIES AND USES.—It has many Sanskrit synonyms, *Chhagalandi*, "goat's testicles", *Raksho-ghna* and *Dirghamulaka*, and several others. The leaves are boiled and applied externally in rheumatism and colic. The leaves are given as a diuretic in dropsy.

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Ipomæa Aquatica.

VERNACULAR.—Sinhalese : *Kankun.* Sanskrit : *Kalambi.* Is used as a vegetable.

Ipomæa Pes-tigridis.

VERNACULAR.—Sinhalese : *Divi-adiya.* Sanskrit : Not known.

PROPERTIES AND USES.—Is supposed to be an antidote to the poison of mad dogs and is used to disperse boils and carbuncles.

BIGNONIACEÆ NATURAL ORDER.

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Calosanthes Indica or **Oroxylum Indicum.**

VERNACULAR.—Sinhalese : *Totila.* Sanskrit : *Syonaka.* Tamil : *Vanga adanthay.*

PROPERTIES AND USES.—The root bark is used medicinally. It is astringent and tonic and is an ingredient in the *Dasamula* decoction. It is prescribed in cases of dysentery and fever. It has many synonyms, such as *Suka-nasa*, " having a nose like a parrot's beak ", and *Bhalluka-priya*, " dear to bears ". It is described as digestive, appetising, bitter, cold and pungent, and as a remedy for wind, phlegm, bile and cough.

The bark is much used by agriculturists as an application to the sore backs of their cattle.

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Stereospermum Suaveolens.

VERNACULAR.—Sinhalese : *Palol* or *Ela-palol.* Sanskrit : *Patala.* Tamil : *Padri.*

PROPERTIES AND USES.—This tree is regarded as sacred to Durga, the wife of Siva. It is also called in Sanskrit *Kamaduti*, " Cupid's messenger," and *Tamra-pushpa*, " red flowered ". *Patala* also signifies " rose coloured " and flowers are taken in the form of a confection as an aphrodisiac. This is an ingredient in the *Dasamula* decoction (see under Tribulus Terrestris). It is also an ingredient in many decoctions and other preparations for various diseases.

AMARANTACEÆ NATURAL ORDER.

කටු තම්පලා

Amarantus Spinosus.

VERNACULAR.—Sinhalese : *Katu-tampala.* Sanskrit : *Tanduliya.* Tamil : *Mulluk-kirai.*

PROPERTIES AND USES.—Promotes alvine and urinary discharges. It is regarded as a very efficacious remedy for menorrhagia.

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Achyranthes Aspera. Prickly Chaff-flower.

VERNACULAR.—Sinhalese : *Gas-karal-heba.* Sanskrit : *Apamarga, Homa.* Tamil : *Na-yurivi.*

PROPERTIES AND USES.—Is regarded as a diuretic and is prescribed in combination with other drugs such as *dévadára* for Anasarca and Ascites. The burnt ashes contain a large quantity of carbonate of

potash. Warts are effectually removed by applying the ashes mixed with Orpiment. A curious mythological legend is attached to this plant : Indra having killed Vritra and other demons was overcome by Namuchi and made peace with him by promising never to kill him by any solid or liquid, neither by day nor by night. But Indra collected some foam, which is neither solid nor liquid, and killed Namuchi between daylight and night. From the head of the demon sprang the plant *Apamarga*, with the assistance of which Indra was able to kill all demons. The plant is worn as a talisman and has the reputation of being a safeguard against snakes and scorpions, paralysing them. It has the Sanskrit synonyms *Shikhari*, *Kini* or *Kinihi*, *Kharamanjari*, "having a rough flower-stalk", *Adhvashalya*, "roadside rice", *Shaikharika*, *Pratyak-pushpi*, "having reverted flowers", and *Mayuraka*, "crested". It is regarded as a powerful diuretic by native Vedarálas and is so considered by many European practitioners in India as well.

The following plants of this order are used more as vegetables than as medicines.

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Celosia Argentea.

VERNACULAR.—Sinhalese : *Kiri-henda.* Sanskrit : *Vitunna, Kshiradala.*

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Allmania Nodiflora.

VERNACULAR.—Sinhalese : *Kumatiya.* Sanskrit : *Vittumia.*

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Amarantus Paniculatus.

VERNACULAR.—Sinhalese : *Rana-tampalá.*

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Amarantus Gangeticus.

VERNACULAR.—Sinhalese : *Sudu-tampalá.* Tamil : *Arikeria, Chiirukirai.*

කුර තම්පලා

Amarantus Virdis vel **Amarantus Polygonoides.**

VERNACULAR.—Sinhalese : *Kúra-tampalá.* Tamil : *Araikkirai.*

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Cyathula Geniculata.

VERNACULAR.—Sinhalese : *Hínkaral-heba.*

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Nothosærua Brachiata.

VERNACULAR.—Sinhalese : *Tampalá.* Tamil : *Chirupilai.*

Celosia Argentea is supposed to be a powerful aphrodisiac by Arabian physicians.

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Aerua Javanica and Lanata.

VERNACULAR.—Sinhalese : *Pol-kudupalá.* Sanskrit : *Kumrapindi.* Tamil : *Sirru-pulai.*

PROPERTIES AND USES.—These two plants, A. Javanica and A. Lanta, are considered of great value in lithiasis, as diuretic and antidotal in cases of poisoning by arsenic. The roots are demulcent. In the *Saraswati Nigandu*, consulted by native medical men in Ceylon, *Polpalá* or *Polkudupalá* is given as the Sinhalese name for *Pashanabhedi Silabhedi*, which according to Dr. Dymock are the Sanskrit names for Saxifraga Ligulata. The name *Pashanabhedi* applies to both, but which is the true *Pashanabhedi* of the Sanskrit writers I cannot say. It should be noted that this *Polkudupalá* (Aerua Lanata) used to be employed till lately by our native medical men for *Prisnapárni*, which according to Indian authorities is Uraria Lagopoides and is called by the Sinhalese *Puswenna.*

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Alternanthera Triandra.

VERNACULAR.—Sinhalese : *Mukunuwenna.*

PROPERTIES AND USES.—Is used by native medical men for *Salapárni* (Desmodium Gangeticum), and is called in Sinhalese *Aswenna*, which is wrong in my opinion. Moreover, according to Dr. Trimen, *Aswenna* is Alysicarpus Vaginalis or Alysicarpus Bupleurifolius. *Mukunuwenna*, whether it be Alternanthera Triandra or Desmodium Gangeticum, is also used for *Brahmi* or *Jala Brahmi* by some Vedarálas, for I have seen the latter rendered into Sinhalese by that name (*Mukunuwenna*).

SOLANACEÆ NATURAL ORDER.

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Solanum Indicum.

VERNACULAR.—Sinhalese : *Tibbatu.* Sanskrit : *Vrihati.* Tamil ; *Pappara-mulli.*

PROPERTIES AND USES.—This is used in cases of catarrhal affections. It is an ingredient in the *Dasamula* decoction. The following is a compound decoction containing *Tibbatu* (*Vrihati*).

Take of :—Solanum Xanthocarpum (Ela-batu).
Do Indicum (Tibbatu).
Do Jacquini (Katu-wel-batu).
Sida Cordifolia (Bevila).
Justicia Vesica (Adathóda).
Raisins (Muddrapalam).

Take equal parts and prepare a decoction.

The following is another decoction containing Solanum Indicum (*Vrihati*) for which Solanum Xanthocarpum is frequently substituted:—

Solanum Indicum (Vrihati) Tibbatu.
Solanum Xanthocarpum vel., Jacquini (Kantakini) Katu-wel-batu.
Sida Cordifolia (Bala) Bevila.
Justicia Vesica (Vasaka) Adathóda.
Ophiorrhiza Mungos (Rasna) Aratta.

Take equal parts of the above and prepare a decoction in the usual way. Half a tea cup for a dose. These two decoctions are found to answer well in cases of fever attended with cough. Solanum Xanthocarpum is *Vaddu* of the Tamils and is more often than not used in place of Solanum Indicum. They are apparently two varieties of the same plant and known by the common Sanskrit name *Vrihati*.

Solanum Jacquini.

VERNACULAR.—Sinhalese : *Katu-wel-batu.* Sanskrit : *Kantakari*- Tamil : *Kandan-kattiri.*

PROPERTIES AND USES.—This is very largely used by native medical men in all cases of fever and affections of the chest and other diseases in combination with other drugs. Solanum Xanthocarpum (Indicum) is an ingredient in the *Dasamula* decoction referred to above. It also enters into the composition of several *churnas* and *ghritas* given in cases of phthisis and other lung affections.

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Solanum Nigrum.

VERNACULAR.—Sinhalese : *Kalu-kan-wériya.* Sanskrit : *Irdhĭphala, Kaka-machi.* Tamil : *Manatta-kali.*

PROPERTIES AND USES.—Similar to those of Solanum Jacquini and used as a diuretic and also in heart diseases.

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Solanum Melongena.

VERNACULAR.—Sinhalese : *Wambatu.* Sanskrit : *Wartaku* or *Bartaku.* Tamil : *Kathirikai.*

PROPERTIES AND USES.—Not used medicinally. Is a common vegetable used largely, especially by the Tamils of all classes, perhaps owing to its cheapness and abundance.

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Datura Alba.

Do Fastuosa.

VERNACULAR.—Sinhalese : *Attana.* Sanskrit : *Dhustura.* Tamil : *Venumattai.*

PROPERTIES AND USES.—The native medical men do not make any distinction between the two varieties, except that one is designated *Ela Attana* and the other *Kalu Attana*, and they are both used indiscriminately in medicine. The chief use is in the juice of the leaves, which is used to grind stock pills and also to purify metallic ores.

The seeds are used medicinally and are a frequent ingredient in several compound preparations, chiefly *churnas*, pills and *rasas* for various diseases. The dried leaves are recommended to be smoked by asthmatic patients in order to ward off attacks of that disease. Powdered *Attana* seeds were used by the old Thugs of India to make people helpless before robbing them. One of the drugs used in the treatment of mad dog bites is *Attana* (Datura Fastuosa). There are men who have set themselves up as specialists for the treatment of these cases and they chiefly aim at preventing attacks of hydrophobia arising in those bitten by mad dogs. As a rule the remedies employed are kept as family secrets, and it would appear different men use different remedies and methods of treatment. I must have seen close on a hundred cases of mad dog bites treated by them in the course of my practice among the people of the country extending over half a century, and I cannot undertake to say that their treatment is altogether futile. The percentage of those who did not get hydrophobia was certainly as good as in the Pasteur treatment, after making due allowance for those cases in which we know the disease does not appear even without any treatment at all. Of the many cases that have come under my observation, I can remember only three which were treated by the old Western method of cutting out the bitten part and cauterising it. Of these two proved fatal subsequently from hydrophobia and in the third case, which recovered, it was very doubtful if the dog had been actually mad. Of the rest that came under my observation during the last fifty years I can remember not more than three or four at the most which proved fatal. All the others escaped from hydrophobia and they were treated by native specialists. This statement would appear almost incredible, but it is nevertheless the fact. Whenever cases of mad dog bites treated by native specialists came under my notice, I invariably took a particular interest in them and made inquiries from friends as to their progress and the treatment adopted. I endeavoured to find out the latter, but all in vain. They would on no account tell me what their treatment was. Only a native Baptist minister, who was stationed at Gampola in the latter part of the seventies of the last century and had a great reputation for treating persons bitten by mad dogs successfully, told me his secret. His chief drugs, or rather the only drug used by him, was *Attana* (Datura Fastuosa), and I have been agreeably surprised to find that the procedure adopted by him is the same as that mentioned in a recent work on Ayurvedic medicine published (1915) by one Kaviraja Narendra Nath Sen of Calcutta. This is what the latter says :—

" Usually hydrophobia comes on forty days after the bite of a mad dog The treatment is to be resorted to two weeks after the patient

has been bitten, that is, between the 15th and 25th day. In the morning after the 15th day, a dessert-spoonful of powdered charcoal is given, and half an hour after that an ounce of the juice of the black *Attana* leaves is administered, and soon after jaggery or something else is given to check vomiting. Then the patient is bound, as he does mischief to others, and is kept in the sun for four or five hours until noon. After this the patient gradually becomes mad and does many things like a mad dog. In the afternoon many pots of cold water are poured over his head. This causes great annoyance to the patient, but after this he may be considered as out of danger and is given a simple diet. In treating a patient already suffering from hydrophobia, the front part of his head is scratched with a lancet, so as to make it bleed a little. The ground leaves of the black Datura are after that rubbed over the scarified part and the juice is given internally. The above method is one of the several modes employed by the Hindu physicians, and is also adopted by the expert physicians of South India."

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Withania Somnifera.

VERNACULAR.—Sinhalese : *Amukkará.* Sanskrit : *Asvagandha.* Tamil : *Amukkiray, Amkulang-kalang.*

PROPERTIES AND USES.—*Amukkará* is a drug frequently used by Vedarálas for various diseases, but chiefly in chronic rheumatism affections. It is called in Sanskrit *Asvagandha, Turagi* and *Turangi gandha*, " smelling like a horse," and *Varaha-karni*, " boar-eared". It is described in the *Nigandus* as pungent, tonic, astringent, hot and aphrodisiac and is recommended to be used in cases of rheumatism, consumption and senile debility. Chakradatta recommends a decoction of this with honey and clarified butter and long pepper for consumption and a *ghrita* prepared with *Amukkará*, milk and clarified butter is also recommended for chronic rheumatism.

Withania Coagulans has the property of coagulating milk. A little juice of the fruit added to milk will give an excellent curd. One table-spoonful of a decoction made with the fruit would coagulate a gallon of milk and give an excellent curd free from any bad taste. I think this would prove useful as a coagulant for rubber latex.

SCROPHULARINEÆ NATURAL ORDER.

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Herpestis Monnieria.

VERNACULAR.—Sinhalese : *Lunu-wila.* Sanskrit : *Jalabrahmi.* Tamil : *Nir-brami.*

PROPERTIES AND USES.—There is some confusion with regard to this drug. It is used by the native medical men in Bengal as the *Brahmi* or *Manduka-párni* of the Sanskrit writers, but Dr. Dymock, Warner and Hooper, the authors of " *Pharmacographia Indica* " are of opinion that this is not the real *Brahmi* but *Jala-brahmi* and that the Calcutta medical men wrongly use this for *Manduka-párni*. This is described by the Sanskrit writers as diuretic and aperient and is useful in that sort of stoppage of urine which is accompanied with obstinate costiveness. In Ceylon this (*Lunuwila*) is a domestic remedy and is frequently given by native mothers to infants for confined bowels and skin eruptions or for that condition of infants known in Sinhalese as *Ratagáya*, hyperæmic appearance of the skin followed sometimes by abscesses, called blood abscesses. (See *Gotukola*, Hydrocotyle Asiatica.) It should be noted that *Mukunuwenna*, according to *Saraswati Nigandu*, is *Brahmi* and *Mandukapárni*. According to Dr. Trimen, *Mukunuwenna* is Alternanthera Triandra.

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Picrorhiza Kurrooa.

VERNACULAR.—Sinhalese : *Katukarósana, Katurina.* Sanskrit : *Kataki.* Tamil : *Katuku-rogani.*

PROPERTIES AND USES.—The Sanskrit writers speak of the drug as *Dhanrantari-grastá*, "the plant eaten by Dhanvantari", who according to Hindu mythology was the surgeon of the gods and was produced (came out) at the churning of the ocean, holding a cup of *amrita* in his hands. This plant has many synonyms : *Katu-rohini, Asoka-rohini, Saku-ladani*, etc., and is described as digestive, bitter, pungent, dry, aperient, light and cold and is recommended as a remedy for worms, asthma, biliousness, and dyspepsia accompanied with fever. This is in constant use in decoctions for fevers of all sorts, and is also one of the ingredients in the *Dasamula* decoction referred to previously (Tribulus Terrestis). The following are two favourite decoctions of native medical men for fever of all sorts containing this drug.

For fever caused by deranged air :—

Black pepper (Piper Nigrum).
Wadakahá (Acorus Calamus).
Inguru (Ginger).
Binkohomba (Ophelia Chirata).
Aralu (Chebulic Myrobalan).
Tippili (Long pepper).
Katukarósana (Picrorhiza Kurrooa).

Make a decoction in the usual way. Half a tea cup twice a day.

For fever caused by the disarrangement of bile and air.

Take of : Kalánduru (Cyperus Rotundus).
Aralu (Terminalia Chebula).
Midi (Premna Serratifolia).
Kuluréna (Picrorhiza Kurrooa).
Ehela (Cassia Fistula).
Pepiliya (Oldenlandia Corymbosa).

Make a decoction in the usual way and administer twice a day.

For continued fever.

Take of :—Ophelia Chirata (Binkohomba).
Picrorhiza Kurrooa (Kuluréna).
Cyperus Rotundus (Kalánduru).
Oldenlandia Corymbosa (Pepiliya).
Tinospora Cordifolia (Rasakinda).

Make a decoction in the usual way and administer twice a day. Dose.—Half a tea cup.

For fever caused by deranged bile.

Take of :—Picrorhiza Kurrooa (Kuluréna).
Gremlina Arborea (Et-demata).
Holarrhena Antidysenterica (Kelinda).
Cyperus Rotundus (Kalánduru).

Make a decoction in the usual way.

For fever caused by deranged Phlegm.

Take of :—Picrorhiza Kurrooa (Kuluréna).
Chebulic Myrobalan (Aralu).
Ginger (Inguru).

Make a decoction in the usual way. Dose.—Half a tea cup.

For *Sannipáta una* or fever caused by the derangement of all the three humours.

Take of :—Solanum Jacquini (Katuwel-batu).
Cedrus Déodara (Dévadára).
Curcuma Longa (Kaha).
Cyperus Rotundus (Kalánduru).
Tricosanthes Dioica (Dummella).
Melia Azadirachta (Kohomba).
Three Myrobalans (Tippili).
Picrorhiza Kurrooa (Kuluréna).

Make a decoction in the usual way. Dose.—Half a tea cup.

Centranthera Procumbens. දුඹු සතුබු

Vernacular.—Sinhalese : *Dutu-satutu.* Sanskrit : *Sudhatu.*

Properties and Uses.—This is used in decoctions for fever in comb-i nation with other drugs. It is diuretic like many other plants of this order.

Terenia Asiatica is known in Sinhalese as *Kotaláwel* (කොතලා වැල්) and si used in the Malabar Coast for gonorrhœa.

PEDALINEÆ NATURAL ORDER.

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Sesamum Indicum.

VERNACULAR.—Sinhalese : *Tel-tala.* Sanskrit : *Tila.* Tamil : *Ellu.*

PROPERTIES AND USES.—According to the Sanskrit writers sesamum seed is symbolic of immortality and is said to have been created by Yama, " the king of death," and it is used in connection with several Hindu ceremonies and on festive occasions.

Dutt seems to think that the very word *Taila* (Sanskrit for oil) was probably derived from *Tila.* It would therefore seem that sesamum oil was the first oil extracted by the Hindus of old. A *tala* seed is the smallest weight among the Sinhalese. Three of them are said to weigh one *amu* seed, which is about the weight of one paddy seed. *Tala* is described as emollient, nourishing, tonic, diuretic and lactogogue. It is used as the basic oil of nearly all the medicinal oils prepared by native medical men, which with their stock pills are among their ready weapons for combating cases of sudden illness. The refuse poonac after expressing the oil from the seeds is used for feeding draught cattle. In cases of dysentery, *Tala* seed is given with *Kitul* palm juggery when the patients are convalescing and with profit, as it helps to form the motions.

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Pedalium Murex.

VERNACULAR.—Sinhalese : *Et-nerenchi.* Sanskrit : *Kakamúla.* Tamil : *Peru-nerunji.*

PROPERTIES AND USES.—This is not mentioned in old Sanskrit works, but in recent years it has come to be used frequently in the treatment of gonorrhœal rheumatism. This is also called *Mahagokshura* or *Gokatu,* to dinsguish it from Tribulus Terrestris, which is *Ikshugandha* or *Gokshura* in Sanskrit. This is spoken of highly as a remedy for spermatorrhœa both by Kavirájas and Western practitioners in India.

ACANTHACEÆ NATURAL ORDER.

කටු ඉකිරි

Hygrophila Spinosa.

VERNACULAR.—Sinhalese : *Katu-ikiri.* Sanskrit : *Ikshura.* Tamil: *Nirmulli.*

PROPERTIES AND USES.—This is also called *Ikshugandha* in Sanskrit and also *Kokilaksha,* " having eyes like the *Kokila* or Indian cuckoo ". It is described as cooling, diuretic and strengthening. All the parts of the plant are used medicinally. The seeds form one of the five kinds included in *Panchavija.* The others are Ajowan, Celastrus Paniculatum, Fenugreck and Cummin. This is called *Katuikiri* to distinguish

it from *Ikiri* or *Gokshura* (*Gokatu*), Tribulus Terrestris. The properties and uses of the plant are similar to those of that drug. *Nirmulli* is a very efficacious remedy, like *Gokatu*, in cases of ascites or dropsy not due to organic disease of the kidneys.

සාමදන

Blepharis Molluginifolia.

Blepharis Edulis.

VERNACULAR.—Sinhalese : *Sámadána*. Sanskrit : *Utanjan*.

PROPERTIES AND USES.—Blepharis Edulis is a native of Persia, Punjab and Scind, and is not met with in Ceylon, but in its place Blepharis Molluginifolia (*Sámadána*) may be used. It is described as attenuant, diuretic, deobstruent, aphrodisiac and expectorant.

ඉකිලි

Acanthus Ilicifolius.

VERNACULAR.—Sinhalese : *Ikili*, *Kata-ikili*. Sanskrit : *Harikasa*. Tamil : *Paina-schulli*.

PROPERTIES AND USES.—Used in cases of dyspepsia with acid eructations.

කහවන් කටුකරඹු

Barleria Prionitis.

VERNACULAR.—Sinhalese : *Katukarandu*. Sanskrit : *Kuranta*. Tamil : *Varamulle*.

PROPERTIES AND USES.—This, like *Ádátoda*, is a very useful drug for all catarrhal affections of children.

Crossandra Undulæfolia.—I have not been able to ascertain either a Sinhalese or a Tamil name for this plant. In Sanskrit it has received the name of *Priya darsa*, "pleasant to look at"; and its beautiful yellow flowers are worn as head ornaments by Hindu women. It is regarded as a powerful aphrodisiac and is prescribed frequently by native medical men in India.

හින් බින් කොහොඹ

Andrographis Paniculata.

VERNACULAR.—Sinhalese : *Hin-binkohomba*. Sanskrit : *Yava-tikta*. Tamil : *Nila-vempu*.

PROPERTIES AND USES.—Dr. Dutt doubts whether this plant was known to the old Indian physicians. This is also called *Sankhini*. Its chief use in India is for the preparation of a domestic remedy very popular with native mothers and called *Abui*. Take equal parts of Cummin, Carum Roxburghianum, anise seed, cloves, capsules of large cardamoms (ensál) and pound them together with the expressed juice

of the leaves of *Hín-binkohomba*. The mass thus prepared is divided into small pills. One pill for a dose. It is given to children for the relief of griping irregularity of the bowels and loss of appetite, administered in human milk. For fever *Hín-binkohomba Galis* (Gardenia Latifolia) and ginger are given.

අඩාතෝඩ

Adatoda Vasica.—Malabar nut tree.

VERNACULAR.—Sinhalese : *datÁóda*. Sanskrit : *Vasaká*. Tamil : *Adatodai*.

PROPERTIES AND USES.—This is also called *Sinhamukhi*, "Lion-mouthed," and *Atarusha* in Sanskrit. It is described as removing phlegm, bile and impurities of the blood and as a remedy for phthisis, asthma, cough, fever (hectic), vomiting, gonorrhœa and leprosy. Consequently it is found as an ingredient in many of the prescriptions given in the old books for those diseases. A decoction which I have seen given by native medical men for long-standing catarrhal fever with severe cough is one composed of :—

Agaládára (Adhátódá Vesica).
Katuwel-batu (Solanum Jacquini).
Ela-batu (Solanum Xanthocarpum or Indicum).
Inguru (Ginger).
Tippili root (Long pepper root).

The decoction is made in the usual way. Dr. Dutt in his *Hindu Materia Medica* gives the following preparation containing Adhátódá Vasicá as an ingredient.

Take of the juice of the *ádhátódá* leaves four seers, long pepper sixteen tolas, white sugar one seer, clarified butter sixteen tolas ; boil them together till reduced to the consistence of an extract ; when cool add honey one seer and stir till intimately mixed. DOSE.—One to two tolas in phthisis, cough with pain in the sides and asthma. Adhátódá Vasicá is now available to Western practitioners in the form of a tincture I have used it frequently with good results.

අනින්ත

Rhinacanthus Communis.

VERNACULAR.—Sinhalese : *Anitta*. Sanskrit : *Yuthikaparni*. Tamil : *Nága-malli*.

PROPERTIES AND USES.—This is regarded as a sovereign remedy for what is called Dhobies itch, Malabar itch, &c., and more or less for all diseases of the skin of a parasitic origin. The roots and the fresh juice of the leaves are employed for this purpose. It is called *Nágamulli* as it is considered to be an antidote to cobra poison. Lately this has found favour with medical men in Europe, through those who reside in China and consider it an efficacious remedy for chronic eczema.

VERBENACEÆ NATURAL ORDER.

හින් මිදි, මහා මිදි

Premna Integrifolia.

Do Serratifolia.

Do Latifolia.

VERNACULAR.—Sinhalese : *Hín-midi, Mahá-midi.* Sanskrit : *Arani, Harimantha.* Tamil : *Munni.*

PROPERTIES AND USES.—These are plants more or less of the same medicinal properties and called in Sanskrit *Agnimantha, Vahnimantha,* "producing fire by friction", for the reason that the sacred fire of the Hindus is produced by the friction of two strips from the trees. This is a frequent ingredient in prescriptions for fever.

බූ සේරු

Premna Tomentosa.

VERNACULAR.—Sinhalese : *Bú-séru* . Tamil : *Kolukkutti, Kollay-cottaynellay.*

PROPERTIES AND USES.—Similar to Premna Integrifolia.

සිරි තේක්කු

Premna Herbacea.

VERNACULAR.—Sinhalese : *Siritékku.* Sanskrit : *Bharangi.* Tamil : *Shirutek.*

PROPERTIES AND USES.—*Brahmayashtika, Hangika, Bhargi* are some of the synonyms of *Bharangi.* There is some confusion about this drug in that many medical men use the root of Clerodendron Serratum for it which is the true *Bhargi* of the old Sanskrit writers. I believe *Siritékku* is imported from India to Ceylon, and the root used by our medical men, it is to be feared, is the root Clerodendron Serratum. To prevent confusion Dr. Dymock suggests that the name *Gantu Bharangi,* by which it was exhibited at Madras some time ago, should be retained for Premna Herbacea. *Bharangi* is described as hot, pungent, digestive and as a remover of dropsy, cough, asthma, fever and rheumatism.

The root is given with ginger juice for asthma and it also enters into the composition of several compound decoctions : *Dasamula* and other preparations used by native medical men.

වල් ගුරෙන්ද

Clerodendron Inerme.

VERNACULAR.—Sinhalese : *Wal-gúrenda.* Sanskrit : *Kshudragni-mantha.* Tamil : *Shen-gankuppi* or *Pinchil.*

PROPERTIES AND USES.—Used chiefly in venereal affections.

දෙමට, අත්දෙමට

Gmelina Asiatica.
Do Arborea.

VERNACULAR.—Sinhalese : *Demata, Et-demata.* Sanskrit : *Ghambhari* Tamil : *Gumadi.*

PROPERTIES AND USES.—This is called *Sriparni* and *Katphala.* The latter name has given rise to a great confusion in the use of this drug in that it is frequently used for *Karambebiya* or *Karapincha, Debara* and Myrica Nagi, all of which also have *Katphala* as a synonym. In the medical works *Katphala* is frequently given as one of the ingredients in prescriptions, and more often than not in such cases *Et-demata* is used for *Katphala*, for it is rendered as such into Sinhalese by the translators in their works as *sanna* writers. According to Dr. Dymock the true *Katphala* is Myrica Nagi, a plant of the natural order Myricacæ. The medicinal properties of *Et-demata* are described as diuretic, astringent, stomachic and laxative. Used in fevers, rheumatism and indigestion. *Et-demata* is an ingredient in the *Dasamula* decoction frequently referred to in the foregoing pages (see Tribulus Terrestis). The fruit is bitter and cooling and enters into the composition of several cooling decoctions. Here is an example of such a decoction.

Take of :—Gmelina Arborea (Et-demata).
Grewia Asiatica (Daminiya).
Liquorice root (Wel-mí).
Red Sandalwood (Rat-sandun).
Andropogon Muricatus (Sæwéndará).

Take equal parts, in all 360 grains, and make a decoction in the usual way. The juice of the tender leaves is used for gonorrhœa, cough, etc. The bark is used by arrack distillers to regulate the fermentation of toddy. The wood of Gmelina Arborea has been found to be excellent for making artificial limbs, stethescopes, etc. The flowers form one of the ingredients of a preparation for dysentery referred to under the head Papaver Somniferum.

තේක්ක

Tectona Grandis.—The teak tree.

VERNACULAR.—Sinhalese: *Tékka.* Sanskrit : *Saka.* Tamil : *Tekkumaram.*

PROPERTIES AND USES.—It is used in cases of bilious headache and dyspepsia, for which the powdered wood is given. An oil is extracted from the seeds for itchiness of the skin. It is used as a diuretic and the bark is applied to inflammatory wounds.

නික, නිල් නික, සුදු නික

Vitex Negundo.
Do Trifolia.

VERNACULAR.—Sinhalese : *Nika, Nil-nika, Sudu-nika.* Sanskrit : *Nirgundi, Sindhuvara.* Tamil : *Vellai-nochi, Nir-nochi.*

PROPERTIES AND USES.—These two shrubs, one with pale blue flowers and the other with blue flowers, are similar in their medicinal properties, and are described as pungent, cephalic, astringent, bitter and light, and as a remedy for colic, rheumatism, worms, leprosy, dyspepsia, phlegm and bile. The leaves are thought to be discutient and are used as a fomentation to rheumatic swellings. The juice is used for the administration of pills and also for purifying metallic ores. The root is thought to be tonic, febrifuge and expectorant, and is frequently prescribed for bilious fever in combination with other drugs. The fruit is nervine, cephalic and is also an emmenagogue. Leaf juice is used as an errhine in cases of wandering and delirium with beneficial results. I have seen several such cases.

කැන් හැන්ද

Clerodendron Serratum.

VERNACULAR.—Sinhalese : *Ken-henda.* Sanskrit : *Bharangi.* Tamil : *Vatamadakki.*

ගස් පින්න

Clerodendron Infortunatum.

Do Phlomidis.

VERNACULAR.—Sinhalese : *Gaspinna.* Sanskrit : *Bhandira. Watamadakki.*

PROPERTIES AND USES.—Clerodendron Serratum is largely used as a substitute for Premna Herbacea, which is the true *Bharangi.* On analysis Dr. Dymock found it to be useless as a medical agent. He says that Clerodendron Siphonanthus is used largely in Bengal as *Bharangi.* To avoid confusion he suggests that Premna Herbacea be called *Gantu* (knotted) *Bharangi* and the other simply *Bharangi.* All the above possess similar properties and are thought to be laxative, tonic and cholagogue.

LABIATÆ NATURAL ORDER.

තලා, හින් තලා

Ocimum.—There are several species or varieties.

Ocimum Basilicum or **Canum.** The Sweet Basil.

VERNACULAR.—Sinhalese : *Talá, Hín-talá.* Tamil : *Tirunitru-pachchai.*

ගස් තලා, කිරි තලා

Ocimum Gratissimum.

VERNACULAR.—Sinhalese : *Gas-talá, Kiri-talá.* Sanskrit : *Varvara, Ajvalla.* Tamil : *Elumicham-tolashi.*

මදුරු තලා

Ocimum Sanctum.—The Sacred Basil.

VERNACULAR.—Sinhalese : *Maduru-talá.* Sanskrit : *Tulasi.* Tamil : *Tulasi.*

The last is also called *Vishnupriya* or *Haripriya.* It is sacred to Vishnu and connected with superstitious notions of many Hindus. The properties of all the above are more or less alike. The plants used by the Sinhalese are *Hín-talá* (Ocimum Canum) and *Maduru-talá* (Ocimum Sanctum). The *Tulasi* or *Talá* plants are regarded as expectorant and febrifuge and are prescribed in all catarrhal affections and low continued fever. The importance attached to them is more on account of Ocimum Sanctum being worshipped by the Vishnuites, and they say that its votaries will find a place in Vishnu's paradise. *Maduru-talá,* as the name signifies, is inimical to mosquitoes ; the houses are smoked by the plant being burnt to keep them away. It is often met with as an ingredient in prescriptions for fever of an intermitent kind. A decoction of *Tulasi,* Ocimum Sanctum (*Maduru-talá*) and ginger for ague of long standing, or Piper Nigrum (*Gammiris*) and the seeds of *Timbiri* (Diospyros Embryopteris) for tertian fever, are highly recommended in mid *Sarasansepa.* *

ඉරිවේරිය

Plectranthes Zeylanicus.

VERNACULAR.—Sinhalese : *Iri-wériya.* Sanskrit : *Valakan.*

PROPERTIES AND USES.—This is largely used in native medicine in the treatment of several diseases, but chiefly dysentery. It is aromatic, astringent and stomachic. Here are some prescriptions for fever and dysentery containing Plectranthes Zeylanicus.

For fever produced by the derangement of the bile.

Take of :—Kalánduru (Cyperus Rotundus).
Ela-sandun (White Sandal).
Iriwériya (Plectranthes Zeylanicus).
Rasakinda (Tinospora Cordifolia).
Mí-mal (Flowers of Bassia Longifolia).
Iramusu (Hemidesmus Indicus).

Make a decoction in the usual way and give with honey.

For fever with typhoid symptoms.

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* Tulasiwara Kanyabhyau Prathuk Pakwan Mahowsadhan.
Sitikan Kampabahulan Samayachcha Chiratanum.
Tulasidalarasa Kudwan Churnitai Marchan Tinduka-uktam.
Pratah Pratah Pripebathie Samayate Sitajawaran Traenat.

Take of :—Iriwériya (Plectranthes Zeylanicus).
Pium (Lotus or Nelumbium).
Kalánduru (Cyperus Rotundus).
Swendará (Andropogon Muricatus).
Iramusu (Hemidesmus Indicus).
Sudu-handun (White Sandalwood).

Make a decoction in the usual way.

For dysentery at the early stage *Iriwériya* is invariably given by native medical men in combination with other drugs. A very common decoction with them is the following :

Take of :—Iriwériya (Plectranthes Zeylanicus).
Inguru (Ginger).
Kalánduru (Cyperus Rotundus)

Four *kalans* each and eight *patas* or small tea cups of water ; and reduce the latter to one. For a dose a tea cup morning and evening.

Both for fever and dysentery *Iriwériya* is largely used, and the following is a prescription taken from *Yógasatakaya*, which directs it to be taken at various stages of the disease :—

Swatsakah Satevishah Sabilvah.
Sodechiyamustaischa Krutah Kashavah.
Sama Sasuláche Sasornitécha.
Chirapravritte Vhitho tesara.

TANGALLA.

In cases of dysentery of long standing give a decoction of *Iriwériya* (Plectranthes Zeylanicus) and *Kalánduru* (Cyperus Rotundus) ; in cases with blood, the above two drugs with pulp of unripe *Beli* (Aegle Marmelos) ; in cases of much griping add *Atiudayan* (A. Heterophyllum). For acute dysentery give the same with *Kelinda* (Holarrhena Antidysenterica).

I have often given the above in the different classes of dysentery referred to and found it very useful. In most cases, if they are not severe at the very outset of the disease, the first decoction suffices. In complicated cases where blood is passed with much griping and tenesmus I give a decoction composed of all the drugs in the following form :—

Take of :—Iriwériya (Plectranthes Zeylanicus).
Kalánduru (Cyperus Rotundus).
Beli-made (Aegle Marmelos).
Atiudayan (A. Heterophyllum).
Kelinda (Holarrhena Antidysenterica).

Make a decoction in the usual way. If the disease be one of several days' standing, I add to the above *Malitta*. I have found it very useful even in most obstinate cases.*

කප්‍ප වල්ලිය

Coleus Aromaticus.

VERNACULAR.—Sinhalese : *Kappra-walliya*. Tamil : *Kappasawalle*.

PROPERTIES AND USES.—This is not mentioned in the old Sanskrit *Nigandus* and I have not been able to ascertain its Sanskrit name. It is mostly used in treating diseases of cattle, but I believe it is also employed in catarrhal affections of children. A very useful prescription for whooping cough, which I learnt from an old Burgher lady, is a syrup prepared with *Kappra-walliya* (Coleus Aromaticus), *Kaluduru* (Nigella Sativa), *Hiressa* (Vitis Quadrangularis) and red onions, which are pounded together and put into a pot, with a quantity of water and enough sugar candy to bring it into the consistency of a thick syrup. A tea-spoonful or two is given to a child suffering from whooping cough and it has a marked effect in shortening the duration of the disease from about three months to as many weeks. If kept too long it is liable to ferment and therefore it must be prepared afresh every two or three days. Dr. Dymock describes the plant as being tonic and cephalic and as used in asthma, epilepsy, convulsion, and chronic cough.

ගස් කප්‍ප වල්ලිය

Anisochilus Carnosus.

VERNACULAR.—Sinhalese : *Gas-kappra-walliya*. Tamil : *Karppuravalli*.

PROPERTIES AND USES.—This is called wild *Kappra-walliya* in Sinhalese. In Mysore, the juice of the leaves mixed with sugar and human milk is a popular domestic remedy for children's cough.

ගොල්ලන් ගොළ, ගන් ගොල්ලන් ගොළ

Pogostemon Parviflorus vel **Pogostemon Heyneanus.**

VERNACULAR.—Sinhalese : *Gan-kollan-kola*. Sanskrit : *Tamalan, Lomasan*.

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* Of late, in treating cases of dysentery, I invariably have prescribed native remedies and I seldom fail to effect a cure in a few days in more than 50 per cent. of the cases. In the more severe cases and at later stages of the disease a preparation containing opium is given to control the frequency of motions whilst at the same time administering decoctions suited to the particular case under treatment. This method is seldom attended with failure and I now hardly lose a case of dysentery, unless it be one that has reached a stage beyond all hopes of recovery by any methods of treatment.

PROPERTIES AND USES.—I am not sure whether *Gan-kollan-kola* mentioned in the *Saraswati Nigandu* is the plant for which the following names are given :—*Tamalan, Lomasan, Patran, Kalaskhandhan, Sugandhakam, Tamalapatran, Tapichchan, Tamali* and *Sukumarakam*. It will be noted that *Sugandhakam* and *Sukumarakam* apply to Pogostemon Parviflorus and in all probability it is the same as *Kollan-kola* of the *Saraswati Nigandu* used by Ceylon vedarálas. But the difficulty in accepting this as probable is a statement by the authors of *Pharmacographia Indica* that the plant is not mentioned in the Hindu Sanskrit *Nigandu*. Whether mentioned or not, it is largely used in native medicine both in Ceylon and India and is found in many Sanskrit prescriptions that I have read. In many parts of India it is used by the natives as an antidote to snake poison and in particular to that of the highly or deadly poisonous Echis Carinata. It is regarded there almost as a specific for Echis Carinata and several European medical men who have given it a trial speak of it very highly as an antidote to Echis poison. Dr. H. McCalman, of the Ratnagiri Hospital, says that he does not pretend to explain the action of *Kollan-kola*, or *Pangala* as it is called in India, but since he began to use it as a remedy for Echis bites, he did not lose a single case out of thirteen except one, and in that the remedy was administered in the form of a tincture, instead of following the native method of getting the patient to chew the root and applying it externally to the wound.

[*N.B.*—Though I have given Pogostemon Parviflorus as the botanical name of this plant, I am not at all sure that it is the right name. There is no doubt that it is a plant of the genus Pogostemon of the natural order Labiatæ.]

සුදු තුම්බ

Leucas Marrubioides.

VERNACULAR.—Sinhalese : *Sudu-tumba.* Sanskrit : *Drona-pushpi.*

ගැට තුම්බ

Leucas Zeylanica.

VERNACULAR.—Sinhalese : *Geta-tumba.* Sanskrit : *Kumbha-yoni.* Tamil : *Muditumpai.*

PROPERTIES AND USES.—These plants and other species of Leucas are known as *Dronapushpi* or " cup flowers," from the resemblance of the calyx to a cup. The other names are :—*Kurumba, Kumbhayoni, Chitra-pattrika.* They are regarded as stimulant and diuretic and are prescribed in jaundice and to expel phlegmatic humours and worms. In cough or catarrh of children, *Tumba* juice one part with two parts honey and a few grains of borax may be mixed together and given occasionally in suitable doses according to age.

යක්වනස්ස

Anisomeles Ovata.

VERNACULAR.—Sinhalese : *Yakwanassa.* Tamil : *Peyameratti.*

PROPERTIES AND USES.—Given to children in colic, dyspepsia, and fever.

මහ යක්වනස්ස

Leonotis Nepetæfolia.

VERNACULAR.—Sinhalese : *Maha-yakwanassa.* Tamil : *Kasitumpai-*

හැමනිල්ල

Dysophylla Auricularia.

VERNACULAR.—Sinhalese : *Hémanilla.*

PROPERTIES AND USES.—The above are other plants of this order, occasionally used in medicine. They are chiefly used in external applications for ring worm and other skin diseases.

PLANTAGINEÆ NATURAL ORDER.

ඉසඳකොල්

Plantago Ovata.

VERNACULAR.—Sinhalese : *Isapagol.* Sanskrit : *Uthamujiran.* Tamil : *Ishappukol-virai.*

PROPERTIES AND USES.—This is an astringent and demulcent used in chronic diarrhœa, that peculiar form known as hill diarrhœa. It may be given in the form of a decoction (1 *to* 40). It is met with in hill districts and is common in Nuwara Eliya and its neighbourhood. I have not been able to ascertain the Sinhalese name of this plant.

NYCTAGINEÆ NATURAL ORDER.

පිටසුදු පලා

Bœrhaavia Repens or **Bœrhaavia Diffusa.**

VERNACULAR.—Sinhalese : *Pita-sudu-palá.* Sanskrit : *Punaranava, Punar-bhava, Sothagni.* Tamil : *Mukku-rattai.*

PROPERTIES AND USES.—This is described in the *Nigandus* as hot, pungent, laxative, diuretic and stomachic, and is perscribed in jaundice, strangury, dropsy and internal inflammations.

Hedyotes Nitida is also called *Pita-sudu-kola* but should not be confounded with Bœrhaavia Repens or Diffusa, the medicinal *Pita-sudu-palá.* The letter is used chiefly as a medicine whilst the other is more a vegetable than a medicine, boiled and eaten by the natives as a food. They are also known as *Maha-kura* and *Sulu-kura.*

N.B.—I note that Trianthema Monogyna vel Trianthema Decanora, which were described as *Hín-sarana* and *Maha-sarana* respectively in the Sinhalese *Nigandus*, have the same Sanskrit name *Punarva* or *Punarbhava*, but they are distinguished by the term *Swetha Purnava* and *Gerdha Purnava* from Bœrhaavia, which is *Pita-sudu-palá* ; this also has two varieties, white and red, but the first is preferred for use medicinally. *Purnavá* is recommended highly in *Sarasansépa** for debility and wasting of the body through indulgence in intoxicating liquors. A decoction of *Purnava* and Liquorice root are directed to be boiled in milk until reduced to a thick consistence, like ghee. The translator renders the word *Punar-nava* into Sinhalese by *Sarana* (Triandra-Monogyna), which I think is wrong. It should be *Pita-sudu-kola* (Bœrhaavia Diffusa). *Pita-sudu-palá* is Hedyotes Nitida. A compound decoction called *Punarnavashtaka* for the above mentioned diseases is made of :—the root Bœrhaavia Diffusa (*Pita-sudu-kola*), dried margosa bark (*Kohombapotu*), leaves of Tricosanthes Dioica (*Dummella*), dried ginger (*Inguru*), root of Picrorhiza Kurroca (*Katu-karósana*), Chebulic Myrobalan (*Aralu*), stem of Tinospora Cordifolia (*Rasakinda*), dried wood of Berberis Asiatica (*Daruharidra*), each one quarter tola, water thrity-two tolas ; boil down to a fourth, to be taken during twenty-four hours (*Dutt*). A tea-spoonful of the root in powder might be given as a laxative ; it is also a very useful remedy for gonorrhœa.

ARISTOLOCHIACEÆ NATURAL ORDER.

ඇස්සඳ

Aristolochia Indica. Indian Birthwort.

VERNACULAR.—Sinhalese : *Sap-sanda.* Sanskrit : *Arkamula.* Tamil: *Peru-marindu.*

PROPERTIES AND USES.—This is also called in Sanskrit *Ishvari*, "goddess", *Sunanda*, "pleasing", *Sudhy-upasya*, "worthy of worship", and *Rudrajata.* It is considered to be attenuant, deobstruent, emmenagogue, antarthritic and a valuable remedy in the treatment of the bowel affections of children who are teething. It is a domestic remedy for infantile colic. It also enters into the composition of many compound decoctions and other remedies. It is antiperiodic and is given in cases of intermittent fever. In South India the powdered fruit is given internally and also applied to the wounds in cases of snake bites.

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* Payah Punnarnawakwatha Yashtikalka Prasadhitam,
Ghrutan Pushtikaran Panan Maddyapana Hataujasan.

The meaning of the above is : Reduce a decoction of Punarnava into the consistence of ghee with liquorice added to it. Administer a tea-spoonful or two in cases of debility and wasting of the body caused by too much indulgence in intoxicating liquor.

Aristolochia Bracteata. A variety of the above plant.

VERNACULAR.—Sinhalese : *Sapsanda.* Sanskrit : *Dhumrahva.* Tamil : *Adutina-palai.*

PROPERTIES AND USES.—This is also known as *Gridhrapattra, Gridhrani,* and *Srima-lapaha.* It is used on account of its bitter, purgative and anthelmintic properties. The powder of the dried leaves is used to kill maggots ; it is also administered in tedious labour to excite uterine action. The famous Indian pill for venomous snake bites is composed of aconite root, white arsenic, Aristolochia Bracteata and fruit of Randia Dumetorum, in equal parts. These drugs are rubbed in a stone with the juice of Piper betel and made into pills, to the size of the Abrus Precatorious seed (*Olinda*). Take one for a dose, one every five minutes, till three are taken. Aristolochia Indica may be substituted for Aristolochia Bracteata ; both these plants are found in Ceylon. This is also called in Sanskrit *Su-labha, Srima-lapaha.*

POLYGONACEÆ NATURAL ORDER.

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Polygonum Barbatum.

VERNACULAR.—Sinhalese : *Ratu-kimbul-wenna.* Sanskrit : *Ola.*

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Polygonum Tomentosum.

VERNACULAR.—Sinhalese : *Sudu-kimbul-wenna.* Sanskrit : *Swastika, Sunnysanna.**

PROPERTIES AND USES.—This is said to be an excellent remedy for chronic diarrhœa. In Algeria at one time a species of Polygonum was a favourite remedy for fever. The leaves are astringent and styptic.

CHENOPODIACEÆ NATURAL ORDER.

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Basella Alba.

VERNACULAR.—Sinhalese : *Niviti.* Sanskrit : *Potaki* or *Upodika.* Tamil : *Pasalai.*

PROPERTIES AND USES.—This is extensively cultivated as a vegetable. It is sometimes used as a poultice to foul ulcers.

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* *Sunnysanna,* according to Dr. Dutt, is Marcella Quadrifolia, but I cannot find a genus of that name in Dr. Trimen's list of Ceylon plants or in Dr. Dymock's *Pharmacographia Indica.*

PIPERACEÆ NATURAL ORDER.

මිරිස්, ගම් මිරිස්

Piper Nigrum, or Black pepper.

VERNACULAR.—Sinhalese : *Miris, Gam-miris.* Sanskrit : *Marichi.* Tamil : *Milagu.*

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Piper Chaba.

VERNACULAR.—Sinhalese : *Siviya.* Sanskrit : *Chavika.*

බුලත්

Piper Betel.

VERNACULAR.—Sinhalese : *Bulat.* Sanskrit : *Tambulan.* Tamil : *Vettilai.*

PROPERTIES AND USES.—There is a tradition among the Hindus to the effect that the betel plant was brought from heaven by Arjuna, who stole a branch of it and planted it on his return to earth. A chew of betel or, as the Hindus call it, *Pan Supare,* is offered to one coming to a house as a mark of affection or courtesy. Among the Sinhalese too this custom is observed extensively in the rural districts. One who goes to see a superior never goes empty-handed but always with a *Bulat hurulla* (a packet of 40 leaves), which is presented to him. This custom was a mere mark of respect originally, but now it has degenerated into a convenient mode of receiving bribes or making exactions from the poor villagers by those in authority, the measure of his attention to the man's request depending upon the amount of the money placed on the betel leaves. Among the Hindus, at a betrothal, the father of the bride sends a *bira* of seven betel leaves to the bridegroom and at the marriage ceremonies a betel leaf rolled into the shape of a cigarette is presented either by the bride or the bridegroom, half of which is kept in her or his mouth, the protruding part being expected to be bitten off by the other ; and at times a piece of stick is concealed within it to prevent its being bitten off readily, to the amusement of the spectators.

The properties of Piper Betel are described in the following *Sloka* :—

Tambulan Katu Tikta Misramadhuran Ksharan Kashayan Vitan
Watagnan Kaphanasanan Krumiharan Daurgandhiya Dosha Paham
Waktrassyabharanan Malapaharanan Kamagni Sandipanan
Tambulassya Sakhe Trayo Dasagunah Swargeppiam Durlabhah.

—*Sararta Sangrhawa.*

" Betel is pungent, bitter, spicy, sweet, alkaline, astringent, a carminative, a destroyer of phlegm, a vermifuge, a sweetner of breath, an ornament of the mouth, a remover of the impurities and a kindler of the flame of love ; these thirteen properties of betel are not to be met with even in heaven". (James D'Alwis). The Sanskrit names of

Bulat are:—*Támbúlawalli, Támbúli, Nágawall, Srikari, Phániwalli, Phánilata* and many others; in Tamil it is called *Vettilai*. *Siriboa Ratabulat-wel* is a variety of Piper Betel.

Piper Subpeltatum, Sinhalese *Maha-labu*, is regarded as pungent, aromatic, and astringent.

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Piper Longum.

VERNACULAR.—Sinhalese : *Tippili.* Sanskrit : *Pippali.* Tamil : *Tippili-ver.*

PROPERTIES AND USES.—Piper Chaba used to be the long pepper of European commerce and was called *Chavi, Chavika* and *Chavya* by Sanskrit writers. It has the properties of Piper Longum, which is *Pippali.* It has also several Sanskrit synonyms : *Chapala, Pala, Magadhi*, "growing in South Behar". All these are used internally in native medicine as carminatives, expectorants and stimulants. In addition to the use of the pods or fruits of all the varieties, the root of Piper Longum is also used largely in medicinal decoctions. Piper Nigrum is much used as a condiment in native cookery.

These form ingredients in many compound preparations, decoctions, *churnas*, confections, etc. *Tippili* root is both laxative and astringent, like *Aralu*, and is frequently used in decoctions for cases of dysentery, where the scybalæ have to be expelled from the intestines.

Take of :—Beli root (Aegle Marmelos).
Long pepper root (Piper Longun).
Aralu (Chebulic Myrobalan).

Make a decoction in the usual way. DOSE.—Half a tea cup at a time

Frequently this disease is cured by this decoction alone ; if not, a decoction like that mentioned under the head Plectranthus Zeylanica might be given. Piper sylvestre (*Walgam-miris*) is not used medicinally to my knowledge. The leaves are heated and some medicinal oil is rubbed over them after which they are applied to the chest of children suffering from catarrhal and other affections of the chest, and to the forehead of persons suffering from headache.

Piper Nigrum is an ingredient in many medicinal preparations, especially in *Ghritas* and *Churnas* for various diseases.

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Piper Cubeba.*

VERNACULAR.—Sinhalese : *Walgá-miris.* Sanskrit : *Kankola* Tamil : *Val-milaku.*

* Although I have given *Walgá-miris* as the Sinhalese name of Piper Cubeba, I am not sure of its correctness. Dr. Trimen does not mention it, as a plant indigenous to Ceylon, but several other varieties are mentioned by him, viz., Piper Thwaitissi, P. Tuneuron, P. Zeylanicus, P. Argyrophyllum, and P. Sylvestere, the last two are called *Walgá-miris* by him.

PROPERTIES AND USES.—This is a comparatively recent introduction into the Hindu or native Materia Medica. It is a valuable diuretic, very frequently prescribed in cases of gonorrhœa with other drugs, and is the Cubeb of the old *British Pharmacopœia*. Piper Cubeba (the uncultivated variety of Piper Nigrum), Piper Chaba and Piper Sylvestre are probably three varieties of the same original plant.

MYRISTICEÆ NATURAL ORDER.

Myristica Fragrans. Nutmeg tree.

VERNACULAR.—Sinhalese : *Sádikka*. Sanskrit : *Jatiphala, Jati-kosha* Tamil : *Jadipattri, Jaiphal.*

PROPERTIES AND USES.—The mace that covers the nutmeg is called *Vasarási* in Sinhalese and *Játipattri* in Sanskrit. These are considered to be hot, dry, carminative, digestive and expectorant ; they enter into the composition of many preparations, decoctions, *churnas*, and *ghritas*. **Myristica Malabarica** is a species of nutmeg, but not used in Ceylon. In Madras an oil is extracted from the seed of Myristica Malabarica and is used as an application to foul ulcers. The other plants of this genus are :—

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Myristica Laurifolia.

VERNACULAR.—Sinhalese : *Mala-boda*. Tamil : *Palmanikam*.

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Myristica Horsfieldia.

VERNACULAR.—Sinhalese : *Ruk-gas*. Sanskrit : *Indura*.

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Myristica Irya.

VERNACULAR.—Sinhalese : *Iriya*.

PROPERTIES AND USES.—I do not know of any medicinal use to which any product of this is put to by native medical men in Ceylon. The *Rukmal* I have seen mentioned in translations of medical works as equivalent of *Priyangu* or *Puwangu*, which I think is a mistake, as the latter is quite a different plant and is the Aglaia Roxburghiana.

LAURINEÆ NATURAL ORDER.

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Cinnamomum Camphora.

VERNACULAR.—Sinhalese : *Kapuru*. Sanskrit : *Karpura*. Tamil : *Karppuram, Shudan*.

PROPERTIES AND USES.—There are two kinds of *Karpura* mentioned in Sanskrit works, *Pakva* and *Apakva*, and they are the products of two different plants or trees. *Pakva* is the camphor obtained by distillation from the wood of Cinnamom Camphora and *Apakva* is a natural exudation from Dryobalanops Aromatica, a tree grown chiefly in Borneo and Sumatra. Camphor is used largely in native medicine, but usually in combination with other drugs. It is also used in the preparation of native medicinal oils. The camphor derived from Dryobalanops is regarded by native physicians as an aphrodisiac.

කුරුඳු

Cinnamomum Cassia vel C. Zeylanicus.

VERNACULAR.—Sinhalese : *Kurundu.* Sanskrit : *Gudatvak.* Tamil : *Lavanga-pattai.*

PROPERTIES AND USES.—I am not certain that this was the cinnamon known to the ancient Greeks and mentioned in the Bible, for it is also called *Darchini*, signifying that it was of the country of the Chinese, and Cinnamomum Zeylanica does not appear to have been known to the ancients nor is it known when it was first introduced to Europe. The first mention of Ceylon cinnamon is made by Kazwini in the 13th century and it was not cultivated before 1770. Apparently it began to be cultivated in Ceylon by the Dutch, who discovered its commercial value to be much superior to that of the Chinese variety. Cinnamon is called *Lavanga-pattai* in Tamil, and *Kurundu* in Sinhalese ; it is called *Gudatvak* in Sanskrit. Cinnamon is largely used in native medicine but more as an ingredient in compound preparations for various diseases ; it is regarded as aromatic, carminative and stomachic. At one time powdered cinnamon was highly spoken of as a remedy for dysentery, but my experience of it in the several cases where I used it was very disappointing. Cinnamomum Tamala is regarded by some botanists as a coarse variety of Cinnamomum Zeylanica. The oil is extracted both from the bark and the leaves and is used to perfume medicinal oils ; it is also a good disinfectant.

Tajpat or *Tamalpatra, Talisha-pattiri* are the leaves of Cinnamomum Tamala. This is used in compound preparations for skin diseases. Toothache is often relieved by the application of the oil to the decayed tooth. These varieties and species of Cinnamon have no connection with the real Cinnamomum Cassia or Cinnamomum Zeylanica. *

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Litsæa Sebifera.

VERNACULAR.—Sinhalese : *Bómi, Bómbi.* Sanskrit : *Maidalakri.* Tamil : *Maida-lakti.*

* Dr. Trimen mentions several other varieties of cinnamomum as being indigenous to Ceylon, viz., C. Multiflorum (*Walkurundu*), C. Ovalifolium, B. Cilncodorum. (*Pengiri kurundu*).

PROPERTIES AND USES.—This is used in dysentery on account of its demulcent qualities. It is also used externally as an emollient application to bruises. It was not known to the old Sanskrit writers, but the natives of India appear to have learnt its use from the Arabian physicians. It is regarded as a resolvent, astringent and a nervine tonic, and is used as a substitute for *Méda*, one of the articles of what is called *Ashtavarga*, the composition of which is not now known. Is a demulcent and used much in the treatment of diarrhœa and dysentery.

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Litsæa Cauliflora, or **Lancifolia** is *Rat-keliya*. Its use and properties are similar to those of *Bómi* or *Bómbi*.

Litsæa Zeylanica is the *Dawul-kurundu* of the Sinhalese and is also known as *Wal-kurundu*.

THYMELÆACEÆ NATURAL ORDER.

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Aquilaria Agallocha.
Do Malaccensis.

VERNACULAR.—Sinhalese : *Agaru*. Sanskrit : *Visvarupa*. Tamil : *Aggalichandana*.

PROPERTIES AND USES.—This is one of the medicines of antiquity and is mentioned in the Bible and in the writings of the Jews and Greeks before the Christian era as having been brought to Europe from India. It is called by the Hindus *Agaru* and has the following Sanskrit names : *Visvarupa*, "taking all forms," *Kirimija*, "produced by worms," *Anarya-ja*, "produced in a non-Aryan country," *Kanaka*, "golden." It is described as hot, light, and cholagogue ; removes diseases of the ears and eyes.

Agaru is recommended by Vedarálas to be used as an application to surgical wounds. Four kinds of *Agaru* are sold in the Indian bazaars : *Hindi*, *Mandali*, *Sinfi*, and *Kamari*. Of these the best is *Mandali*, the product of Central India.

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Lasiosiphon Eriocephalus.—This is called *Nahá* in Sinhalese. It is not mentioned in native works, but I have noted it here as a decoction of it is said to be rubbed on lean cattle by the natives in some parts of India before they take them to the market for sale, to give a plump appearance to the animals, which, however, disappears after two or three days, to the great astonishment and disappointment of the purchasers.

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Gyrinops Walla.—*Wallá* or *Wallá-patta* of the Sinhalese. It has a fibrous bark with which strong ropes are manufactured by natives. The tender leaves smashed are applied to relieve toothache.

SANTALACEÆ NATURAL ORDER.

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Santalum Album.

VERNACULAR.—Sinhalese : *Handun.* Sanskrit : *Chandana.* Tamil : *Sandanak-kattai.*

PROPERTIES AND USES.—Although the Sanskrit writers speak of two kinds of sandalwood, *Rakta Chandana* and *Sweta Chandana*, in reality *Rakta Chandana* is not a kind of sandalwood at all but a tree of quite a different natural order. Pterocarpus Santalinus has no smell like the true sandalwood. It is astringent and cooling so that the native medical men often use it in the treatment of diseases for real *Chandana.* Unless distinctly mentioned as *Sudu-handun* (*Sweta Chandana*) Santalum Album is used.

The *Chandana* (Santalum Album) is of two kinds. They are called *Sweta* and *Pita Chandana.* The latter is of a darker hue being the heart wood, while the other one, the cambian, is of a lighter hue. The properties are the same. An oil extracted from the wood is used as a perfume by the natives, also for treating various diseases, chiefly gonorrhœa, as well as for affections of the urinary passages. The wood is cooling and astringent and enters into the composition of many decoctions for fever and other diseases. This is the source of several Western preparations, such as Santal Medi, Ariol and some others.

A very efficacious remedy that I have seen employed by Vedarálas for Cystitis is sandalwood rubbed up into a paste, about a tea-spoonful, which is put overnight into a tender king cocoanut with water and administered the following morning, all symptoms of Cystitis being expected to disappear about the 3rd day.

Scleropyrum Wallichianum is called in Sinhalese *Katupamburu* (කටු පඹුරු) and *Idda-mulai* in Tamil. I do not know of its being used medicinally.

EUPHORBIACEÆ NATURAL ORDER.

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Euphorbia vel **Pilulifera.**

VERNACULAR.—Sinhalese : *Búdadakiriya.* Tamil : *Amumpatchai-arissi.*

PROPERTIES AND USES.—I have not been able to ascertain the Sanskrit name for this plant. It is *Bara-keru* in Bengali, and is a well-known remedy among the Sinhalese for worms, bowel complaints, cough and gonorrhœa, and as a local application for ring worm. It is said to possess extraordinary qualities, e.g., a few drops of the juice would kill serpents. Its efficacy in gonorrhœa, cough and colic, and as an antidote to poisons, is doubtful in my opinion. It is said to be very useful in dyspepsia and asthma.

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Euphorbia Thymifolia.

VERNACULAR.—Sinhalese : *Bin-dadakiriya.* Sanskrit : *Raktavindu chadha.* Tamil : *Sittrapaladi, Chin-amam-pátchái-arissi.*

PROPERTIES AND USES.—As its name *Raktavindu chadha* implies, it is a remedy for gonorrhœa with sanious discharge. It is regarded as an antidote to snake poison, the expressed juice being applied externally with milk to the bitten part. It acts as a purgative and is said to expel all vitiated humours from the body. It is a resolvent, purgative and a cure for ring worms when applied externally. The Sinhalese names of these two plants have the same signification and there is little or no difference in their therapeutical properties ; and I think one may be used for the other without any hesitation as to their effect on the disease. For the cure of dandriff the juice is applied with Chloride of Ammonium.

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Euphorbia Tirucalli.—Milkbush.

VERNACULAR.—Sinhalese : *Nawahandi.* Tamil : *Kalli-kombu.*

PROPERTIES AND USES.—This is a plant introduced into the East from Africa, but is now found all over here. The milky juice is a purgative and is applied externally as a counter irritant. It is too great an irritant to be used internally.

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Euphorbia Neriifolia.

VERNACULAR.—Sinhalese : *Patuk.* Sanskrit : *Snuhi.* Tamil : *Ilaik-kalli.*

PROPERTIES AND USES.—Similar to *Nawahandi.*

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Euphorbia Antiquorum.

VERNACULAR.—Sinhalese : *Daluk.* Sanskrit : *Vajri.* Tamil : *Shadhurak-kalli.*

PROPERTIES AND USES.—This is also called *Vajra, Gandira,* and *Mahataru* in Sanskrit.

Its properties are similar to those of the other plants of the Euphorbia family already described.

Euphorbia Neriifolia and Euphorbia Antiquorum are sacred to *Mansa,* goddess of serpents, and on Tuesdays and Thursdays Hindus in some parts of India worship them, praying that they may be delivered from the attacks of serpents. In Bengal, Dr. Dutt says, they are planted on the 5th day after the full moon, in the month of *Srawan,* and worshipped ; further, to prevent snakes coming into their homes, they are planted in pots, which are placed round them. In Western

India there is a curious custom connected with these plants. About the time of the *Dewali* festival among the Concan Brahmins, they cut out a piece of the stem, hollow it, put a little oil into it and a wick is placed in it. This is lighted and the small lamp is carried from house to house of friends with the words, " A son-in-law to you " (*Nevadunga*), that is, wishing them good prosperity ; the latter pretend not to wish it and try to put out the lamps by throwing water on them. As medicines these are regarded as diuretic and purgative, pungent, digestive, bitter and heavy, and are said to be useful in a large number of diseases : rheumatism, tumours, abdominal swellings, spleen, and jaundice.

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Phyllanthus Emblica.

VERNACULAR.—Sinhalese : *Nelli.* Sanskrit : *Amalaka.* Tamil : *Nelli-kai.*

PROPERTIES AND USES.—This is called *Dhatriphala, Amritaphala* and *Sriphala* in Sanskrit and is one of the three Myrobalans (*Tippal*) of the native medical men. It is one of the most important medicines in the native Materia Medica and, like *Aralu*, there is hardly a disease for which it is not prescribed, singly or in combination with other drugs. It is supposed to have a specific effect on the eyes and is given to strengthen the retina, or for weak or defective sight. The juice of the fresh fruit is given with honey for gonorrhœa.

A prescription called *Dhatrilauha* is prescribed as follows :—Take of dried Embelic Myrobalan, in fine powder, 14 tolas or phalams, prepared iron 32 phalams, liquorice root powder 16 phalams, and mix together and wash in the juice of Tinospora Cordifolia several times successively. This preparation is given in jaundice, anæmia, and dyspepsia from 20 to 40 grains, and it is said to be a very efficacious one. I have myself seen a case of anæmia marvellously improved by the use of this preparation in a very short time, and its action is quite intelligible in view of the presence of iron.

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Phyllanthus Reticulatus.

VERNACULAR.—Sinhalese : *Wel-kayila.* Sanskrit : *Krishnakamboji.* Tamil : *Pullanti, Pulavayr.*

PROPERTIES AND USES.—This is used medicinally as an alterative and diuretic and as a cooling application to the head in cases of temporal insanity, delirium tremens and other affections of the head attended with derangement of the mental faculties. The leaves and bark are used as a diuretic and cooling medicine.

Puttra Jiva Roxburghii.—Sanskrit : *Puttran jiva,* " that which makes the child live." The nuts of *Puttran jiva* are hung round the neck of children to keep them in good health. They are mentioned in the

Nigandus as being also *Garbha-kara*, "productive of impregnation". The nuts are also given internally in colds and coughs of children.

N.B.—Saraswati Nigandu gives *Puttran jiva* as a synonym for *Butsarana*, which according to Dr. Trimen is Canna Indica, called in Sanskrit *Sarvajaya*, "all conquering". *Kamakshi* also is a name for this drug.

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Phyllanthus Niurii.
Do Urinaria.

VERNACULAR.—Sinhalese : *Pitawakká* and *Ratpitawakká*. Sanskrit : *Tamanwalli* and *Bannyamalaki* respectively. Tamil : *Kiszhkay-nelli* or *Kilka-nelli*.

PROPERTIES AND USES.—These are common garden weeds which appear after the rains both in India and Ceylon and are regarded by native medical men as deobstruent, diuretic, astringent and cooling. Prescribed in jaundice either in the form of powder of the dried plant, the dose of which is about a spoon, or in the form of an infusion of the whole shrub made in the usual way. The milk juice is a good application for foul sores in chronic dysentery or diarrhœa. A decoction of P. Niurii and Finu, Greek Methi or Uluva, is highly recommended, and it seldom fails to effect a cure.

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Croton Tiglium.—The croton.

VERNACULAR.—Sinhalese : *Jayapála*. Sanskrit : *Jayapala*. Tamil : *Nervalam*.

PROPERTIES AND USES.—This is also called *Tittiriphala* in Sanskrit and enters into the composition of many medical preparations used by native Vedarálas. Its chief use is as a purgative and it is also given in fevers of a low type. The following preparation called *Mahanaracha Rasa* is prepared thus :—Take of Chebulic Myrobalan, pulp of Cassia Fistula (*Ehela*), Embelic Myrobalan, root of Baliosphermum Montanum (*Danti*), Picrorhiza Kurooa (*Katu-karósana*), milky juice of Euphorbia Neriifolia (*Patuk*), Ipomæa Turpethum (*Trastawálu*), the tubers of Cyperus Rotundus (*Kalánduru*), each one, a tola or phalam ; pound to coarse powder and boil in 4 seers of water till the latter is reduced to $\frac{1}{8}$. Then take a tola or phalam of husked croton seeds, tie them in a piece of cloth and boil them in the above decoction till the latter is reduced to a consistence of fluid extract. To this extract add a powder composed of 8 parts of purified croton seeds, three parts of ginger and two parts of Black pepper, mercury and sulphur, in quantity sufficient to make a pill mass ; rub them together for twelve hours and make into two-grain pills. These are given with cold water in tympanitis, colic, ascites, etc., as a drastic purgative. After the bowels are moved rice should be given with curdled milk and sugar.

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Croton Lacciferus.

VERNACULAR.—Sinhalese : *Gas-keppitiya.*

PROPERTIES AND USES.—This is the lac tree of Ceylon. On the stems of all trees a red crocod occurs. It is collected in the districts where it is abundant, such as in Matale, and melted over a fire in a metal pot. It is used by the lacquer workers in Ceylon for fixing colour.

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Croton Polyandrum, which is also called Baliospermum Montanum, is very similar in its action to Croton Tiglium and is called *Danti* in Sanskrit medical works. The seeds are sold in the Indian bazaars as Croton seeds. The root of this (Croton Polyandrum) is an ingredient in several decoctions : but a decoction is more frequently used to purify mineral ores and also in the preparation of *Rasas.* A remedy called *Jwara Ankusa* is composed of one part of mercury, two parts of sulphur, three parts of Cinnabar, four parts of Croton seeds. These are directed to be pounded into a paste with a decoction of the root of Croton Polyandrum and made into one *rate* weight pills. The Sanskrit names of this plant are : *Dantiharitaka, Nagadanti, Dantimúla* (root) and *Dantiveja* (seeds), which are used medicinally.

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Dimorphocalyx Glabellus.

VERNACULAR.—Sinhalese : *Weli-wenna.* Sanskrit : *Hansapáda.* Tamil : *Tentukki.*

PROPERTIES AND USES.—Used as a diuretic and a purgative.

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Acalypha Indica vel **Paniculata.**

VERNACULAR.—Sinhalese : *Kuppaméniya.* Sanskrit : *Haritamanjari.* Tamil : *Kuppaimeni.*

PROPERTIES AND USES.—It is laxative and is given singly or in combination with other drugs in the form of a decoction. Leaves smashed and made into a poultice are applied to the Hypogastrium in cases of retention of urine and seldom fails to answer the purpose when the retention is due to spasmodic stricture.

Kuppaméniya may also be given as an expectorant, with ginger and liquorice root, in catarrhal affection, and in that respect its action is similar to that of Ipecacuanha. A few leaves smashed up and applied to the rectum in the form of a suppository in constipation of children relieves the bowels at once.

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Mallotus Phillippinensis.

VERNACULAR.—Sinhalese : *Hamparilla.* Sanskrit : *Kampilla.* Tamil : *Kapli, Kapila.*

PROPERTIES AND USES.—This is also called *Lohita-rakta* in Sanskrit and is recommended to be given in cases of intestinal worms, gravel and skin diseases. The leaves are said to be astringent and cooling.

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Ricinus Communis.

VERNACULAR.—Sinhalese : *Endaru* or *Erandu.* Sanskrit : *Eranda.* Tamil : *Amanakkam-chedi, Chittamanakku.*

PROPERTIES AND USES.—The chief use of this plant is as a cathartic. The oil is given by itself or in decoctions and the root in combination with other drugs. It is a safe laxative and is given in cases of rheumatism. This oil enters into the composition of many medicinal oils.

වැල් කහඹිලිය

Tragia Involucrata.

VERNACULAR.—Sinhalese : *Wel-kahambiliyá.* Sanskrit : *Vrischikali.* Tamil : *Kanchuri.*

PROPERTIES AND USES.—This is very largely used by our native medical men, not so much as a medicine in itself, but from a mistaken identification of it with *Yavasa* of the Sanskrit writers. Where *Yavasa* or *Duralabha* is ordered in old prescriptions medical men in Ceylon invariably take *Wel-kahambiliyá*, whereas the true *Yavasa* is Alhagi Maurorum. The term *Duralabha* given to Alhagi Maurorum, signifying difficult to get at, or touch, is not inapplicable to Tragia Involucrata, which perhaps explains its use by our Vedarálas for the former. *Vrischikali* (*Wel-kahambiliyá*) is given in cases of fever and dysentery.

Here below are some prescriptions in which it is used by our native medical men, though the drug ordered in the old prescriptions is either *Yavaso* or *Duralabha*, or other synonym of Alhagi Maurorum.

Take of :—Wel-kahambiliyá (Tragia Involucrata or Alhagi Maurorum).
Rasakinda (Tinospora Cordifolia).
Kalánduru (Cyperus Rotundus).
Bevila (Sida Cordifolia).
Kottamalli (Coriander).
Inguru (Ginger).

Make a decoction in the usual way and give morning and evening. DOSE.—Half a tea cup.

For fever caused by deranged air (*Wáté*).

Take of :— Rasakinda (Tinospora Cordifolia).
Wanepala (Adhatoda Vasica).
Bin-kohomba (Swertia Chirata).
Pepiliya (Oldenlandia Herbacea).
Wel-kahambiliyá — Yavaso, — (Tragia Involucrata or Alhagi Maurorum).

Make a decoction in the usual way.

For dry cough Tragia Involucrata boiled in cow's milk is recommended to be taken at night.

කිරි මකුළු

Sapium Indicum.

VERNACULAR.—Sinhalese : *Kiri-makulu.*

PROPERTIES AND USES.—Is said to be used medicinally, but I have not seen any prescriptions containing it.

තෙල කිරිය

Excæcaria Agallocha.—Blinding tree ; Tiger milk tree.

VERNACULAR.—Sinhalese : *Tela-kíriya.* Tamil : *Tillai-cheddi.*

PROPERTIES AND USES.—The above are two plants used at times medicinally, apparently empirically.

Excæcaria Agallocha is a purgative. Sabastiania Chamacha is the *Bhui Erandi* of South India, the juice of which is used as astringent. The milky juice of *Kiri-makulu* is poisonous. I have not seen any prescriptions containing it as an ingredient. *Kiri-makulu* is, I think, the same as *Kawalu* or *Kavalu.*

UTICACEÆ NATURAL ORDER.

වල් මූනමල්

Gironniera Reticulata.

VERNACULAR.—Sinhalese : *Wal-múnamal* or *Gúrenda.* Tamil : *Koditani.*

PROPERTIES AND USES.—Dr. Trimen has given *Wal-múnamal* as the Sinhalese name of Gironniera Reticulata, which I think must be accepted as correct in preference to that of Dr. Dymock who says it is called *Urenne,* apparently a mistake for *Gúrenda* : it is sold in the Indian bazaars as a medicine under the name of *Pinari.* This plant is not mentioned in the old native medical works. It is called *Koditani* by the Tamils and Dr. Dymock says it is imported to India from Ceylon.

It is said that the Dutch called it Strunthout and Thumberg in his travel records says, " the tree was called *Urenne* (apparently a mistake for *Gúrenda*) by the Sinhalese on account of its disgusting odour, which resides especially in the stem and the large branches". He further remarks that it resembles that of human ordure so much that he could not know how the natives could stomach it as a medicine, and that they took it mixed up with lime juice, as a purifier of blood in itch and other cutaneous affections.

ගොඩ කිරිල්ල

Holoptelea Integrifolia.

VERNACULAR.—Sinhalese : *Goda-kirilla.* Tamil : *Ayil, Velayil.*

PROPERTIES AND USES.—This is a large tree growing in India and found in the drier parts of Ceylon. The bark contains a mucilaginous juice, which is squeezed out and applied to rheumatic swellings. I have seen it mentioned in a *Wattóru* book as a remedy for promoting the union of recently fractured bones.*

The leaves are recommended to be pounded or cut into minute pieces and baked with saffron and tied over the fractured limb and kept for about half an hour or, as the *Wattóru* states, till the expiration of the time required to boil rice to be fit for eating.

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Cannabis Sativa.

VERNACULAR.—Sinhalese : *Kansa.* Sanskrit : *Bhanga, Indrasana.* Tamil : *Ganja-ilai, Bangi-ilai.*

PROPERTIES AND USES.—This plant has been known to the Indians from prehistoric times and is mentioned along with the Vedic plant *Janjida,* to which is attributed magical and medicinal properties. " The gods are said to have created this plant three times and given it a thousand eyes and conferred on it the property of driving all diseases and killing all monsters". (Dymock).

A mythological origin is also attributed to this plant which is said to have been produced at the churning of the ocean by the gods to obtain *Amrita* ; and they, out of compassion on mankind, sent it to earth for men to take it in order to lose it is said fear and attain delight as well as to have their sexual desires excited. Leaving all the fables and myths

* In an old *Wattóru* book this drug is said to have been found successful in practice to promote the union of bones, but I have not seen an instance nor have I had any opportunity to give it a trial and test its alleged efficacy in such cases. I have not been able to ascertain the Sanskrit name of the tree. It is not likely the author would set it down as so efficacious a remedy and say he found it successful in actual practice unless it was found really useful in the manner specified. There is some doubt as to the identity of the plant here recommended for hastening the union of fractured bones. It is thought by some that it is not *Goda-kirilla*, Holoptelea Integrifolia, but *Diya-kirilla*, Hydrolea Zeylanica, a plant of the natural order Hydrophylaceæ.

aside, there is no doubt that this has been used largely in the Middle Ages and for long afterwards, both by the Hindus and Mohammedans, to whom all intoxicating liquors are prohibited by the tenets of their religious faiths and with a view to avoid the strict literal injunction not to drink by taking a solid substance having more or less intoxicating properties, though the latter is more injurious to their health than any spirituous liquor one could think of. One need not be surprised if an intoxicating agent, so highly praised in the sacred books of the Hindus, had become a favourite and a common article of use among them, till replaced by the imported foreign liquors under Western influence and civilization.

Medicinally *Ganja* or *Kansa** is used largely by native medical men and enters into the composition of many of their stock preparations : pills, *churnas* and *ghritas*, mentioned in their old works on medicine, for various ailments. There are three principal forms in which *Ganja* or *Kansa* is met with in commerce, viz. : (1) *Ganja*, the dried flowering tops of the female plant in which the raisin has not been removed ; (2) *Charas*, the resinous exudation from the leaves, stem and flowers ; (3) *Bhang*, the larger leaves and seed vessels without the stalks. A favourite composition largely used by the Mohammedans is called *Sabji*. This is prepared as follows :—

Take about 540 grains of *Ganja* and wash it well with cold water ; then rub to powder, mixed with black pepper, cucumber, melon seeds and sugar, ½ a pint of milk and an equal quantity of water. I believe of late the use of *Ganja* preparations among the Mohammedans of India and even of Ceylon has been replaced by that of Cocaine, which they say is more agreeable and has all the desirable effects of *Ganja* without any of the injurious effects of intoxication experienced by the use of the other. *Ganja* not unfrequently makes one quite indifferent to what he does ; he is affected with a desire to run amock, killing people without any provocation. *Ganja* enters into many compound preparations used in the treatment of dysentery and diarrhœa. A preparation which I once saw a Vedarála use with much benefit in a very severe case of this disease, attended with much pain, tenesmus, and frequent motions, was one composed of *Ganja*, mace, nutmeg, catechu, gum of Bombax Malabarica (*Mocharasa*), flowers of Gmelina Arborea (*Demata*) and opium in equal parts. Following are some of the many remedies mentioned in their medical works to be prepared with *Ganja* :—

Jatiphaladya Churna.

Take of :—Nutmeg, Cloves, Cinnamon, Cardamon, Tejapatra leaves, Flowers of Mesuaferrea (*Nágakésara*), Camphor, Sandalwood, Sesamum seeds, Bamboo Manna, Tabernæmontana Coronaria (*Tagara*), Chebulic and Embelic Myrobalans, Long pepper, Black pepper, Ginger, leaves of

* *Kansa* has been used medicinally by the Vedarálas from time immemorial and it is to be very much regretted that, unlike the case of opium, no provision is now made for Vedarálas to procure it legitimately for medicinal use.

Pinus Webiana (*Talis*), Plumbago root (*Ratnitul*), Cummin seeds and the seeds of Embilia ribes (*Vidanga*) in equal parts, purified *Bhang* equal in weight to all the above ingredients, and sugar twice as much as the *Bhang*. Powder and mix. DOSE.—About 20 to 40 grains. This preparation is given in diarrhœa, indigestion and loss of appetite.

JVALANALA RASA.

Take of :—*Yavakshara* and *Sarjikakshara* (impure carbonate of potash and soda respectively), borax, mercury, sulphur, long pepper, black pepper, Piper Chaba and ginger in equal parts, fried leaves of Cannabis Sativa equal to all the above ingredients, root of Moringa Pterygosperma and half the weight of *Bhang*. Powder the ingredients, mix, and soak the mixed powder for three days in each of the following fluids, namely, a decoction of fresh juice of the leaves of Cannabis Indica, the roots of Moringa Pterygosperma and Plumbago Rosea ; and dry in the sun. Then roast the mass lightly and make into a pill mass with the juice of Wedeliya Calendulacea (*Kikirindiya*). DOSE.—About half a drachm with honey is given in indigestion and loss of appetite with nausea and vomiting.

Ficus.—There are many varieties or species of Ficus, which are more or less used in native medicine, and only the more important of them are mentioned here. The parts used are :—Bark, root, leaves and galls, and leaf juice.

Ficus Religiosa.

VERNACULAR.—Sinhalese : *Bó.* Sanskrit : *Asvattha* or *Pippal.* Tamil : *Arasa.*

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Ficus Tjakela.

VERNACULAR.—Sinhalese : *Kiripella.* Sanskrit : *Parkati* or *Parkatin.* Tamil : *Jovi.*

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Ficus Glomerata.

VERNACULAR.—Sinhalese : *Attikká.* Sanskrit : *Udumbara.* Tamil : *Atti.*

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Ficus Benghalensis.

VERNACULAR.—Sinhalese : *Nuga, Maha-nuga.* Sanskrit : *Nigrodha.* Tamil : *Ala.*

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Ficus Parasitica.

VERNACULAR.—Sinhalese : *Gas-netul, Wel-ehetu.*

PROPERTIES AND USES.—Both Ficus Religiosa and Ficus Benghalensis are connected with the mythological and legendary lore of the Hindus and Buddhists. The latter regard Ficus Religiosa as the tree of wisdom and it is venerated by the Buddhists as the tree under which Buddha received enlightenment to preach his religious doctrines to mankind at large. The wood of Ficus Benghalensis rubbed against that of the *Sami* (Acacia Suma) engenders fire ; this is considered emblematic of procreation.

These are all more or less astringent and used in the same classes of diseases. They are used in prescriptions for fever, but chiefly in cases of dysentery and diarrhœa. Ficus Glomerata is the kind most frequently used.

The other species of Ficus used in medicine occasionally are :—

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Ficus Arnottiana.

VERNACULAR.—Sinhalese : *Kaputu-bó.* Sanskrit : *Kako-dumbara.*

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Ficus Infectoria.

VERNACULAR.—Sinhalese : *Kalahá.*

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Ficus Mysorensis.

VERNACULAR.—Sinhalese : *Bú-nuga.*

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Ficus Altissima.

VERNACULAR.—Sinhalese : *Nuga, Kosgonna.*

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Ficus Tsiela.

VERNACULAR.—Sinhalese : *Ela-nuga, Ehetu.* Sanskrit : *Bodi Taru.* Tamil : *Kalatti.*

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Ficus Trimeni.

VERNACULAR.—Sinhalese : *Tel-nuga.*

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Ficus Nervosa.

VERNACULAR.—Sinhalese : *Kalumaduwa.* Tamil : *Itti.*

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Ficus Asperrima.

VERNACULAR.—Sinhalese : *Sewanamediya.*

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Ficus Hispida.

VERNACULAR.—Sinhalese : *Kota-dimbulá.* Sanskrit : *Avira.*

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Ficus Gallosa.

VERNACULAR.—Sinhalese : *Wal-góna.*

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Ficus Carica.

VERNACULAR.—Sinhalese : *Attikká.* Sanskrit : *Anjira.* Tamil : *Teni-atti.*

Ficus Rumphii.—Used as a vermifuge in some parts of India.

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Ficus Retusa.

VERNACULAR.—Sinhalese : *Panu-nuga.* Tamil : *Jili.*

PROPERTIES AND USES.—Ficus Retusa has a reputation as a remedy for liver diseases. Ficus Asperrima is bitter and astringent and used in glandular enlargement of the abdominal organs such as the liver and spleen. Ficus Carica is the fig tree of the ancients and mentioned in the Bible—now cultivated in many parts of India for the fruit, which is an article of commerce. The preserved fruit is largely consumed by people of all classes more or less. Mr. Gunasekara gives *Attikká* as the Sinhalese equivalent of the English word fig, but what the native medical men use as such is Ficus Glomerata or *Udumbara* of the Sanskrit writers.

Ficus Indica or Tjakela is the *Parkati* or *Parkatin* of the Sanskrit writers and is said to possess the same properties as Ficus Glomerata.

Ficus Gibbosa is slightly laxative and is called *Dantira* in Sanskrit and Marathi.

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Antiaris Toxicaria.

VERNACULAR.—Sinhalese : *Riti.* Tamil : *Nettavil-maram.*

PROPERTIES AND USES.—This is supposed to be the Upas tree, of which an exaggerated account was published by a Dutch surgeon about the close of the 18th century ; but it has by no means the strange characteristics assigned to it, viz., that people are not able to approach it, and that even a bird would not sit on it, &c. In India it is even used medicinally for fever and dysentery. Its poisonous principle has the effect of stopping the heart as if by a strong electric shock. There is a species of Antiaris, called Antiaris Innoxia, which is quite innocuous and hence presumably its name Innoxia. The plant was first found in Ceylon by Dr. Gardener and is c mmon in some parts of the Island.

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Antocarpus Integrifolia.

VERNACULAR.—Sinhalese : *Kos.* Sanskrit : *Panasa* or *Pilakai.* Tamil : *Pila.*

PROPERTIES AND USES.—This is the well-known jak tree, the wood of which is so much valued as timber for building purposes and also for making furniture of all sorts. It is durable and of a good appearance when polished. The colouring matter is used by Buddhist priests to dye their robes with.*

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Streblus Asper.

VERNACULAR.—Sinhalese : *Geta-netul.* Sanskrit : *Akshaduti, Gojhiva.* Tamil : *Patpiray, Pirasu.*

PROPERTIES AND USES.—The yellow fruit is said to be edible, but the bark is regarded as poisonous though used medicinally as an ingredient in some decoctions. The leaves are rough and used to polish furniture like sand paper. According to Dr. Dymock *Gojhiva* is Elephantopus Scaber, a plant of quite a different natural order. It is called by the Sinhalese *Et-adi* ; in Tamil : *Anichovadi.*

XYRIDEÆ NATURAL ORDER.

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Xyris Indica.

VERNACULAR.—Sinhalese : *Ran-mota.* Sanskrit : *Dabi-duba.* Tamil : *Kochilitti-pullu.*

PROPERTIES AND USES.—Given internally as a diuretic and alterative and applied externally to scrofulous swellings. It promotes the healing of sores and has a great reputation for ring worm in many parts of India.

MYRICACEÆ NATURAL ORDER.

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Myrica Nagi or **Sapida.**

VERNACULAR.—Sinhalese : *Katphala.* Sanskrit : *Katphala.* Tamil : *Marudam-pattai.*

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* In a standard work on native medicine, "*Sárasansépa,*" the following prescription for diabetes is given :—

Pakwanan Moshapatranan Churnan Tayilana Lehayet
Pramehan Sakalan Sigran Masayemuttra Sansayah.

The meaning of the above is, pound well the ripe leaves (of the jak tree), and take it fried in gingerly oil, and diabetes will undoubtedly vanish forthwith. One can hardly imagine that so simple a remedy could have such marked results on this disease. I have not seen any cases treated with it. It looks too simple a remedy to cure so formidable a disease, but who knows but that there might be something in it as otherwise it is not likely to have been mentioned in a standard work on medicine like the one referred to.

PROPERTIES AND USES.—This has also the following synonyms: *Kumuda*, *Kumbhi-paki*, *Sriparnika*, *Somavalka* and *Mahakumbhi*. There is a great confusion among Sinhalese medical men with regard to the use of *Katphala*, which when occurring in their books is always rendered into Sinhalese as *Et-demata* (Gmelina Arborea), and the latter drug is used as *Katphala*. But it is the opinion of Dutt and other Pharmacologists that the *Katphala* of the old Sanskrit writers is Myrica Nagi. *Katphala* is also a synonym of other plants such as *Debera*, *Karambebiya*, and, as a rule, it is rendered into Sinhalese as *Et-demata*. They might with equal reason regard the other two also as *Katphala*. According to the *Nigandus* this is useful in cases of deranged phlegm and of such diseases as asthma, gonorrhœa, piles, cough and other affections of the chest. It is an ingredient in numerous formulæ for these diseases. I have noted in Indian authorities that *Katphala* occurs frequently as an ingredient in the prescriptions given in the native medical books. But the translator invariably rendered it into Sinhalese by *Et-demata* and seldom by any other name. I am inclined to think that the Sinhalese have really no name of their own for *Katphala* (Myrica Nagi). Nor is there a single plant of this natural order mentioned in the list of Ceylon plants published by Dr. Trimen. It is quite possible that *Katphala* is used in many prescriptions for *Et-demata* and the other drugs for which it is a synonym, in order to suit the metre of the *slokas* in which many of the Sanskrit prescriptions are given, difficultly is to know exactly what was the one that was intended in any particular prescription.

CONIFERÆ NATURAL ORDER.

Taxus Baccata. Yew (English).—This is used by the native medical men in certain prescriptions for phthisis and other affections. It is called *Talisapatara* in Sanskrit and till lately it was thought to be the leaves of Flacourtia Cataphracta or *Ratauguressa* in Sinhalese. It is a carminative, expectorant, and is not found in Ceylon. *Talisapatra* is old in the Indian bazaars.

Pinus Longifolia.—This is called *Sarala* in Sanskrit and is known to the Sinhalese by the same name.* It yields on distillation a fine variety of turpentine, which is used for the same purpose as that for which common turpentine is used.

Cedrus Deodara is a variety of Cedrus Excelsia or Cedrus Libani. This is called *Dévadára* in Sanskrit and it is the same in Sinhalese and Tamil. Cedrus Deodara is regarded as carminative, diaphoretic, diuretic, and useful in fever, flatulence, inflammation, dropsy, and urinary diseases. Here is a preparation containing it for ascites.

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* *Hora Aratu*, the hard wood of Diptero Carpus Zeylanicus, is used by Ceylon native medical men for *Sarala*.

Take of :—Dévadára (Cedrus Deodara).
Muringa-mul (Root of Moringa Pterygosperma).
Gas-karal-heba (Achyranthes Aspera).

One drachm each. Reduce these to a paste in cow's urine.

The following decoction in which *Dévadára* is an ingredient might be given for continued fever of any sort.

Take of :—Dévadara (Cedrus Deodara).
Pepiliya (Oldenlandia Herbacea).
Kalánduru (Cyperus Rotundus).
Vadakaha (Acorus Calamus).
Kottamalli (Coriander).
Et-demeta (Gmelina Arborea) vel Myrica Nagi.
Siritékku (Premna Herbacea).

Make a decoction in the usual way.

In this, as in all old prescriptions, *Katphala* is rendered into Sinhalese as *Et-demata*, which I think is wrong. In many instances the *Katphala* intended by the old authors is in all probability the Myrica Nagi and not *Et-demata*. There are five species of Pinus indigenous to India, all of which are more or less of economic value. They are : Pinus Excelsa, Pinus Gerardiana, Pinus Khasya, Pinus Merkusii and Pinus Longifolia.

CUPULIFERÆ NATURAL ORDER.

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Betula Utilis.—Himalayan Birch (Eng.).
Do Alnoides.

VERNACULAR.—Sinhalese : *Bhúrjapatra.*

PROPERTIES AND USES.—The bark of this plant is known as *Bhûrja-patra* and it is the same name in Sinhalese, Tamil, and Sanskrit and in fact in all the Indian languages. It was used in the olden days to write books on like paper, the sheets being prepared from the inner bark of the tree. The Himalayas furnish a never failing supply of *Bhúrjapatra* and even now in Cashmere and other northern parts of India *Bhúrja-patra* is used to write upon instead of paper. The ink used for writing on *Bhúrjapatra* is prepared by converting almonds into charcoal and boiling this, powdered in cow's urine. The ink is not affected by damp or water.

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Quercus Infectoria.—The galls.

VERNACULAR.—Sinhalese : *Másakká.* Sanskrit : *Mayin, Mayika.* Tamil : *Máshik-káy.*

PROPERTIES AND USES.—The galls appear to have been introduced to the Middle-East from the West at a remote period through Persia. Even at the present time a large quantity of these are brought to Bombay from Basra, a Turkish port on the Tigris. The galls are for the most part found on oak trees growing in the Levant and are the same as those used in Western medicines. The galls obtained from Asia Minor are regarded as of a better quality than those from other sources and are medicinally used in cases where astringents are indicated, such as in the decoctions for dysentery and diarrhœa. There are two varieties : black and white ; and the native doctors prescribe frequently both varieties in the same prescription. The Sanskrit name *Mayika* or *Mayin* is derived from the circumstance that these galls are used in " magic " by those who practise the art in India. Powdered galls are administered in cases of antimonial poisoning, but it should be followed by a purgative as the insoluble tennates are dissolved more or less by the alkaline secretions in the intestines.

CYCADACEÆ NATURAL ORDER.

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Cycas Circinalis.

VERNACULAR.—Sinhalese : *Madu.* Tamil : *Madanakama-pu, Kamappu, Chanang kay.*

PROPERTIES AND USES.—This is known in Southern India as *Madanakamapu*, and the Tamils call it *Mandanakama.* It is similar in its action to *Kukurumuwan* (Randia Dumetorium). It is narcotic and is also regarded as a powerful aphrodisiac. Flour is made both from the flower and the fruit of this tree and is eaten by the poorer classes of people as a substitute for rice.

ORCHIDEÆ NATURAL ORDER.

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Dendrobium Macræi.

VERNACULAR.—Sinhalese : *Játamakuta.* Sanskrit : *Jivanti.*

PROPERTIES AND USES.—This plant was called by the ancient writers *Jivaniya*, " supporting life", or *Saka-sreshtha*, " best of herbs". It is supposed to restore all the three humours (*tridosha*) when deranged to a normal state. The whole plant is given in the form of a decoction.

Vanda Roxburghii.

Saccolabium Papillosum vel **Acampe Papillorum.**

PROPERTIES AND USES.—I have already referred to these drugs in a previous place (see *Aratta* or *Rasna*) and stated that the Calcutta medical men use these two plants indiscriminately for *Rasna Nakuli* or

Gandha Nakuli of the old Sanskrit writers and that the native medical men in Ceylon use a sort of Rhizome called *Aratta* or *Retta* for *Rasna* or *Nákuli*. Whatever the drug used, *Rasna* is described by Sanskrit writers as bitter and fragrant and is considered useful in rheumatism. A popular prescription for this ailment is a decoction of *Rasna* (*Retta* or *Aratta*), Tinospora Cordifolia (*Rasakinda*), Cedrus Deodara (*Dévadára*), and root of Ricinus Communis (*Endarumul*) prepared in the usual way. *Aratta* is sold in the drug stores.

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Anæctochilus Setacens vel **Rigalia** is *Wanarája* and Zeuxine Regia is *Iru-rája* of the Sinhalese ; they are mentioned in Sanskrit works, but are used it is said as secret medicines for certain diseases.

SCITAMINEÆ NATURAL ORDER.

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Globba Marantinoides vel **Kæmpferia Galanga.**

VERNACULAR.—Sinhalese : *Hingumpiyali.* Sanskrit : *Chandra-mulika.* Tamil : *Kachula-kalangu.*

PROPERTIES AND USES.—This is also called *Chandra-mula,* but is not mentioned in the old Indian *Nigandus.* The *Saraswati Nigandu* in use among the Sinhalese medical men gives the following synonyms for it : *Chorakali, Nisacharah, Kalyaka.* It is an aromatic and the women use it as an ingredient of the betel packet to give their mouths a good smell. It is also frequently used medicinally in combination with other drugs.

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Kæmpferia Rotunda.

VERNACULAR.—Sinhalese : *Yawakenda, Saukenda.* Sanskrit : *Bhumi-champaka.*

PROPERTIES AND USES.—Is similar to Globba Marantinoides in its properties. Used in prescriptions for dispersing abscesses.

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Curcuma Aromatica.

VERNACULAR.—Sinhalese : *Dadakaha, Walkaha.* Sanskrit : *Vana-haridra.* Tamil : *Kashturi-manjal.*

PROPERTIES AND USES.—This is used medicinally in combination with other drugs as an aromatic and is given in exanthematous fevers to promote eruptions.

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Curcuma Zedoaria.

VERNACULAR.—Sinhalese : *Harankaha.* Sanskrit : *Sati.* Tamil : *Kichilick-kizhanghu, Pulan-kizhanga.*

PROPERTIES AND USES.—Same as those of Curcuma Aromatica.

Curcuma Cæsia also is possessed of the same properties and is used in like cases and for the same purposes.

Indian Arrowroot.—Arrowroot starch is derived chiefly from the following plants, all of which except one, being of the Curcuma family :—

Curcuma Leucorhiza.—A native of Behar.

Curcuma Angustifolia.—A native of tropical Himalaya.

Curcuma Rubescens.—A native of Bengal.

Hitchenia Caulina.—A native of Concan.

VERNACULAR.—Sanskrit : *Tavakshiri, Tavakshriyeka-pattrika.*

PROPERTIES AND USES.—The uses of arrowroot are so well-known that no detailed account is needed here. The West-Indian arrowroot plant has been given the Sanskrit name of *Araruta* by the recent writers on native medicine in India and is the Maranta Arendeuacea. There is a variety of Maranta. M. Ramosissima, which yields the best starch obtained from these two plants and is a valuable food for invalids and in cases of dysentery, being prepared after roasting the flour ; this seems to have an astringent effect on the bowels.

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Curcuma Longa.—Turmeric.

VERNACULAR.—Sinhalese : *Kaha.* Sanskrit : *Haridra.* Tamil : *Manjal.*

PROPERTIES AND USES.—It is called *Haridra* in Sanskrit and has no less than forty-six synonyms. In many ceremonials Turmeric is indispensable. All threads used in Indian charms and other ceremonies are dyed yellow with Turmeric.

Turmeric is one of the eight ingredients in *Arghya*, a respectful oblation made to the gods and venerable men. They are, curdled milk (*Dadhi*), *Durva* grass, yellow gall stones of the cow (*Rochan* or *Gorchana*) fruit and roots of lotus, Tulasi leaves, and Turmeric.

Medicinally Turmeric is bitter, pungent, astringent and drying and is used in combination with other drugs for various diseases. It is also given by itself boiled with milk and sugar and is a popular remedy for cold or catarrh.

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Elettaria Cardamomum.

VERNACULAR.—Sinhalese : *Ensál.* Sanskrit : *Ela.* Tamil : *Ella-kai.*

PROPERTIES AND USES.—It is mentioned in *Susruta* as *Truti, Kapotavarni*, etc. There are two varieties, one smaller than the other, both alike in their properties and uses. They are frequently employed as aromatics in combination with other drugs for the treatment of many diseases. The seeds of the larger variety are regarded as diuretic. For

the suppression of urine a powder composed of *Ela* (*Ensál*), Nitre and seeds of Strychnos Potatorum is said to be very effective. Botanically, according to Dr. Trimen, there is no difference between the smaller and larger varieties except that in one plant the fruit is smaller than in the other. For difficult micturition the following is recommended as an excellent remedy: Take of the seeds of Strychnos Potatorum, Cardamon seeds and sugar equal parts and administer in young king-cocoanut water.* For excessive vomitting the following is recommended in *Sárasansépa* and is said by the author to be a great and successful secret remedy.

Take of:—Cotton seeds (*Karpase*), Cardamon and long pepper. These are to be powdered or grounded well and mixed with sugar and powder of roasted paddy (*Vilanda*): a little of it is to be given to the patient.

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Zingiber Officinale.

VERNACULAR.—Sinhalese: *Inguru.* Sanskrit: *Mahaushadha, Sunthi.* Tamil: *Shukku.*

PROPERTIES AND USES.—Ginger is a native of the East and has been cultivated from a remote period and is called the great remedy, *Mahaushadha;* by the Sanskrit writers. There is hardly a disease in which it is not given in some form or other, and it is described as acrid and digestive. It is useful in costiveness, nausea, asthma, cough, colic, palpitation of the heart, tympanitis, etc. The dried ginger is called *Sunti*, and the fresh *Ardraka;* it is one of the three acrids (*trikatu*), the other two being long pepper and black pepper. A very useful decoction which I have found frequently useful in acute dysentery is one composed of:—

Coriander (Kottamalli)
Ginger (Inguru).
Plectranthes Zeylanicus (Iri-wériya).
Cyperus Rotundus (Kaláṅduru).
Aegle Marmelos (Beli).†

Make a decoction in the usual way and administer twice a day.

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Zingiber Cylindricum is the wild ginger.

VERNACULAR.—Sinhalese: *Wal-inguru.* Sanskrit: *Várnadraka.*

PROPERTIES AND USES.—The properties of this are similar to those of the cultivated kind (Zingiber Officinale), but it is seldom or never used medicinally.

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* Raktasaya Nárikalasaya Jalan Kataka Sanyutan
Sarkaraila Samáyukta Muttra Kruchchharan Viduk

† Daniya Nagara Mustacha Walakan Bilvamavacha
Ama Sula Vinasaya Pachanan Vihinidepanam.

තෙඹු

Costus Speciosus.

VERNACULAR.—Sinhalese : *Tebu.* Sanskrit : *Kemuka.*
Aplotaxis Auriculata.

PROPERTIES AND USES.—This is called *Pushkaramula*, "Lotus root", in Sanskrit, and is described by Dr. Dymock as depurative and aphrodisiac. It might be used as a substitute for ginger, but is inferior to it in quality and does not preserve long unless kept with a quantity of that root sufficient to cover it. Hindu physicians have used a root which they called *Pushkaramula* from a remote period and sold in the Indian bazaars under the name *Kushta.* They had no knowledge of its source till it was discovered not many years ago by a Western Botanist, Dr. Falconer, as Aplotaxis Auriculata, a plant found growing in Cashmere.

A preparation recommended to relieve severe headache in cases of fever or occurring otherwise is a paste of Costus, white sandalwood and dry ginger, made by grinding them down with human milk, to be rubbed on the forehead. In a few cases in which I tried this it was found to be very useful and relieved the patients of their distressing affection almost immediately.

කෙසෙල්, කෙහෙල්, ගල් කෙහෙල්

Musa Paradisiaca.

VERNACULAR.—Sinhalese : *Kesel, Gal-kehel.* Sanskrit : *Kadali.* Tamil : *Vazhai-pazham* (*Valapalam*).

PROPERTIES AND USES.—*Kadali* is the term given to cultivated varieties and *Aranya-kadali* and *Rambha* to the wild progenitors of the cultivated varieties. According to Rumphius there are as many as sixteen varieties.

Some of these, like the ash plantain and several West Indian varieties, are only used after being cooked ; some which are small, such as our *Swandel*, or a larger kind, *Kólikuttu*, so named from its having been originally brought here from Calicut, are very delicious in flavour.

The abortive flowers at the end of the spike are removed and used as a vegetable by the natives. The unripe fruit, called *Mochaka* in Sanskrit, is used in diabetes and dysentery on account of its astringent properties. It is made into a *Ghrita*, with the three myrobalans and aromatics. In America a syrup made of Bananas or plantains is said to be very effective in chronic cough and bronchitis. Its preparation is very simple ; cut the fruit into slices, add an equal weight of sugar and cold water and boil the contents in a closed jar to the boiling point or till it is reduced to the consistency of a syrup. DOSE.—A tea-spoonful every hour.

The stem juice is said to be an antidote for poisonous snake bites. There is a wild variety met with in the hill sides and higher elevations of Ceylon called *Eta-kehel* ; it is called in Sanskrit, *Kashtha Kadali.*

The fruit is very small and the pulp unpalatable, but unlike the cultivated varieties small seeds are found embedded in the pulp. Some botanists treat this as a different variety or species and has given it the name, M. Troglodyturan, but Dr. Trimen says that botanically he could not find any difference and thinks this is the original of all the cultivated varieties. Ripe plantain with bees honey is recommended by the author of *Sárasansépa* to be eaten in chronic cases of fever, but the present day Vedarálas would seem to be quite ignorant of or averse to the use of many simple remedies such as those that I have quoted in several prescriptions taken from *Sárasansépa* and other works on medicine. The following are some other plants of the same natural order (Scitamineæ) not mentioned in Sanskrit works, but used medicinally by some people who have found them useful empirically in one disease or another.

කළුවාල

Alpinia Galanga.

VERNACULAR.—Sinhalese : *Kaluwála.* Sanskrit : *Kulinjana* or *Kulanjana.* Tamil : *Pera-rattai.*

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Alpinia Allughas.

VERNACULAR.—Sinhalese : *Alu, Alu-gas, Alau.* Tamil : *Shitta-rattai.*

බුත්සරණ

Canna Indica.

VERNACULAR.—Sinhalese : *Butsarana.* Sanskrit : *Sarva-jaya.* Tamil : *Kandamani-cheddi.*

PROPERTIES AND USES.—*Butsarana* is called in Sanskrit *Sarva-jaya,* signifying " all conquering ". The root is used as diuretic and diaphoretic in fevers and dropsy. Natives administer the roots of *Butsarana* to cattle which have happened to eat poisonous herbs, as evinced by puffed up bellies and other signs of such poisoning. The seeds are used to make rosaries by Buddhists in Tibet. The name signifies, " help from Buddha ". An allied species is found in the West Indies and is cultivated largely for its starch ; it is peculiar for its large grains and is known there as " *Tous les mois* " or " *Fecule de Tolomane* ". Canna Indica is found in Ceylon and Burma and is cultivated largely in Bengal and other parts of India.

GRAMINEÆ NATURAL ORDER.

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Saccharum Officinarum.

VERNACULAR.—Sinhalese : *Uk-gas.* Sanskrit : *Ikshu.* Tamil : *Karumbu.*

PROPERTIES AND USES.—Twelve varieties of sugar cane are described by old Sanskrit writers ; they cannot be all identified now. There are two varieties met with in Ceylon : they are the black sugar canes indigenous to Ceylon and a larger and rather yellow variety imported from the West Indies by the early pioneers of the sugar industry in Ceylon. The black variety is the one used in medicine and eight products of the sugar cane are mentioned in the old medical works. These are :—

(1) Ikshurasa (Sugar cane juice).
(2) Phanita (Sugar cane juice boiled down to a ¼).
(3) Guda (Sugar cane juice boiled down to a thick consistency).
(4) Matoyandika (Sugar cane juice boiled down to a solid state, but still with a few drops of fluid or semi-solid matter present).
(5) Khanda (Treacle, with sand-like crystals present).
(6) Sarkara (White sugar).
(7) Sitopalá (Sugar candy).
(8) Gauredi (Fermented liquor obtained from the juice of the sugar cane).

TRINAPANCHA-MULA.—Under this designation five kinds of roots obtained from the grass plants are included. They are :—

(1) Ikshu (Saccharum Officinarum).
(2) Sara (Saccharum Sara).
(3) Kasa (Saccharum Spontaneum).
(4) Kusa (Poa Coromandeliana).
(5) Darva (Heteropogon Hirtus, Andropogon Contortus).

A decoction of these five roots is used as an adjunct to metallic drugs in gonorrhœa and other venereal diseases.

A preparation recommended for these diseases is the following *Kusa-valeha*. Take of the above roots eight tolas each, water 64 seers : boil down to eight seers and strain. Then add sugar four seers and reduce to the consistence of a syrup. Remove ths syrup from the fire and add :—

Liquorice root (Welmí).
Cucumber seed (Kekiri).
Cucumis Melo seed (Thiambará).
Bamboo Manna (Una-makulu).
Emblic Myrobalan (Nelli).
Tejapatra leaves (Tejapatra).
Cardamon (Ensál).
Cinnamon (Kurundu).
Cratæva Religiosa (Lunuwarana).
Tinospora Cordifolia (Rasakinda).
Flowers of Mesua Ferrea (Nágakésara).

Two tolas each in fine powder : mix and make an electuary. DOSE.—About two tolas (6 drachms).

Sárasansépa recommends a cooling drink made of sugar cane, jaggery, powdered Beleric Myrobalan (*Bulu* Belerica) and young king cocoanut water for fever attended with burning of the body, delirium and continued fevers of all sorts, excepting enteric.

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Saccharum Arundinaceum.

VERNACULAR.—Sinhalese : *Rambuk.* Sanskrit : *Indigandha.* Tamil : *Pey Karumu.*

PROPERTIES AND USES.—The pith or the cabbage of this, called *Rambukbada,* is largely used in decoctions given for protracted labour and puerperal fever and other diseases. It is supposed to be a powerful emmenagogue.

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Triticum Sativum or **Vulgre.**

VERNACULAR.—Sinhalese : *Tiringu.* Sanskrit : *Mahagodhuma.* Tamil : *Godumai.*

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Oryza Sativa.

VERNACULAR.—Sinhalese : *Ví-hál* or *Sál.* Sanskrit : *Vrihi.* Tamil : *Arishi, Nelli.*

PROPERTIES AND USES.—Parched rice (*Kekuluhál*) is *Laja* and *Syala* in Sanskrit. Rice is the staple food of the people both here and in India, in the same way that several Western nations use wheat as their staple food ; these do not require a description here. The other plants of Gramineæ that are used medicinally are the following :—

පැඟිර

Andropogon Schœnanthus.

VERNACULAR.—Sinhalese : *Pengiri.* Sanskrit : *Bhustrina* or *Bhutrina, Rohisha.* Tamil : *Sakanaru-pillu.*

PROPERTIES AND USES.—This is a plant allied to the citronella or *pengiri* grass, from which an oil is extracted. This was a somewhat important industry in South India. It is also called *Gandha-kheda, Gandha-trina,* "odorous grass", and *Surasa,* " well flavoured ". It is described as aromatic and stimulant and is useful in bilious and phlegmatic affections. The oil is chiefly used for perfuming soaps and medicinally as an adjunct to medicinal oils for the same purpose.

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Andropogon Laniger is a plant allied to the above plant and is called in Sanskrit *Dírgha-mulaka,* " long rooted ". It is used in fever and disturbance of the " three humours ". It has carminative, stimulant and ecbolic properties. The Romans used to flavour their wine with the root of this grass.

Andropogon Nardus.—*Watu-werella*, according to Clough's Dictionary. It is not used medicinally nor is any oil extracted from it, but it is used by poor people for covering and thatching houses and is also called Máná grass.

Andropogon Citratus.—This is a variety of *pengiri* called lemon grass in English. Like the Andropogon Schœnanthus, it is also used to extract an oil from which has been a considerable industry for many years in the Southern Province, the oil being exported to Europe for scenting soaps and other like purposes. Medicinally it is little used. The oil relieves toothache for the time being when applied to the decayed part locally ; mixed with turpentine it makes a good liniment for external application.

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Andropogon Muricatus is called *Usira* in Sanskrit and is the well-known *Swendara* or *Khas-khas* of the natives in Bengal. It is called *Suwandahota*, and is largely used in medicine as a cooling refrigerant and stomachic remedy in fevers of all sorts. It enters into the composition of many cooling mixtures and is an ingredient in the *shad-angi-pani*.

ඇට වී

Hordium Vulgare vel **Hexastium.**

VERNACULAR.—Sinhalese : *Yavawi*. Sanskrit : *Yavaniya*.

PROPERTIES AND USES.—This is the well-known *Yavawi* of the Sinhalese and is used both as food for infants and as a medicine in combination with other drugs. Is regarded as cooling and nourishing, and is referred to under Pavonia Odorata. It is prepared as follows :—Take Tubers of Cyperus Rotundus, Red sandalwood, root of Andropogon Muricatus, Oldenlandia Herbacea, Pavonia Odorata, and dried ginger each one drachm, and water two seers ; boil down to one seer. This decoction is given as a drink for appeasing thirst and relieving heat of the body. It has several synonyms : *Usira*, *Sugandhi-mulaka*, and *Sita-mulaka*, " having cool roots ". In many parts of India the roots of this grass are woven into mats and in hot weather they are hung over doorways and kept wet to keep the houses cool. They are also used for the manufacturing of fans. The Tamil name of this plant is *Vittiver* ; it is called *kas kas* in Bengal.

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Eragrostis Cynosuroides.—This is the *Kusa* grass which, with *Tulasi* and *Durva*, plays an important part in all Hindu ceremonies ; but it is not of any medicinal use. It is not mentioned among the Ceylon plants of Dr. Trimen and is aparently not met in Ceylon.

Bambusa Arundinacea.

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VERNACULAR.—Sinhalese : *Katu-una*. Sanskrit : *Vansa*, *Venu*. Tamil : *Mangal*.

PROPERTIES AND USES.—The bamboo is called in Sanskrit *Vansa* and *Venu* and is considered by the Hindus to possess the hardest of woods. The word *Vansa* also signifies spine and lineage, so that when speaking of a man of a pure and good family they would say *Vansa-visuddha*, and of one founding a family on a sure foundation *Vansa-pratishthana-kára*. The bamboo seeds are nourishing and in times of famine they save the lives of many people. Medicinally it is of importance as producing what is known as Bamboo-manna and *Vansa lochina* of the Indian native physicians, and *Una-makulu* of the native medical men in Ceylon. The young shoots are also consumed largely in the form of preserves and pickles. A decoction of the roots is given to puerperal women to cause a free flow of lochia. The leaves are given to horses for cough and cold. *Bamboo manna* or *Una-makulu* is regarded as tonic, strengthening, cold and sweet, and is given to alleviate thirst and to avert phthisis, fever, asthma, and skin diseases in combination with other drugs ; and the preparation called *Sitopaladi-churna* is given in phthisis with pain in the sides, hæmoptysis, loss of appetite and burning of hands and feet. It is made as follows :—

Take of Bamboo manna eight parts, long pepper four parts, cardamon two parts, cinnamon one part, sugar sixteen parts. Powder the ingredients and mix. DOSE.—About one drachm with honey and clarified butter.

Heteropogon Hirtus.

Cynodon Dactylon.

VERNACULAR.—Sinhalese : *Durva.* Sanskrit : *Durva.* Tamil : *Arugam-pillu.*

PROPERTIES AND USES.—These two plants, H. Hirtu and C. Dactylon, are, I believe, *I-tana* and *Helaitana* respectively in Sinhalese, of which the latter is more important and is sacred to *Durva.* It is one of the ingredients in *Arghiga*, a respectful oblation to the gods and to venerable people. It has many synonyms, such as *Granthi*, " knotted ", *Sveta*, " white ", *Bhargavi*, " belonging to *Sukra* ", and *Dur-mara*, " not easily dying ". Among the Hindus this grass plays an important part in many of their religious festivals and ceremonies. In the festival called *Durvashtami*, in honour of Vishnu and Ganesha, the male worshippers wear the grass tied to the right arm and the females tied to the left arm. At marriages the right arm of the bridegroom is tied to the left arm of the bride with this grass and, according to *Asvalayana*, the young husband is enjoined to squeeze the juice of the *Durva* grass into the right nostril of his wife in the third month of pregnancy to get a male child. This practice still obtains in the western parts of India. Medicinally the fresh juice is considered astringent and is used as a snuff in Epistaxis.

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Paspalum Scrobiculatum.

VERNACULAR.—Sinhalese : *Amu.* Sanskrit : *Kodrava.* Tamil : *Waragu.*

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Panicum Crus-galli.

VERNACULAR.—Sinhalese : *Wel-marukku.*

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Panicum Molle.—Mauritius grass.

VERNACULAR.—Sinhalese : *Diya-tanakola.*

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Panicum Psilopodium.
Panicum Miliare.

VERNACULAR.—Sinhalese : *Menéri.* Tamil : *Chamai.*

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Panicum Repens.

VERNACULAR.—Sinhalese : *Etóra.*

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Panicum Antidotale.

VERNACULAR.—Sinhalese : *Krimisastru.*

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Setaria Intermedia.

VERNACULAR.—Sinhalese : *Tana-hál.*

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Eleusine Corocana.

VERNACULAR.—Sinhalese : *Kurakkan.* Sanskrit : *Ragi.* Tamil : *Kayur.*

PROPERTIES AND USES.—Of the above some are used as fodder and others at times medicinally as adjuncts or vehicles for the administration of other medicines.

Krimisastru, as the name indicates, is a vermifuge.

Eleusine Corocana is used as a food grain by the poorer classes of natives and, being richer in nitrogenous elements than rice, is a good substitute for it in the case of diabetic patients. *Amu* of the Sinhalese and *waragu* of the Tamils is used like rice by patients suffering from this disease, but according to Dr. Dymock *Waragu* of South Indian Tamils is Panicum Miliaceum. It has a slight narcotic effect. It is cooked n the same way as rice.

PALMÆ NATURAL ORDER.

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Cocos Nucifera.

VERNACULAR.—Sinhalese : *Pol.* Sanskrit : *Narikela.* Tamil : *Tenha Tenna-maram.*

PROPERTIES AND USES.—The economic uses of this plant are varied and many, but the medicinal uses alone will be referred to here.

The water of the unripe fruit is described as a cooling, refrigerant drink for thirst in fever and urinary diseases ; the tender pulp of the fruit as cooling, diuretic and nourishing. The pulp of the ripe fruit is hard and indigestible, but is used medicinally. The terminal bud is nourishing and strengthening and makes an agreeable vegetable. The same use is made with the tops of the Tal-palm and Date tree. The root is used as a diuretic and also in uterine diseases. Cocoanut oil promotes the growth of hair and is used as a hair oil by the natives, both men and women. The ashes of the leaves are also used in medicine, as they contain a good deal of potash. The fresh juice obtained from the unopened flowers is the well-known toddy, and is called *Rá* by the Sinhalese and *Kallu* by the Tamils.* It is also the basic ingredient for distilling Arrack. The sale of both Arrack and Toddy is a Government monopoly. A sort of creosote obtained from the shells is useful in ring worm.† The cocoanut flower unopened and tender is a powerful astringent and is used in all cases of hæmorrhage and dysentery. The chief remedies of vedarálas for hæmorrhage are decoctions containing this as one of the ingredients. For dysentery with blood and mucus give a decoction of the cocoanut flower made in the usual way. 12 *kalans* of the flower to 8 tea cups of water reduced to one is highly recommended in *Sárasansépa* in the following prescription :—

* To draw Toddy, the unopened cocoanut flower has to be subjected to a certain technique. As it comes out of the flower, it is sweet and wholesome, but after a time it ferments and assumes more or less intoxicating properties. To prevent fermentation the pots are limed, or small pieces of *hal* bark Vatevia Indica are put into them. The unfermented Toddy is called *mírá*.

† A most efficacious remedy that I once saw used by a native Vedarála in a case of obstinate interrigo in an infant of about six months old, and for which I had done all I could without any beneficial results, was the chocolate coloured lining of the inner surface of the cocoanut shell exposed on removal of the white kernel. This was scraped off, dried, reduced to a fine powder and then dusted over the affected parts, some of which were almost sores. There was a marked beneficial effect on the raw surface of the skin with the very first application ; all the sores healed up and the little patient was quite well in three or four days. After this experience I tried the same remedy in several cases of a like kind with the same satisfactory result ; they certainly got well within a week. I do not know what there is in this brownish lining of the cocoanut shell to bring about such a result in these cases of interrigo, but it was so beyond all cavil and question and could not be explained otherwise than by attributing some curative property to the remedy.

Narikelasya Pushpani Warina saha Pachayet
Raktitisara Samanan Hantisulan Prawahikam.

The meaning of the above is, make a decoction in the usual way (12 *kalans* of cocoanut flower to 8 *patas* of water reduced to one, twice a day), and administer in cases of dysentery with mucus and blood.

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Borassus Flabelliformis.

VERNACULAR.—Sinhalese : *Tal.* Sanskrit : *Tala.* Tamil : *Panai-maram.*

PROPERTIES AND USES.—The uses of *Tal* medicinally are nearly the same as those of the cocoanut palm. The yellow pulp surrounding the seed is eaten by the poorer classes of natives, but it is heavy and indigestible. It is collected and dried in a peculiar way for use when the fruits are out of season. These fruits, unlike cocoanuts, are not available throughout the year. The water contained in the seed is cooling and refreshing. When the seeds begin to germinate and the embryo expands, it is removed, dried and preserved for subsequent use and is known as *Kotta-kelangu.* They contain much starch and are pounded and converted into flour, which is boiled and eaten by the natives. The terminal bud is diuretic and nutritive and is used in the same way as the cocoanut bud is used. When the fruits are ripe the husk becomes soft and when squeezed a yellow semi-fluid appears, which is spread on mats and dried in the sun ; and when dry it is removed in the form of slabs which are known as *Punnatu.* This is boiled and formed into a sort of gruel to which dry prawns are added before boiling and is eaten by itself by the natives of Jaffna.

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Areca Catechu.

VERNACULAR.—Sinhalese : *Puwak.* Sanskrit : *Guvaka, Puga.* Tamil : *Pakku.*

PROPERTIES AND USES.—The chief consumption of arecanut is as a masticatory either in itself or in combination with betel. It is both astringent and diuretic and enters into the composition of many preparations used in the treatment of dysentery and diarrhœa. The nuts are roasted and made into tooth powder, which, mixed with camphor and cinnamon, is used to strengthen gums and teeth. The unripe fruits when not yet dry in their interior have some intoxicating properties which make a person giddy at times. *Bhávaprakása.* according to Dutt, gives a preparation called *Rativallava-pugapaka.* It is a confection made of betel nuts (*Puwak*) boiled in milk with the addition of a number of aromatic and stimulant substances supposed to have aphrodisiac properties and to which sometimes *Datura* seeds and the leaves of Cannabis Indica are added.

වල් ඉඳි

Phoenix Sylvestris.

VERNACULAR.—Sinhalese : *Wal-indi.* Sanskrit : *Kharjura.* Tamil : *Ishan-chedi.*

PROPERTIES AND USES.—It is an ingredient in decoctions for fever and urinary complaints. Among the Tamils a *Paushtik* prepared with *Kharjura*, the roots of Achyranthes Aspera, and some aromatics, is a remedy for ague.

AMARYLLIDEÆ NATURAL ORDER.

තොලබෝ

Crinum Asiaticum vel **Toxicarium.**

VERNACULAR.—Sinhalese : *Tolabó.* Sanskrit : *Sukhdarshan.* Tamil: *Visha-manjil.*

PROPERTIES AND USES.—The juice of the leaves slightly roasted is a popular remedy for ear-ache. Dr. O'Shaugnessy found this to be a good emetic, which acted without purging.

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Curculigo Orchioide.
Do Finlaysoniana.

VERNACULAR.—Sinhalese : *Hín-bintal.* Sanskrit : *Héma-pushpi.* Tamil : *Nila-panai-kizhangu.* (2) Sinhalese : *Maha-bintal.*

PROPERTIES AND USES.—This is a very important drug among native medical men and is regarded as an alterative, tonic and restorative. It is given either in combination with other drugs or by itself, when it is powdered and given with milk and sugar for piles, asthma, jaundice, diarrhœa, colic, and gonorrhœa. This is also called *Urala*, a mixed term neither Sinhalese nor Sanskrit.

ගොඩ මානිල්

Crinum Zeylanicum.

VERNACULAR.—Sinhalese : *Godamánil.* Sanskrit : *Sukhdarshan.*

PROPERTIES AND USES.—The *Godamánil* of the Sinhalese, according to Dr. Dymock, is also, like Crinum Asiaticum, called *Sukhdarshan* in Sanskrit and *Godanikand* or *Gadambhikanda* in Marathi. This is applied to abscesses to promote suppuration and is also mentioned as an ingredient in decoctions for fever and other diseases. As in the case of several drugs which I have mentioned previously there is some confusion as to the identity of this plant, for the *Saraswati Nigandu* calls it the *Saha-devi*, *Devasha*, *Vrisha-pushpika*, etc., which the Indian authorities apply to Vernonia Cinerea. Dr. Trimen gives the name *Tolabó* (Sinhalese) to nearly all the species or varieties of Crinum.

IRIDEÆ NATURAL ORDER.

කුම්කුමප්පු

Crocos Sativus.

VERNACULAR.—Sinhalese : *Kumkumappu.* Sanskrit : *Kunkuma* Tamil : *Kunguma-pu.*

PROPERTIES AND USES.—This is the saffron which, with turmeric, is used largely by the Indians to colour food, etc. Medicinally it is regarded as a cardiac, aphrodisiac, diuretic, deobstruent and emmenagogue and is given in combination with other drugs. It is regarded as of no importance medicinally by the Western practitioners and is now expunged from the *British Pharmacopœia.* The portions used are the stigma with parts of styles.

ගෘහකන්‍යා

Aloe Indica.

VERNACULAR.—Sinhalese : *Kómáriká.* Sanskrit : *Grihakanya.* Tamil : *Kumari, Kariya-palam.*

PROPERTIES AND USES.—Although this plant appears to have been cultivated in India from a long time it is not mentioned in the old Sanskrit books. The inspissated juice is sold in Ceylon bazaars under the name *Titta-abin ;* it is imported to India from Socotra and other places in the West. There are several varieties of Alœs, but the chief varieties are the Socotra and the Jamaica Alœs (Yemen). The fresh juice is mentioned in the old books, though not the inspissated variety, as an article of commerce and described as cooling, cathartic, tonic and useful in fevers, enlarged glands, spleen and liver. It is a frequent ingredient of the compound and stock preparations of native medical men for the treatment of various diseases. It is also used by cattle doctors and it is not at all uncommon to see carters carrying a supply of the plants in tin cans on the side of their cart hoods so as to have the remedy at hand when going on long journeys.

හාතාවාරිය

Asparagus Racemosus.

VERNACULAR.—Sinhalese : *Hátáwáriya.* Sanskrit : *Sáta-muli.* Tamil : *Kilavari.*

PROPERTIES AND USES.—This is called *Sátamuli,* "hundred roots", by reason of the presence of numerous fusiform tubers which are used medicinally and also to make preserves. *Sátamuli* is described as cooling, demulcent, diuretic, tonic and aphrodisiac and is used in the preparation of many remedies for external use and also in the preparation of hair oils. There is a *Ghrita* called *Sátavari Ghrita,* which is composed of four seers of clarified butter, juice of Asparagus Racemosus four seers and milk forty seers ; boil them down to a thick consistence and administer with honey, sugar and long pepper, in cases of chronic rheumatism.

Another preparation of *Sátavari* is *Phala Ghrita*, prepared with four seers of clarified butter, sixteen seers of the juice of Asparagus Racemosus and cow's milk, with the addition of a number of other medicines, chiefly aromatics, in small quantities in the form of a paste. Its use is said to increase the secretion of semen, to cure barrenness in women, and to remove disorders of the female genital organs. As a diuretic it is directed to be given in the form of the following decoction. Take of the roots of Asparagus Racemosus, Saccharum Spontaneum, Poa Cynosuroides, Oryza Sativa, Saccharum Officinarum, Batatas Paniculatus, Scirpus Kysoor (a tuber found in tanks not unlike Cyperus Rotundus), Tribulus Terrestris, equal parts, and make a decoction in the usual way. This is used in cases of ardor urinæ and in difficult micturition.

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Allium Sativum.

VERNACULAR.—Sinhalese : *Sudulúnu.* Sanskrit : *Lasuna.* Tamil : *Vellavengan* or *Vellappudu.*

PROPERTIES AND USES.—This is the white Garlic of commerce and is also called in Sanskrit *Lasuna, Ugra-gandha, Bhuta-ghna.* It is described as carminative, stomachic, diuretic, alterative and useful in nervous affections, flatulence and hysteria. A decoction of Allium Sativum is to be prepared as follows :—Take of Allium Sativum thirty-two phalams, milk and water four seers each, and boil together till the water is evaporated, and strain. To be given in milk in small doses in hysteria, flatulence, sciatica and heart disease.

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Allium Rubrum. (Red Onions).

VERNACULAR.—Sinhalese : *Ratulúnu.* Sanskrit : *Palandu.* Tamil : *Vengayam.*

PROPERTIES AND USES.—This is much used in native cookery ; it has the same properties as Allium Sativum, but is more pungent. It is used in dysentery in administering medicinal pills. It is an ingredient in an useful syrup for whooping cough.

Allium Cepa.—This is the variety known as Bombay onion. Not used medicinally.

නියඟලා

Gloriosa Superba.

VERNACULAR.—Sinhalese : *Niyangalá.* Sanskrit : *Lanjalika, Agnisikha.* Tamil : *Kalaipai-kizhangu.*

PROPERTIES AND USES.—This is one of the poisons mentioned in old Sanskrit works and is called in them *Garbhaghatini*, "causing abortion", and is seldom or never used internally. The tuber is rubbed into a paste and applied to the navel and soles of the feet for protracted labour, through the Inertis Uteri, to bring on uterine pains, and it is said to be useful in that respect. It is used in the same way to expel retained placenta.

HAEMODORACEÆ NATURAL ORDER.

නියඳ

Sanseviera Zeylanica.

VERNACULAR.—Sinhalese : *Niyanda.* Sanskrit : *Murva.* Tamil : *Marul-kalang.*

PROPERTIES AND USES.—The long thick leaves contain fine fibres which are used in the manufacture of whips and mats in the Central Province. This is *Murva* of the old Sanskrit writers and is mentioned by Manu as the source from which the girdle (*Maurvi*) of the *Kshatrivas* or warriors was made. It has several Sanskrit names : *Devi*, "goddess", *Morata, Madhurasa, Madhusrava*, "having a sweet juice", *Prithak-parni*, " many leaves ". In the olden days the fibres were used for making bow strings. The roots are used medicinally ; they are said to be pungent, tonic and cardiac, and a remedy for bile and gonorrhœa.

AROIDEÆ VEL ARACEÆ NATURAL ORDER.

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Acorus Calamus.

VERNACULAR.—Sinhalese : *Wadakahá.* Sanskrit : *Vacha.* Tamil : *Vashambu.*

PROPERTIES AND USES.—This has other Sanskrit names, viz., *Ugra-gandha*, " strong smelling", and *Jatila*, " having entangled hair," and is described as hot, pungent, bitter, stomachic and emetic. As an emetic it may be given in 80 grain doses and I have seen it used on one occasion for the cure of a case of rupture (*Inguinal Hernia*), but the patient could not take it even three days in place of the seven successive days in which he was directed by the Vedarála to take it. The Vedarála declared, however, that he had cured several cases by this treatment. In dyspepsia it is recommended to be given with asafœtida, three myrobalans, ginger, sonchal salt, and Aconitum Heterophyllum (*Atiudayan*). It is also given as a nervine tonic in combination with other drugs. An infusion of *Wadakahá* (Acorus Calamus) is a domestic remedy used till not very long ago among native mothers to allay distrubances caused in children by the presence of worms, such as nausea, vomiting, and diarrhœa. A very useful prescription in most cases of dysentery without complications at the outset is the following :—Take of Acorus Calamus (*Wadakahá*) two parts (two drachms), Coriander one part (one drachm), Black pepper (½a drachm), and 8 pints of water and boil down to 12 ounces. DOSE.—One ounce, sweetened with sugar, twice or three times a day.

ඇත තිප්පිලි

Scindapsus Officinalis.

VERNACULAR.—Sinhalese : *Gaja-tippili.* Sanskrit : *Karipippali.* Tamil : *Atti-tippili.*

PROPERTIES AND USES.—It is described as aromatic, carminative and stimulant and is used in the same class of cases as that for which *Tippili* or *Pippali* is used. It is always used as an adjunct to other drugs and to my knowledge never used by itself. It is also called *Etwagapul* in Sinhalese.

දඩ කෙහෙල්

Scindapsus Pertusus.—This is the *Dada-kehel* of the Sinhalese. The juice is said to be an antidote to the poisons of the snake called *Kusriya Ghanas.** The juice, with that of the roots of Croton Oblongifolium and of the fruit of Momordica Charantia, is also applied to the bitten parts.

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Alocasia Indica.

VERNACULAR.—Sinhalese : *Rata-ala, Désa-ala.* Sanskrit : *Manaka.*

PROPERTIES AND USES.—The term *Rata-ala* signifies that it has been imported to this country from a foreign country. The large root stock contains much starch and was largely consumed by the people of this country in recent years as an article of food. It is extensively cultivated in some parts of the Island. Medicinally the acrid juice of the petiole is a common domestic remedy as a styptic, to stop bleeding from injured parts. *Rata-ala* acts also as a diuretic and is given in cases of dropsy.

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Amorphophallus Campanulatus.

VERNACULAR.—Sinhalese : *Kidáran.* Sanskrit : *Surana.* Tamil : *Karunai-kizhangu.*

PROPERTIES AND USES.—This is an arum found as a wild plant on the banks of streams and is also cultivated in some parts of the Island, though not to a large extent. It produces a very large yam or tuber which is edible. It enters into the composition of many preparations for the treatment of piles and dropsy.

Sarangadhara recommends *Surana* (*Kidáran*) to be prepared in the following manner and eaten for piles :—A tuber is to be covered with a layer of earth, roasted in hot ashes and administered with the addition of Sessamum oil and salt. There are also several confections ordered to be made with *Surana*, to nearly all of which are added carminatives such as Cummin, Long pepper, but in one confection recommended in medical works *Chitraka* (*Ratnitul*) is also an ingredient.

දිය පරඬල

Pistia Stratiotes.

VERNACULAR.—Sinhalese : *Diya-parandala.* Sanskrit : *Jalodbhuta.* Tamil : *Agasatamaray.*

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* Daboia Russellii—a viper.

PROPERTIES AND USES.—This plant is also called *Gucchabodhra* and *Paniya-prishthaja*, all more or less signifying "born on the surface of water". This is regarded by the natives as cooling and demulcent and is prescribed in Dysuriya. The leaves are applied to sores as poultice and the ashes are used as an application for piles.

There are several plants of this order which are chiefly used as food, one or two of them medicinally.

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Lasia Spinosa.

VERNACULAR.—Sinhalese : *Kohila*. Sanskrit : *Abhiru*.

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Alocasia Macrorrhiza.

VERNACULAR.—Sinhalese : *Habarala*.

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Colocasia Antiquorum.

VERNACULAR.—Sinhalese : *Gahala*.

PROPERTIES AND USES.—Is an arum, largely used by the natives as an article of diet.

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Pothos Scandens.

VERNACULAR.—Sinhalese : *Pótá-wel*.

PROPERTIES AND USES.—The seeds of the creeper and climber are used medicinally.

අති උඩයන්

Lagenandra Lancifolia.—The Sinhalese name of the plant is given by Dr. Trimen as *Ati-udayan*, which is quite inexplicable to me in view of the fact that the native medical men invariably use *Atis* or *Ativisha* (Aconitum Heterophyllum) as *Ati-uadayan*. I do not know whether like several other drugs *Atis* is imported to Ceylon from India. If not imported the medical men here must be using the tuber of Lagenandra Lancifolia, which Dr. Trimen calls *Ati-udayan*, in its place. Aconitum Heterophyllum is not mentioned by him in his work on Ceylon plants nor does he mention any plants of the genus Aconitum of the natural order Rananculacæ as growing here.

NAIADEÆ NATURAL ORDER.

කෙකටිය

Aponogeton Crispum.

VERNACULAR.—Sinhalese : *Kekatiya*. Sanskrit : *Kasira*.

PROPERTIES AND USES.—This is an aquatic plant found growing in the beds of rivers and in back waters to which sea water gains access

periodically. The rhizomes contain starch and are roasted and eaten by the natives. Medicinally it is a frequent ingredient for decoctions and other preparations given to women during gestation. *Sarartha Sangrahawa* gives this as an ingredient in a decoction to be given in the sixth month of pregnancy should the patient complain of any pains about the loins.

CYPERACEÆ NATURAL ORDER.

කළුඳුරු

Cyperus Rotundus.

VERNACULAR.—Sinhalese : *Kalánduru.* Sanskrit : *Mustaka.* Tamil : *Korai.*

PROPERTIES AND USES.—This is regarded as diuretic, diaphoretic, astringent, and stomachic and is used in febrile affections and derangements of the bowels. Cyperus Rotundus is one of the most largely used drugs in native medicine. There is hardly a decoction for dysentery in which this does not form an ingredient and it is nearly the same case in respect of fevers. Here are some of the prescriptions for dysentery and fever which I have myself used on several occasions where the patients were too poor to buy European medicines. For acute dysentery—

Take of :—Kelinda (Holarrhena Antidysenterica).
Atiudayan (Aconitum Heterophyllum).
Diamitta (Cissampelos Pereira).
Beli-root (Aegle Marmelos).
Inguru (Ginger).
Kottamalli (Coriander).
Wel-kahambiliya (Tragia Involucrata).
Kalánduru (Cyperus Rotundus).

Make a decoction in the sual way. DOSE.—Half a tea cup twice a day.

Diyamitta (Cissampelos Pereira).
Inguru (Ginger).
Wel-kahambiliya (Tragia Involucrata).
Kottamalli (Coriander).
Delunpotu (rind) (Punica Granatum).
Kelinda (Holarrhena Antidysenterica).
Atiudayan (Aconitum Heterophyllum).
Kalánduru (Cyperus Rotundus).
Manda-madini-wel (Rubia Manjishtha vel Cordifolia).
Totila (Calosanthes Indica).

The above decoctions are recommended in all cases of dysentery attended with severe pain, tenesmus and frequent motions with blood.

Kottamalli (Coriander).
Inguru (Ginger).
Kalánduru (Cyperus Rotundus).
Iriwériya (Plectranthes Zeylanica).
Beli Mada (Aegle Marmelos Fruit).

Make a decoction in the usual way of Cloves, Coriander, Long pepper, dry Ginger and *Kalánduru*.

The above ingredients may also be powdered and administered in a decoction of *Kalánduru* for dysentery in which much blood is passed ; a simple decoction of *Kalánduru* (Cyperus Rotundus) might be given with honey in cases in which much blood and mucus are passed. Or take *Kalánduru*, dry ginger, *Karanda-mul* (roots of Pongamia Glabra), and make a decoction, if early with water ; if at a later stage, with milk one part and seven of water, and boil till the water is evaporated.

For fever take :—

Diyamitta (Cissampelos Pereira).
Kulurena (Picrorhiza Kurooa).
Kalánduru (Cyperus Rotundus).
Aralu (Chebulic Myrobalan).
Wel-mí (Liquorice root).

Make a decoction in the usual way. Dose.—Half a tea cup twice a day. Or this :—

Katuwelbatu (Solanum Jacquinii).
Rasakinda (Tinospora Cordifolia).
Kalánduru (Cyperus Rotundus).
Inguru (Ginger).
Pokurumúla or Nelum-ala (Nelumbium).

Make a decoction in the usual way and administer with long pepper powder.

මහ කළුඳුරු

Cyperus Scariosus,

Vernacular.—Sinhalese : *Maha-kalánduru.* Sanskrit : *Nagar-mustaka.* Tamil : *Muttah-kach.*

Properties and Uses.—The therapeutical properties and uses of this plant are nearly the same as those of Cyperus Rotundus. In India a prescription used for dysentery is *Nagar-mustaka*, *Mocharas*, *Lodhra*, *Dhataki*, *Bael* (unripe fruit), and *Kalánduru*, ground with whey and given in treacle, about two drachms for a dose.

N.B.—I have given the formulæ for decoctions as detailed in native works but I do not adhere to them in my prescriptions. I select those drugs which I think would be most useful for the cases under treatment and order them to be taken in the form of a decoction or otherwise.

LICHENES NATURAL ORDER.

Parmelia Perlata.—Two varieties of this are sold in the Indian bazaars. It is called in Sanskrit *Sila-valka*, "stone flowers" and they are regarded as astringent and alterative. Dry powder is applied to sores to promote granulation.

ALGÆ NATURAL ORDER.

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Gracilaria Lichenoides (Agar-agar) is the well-known Ceylon moss found chiefly in the back waters between Puttalam and Calpentyn. It is collected in the south-west monson, when it becomes separated by the agitation of the water. The moss is spread on mats and dried in the sun for two or three days and then washed again with fresh water. If dried well it will keep for a long time without deterioration. To my knowledge it has kept four years without any deterioration and was found fit for use after that period. It forms a clear nutrient jelly when boiled and may be given with advantage to convalescing patients. It is commonly called *Pási* by the natives. It is said that this is collected and exported to China chiefly ; it is not unlike Chaw-chow.

LYCOPODIACEÆ NATURAL ORDER.

Maha-hedaya.—Dr. Trimen does not mention this in his work on Ceylon plants. Clough's Dictionary calls it club-moss and gives it the name Lycopodium Phelgmaria.

PROPERTIES AND USES.—This is given as an ingredient in prescriptions for several diseases and in particular for fever.

SUBSTANCES BELONGING TO THE INORGANIC KINGDOM USED IN NATIVE MEDICINE.

The substances or articles belonging to the inorganic kingdom which are used in native medicine are nearly all those found in a natural state, and are also used by Western practitioners, but the latter use them more or less artificially prepared and in a purer form. I have given here only the names of these substances and have purposely avoided mentioning, except in a few instances, their therapeutical properties and uses as they do not materially differ from those attributed to them by the Western practitioners. There is however one difference, viz., the Ayurvedic physicians combine several of the metallic ores with vegetable drugs and have a very large number of alchemic preparations called *Rasas* in the treatment of a considerable number of diseases. In order to form an idea of what they are, several recipes for their preparation are given below :

NAMES OF METALS AND THEIR VERNACULARS

English	*Sinhalese*	*Sanskrit*	*Tamil*
Mercury	Rahadiya or Rasa-diya	Parada	Ieras-am
Silver	Ridi	Rupya	Velli
Gold	Ratran	Suvarna	Thangam
Copper	Tamba	Tamra	Semboo
Tin	Belek	Vanga	Thagaram
Zinc	Tuttanagam	Yasada	Nag-am
Lead	Iyan	Sisaka	Ieam
Iron	Yakada	Lauha	Ierumboo
Bell-metal	Lókada	Kansa	Vang-am
Brass	Pittala	Pittala	Pithelay
Cinnabar and red Sulphide	Sadilingam	Hingul	
Sulphur	Gendagan	Gandhaka	
Talc and Mica		Abhra	Apprag-am
Lodestone	Kándan	Kanta	Wottoo-candam
Orpiment ($as_2 s_2$)	Hiriyal	Haritala	Thalag-am
Realgar ($as^2 s_3$)	Manosila	Manahsila	Jadhi-ling-am
Galena (Sulphide of Lead)	Anjanaketa	Anjana	Kadiam
Sulphate of Copper	Palmánikkam	Tuttha	Palmanikam or Thras
Sulphate of Iron	Kasis	Kasisa	
Calomel	Karpuru	Karpura	Paspura
Lime	Hunu	Sankha-bhashma	Nutha-sumnamboo
Alum	Sinakkáran	Sphatikari	Seenakaram
Borax	Phuskara	Tankana	Vengaram

SALTS.

Saindhava (impure chloride of Sodium) literally means salt from Scinde or the country along the Indus. This term is applied to rock salt, which is regarded as the best of salts. There are three varieties of rock salts : white, red and crystalline. It is regarded as digestive, appetizing and aperient. This is an impure chloride of salt.

Samudra (*Múdu lunu*) literally means produced from the sea. It is prepared by exposing sea water to the sun. This sun dried salt is regarded as bitter and laxative. In Madras this is called *Karkach*. It is chiefly composed of chloride of sodium.

Vit lavana.—This occurs in dark red shining granules. It has a mild, saline and somewhat nauseous taste. This is probably the *Balal lunu* of the Sinhalese. It is prepared as follows :—56 pounds of sambar salt are mixed with 20 ounces of dried *Amalaki* (Embelic Myrobalans—dried *Nelli*), and a fourth of this is put into a large earthen pot with a narrow mouth. Fire is applied to the pot and the materials are put in by degrees till the pot is somewhat heated, after which the whole is exposed to a strong fire for about 6 hours and then allowed to cool. When the pot is broken about 48 lbs. of *Vit* salt is found.

Romaka (*Roma lunu*).—This is also called *Sakambari* and is the salt obtained from the Sambar Lake near Ajmere. The *Romaka* is derived from the river Ruma, which falls into the lake. It is considered laxative and diuretic.

Audbhid.—I do not know whether there is a Sinhalese name for this salt. Dr. Dutt says it is one of the five salts which, according to the *Yógaratnákara*, is composed of *saindha lunu*, *yavakára lunu*, *balal lunu*, *róma lunu* and *suwása lunu*. *Suwása lunu*, according to Clough's Dictionary, is impure carbonate of soda.

Sarjikakshara.—I have put down *Vit lavana* as *balal lunu*, but I am not sure of it ; it might be *yavakára* which, according to Dr. Watt, is saltpetre or nitrate of potash, called in Sanskrit *Soraka*, the word being derived from Persian *Shora*. I am not sure that *Audbhid* is saltpetre. According to Sanskrit writers, it is a variety of common salt produced on the surface of the earth in certain countries, such as Behar in India, which is also the characteristic of *Audbhid*. It is quite possible that it is not the same as saltpetre or nitrate of potash.

Gutika.—This salt though mentioned in *Susruta* and other works on medicine cannot now be identified.

Pansuja or **Ushasuta.**—This is a salt manufactured from saline earth. There are several preparations mentioned in medical works to be

prepared with salts, chiefly for diseases of the stomach. A preparation largely recommended for dyspepsia is called *Nárikelakshara*. It is prepared by putting into a coconut full of water a sufficient quantity of rock salt by making a hole in it. The hole is then closed and the nut is covered with a thick layer of clay. This is then put under a fire and roasted till the clay assumes a brick red colour. The salt thus prepared is said to be very useful in dyspepsia attended with pain after meals. It is given with long pepper. DOSE.—About a quarter tola (45 grains).

Yavakara lunu (Sanskrit) *Yavakshára*.—It is called *Yavakára lunu* by the Sinhalese and is prepared by reducing the young spikes of barley (Hordeum Hexastichum) to ashes ; the ashes being dissolved in water, the solution is strained through a thick cloth and evaporated, when crystallisation takes place. Chemically it is carbonate of potash with some impurities. It is regarded as laxative, diuretic and stomachic. In enlarged spleen a decoction of *Aralu* (Chebulic Myrobalan) and *Rohitaka* bark with the addition of *Yavakshara* and long pepper is given.

The term *Yavakára lunu* is erroneously applied by many to Nitrate of Potash (saltpetre), which is not mentioned in old Sanskrit works on medicine. *Bhavaprakasa* calls it *Suvarchika*, but that is a variety of *Sarjika* applied to *Sora* or *Berilla*. Chemically *Yavakára* is composed of impure carbonate of soda and I note even Clough's Dictionary gives *Yavakára* as Nitrate of Potash, which I do not think is correct.

Sarjikakshara.—This is an impure carbonate of soda prepared in the same way as *Yavakshara* is manufactured, but using salt worts found growing in salt marshy grounds instead of barley shoots. There is no recognised name for this plant in Sinhalese, but saltpetre (Nitrate of Potash) is called *Vedilunu*, signifying " gun salt", or rather " shooting salt", as it is used in the manufacture of gun-powder. Tamils call saltpetre *Vetti-uppu*, which is the same as *Vedi-lunu* of the Sinhalese.

Kshara.—These are alkaline ashes and are prepared by burning certain plants. They are 16 in number and as many as are available may be used. These are :—

Sinhalese	*Sanskrit*	*English*	*Tamil*
Palol	Patala	Stereospermum Suaveolens	Padre
Kelinda	Kutaja	Holarrhena Anti-dysenterica	Veppalei
Gas-kela	Palasha	Butea Frondosa	Purashu
Hal, Sal	Asvakarna	Shorea Robusta	Kungilium
Erabadu	Parijata	Erythrena Indica	Murutu
Bulu	Vibhitaka	Terminalia Belerica	Tantrik kai
Ehela	Aragbadha	Cassia Fistula	Mambala konnai
Lotsumbulu	Lodhra	Symplocos Racemosa	
Wara	Arka	Calotropsis Giganta	Erukku

Gas-karal-heba	Apamarga Homa	Achyranthes Aspera	Na-yrivi
Patuk	Snuhi	EuphorbiaNerifolia	Ilaik-kalle
Karanda	Karanja	Pongamia Glabra	Ponga
Adathoda	Vasaka	Adatoda Vasica	Adatodai
Kehel	Kadali	Musa Sapientum	Valei
Ratnitul	Chitraka	Plumbago Zeylanica	Chittira
Kumburuwel	Putikaranji	CæsalpineBonducella	Cech-ckkai

Narasara (Sinhalese *Nawasaran*) is chloride of Ammonium. It is not mentioned in the old Sanskrit books, and is of Persian origin. A very large number of preparations are made with it and alkaline ashes are obtained from the plants : of these the following may be noted here :—

Vaisvanarakshara, given for anasarca and dyspepsia, and *Abhaya lavana* for enlarged spleen, liver disease, ascites.

GEMS.

Susruta mentions nine kinds of gems which are collectively known as *Navaratna* ; they are also representative of the nine planets :—

English	*Sinhalese*	*Sanskrit*
Diamond	Diamanti	Hiraka
Ruby	Ratu-keta	Mánikya
Emerald	Pachcha-keta	Garutmat
Topaz	Pusparága	Phusparága
Sapphire	Nil-keta	Indranila
Lapis Lazuli (cat's eye)	Vayiduriya, Vairodi	Vayidúrys
Pearl	Mutu	Mukta
Var Topaz	Góméda	Góméda
Corals	Koral	Vidruma

Silajatu.—The term *Silájatu* literally means stone and lac and is given to a certain bituminous substance said to exude from heated rocks in Vindhya mountains in North India. It is composed chiefly of iron and lime and has also traces of gold, silver and copper. It is a sticky, unctuous substance resembling Bdellium according to Dr. Dutt, but native medical men I believe use for it *Gal-sewel*, which does not tally with the description given by him. It is in hard lumps with dark streaks between and contains a good deal of carbonate of lime and magnesia, and when burnt over platinum foil it is said to leave a residue of magnesia, lime, silica, and iron in a state of proto and peroxide. This is chiefly used in urinary complaints and I have used it frequently in cases of diabetes. (*Vide* Opium).

I do not know whether the *Silájatu* sold in the bazaars is what is called the extract or the prepared article. The direction given for the preparation of the extract of *Silájatu* is as follows :—Take a quantity of *Silájatu*, wash it well in cold water and rub into an emulsion with its bulk of hot water or milk in an iron pot. The emulsion being exposed to the sun a black cream-like substance rises to the top. This is collected and laid aside and the process repeated till no froth rises to the top.

The froth collected is again purified by soaking in a decoction of the plants :—

Hal (Shorea Robusta).
Piala (Buchanania Latifolia).
Kaippu (Acacia Sundra).
Asana (Terminalia Tomentosa).

Silájatu is regarded as a powerful alterative and tonic and is also highly recommended for diabetes, gravel, anæmia and consumption. For cases of stranguary or painful micturition it is given with honey in a decoction of Tribulis Terrestris (*Gokatu*). Dr. Dutt gives the following prescription for a preparation called *Yógarája*, taken from *Chakradatta*.

Take of :—*Silájatu*, prepared iron, iron pyrites and silver, each five parts. The three Myrobalans (Tippal), ginger, black pepper, long pepper, Plumbago root (*Chitraka*) and Baberung seeds each one part and sugar eight parts. Powder, mix and make into a confection with honey. This is regarded as a valuable remedy in anæmia, jaundice, chronic fever, skin diseases, urinary diseases and in short as a powerful tonic and alterative. DOSE.—½ a tola (90 grains). For diabetes powdered *Ranawará* seed (Cassia Auriculata) and *Silájatu* are recommended in *Susruta*. I prescribed this to one of my patients and it appeared to do good.

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Red Ochre.

VERNACULAR.—Sinhalese : *Siwanguru*. Sanskrit : *Gairika*. Tamil : *Kavimun*.

PROPERTIES AND USES.—There are two varieties : red and yellow. The first is called *Raktapáshána*. *Gairika* is a silicate of alumina coloured with oxide of iron and is purified by being soaked seven times in milk. It is not used internally by itself, but is an ingredient in several *Rasa* preparations, such as *Jvarakunjara parindra*, which contains nearly all the mineral substances.

There are in Ayurvedic medicine many preparations called *Rasa* which, though largely used in India, are little known to the general practitioners of native medicine in Ceylon. They are chiefly composed of minerals or metallic ores mixed with vegetable drugs. Some of them are found to be very useful and I have culled the following from Dr. Dutt's work on Hindu Materia Medica for almost every conceivable disease which human flesh is heir to.

Vajrakapata Rasa.—The chief ingredient of this is mercury,* and it is one out of nearly a dozen of such preparations mentioned by Dr. Dutt.

Take of :—Mercury, sulphur, opium, Mocha Rasa or gum of Bombax Malabaricum (see Imbul Látu), the three myrobalans (*Tippal*), ginger, black pepper and long pepper in equal parts. Powder and mix. Soak the powder in the juice of the leaves of Cannabis Sativa and Wedilia Calendulacea (*bhringaraja*) and make into six-grain pills and administer with honey in obstinate chronic diarrhœa.

Jvara Brahmastra Rasa.—This is a *Rasa* in which arsenic is the chief ingredient.

Take of :—White arsenic two tolas (or *kalans*) ; soak it in cow's urine for three days and afterwards in the juice of Celsia Coromandeliana (*Kokasima*) for one day and then wash in cold water. Take a small

* It is the belief of the Vedaralas and the authors of the old works on medicine that mercury administered to patients in the form of Sulphides does not give rise to salivation.

quantity, the weight of a mustard seed, and administer it in a lump of sugar in intermittent fever before the paroxysm comes on.

Chronic fevers, ague and remittent fever are also to be treated in the same way. Another *Rasa* containing arsenic in the form of sulphide of arsenic (*Haritala*) is :—

Vidyadhara Rasa.—It is directed to be prepared as follows in *Bhaisajya Kalpa,* an Indian work on Ayurvedic medicine.

Take of :—Mercury (Rahadiya).
Iron Pyrites (Kasis).
Sulphur (Gendagam).
Prepared Copper (Tamba).
Realgar (Manosila).
Orpiment (Hiriyal).

equal parts ; rub them together and soak the mixture in a decoction of long pepper and in the milky juice of Euphorbia Nerifolia (Sanskrit *Vajri*) ; make into six-grain pills. These pills are administered with honey in enlarged spleen and other enlargements of the abdominal viscera. The following is a *Rasa* containing Realgar as the basic ingredient.

Svasa Kuthara Rasa.—Take of Realgar, mercury, sulphur, aconite, borax one part each, black pepper seven parts, ginger and long pepper three parts each, rub them together with water and make into four-grain pills. They are said to be useful in asthma, cough, and remittent fever. These pills are powdered and used as snuff for rousing the patient.

They are also used likewise in cephalalgia, hemicrania, ozæna, etc. Realgar rubbed up with the juice of Achyranthes Aspera (*Achariya-palu*) is applied to patches of leucoderma or white leprosy (*Kabara*). There is a large number of *Rasa* prepared with iron in one form or another chiefly used in cases of anæmia.

Navayasa lauha.—Take of :—Ginger, long pepper, black pepper, the three myrobalans (*Tippal*), plumbago root (*Ratnitul*), tubers of Cyperus Rotundus (*Kalânduru*), and baberung seeds each one part, prepared iron nine parts. Powder the ingredients and mix. Dose.—Four grains, gradually increased to 18 grains, to be taken with honey and ghee in cases of anæmia, jaundice, piles, heart disease.

Rasis or sulphate of iron is also used in several *Rasa* preparations.

Kasisadyataila is an oil prepared with sulphate of iron, wood of Withania Somnifera (*Aswagandha*), bark of Symplocos Racemosa (*Lotsumbulu*), root of Pothos Officinalis (*Gaja-tippili*) each 16 tolas or kalans. Heat the solid ingredients into a paste and boil it with sesamum oil four seers

and water 16 seers in the usual way. The oil is recommended to be applied to the genitals and the breasts to strengthen them.

Gold is much used as an alterative tonic chiefly in cases of phthisis. Of the several *Rasas* prepared with it the *Jayamangala Rasa* is one.

Take of:—Mercury obtained by sublimation, cinnabar, sulphur, borax, prepared copper, tin, iron, pyrites, rock salt, black pepper, prepared iron and silver, each one part, and prepared gold two parts. Powder them well and mix and soak the mixture three times respectively in the juice of *Datura* leaves and leaves of Nyctanthes Arbor Tirtstis (*Sépalika*) in the *Dasamula* decoction of Chirata. Divide the mass into four-grain pills and take with cummin seed powder and honey. This medicine is used in chronic fevers of all sorts and is said to be a powerful tonic and alterative.

Of the metals, silver is less often used medicinally than others.

Vrithat-vata-gajankusa Rasa is one containing this metal.

Take of:—Mercury, prepared talc, iron, gold, copper, silver, orpiment, sulphur, ginger, coriander, root of Sida Cordifolia (*Bala*), bark of Myrica Sapida (*Katphála*), Rhussuccedanea (*Karkatasringi*), aconite, long pepper, black pepper and borax each one part, Chebulic Myrobalan two parts. Powder and mix and rub with the juice of Sphœranthus Indicus (*Muda-mahana*) and Vitex Nigundu (*Nirgundi*) for one day. Divide the mass into four-grain pills. They are said to be very useful in various nervous diseases and also in what the Vedarálas term *Váta* or windy complaints. Silver also enters into other preparations such as *Yogarája* and *Jayamangala Rasa*.

Rasa preparations of copper are chiefly used in ague and remittent fever ; one of them which is regarded as very useful is :—

Svachchanda Bhairava Rasa.—

Take of :—Prepared copper and aconite equal parts, rub them together with the juice of *Datura* (*Attana*) leaves, and make into one grain pills. They are given with ginger juice and rock salt in fevers complicated with cerebral symptoms.

Graghani-kapata Rasa is prepared with sulphate of copper and is used in chronic bowel complaints as the name itself implies.

Take of :—Sulphate of copper, iron, orpiment, mercury, iron pyrites and borax, each five masha (*manchadies*—about fifteen grains), prepared cowries two and a half tolas, and sulphur one tola : rub them all together with lime juice and roast the mass lightly. This is given in chronic complaints and consumption.

A *Rasa* prepared with tin is as follows :—

Trinctra Rasa.—

Take of :—Prepared tin, mercury, sulphur, equal parts : rub them together in a mortar and soak 7 times severally in the juice of Cynodon

Dactylon (*Durva*) and the decoction of liquorice root, Gum of Bombax Malabaricum (*Imbul-meliyan*), Tribulus Terrestris (*Gokatu*) ; then roast in a covered crucible, again soak in the above mentioned fluid medicines and make into four-grain pills. This medicine is given in painful micturition with a decoction in milk of the above named vegetable drugs.

Of zinc what is chiefly used in medicine is *Kharpara*, which is an impure calamine or carbonate of zinc. Some native physicians in India use the one for the other. A *Rasa* made with *Kharpura* is :

Vasanta-malita Rasa.—

Take of :—Leaf gold one part, pearls two parts, cinnabar three parts black pepper four parts, purified *Kharpura* eight parts : rub together. Then add some butter and lemon juice and rub together again till they are intimately mixed and no separate particles are visible. DOSE.— Two to four grains with honey and long pepper. This is used in chronic fever, secondary syphilis, chronic gonorrhœa and leucorrhœa.

Very few or hardly any *Rasa* is made with pure lead, and what is medicinally used is more of an impure carbonate of lead, which is the resultant after its purification. An oil called *Sinduradya taila* is prepared as follows :—

Take of :—Mustard oil one seer, water four seers, minimum 12 drachms or as many kalans, cummin seeds eight tolas (24 drachms or 3 ounces) : boil together in the usual way. The oil is used in eczema and other eruptive skin diseases.

Galena or Anjana Keta is chiefly used as a collyrium with other drugs in eye diseases.

A *Rasa* made of bell-metal and alloy of copper and tin is—

Nityananda Rasa.—

Take of :—Mercury, prepared copper, iron, bell-metal, and tin, purified orpiment, sulphate of copper, calcined conch-shell and couries, sulphur, ginger, long pepper and black pepper, the three myrobalans, baberung seeds, the five salts (namely : rock, sun-dried sea salt, black, sonchal and Sambar Lake salts), Chavica Officinarum (*chavika*), long pepper root, *havusa* (an aromatic substance), Acorus Calamus (*vacha*), Curcuma Zedoaria (*sati*), Stephania Hernandifolia (*patha*), Pinus Deodara, cardamons, seeds of Argyreja Speciosa (*vridhya daraka*), each two tolas : rub them together with the juice or decoction of Chebulic Myrobalans and make into ten-grain pills. These are given in hydrocele and elephantiasis of the scrotum.

A *Rasa* made of Abhra is called—

Jvarasani Rasa.—

Take of :—Mercury, sulphur, rock salt, aconite and copper one part each, prepared iron and talc five parts each, rub them together with the

juice of Vitex Negundo leaves, then add one part of black pepper and make into two-grain pills. They are administered with the juice of betel leaves in chronic fever and enlarged spleen.

There are also other *Rasas* made with Mica as an ingredient. A *Rasa* made with Borax as the following is called —

Amirtakalpa Rasa.—

Take of :—Mercury, sulphur and aconite one part each, borax three parts ; soak them for three days in the juice of Wedelia Calendulacea (*bhringaraja*), and make into two-grain pills. This medicine is said to be useful in loss of appetite, indigestion and dyspepsia.

It will have been noted that there is great similarity in many of the foregoing *Rasas* and that the ingredients are put together without any principle or method, as far as one can see ; but the notion entertained by the Ayurvedic physicians is that by the union or mixture of several ingredients what they call a new *Yoga* or a new therapeutical agent is formed and this has the effect of curing the diseases for which they are prescribed. Whatever the system may be and however crude their modes of preparing the drugs, there is no doubt that these have been found by experience to be useful for the curing of many diseases ; I have seen remarkable cures effected with these *Rasa* preparations. I may mention that none of the metals or their ores are used medicinally as sold in the bazaars. They are subjected to a process of purification and as the method employed is not similar in all cases the mode of purifying the chief metals is mentioned here :—

Mercury is purified by first rubbing it with brick dust and garlic and then tying it in four folds of cloth and boiling in water over a gentle fire for three hours in an apparatus called *Dolayantra :* when cool it is washed in cold water and dried in the sun.

Arsenic is prepared by being soaked in lemon juice or the juice of the plantain tree.

Orpiment is purified by being successively boiled in *Kanjika*, the juice of the fruit of Benincasia Cerifera (*kushmanda*), sessamum oil, and a decoction of the three myrobalans for three hours in each fluid.

Realgar is purified by being rubbed with the juice of lemons or of ginger.

Iron is purified by beating it into thin plates, heating the plates in fire and sprinkling them with cow's urine, sour conjee, oil, and a decoction of the pulse of Dolichos Uniflorus (*kulattha*), seven times in succession.

Gold is purified by heating its leaves and cooling them alternately with *Kanjika*, oil, cow's urine, butter-milk and a decoction of horse gram. It is reduced to powder by being rubbed with mercury and exposed to

heat in a covered crucible with the addition of sulphur. Two parts of mercury and one of leaf-gold are rubbed together into a mass with lemon juice and placed in a crucible with three parts of sulphur. The crucible is then covered and exposed to heat. This process of mixing the gold with mercury and exposing to heat is repeated fourteen times when the gold completely loses its metallic character. This powder of gold appears to undergo little change from its metallic state, for on being rubbed on an agate mortar it produces a brilliant yellow stain like that of massive gold when the latter is rubbed on touchstone for ascertaining its purity.

Silver is prepared or purified in the same way as gold. It is converted into a black oxide by thin silver leaves being mixed with twice their weight of cinnabar and heated in the subliming apparatus called *Urddhapatana Yantra*. This process is repeated fourteen times. The resulting powder is found on analysis to be composed chiefly of black oxide of silver.

Copper is purified by being boiled in cow's urine for three hours ; the metal is beaten into thin plates before being boiled in cow's urine.

Tin is purified by melting it over the fire and pouring the melted fluid into the milky juice of Calotropis Gigantea (*arka*).

Zinc is prepared in the same way as tin.

Talc or **Mica** is purified by first heating it and then washing in milk. The plates are then separated and soaked in the juice of Amaranthes Polygamus (*tandulia*) and *Kanjika* for eight days.

Borax is purified by being steeped for a night in *Kanjika* and dried in the sun.

Bell-metal is prepared in the same way as copper.

ARTICLES OF THE ANIMAL KINGDOM USED IN NATIVE MEDICINE.

Leeches.—There are twelve varieties of leeches, six of which are venomous and six useful for blood letting. The poisonous leeches are found near putrid fish or animals in foul, stagnant and putrescent water. The middle sized leeches found in pure water and in tanks in which lilies and fragrant aquatic plants grow are those recommended to be used for drawing blood from inflamed and painful parts.

Lac (Sanskrit *Laksha*).—The Lac insect has been known to the natives of the East from a remote period. It is found on certain trees, the chief of which is Butea Frondosa (*Kela*). The other plants on which Coccus Lacca is found are Schleichera Trijuga and Erythrina Indica. Several species of fruit Lac are used largely by Vedarálas in the preparation of medicinal oils, one of which is known as *Lakshadi taila*.

Honey.—Eight kinds of honey are mentioned in old Sanskrit works on medicine, but only four are mentioned by recent writers. Of these eight kinds I have only been able to identify the following six :—

Madhuma (*Mí-peni*). This is the honey collected by the common bee and is regarded as the best. As a rule this kind is to be used medicinally unless another is specified in the prescription.

Bhramara is honey collected by a large black bee and is called *Bamarapeni* in Sinhalese.

Pantika is the *Kanami* of the Sinhalese and is collected by a small black bee ; it is said to have a soporific effect if taken internally.

Argha is honey collected by a yellow bee (wasp) of the size of the black bee (*Bhamara*).

Audalaka. A kind of honey found in the nest of some ants.

Dala is unprepared honey found in flowers.

Honey is largely used in native medicine and in preparing confections and electuaries and also as an adjunct (*Anupána*) in the administrations of decoctions and pills. It is also used to grind down drugs into a paste in preparing *Kalkas*. Fresh honey is regarded as demulcent and laxative. Honey of one year old is said to be demulcent and astringent. Although not generally known, a most efficacious remedy that I have seen for scaldings with hot fluids is a free application of bee's honey. I first learnt of its use in such cases from a Buddhist priest of Kandy who had earned a great reputation as a successful practitioner of medicine. Since then I have used it in several cases of scaldings with

hot fluids and have been most agreeably surprised at its good effects. I recall to mind two cases in particular. One was a cook of my own who had upset a kettle of boiling and steaming water on one of his feet and was yelling with pain ; an application of honey relieved the man at once and the next day he was able to walk about as if nothing had happened and without a sign of blistering anywhere. The other case was of a similar kind but the patient was brought to my dispensary a few hours after the scalding and in the meantime he had applied some ink, which is a common application with natives in such cases. I had the ink washed off and some honey applied to the part. It immediately relieved the man of all pains and the following day he was able to attend to his work. I have had no opportunity of applying the remedy in cases of severe burns in which the tissue is destroyed or to cases at a later stage when the skin is peeled off by the formation of blisters. I am doubtful of its utility in such cases.

Serpent Poison is used by Hindu physicians since a recent period. It is not mentioned in *Bhavaprakasa*, which is only about three hundred years old. The snake poison used is chiefly of the black cobra, which is procured by making the animal bite pieces of wood placed on leaves ; the poison is poured on to the latter in the act of biting the wood in which there is nothing to absorb the poison.

Musk (*Mriganabhi*).—Three varieties of musk is found in commerce. It is called *Kastúri* in Sinhalese. The three varieties are : *Kamrupa*, *Nepala*, and *Kashmira*. The first is brought from Tibet *via* Kamroop, the second from Nepala and the third from Kashmira. This is largely used by Vedarálas in many of their compound pills and other preparations. The addition of musk to the diabetic pills referred to under *Silájatu* is an improvement and a desirable adjunct in the case of debilitated patients.

Civet Cat. Sanskrit : *Gandha Marjara.* Sinhalese : *Urulé tattan.*—This is obtained from the Civet Cat and is a glandular secretion. It is used as a perfume for medicated oils.

APPENDIX A.

FORMS OF MEDICINES.

The following are forms of medicines with the mode of administering them to patients.

Churna or powders are prepared by pounding dry substances in a mortar with a pestle and passing the powder through cloth.

Svarasa or expressed juice is prepared by pounding fresh vegetables in a mortar, expressing the juice and straining it through cloth.

Kalka or paste is prepared by grinding dry or fresh vegetable substances on a stone with a muller and then making a thin paste with the addition of water when necessary. These are also sometimes mixed with honey and sugar and cooked or boiled in ghee until they are reduced to a certain consistency and they would then keep for a long time without deterioration or losing their therapeutic effects. I have found a preparation of this kind, an excellent remedy for any form of dysentery, to keep over a year without deteriorating.

Kvatha or decoctions are as a general rule prepared by boiling one part of vegetable substances with sixteen parts of water till the latter is reduced to one-fourth. The medicines should first be pounded small, then boiled over a slow fire, and the decoction strained through a cloth. When decoctions are prepared with dry substances, eight parts of water are recommended to be used. Decoctions are administered with the addition of salt, honey, sugar, treacle, alkalies, clarified butter, oil or some medicinal powders. A general rule to be observed for a decoction of one *pata* or about a pint, no matter what is the number of drugs, is that they should not in the aggregate be more or less than 12 *kalans*, i.e., if they are 8 drugs each should be one *kalan* and half ; if they are 3 drugs each should be four *kalans* ; and so on. If the drugs are too many, the quantity of water to be increased proportionately.*

Phanta or infusions are prepared by steeping one part of powdered herbs in eight parts of hot water for twelve hours during the night. They are administered in the same way as decoctions.

Sitakashaya or cold infusions are prepared by steeping one part of a drug in six of water for the night and straining out the fluid in the morning.

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* As a rule the practice of Vedarálas is to add eight parts of water to the drugs, and reduce them to one part, by boiling over a slow fire.

Paniya is a weak form of decoction, prepared by boiling one part of medicinal substances in thrity-two of water till the latter is reduced to one half. This preparation is usually taken *ad libitum* for appeasing thirst or some such object.

Pramathya is a sort of decoction in which the medicines are first reduced to a pulp and then boiled in eight parts of water till the latter is reduced to one-fourth. It is administered with the addition of honey.

Mantha is an emulsion of medicines in fine powder with four parts of cold water.

Kshi-rapaka or decoction in milk. The proportions in this preparation are one part of medicine, eight of milk and thirty-two of water. The materials are boiled together till the water is evaporated and the milk alone remains ; the decoction is then strained.

Yavagu. Sometimes medicines are added to powdered rice, wheat, barley, etc., and boiled with water into a gruel which is taken as aliment. The proportion of water in the preparation is six to one of solid materials. This preparation is called *Kalka-sadhya-yavagu* or gruel made with medicinal paste, in contradistinction to another form called *Kvatha-sadhya-yavagu* or gruel made with a decoction of medicines (see Oryza Sativa).

Avaleha or **extract.** To prepare this, decoctions after being strained are again boiled down to the consistence of a thick extract. This extract when properly made does not readily dissolve in water ; it can be drawn out into wires and will receive impressions of coins on its surface. Extracts are administered with the addition of sugar.

Modaka are boluses prepared by adding powders to cold syrup and stirring them together till uniformly mixed. No boiling is required in this preparation.

Vatika and **Gudika** or pills and boluses. These are usually prepared by reducing a decoction of vegetable substances to a thick consistence and then adding some powders for making a pill mass. Sometimes pill masses are made of powdered medicines with the addition of treacle or honey.

Khandapaka or confections. These are made by adding to syrup medicines in fine powder and stirring them over the fire till intimately mixed and reduced to proper consistence. Honey is often subsequently added to confections. Syrup may be made with sugar and water or milk or the strained decoction of some medicinal substance. Confections should be of the same consistence as extracts above described.

Bhavana or maceration of powders in fluids. Powders, especially mineral substances, are often soaked in various fluids, such as expressed juice of herbs, decoctions, etc., and then dried. For this process the quantity of the fluid added to the powder should be sufficient to cover it. The mixture is then allowed to dry in the sun. A single operation of this sort is completed in twenty-four hours, but the process is generally repeated from 3 to 7 times and afterwards with a variety of fluids, so that the resulting mass combines in it the active principles of various drugs.

Putapaka or roasting. In this process vegetable drugs are reduced to a paste, which is wrapped up in *jambu* or *vatapatra* (leaves of Eugenia Jambolona and Ficus Bengalensis) firmly tied with fibres of some sort covered with a layer of clay from half an inch to one in thickness and roasted in cowdung fire. When the layer of clay assumes a brick red colour in the surface the roasting is known to be completed. The ball should now be withdrawn from the fire and broken and the juice of the roasted drug expressed and administered with an addition of honey or such other adjuncts as may be directed. Sometimes the roasted drug itself is given in the form of a powder or pill.

Sandhanavarga or products of acetous fermentation.

Kanjika. This is a sour liquid produced from the acetous fermentation of powdered paddy. Two seers of powdered *aus dhan* (paddy grown in the rainy season) are steeped in eight seers of water and laid aside in an earthen pot for fifteen days and upwards, when the mixture undergoes acetous fermentation, the resulting fluid being called *Kanjika* or *Dhanyamla*, that is, acid produced from paddy. *Kanjika* is a clear, transparent fluid with an acid taste and vinous smell. It is cooling, refrigerant and useful as a drink in fever, burning of the body, etc. It is sometimes applied externally upon the principle of wetsheet packing, cloth steeped in the fluid being wrapped round the body for relief of high fever and heat of body. This is not unlike the wet pack treatment adopted by Western practitioners for pyrexia.*

It is also used as a vehicle for other medicines and for preparing decoctions, oils, etc. Other grains besides paddy are sometimes used for acetous fermentation. If mustard or the seeds of Raphanus Sativus (*múlaka*) are added to paddy, the resulting fluid is called *Sintaki*. If the husked grains of barley are boiled and steeped in water, the resulting acid liquor is called *Sauvira*. When the husks of fried *mashakalaya* (pulse of Phaseolus Roxburghii) and barley are bolied

* It will be noted that although this mode of treating cases of continued fevers with a high temperature was one that came into vogue among Western practitioners not more than 30 or 40 years ago, it was apparently known to the old Hindu physicians more than 3,000 years ago ; and, strange to say, it is seldom or never practiced by their successors of the present day.

together for acetous fermentation, the acid is called *Tushamvu*. *Árnala* is a sour gruel made from fermentation of boiled rice. A mixture called *sukta* or *chukra* is thus prepared. Take of treacle one part, honey two parts, *Kanjika* made as above described four parts, whey eight parts : mix together in a clean earthen pot and bury the pot in a heap of paddy for three days. The properties of these preparations are similar, they being regarded as cooling, refrigerant, diuretic and useful in nervous diseases, rheumatism, dyspepsia, indigestion, urinary diseases, intoxication from spirituous drinks, etc. What is ordinarily spoken of as *conjee* water in English is a decoction of rice, and not the *Kanjika* of Sanskrit writers on medicine.

Dravaka or distilled mineral acids. Several formulæ are given in different works for the preparation of mineral acids. A number of mineral substances or salts are heated in a retort and the distilled fluid collected in a glass receiver. The test of acids is said to be their property of dissolving a cowrie or shell thrown into them. The following are two examples of the compositions used for preparing mineral acids :—

Svalpadravaka.—Take of alum, chloride of ammonium, borax, sulphide of antimony, impure carbonate of potash and soda called *Yávakshara* and *Svarjikakshará*, and rock salt, each eight tolas, nitre six tolas, orpiment four tolas. Powder, mix and rub them together repeatedly with lemon juice, and dry. Introduce the mixture into the receptacle of a distilling apparatus, and distil over a fire. The dose of the acid thus distilled is two drops. It should be taken with six grains of long pepper. One week's use of this medicine is said to cure spleen disease and dyspepsia.

Sankhadravaka.—For this preparation take of sulphate of iron thirty-two tolas, alum and rock salt sixteen tolas each, nitre one hundred and twenty-eight tolas. Powder, mix and distil the mixture from a glass retort. The dose of this acid is said to be twelve minims. The tongue should be anointed with clarified butter before using this medicine. It should also not touch the teeth.

Asava and Arishta or medicated spirituous liquors. These are prepared from honey and treacle, with the addition of various medicinal substances. They are all steeped in water and laid aside in earthen jars for vinous fermentation. The proportion of the different ingredients, as a general rule, is as follows :—

Water thirty-two seers, treacle twelve seers and a half, honey six seers and a quarter, medicinal substances one seer and a quarter in powder or decoction. When raw vegetables are used for fermentation the resulting fluid is called *Ásava*. When the decoction of drugs only is added the fermented liquor is called *Arishta*. These preparations combine the properties of spirituous drinks and those of the drugs used in preparing them. They are heating, stimulant, easily digested

and stomachic. The preparation called *Drákshárishta* is made with honey, sugar and decoction of raisins with the addition of a few aromatics (*see* Vitis Vinifera). Its action must be analogous to that of wines. It is used as a stimulant in exhausting diseases.

Medicated Oils and Ghritas.—These are decoctions of vegetable drugs in oil or *Ghrita* (clarified butter) and form a prominent feature of native practice. They are prepared in great varieties and are extensively used in almost all sorts of diseases. The *Ghritas* are chiefly used internally and the oils are rubbed on the body. They are prepared by boiling vegetable drugs in *Ghrita* or oil with the addition of water or other fluids, such as *Kanjika*, milk or a decoction or drugs, etc. As a general rule the proportion of the ingredients used is as follows :—

Medicinal substances in form of paste one part, *Ghrita* or oil four parts, water or other menstruum sixteen parts. When the fluids used are thick, such as decoctions or the expressed juice of vegetables, the proportion of solid paste is reduced from one-fourth to one-sixth and one-eighth respectively of the oil or *Ghrita*. Sometimes no solid paste is used at all. If more than one variety of fluid is ordered, then up to four sorts (the usual proportion is four of fluid to one of *Ghrita* or oil) is observed and these are boiled separately with each fluid ; but when the number of fluids exceeds four, each of the fluids ordered is taken in quantity equal to the oil or *Ghrita* and the whole boiled together.

Ghritapaka or preparations of medicated *Ghrita*. The *Ghrita* or clarified butter is first of all heated on a fire so as to deprive it of any water that may be mixed with it. A little turmeric juice is then added to purify it, it is said, but the object I fancy is to colour it. *Ghrita* thus purified is placed on a fire in an earthern, copper or iron pan and melted with a gentle heat. Then the medicinal paste and fluids to be used are added and the whole boiled together till the watery parts are evaporated and the *Ghrita* is free from froth. It is then strained through a cloth and preserved for use. *Ghrita* thus prepared should be imbued with the colour, taste and odour of the medicines with which it has been boiled. It is recommended that the preparation of *Ghrita* by boiling be not completed in one day and that the medicines be allowed to remain in contact with the butter for some time, so that their active principles may be thoroughly extracted. The boiling process is carried on to three degrees, called respectively, *mridu*, *madhyama*, *kharapaka*. In the first the boiled paste is somewhat soft, in the second it is dry and just soft enough to be made into pills with the fingers. In the third form it is turned hard and dry. The intermediate form is preferred for internal administration and injection into the rectum, while the over-boiled form is used for external application. The over-boiled form might be reduced to powder and is said to be suitable for use as snuff.

Tailapaka or medicated oils. In preparing these, Sesamum oil should be used unless otherwise specified. Sesamum oil, before being boiled with medicinal substances, is coloured and purified as follows :—First of all it is heated to deprive it of any water that may be mixed with it ; then the following substances are steeped in it for 24 hours, viz. : Madder one-sixteenth part in weight of the oil, turmeric, wood of Symplocos Racemosa (*Lodhra*), tubers of Cyperus Rotundus (*Kalánduru*), bark called *nalika*, the three myrobalans, root of Pavonia Odorata (*bala*) and the tender shoots of Pandanus Odoratissimus (*ketaki*), each one sixty-fourth part in weight of the oil. These ingredients in fine powder should be soaked in the oil, with the addition of an equal quantity of water, for a day. The mixture should then be boiled till the water is evaporated and finally strained. To the oil thus prepared, medicinal substances in the form of a paste, decoction, etc., are added in the same proportions as for the preparation of *Ghritapáka*. They are boiled together till the water parts are all evaporated. When cool the oil is strained through a cloth so as to separate solid particles. Some medicinal oils, and especially those used in the treatment of nervous diseases, rheumatism, etc., are subjected to a third process of boiling with various aromatic and fragrant substances. This is called the *Gandhapáka* or boiling for rendering the oil fragrant. The following substances, or as many of them as are available, are used for scenting medicated oils, namely : cardamons, cinnamon, cloves, fenugreek seeds, saffron, leaves of Cinnamomum Tamala, white sandalwood, Jatamansi root, Curcuma Zedoaria (*sati*), Cyperus Rotundus (*mustaka*), *Kakkola* (an aromatic seed), resin of Pinus Longifolius (*gandhaviraja*), storax, long pepper root, root of Andropogon Muricatus (*usira*), *nakhi* (Unguis Odoratus), pouch of Civet Cat (*khattasi*), camphor, musk, Permelia Perlata (*saileya*), root of Aplotaxis Auriculata (*kushta*), seeds of Abelmoschus Moschatus (*latakastúri*), etc.

For four seers of oil one tola of each of the above ingredients should be taken, with the exception of camphor, which should be four tolas. These ingredients, with the exceptions noted below, are reduced to a paste with water and added to the oil, which is then boiled with an equal quantity of water till the latter is evaporated, and lastly strained. Camphor, musk, storax and the substance called *nakhi* should be added after the process of boiling is finished and the oil strained. Oils for rheumatism and nervous diseases are sometimes rendered fragrant by the addition of camphor alone.

Castor oil and mustard oil are sometimes used in the preparation of medicated oils. The proportions of oil, medicinal substances and fluids are the same as with sesamum oil, but the preliminary preparation of these oils is different. Mustard oil is purified by being boiled with the following ingredients, namely : emblic myrobalan, turmeric, tubers of Cyperus Rotundus (*mustaka*), root bark of Aegle Marmelos (*vilva*), pomegranate bark, flowers of Mesua Ferrea (*nágakésara*). Nigella seeds,

root of Pavonia Odorata (*bala*), the bark called *nalika** and beleric myrobalan, two tolas each, and madder, sixteen tolas, for four seers of oil. These should be boiled together with sixteen seers of water, till the latter is all evaporated, and the oil should then be strained. It is now fit for being boiled with medicinal substances, the process for which is the same as for sesamum oil above described.

For purifying castor oil, the following ingredients are used, namely : tubers of Cyperus Rotundus (*mustaka*), Coriander, the three myrobalans, leaves of Sesbania Aculeata (*vaijayanti*), Pavonia Odorata (*hrivera*), wild dates, tender red buds of Ficus Bengalensis (*vatasunga*), turmeric, wood of Berberis Asiatica (*dáruharidra*), the bark called *nalika*, ginger and the shoots of Pandanus Odoratissimus (*ketaki*), each half a tola for four seers of oil. Castor oil should be boiled with equal parts of whey and *Kanjika* (fermented paddy water) along with the above ingredients.

* I have not been able to ascertain the source of this bark.

APPENDIX B.

THE DIFFERENT MODES OF APPLYING MEDICINES EXTERNALLY.

Besides being taken internally, medicines are applied in various other ways, such as by injections into the rectum, urethra and female organs ; by application to the nose, the mouth, the eyes, and the skin ; in the shape of plasters, ointments, oils and fumigations ; and as applications to the lungs by inhalation.

Vastikarma or injections into the rectum were thrown in by means of a tube with a membranous bag tied to its end. The bag was recommended to be made of the bladder of some animal, such as the bull, goat, etc. It was filled with the fluid to be injected and tied to one end of a tube about eight inches long and with a tapering rounded extremity for introduction into the rectum. Injections into urethra and vagina were thrown in by similar contrivances, the tubes being adapted in length and thickness to the passages for which they were intended.

Phalavarti or suppositories were recommended to be made of the size of the patient's thumb. They were smeared with clarified butter and introduced into the rectum. The following is an example of a suppository :—Take of Assafœtida and rock salt equal parts and make a suppository with honey, for use in tympanitis.

Nasya or the application of medicated substances to the nose forms a prominent feature of native therapeutics. Two primary classes of medicines for this organ are recognised, namely, *Sirovirechana* or medicines causing a flow of secretion from the nose, thus relieving cerebral congestion, and *Vrinhana* or medicated oils applied to the nose with the object of cooling the head and relieving affections of the neck and chest. For clearing the head and promoting discharge from the nose, the expressed juice of pungent drugs is poured into the nose, drop by drop, or if powders, the latter are blown into the nostrils by means of a tube. The former process is called *Avapida* and the latter *Pradhamana*. For cooling the head and relieving affections of the upper part of the body various medicated oils are used. In one form the snuff called *Pratimarsha*, two or three drops of medicated oil are directed to be snuffed up the nostril till they reach the throat, when they should be expectorated and not swallowed. In another form of application called *Marsha*, about a drachm of oil is recommended to be gradually poured into each nostril from a spoon or shell.

Kavala.—Liquids used as gargles are thus called. Sometimes a mixture of liquid and solid substances or solid balls of medicine are taken into the mouth and retained in it till they bring on a discharge from the nose

and eyes. This mode of application is called *Gandusha.* When powders or thick solutions are applied to the teeth and gums with the finger, the process of medicament is called *Pratisarana.*

Sirovastis, etc., or applications to the head. Oils or other fluids are applied to the head in four different ways. The first form called *Sirovasti* consists in tying a piece of leather four and a half inches in breadth all round the head, luting its lower margin to the skin by a paste of the pulse called *Mashakalaya* (*ulundu*) and then filling the cavity thus formed on the top of the head with lukewarm oil. The oil is directed to be retained till pain is relieved or till there is a discharge from the eyes and nose. It should then be removed and the head washed with warm water. This sort of medication is said to be useful in severe headache and shaking of the head.

In the second form, oil or other fluid is poured in a stream on the head. This is called *Parisheka.* In the third form called *Pichu,* cotton soaked in oil is applied to the scalp. In the fourth called *Avyanga,* the oil is simply rubbed on the head.

Applications of liquids and medicated oils to the ears are used in diseases of the head as well as of the ears. The external meatus is filled with the fluid, which is allowed to remain in it from one to twenty minutes, and is then withdrawn.

Netrakarma or applications to the eyes receive various names, according to the nature of the substances used and the manner, in which they are applied. Pouring of drops into the eyes is called *Áschotana.* A poultice enclosed within a piece of cloth and applied over the lids is called *Pinda.* A paste applied to the lids is called *Vidalaka.* Medicines applied to the margin of the lids or to the conjunctiva with the finger or a metallic probe are called *Anjana.* These last may be in the shape of powder or liquid or they may be made into sticks or pills which are rubbed with water before use. The probe for applying medicines to the margin of the lids should be six inches long with a rounded bulbous end. It may be made of gold, silver, copper, iron or stone. For habitual use of collyria a lead probe is preferred. When medicines are applied not only to the lids but also to the conjunctiva, up to the margin of cornea, the finger is recommended to be used, as it is soft and safe.

Applications to the Skin.—These consist of *ghritas*, oils, plasters, poultices, baths and hot applications for inducing, perspiration. Medicated *ghritas* and oils have been already described. They are for the most part rubbed all over the body, except those intended for local ailments. Plasters called *Pralepa* are applied moist and cold. They are also thicker than plasters.

Svedana or application of heat to the skin for inducing perspiration is carried out in four different ways, namely :—

(1) **Tapasveda** or the application of dry heat by means of heated plates, brick, sand, cloth or the palm of the hand only. These are recommended to be heated by catechuwood fire.

(2) **Ushmasveda** or the application of hot steam. This is effected in various ways. The part to be heated is covered with wet cloth. Bricks, stones or iron plates are made red hot and sprinkled over with *Kanjika* or some decoction, and are then applied to the part to be heated ; or an earthen pot with a small opening in the side is filled with hot water or decoction of some drugs, a tube is adjusted to the hole in the pot, and the steam is applied to the covered body through it. A third method consists in heating the ground by burning catechuwood over it, and, after removing the fire, sprinkling some decoction over the spot and making a bed of castor oil leaves on it. The patient is to lie on this bed and cover himself with a blanket, or the ground may be covered with a thick layer of boiled pulse, such as *Mashakalaya,* and a bed made over it for the patient.

(3) **Upanahasveda.**—This means the application of heat by hot medicinal substances in the form of decoctions, pastes, or plasters, or of fomentation by cloth wrung out of hot fluids ; or heat may be applied by enclosing hot medicinal substances or pastes within a cloth bag and applying the latter to the skin.

(4) **Dravasveda.**—This means the hot hip-bath and hot bath with warm water or decoctions. Milk, broth, oil, *Kanjika*, etc., may also be used for baths. The patient should sit in a tub with the fluid up to his navel, which should also be poured over his body from above the shoulders, so a o bathe him thoroughly. The tub should be made of wood, silver, copper, or iron, of square form and twenty-six fingers in measurement in all directions, that is, in height, length and breadth. After the application of heat, the patient should take a hot bath, eat light food and keep himself covered in bed. If too much heat has been applied, and the patient suffers from pain in the joints, thirst, languor or giddiness, then he should be treated by cooling applications. The region of the heart, scrotum and eyes should be heated with great care and to a mild degree only.

Dhumapana or inhalations.—Tapers or pastilles made of medical substances are set fire to and their fumes inhaled with a tube by the mouth or nose. Pastilles for inhalation are thus prepared : A reed half a cubit in length is smeared or laid over with a paste of the drugs to be used to two-thirds of its extent and is dried in the shade. When dry the reed is withdrawn from the paste, leaving it in the form of a hollow tube. This is smeared with clarified butter and lighted. The lighted extremity is introduced into one end of the inhaling tube and the fumes drawn in by the other end through the mouth or nose, as the case may be, and emitted again through the mouth. In affections of the throat and chest, inhalation through the mouth is recommended, while in diseases of the head, eyes or nose, the fumes are drawn in through the

nose. The tube for inhalation may be metallic or made of wood or ivory. Its length varies from two cubits to half a cubit, and its calibre should be sufficient to allow a large pea to pass through. The shorter tubes are used in administering expectorant and emetic fumes. Inhalations are useful in cough, asthma, catarrh, pain in the head or neck, etc. They may be used for soothing the air passages, for promoting discharge from them, for the relief of cough or for inducing vomiting. Another form of inhalation called *Samana* is recommended to be used daily after washing the face, bathing, breakfast, etc. The pastille for this is made of cardamons and other aromatic substances. This sort of smoking is not seen in the present day. Probably it was in vogue before the introduction of tobacco and has been displaced by the latter.

Dhupana or fumigations were employed for ulcers and skin diseases. The pastilles for these are made as for inhalation. They are lighted and placed inside two earthen pots, placed face to face. A hole is made in the upper pot and a tube adjusted to it. The free or open end of the tube is now directed to the affected part and the fumes allowed to spread over it. Incenses and tapers composed of various medicinal substances are also burnt in rooms occupied by the sick, for removing unpleasant smells and supposed evil spirits.

Ksharakarma or caustic applications. The ancient physicians of India, like their modern representatives, preferred opening abscesses by caustics to incising them with a knife or opening with a lancet. Hence caustics were described as superior to the lancet, in as much as, in addition to opening abscesses, they purified them by removing the derangement of the humours. The ashes of the following plants were used for the preparation of caustics, namely :—

Sanskrit	*Botanical*	*Sinhalese*
Patala	Stereospermum Suaveolens	Palol
Kutaja	Holarrhena Antidysenterica	Kelinda
Palasa	Butea Frondosa	Kila
Asvakarna	Shorea Robusta	Sal
Paribhadra	Erythrina Indica	Erabadu
Vibhitaka	Terminalia Bellerica	Bulu
Aragvadha	Cassia Fistula	Ehela
Lodhra	Symplocos Racemosa	Lotsumbulu
Arka	Calotropis Gigantea	Warâ
Snuhi	Euphorbia Neriifolia	Dádakeriya
Apamarga	Achyranthes Aspera	Achâriyapalu
Karanja	Pongamia Glabra	Karanda
Vasaka	Justicia Adhatoda	Adathoda
Kadali	Musa Sapientum	Kesel
Chitraka	Plumbago Zeylanica	Ratnitul
Putika	Cæsalpinia Bonducella	Kumburuwel
Devadaru	Cedrus Deodara	Dêwadâru

Asphota	Vallaris Dichotoma	
Karavira	Nerium Odorum	Allariya
Saptaparni	Alstonia Scholaris	Ruk-attana
Gambhari	Gmelina Arborea	Demata
Gunja	Abrus Precatorius	Olinda
Koshataki	Luffa Pentandra	Wetakolu

The roots, stems and leaves of these plants or of such of them as are available are cut into pieces and burnt in a pit. The ashes are then collected and boiled in six times their weight of water till the solution becomes transparent, red, pungent and soapy to the feel. It should then be strained and again put on fire and the following substances added, namely, ashes of Euphorbia Neriifolia (*snuhi*) and the burnt powders of bivalve and conch shells. The mixture should be constantly stirred and boiled till it is of a thick consistence. The proportion of shell-lime added varies from one-fourth to one-eighth or one-sixteenth part of the solution. Caustics of three strengths are thus obtained. Sometimes orpiment and realgar are added to increase their strength.

The part where the caustic is to be applied should first be cleaned and rubbed. The caustic should then be applied with a probe. It should be allowed to remain in contact with the skin for such time as is occupied in counting a hundred and then removed. The skin becomes black from the application, when it is dressed with a paste of acids, clarified butter and honey. For hastening the removal of the slough, a paste or poultice composed of sesamum seeds, liquorice root, lemon juice and *Kanjika* should be applied. Caustics are applied to external piles, sinuses, fistulæ in ano, abscesses, warts, tumours, leprous patches, etc.

APPENDIX C.

A CLASSIFICATION OF DRUGS ACCORDING TO THEIR THERAPEUTIC EFFECTS.

As Given by Dr. Dutt in His "*Hindu Materia Medica*".

Dipana are medicines which promote appetite, but do not aid in digesting undigested food.

Pachana are medicines which assist in digesting undigested food, but do not increase the appetite. Some medicines have both these properties, that is, they are appetizers as well as digestives.

Anulomana are medicines which digest the humours and set them free, that is, promote excretions and favours their discharge.

Virechaka or purgatives are described under three heads, namely: *Sransana*, *Bhedana*, and *Rechaka*. Those medicines which hurry the chyle or materials for digestion without allowing them to be properly digested are called *Sransana*, as for example the pulp of Cassia Fistula. Those medicines which set free scybala and other contents of the intestines and discharge them from the bowels without producing water stools are called *Bhedana*, as for example *Katuki* (Pricorrhiza Kurroa). Those medicines which cause the discharge of the digested or undigested contents of the intestines in a liquid form are called *Rechaka*, as for example *Trivrit* (Ipomœa Turpethum). These last again are subdivided into three orders, namely, *mridu* or mild, *madhyama* or intermediate and *krura* or drastic.

Vamana or emetics are medicines which cause emesis of bile, mucus and other contents of the stomach.

Chhedana are medicines which remove by force as it were and discharge from the body adherent phlegm or other humours. Emetics, expectorants, errhines, caustics, etc., would probably come under this head. Black pepper and alkaline ashes are given as examples of this class of medicines.

Lekhana or attenuants remove bad humours and altered constituents of the body, thinning them gradually and thus clearing the system of them. Warm water, honey, barley, etc., are examples of this class.

Medicines which promote the secretion of perspiration, urine and milk are called respectively *Svedana*, *Mutrala*, and *Stanyajanana*.

Pramathi are medicines which facilitate the exit of collected secretions from their tubes or receptacles, as for example *Vacha* (Acorus Calamus).

Grahi or inspissants are medicines which, from their stomachic, digestive and heating qualities, dry the fluids of the body.

Stambhana or constipators are medicines which, from their drying, astringent and cooling qualities, and from their easy digestibility, increase the air and retain the secretions, as for example *Indrayava* (seeds of Holarrhena Antidysenterica).

Abhishyandi are substances which from their emollient qualities or heaviness retain the secretions and cause heaviness and fullness of the body, as for example *Dadhi* or curdled milk.

Rasavana or alterative tonics are medicines which prevent or remove the effects of age, increase the vigour of healthy persons and cure the ailments of the sick.

Balya or tonics are medicines which increase strength.

Vrinhana are medicines which promote nutrition and increase the bulk of the body.

Vajikarana or aphrodisiacs are medicines which increase the sexual powers.

Visha or poisons are said to be endowed with the following qualities, namely : *Vyavayi*, that is, affecting the entire system as for example opium and hemp.

Sukshma, that is, penetrating into the minutest pores of the body.

Vikasi, that is, drying the humours, depressing the system and causing relaxation of the joints, as for example betel-nuts.

Agneya, that is, heating or stimulant.

Madavaha, that is, depriving men of their senses and enveloping their minds in darkness, as spirituous liquors. Taken in large doses poisons destroy life, but judiciously used they act as curatives and restore health, even in dangerous diseases.

I may mention that Charaka classifies medicines into fifty-two different classes based on their action on different parts and organs of the body.

APPENDIX D.

NAMES OF MEDICAL BOOKS IN USE AMONG CEYLON VEDARALAS.

(Contributed By Mr. C. T. Vaidyaratna of Madampe.)

NIGANDUS OR GLOSSARIES OF DRUGS.

1. Saraswati Niganduwa.
2. Siddhawsadha Niganduwa.
3. Wanawasa Niganduwa.
4. Drawiyaguna Darpanaya.
5. Drawiyaguna Niganduwa (with plates).

DICTIONARIES.

1. Bhaisaggiyartha Akárádiya.
2. Bhaisaggiya Darpanaya.
3. Yógaratnákara Getapadaya.
4. Drawiya Namawali Akárádiya.
5. Waiddiyajotisa Akárádiya.
6. Amarakhóshaya.

NIDHANA OR SYMPTOMS OF DISEASES.

1. Madhawa Nidhanaya.
2. Arishta Satakaya.
3. Susruta Nidhana Stanaya.

PRESCRIPTION OR TREATMENT.

1. Sárasansépaya.
2. Prayóga Samuchchaya.
3. Bhaishagga Manjusaya.
4. Chakkra Datthaya.
5. Saranga Dharaya.
6. Sarartha Sangrahawa.
7. Waiddiya Jíwaniya.
8. Waiddiyálankáraya
9. Waiddiya Mruthaya.
10. Patthiya Patthiya.
11. Yógasathakaya.
12. Yógamuktawaliya.
13. Ajirna Manjariya.
14. Yógasangrahawa.
15. Papadhosa Pratikaraya.

16. Nadighana taranganiya.
17. Sathaslokaya.
18. Bhutanadisastraya.
19. Asta Parikshawa.
20. Aristasawa Sangrahawa.
21. Ayurveda Wiyakaranaya.

HANDI-VEDAPOT OR WORKS DEALING WITH TREATMENT OF WOUNDS.

1. Pilika Prakranaya.
2. Handi Vedapota.
3. Gedi Vedapota.
4. Wana Vedapota.
5. Wrunawusadhamalawa.

WÁSAGAM VEDAPOT OR BOOKS IN PROSE.

1. Pissubalu Vedapota.
2. Udarata Behetge At-vedapota.
3. Potuwila Swamy's At-vedapota.
4. Waiddiyachintamaniya.
5. Goratnaya or Diseases of Cattle.
6. Gawaratnaya.
7. Pinas Vedapota.
8. Sarausadha Dipaniya.

BOOKS IN VERSE.

1. Yógaratnakaraya.
2. Yógamuktaharaya.
3. Sanskruta Yógaratnakara Sannaya.
4. Yóga Daranaya.
5. Yógasangrahawa.
6. Yógasaraya.
7. Yógamanjusawa.
8. Yógasekaraya.
9. Yógamalawa.
10. Yógamushtiya.
11. Yógamuktawaliya.
12. Waiddiyamalawa.
13. Watikaprakaranaya.
14. Kumarausadhamalawa.
15. Rata Vedapota.
16. Tipal Warnawa.
17. Awshadha Muktaharaya.
18. Gunapataya,

BOOKS DEALING WITH DISEASES CAUSED BY SEXUAL INDISCRETION.

1. Kamaroga Darsanaya.
2. Kamaroga Dipaniya.
3. Rahasawshadha Chintamaniya.
4. Kamachcheda Waiddiya Sangrahawa.
5. Madanalankaraya.
6. Prameha Awshadha Manjariya.
7. Rahas Awshadha Manjusawa.

BOOKS ON THE DISEASES OF THE EYE.

1. Chandramihirawa.
2. Es Vedapota (verse).
3. Es Vedapota (prose).

BOOKS ON SNAKE BITES.

1. Sarpawisawinodaniya.
2. Sarpaveda Niganduwa.
3. Sarpa Vedapota (with plates).

BOOKS ON MEDICINAL OIL.

1. Sneha Satakaya.
2. Bhaishaggatel Pota.
3. Tailapanc a Satakaya.

APPENDIX E.

MISCELLANEOUS PRESCRIPTIONS.

Prescriptions for Dysentery and Diarrhœa.

The following are some prescriptions said to be of great efficacy in cases of diarrhœa both simple and acute and dysentery of every form and stage. They have been furnished to me by Dr. Kobbekaduwa, of Kandy, taken from a *Wattóru* book that has been in the possession of a family in the Uva district, whose members have had a great reputation for treating these diseases successfully.

I. Take of :—

Achyranthes Aspera (*Karal* or *Rat heba*) the whole plant (leaves and root), cut into small pieces, pound them well with coconut kernel, squeeze the juice, and administer about half a tea cup for diarrhœa and dysentery in the early stages.

II. White sandalwood (*Sudu handun*).
Leaves of Ficus Religiosa (*Bó-kola* or *Mandala patra*).

Take equal quantities of the above, pound them well with young coconut water, and strain. Dip a hot iron into the strained fluid and when warm administer about half a tea cup in cases of diarrhœa and dysentery, with the addition of bees honey.

III. Woodfordia Floribunda (*Malitta mal*).
Aconitum Hetrophyllum (*Evanda*).
Ginger (*Inguru*).

Take equal quantities of the above (say about four kalans or one *ak*), and make a decoction in the usual way (eight patas or pints of water reduced to one). Dose.—Half a tea cup with a little bees honey added to it. For *Malitta*, Vedarálas of Ceylon as a rule take *Maila mal*, flowers of Bauhinia Racemosa, a plant of quite a different order, but apparently possessing the same therapeutical properties.

IV. Mango seed kernel (*Amba-eta mada*).
Sea salt (*Múdu lunu*).

Take equal quantities of the above, grind well on a stone, and make into boluses of the size of a fresh *nelli* fruit, and fry them in sesamum seed oil (*Tala tel*) until they assume a reddish colour. Dose.—One or two boluses three times a day. These are highly recommended for hæmorrhagic dysentery (*Rakta Atísára*).

V. Take equal quantities of :—

Desmodium Triflorum (*Hín-undupiyali kola*).
Leucas Zeylanicus (*Geta tumba*).
Spheranthus Indicus (*Muda-mahana*).

Make a decoction in the usual way. DOSE.—Half a tea cup twice or three times a day.

VI. Take equal quantities of :—

Achyranthes Aspera (*Karal* or *Rat heba*).
Feronia Elephanta (*Divul geta*).

Make a decoction in the usual way. DOSE.—Half a tea cup twice or three times a day.

VII. Take four kalans of :—

Tender coconut flower (*Lá pol-mal*).
Cyperus Rotundus (*Kalánduru*).
Ficus Glomerata (*Attikka*).

Make a decoction in the usual way. DOSE.—Half a tea cup in cases of diarrhœa and dysentery.

VIII. Take four kalans of :—

Tender fruit of Elephanta Feronia (*Divul geta*).
Unopened flower of ash plantain (*Alu-kehel muha*).
Bassia Longifolia seeds (*Mí eta*).

Pound well with kernel of coconut, and make into boluses of the size of a *nelli* fruit. DOSE.—One or two boluses twice a day.

I may mention here that the term *Atísára* signifies "too much purging", and is applied by Vedarálas both for diarrhœa and dysentery *Atísára* is divided into eight kinds of forms, which are :—

(1) Wátha Atísára—caused by deranged wind.
(2) Pita Atísára—caused by deranged bile.
(3) Kapha or Sem Atísára—caused by deranged phlegm.
(4) Wátha-pita Atísára—caused by deranged wind and bile.
(5) Sem-pita Atísára—caused by deranged bile and phlegm.
(6) Sem-wáyu Atísára—caused by deranged phlegm and wind.
(7) Baya Atísára—caused by fear.
(8) Sóka Atísára—caused by sorrow.

Rasa Prescriptions.

The following are some *Rasa* preparations for various diseases. They are composed of mineral ores, metals and natural salts, combined with

a greater or lesser number of vegetable drugs ; and the native medical men believe that by their union with the latter a new *Yóga* or therapeutical agent is produced having a most curative effect on the diseases for which they are administered. A good many of these are in the forms of pills and confections and comprise the stock preparations of Vedarálas, which they carry about for the treatment of emergency cases, such as convulsions, acute diarrhœa, cholera, etc., and are regarded as very efficacious.

I.	Nutmeg (*Sádikká*)	Kalan	1
	Borax (*Puskara*)	,,	1
	Mica (Sanskrit : *Abra*. Sinhalese : *Miniran*)	,,	1
	Datura Fastosa seeds (*Attana eta*)	,,	1
	Opium (*Abin*)	,,	2

The above drugs are to be well pounded in a mortar and reduced to a soft paste with the juice of Prœtera Fætæda, *ápasumadu*, and made into pills of the size of a chick pea. This pill is called *Játiphaládiya* pill and is said to cure all forms of dysentery at any stage. DOSE.—One or two (according to the age) dissolved in bees honey.

II. Take of :—

Cyperus Rotundus (*Kalánduru ala*).
Cinamomum Zeylanicum (*Kurundu potu*).
Ellataria Cardamomum (*Ensál*).
Borax (*Puskara*).
Assafœtida (*Perunkáyan*).
Mica (*Miniran*).
Mercury (*Rasadiya*).
Sulphur (*Gendagan*).
Impure Carbonate of Potash (*Sahinda lunu*).
Iron (*Yakada*).
Copper (*Tamba*).

Take one kalan each of the above and two kalans of black pepper. All these are to be boiled in goat milk or cream, and the expressed juice of Phyllanthus Emblica (*Nelli*). Make into boluses or large pills to the weight of one anna each. Cures all forms of dysentery and indigestion.

III. Take of :—

Nutmeg (*Sádikka*).
Cloves (*Karábu netti*).
Cinamomum Zeylanicus (*Kurundu potu*).
Cummin seeds (*Sududuru*).
Apolaxis Auriculata (*Tebu*).
Borax (*Puskara*).
Sulphur (*Gendagan*).

Take equal quantities of the above drugs, pound them to a paste, and macerate for three days in the fresh juice of each of the following leaves :—

Vitex Negandu (*Nika*).
Nyctanthes Arbor-tristis (*Sépáliká*).
Verbisinia Calendulacea (*Ranwan-kikirindi*).
Justicia Adatoda (*Ádátodá*).
Achyranthes Aspera (*Karal heba*).

Make into a pill mass. Pills are made to the weight of two grains and administered in doses of one or two pills in cases of continued severe fever and other ailments.

IV. Take equal parts of :—

Mercury (*Rasa diya*).
Sulphur (*Gendagan*).
Copper (*Thamba*).
Cinnabar (*Sádilingan*).
Orpiment (*Hiriyal*).
Iron (*Yakada*).
Tin (*Belek*).
Realgar (*Manósila*).
Mica (*Miniran*).
Red ochre (*Puskara*).
Borax (*Swasha lunu*).
Silver (*Ridi*).
Gold (*Ratran*).

Macerate for three days in the expressed juice or decoction (as the case may be) of :—

Citrus Acida of the variety called *Gonra*.
The leaves of Ocimum Sanctum (*Maduru talá*).
The root of Plumbago Zeylanica (*Rat nitul*).
The leaves of Cannabis Sativa (*Ganja*).
The leaves of Tamarindus Indica (*Siyambala*).

After macerating, pound well together and form pills, the size of chick peas.

This medicine is believed to cure all kinds of fevers.

V. Take of :—

Ghee	4 seers
Milk	16 ,,

One seer of paste obtained by grinding the following drugs on a stone :—

Barleria Cristata (white and yellow root) (*Katukarandu*).
Tinospora Cordifolia (*Rasakinda*).
Berberis Asiatica (*Rasadun*).
Vanda Roxburghii (*Aratta*).
Asparagus Racemosa (*Sátáwaria, Hátáwáriya.*)

Boil well till they assume the consistency of a *Ghritha*, and administer in cases of sterility, and women subject to miscarriages and early death of children, in short for all diseases of women. Dose.—Two drachms with honey in all cases of fever.

Prescriptions from "Wattoru" or Hand-books.

The following are a number of prescriptions which I have selected out of scores of prescriptions given in *At-pot* or "hand-books", used chiefly by up-country Vedarálas, or men not acquainted with the Sanskrit language, in which most of the old standard works on medicine are written. These books contain very little that is descriptive of diseases and their causes and are composed of numerous prescriptions for almost every known disease. Some of these I have personally found successful in practice. I have marked them with an asterisk, and I can testify to their usefulness from my own experience.

I. Stamens of Lotus flowers (*Nelum mal rénu*).
Kernel of mango seed (*Amba-eta mada*).
Mimosa Pudica (*Nidikumba*).

Take three *kalans* each of the above drugs, grind and reduce them to a fine paste, and administer it with "rice boiled water" to persons affected with biliousness or acute diarrhœa caused by indigestion.

II. Dregea Volubilis (Indian Ipecac ; Sinhalese : *Kirianguna*).
[1] Hæmedismus Indica or Inocarpus Fruitescens (*Iramusu*).
Dæmia Extensa—*Medahangu* (Tamil : *Vellapparitti*).
Sugar (*Sini*).
Bees honey (*Mi peni*).

Take equal parts of the above, grind them into a fine paste, and administer in cow milk to dysentery patients passing blood and mucus.

III. Stephania Hernandifolia (*Diyamitta*).
Tragia Involucrata (*Hin kahambiliya*).
Ginger (Zingiber officinalis *Inguru*):

Take four *kalans* of each of these and make a decoction in the usual way. Dose.—Half a tea cup twice a day.

IV. Aconitum Hetrophyllum (*Atiudayan*).
Semicarpus Ancardia (*Kottan*).
Solanum Jacquini (*Katu karósana*).

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[1] There are two varieties of *Iramusu*, white and black, *Ela* and *Kalu*.

Take six *kalans* of each of the above, eight *manas* of water, and make a decoction of a *manava*. DOSE.—Half a tea cup used in cases of acute diarrhœa.

V. (Three *Wargas* or *Katukas*) : Black pepper, long pepper and dry ginger.

Cuminum—Cyminum (*Sududurú*).
Nigella Sativa (*Kaludurú*).
Gum Benjim or Benzoine (*Gal mada*).
Terminalia-chebula (*Aralu*).
Aconitum Hetrophyllum (*Atiudayan*).
Acorus Calamus (*Wadakaha*).
Petreseluim Sativa (*Asamódagan*).
Bauhinia Racemosa (*Maila mal*).
Resin found underground (*Bin dummala*).

Take equal quantities of the above drugs, powder them well with rice flour, add some opium, which should be increased according to the age. If the patient be a habitual opium eater, the quantity should be equal to his usual allowance a day. This remedy is highly effective to cure dysentery attended with much griping.

The Following Prescriptions are for Broken Bones, &c. :

I. Allophyllus Cobbe (*Kobo kola*).
Mallotus Alba (*Búkenda kola*).
Tephrosia Purpuria (*Pila kola*).
Pothos Scandens (*Póta kolamul*).
Ipomæa Repens (*Bin tamburu*).
Asystasia Coromendeleana (*Puruk*).

Take equal quantities of the above drugs, pound them well, add some salt, and bind over the broken bone, after adjusting it to its proper position with leaves of Gymnema Sylvestris (*Masbedde kola*).

II. Euphorbia Tirucalli (*Navahandi*).

Pound a quantity of the above named drug with some scraped coconut, express the juice, and rub over the seat of the fracture. Pound again the refuse with the juice of the leaves of Fisus Religiosa (*Bó-kola*) and Asparagus Racemosa (*Hátawáriya*), and bind the mass over the seat of the fracture for thirty hours. Vedarálas say the bone will be united by that time.

III. Cassia Tora (*Ettora mul potu*).
Cassia Fistula leaves (*Ehela kola*).
Mustard seeds (*Aba eta*).
Gymnema Sylvestris (*Masbedda*).
Capparis Harida bark (*Wellangiríya potu*).

Take equal quantities of the above, pound well, and tie over the fractured bones to strengthen their union.

In these books are given numerous other formulæ for remedies, application of which is said to effect the union of broken bones. The following may be mentioned as one, which is highly recommended by " native surgeons " as calculated to effect the union of bone by the time rice is boiled.

Streblus Asper (*Geta nitol potu*).

Pound well the above, and tie over the fracture after adjusting the bones to their proper position. Keep it there "till rice is boiled".

The same direction I have seen given in respect of Holoptelea Integrifolia (*Goda kirilla*) or Hydrolea Zeylanica (*Diya kirilla*), I am not sure which, in an old *At-pot* I obtained from a native " specialist " in the Puttalam district, but I cannot bring myself to believe in the possibility of the union of broken bones in so short a period—about an hour and half the most. But I recollect when I was stationed at Tangalle a boy was brought to me with a simple fracture of both the bones of one of the forearms. I set them up in splints in the manner directed by Western surgeons, but I was surprised to see him running after some cattle about a week after, without the splints, and only a piece of cloth smeared with some medicinal oil wrapped round the arm. On enquiry he told me that after I had put up the arm in splints, his father took him to a native " specialist ", who took off the splints, tied a preparation of some kind for a few hours, and then gave him some medicinal oil to rub over the fracture. A similar case was mentioned to me by Dr. Kalenberg, of a a man who broke one of the collar bones. After his assistant had bandaged him, the dressing was removed and some medicine applied by a native specialist, and he saw the man two or three days later without any sign of a fracture.

The Following are Prescriptions to Prevent the Formation of Matter and Reduce Inflammatory Swelling of all kinds :—

I. Mercury (*Rasadiya*).
Cinnabar (*Sádilingan*).
Kernel of fruit of Entadi Scandens (*Puseta mada*).
Tamarindus Indica (*Siyambalá-eta mada*).
Ginger (*Inguru*).

Grind the above drugs into a fine paste with the juice of bitter orange, mix it with the juice of Trabernæmontana Coronaria (*Divi kaduru*)fruit, and apply over the threatened abscess. The swelling will disappear at once.

II. Kernel of Abrus Precatorius seeds (*Olinda-eta mada*).
Boiled lime (*Kana hunu*).

Grind the above with the juice of bitter orange and apply over the affected parts.

III. Anisomelis Ovata (*Yak-wanassa*).
Crotolaria Laprofolia (*Yak-beriya*).
Turmeric (*Amu-kaha*).
Scraped coconut (*Gápu pol*).

Pound these well or cut into very small pieces, make a *mellun*, and apply over the affected part.

IV. Gum of Canariun Zeylanica (*Kekuna meliyan*).
Gum of Dipterocarpus Zeylanica (*Hora meliyan*).
Cidrus Deodora (*Dévadára*).
Sulphate of Copper (*Palmánikkam*).
Garcinia Morella : the dried fruit (*Parana goraka*).
Cinnabar (*Sádilingan*).
Chloride of Ammonium (*Navasaram*).
Marseilea quadrifolia (*Sárana mul*).
Ginger (*Inguru*).

Grind the above named ingredients to a fine paste with the five kinds of oil, [1] smear on a piece of cloth and apply over the affected parts : It will prevent the formation of matter and relieve pains of any sort confined to a limited area. All these remedies act as powerful Anaplogistics.

* V. Kernel of Entada Scandens (*Puseta mada*).
Oryza Sativa (*Hínati hál*).
Ophelia Chiratta (*Bin kohomba*).
Resin found underground (*Bin dummella*).
Gum of Odina Woodier (*Hik meliyan*).
Earth thrown up by worms (*Geri pas*).

Take equal parts and grind them into a paste with white of the egg, and apply over the incipient boil or abscess.

VI. Terminalia Chebula (*Aralu*).
Moringa Pterygosperma (*Murunga*).
Cinamomum Zeylanicum (*Kurundu potu*).
Ginger (*Inguru*).
Impure Carbonate of Potash (*Sahinda lunu*).

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1 The five kinds of oil are :—*Mi* (Bassia Longifolia), *Talatel* (Sesamum oil), castor oil, ghee and *Kohombatel* (Margosa oil).

Take equal quantities of the above and grind into a fine paste with cow's urine, and apply over the affected parts.

VII. Plumbago Rosea (*Rat mal*).
Sulphur (*Gendagan*).
Semicarpus Gardneri (*Badulla eta*).
Adatoda Vesua (*Ádatóda*).
Ficus Religiosa bark (*Bó-potu*).
Cearus Diodora (*Dévadára*).

Take equal parts of the above, grind them into a fine paste with cow's urine, and apply over the affected parts.

VIII. Kæmpferia Rotunda (*Saw-kenda*).
Oryza Sativa (*Hínati hál*).
Resin found underground (*Bin dummella*).
Odina Woodier (*Hik meliyan*).

Take equal parts of the above, grind down into a paste and apply over the affected parts.

* IX. Brick dust (*Gadol kudu*).
Odina Woodier (*Hik-meliyan*).
Leaf juice of Alœ Vulgaris (*Kómárika*).

Take equal parts, mix into a paste, and apply over the affected parts.

X. Kernel of Castor oil seed (*Endaru eta mada*).
Nigella Sativa (*Kaluduru*).
White Cumin (*Sududurú*).
Allium Sativum (*Sudu lúnu*).

Roast the above, adding soot (*Vian dumbulu*), and grind them into a paste with bitter orange juice and apply over the affected parts.

XI. Terminalia Chebula (*Aralu*).
Seeds of Pterygosperma Moringa (*Murunga eta*).
Calotropus Gigantica (*Warád-mul-potu*).
Alattaria Cardamomum (*Ensál*).
Dry ginger.
Impure Carbonate of Potash (*Sahinda lunu*).

Grind into a paste with cow's urine and apply over the affected parts.

For the Cure of Ring Worm—(*Dada*).

I. Cassia Tora (*Tóra eta*).
Sulphate of Copper (*Palmánikkam*).

Take equal parts and grind well, add to this orpiment, the weight of two *maditiya* seeds, and make a fine paste with the addition of lime juice. This cures ring worm readily.

II. Nephenthes Distillatus (*Bándurá dalu*).
Mustard seed (*Aba eta*).

Grind the above and apply to warts and ring worm patches.

Prescriptions for the Cure of Contusions.

I. Bark of Macranga Tomentosa (*Kenda*).
Bark of Moringa Citrifolia (*Ahu*).
Bark of mango.

Take the juice, boil and rub over the contused part, and apply a *pattu* of *Kelinda* and *Hínati hál.*

II. Red Sandalwood (*Rat handun*).
Terminalia Chebula (*Aralu*).
Alum (*Sínakkáram*),
Alœ (*Kómariká*).

Make into a fine paste with lime juice, place over a heated iron plate, and rub over the affected parts. Some Vedarálas add to this *Kómariká* leaf pulp. This is a domestic remedy for all injuries with unbroken skin, even for sore eyes at the start. It is in that case rubbed round over the eye. It is also a capital remedy for black eye.

DOMESTIC REMEDIES.

For Bites of Bees, Wasps and Hornets.

The expressed juice of the leaves Bassila Rubra (*Niviti*) or Heliotroperm Indicum (*Et setiriya* or *Et honda*). Apply over the bites and the pain and burning will cease immediately.

For Burns.

Apply honey or treacle at once. It alleviates the pain and prevents the formation of blisters. (*Vide* remarks under honey)

In case of hæmorrhage from wounds, the wound should first be laved with the expressed juice of the tender leaves of Croton Polyandrum (*Keppitiya kola*) and then bandaged with the smashed leaves of the same. Hæmorrhage will cease, and the wound will heal without suppuration.

For Malignant Boils.

A plaster of the paste obtained by rubbing the bark of Melia Azara dicht (*Kohomba potu*) on a stone with water should be applied over the abscess and covered with a leaf of Datura Faustosa (*Attana*).

Three or four applications will disperse the boil without suppuration.

For Chronic Fever.

One *tólá* of the expressed juice of Ocymum Sanctum (*Madurutalá*) to be taken every morning. It is said to be very efficacious in cases of chronic fever, dysentery, hæmorrhage and dyspepsia.

Another remedy for chronic fever is an infusion or decoction of Evolvulous Alsimoides (*Vishnukránti*). DOSE.—About half a tea cup every morning.

For Hiccup.

An infusion, cold or boiled, of Lepodium Sativum (the common cress) should be given to drink. It is said to be very efficacious.

For Headache.

The expressed juice of the leaves of Cleome Viscosa with salt should be applied to the forehead.

In cases of Obstinate Headache.

I. Make a plaster with—

Cinnamomum Zeylanica bark (*Kurundu potu*).
Leaves of Cinnamomum Tammala (*Dawul kurundu*).
Fruits of Pterygosperma Suburifolium (*Velanga*).
Seeds of Cleome Viscosa (*Wal-aba*).
Mustard seed (*Aba*).
Black pepper (*Gammiris*).
Nigella Sativa (*Kaluduru*).

Take these in equal parts, pounded well with the expressed juice of Cleome Viscosa (*Wal-aba*) leaves, and apply to the forehead.

II. Make a paste with Nigella Sativa (*Kaluduru*) and the juice of Euphorbia Sativa (*Navahandi*), and apply over the forehead.

For Baldness.

Tender leaves of Tragia Involucarata (*Kahambiliya*) should be rubbed for several days, morning and evening ; it is said to have beneficial results.

APPENDIX F.

NATIVE WEIGHTS AND MEASURES.

3	Tala-eta	(තල ඇට)	= 1	Amu-eta	(අමු ඇට)
3	Amu-eta	(අමු ඇට)	= 1	Ví-eta	(වී ඇට)
4	Ví-eta	(වී ඇට)	= 1	Olinda-eta	(ඔලිඳ.ඇට)
2	*Olinda-eta	(ඔලිඳ ඇට)	= 1	Maditiya-eta	(මදවිය ඇට)
20	Ví-eta	(වී ඇට)	= 1	Ak	(අක්)
8	Ak	(අක්)	= 1	Kalan	(කලන්)
20	Maditiya-eta	(මදවිය ඇට)	= 1	Kalan	(කලන්)
3	Kalan	(කලන්)	= 1	Huna	(හුන)
4	Huna	(හුන)	= 1	Palam	(පලම්)
2	Palam	(පලම්)	= 1	Kula dul	(කුල දුල්)
2	Kula dul	(කුල දුල්)	= 1	Patá	(පතා)
4	Patá	(පතා)	= 1	Nedumba	(නැඹුම)
2	Maná	(මන:)	= 1	Neliya	(නැළිය)
4	Neli	(නැළි)	= 1	Lás	(ලාස්)
4	Lás	(ලාස්)	= 1	Dróne	(ද්‍රෝණ)
2	Dróne	(ද්‍රෝණ)	= 1	Surpá	(සුර්පා)
2	Surpá	(සුර්පා)	= 1	Vaha	(වහ)
4	Vaha	(වහ)	= 1	Bara	(බෙරෙ)
100	Palam	(පලම්)	= 1	Tuláwa	(තුලාව)
8	„	(පලම්)	= 1	Lb.	(රාත්තල්)
560	Lbs.	(රාත්තල්)	= 1	Párama	(පාරම)

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* One seed of Abrus Pictorius (*Olinda eta*) is equal to one and seven-eights, $1\frac{7}{8}$ grains of Troy weight.

One seed of Adnanthera Pavonina (*Madatiya eta*) equals $3\frac{3}{4}$ grains.

One *Kalan* (20 *Maditiya eta*) equals seventy-five grains.

12 *Kalans* equal one *Palama*.

One pound equals very nearly 8 *Palams* or exactly $7\frac{7}{8}$ *Palams*.

Native medical men in Bengal commonly use one *Tólá* as the unit.

One *Tólá* weighs exactly 180 grains or one silver Rupee.

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view of these ancient worthies proved almost fatal to the advancement of native medical science. Later incursionists into these domains became so obsessed with this idea of the infallibility of the older masters, that they feared to add or alter one jot or tittle of what had already been laid down by their god-like predecessors. All further inquiry into the causation of diseases and their pathology seemed therefore impious, and as a result the findings of the older ones became as it were articles of faith with the later writers, which were accepted without dissent and to the obvious detriment of the cause of medical science.

The author partly with a desire to remedy these drawbacks and partly to afford Western practitioners of medicine in Ceylon a convenient and ready means of gaining a knowledge of the drugs used by native Vedaralas and their methods of treating diseases undertook the preparation of this treatise.

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