

# LORIS



COOKE

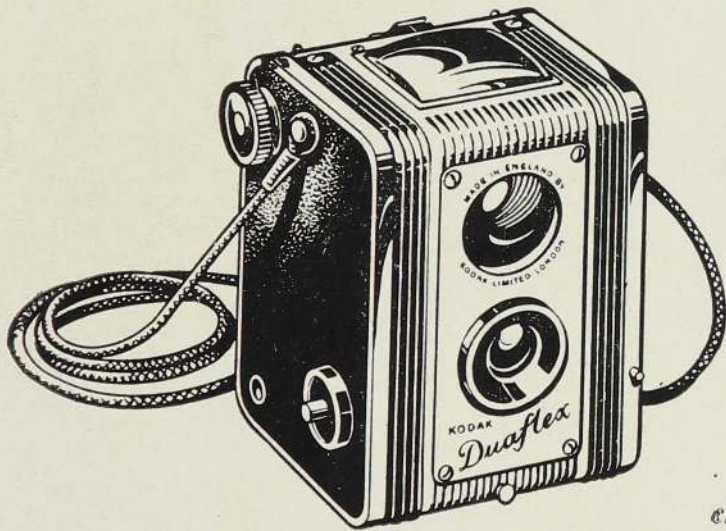
Digitized by Noolaham Foundation  
noolaham.org | aavaraham.org

Lovely pictures are  
easy to get...

with a **'KODAK'** camera

**KODAK 'DUAFLEX' Camera**

—a good-looking, reliable camera with a large viewfinder to help you see your picture clearly before you 'snap'. Takes 12 pictures  $2\frac{1}{4} \times 2\frac{1}{4}$  inches on 'Kodak' film size 620. With the accessory Kodak 'Duaflex' Flashholder attached, you can take pictures indoors and at night as easily as during the day-time.



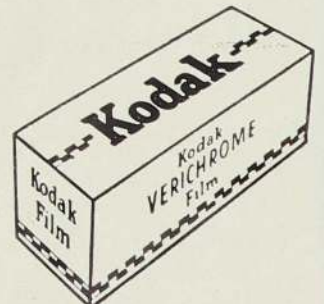
**'BROWNIE' REFLEX Camera**

This model has a big clear viewfinder almost the same size as the pictures it takes— $1\frac{5}{8} \times 1\frac{1}{8}$  inches. It is a stylish, robust camera—fitted with flash contacts to accommodate the 'Kodak' Flashholder, Type B. With this accessory attached you are all set for taking pictures indoors and at night. The camera takes 12 pictures on 'Kodak' film size 127.

... and to make the most of your picture-taking chances, remember to load your camera with

**KODAK film**

*It helps to get sparkling, life-like pictures.*



'KODAK' and 'BROWNIE' are registered trade-marks

**MILLERS LTD**  
SOLE KODAK WHOLESALE DISTRIBUTORS  
**IN CEYLON**

# LORIS

Vol. vii

June, 1955

No. 1

## CONTENTS

	Page
GLEANINGS FROM THE ADMINISTRATION REPORT OF THE WARDEN by <i>C. W. Nicholas—May, 1954</i> ... ..	1
WILPATTU SCHEME IS INAUGURATED ( <i>Morning Times</i> ) ... ..	11
DOWN THE MAHAWELI GANGA by <i>Philip K. Crowe</i> ... ..	12
MAHAWELI BOATMAN'S SONG by <i>R. L. Spittel</i> ... ..	22
THE DEVIL IS A BIRD by <i>Peter Van Reyk</i> ( <i>Sunday Observer</i> ) ... ..	23
SPORTING ARCADIA OF CEYLON by "J. W." ( <i>Times of Ceylon Sunday Illustrated</i> , 1927) ... ..	25
PEACOCKS, PARTRIDGES AND PIGS by <i>Philip K. Crowe</i> ... ..	26
THE RUFOUS TURTLE-DOVE IN CEYLON by <i>W. W. A. Phillips</i> ... ..	29
AN ALBINO INDIAN PIPIT IN THE RUHUNA NATIONAL PARK by <i>W. W. A.</i> <i>Phillips</i> ... ..	32
PLOVERS by <i>C. E. Norris</i> ... ..	33
SNIPE SHOOTING by "D. D." ( <i>Pioneer</i> old number) ... ..	36
FISH BREEDING IN THE GAL OYA VALLEY by <i>R. W. Szechowycz</i> ... ..	37
TILARPE by <i>David Weinman</i> (Letter) ... ..	41
THE BURNING OF THE PATANAS (Extract, Report of Nuwara Eliya District Agri- cultural Committee, 11th December, 1954) ... ..	42
RAIN FOREST by <i>Lincoln Barnett</i> ... ..	44
THE ORCHID-MANTIS by <i>W. W. A. Phillips</i> ... ..	45
PRESERVATION OF ARCTIC ANIMALS ( <i>London Times</i> ) ... ..	46
OBITUARY :—	
A. J. Wickwar—An Appreciation by <i>W. W. A. P.</i> ... ..	47
M. L. Wilkins—A Planter ... ..	48
A. C. Tutein-Nolthenius—(Tribute in <i>Oryx</i> ) ... ..	50
BOOK REVIEWS :—	
"The Temple Tiger and More Man-eaters of Kumaon" by <i>Jim Corbett</i> ( <i>C. E.</i> <i>Norris</i> ) ... ..	50
"Sport is Where You Find It" by <i>Philip K. Crowe</i> ( <i>W. W. A. P.</i> ) ... ..	51
SNIPPETS :—	
Elephants in the Gal Oya Valley (I, II and III) ... ..	52
Elephants in China Bay (I and II) ... ..	53
Stag Hunt with Hounds (I and II) ... ..	55
Execution of a Crow ... ..	56
Fight Between Swan and Cormorant ... ..	56
Evicted Birds Pay Rent ... ..	56
Seal and Dog in River Drama... ..	56
Otters ... ..	57
They Would Have Their Little Joke ... ..	57
Batticaloa Graves—Gordon Cumming ... ..	57
CORRESPONDENCE :—	
"Don't Mutilate Your Cartridges" by <i>A. M. M. Davies</i> ... ..	58
"Freshwater Eels" by <i>J. A. Martensz</i> ... ..	58
"Fantail Snipe" by "Gallinago" ... ..	60
"Honorary Game Wardens" by <i>A. M. M. Davies</i> ... ..	60
ANNOUNCEMENT.—Index to Vol. 6 ... ..	61

# Wild Life Protection Society of Ceylon

FOUNDED 1894

---

The objects for which the Society was formed were—

“ To prevent the elimination of game in Ceylon by destruction of animals for trading purposes, to further the interests of legitimate sport, and to conserve one of the food supplies of the inhabitants.”

At the Annual General Meeting held on 30th November, 1945, the Rules were revised, and the objects of the Society now are—

- (1) To prevent the progressive destruction of species of wild animals and wherever possible to preserve wild life intact in natural conditions in Ceylon.
  - (2) To continue the tradition of the Society in furthering the interests of legitimate sport.
  - (3) To promote an interest in the life histories of all forms of animal life and to co-operate with other Societies and Institutions which have similar aims and objects.
- 

*The Subscription to the Society is Rs. 10 annually, payable on the 1st October.*

*All members, whose subscriptions are not in arrears, receive a copy of each number of the Society's Magazine, "LORIS," which is issued bi-annually in June and December. Further copies may be had at Rs. 3-50 each, at which price copies are also available to the general public.*

*Persons wishing to join the Society, or desirous of obtaining further particulars, should apply to the Hony. Secretary, Mr. C. E. Norris, Pingarawa Estate, Namunukula.*

# LORIS

## A JOURNAL OF CEYLON WILD LIFE

*Published by the Wild Life Protection Society of Ceylon.*

*Literary contributions* should be sent to the Editor, MR. R. L. SPITTEL, WYCHERLEY, BULLER'S ROAD, COLOMBO.

Articles are invited not only from members of the Society but also from the general public interested in Wild Life.

All manuscripts should be typed with double spacing and on one side of the paper only.

Matters relating to *Membership* and *Subscriptions* should be

addressed to MR. C. E. NORRIS, PINGARAWA ESTATE, NAMUNUKULA.

### Advertisement Rates.

Rs. 75 full page.

Rs. 40 half page.

*All Enquiries regarding Advertising* should be made to Mr. Gorton Coombe, Hony. Treasurer, W.L.P.S., Poonagalla Group, Bandara-wela.

# Gleanings from the 1954 Administration Report of the Warden

By C. W. NICHOLAS

The areas of the Strict Natural Reserves, National Parks and Intermediate Zones remained statutorily unchanged at 272.8, 264.9 and 487.2 square miles respectively. For all practical purposes, however, the Vettikachchi Intermediate Zone has lost nearly half its area of 126 square miles to agricultural and village expansion schemes. Surrenders of patna land from the Hakgala Strict Natural Reserve for agricultural grazing and re-forestation purposes have not yet been formally declared. New irrigation projects are under investigation in the northern and southern sectors of the Wilpattu East Intermediate Zone, and if these projects eventually receive approval fairly large excisions from that zone will become necessary and the limits of the irrigable lands will run close to the boundary of the National Park.

(Subsequent developments appear at page 241 of *Loris* of December, 1954, Vol. VI., No. 6, and in the present number.—*Ed.*)

### Strict Natural Reserves

**Yala Strict Natural Reserve.**—A rough census was taken of the number of pilgrims who travelled through the Yala Strict Natural Reserve on their way to and from Kataragama during the main pilgrimage in July and August. The number was about 2,700. It had been

observed that since 1950 fewer pilgrims were using this route every year. The great majority have taken to travelling by bus. Financial provision was not made in the Estimates for 1953-54 for the new pilgrim route from Panama along the northern boundaries of the Yala Intermediate Zones. This deviation will have to await better times.

A Brown Bear was reported to have been seen at close quarters by the Katagamuwa staff, but this solitary observation does not, although the observers are reliable, establish the existence of this species. An albino Sloth Bear, with nearly the whole of the head and neck white, was also seen.

The 1953 drought in the Yala Strict Natural Reserve was very severe. In September, the only fresh water in the 20-mile stretch between the Menik Ganga and the Kumbukkan Oya was in the rock water-hole at Walaskema. The two rivers did not run dry at any stage and the great assemblage of animals along their banks was very impressive. In the area between the rivers, the great plains of Potana, Pillinawa and Gajabawa were practically deserted but many animals remained behind and drank the brackish water retained in the lower reaches of the Katupila Ara and the backwater which runs into Agara Eliya. The famed water-hole,

Ketagalwala, was completely dry. The drought broke with a fall of 5 inches of rain between October 10 and 18.

Some interest was aroused by the reported discovery of a herd of Sinhala wild cattle in the Ruhuna National Park. In point of fact, there is not and never has been a herd of wild cattle in the Park although an occasional adult, unbranded animal and calves born in the Park may be seen. But there was a herd of cattle gone wild in the Yala Strict Natural Reserve and the history of that herd is as follows. The late Mr. Engelbrecht, then the Guardian of the Yala Sanctuary, had a herd of 7 cows and 8 bulls at Yala. All these were local cattle, of different colours, purchased by him at Tissamaharama and Kumuna. The 8 bulls drew the two large waggons in which Mr. Engelbrecht was accustomed to travel. The original 15 increased to 28 at Yala. Then Mr. Engelbrecht moved from Yala to Wirawila some time before his death, taking only the 8 cart bulls with him. On his death, the herd of about 20 cattle left behind at Yala ceased to be cared for and strayed into the Strict Natural Reserve across the river. They gradually turned wilder and wilder, running away on the approach of men, and increased to a maximum of around 35 head about 1937. Thereafter they began to decline in number owing to the depredations of leopards and, at the present time, only 4 are left, 3 bulls and 1 cow. Two of the bulls are black, one brown and one greyish-brown, and the cow is brown. All are full-grown and have large humps: their horns about 9 inches long and curved forwards. They are usually to be seen at Pillinawa or Potana.

**Wasgomuwa Strict Natural Reserve.**—In 1952, the whole of the Wasgomuwa Strict Natural Reserve, except for the Sudukanda range, which runs through it on the west and rises to a height of over 1,500 feet, and its north-western corner, was systematically explored. No elephants were seen and the populations of other

animals in the extensive park country were found to be comparatively small.

Opportunity was taken to collect specimens of the grasses in the park lands and these were very kindly identified and reported upon by the Assistant Research Officer, Maha Illupallama. The predominant grass is an *Andropogon* which is not good fodder, but inextensive and isolated patches of good fodder grasses were found in some of the parks, and it was in these parks that the largest herds of deer were seen.

### National Parks

Several notice boards have been erected in the National Parks, and the watchers accompanying visitors also carry printed notices, enjoining visitors (i) to keep to the roads, (ii) not to leave their vehicles, and (iii) to avoid all noise. Sportsmen who have acquired their knowledge of Wild Life only by the hunting and shooting of animals, and people unfamiliar with conditions in National Parks find it difficult to comprehend the notable difference in the reaction of the majority of wild animals to men in motor cars and men on foot. In the unprotected areas where shooting from motor vehicles is indulged in, the animals flee from motor cars as readily as they flee from the sight of men on foot. But in the National Parks, where hundreds of cars have passed and re-passed the animals since 1938, without injury or danger to them, the animals have ceased to exhibit alarm at the spectacle of a motor vehicle unless the occupants make themselves heard or the vehicle is a noisy one. Ceylon experience in this respect is in accord with experience in National Parks elsewhere. The ban on walking in the Parks is not an impediment to photography. All photography in the great National Parks in Africa must be done from vehicles and recent publications, such as "Sanctuary" and "Animals in Africa," of photographs taken in that way are outstanding in the field of Wild Life photography.

Motorable roads are essential in National Parks to make the Parks accessible to visitors

of all classes, the traveller by bus as well as the motorist. Without motorable roads they would be accessible only to the few who own specialized vehicles with 4-wheel drive, and they would not then be national institutions but the pleasuring grounds of the rich and leisured class. Colonel Stevenson-Hamilton, Warden of the Kruger National Park from its inception for 20 years, in his stimulating book, "South African Eden," remarks most truly that "to secure permanence, or relative permanence, National Parks must be popularized: made attractive to the visiting public." This means constructing motorable roads, building adequate and comfortable accommodation for visitors and providing the essential amenities of modern civilized life. One can do all this on a large scale, without going to the extent of dance halls and tennis courts, and still keep the Parks wild. Reviewing the factors which have contributed towards the world-wide popularity and fame of the Kruger National Park, Colonel Stevenson-Hamilton unhesitatingly puts first its motorability. Propaganda has its uses but nothing is more conducive to the creation of interest in wild life than a visit to a National Park. Wild Life protection is not a matter of legislation only: laws have no perpetuity. The perpetuation of Wild Life Reserves can be ensured only by widespread public interest in their preservation and by the assurance of strong public opposition to every attempt to unreserve them: public interest in the National Parks can be stimulated only by making them easily accessible and traversable, and encouraging all sections of the population to visit them.

Roads serve other valuable purposes. They are vital to the protection of the Parks. In every form of detective and preventive activity, mobility and the element of surprise are the main factors which aid detection. A Ranger without a motor vehicle is impotent against poachers: if they get a start on him, as they usually do, he certainly cannot overtake them on foot. It is also a well known fact that

poachers avoid the proximity of roads. This is natural. In Wilpattu, all the 26 old poaching sites discovered were water-holes or Villus to which no roads led. In these places the poachers were able to camp and shoot in safety. Now, Jeep roads run to every potential poaching site and are regularly used by the staff on patrol, and poaching has come to an end. Roads are also essential for the transport of men, materials and supplies to places where works of improvement, such as restoration of tanks and water-holes and building construction, are being carried out.

**Ruhuna National Park.**—The failure of the North-East Monsoon in 1952-53 was not so pronounced in the Ruhuna National Park as in Wilpattu. From October to December the rainfall was below the average for this period by  $5\frac{1}{4}$  inches. But this shortfall was fully made up by heavy rains in January and February. In March and April the rainfall, in terms of inches, was normal, but the precipitation was over 3 days in March and 2 days in April, with long periods of fine, dry weather intervening. Under such conditions the evaporation and dryage are much more considerable than under conditions of evenly spaced rainy days. The drought began in May with a deficiency of water. There was no rain at all in that month.  $1\frac{1}{2}$  inches of rain fell in 3 days early in June but by the end of June the situation was serious and causing anxiety. Then the most unusual occurrence took place of a fall of  $5\frac{3}{4}$  inches of rain in July. This saved the situation, but only just, because before the first inter-monsoonal rains came early in September, all tanks and water-holes were dry except Palatupana and Wilapalawewa tanks and Siyambalagaswala and Deberagaswala water-holes restored in 1952. Happily, the Menik Ganga did not go completely dry, although it ceased to flow for some days in August. The North-East Monsoon rains of 1953-54, from October to December, measured 15.89 inches, a deficit of 3 inches.

Stray cattle, both buffaloes and neat cattle,

are an ever-present eye-sore in the Ruhuna National Park. So long as cattle grazing is permitted by the competent authority up to the boundary of the Park along its western side, straying of the cattle across the boundary into the Park must inevitably take place : and now that the water-supplies in the Park have been improved, the tendency is increasing for the stray cattle to take up permanent residence within it. The cattle cannot be captured or driven out without stampeding them and causing serious disturbance and alarm to the wild animals. Driving has been tried in certain localities near the boundary under conditions not prejudicial to the wild animals, but the cattle are found in the Park again after a day or two. The consumption of food and water in the Park by stray cattle reduces the maximum utilization which Wild Life could make of these essential supplies. When the cattle are brought to Palatupana for grazing, after having worked on the fields, they are in an emaciated condition and highly susceptible to disease. Twice in the past they have been the source of epidemic attacks of rinderpest and foot-and-mouth disease which afflicted the wild animals.

Elephants are the principal attraction in the Ruhuna National Park. In dry weather they are frequently seen on the plains feeding on the grass : when the ground is wet and the grass cannot be detached without bringing away with it clods of wet sand and earth, elephants feed mainly in the forest. Tuskers are a rarity, although in May three tuskers were seen on one evening in the Yala area. The largest herd in the Park numbers, 29, but it is rarely seen by day far removed from its main habitat, the Akasa Cetiya forest. Small herds of 4 to 10 elephants are fairly often observed. Most commonly seen by visitors are lone, bull elephants of whom there are at least 25 in the Park. On different occasions, two or three of these lone elephants have turned definitely aggressive towards vehicles as well as the staff travelling on foot. All male elephants, wild or tame, in good health go through a period of " must "

every year for 2 to 3 weeks. During this period they are of uncertain temper and some become definitely dangerous. But " must " has not been the cause of all the aggressiveness experienced in the Park. In more than one case, the animal by the road-side has been irritated by being repeatedly shouted or jeered at by the occupants of passing vehicles, the principal offenders being unescorted parties of labourers in vans : its violent reactions to this annoyance have been directed, unfortunately, against inoffending vehicles which passed later. An interesting natural development in elephant behaviour in the Park, increasingly conspicuous, during the last three years, particularly among lone elephants, has been the partial abandonment of nocturnalism. Both in the wet and the dry seasons, elephants may be encountered, feeding or drinking or moving about, at all hours of the day except, perhaps, between 1 p.m. and 3 p.m. Their lying-up places are usually in very close proximity to their feeding grounds. In the unprotected areas outside the Reserves, elephants begin to move off to their lying-up places, some miles within the forest, before dawn, and are rarely seen in the vicinity of human habitation or of the roads before nightfall.

Sambhur are gregarious in certain favoured localities, notably the coastal stretch from Uraniya to Patanangala. From the Buttawa rock they may often be seen, with the aid of field glasses, feeding or lying down on the dunes in numbers up to 15 and more together. Two albino pigs, both boars, were observed at Yala and Wilapalawewa, one alone and the other in a sounder. During the drought the spotted deer left the waterless Buttawa plain for the proximity of the Menik Ganga. Large numbers of spotted deer from Silawa, Jamburagala and other adjacent areas concentrated at Wilapalawewa, the only source of water, during August and September. Along the Yala-Katagamuwa road, which runs parallel to the river and around Katagamuwa tank, the assemblage of animals during the drought was exceedingly large. Leopards are occasionally seen in the Park ; bears very rarely.



**Wilpattu National Park.** went through a drought of exceptional severity, unprecedented in living memory, during 1953. The North-east Monsoon failed. The rainfall in the 3 months, October to December, 1952, was only 14.3 inches, nearly 40 per cent. below average. The year 1953 opened with the tanks, villus and water-holes less than half full. January and February rains were normal, but made no impression. March was a dry month with only two days of heavy rain, and the water position deteriorated. Then  $6\frac{1}{2}$  inches of rain fell in the 4 days April 6 to 9, but the ground was very dry and absorbed most of the water: the water level in the tanks, villus and water-holes increased slightly but was far below what it should be in that month. The Maradanmaduwa tank was a muddy pool. Thereafter, no rain fell from April 29 till July 4, a period of 66 days, and the position became desperate. Kumbuk Wila, which had never been known to go dry, contained no water on May 18. One by one the 26 Villus went dry: on June 10, only the 2 salt lakes, Kokkare Villu and Lunuwila, held water. The animals were reduced to dire straits. Fresh water could be obtained only by digging in the dry beds of a few of the Villus. The staff of the Park helped out the animals in this task by excavating holes in the beds of Kali Villu, Kudapatessa Wila, Nelun Wila and Maradanmaduwa tank, and keeping these holes going so long as the water-supply lasted. Animals in large numbers drank the salt water in Kokkare Villu and Lunuwila. But these 2 lakes proved to be death traps, because the area between the shore and the shrunken water-line became a deep, sticky mass of congealed mud: the effort of getting to or returning from the water proved too much for the weakest of the weakened animals and several of them perished in the mud. The staff hauled many animals, including buffaloes, to the shore with the aid of ropes, but most of them did not survive. In July there was a rainfall of  $2\frac{1}{2}$  inches spaced over 6 days and for 2 weeks there was some slight abatement of the

drought conditions. Then, once again, 46 days passed without further rain and the former desperate situation was resumed. The maximum temperature in the shade was  $96^{\circ}$  to  $100^{\circ}$ . A well was sunk at Maradanmaduwa but no water was reached at 33 feet. Drinking water for the Ranger and his staff, who remained at their posts and went out daily to the succour of the animals, was transported by Jeep from a rock water-hole 2 miles away: no animal could descend the vertical rock face of this hole to reach the water. Bears walked in the compound of the Maradanmaduwa bungalow and even attempted to enter the buildings in their search for water. When the water in Maradanmaduwa tank was running very low, a fascinating spectacle was that of 60 to 80 sambhur drinking there every day in day-light in addition to bears, leopards and numbers of spotted deer and pigs. Elephants came to the tank once, found the water too muddy and never returned.

The carcasses of animals, found by the staff, which had died of thirst or by being bogged in the salt Villus from weakness brought on by thirst, amounted to: sambhur, 35; buffaloes, 12.

In 5 attacks made by bears on various members of the Wilpattu staff while they were on patrol, shooting in self-defence had to be restored to at point-blank ranges. In one case the bear was killed and in three others the shot turned the animal, but in the fifth case the bear fell to the shot, came again, and sent two men to hospital. In this last case the injured men had to walk 17 miles, then take bus to Mannar and finally travel by train to Anuradhapura Hospital. One man nearly died of gangrene.

The White Doe of Wilpattu is now 4 years old. She dropped a fawn, her first, on November 25. The fawn had a very light, golden brown head, and pure white neck, limbs and body. Those who saw the two together and the playful gambolling of the active little fawn will not forget it. On the morning of December 12, the fawn was reported missing. In-

tensive search was at once carried out by the whole staff but the fawn was not found. On December 14, the droppings either of a crocodile or a leopard, containing white hairs, a small hoof and small bones, were found at Timbiri Wila and these were sent to Professor C. A. McGaughey at Peradeniya for examination. There is no doubt that the fawn was killed and eaten by a carnivorous animal and much as its death is regretted, most so by the staff, it was not a preventable occurrence.

Elephants are still a rarity in Wilpattu but more of them are taking refuge there and the population now is about 30. In the area of the Villus they are very seldom seen. Their principal habitat is along the Moderagam Aru and around Makalanmaduwa in the south. They rarely move into the central part of the Park but their old well beaten tracks, made when their numbers were much more numerous, are still there. The losses to the buffalo and sambhur populations caused by drought conditions were about 10 per cent. in each case. The number of spotted deer in the Park is estimated at 3,000. The largest herd consists of about 70 individuals. The bear population is considerably larger than in the Ruhuna Park and is probably not less than 250. Leopards, also, are more frequently seen in Wilpattu than in Ruhuna, and probably number about 75. One leopard at Timbiri Wila, prevented from making a successful stalk of a sambhur fawn by the accidental emergence from the jungle of Ranger C. S. Wickremasinghe and Watcher Malhamy, charged towards the officers for a short distance and then turned off into cover. They followed and had to face a second and much more determined charge, the leopard snarling and lashing its tail, but by standing their ground and shouting loudly they were able to turn the leopard when he was within a few feet of them. This animal, recognizable by his large head, was at various times later deliberately approached, rifle in hand, to see whether he would repeat his aggressive behaviour, in which case the

orders were that he was to be destroyed. But he was docile enough and ran away each time. Finally, he was approached and photographed by Ranger Wickremasinghe when he was lying fast asleep in the open. The population of pigs is not so high as was first estimated and should be reduced to about 700. On the other hand, the number of peafowl was underestimated and the revised figure is 200. Peafowl are not found everywhere as in the Ruhuna Park but are scattered in widely separated localities.

The flowering and seeding of *Nelu* (not *Nilu* or *Nillu*, as it has been spelt elsewhere) of the dry zone species (*Stenosiphonium cordifolium*) was extensive both in the Wilpattu Reserves and in the Yala North Intermediate Zone from December, 1952, to March, 1953. Specimens were collected and identified. This species flowers once in 7 years. The Up-country *Nelu* (*Strobilanthes*, of which there are 28 or more sub-species) flowers once in 12 years. The buds appear in July-August, the flowers in October-December and the seeding goes on from January to April. It is during the seeding that the birds, including Jungle Fowl from the lowlands, arrive in large numbers. The 6-mile stretch of *Nelu* near World's End on the Horton Plains flowered towards the end of 1953. A flowering around the 4th mile on the Blackpool-Ambawela road is due in 1954-55. Thereafter, no flowering will take place Up-country till 1958-59.

### The Intermediate Zones

**Yala East Intermediate Zone.**—This is the most popular of the Intermediate Zones, and it is beginning to show signs of having been over-shot during the past 5 years. But it still contains the largest animal population of all the Intermediate Zones. The public highway through it to the village of Kumuna impairs the security of the Reserve. And, as time goes on, it must give up more and more land for village expansion. There is very strong suspicion that some men of Kumuna, joined by

outsiders, shot crocodiles on two occasions in the Strict Natural Reserve and in the Kumbukkan Oya.

**Yala North Intermediate Zone.**—This Zone consists of 3 Blocks, Galge, Warahana and Talaguruhela. A second expedition to reach Talaguruhela was organized in June. The first in 1951, failed: the second, led by Ranger G. N. Q. de Silva, reached its destination and explored the surrounding country. The party spent 7 days on the journey and the route taken was along the boundary from Rugamtota to Lunuatugalge and thence cross-country by compass bearing to the Talaguruhela group of hills, the highest point of which is 894 feet above sea-level. The country in the 6-mile stretch between Lunuatugalge and Talaguruhela Vihara is rocky and undulating and the vegetation consists mainly of low jungle with a thick undergrowth of *Nelu* interrupted by stands of high forest: there are no park lands. The forested valleys were dark and gloomy. No large animals were seen, but there were recent signs of a few elephants, bears and sambhur: spotted deer and pigs appeared to be absent. Old elephant trails were found but they had not been recently used. *Wira* and *Palu* were in fruit but there was very little bird-life. As shooting country this locality is practically useless. There are several rock water-holes, mostly shallow ones. The ruins on the Vihara rock were fully explored and 5 un-inscribed drip-ledged caves, a stone-pillared ruin, 76 rock-cut steps and a ruined thupa on the summit were found: on the main rock, alongside the steps and around the thupa, were several pre-Christian inscriptions. No sportsman has yet visited the Talaguruhela block and, till good shooting country is discovered by further exploration, a visit is not recommended unless its purpose is botanical, geological or archaeological study.

The Galge Block is poached from the Buttala-Kataragama track. No detection was made, but the poaching is indisputable. The Warahana and Talaguruhela Blocks are too remote

for poachers, but the latter may be entered by the new poaching gang at Kumuna.

**Wilpattu East Intermediate Zone.**—A Jeep road was constructed from the 21st mile on the Arippu road, through Sinadiyagala, to the Moderagam Aru, and the large water-hole known as Sinadiyawila was restored. This northern triangle of the Wilpattu East Intermediate Zone is good shooting country, but conditions during the 1952-53 Open Season were unsatisfactory owing to lack of rain. There are many rock-groups and rock water-holes and large stretches of park country. Spotted deer are found in large herds and pigs and peafowl are fairly plentiful: bears and leopards are frequently met with. This area is one of the few permanent habitats of elephants in the Wilpattu group of Reserves. The central and southern sections of this Intermediate Zone were assumed to be largely high forest but this assumption has been proved to be wrong. There are many small parks and a few large ones, but the grass is of poor quality and cannot support a large deer population. Several eroded patches, approaching near-desert formations, occur here and there. The jungle-fowl population in the central section is unusually large. Peafowl are absent. Elephants move into this area in January and February to be in proximity to the ripening chenas.

**Wilpattu South Intermediate Zone.**—The drought was particularly intense in this Zone and the only water for the whole zone was in the Kala Oya which forms its southern boundary. As a shooting ground it is not comparable with the Yala East, Yala North and Wilpattu East Intermediate Zones, but it is considerably superior to any unprotected area. Andachchikulam tank, 3 miles from Tala Wila, was restored and was a large sheet of water in December: the bund was in danger and temporary repairs were made, but further building up and consolidation will be necessary in 1954. The extent of park country in this Zone is not considerable except at Wowalakulam, but there are successions of

small parks at Karambankulam, Paddiveli and Galge Vihara. A she-buffalo was killed in self-defence by one shooting party. No evidence of poaching was discovered in either of the Wilpattu Intermediate Zones during 1953.

**Vettikachchi Intermediate Zone.**—This Zone, heavily poached during and subsequent to the war years, has lost nearly half its original area to new agricultural and irrigation schemes. It contains some of the finest park country in Ceylon and in time past was an excellent shooting ground. In February, Ranger C. S. Wickremasinghe was placed in charge of a party whose function was to traverse the park country and count the animals. At this time water was plentiful and there was a luxuriant growth of grass. The party covered the entirety of the park country over a period of 6 days. The animals seen and counted by them were: elephants, 10; buffaloes, 5; sambhur, 3; spotted deer, 93, the largest herd consisting of 15 and all the heads being very poor; pigs, 3; red deer, none; bears, none; leopards, none; and peafowl, none. There were tracks and droppings of a few red deer, a leopard and a bear. All the animals seen were timid and shy. Remains of poachers' camps, 2 weeks to 6 months old, were found in 4 places. The rehabilitation of this Reserve will take a considerable time under proper protection, but there is no available housing for the staff within many miles of its boundaries. It is vulnerable on all sides; on the north, the Kantalai Augmentation Scheme has reached the boundary; on the east are several villages; on the south, the Minneriya scheme has touched the boundary at one point; and on the west is the newly-constructed irrigation canal. An illicit clearing and cultivation in the southern area of the Reserve was detected and the trespassers were ejected.

### Special Protection for the Elephant

It is clearly necessary, if the survival of the wild elephant of Ceylon is generally and earnestly desired, that the mortality by shoot-

ing should be reduced. To achieve this voluntarily, the watchers who watch the crops at night must be prepared to build stronger fences, to watch vigilantly and to undergo greater exertion. The elephant is a formidable animal and it is a persistent crop-raider. Shooting is the most convenient way of putting a stop to its marauding. The shooting accomplished, the watcher can go to sleep: but if he dispenses with the gun, he must keep awake all night. Here lies the difficulty. Before guns began to be used, the protection of cultivation was achieved by organized watching, employing a combination of illumination and sound. In its primitive form this combination would have consisted of fires, drums, gongs, rattles and the human voice. Their modern counterparts are electric torches, crackers and "bombs" which go off with loud explosions, and rockets which could be accurately directed to burst in a shower of sparks without injuring the animal. The electric torch is very effective, but there is the occasional elephant which will come forward aggressively towards the light: this will happen so infrequently that shooting could be sanctioned, and would indeed be justified, in such cases. Loud explosions at intervals will scare away animals approaching the fences: simple and inexpensive means of setting the crackers off mechanically, such as a smouldering rope, could be devised. There is no lack of free firewood in the jungle areas and fires could be kept burning on the perimeter and close to the watch-huts. Crackers and fireworks cost no more than cartridges. The electric torch is not an additional expense because every watcher now carries one and uses it to illuminate his target. It must not be supposed that a continuous din has to be kept up from sunset to sunrise. Fires which are not allowed to burn out, an occasional explosion, and prompt and direct action against the trespassing animal are all that is necessary. To create a general willingness to give up the gun and try other methods will be no easy task.

There is a biological minimum for every species of animal: if the population falls below that minimum, breeding ceases and extinction follows. What the minimum is for elephants is not known, and it is to be hoped that it will never be known. Within approximately the last one hundred years the wild elephant population of Ceylon has fallen from over 10,000 to under 1,000: the reliability of the figure of estimated population a century ago may be adjudged on the single fact that, over a period of only 5 years, rewards were paid for 5,500 elephants destroyed in the Northern and Southern Provinces alone. Before the Up-country forests were cleared for plantations, elephants abounded in the mountain ranges: their well-beaten trails traversed mountains and valleys and ascended the highest peaks.

The measures taken during the last few years with the object of giving special protection to the elephant have been as follows:—

- (i) licences to shoot elephants for sport are not issued;
- (ii) the export of elephants by private parties is banned;
- (iii) the number of licences issued to capture elephants was successively reduced from 60 in 1951, to 30 in 1952, and 15 in 1953;
- (iv) elephants may be captured only in areas (a) in which major development schemes are in progress, and (b) which have been declared to be areas in which damage to crops by elephants is apprehended;
- (v) before special licences are issued for the destruction of proclaimed elephants, efforts are made to get the animals captured.

Measures to reduce the mortality by shooting in defence of crops are now necessary.

Large herds of elephants are now a great rarity. In times of drought, small herds from some distance around may collect near a large tank where there is food and water, and give

the appearance of being one large herd. This happened in July at Nachchaduwa tank where 48 elephants belonging to different herds gathered together: they were frequently seen from passing buses and motor cars in the evenings. Outside the Reserves, the largest population of elephants exists probably in the extensive jungle area to north and south of the Vakaneri-Manampitiya road. In the entire montane and wet zones today there are probably not more than two or three resident herds: one, consisting of about 17 animals, moves around in the Hiniduma-Deniyaya-Rakwana forests, and another, of which little is known, inhabits the Peak Wilderness Sanctuary.

**Birth of an Elephant.**—The following is a translation of a narrative by Game Guard W. L. A. Andris of Yala Range of the birth of an elephant:—

I have witnessed the birth of a wild elephant on four different occasions, the localities being the bed of the Menik Ganga, Talgasmankada Eliya, Katagamuwa tank and Kudasilawa, all in the Yala Reserves, and the times at which I began my observations were approximately 10 a.m., 4 p.m., 6 a.m., and 8 a.m., respectively. I had the clearest, the closest and the most complete view at Kudasilawa lagoon. I was there about 8 a.m. one morning when nine elephants came out of the jungle into the open space round the lagoon. I climbed one of the rocks there and waited. One of the elephants, the cow which afterwards gave birth, went down on its knees and gently lay down on its side with its legs outstretched, remaining in that position for several minutes. The other eight elephants stood around her, caressing her all over her body with their trunks. The cow then rose to her feet, walked away a few paces, and lay down again as before. The other elephants, save one, went into the surrounding jungle: this one remained standing by the cow. More minutes passed, and the cow then rose again, walked a few paces away and again lay down, and this time turned

over to the opposite side, pivoting on her spine. It remained thus for about 10 minutes and then rose once again, went a few paces and again lay down. This time it got up almost immediately after it lay down. As it rose, I noticed a pale, pink coloured bag about two feet in diameter, protruding out of its genitals. With the protruding bag in this position, the cow paced to and fro, apparently quite normally, for about 10 minutes, and then the bag burst open and a watery fluid poured fourth from it. Just at this time, the other elephant, which had remained with the cow throughout, strolled away and joined the rest of the herd which was all the time in the jungle close by. Several minutes after the water-bag burst open the cow again lay down. It was now about 9 a.m. The cow lay still in her prone position, only moving and tossing her trunk around, but uttering no sound, not even a groan, for about half an hour. Her abdomen was rising and falling at regular intervals and she appeared to be heaving. Two elephants from the herd in the jungle walked slowly up to the prostrate cow, felt her with their trunks in the region of the genitals, and then returned to the jungle.

Shortly afterwards, the cow stretched out her hind legs wide apart and without any noticeable signs of strain, the head and fore-legs of the calf appeared. Immediately after, the cow rose to its feet and then again, in a few seconds, went down on its knees and lay down. Almost at once the calf was dropped and the cow immediately rose up and walked away for about 10 paces. At this time the cow bled profusely from the genitals. Having gone this distance, the cow again lay down on its side and kept tossing and turning over from side to side. The calf lay on the ground where it was dropped and was wriggling about. It was covered all over with what appeared to be a slimy liquid. About 15 minutes later, one of the elephants from the herd came up to the calf, raised it with its trunk about four feet clear off the ground, and then gently

placed it back on the ground. This elephant then made a loud, rumbling noise, and all the other elephants in the herd came out of the jungle, trumpeting and making various noises, and approached the new-born calf. Each one of them in turn moved the calf about with its trunk and feet and threw sand on the calf. This went on for about half an hour at the end of which the calf stood up, quite dry and steady on all fours. The calf, after rising, tried to suck milk from the other elephants. Its mother, which continued to remain lying down and tossing about for several minutes longer, then dropped the after-birth while lying on the ground. She rose immediately afterwards, picked up the after-birth and ate a portion of it. She tore a part of it to pieces and flung it away and also trod on portions of it. The after-birth appeared like a large sack in a portion of it, with elongations, similar in appearance to the tentacles of an octopus. Some portions of the after-birth were fleshy, while others were like lumps of "nerves." The whole was coloured purple, in some parts, in others pinkish or reddish. The baby elephant did not appear to have a navel cord. It was about  $2\frac{1}{2}$  feet high and its little trunk was about 12 inches long. About 15 minutes after the cow dropped the after-birth and did away with most of it, she walked up to the calf which was now in the midst of the herd. The cow on reaching her calf trumpeted, lifted the calf with her trunk and took it away from the other elephants. She then placed the calf on the ground. The calf was now trying to suck milk from its mother. The cow went down on her knees and rested her head on the ground. The calf then reached for the breasts and sucked off both breasts for a considerable time. The cow then rose, picked up the calf in its trunk, poised it high up to her chin, and walked away in the centre of the accompanying herd into the jungle. I then came down from the top of the rock from which I had been watching. I found the

ground where the cow was lying smeared with blood and a slimy fluid. I cut a piece from what was left of the crushed after-birth. The

portion I cut contained blood and appeared to consist of tubes, each about 2 inches in diameter and 2 feet long.

### WILPATTU SCHEME IS INAUGURATED

An age-old ceremony, to propitiate the gods, was performed recently in the heart of the elephant-infested forest 20 miles from Anuradhapura town, when the work on the Maha Willachchiya tank restoration scheme in Wilpattu was inaugurated. A foundation stone was laid, at an auspicious hour, for the first building on the site by Mr. M. C. B. Mendis, the Resident Irrigation Engineer, in charge of the restoration scheme. Bhikkhus chanted pirith.

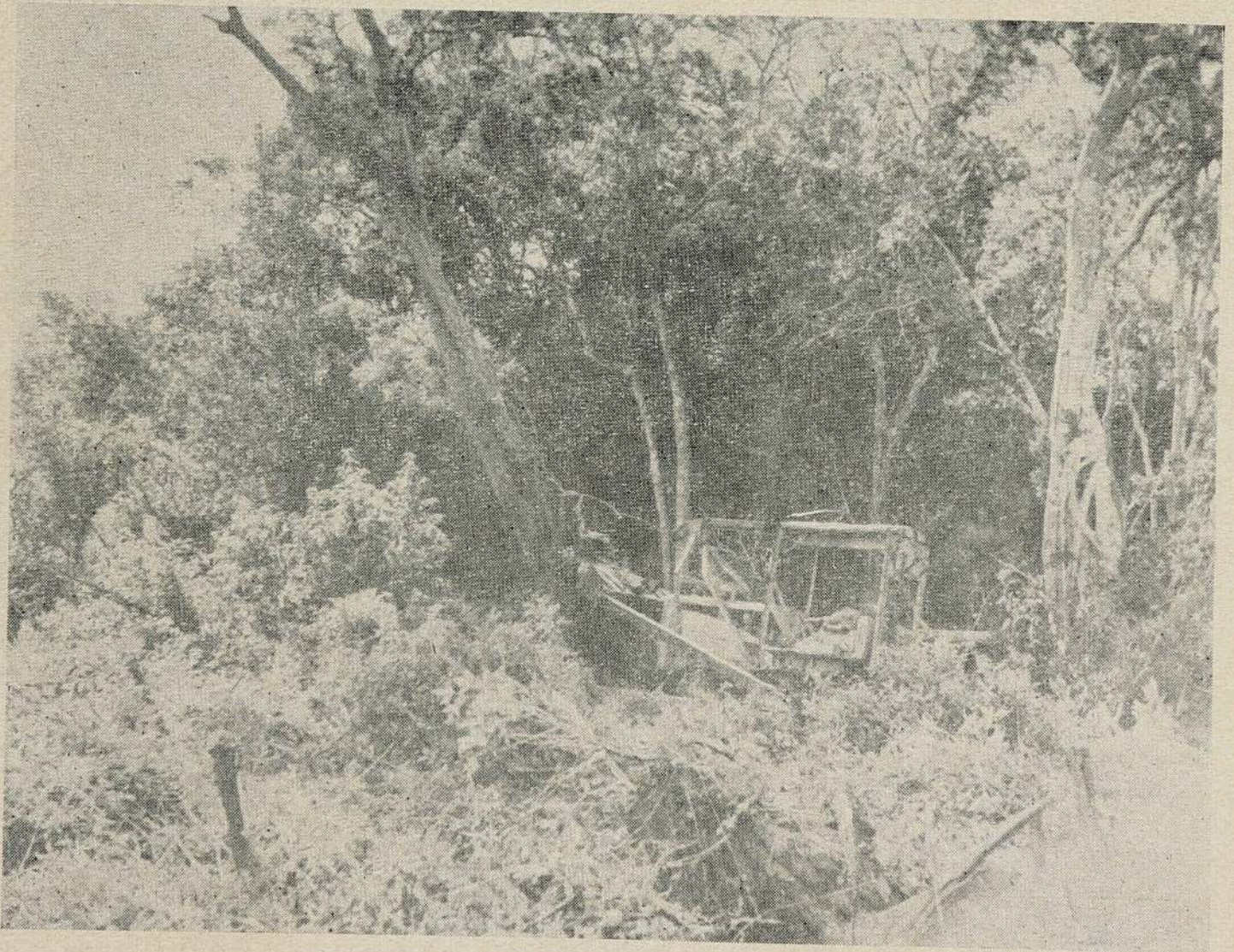
Panditha Paindukulame Sri Sumana Thero of Thuparama Vihara traced the ancient history of Maha Willachchiya Tank and said that it was

originally constructed by Prince Saliya, son of King Dutugemunu. In those days it was a highly prosperous area of the Rajarata.

He appealed to the authorities to make it a point first to resettle the poor peasantry in the area before giving lands to outsiders.

Mr. A. Sivasundram, Divisional Irrigation Engineer, North Central Division, who presided over the meeting, said that tank restoration schemes (like that of Maha Willachchiya) had been taken up by the Government because the nationals of the country were in charge of these works.

—*Morning Times.*



*Jungle Clearing*

*Photograph by courtesy of the Gal Oya Development Board.*

# Down the Mahaweli Ganga

By PHILIP K. CROWE

SEVEN thousand feet above sea-level on the dark jungle slopes of the Horton Plains in the Central Province of Ceylon a small mountain stream starts on a long journey to the sea. It is the Mahaweli Ganga, the greatest river of the Island, which runs its dragon course for over two hundred miles before it casts its brown tide into the blue waters of Kotiyar Bay at Trincomalee. The upper waters of this father of Ceylonese rivers are churning mountain torrents, incessantly fed by the heavy rains of the tea country, but by the time the river passes the ancient city of Polonnaruwa it becomes navigable for canoes. This is the account of a journey by dug-outs down the last sixty miles. The river is, in fact, the only way to penetrate the area as vast swamps or "vilas" discourage any other approach.

There were many reasons why I wanted to make this trip. The Mahaweli flows through some of the least known jungle areas of the Island and those few men who had made the trip told me that they had seen swamp elephant, the rarest and most massive of the Asiatic pachyderms. The equally rare Ceylon Coral Snake is found in the area. Legend declares it to be the hunting grounds of the "Rahu Valaha," the red bear, a skin of which was identified in 1815 as a new world species, and even through another specimen has not been obtained, the villagers still believe in its existence. Unlike the common Sloth-bear it has no white V on the chest and has a reddish brown coat instead of a black one. It is reputed to be savage and carnivorous.

The river also runs through one of the last strongholds of the Veddahs, the almost extinct aborigine of the Island. The Veddahs of Gunners' Quoin, a great rocky outcropping in whose caves they used to make their homes, are of the Moranne tribe which was virtually wiped

out by dysentery in 1930. There are, however, remnants of this tribe who still haunt the jungle fastnesses of the area, and it was these Veddahs that Mrs. Milward, the famous anthropological sculptress, modelled in 1937.

One chooses companions for a trip like this carefully for the success of the venture as a whole could easily be wrecked by the fears or tempers of any one member of the expedition. My original plan was to take ten men with me in addition to the crew and cook but three invitees had to drop out. The following seven made the journey: James Espy, Counsellor of the American Embassy and a good man to have along any time for any purpose; Dr. Paul Deraniyagala, Director of the Ceylon National Museums, and a well known authority on the Island's fauna and flora; Dr. Drogo Austin, leading surgeon of Colombo; Colonel Christie Jayawardana, Camp Chief of the Ceylon Boy Scouts and A.D.C. to Her Majesty, the Queen; Mr. Charles Cruickshank, United Kingdom Trade Commissioner in Ceylon and my companion on a journey to the little-known Maldivé Islands; T. L. Green, professor of education at the University of Ceylon; and Dr. Chandra Gooneratne, director of films for the United States Information Service in Ceylon.

Beyond giving myself the pleasure of inviting the above, however, I did virtually nothing toward preparations for the journey. Dr. Gooneratne and my wife did the work and believe me a lot of effort goes into an undertaking which transports and feeds such a group for five nights and four days. Our point of departure on the river was not located at a railway station. This meant that arrangements had to be made to stop the train at four o'clock in the morning on the far side of the Manipitiya bridge, and have about half a ton of personal effects, food and camping equipment lugged down the shore.



The Government Agent of the Eastern Province had to be informed and he in turn kindly passed the word down to the various headmen of the river villages. There are no roads connecting these hamlets so that word had to be sent by dugout canoe some time in advance. Food presented another problem as there had to be plenty of it but not so much that its bulk would swamp the canoes. We planned to take shot guns, rifles and fishing rods and the chances were that we would be able to supply at least some of our larder, but my wife, having suspicions born of long experience, saw to it that we had enough sustenance in cans to see us through no matter what happened.

The most delicate of the arrangements concerned our transport down the river. Two of the three men I talked with who had previously made the trip did it in their own canvas and rubber canoes. These craft being extremely light presented no problems as they could easily be carried if the river was too high and fast and drawing virtually no water could be manoeuvred more easily over the rapids than heavier vessels if it was low. The standard river boats on the Mahaweli, however, are dugout log canoes. About thirty feet long, heavy, and tippy they present no problems to the rivermen who squat on their bottoms but a good many to explorers who insist on sitting on chairs. Undaunted by these technical details and the fact that he had to make his arrangements by letter,—the old Moorish riverman with whom he negotiated for the canoes could not write or read English and had to employ a public letter writer—Chandra proceeded to gather all the facts and then set about making them fit our needs. To overcome the risk of the canoe tipping over he ordered two of the largest available to be lashed together ; and to enable chairs to be used safely he had flat floors built over the round bottoms of the canoes. He also insisted that an outrigger be fitted to the baggage canoe.

Timing was specially important. Heavy rains up-country could so swell the Mahaweli that the trip would have to be called off ; and conversely

a long dry spell might mean a fall in the water level to a point where the heavy canoes could not be dragged over the shallows. Accordingly it was arranged that the irrigation officers would wire us pertinent data a few days before the rivermen started to pole up from their village at the mouth of the Mahaweli. Another wire was sent by the station agent at Manipitiya when they arrived at the bridge.

The co-operation of the Ceylon Government Railways was also enlisted and my friend Everard Wijeyesekera, Chief Engineer, kindly saw to it that the expedition was assigned its own sleeping car and that permission was obtained from the operating branch for the unscheduled stop. The driver of the train, in fact, dismounted from his cab and came and wished us well when we left his charge.

So it was that just before dawn on the morning of Friday, September 10th, the Batticaloa Night Mail ground to a stop and we tumbled down the embankment to find a grinning committee led by Clayton, the irrigation officer of the district, and Kudurasa, the old Moor captain in charge of the dugout canoes. Clayton kindly offered his bungalow as a breakfasting site, and soon Perera, our cook, had an appetizing repast of fried eggs, bacon, and coffee laid before us. Mrs. Clayton supplemented this by some delicious cakes made of freshly caught Mahseer and jungle honey.

By seven the canoes were loaded. In addition to the eight of us, the two lashed canoes carried a brace of rivermen with heart-shaped paddles in the bows, another brace of rivermen with poles directly behind them and a third brace, one of whom was the captain, in the stern sheets. The captain was neatly but not gaudily arrayed in a blue shirt and khaki hat with a blue band around it. His men wore sarongs and gaily coloured clothes. The cook rode in the middle of the baggage canoe on his own chair and under a bright coloured umbrella and looked for all the world like some ancient sultan being poled down the river by his retainers.

As we left the shore the crowd shouted good-

byes and I could not help thinking that they must also be doing a bit of bookmaking on the chances of our safe arrival. I had learned just before our departure that the last man to go down the river had been killed by an elephant whom he tried to photograph at too close quarters. There were also some disturbing rumours about crocodiles and sharks, and a pair of RAF men who started down during the war and never arrived at Trincomalee.

The river at the Manipitiya Bridge was about 250 yards wide, and, except in the channel, very shallow. The irrigation officer told us that it was running about 3 miles per hour, but that this speed could quickly vary either way depending on rains up-country. That the river often became a far mightier body of water was evident from the banks which were heavily eroded.

Behind us as we left the bridge loomed the granite mass of Gunners' Quoin looking like its namesake, a vast Quoin or wedge that was used in the old days to elevate cannon. Jungle ran down to the banks on either side of the river but in many places it has been burned to make "chena" areas for the cultivation of tobacco. Chena farming consists of burning off a stretch of jungle, cultivating it for a few seasons and then letting it return to the jungle again. The method is wasteful of timber, destroys the humus in the soil, and, of course, kills all the animal and bird life in the burned area.

One of the most fascinating games in Ceylon is bird spotting and as all of us brought binoculars we were able to study many of the common types. Imperial and Green pigeons shot across the water on their earnest business. I have never seen a pigeon flying without purpose. We heard the harsh notes of the Crimson-backed Woodpecker and then spied him and his equally harsh noted colleague, the Pied Kingfisher. Apparently none of the brilliant-hued birds sing sweetly. Swiftlets darted twittering high in the air, and the gorgeous Oriole flashed its golden sheen against the green of the jungle.

The river was reputed to hold both Mahseer

and Gerami, and Drogo and I trolled most of the way down. Unfortunately the water was discoloured and it is almost axiomatic that Mahseer will only take a spoon in clear water. Gerami, however, are fruit eaters and can be caught in almost any kind of water providing one still fishes for them. We stopped once so that Paul could examine a section of rock strata and Christie promptly baited up with a whole fig and soon had a three pound Gerami out of the water. It was too much of a haul to the top of the bank, however, and he lost it en route.

Our first night's camping ground was on a wide sand-spit about a mile from Kattuwanwilla village and only eight miles below Manipitiya bridge even though constant criss-crossing of the river made it seem that we had covered a much greater distance. Soon after we landed, Alyarlebbe, the twenty-year old headman of the village made his appearance and assured us of his desire to be of service. Even though these river villages are all Moslems and as such despise "pandi" he said he would be willing to show us where the wild pig were.

Across the river from our camping ground, the jungle in the shape of huge Kumbuk trees overhangs some ancient rocks. One of these rocks is the famous "Anakuiti" or carved head of a baby elephant, which rises from the river in a position so life-like that one could almost take it for a young elephant drinking. No one knows how it got there or when it was carved but Paul, after a careful study, thought that it dated from the 4th century of our era. Before the carved head the river forms a deep whirling pool about which the villagers seemed to hold some superstitious belief. It was not till later when we were all in swimming that the Moorish captain came running down to the bank and yelled at us to stay in the shallow water. Chandra translated that there were crocodiles in that stretch of the river and a particularly big one was said to invest the pool before the elephant's head.

The truth of this claim was made crystal clear that evening. In the glare of a powerful flash

light we made out the baleful eyes of a huge crocodile lying on the bank just above the pool. Further examination revealed other sets of eyes on the same bank. The headman said that many of these crocodiles spent the day hidden in the jungle in order to avoid hunters and then crawled down to the river at night to feed. He added that twenty of the village's best cattle have been eaten by these monsters during the past year and only last week four were taken in one evening. As the average brahman bull weighs at least five hundred pounds, it takes considerable strength on the part of the saurian to handle it. The crocodiles wait nearly submerged near the banks and seize the cattle by their noses when they are drinking.

In the cool of the evening Paul and I took our rifles and followed a villager to the haunts of the pig. He took us first along the bank of the river where we examined the ingenious device by which water is drawn up to irrigate the tobacco fields. A leather sack with a cornucopia type of bottom is lowered to the river by a rope which is attached to a pair of bullocks. The sack fills with water and as it is drawn up another rope tightens on the narrow bottom and closes it. Then when the water is raised to the requisite level the rope governing the narrow end is released and the water pours from it into the irrigation sluice.

He then led us to a vast park-like "vila," or dried up swamp area, where we found numerous tracks of elephant and many clumps of dung. After examining this Paul said that it contained virtually no bark and consisted mainly of grass. These elephant, he thought, were undoubtedly the swamp variety which we were seeking. A long walk in the waning sunset and frequent sweeping of the open spaces with the glasses failed to reveal any pigs or elephants, and we turned back to camp.

After a good dinner of soup casserole and peaches we sat in the moonlight and talked of the jungle and its superstitions. Christie who says he does not believe any of these things still wears a pendant of "the nine precious stones,"

a charm said to be proof against anything from charging elephants to old age. Paul told us that the pig was not only taboo to the Moslems but since it, along with the peafowl, was supposed to be the carrier of some of the minor Hindu Gods, it was considered very bad luck to shoot it in many sections of Ceylon. This taboo was especially strong in the extreme south where the powerful Hindu God, Kataragama, holds sway. One of the few things we forgot to bring along on the expedition was a candle. No wonder we did not find a pig. Unless a candle is burnt to the Devio of the jungle it is virtually impossible to make an important kill.

Paul also told us that the rock formations of Ceylon are among the oldest in the world. Most of the rocks of Europe and America have been ground up frequently by various agencies such as ice, water, etc., while the rocks of Ceylon have not suffered these changes and are the same formations that perhaps existed at the time the earth cooled.

The night wind blew its cooling breeze down the river and drove the mosquitoes from the sand spit. Nevertheless we slept under nets, and, except for the occasional sharp sting of the black ants, were not bothered by insects. No leeches or ticks were apparent even though all of us made long treks into the surrounding jungles. There is a good deal of malaria in the river villages but strict instructions had been issued about papadrin and everyone had begun these precautions at least a week in advance.

The second day's start was late, eight-thirty, and the old Moor shook his head and said we had to cover a lot of river before we arrived at our next camping ground. It had evidently rained during the night for the river was deeper and faster. We passed families of monkeys, the Macaques, the red monkeys who do so much damage to the farmers' crops. As we paddled further north-east the plantations became fewer and by the middle of the second morning we were passing through long stretches of virgin jungle. More birds were seen; turquoise blue Indian Rollers, lacy white

Egrets, White-bellied Sea Eagles and flocks of yellow and green and orange Green Pigeons.

The Moorish crew were interesting types with facial characteristics very different from the Sinhalese and Tamils. These Moors are said to be descendants of the Moplahs of South India who migrated to Ceylon many years ago and have preserved many of their institutions including their religion. Their trousers over which they wear a sarong are full in the crotch and they have no fly. What relation this has to the Prophets allowance of four wives is anyone's guess. They are very clannish and give their headmen a good deal of respect. Their women are not veiled but invariably cover their faces when they see strangers.

The canoes are made from giant mango logs. They are hollowed out with an iron adze and take about three months to make. They are worth 600 rupees and our captain owns five, making him a rich and respected man in his community. The launching is an elaborate ceremony. Everyone in the village comes; the priest or "Lebbe" cuts the throat of a goat, and there is a feast. The canoes are used mainly for fishing in the ocean. Without the aid of outriggers they are paddled or sailed out of sight of land.

Perched on a dead tree was a Hawk-Eagle, one of the contenders for the dubious honour of being the Devil Bird, the dreaded bird of ill omen whose cry the villagers believe will announce death. Dr. R. L. Spittel, the historian of the Veddahs, has spent a lot of time in this area and believes that the Hawk-Eagle makes this terrible cry. He describes it as the scream of a woman being murdered. W. W. A. Phillips, the ornithologist, however, is sure that the Devil bird is the Forest Eagle Owl and has documented his theories with a considerable array of facts.\*

Soon after we passed the Hawk-Eagle, Drogo Austin, who was sitting next to me in the adjoining canoe, gave a shout to the effect that

R.L.S.—This generalisation cannot be allowed to pass without comment. For *evidence* regarding the identity of Devil Birds (note the plural) readers are referred to an article on "The Devil Bird" by R. L. Spittel in *Loris*, Vol. vi., No. 3.

he had dropped the telephoto lens of his camera overboard. The river at that point was narrow and fast but fortunately only about waist deep. Tom Green had the presence of mind to note where the lens had dropped. He intimated that this quick reaction was due to his early poaching experience in England when occasionally he had to dump his shotgun overboard. The canoes were stopped, and, while two boatmen held them against the current, the rest of us plunged in, and forming a line, waded over the area. Christie, the last one to join the line and the most dubious about its success promptly found the lens. Trust the Boy Scouts to make the miracle rescue of the year.

We continued to pass deserted chena clearings but the jungle pressed close on them and as we rounded a bend we came on a huge elephant slide, the place where the herds descend the steep bank to drink and bath. It was near there that the photographer was killed.

A thin villager hailed us and shouted that he and his family were hungry. Evidently he thought we were the government officials making a circuit. A bit further down a whole tribe of villagers waded out into the stream and bowed to us as we passed.

At shortly after noon we reached the jungle-shaded Island where we intended to camp for the second night. Instead of stopping for lunch and having the chore of unloading for the noon siesta it was decided to do the full day's run during the morning and then make permanent camp for the afternoon and night. Shortly after we landed it started to rain and came down for half an hour as only a tropical thunderstorm can.

When the rain stopped and we had lunched on ham, and salmon, we made an inspection of the Island and found many signs of elephant. Piles of dung, looking like small hillocks spotted the beach and down at one end of the Island were a mass of tracks showing that the place must be a favourite crossing place for the great beasts. Paul was sure that we were now in the country of the swamp elephants and when a villager came with a report that a herd had been seen on the edge of a neighbouring vila we

immediately asked him to guide us to them. Drogo and Christie were busy shooting pigeons for supper and Chandra and Tom were supervising the pitching of our tents for the night. The elephant party, therefore, consisted of Charlie, armed with a Leica camera, Paul with a pair of binoculars, Jim with a shotgun and me with the 405 Winchester.

Crossing a narrow bit of tobacco cultivation, we found ourselves on the edge of a vast swamp which stretched for hundreds of acres toward the distant line of the jungle. The going was difficult. Not only did we sink to our knees in the mud but the grass, three feet high, further impeded our progress.

Suddenly our guide stopped dead and pointed. There on the edge of a clump of swamp elm we saw four huge brown shapes moving slowly away from us. Through the glasses they were brought close and I saw the massive trunk, the lack of visible tusks and the greater than normal bulk that characterize the swamp variety. The herd consisted of three cows and a bull with the possibility of calves hidden by the high grass.

I was quite satisfied and had no desire to go closer but Paul with the scientist's insatiable curiosity decided to try and get closer to the herd. Accordingly Jim, Charlie and I halted where we were and watched Paul and the guide creep along the edge of the cover toward where the elephants were last seen.

Then we heard a terrifying scream and the big bull, his trunk curled up and his ears cocked forward, charged straight out of the bushes toward the luckless pair. Evidently the elephant saw the boy first and started to charge him. The boy, however, quickly dived into a clump of cover and the elephant, cheated of his prey, saw Paul standing in a clear space and changed his direction. Paul was then faced with a grim fact. He could not possibly run to the edge of the jungle before the elephant reached him. A quick glance, however, revealed a single tree standing alone some fifteen yards away and Paul, spurred by the continued

screams of the charging bull, managed to struggle to this tree and fell down flat behind it. The bull, with the poor eyesight of all elephants, rushed past him and into the jungle. As he reached the point where I last saw Paul I fired over his head, hoping to turn him. The range was at least 150 yards and I did not dare try a body shot as I might only have wounded him and made him even more dangerous to Paul.

Charlie and I who had seen the whole drama had no idea whether or not the elephant had stepped on Paul in its charge, and I was preparing to go and find him when Paul and his boy appeared. The boy was three shades whiter but Paul, even though he knew he had had the luckiest escape of his life, managed to appear cheerful and unconcerned. I was never happier to see any one in my life. The prospect of bringing him back in a sardine can had appeared all too probable. Jim Espy had heard the bull scream but did not see the charge and did not realize until I told him how really close a call Paul had had.

Back at camp we drank a great deal of Scotch and Bourbon whiskey and Paul told me more about these wild elephants of the Mahaweli vilas. The first hunter to note them was Sir Samuel Baker, who commented a hundred and fifty years ago on their great size. At the turn of the twentieth century Harry Storey, perhaps the most famous contemporary big game hunter in Ceylon, first suggested that they were a race of the Ceylon elephant. Neither of these men, however, were scientists and it was Dr. Lydekker of British Museums who gave the first expert opinion on them, but since he had no specimens he had to base his conclusions on Storey's descriptions. E. L. Walker, a planter who wrote a book called *Elephant Hunting in Ceylon* (1920) gave the most accurate description of the swamp elephant. It was not until 1936 that Paul, while working in this area, made a detailed study of these elephants and discovered characteristics by which they could be scientifically distinguished from the other elephants.

He named the sub-species *Elephas maximum vilaliya*. The type skull, shot by E. L. Walker, is now in the Colombo Museum, and the paratype is in the British Museum. Paul thinks there are probably not more than fifty or sixty of these elephants left in Ceylon and virtually all of them are concentrated in the swamp wildernesses of the Mahaweli. It would certainly be wise if the government declared some of these vilas game reserves and protected the remnants of this interesting sub-species.

Scarcely had we settled down for the night when we heard trumpeting and a great splashing at the end of the Island, a distance of only about 500 yards from the tents. The herd were crossing the river and having caught our scent were sounding their resentment. We built up the fire, loaded the rifles and waited. The herd passed on but soon after it had melted into the opposite jungle we heard the trumpeting of another herd converging on the Island from the up stream end. There was no doubt about it, the Island was a favourite stamping ground for the local herds and the dung we saw should have told us this. But we were tired and had dined well off pigeons shot by Drogo and fish caught by Tom, consumed vast quantities of whiskey and even though all of us must have said a private prayer we soon dropped off to sleep.

The morning of Sunday, September 12th, dawned grey and cold, and it looked as if the north-east monsoon which gave us a taste of its pleasure the previous evening might have set in for a long spell. By eight, however, the sun broke through the clouds and the river steamed in the pearly light. Soon after the sun came out the captain spotted a solitary elephant feeding with his back to us on the edge of an abandoned strip of chena. Landing we advanced cautiously and examined it. Although a bull this elephant was considerably smaller than the one that had charged Paul, and since the wind was blowing from him to us there did not seem to be much chance of his acting up. I brought my 405, however, and cautioned everyone

against going too close. Drogo took colour movies ; Tom, Charlie and Paul took black and white stills and Jim took colour stills.

Many varieties of birds of prey were seen ; the Brahminy Kite, the Marsh Harrier, and the White-headed Sea Eagle. We were alerted by Paul to find the Broad-billed Roller, one of the rarest birds in Ceylon. For many years it was thought to be extinct until Mrs. Darnton discovered a pair in 1950 in this general area. Over the jungle we spotted a hovering Kestrel which later dove like a fighter plane on some luckless mouse.

The canoes hummed with activity. Paul did water colour sketches ; Drogo trolled ; Charles photographed birds ; Tom told highly amusing tales of his academic life in London ; Chandra worried about details and kept the men in line ; Christie carried on animated conversations in Tamil with the crew ; Jim got out and waded beside the boat with his gun for shots at passing pigeons ; and I typed this record.

As we progressed downstream the river became shallower instead of deeper. The reasons for this appeared to be heavy silting due to chena work and evaporation. The going in places became slow and difficult and necessitated all of us getting out and walking beside the canoes.

At a ford in the river we came on a big herd of white cattle slowly crossing and tried to buy some curds from the shepherd. He had none but offered us sour milk. Resisting this certain invitation to dysentery, we talked with the man and learned that his herd was a prey to cattle-eating leopard as well as crocodiles. It is undoubtedly strays from herds like this that become lost in the vilas and sired the wild herds that have been reported in this area. Drogo said that the curds, which are safe to eat, due to the lactic acid content, were largely responsible for the fine physical condition of most of the villagers we passed. Their sole diet, he said, is rice and curds, fish and pumpkins.

As we ran in close to the red clay banks,

Paul asked us to look for the day Gecko, a very rare little lizard that is only found in this section of Eastern Province. The night Geckos are said to be bad luck and a villager hearing it will often put off adventure until he propitiates the local gods. Whether or not the note of the day Gecko is also bad news is not known.

By eleven-thirty we left the last chena cultivation and started through virgin jungle, lush tangles of great trees, cable-like creepers and matted grass which bore little resemblance to the sere and stunted bush of the dry country.

Unlike the russet yellows and browns of the Wani, the prevailing colour is deep green relieved occasionally by the brilliant purple flowers of the Pride of India, and the yellow blooms of the Golden Mohur. We passed great stretches of it indented here and there by the muddy slides by which the elephants descended to the river. The banks had been crushed down as if by a giant bulldozer and in the mud were the huge platter-like impressions of elephant. There were so many of these elephant slides that there was no question but that large numbers of the pachyderms must live in the district. And soon after this we saw one drinking from a pool in the river. Further on we saw another and soon after that a third. All of them had the typical huge trunks of the swamp variety.

At two-thirty we passed the junction of the Mahaweli and the Kuru Ganga, or elephant river, and instead of having to get out and help the crew drag the canoes over the shallows we found ourselves in a great broad river where the poles were laid aside and only the oars used to help the current. We ran into several violent thundershowers which soaked us thoroughly but such was the strength of the sun that we were soon dried. The Moor captain while reasonably proficient in handling his boats and men had no idea of distance. At noon he said our night's camping ground was four miles away. At one-thirty he again said it was four miles away and at three it was still four miles away.

The ever-new fascination of sailing through

untouched wilderness more than made up for lack of lunch especially since we had plenty of cans of Mr. Schlitz' product that made Milwaukee famous. Beer tastes good any time but on a jungle river it takes on the quality of nectar. Actually we were never uncomfortably hot as there was always a breeze on the river and the thunderstorms periodically cooled the atmosphere. Lady-like as it may seem, the umbrellas proved a real boon as they not only kept us reasonably dry during the lighter showers but shaded us from the sun.

The Lanka Palu, the parasitic vine which eventually kills its host tree, made gloomy caverns in the jungle and, as we passed close to the banks, we could look down these dim forest aisles. Often a crash of branches indicated that an elephant or a sambhur deer had started away on catching sight of us. Once we saw the cleverly concealed hut of a poacher—perhaps one of the forest Moors who make a precarious living killing deer and crocodiles illegally and selling them. The white belly of a crocodile brings three rupees an inch in the Colombo market so it is not strange that the Saurians are becoming rapidly scarcer, and wiser. One of our boatmen shot a small four-foot specimen which Paul identified as a *Crocodylus palustris kimbula*, a sub-species of the Indian mugger which he identified in 1932. The main difference is in the number of the scales, the Ceylon croc having more.

Another difference between the Ceylon and the Indian crocodile is the former's propensity occasionally to attack man. There are two species of crocodiles in Ceylon, the estuarine, most of which are man-eaters and the swamp crocodile which inhabits the tanks and rivers. There lives to-day in the tidal reaches of the Walave River at Ambalantota a giant crocodile which is credited with at least a dozen victims. He inhabits a favourite bathing place and it became necessary to put up a wooden fence in order to protect the swimmers from the brute. All efforts to trap or shoot this croc have proved futile.

In the late afternoon we spotted two huge elephants, a bull and a cow, wading slowly across the river in front of us. The Moor captain cautioned us not to make a noise as the elephants are quite as much at home in the river as they are on the land and he knew of several cases where they had charged straight at canoes, capsized them and then tried to locate the terror-stricken occupants by smelling them out with trunks even though they dove as often as they could.

Accordingly the boatmen rested on their oars and we drifted down silently on the pair, who, by the time we reached them, had just mounted the opposite bank and were standing there facing us, the bull a bit in front of the cow. Again I noted the unusual size of the trunk, particularly at its base and the absence of tushes. As we slid past everyone took pictures while I drew back the hammer on the 405 just in case. The pair suddenly gave a start and plunged off into the jungle. The total seen was eleven, more swamp elephants than had been reported for years.

Although we passed many likely camping spots the old captain kept insisting that unless we went on he could not guarantee to get us to Trincomalee by the deadline the following evening. We strongly suspected, however, that his real reason was fear of elephants and he finally admitted that there was no point in carting passengers this far down the river to have them made into jelly. The result was we skipped lunch and at five in the afternoon he finally, though somewhat dubiously, turned our bows toward a long spit of sand bordering an abandoned chena clearing. The first thing we saw on the sand was the fresh tracks of a big elephant.

Eating is certainly one of the most important events of a camping trip and we were really lucky in having secured the services of John Perera. A thin little wisp of a man of fifty with his long silver hair tied in a bun behind his head and his three remaining teeth permanently exposed in a broad grin, John proved

himself capable of dealing with really grand meals under the most primitive circumstances. He even produced tea in a pouring rain. His record as a jungle cook was long established for he was the cook chosen by Christie to officiate for the Governor-General when Lord Soulbury went on his expeditions into the jungle. John has a long record of government service having been employed at Queen's House since the days of Sir William Manning in 1925.

Our last supper in the jungle was a triumph of culinary art. Aided and abetted by Drogo, John produced a savory mess consisting of chop suey, fried Bombay onions, fried bacon, shredded cabbage, boiled rice, two tins of mushroom soup, one tin of tomato soup, and pre-cooked bully beef. Needless to say we slept the sleep of the just and paid no attention to Tom when he declared that he had heard an elephant splashing near us. In the morning he was proved completely correct. Not more than fifty yards from the camp were fresh tracks showing that the big fellow had waded across the river, stood for a moment gazing in the direction of the tents, and then lumbered across the beach to the jungle. Tom's efforts in keeping a roaring fire going undoubtedly had something to do with the elephant's unwillingness to examine the intruders more closely.

Left alone there is no doubt but that elephants would take no more notice of man than they would of any other animal, but in Ceylon the poor beasts have been shot at for so many years that there are probably few alive that do not carry the festering sores resulting from bullet wounds. The villagers only shoot at them to protect their crops and the guns they use seldom have the penetrating power to kill an elephant. The nails, glass, and other unmentionable projectiles that they fire from their ancient gas pipes make nasty wounds however and certainly result in the elephants hatred of man.

The lower waters were too muddy to make trolling worth while but according to Paul the river carried some tempting prizes. There is even a species of Saw Fish that runs up from the



Bay of Bengal and has been caught at Alutnuvara, 130 miles from the sea. Sand Sharks and Rays are also reported to have been caught at Manampitiya, the jumping off place for our voyage.

At a jungle clearing, where we saw a hut, we landed and questioned the Tamil owner. He proved an intelligent chap who acts as caretaker for a vast estate formerly planted in fruits but long since abandoned. He has been on the estate for ten years and being fond of sport was able to tell us a lot about the local fish and game. He verified the fact that shark, ray, and saw fish are caught in the river and said he eats all three of them. He also shoots many crocodiles and was currently trying to pot the local monster, which he said measures twenty feet by four wide and accounts for many cattle.

He said the country is full of bear and leopard and only two days ago a leopard killed one of his Brahmin bulls. It was still early in the morning and thinking that the big cat might be having a late breakfast I asked him to guide a party of us to the kill. Jim and I led the expedition with guns ready. About half a mile along a jungle trail we began to smell the rank pungent smell of rotting flesh and soon came on the corpse. It was very high with swarms of hornets as well as flies feasting on the carrion. On the soft sand around the kill were the pads of a big leopard, and they had been made since the last evening's shower.

The Tamil told us that he fished in the great Vila as well as in the river and caught Giant Snake Head, weighing over twenty pounds. Paul explained that these are air breathing fish which must come to the surface every five minutes if they are not to drown. Behind their gills they have a little chamber that allows them to live out of water for four hours. As the swamps start to dry out these fish wriggle to the deep pools and so survive the draught. The Tamil name is "Irru viral" and the Sinhalese name is "Ara." They are about two and one-half feet long and very broad, the head alone being nine inches across. They

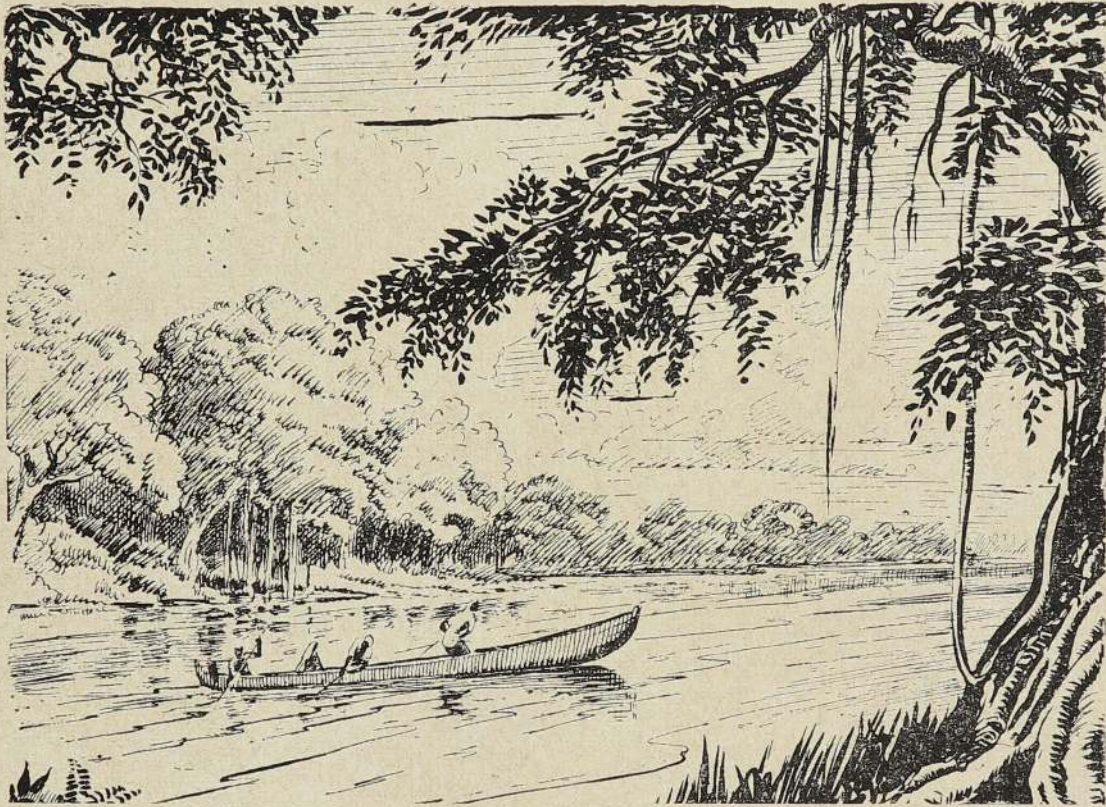
have dark olive backs covered with blue spots; golden yellow bellies and diamond-shaped black marks on the sides. The mother fish guards her fry and has been known to leap into the air after a kingfisher. Near Galle the villagers will not eat these fish as they have been seen to leap up and pull snakes from the branches of overhanging trees.

The last stretch of the river before we arrived at the Bay was the most exciting of the trip. Sunken logs, whirlpools and rapids made the old Moor captain fairly fume with curses and brought a frenzy of action from the crew. We had some close calls but got through without a wetting, or, more important, a brush with the crocodiles. When we stopped on a sand spit for lunch, we were solemnly warned not to swim. We did, but stuck close to the bank. I got a minor scare from a six inch fish that tried to bite me on the bottom. The setting of this last jungle meal was the most spectacular of the trip. Great kumbuks festooned with lianas hung far over a deep pool and the sunlight slanting down through this green fan fell like pieces of amber gold on the water. We ate our sausages, baked potatoes, and hard boiled eggs and sadly departed.

We reached civilization in the shape of the river port of Muthura about 2 p.m., and, landing at the resthouse, had a cup of tea before we paddled down to the town wharf and disembarked. Mathura (Muttur) is an old town but is famous for only one event. In the year 1660 the frigate Anne of the Honorable East India Company was lying off this village when agents of Raja Singhe, King of Kandy, sought out her Captain, Robert Knox, and invited him and some of his men to come ashore and pay their respects. They foolishly obeyed and were speedily captured and sent inland. Captain Knox later died but his son Robert Knox, Jr., survived twenty years as a prisoner and finally escaped. I have a first edition of his book, "An Historical Relation to the Island of Ceylon in the East Indies," printed by Richard Chiswell of London in 1681.

In the town is an ancient Tamarind tree under which Knox talked with the King's envoys. Massive as it is, it would not be standing to-day if it were not for the efforts of Christie, who twenty years ago when he was a forest officer, had a brick wall built to support the trunk.

Towards evening a launch took us across the harbour to Trincomalee where we boarded the train for Colombo. John Perera cooked us a last supper and we drank a final toast to the jungles of the lower Mahaweli Ganga. May they always remain as unspoiled as we found them.



### MAHAWELI BOATMAN'S SONG

*THE swish of poles on a silent river,  
The air so cool and keen,  
Nature, ever a bountiful giver,  
Here most bountiful has been.*

*The watchful trees are with wonder holden  
To see us match the water's might,  
The dragonfly's wings are hued and golden  
In beams of the morning light.*

*The river's deep, our poles no longer  
Touch ground, our oars we take :*

*The river's strong, but our strength is stronger—  
See where the eddies break.*

*Soon, soon, we'll wait where the good trees shelter,  
And rest our thews in the halting place,  
Soon we'll be free from the water's welter,  
And bondage to the current's pace.*

*There where the tide the land divides,  
When the homing birds to their coverts fly,  
We'll lay us down as the darkness strides,  
And hushed in the dreaming woodlands lie.*

R. L. SPITTEL

## THE DEVIL IS A BIRD

By PETER VAN REYK

*In Sunday Observer.*

There has been no radical explanation for the terrifying cries of what is known as the Devil-bird, apparently peculiar to Ceylon although why it cannot pack up and get out, bugle and all, to some neighbouring country like Siberia (the snipe do it we are told) is more than I can see. Possibly it finds it more interesting to scare the pants off the local villagers and hunters who browse in its vicinity, but that is by the way. It didn't have to scare me too.

the trunk and bed down for the night, as they say in the best jungle books.

Alone about 2 a.m. when I was still biting my fingernails down to the quick and trying to distinguish between my friend's snores and the nocturnal sounds of the jungle, this feathered fiend cut loose with his yodelling. At first I thought the bird was in bed with me, but after carefully feeling around, I decided he must be in a nearby tree. The racket, curiously enough



The first time I heard the Devil-bird was on a trip with a friend and a temperamental car. We had decided to camp for the night by the Divulana tank. I was not particularly in favour of the scheme but the car wouldn't start and we had little choice but to get our things out of

had aroused my friend, and we clung to each other in an ecstasy of terror, while the horrible gurgling cries went on and on.

The bird kept this up for quite some minutes, then peeled off, leaving us sweating in the cold, damp jungle night. Now you may not believe

this, but I was eager to find out all I could about this bird—from the safe retreat of some arm-chair. The first book I came upon was Dr. R. L. Spittel's "Far Off Things."

Right from the first page of the portion dealing with the Devil-bird, I could see I was not going to get any sleep that night. The section started off with the legends connected with the bird, dealing with bereaved mothers sent crazy over their murdered children. The legends make out that the cry is that of the shrieking mother—but you ought to hear my neighbour sing in his bath every morning.

But the stories were all calculated to keep you awake at night, particularly if you were the less adventurous type, like me. Dr. Spittel generously gave space to the many and varied theories held with regard to the bird's identity—though it is beyond me how these intrepid persons could go out into the jungle with the sole purpose of being frightened half out of their wits. Dr. Spittel's theory was that the bird is the Ceylon Hawk-Eagle. A sort of hybrid, I should imagine.

Its Latin name is a honey.

It sounds like nutmeg being grated. It's "Spizaetus cirrhatus ceylanensis" and if you say it quickly over and over again, it is something like the cry of the Devil-bird. Only don't let your maiden aunt hear you say it. Grown man or not you're liable to get your mouth washed out with soap. And don't say it near me: I hate getting my glasses wet.

However, the bird is found in dense forests, and its favourite roosts are large trees, like the kumbuk, often growing by rivers and tanks.

You can hear it sound off any time after dark, though about midnight or towards dawn, are about the times when it comes on the air. Uttering its "murder" cry, the bird hops on a branch with opened wings and ruffled plumes, taking care to twist its head right round so it can't hear itself. It swells out its throat and forces with obvious effort the choking, sobbing notes that give the bravest among us the heeby-jeebies.

It has the most appalling eating habits, and I believe they would serve to revolt any Chinaman worthy of his kimono. It picks on snakes, small birds, and the eyes of mouse deer with equal relish, and even goes for bloodsuckers, commonly known as green, or garden, lizards—or have I got that the wrong way round?

The bird is large and crested, with breast feathers mottled like a jungle hen's. It is a fierce marauder, the terror of lesser creatures of the jungle, and it swoops down like a bolt from the blue (not at me, Dr. Spittel, not at me. It couldn't swoop that far).

Up to that point I am ready to fall in with Dr. Spittel's views. But I do not agree that the bird is a Hawk-eagle. No Hawk-eagle can sound like that. Going by my own experience, the cry sends one into a muttering, shuddering, sobbing travesty of a man, I admit, but let's retain a sense of proportion.

The cry actually emanates from a crow with a nightmare all his own—or from a Veddah who has had too much of his own liquor to drink. I've had a bash at it myself, and if I had the wind, I'd have sounded like a Devil-bird myself.

---

*Loris*.—A small slender tailless nocturnal climbing quadrumanous Cingalese mammal; kind of lemur.—*Concise Oxford Dictionary*.

# Sporting Arcadia of Ceylon

This article was contributed by "J. W." to the *Times of Ceylon Sunday Illustrated* in 1927. To-day motorable roads have tended to change the picture.

ROUND about Arugam Bay is the finest game country in Ceylon, and perhaps, of the whole world, all owing to that rotten twenty miles of sandy, bad road over which no motor car or "bike" can ever hope to buzz along, but over which I have slept, or tried to sleep, in a double bullock cart travelling by night.

There is a parallel footpath to this already much-abused road that runs along the sea side, a bright, glorious, golden, sandy beach. For eight months of the year there is not a fisherman for 20 miles, and nothing more than a flock of pelicans, flamingoes or large fish birds which grace the long, silent stretches of shallow water. Here these live in peace and are not disturbed. At a certain season of the year five to seven katamarans with their crews of fishermen, who hail from Galle, erect their huts and compose what looks like a fishing village. These Gallileans stay about three to four months and reap a rich harvest, catching and drying fish.

A friend of mine had a son of sixteen summers with a weak chest, who was ordered three months at the sea side. We agreed that Arugam Bay Bungalow, E.P., would be the most suitable, but this fell through; so we built, twelve miles from this, three huts which we covered with mana grass, close to good water and beneath the shade of several giant palm trees, which made a very "comfy" haven for our sojourn. The fishing village was about three miles from us, but the help of two hired ponies from Potuvil, where there still exist Moors who breed horses, made the distance a pleasure ride. One day we shot a pig and gave it to the fishermen in exchange for a big seer. We not only made a bargain, but good friends of the Sinhalese fishermen who cordially invited us to join them at any time in their daily fishing excursions.

We had no deep sea fishing tackle but they said they had enough and to spare, which they very liberally gave us, and helped us immensely with their bait and advice.

The next day we went as arranged early, and though we got very sea-sick at the start, we enjoyed the outing. The boats carried a very heavy sail and the way they tore through the water and through the salt spray over us was very great. By the time light was appearing in the Eastern sky, we came across a colony of sea gulls who were squealing, screaming, fighting and causing an unusual and strange noise to us, two land lubbers; but we had not rolled over the waves by chance; this was our destination and the birds being there showed that the sardines were there also, and as a sequence, big fish would be preying on them, and by the time the ball of fire showed itself on the keen edge of the beyond we were as busy as the birds. Grey and red mullet predominated with a sprinkling of all good kinds of fish, from 10 to 15 lbs. and now and again a big seer or para 30 to 40 lbs. These would tear away like a motor boat, occasionally leaping clean out of the water, then doubling back trying to get a mix up. But these men were all experts and quite alive to any emergency. After a long struggle the fish would come towards the boat rolling on the side for the short 3-foot gaff.

Whilst thoroughly engrossed with the cleverness of these simple folk, I felt my line going through my hands like a hot wire and was astonished, and at my wits' end, when an elderly Sinhalese took it quietly from my hand and allowed the required play, and such a performance I never thought a fish capable of. The fisherman, too, was fully taxed and all on our boat turned to see the result. Had he not taken over, the fish would have broken away, but with his skill one of the biggest sword fish, after  $\frac{3}{4}$  of an hour's fighting, was gaffed, but not pulled over, only additionally roped and afterwards taken in tow. All the honours were due to the old gent. This ended

our day's sport. The experience, fun, excitement and work we had had that morning were the first of very many, and at what cost?—the exchange of a wild boar, the shooting of which was a pleasure, added to the pleasure of knowing these simple and very decent people, the most sober and honest it has been my lot to meet.

We did not keep ourselves to the beach only, although I had seen the best curlew shooting I ever did have ; we also met on our side, several turtle, the meat of which we desiccated in the sun for soup later on, and we went often into the game preserves to supply our friends with meat and for our pleasure.

## Peacocks, Partridges and Pigs

By PHILIP K. CROWE

THE northern third of the Island of Ceylon has little in common with the South. A flat land of sandy desert, graceful palmyra palms, and short-lived rivers, the country two hundred miles north of Colombo is reminiscent of the South Indian states of Travancore Cochin and bears no relation to the lush paddy fields or towering tea-capped mountains of the southern portions of Lanka. There is an equally great difference between the Tamil-speaking peoples of the north and the Sinhalese-speaking inhabitants of the South. The former worship the Indian gods and the latter the tenets of Buddha. But for the purposes of this tale the most obvious differences are in the Tamil names for places and the flora and fauna of the jungles, "oya and ganga," the Sinhalese designations for rivers give place to the Tamil "odai" and "aru" and the Sinhalese "aliya" for elephant becomes the Tamil "anei."

The Ceylon Hunting Club selected the area near Mannar, the ancient pearling port on the Indian Ocean, as the base of operations for the club's tenth outing. Camp was pitched some twenty-five miles from town near the abandoned road which in Portuguese times connected the forts at Jaffna and Mannar. The site was pleasing as all real jungle sites invariably are. The tents faced a quiet forest pool and were hedged on the remaining three sides by dense foliage of thorn and Kumbuk trees. The rains had just ended and the landscape was a prevailing

green. In another month, when the fierce heat of the dry season had burnt them, these same plains would be sere and yellow as old parchment. And the elephant, whose bellowing we often heard and whose tracks we saw at every turn, would have to migrate south to the perennial rivers.

The primary quarry was wild boar, the canniest and toughest of Ceylon's big game. Even though they enjoy no protection under the game laws and everyone's hand is against them they not only maintain their own but in some sections have become a menace to the crops. They are hard to find and harder to shoot. During the early morning they leave their tangled jungle hideouts and move out on to the open "villus" where they root for yams and mahadan and pallu berries. It is then that the enterprising sportsman can occasionally get a shot but it must be a quick one for the wild pigs sense of smell and hearing are highly developed and at the first hint of danger, they are off to cover. A group of pig is known as a "sunder," possibly because of their grunting.

During the heat of the day the pig lie up and it is then that they can sometimes be located by specially trained dogs. Best at this dangerous occupation are the common pariah dogs of the villages, some of whom display a high degree of intelligence and bravery. We hired three Tamil hunters, by name Joseph, Mani and Itin and their three dogs, Tombi, Poni and D. S. The

leader of the pack was Tombi, a gaunt black dog resembling a cross between a pointer and a fox terrier. These dogs do not give tongue until they get the pig surrounded but then they wake the jungle with a series of short staccato barks. Knowing them well it is easy to tell what they are coursing, by the notes of their yapping.

We,—John Friar of my embassy staff and his wife Dossie, my wife Irene and my daughter Rene and I—arrived in the early morning to find camp set up and everything in running order, thanks to William Abeysekera, the president of the Club, Dr. Chandra Gooneratne and their wives who had driven down the previous day. In addition to the three trackers, the staff consisted of Ernest Kotelawala, my driver, Don Juan, the cook and Abey's servant Nonnis. Following an excellent breakfast of curried peafowl, Axis deer steak, and eggs we all went for a swim in the Parangi Aru, a shallow forest stream whose beds of golden gravel were criss-crossed with the tracks of all kinds of game. Elephants seem to prefer to slide down to water and we used one of the great inclines made by them to get down the bank.

The prevalence of elephant tracks plus the statement of the headman of the local village that there were three big herds in the district made us decide not to take the girls with us on our pig shoot. Nine times out of ten elephant will run and the tenth they will charge with purpose and we had no heavy rifle capable of stopping them with us. Setting out at eleven we immediately entered the thick jungle where the trackers and their little pack led us into the twilight world where ancient trees locked branches above us and giant creepers chained them even closer together. The lack of sun had one good effect; it kept down the undergrowth and we were able to walk without too much effort along the corridors of the forest floor.

Suddenly the dogs—as a fox hunter and beagler I gag at the term—opened and raced into a thick cover. Dashing in after them we saw a huge Kabaragoya at bay. These six-foot dragon-like lizards have razor sharp tails

with which they are capable of inflicting severe wounds. The dogs were too smart to be caught by the tail and after a short chase the reptile disappeared down a large hole in a giant anthill.

Shortly after this incident the dogs opened again and we heard a frightening breaking of branches followed by a shrill squeal. "Anei," yelled the trackers and gathering their loin clothes about them prepared to beat it into the bush. Restrained by Abey, they explained that elephant often charged the dogs and the dogs of course then ran to their masters for protection. This made sense and we all moved quickly away.

We left the thick jungle and emerged on the shores of a water-hole where herons flapped lazily away and a brace of snipe shot up in front of us. The soft ground was a maze of tracks, among which were many of the sharp slotted marks of pigs. On the far side of the hole we traversed an open willu and were about half way across it when the leading tracker gave a shout and leapt into the air. Abey, who was behind him, also took off into space and cried snake. I looked where he had been standing and saw the swaying hood and darting fangs of a big cobra. Before I could level my gun at it the snake shot forward into high grass and was lost to view. This was the first cobra I had seen in the jungle of Ceylon, although they are reported quite common in the garden lots of Colombo city. By this time the sun was dead overhead, and, feeling that we had sufficient excitement for a morning, we returned to camp, where we had an excellent lunch of young wild pig chops, rice, and vegetables. Sleep after the noon meal is virtually a necessity in the tropics and I always take such a siesta. In the jungle it is particularly good to lie on one's cot in the shade of a spreading Kumbuk tree and be lulled to sleep by the muted hum of the insects and the occasional notes of birds.

Peafowl are far and away the most gorgeous game bird in the East. They are so beautiful that I confess my personal zeal to shoot them has waned a great deal since the days in India

twenty years ago when " Punjab turkeys " were prime targets. The cock in full mating plumage measures about 85 inches to which is added a train of another 40 to 48 inches, and weighs about ten pounds. The hen is a drably dressed lady who makes her mate even more glorious by comparison. Despite their size peafowl are by no means easy to shoot and I do not believe there is a wariier inhabitant of the jungle than an old peacock. They have unusually sharp eyes and spot a hunter long before he gets within range. Even when they are surprised they seldom rise in the air to allow a shot but race off among the bushes. How many times have I been sure of hitting one only to find a few feathers and a vanished bird.

There are two ways to shoot peafowl ; cruising in the jeep toward evening, and waiting under big trees for the big birds to roost for the night. The former method is less rewarding but more adventurous as one gets over the country at the time of day when the going is the pleasantest. The great heat of noon has gone ; the sun is sinking in the West and the forest dwellers are coming into the open to feed. This is the time when the peafowl are abroad but it is also the time when they are most wary. Standing on the back tire of the jeep, old Joseph scanned the scrub jungle and saw peafowl at distances that appeared almost magical to me. Once notified of the birds location Abey would point his green jeep, which incidentally is a full fledged member of the hunting club in its own right, in the right direction and virtually let the machine find its own way while he grasped his long automatic shotgun in preparation for action. Invariably, however, the birds would hear us and be off before we could jump from the jeep to shoot at them.

The shotgun is not a suitable weapon for peafowl. A light rifle, say a .22 hornet or a .280 with a powerful scope sight, is far more effective and undoubtedly more sporting. You either kill the bird cleanly or he gets away. With the shotgun there is always the chance that he will absorb a few pellets as he departs,

which, while they may not impede his progress will, like the school master's lickings, make him eat his breakfast standing up for some time to come.

Peafowl flesh is all white meat and can be delicious particularly if from a young bird.

As I have noted in past articles, the peafowl has few natural enemies. The tiny Loris creeps up and kills it while it roosts and the leopard occasionally makes a successful spring before the great birds, like bombers, can get a long enough run to take off. Hume and Marshall in their definitive three volume work *Game Birds of India, Burma and Ceylon* (Calcutta, 1879) cite the case of a Colonel Tytler who stalked a peacock which did not flush but continued to gaze intently at a patch of jungle just in front of it. Rising up he saw a leopard crawling toward the bird. His left barrel was loaded with ball and he was just about to shoot the beast when to his amazement the leopard threw up both its paws and shrieked in a voice hoarse with terror " Nehin Sahib, nehin, nehin Sahib, mut chulao " (No sir, no sir, don't shoot).

The Colonel, like most of his ilk in those days was not a teetotaler, but he had not had a drink since lunch and was beginning to doubt his reason when the leopard rose up higher and revealed the figure of a man cleverly concealed in the skin. The frightened native then told him that he was a professional hunter and that he was able by this disguise to get close enough to the peafowl to kill them with a small bow and arrows.

Later that evening Abey waited under a tree and came home triumphant with a brace of big male birds.

The Ceylon Hunting Club always paid respect to the Devio, the God of the Jungles, offerings of propitiation were made and new members introduced to the diety. Accordingly John and Dossie Friar were led to a forest glen where a small candle burned on a flat stone and a little pile of coins signified the altar. As secretary of the club I addressed the Devio and then all the members knelt while the God replied. His replies mean different things to



different people. Personally I always ask him to make my eye keen, my gun steady, and the quarry slow.

Last on the list of game we hoped to collect was grey partridge; particularly interesting to me in that the Mannar district of Ceylon is one of the few places on the Island where it is found. Common in India, it seems to prefer arid desert land and is found in this type of terrain throughout the greater part of the sub-continent. It does not like high altitudes and seldom is found above 1,500 feet. The grey partridge in fact provides sport in places where it is hard to imagine any living thing could find sustenance. I have shot these little birds in the barren hills of the North-west Frontier and on the salt flats of the Malabar coast.

Considerably larger than our Virginia quail and somewhat smaller than our ruffed grouse,

the grey partridge has a handsome coat of checked reddish brown feathers and a pair of neat red legs and feet. He is a fast flier and sits well to both dogs and beaters.

We shot the coastal plain near the sea just after dawn and even though the bag was small the scenery was unequalled. Of all the dawns in the world, and I have seen them on hunting trips in every continent, I think those of India and Ceylon are the most brilliant.

I believe that the day will come when shooting, except for such plentiful game birds as partridge, will become obsolete. The constant advance of civilization will mean the virtual extinction of the big animals outside reserves and the sportsman of tomorrow may never see wild pig or jungle peafowl, but the chances are he will still be able to find sport with the humble grey partridge.

## The Rufous Turtle-dove

(*Streptopelia orientalis meena*)

### in Ceylon

By W. W. A. PHILLIPS

UNTIL recently there were only two records of the occurrence in Ceylon of the Rufous Turtle-dove, the Oriental counterpart of the Common Turtle-dove (*S. turtur*) of Europe. Both these occurrences were noted as long ago as the last century and are recorded by Legge in his famous History of the Birds of Ceylon, published in 1880.

Writing under the name of Hodgson's Turtle-dove, Legge states that one (a juvenile) was collected by Layard from a small flock that flew over his head when he was travelling in the Pasdun Korale (Kalutara District?) in December, 1848, and the other (an adult) was obtained by Mr. G. S. Grigson, in 1871, at Nilambe (Kandy District) during the cold weather. So,

from 1871 until 1953 this Turtle-dove had not been identified in Ceylon. It is interesting, therefore, to record that quite recently there have been two further occurrences, both records of which lie to the credit of that fine sportsman, Mr. B. Gordon-Graham.

On November 7th, 1953, Mr. Gordon-Graham, while shooting along the jungle track between Tellula and Hambegamuwa tank in the dry lowlands of the Uva Province, saw a strange dove flitting through the jungle, stopping to perch now and again and often flying close to the ground. He shot it and being unable to identify it, he sent to me, the head, wings, feet and a few feathers from the breast, flanks and rump; these were sufficient to confirm that

the bird was a Rufous Turtle-dove, in juvenile plumage, just commencing to moult into the adult dress.

Again, this season, Mr. Gordon-Graham has been lucky enough to meet with another of these rare migrants. Shooting on 19th December, 1954, in a paddy-field near Urubokka, not far from Deniyaya in the Galle District of

Like the 1953 bird, it is a first year juvenile commencing to moult into adult plumage ; the under tail-coverts are white and it belongs, as one would expect, to the migratory race *meena*, which is known to breed in the Southern parts of Western Siberia, Turkestan, Persia, Afghanistan or Kashmir or in the Himalayas, eastwards as far as Western Nepal and to migrate to spend

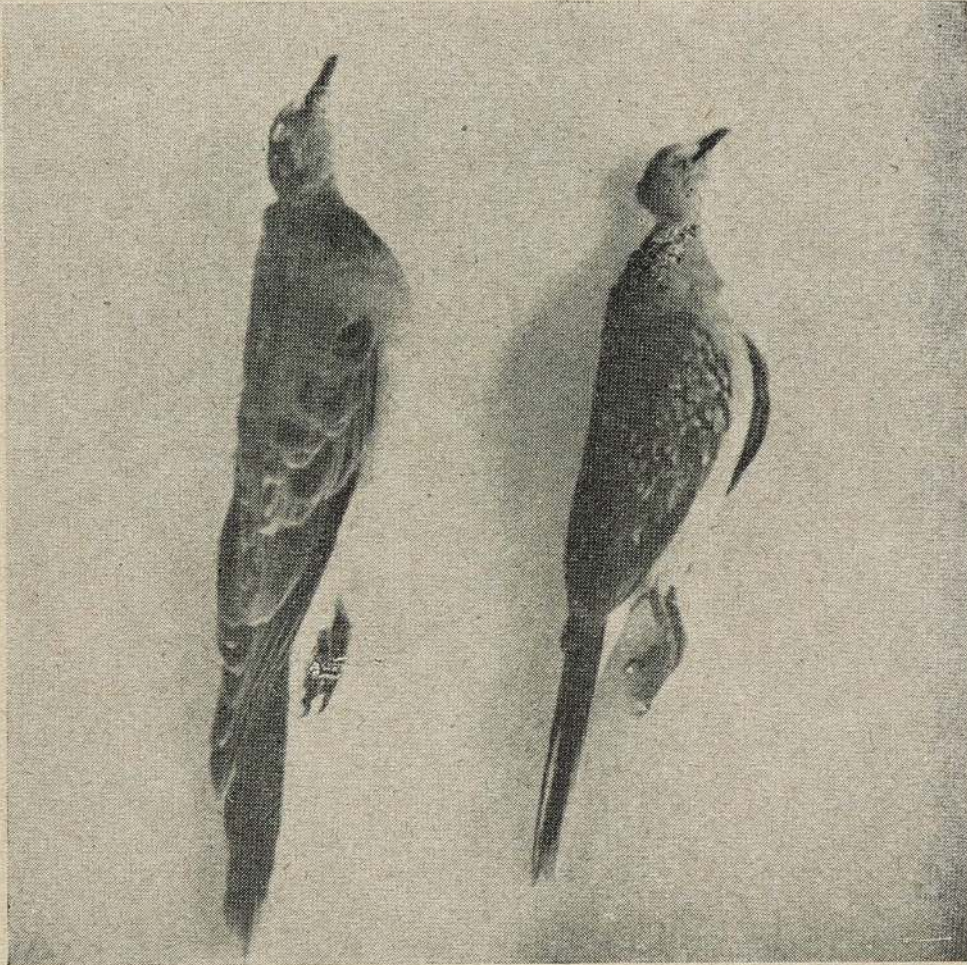


Photo R. Wynell-Mayow

A. *Rufous Turtle-dove.*

B. *Ceylon Spotted-dove.*

the Southern Province (Wet Zone) with Mr. Jack Van Twest, he observed one feeding on the ground alongside a number of Common Spotted-doves (*S. chinensis ceylonensis*). The bird, which seems to be rather shy by nature, rose and was eventually shot by Mr. Van Twest ; it was carefully preserved and forwarded to me, in good condition, by Mr. Gordon-Graham.

the Winter in the plains of Western and Southern India or occasionally, overshooting its normal haunts, in Ceylon.

The Rufous Turtle-dove may be distinguished from the Common Spotted-dove by its larger size (13 inches against  $11\frac{1}{4}$  inches in length), reddish base to the beak, light orange iris to the eye and the rather reddish-brown upper plumage

with conspicuous rufous scale-markings on the wings instead of the very marked spotting in the Spotted-dove. In the adult, there is a patch of black and blue-grey scale-markings on the sides of the neck in place of the white-spotted black patch in the Spotted Dove ; in first year juveniles, however, such as generally visit Ceylon, the neck markings are wanting.

It is interesting to note that all but one of the Rufous Turtle-doves that have been recorded from Ceylon have been first year birds ; it may be that, in their first year, the tendency to wander further afield is more pronounced than in the adult. Also, all of them have been shot

in the South or South West, indicating that they have arrived in Ceylon by the Western migratory route, down the West coast of India and across the Gulf of Mannar to the West coast of Ceylon.

## ACKNOWLEDGMENTS

My grateful thanks are due to Mr. Gordon-Graham for so kindly sending the specimen to me, to Mr. E. C. Fernando for skinning and preserving it and to Mr. R. Wynell-Mayow for making the excellent photographs of it, placed beside a Spotted Dove to show the distinctive plumage.

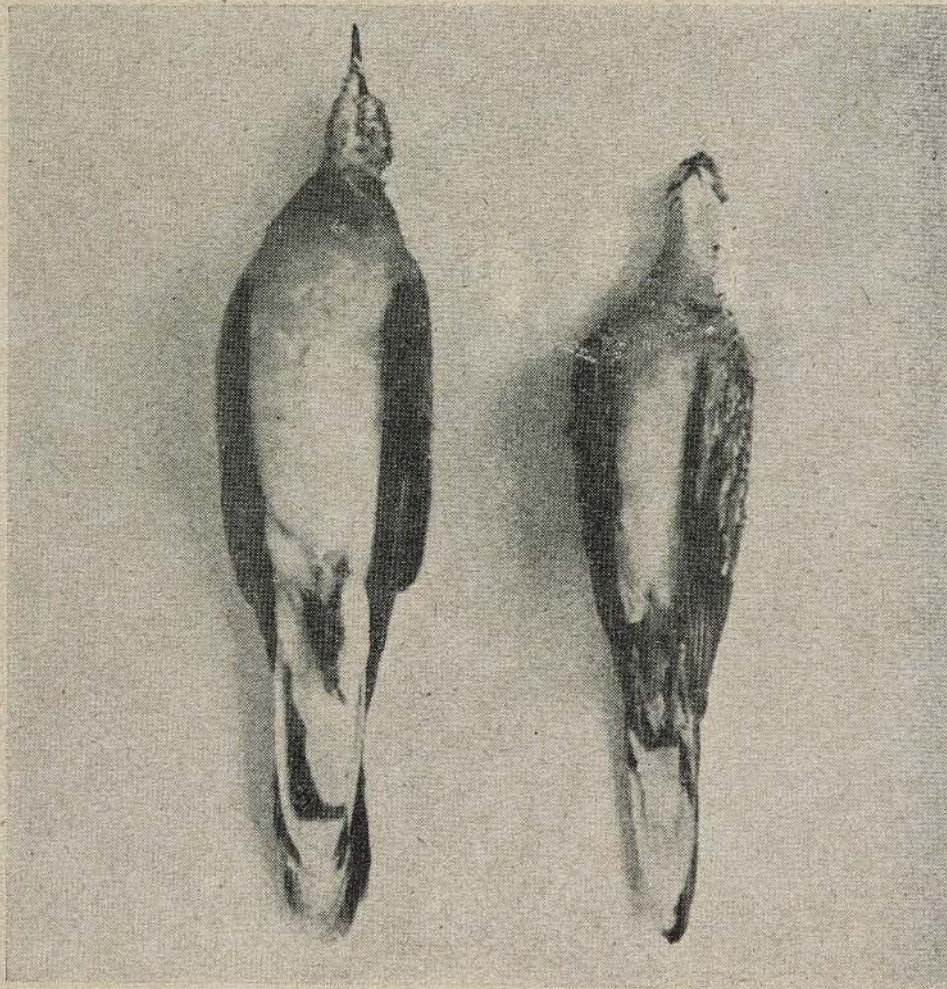


Photo R. Wynell-Mayow.

A. *Rufous Turtle-dove*

B. *Ceylon Spotted-dove*

# An Albino Indian Pipit in the Ruhuna National Park

By W. W. A. PHILLIPS

IT is interesting to record that a pure white Indian Pipit (*Anthus novaeseelandiae malayensis*) was seen in Ruhuna on November 21st, 1954, by Mr. F. W. E. de Vos of Galle and photographed by him ; some of the photographs being reproduced with this note. The Pipit was running about on the grass about 50 yards from the boundary of the National Park, near the gate below the Ranger's Office at Palutupana—Palutupana being, as most readers know, almost

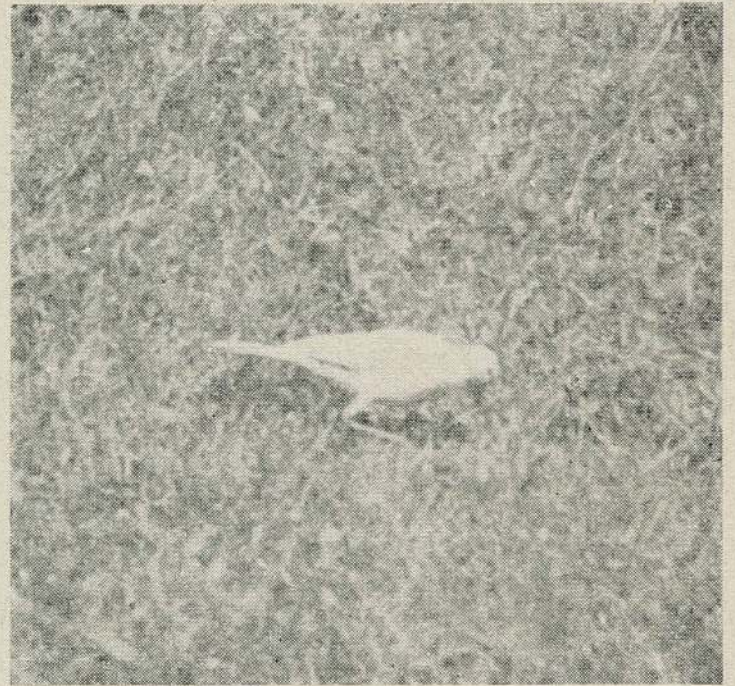
unlikely that a ground-nesting bird would be breeding at the end of November when heavy monsoonal rains were anticipated, it seems more probable that the object in its beak is a small brown grass-hopper or other insect.

The photographs show that the bird is in pure white plumage, with whitish or light-coloured legs and beak but the eyes appear to be of the normal dark-type ; no doubt the bird is a rare albino colour-variety of the common Indian



*Albino Pipit*

F. W. E. de Vos.



*Albino Pipit*

F. W. E. de Vos

on the sea coast in the Hambantota District of the Southern Province. Like most Indian Pipits, this bird was very confiding and allowed Mr. de Vos to approach near enough to take several photographs of it at fairly close range. In one of the photographs, here reproduced, there appears to be a piece of grass in the Pipit's beak and the suggestion has been made that it may have been building a nest but, as it is extremely

Pipit, an abundant species resident in that area.

Mr. de Vos was very fortunate in being able to observe this interesting bird and more fortunate still to be able to take its photograph.

Previously, the closest approach to an albino Pipit that I had met with was a light biscuit-coloured or fawn bird that Mr. Geoffrey Palmer and I observed, about the year 1937, on the bund of the Kaluwewa Tank in the N.C.P.

# Plovers

By C. E. NORRIS

AROUND coastal lagoons and along the beaches, small Plovers will be found that may present confusion as to their identification. It is probable those seen during the South West Monsoon will belong to the resident-species, but just to make things more difficult stragglers of the migrant-species may also be encountered. The resident species are : Jerdon's Little Ringed Plover and the Ceylon Kentish Plover, both of which frequent the shores of lagoons, large tanks and the sea-shore. They breed between May and August, laying their eggs in depressions amongst the gravel of lagoon shores. With the arrival of the winter visitors at the end of August, difficulties start confronting the bird watcher as now there will be found two Ringed Plovers and two Kentish Plovers. The migratory Little Ringed Plover has slightly heavier markings on the head than the resident species and a narrower line around the eye, also there is more black on the bill. The migratory Kentish Plover is very difficult to differentiate in the field from the resident species. The differences are mainly in size ; the colouration being nearly identical in both species.

When they are on the wing it is easy to tell the difference between the Kentish and the Ringed Plover as the former has a white bar across the wing and a white edging on the lower wing. The incomplete dark bar across the upper breast of the Kentish Plover is distinctive. The yellow legs of the Ringed Plover are a helpful guide to its identification.

The Sand Plovers are winter visitors to the coastal flats and beaches; it is possible they may be confused with the Kentish Plover owing to the incomplete brown bar on either side of the

breast. They are, however, lighter in colour on the upper plumage and appear longer on the leg. The dark bar which runs under the eye to the ear coverts gives the impression of a dark spot behind the eye. The Lesser Sand Plover is common during the North East Monsoon all round the coast.

The Golden Plover's distinctive whistle must be well known to sportsmen in Ceylon, but it is possible the Grey Plover is not so well known. It is a larger bird than the Golden and its large head helps to distinguish it. On the accompanying chart I have tried to show the comparative differences between the two species ; the arrows have been inserted to indicate the significant " field-marks." The rare Caspian Plover has been recorded once from the Hambantota area and therefore must be regarded as a rare vagrant. It is about the size of the Ringed Plover and has a broad rusty breast band narrowly bordered with black below.

The Plovers to be found in Ceylon are :—

*Resident*—

Jerdon's Little Ringed Plover.

The Ceylon Kentish Plover.

*Migrant*—

The Little Ringed Plover.

The Kentish Plover.

The Lesser Sand Plover.

The Larger Sand Plover.

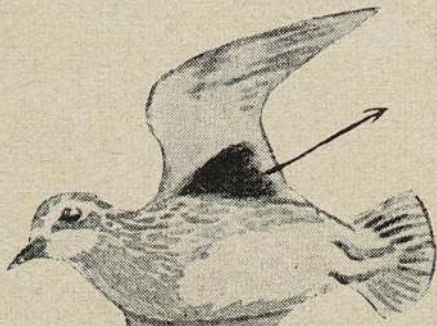
The Caspian Plover (rare vagrant).

The Grey Plover.

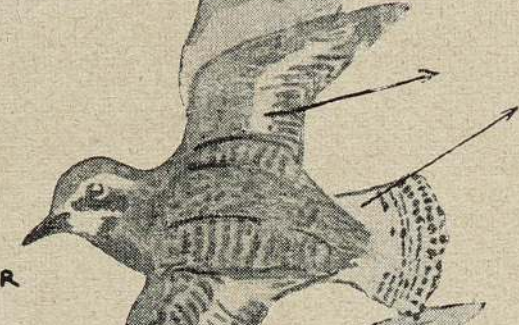
The Eastern Golden Plover.

I have not included the Yellow-wattled Lapwing and the Ceylon Red-wattled Lapwing in this list, although both species are residents, as they are distinctive and well known.

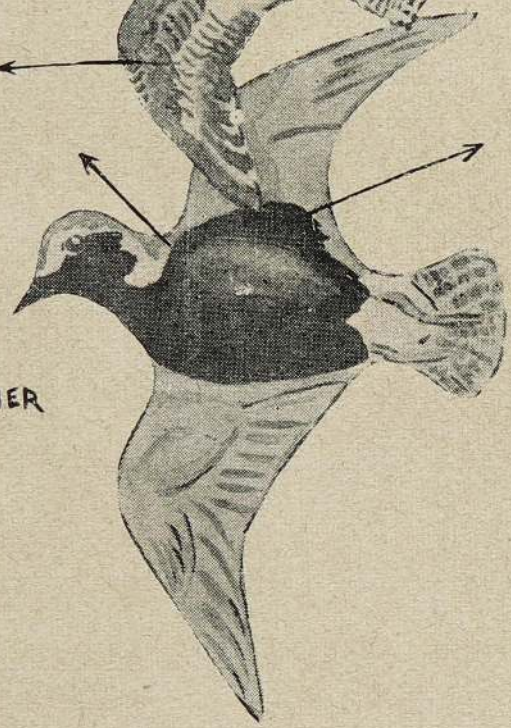
WINTER



WINTER

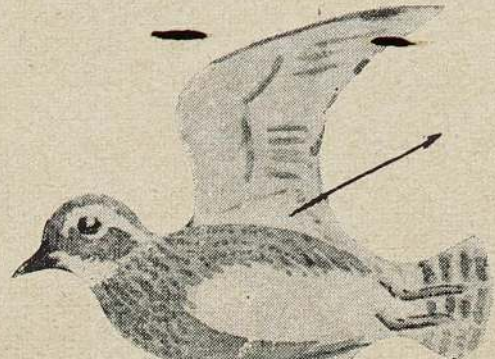


SUMMER



GREY PLOVER

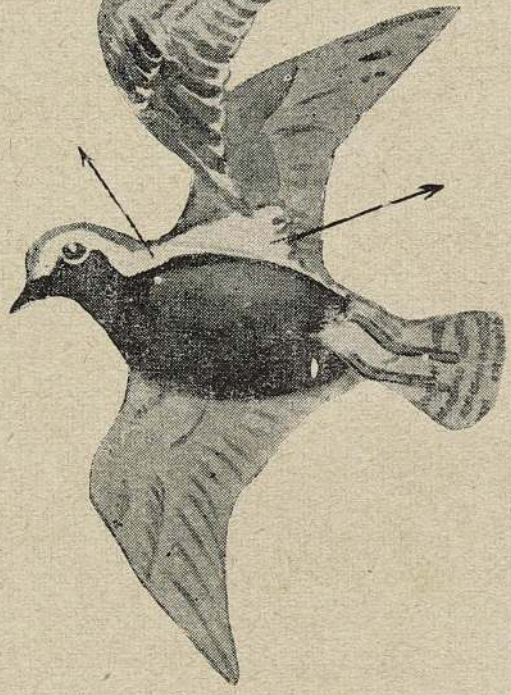
WINTER



WINTER

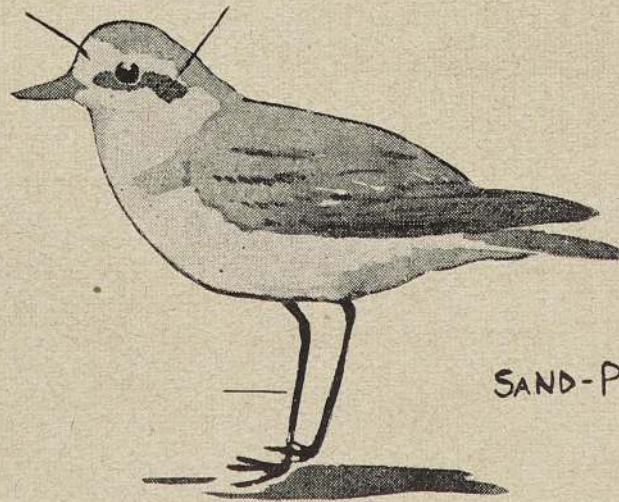


SUMMER

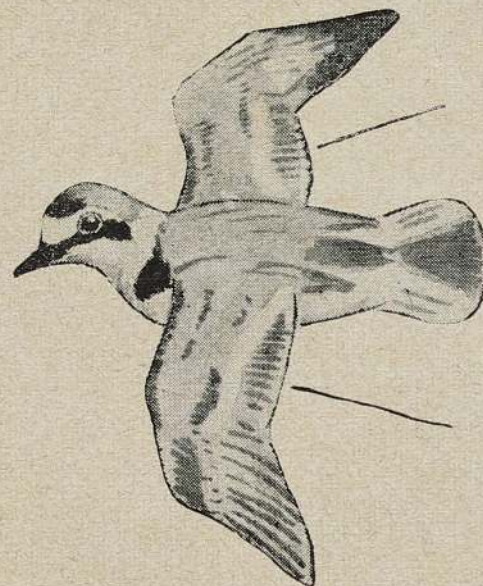
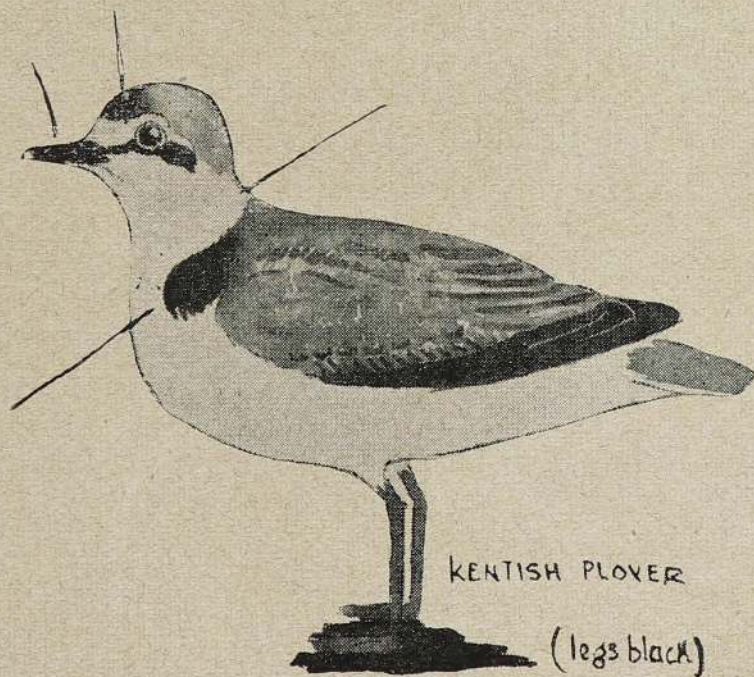
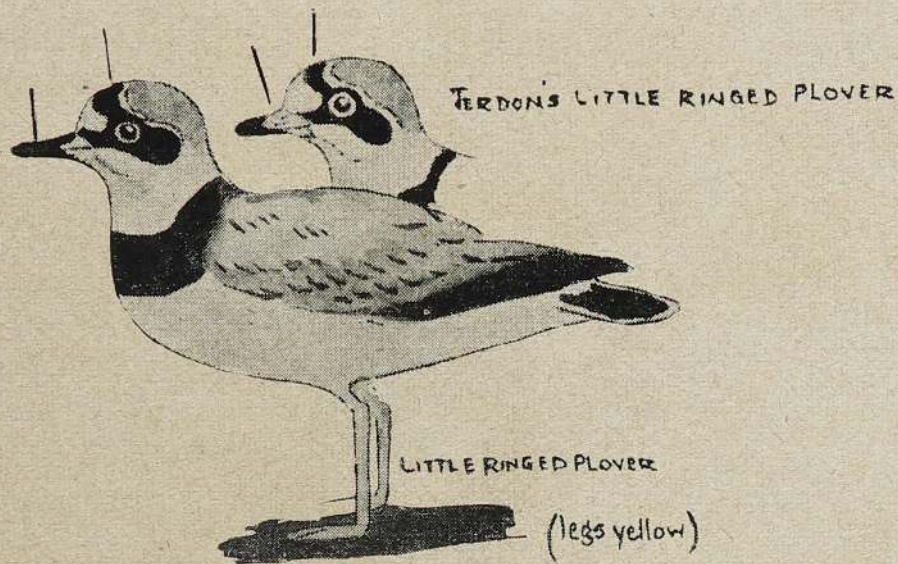


GOLDEN PLOVER

CEN 1/54



SAND-PLOVER



1881/54

# Snipe Shooting

By D. D. in an old number of the *Pioneer*

AT the third camp there was some marshy ground that usually gave cover to snipe. Before we set out I explained to my companion that he would get wet and very muddy and told him how to distinguish between a snipe and a sandpiper. After we had waded a few yards, snipe began to get up in rapid succession in ones and twos, in consequence between us we dropped four couples in less than ten minutes. My friend then slapped his thigh and exclaimed: "This is sport if you like. I've seen nothing to touch this." Sentiments such as these are very general. Probably three out of four men, if asked which form of small game shikar appealed to them most, would reply "Snipe shooting."

Now, in theory snipe should be among the least attractive of game birds. The sportsman has usually to work hard for his bag walking for miles through water and mud, the latter often so soft that he sinks into it up to the thighs so that every step is a labour, and in a very short time he becomes what the most unsporting of poets describe as a "muddied oaf."

Then the quarry is small. When you have shot a snipe you have not the satisfaction of hearing the heavy thud that accompanies the fall of the goose. Nevertheless I, for one, would never hesitate to go after snipe in preference to geese, duck, sandgrouse, quail or any small game.

It never occurred to me to enquire into the reason for my preference for snipe shooting until I came across an essay on this form of sport by Alexander Innes Shand, in which that talented writer sings its praises in a book entitled "Recreations and Reflections"; the essay seems to be known to few people.—

"The charm in the chase of the snipe is that it is always speculative and often delusive. One day you bring home a fair bag of the featherweights; the results of the next may be stowed away in a breast pocket. A feathered will-o-the-wisp, he is here to-day and gone

to-morrow. He may have settled down in flocks, but may rise in wisps, scenting danger as it is wafted down the wind, like the watchful wild-goose or the red-deer. Flushed at your feet, he is apt to fluster even the expert out of his equanimity: you shoot too soon or wait too long. He imitates the wildfire in his dancing flight: those erratic jerks to right and left demoralise the steady game-shot, and if you give him law, say for five and thirty yards, he may slip through the charge of a choke-bore, loaded with No. 8. And nothing can be more exasperating than the note of mockery, as he soars skyward when you have failed to secure him. Then there are other drawbacks, which he seems diabolically to improve to his advantage. It is not easy to take deadly aim when balancing yourself on one leg in a quaking morass. And the weight of the gun tells on the muscles of the arms, when you have been flourishing it for toilsome hours as a balancing pole. In fact nothing tries the nerve like snipe shooting under difficulties. The woodcock is not in it with the snipe, for the chances at the cock are few and far between, and after a bad miss you have time to pull yourself together, whereas on a good snipe ground, where you may flush a bird at any step, you are flustered. Colonel Hawker, the crack snipe shot of his time, tells how one day he bagged thirteen in succession, and next made eleven consecutive misses.

That a crack shot in England should miss eleven snipe in succession would tend to confirm the assertion, often made, that snipe shooting is more difficult in Europe than in India.

From the fact that much bigger bags of snipe are secured in India than in Europe it does not necessarily follow that snipe are easier to shoot in this country. It may be that our sportsmen are better shots, or that snipe are more plentiful. The latter is undoubtedly one of the reasons why larger bags are obtained in India.



My experience is that the warmer the day the easier it is to shoot snipe. You go to a 'jhil' in Northern India early on a winter's morning and the snipe get up in wisps, sixty, seventy, or eighty yards ahead. Later in the day when the sun has warmed the water, they lie much closer and do not rise until you come within twenty yards of them. This, I think, demonstrates the truth of the allegation that snipe shooting is easier in India than in Europe; it also in part accounts for the fact that the average bag of snipe is larger in South India and Lower Bengal than in the United Provinces.

Another reason for the attractiveness of the chase of the snipe is that it lasts much longer than duck shooting. After you have been half an hour on a 'jhil,' practically every duck that has not been shot has left the tank, any that remain have become so wary that it is next to impossible for the gunner to get within range. It is not so with snipe. They rarely fly far and you can obtain a whole day's sport on a comparatively small patch of ground. Recently a friend and myself spent and enjoyed nearly five hours on a 'jhil' consisting of a centre patch

of rush-covered water surrounded by open marsh, the whole being a little over half a mile in circumference. We walked three times round the 'jhil' and on each occasion put up a number of snipe.

Another advantage of snipe-shooting is that the bird, if hit almost invariably drops dead. This form of sport is, therefore, accompanied by very little cruelty.

Lastly, the snipe is not a runner. You flush a partridge, fire at it and miss. It drops to cover ninety yards ahead of you. You walk up to the spot but can find no trace of the bird: it is probably further away from you that it was when it alighted. On the other hand, you can almost always flush a snipe from the place where you saw it settle.

Phil Robinson pokes fun at the poets, who profess to be the high priests of nature, for their lack of knowledge and appreciation of birds. In regard to the snipe his strictures are fully justified. The best that any well-known poet has been able to do for this prince of sporting birds is 'the pallat-pleasing snipe' of Drayton. Here then is a grand opportunity for the naturalist bard."

## Fish Breeding in the Gal Oya Valley

By R. W. SZECHOWYCZ, D.Sc. (Eng.)

Chief Forest Officer, Gal Oya Development Board

THE importance of fish breeding is recognised the world over, but large extents of water still remain which are either completely neglected or are used uneconomically. The area under water in the Gal Oya Valley is quite large, and all this expanse of water extending over some 50,000 acres is suitable for fish-breeding.

In 1951, under the supervision of the Forest

Branch of the Gal Oya Development Board and with the co-operation of the Department of Fisheries, the first steps were taken in this direction by introducing such exotic fishes as Gourami, Carps of different varieties, *Trichogaster pectoralis*, *Lebistes* and *Tilapia mossambica*.

Of these the *Tilapia mossambica*—Peters (Syn. *Tilapia natalensis* M. W., Family—Cichti-

*dae*, Order *Percomorphi*, Sub-order—*Percoidae*) first introduced to Ceylon from Indonesia in 1951, and which were stocked in the tanks of the Gal Oya Valley (Amparai, Wavinna, Aligalge and the Senanayake Samudra) has a most interesting history behind it.

Prior to 1939, this fish was absolutely unknown outside its home waters in East Africa, where it bred in rivers with other varieties of *Tilapia* (to my knowledge there are 18 varieties) and being smaller than the others received little or no attention.

On a momentous day early in 1939, Pek Mudjair, an Overseer of the Extension Service living in Residency Re-Kediri at Blitar, East Java, fishing in the River Serang, had had a good catch and the fish so caught he used for stocking his fresh water pond. To his amazement, however, he discovered the next day, that of the fishes put in all but one species had died. The survivor showed signs of rapid propagation and in due course Pek Mudjair brought these facts to the notice of the local Fishery Officer. Rough data were then collected and in November that year specimens of the fish were produced before the Conference of Inland Fishery Experts held in Surahaja. As the fish was still nameless (being referred to locally as "Ikam Mudjair" after its discoverer—"Ikam" meaning fish) specimens were sent to Holland where it was incorrectly identified as *Tilapia zilli* (Gervais). As a result of this all reference books and reports between 1939 and 1947 have used this incorrect name. It was only after World War II that the fish was identified as *Tilapia mossambica*.

How this fish, originating in African waters, came to Java still remains a mystery. It is supposed that specimens had escaped from some aquarium, as it was known to be a very interesting aquarium fish. But against this supposition stands the fact that the River Serang flows through very wild jungle territory where no aquarium ever existed or does exist to this day.

The history of breeding and transplanting

from one country to another of this kind of *Tilapia* presents a most interesting study not only to the aquarist but to a much wider circle.

The general belief that this fish was introduced into Indonesia by the Japanese during World War II was found to be incorrect. From Indonesia this fish was introduced into Malaya, Pakistan, India, Ceylon, Thailand, Haiti, Jamaica and even Egypt. In all these countries the fish is well established and provides great benefit to the fisherman.

The habits of the fish have been studied by many scientists, among whom are such figures as F. Hickling, A. E. Hofstede, F. Botlee, H. Peters, and W. M. Schuster. Summarised their findings are as follows :

*Tilapia mossambica* can grow in both fresh and saline water and can endure well a salinity of 6.9 per cent. The multiplication of *Tilapia*, however, does not occur where the salinity exceeds 3 per cent. The breeding habits of the fish provide much scope for study. Some varieties such as *T. gunesana*, *T. spermanii* and *T. melanopleura* dig holes in the mud where the eggs are laid and guarded. In the case of other varieties such as *T. dolloi*, *T. bendaloti*, *T. simonis*, *T. dicolor*, *T. galitea*, *T. nilotica* and *T. microcephala*, both the male and female incubate the eggs in their mouth. In *T. macrocephala*, only the male incubates the eggs and that too in its mouth. Still another group to which the *T. mossambica* belongs, has only the female as the caretaker of the eggs. This group includes *T. flavomarginata*, *T. maritini*, *T. squamipinnis*, *T. lidole* and *T. shirana*.

The male *Tilapia mossambica* digs a hole in the mud, approximately 2½ inches deep and about 10 to 14 inches in diameter. The vicinity of the hole it claims as its own exclusive property and it guards the area, ready to fight any intruding male fish. The female lays the eggs in the hole and the male fertilizes them. Thereafter they are collected in the mouth of the female (quantity ranging from 75—200) and are hatched during the succeed-

ing 14 days. During this period the female takes no food. The female lays eggs at intervals of 30 to 40 days. The sexual maturity of the *Tilapia mossambica* is reckoned at the age of 2 to 3 months, when its length reaches 3 to 4 inches. During the mating season the male bears a black body without any bands visible, while the lower part of its mouth shows a white colour. The pectoral and dorsal fins appear red. The female carries a grey coloured body, but a large female would show a slight red margin on its fins. In non-productive periods both sexes of the fish would show out a grey colour, very often carrying greyish bands, and in this phase they are found in shoals below the upper surface of the waters. The absence of any shoals of *Tilapia* is an indication that the mating season has started.

The male of the species grows to bigger proportions than the female, reaching lengths up to 15 inches, heights up to 5 inches and weighing up to 2½ pounds.

The breeding of *Tilapia* does not require any specialised skill as is required in the case of other fishes, e.g., Carp, and this factor has made it the most suitable fish to be introduced into areas where pisciculture is not known or its practice is of a low standard. It is generally very difficult to persuade the average peasant to grow fish in ponds or paddy fields as long as it calls for the expenditure of money in the purchase of fingerlings, especially when lack of skill often results in the total failure of the breeding. The *Tilapia* propagate profusely and no effort is therefore required to secure fingerlings for purposes of breeding.

As in Malaya and Indonesia all that is required for breeding *Tilapia* is only a deep water-hole in the corner of a paddy field. The fish is stocked here and when the paddy field as well as the water-hole is submerged the fish come out and start breeding and growing. And, at the end of the season the farmer has only to collect his required stock. Even during a period of drought when the level of the water in the hole drops to the level

of the ground water table of the paddy field the *Tilapia* survive and the process of breeding continues uninterruptedly from season to season. In this simple way millions of pounds of fish are raised, adding thereby to the daily diet of the farmer.

Experience gained with the passage of time will teach the farmer the value of fish-breeding and when he realises that with a little more effort and expense he can breed Carp which will give him a return of 90 pounds an acre as against the 22 pounds he gets with his *Tilapia* stocked under similar conditions, he would naturally take to breeding the more profit-bringing species. In many instances *Tilapia* breeding has been the stepping-stone to breeding of other fishes.

The introduction of *Tilapia* into some lakes has been attended with complete success. One such instance is the small crater lake Rann Lamongan in East Java which has a water-spread of approximately 140 acres varying in depth from 54 to 85 feet, (pH of water being 7.3 at the bottom and 8.2 at the surface and, photosynthesis being limited to the upper fifteen feet, and the bottom saturated with H<sub>2</sub>S which, due to absence of oxygen is toxic to fishes). Five years after stocking done here in 1949, the yield was found to reach 52,000 pounds of *Tilapia*, corresponding to 370 pounds per acre.

The structure of the body of the *Tilapia* and also the formation of its fins show that it is not a strong and fast swimming fish, and, due to its habit of living close to the bottom of the water (especially during mating season) renders itself an easy prey to predatory animals. Hence the existence of plenty of evidence of how *Tilapia* stocking ended in total failure. One such instance is the Rawa Labbok marshes in Central Java, where *Tilapia* stocked were almost entirely exterminated by fishes of the *Ophiocephalus* family.

A pertinent question which arises is what influence *Tilapia mossambica* introduced into Ceylon waters exerts on the indigenous fish

fauna. According to the Catalogue of Fishes in Ceylon, there are on record 675 species of fishes, 75 of which are fresh water fishes. Out of the latter only 10 species grow to a length of over 10 inches and, excepting for two varieties of Eel which live in fresh water only temporarily and breed in the sea, these ten species are: *Wallago attu* (Walaya), *Clarias teysmanii* (Magura), *Ompok bimaculatus* (Kokusa), *Tor kbudree longispinis* (Lahella), *Labeo dussumieri* (Kanaya), *Labeo porcellus* (Vanna), *Labeo fisheri* (Gedaya), *Puntius sarana* (Pethiya), *Ophiocephalus marulins* (Gan-era) and *Ophiocephalus striatus* (Loola).

The bulk of the fresh water species of fishes are too small and in consequence do not carry a high commercial value, or, they are of a muddy taste or are too bony. Also some species suffer from human prejudices against them and are seldom used as food.

All scientists who have studied the fish agree that *Tilapia mossambica* is a herbivorous animal. It feeds exclusively on diatoms and unicellular green algae strained from the water and collected from the organisms growing on submerged plants and when the fish grows bigger it gradually turns to higher plant forms that constitute the main food of the adults. The blue algae and the bottom diatoms play an important part in the diet of the fish. Research done in Indonesia on *Tilapia* breeding and its influence on other fishes—the local species—have “proved without a shadow of doubt that a too quick distribution of this species in the Island waters with a possible disastrous effect on the natural fish fauna need not be feared.” (3 p. 17).

In some cases the breeding of *Tilapia*, as stated before, has proved a failure, and this has chiefly been due to the presence of predatory fishes such as members of the *Ophiocephalus* family. The *Loola* which is a member of this family is a very common fish in Ceylon and it is well known that it is extremely carnivorous. This fish builds a nest and guards its young fry or eggs. They spawn in enor-

mous numbers and it is difficult to imagine that the herbivorous *Tilapia* could ever exterminate the carnivorous *Loola*.

In African rivers and lakes there are several varieties of native *Tilapia*. Most of them grow to larger sizes than the *T. mossambica* and live in amity with other fish fauna as is evidenced from the fact that fishermen get quite big catches of other species of fish from rivers and lakes where *Tilapia* breed. When a new species of fish is introduced some changes in the composition of the fish fauna and flora must always be expected. This has been observed in the Potuvil lagoon where the fishermen occasionally caught the marine fish *Paravu*. Since the introduction of *Tilapia*, this fish is reported as seldom or never seen entering the lagoon waters from the sea. This is perhaps due to some change which has taken place in the composition of the bentom and plankton which is consumed by the *Tilapia*. The fishermen, however, are not disappointed as they derive greater profit by the sale of the *Tilapia* they catch than they ever did before with *Paravu*. The Warden of the Department of Wild Life, Mr. Nicholas, states that after the introduction of *Tilapia* into brackish water lagoons within National Parks where fishes and water birds were hardly to be seen, the bird population had increased several times over, thereby adding considerably to the aesthetic value of the park.

The great advantage of *Tilapia* breeding in inland waters is the beneficial effect it has in the control of malaria. The larvae of *Anopheles* lie close to the surface of the water and is attached to water plants by a special hook provided by nature. The chances of mosquito larvae being completely destroyed by other fishes which feed on them (*Larvicidae* fishes such as *Lebistes*, *Gambusia*, etc.) and which are often introduced for this purpose are limited, while on the other hand, vegetarians like the Grass Carp and *Tilapia* are able to do a thorough job of it by keeping the surface waters completely free of weeds and thereby

destroying the very breeding places. In many places in Indonesia where Tilapia was introduced the Malaria mosquito has almost entirely disappeared and this contribution to the well-being of the community can be considered of greater value than the addition to the food supply.

Before the Tilapia was introduced into the Amparai tank, the people interested in fishing were perhaps only a few fishermen from Samanthurai. Now the Tilapia has established himself and quite large quantities are caught by anglers. I would advise anyone who is averse to Tilapia breeding to visit Amparai and witness the many workmen and officers of the Gal Oya Development Board engaged in the evenings in the business of angling for Tilapia for a delicious dinner. There are some who would compare the Tilapia to the rabbit introduced into Australia, but they overlook the fact that the sheep, which stood as the main prop on which the prosperity of the Australian people was built was also introduced from out-

side. In Ceylon, where at the present rate of increase the population will double itself in another 25 years, and where even at present food has to be imported and the maximum land area that can be brought under cultivation is limited to a little over a million acres, the importance of fish-breeding cannot be over-emphasized, and, in this new sphere of economic activity, vital to the prosperity of the people of this country, the Tilapia will no doubt play an important role.

REFERENCES

1. HALL, C. B.—“Ponds and Fish.”
2. HOFSTEDE, A. E., ARDIWINATA, R. O. and BOTKE, F.—“Fish Culture in Indonesia.”
3. VAAS, K. F. and HOFSTEDE, A. F.—“Studies on Tilapia Mossambica-Peters (*ikan mudjair*) in Indonesia.”
4. MENDIS, A. S.—“Catalogue of Fishes of Ceylon.”
5. SCHUSTER, W. H., KESTEREN, G. L. and COLLINS, G. E. P.—“Fish Farming and Inland Fishery Management in Rural Economy.”
6. HOFSTEDE and BOTKE, F.—“Tilapia Mossambica-Peters as a factor in Malaria Control in the vicinity of Djakarta., Djakarta, 1950.”

“TILARPE”

Sir,

I am sending you a small article on my experience of fishing and what the fish take as bait in this particular pond that I am writing about.

*Tilarpe.* The Tilarpe will not grow more than 8 to 9 ins. in length. They can survive in fresh-water or in sea water. No other small fish can live with him as he eats them. Tilarpe is good eating but there are many bones. The Tilarpe will not die soon. I have hooked one and i have kept him on the ground and he did not die for 28 minites. of course he was hooked badly in the mouth so that he died rather soon. It is very easy to catch the Tilarpe, you can catch about 25 to 30 in an hour. When i have no line and hooks take a piece of thred about 2 to 4 yards and a pin bent in two for a hook, you can catch them quite easy like this. Tilarpe do not attack fish bigger than itself

Bait. Small earth worms or small artificial bait is what I use ;

*Eels.* The Eel is very much like the water snake. It is a fish-eater. In this particular pond there are some pelicans and every day these pelicans get sea fish for their food, the food is put on the banks of the pond and some fish drop into the water and the eels eat them. I fish out the eels with little 2 inch fish which they love. The biggest eel i have caught is 3½ pounds, but is very hard to get the hook out of the eels mouth because it is so small. there are many eels in this pond.

Bait. small sea fish or fresh-water fish about 2 inches in length.

In this pond there are many other common fish. This pond is about 30 feet deep in one conner. There are many snake birds and water hens with nests in this pond. It is very interesting to watch them.

DAVID WEINMAN,  
Aged 11 years.

Debiwela Zoo.

# The Burning of Patanas

Extracted from a Report presented to the Nuwara Eliya District Agricultural Committee on 11th December, 1954.

THE annual firing of patanas especially in Upper Uva and Nuwara Eliya Districts is assuming tremendous proportion. Although no accurate estimate of the annual acreage fired is possible it is quite evident that the practice is becoming more prevalent from year to year and has come to be looked upon as a necessary evil.

It has been said that the Ceylonese villager has fired patana land for generations. Nothing will make him give up this practise. That is purely a negative approach and must be remedied.

The annual firing, done generally before the onset of the monsoon rains, removes the surface vegetation thus lowering the organic soil status and destroying soil stability. This instability coupled with the monsoon rains brings about a removal of the top soil by surface run-off which, coupled with over grazing and consequent ripple formation, ends in the space of a few years in far more serious gully erosion.

These are but visible indications of the deterioration of the patanas. The annual loss of top soil by surface run-off means the removal of large areas of relatively fertile top soil and the exposure of the sub-soil, poor in plant nutrient and lacking the porous structure of the surface soil so necessary for fertility.

The annual reduction in the inherent fertility of the soil can have but one end—complete sterility. In these days when the landlessness of the villager is most acute the loss of potentially cultivable land is a national calamity.

Erosion can thus be said to be the most spectacular result of human interference of the soil and is a menace to an agricultural economy.

Unless definite and immediate steps are taken the continuation of this common ill-advised and ill-conceived practice will have far-reaching consequences affecting not only the life of the

villager but the economic stability of the country.

What are the reasons for this practise ?

Why is it a “ necessary evil ? ”

It is common knowledge that the main reasons for the annual firing of patanas are :—

- (a) To provide “better” pasture for the village cattle.
- (b) To facilitate hunting of small game.
- (c) Mischief.

Of these three reasons, (b) and (c) one may say, are purely incidental. It is the first that is most important and is one that must be tackled conscientiously.

The unrestricted over-grazing of the patana lands mapped out for village pasture has, over the years, eradicated the better, more succulent fodder grasses in the patana vegetation with their suppression and final replacement by hardier coarse grasses which are inedible when mature. The firing of the patana grasses provides a temporary increase in fertility thus encouraging the regeneration of these coarse grasses, only the fresh shoots of which are edible. The villager and cattle owner therefore, quite justifiably in their opinion, fire the patana. They have no alternative.

No purpose will thus be served by merely informing the cattle owner that his practise is destructive and by appealing to his good sense. The cattle owner is well aware of the consequence of his act. No purpose will be served by the total prohibition of free grazing of degraded patana land by legislation. If the cattle owner is to be weaned of this evil practise he must be provided with an alternative.

It is therefore the recommendation of this committee that a comprehensive scheme be inaugurated to provide better pasture land for a cattle population of the villages.

Such a scheme involves the division of patana land in each village or group of villages into two categories:

- (a) Steep areas with inadequate soil cover.
- (b) Areas of adequate soil cover.

The first category is comprised of patana land that has reached the final stages of soil degradation. Further grazing of lands of this type will be prohibited and the land reclaimed by total reforestation.

The latter category comprises land which, by over-grazing and annual firing, is well on its way towards final deterioration and complete sterility, but which, by treatment can be reclaimed to provide adequate pasture for cattle.

The scheme proposes that land of this category be divided up into blocks or paddocks by the establishment of wind belts on a grid system, 25 per cent. of the total patana available comprising these wind belts. The balance 75 per cent. will be put under the plough by tractors of the Forest Department as a soil improvement measure and subsequently planted up with selected fodder grasses species by the Agricultural Department who will be responsible, in addition, for the fencing arrangements.

The cattle population of the villages served by this scheme will then be permitted to graze the paddocks in scientific rotation, the period of grazing of each paddock being determined by the number of head of cattle and the acreage of each paddock on the basis of "pasture units." The supervision of this rotational grazing will be the responsibility, in the first instance, of the Forest and Agricultural Offices and subsequently that of the Rural Development Societies, Village Committees and Young Farmers' Clubs set up for the purpose.

This Committee predicts a great future for this scheme. The Scheme, it is felt, will serve a triple purpose in that not only will it eliminate the reasons for firing and thus the firing itself, but will also provide adequate pasture land for the village cattle which at present, as a result of the inherently poor quality of the fodder at its disposal in its roving life cannot serve either as a

beast of burden or as a milk producer. This scheme will further by providing better fodder on a smaller acreage for a larger number of cattle than at present, release a proportion of the large extents of land, presently mapped out for village pasture, for village expansion and development.

It is felt that the scheme will appeal to the village cattle owner in that not only will it provide improved pasture, but will ensure better protection of cattle which at present roam the country-side, either unattended, or in the care of village lads.

It is the opinion of the Committee that an essential pre-requisite to the Anti-Patana Firing Campaign and the improved Pasture Scheme is Propaganda. The peasant must be made to see the error of his ways.

It is thus the recommendation of this Committee that.—

1. Periodically, especially before the rainy season, Officers of the Forest, Revenue, Soil Conservation and Fauna and Flora Departments attend the meetings of the Rural Development Societies, Village Committees and Young Farmers' Clubs in order to explain the advantage of the Improved Pasture Scheme and the disadvantages and consequences of unrestricted grazing and fire raising.

2. The Education Department be requested to include in their curriculum lessons on Nature study, animal husbandry, farm management, etc., in order to instil in the younger generation a love for the land that surrounds them and on which they depend for their existence.

3. In the booklet "Instructions to Headmen" a paragraph be added emphasizing that prevention and detection of wilful fire raising is a national duty.

4. The Government Information Department through the Film Unit produce a documentary film illustrating the evils of patana firing and over-grazing to be shown in schools, village committees, Rural Development Societies, and Young Farmers' Clubs.

5. The Department of Information conduct

a poster competition for the selection, distribution and publication of the most attractive and illustrative posters in village halls, resthouses, preaching halls, schools, railway stations, etc.

6. The Department of Information produce hand bills and booklets in all three languages for publication, outlining the principles of the Anti-patana Firing Campaign, the gravity of the offence, the punishment, the availability of rewards to the informants and witnesses and the advantages of the Improved Pasture Scheme.

It has also been observed that considerable extents of patana land, over-grazed and annually fired, are owned by private individuals and companies. It is therefore necessary to implement without delay regulations 5 and 9 of the Soil Conservation Act in these areas declared erodible, thus empowering the Government to advise, or to compel as a last resort, the adoption of certain soil conservation methods and in those areas not declared erodible under the Soil Conservation Act to frame legislation empowering an authorised officer to direct the

owner of degraded forest land and patana subject to soil erosion to carry out the following measures in respect of the land owned by him:

- (a) Reafforestation.
- (b) Provision of check dams and contour wattling.
- (c) Provision of fire belts.
- (d) Measures for the prevention of grazing by fencing.

It is recommended, however, that compulsion be only a last resort and that everything be done to advise and encourage soil conservation measures by the provision of free planting materials, technical advice and possibly, exemption under the Food Production Act for those areas of patana in which reafforestation or other soil conservation methods have been adopted.

MALCOLM WRIGHT,  
Division Forest Officer, U.D.

U. B. UNAMBOOWE, M.P., Kotagala.

KENNETH MORFORD,  
Chairman, Planters' Association of Ceylon.

---

## RAIN FOREST

*This authoritative extract has a special significance for us in Ceylon where forest devastation seems to be the order of the day.*

**B**Y contrast with the prodigality of foliage in the upper stories, the leaf litter on the forest floor is thin, the underlying soil impoverished. The explanation lies in the fact that decomposition keeps pace with the rain of dead leaves from above, while the feeding roots take up the products of decomposition as quickly as they dissolve into the earth. So the richness of all forests springs from soil so poor that when cleared of trees it will seldom support crops for more than a single season.

Until recent times the rain forest was uninhabited except by hunting aborigines who knew little of agriculture. To-day the forest fabric has been disturbed by the demolition of vast tracts for rubber, coffee and cocoa plantations, and by their subsequent abandonment. Native tribesmen also raze patches of timber, burn fallen trees and plant crops, after which

torrential rains leach and erode the naked surface layers. A season or two later the impoverished plots are abandoned and the chaos of secondary growth over-runs them.

Just as the virgin forest of Europe and North America were laid low by man's improvidence, so now *those of the tropics may vanish within a generation*. The economic loss will be incalculable, for the primary rain forests are rich sources of mahogany, teak and other timber, and such by-products as resins, gums, cellulose, camphor and rattans. If the forests are to remain for future generations, extensive government reserves must be defended from the acquisitive hand of man. For it is man, not nature, who in the final analysis is the agent of destruction.

LINCOLN BARNETT.



# The Orchid-mantis

(*Gongylus gongyloides*)

By W. W. A. PHILLIPS

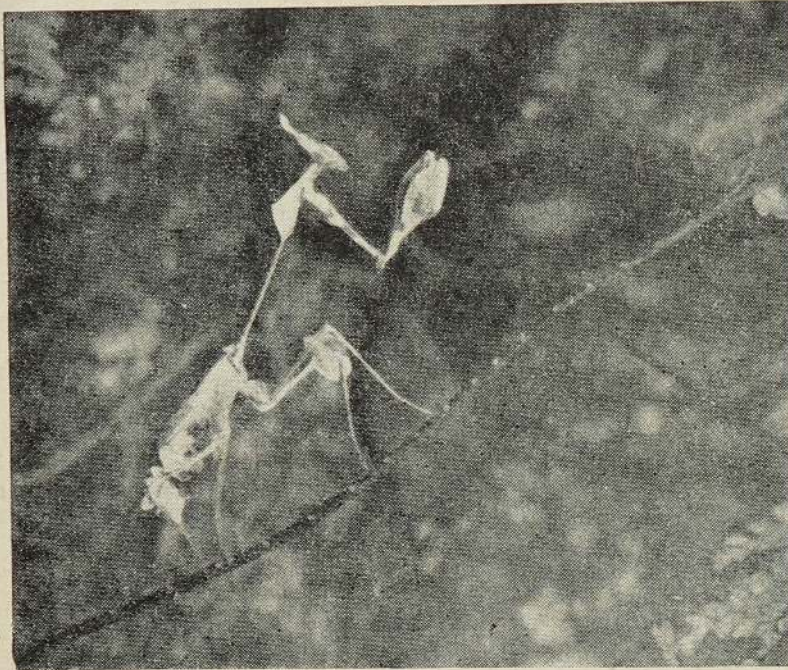


Photo by W. W. A. Phillips

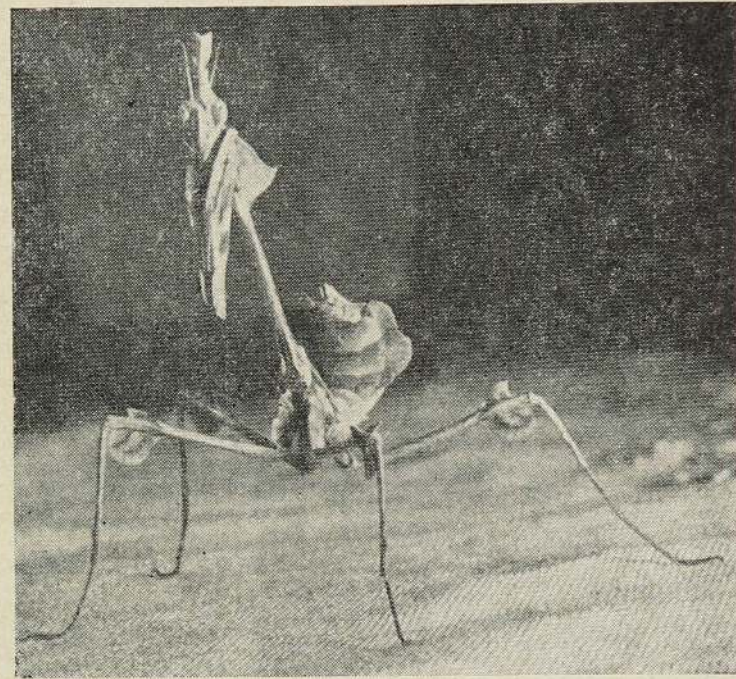


Photo by E. A. Jackman

## *Orchid-mantis*

HERE are two photographs showing different aspects of the Orchid-mantis, an uncommon form of Praying-mantis that is occasionally to be met with in the lowlands and lower hills of Ceylon as well as in India. By day, this curious insect hides itself away amongst dead or shrivelled leaves, either on the ground or more commonly in low vegetation, but, as night comes on, it emerges to seek its prey during the hours of darkness.

It feeds on small insects, pouncing upon them and grasping them with the spines of its forelegs

which are adapted for siezing and holding prey rather than for walking. The victim is held and chewed up so that the mantis may absorb its juices.

The leaf-like appendages on the legs and body are aids to obliteration and assist in concealing the mantis from its enemies. Probably it derives its trivial name, "Orchid-mantis" from its bizarre appearance which calls to mind the extravagant forms of some of the members of the Orchid tribe.

## PRESERVATION OF ARCTIC ANIMALS

THE Arctic is being thrown open to man: meteorological stations, air fields, and defence bases are spreading northwards. We ought to consider carefully the animals whose territory we are thus invading, if we are to avoid a repetition of the tragic effects of man's impact on the fauna of other new countries.

The *Musk ox* inhabits arctic and near-arctic regions from Greenland to Alaska. It is well able to defend itself against its natural enemy, the wolf, for the musk oxen stand their ground in a solid phalanx, guarding their calves. But these tactics, so successful against the wolf, have been its undoing against men armed with firearms, and 50 years ago it became in danger of extinction.

In east Greenland last winter a heavy snowfall formed a layer of snow two or three metres thick. Hundreds, perhaps thousands, of musk oxen died of starvation.

In Canada the musk ox is now carefully protected.

The continued existence of the *Caribou* is necessary not only for its own sake but because it forms an important part of Eskimo diet. Its only important enemy apart from man is the wolf, and so efforts have been made to protect the caribou from the wolf. But nature is seldom as simple as that. Its food in winter is lichen, without which it cannot survive. Lichen can be destroyed by over-grazing. So survival of the caribou depends upon limitation of its own numbers and this, in the interior of the far north, can be carried out only by the wolf. The wolf, therefore, not only preys on the caribou but helps to preserve it.

No arctic animal is harder to investigate than the *Polar bear*. In Canada varying degrees of protection are afforded to the polar bear.

The depredations on the polar bear population, and also on the great Alaskan brown bear,

are heavy. In Canada no restriction is placed on the hunting of polar bears by Eskimos. This could not have been questioned in the days before Eskimos acquired firearms. Perhaps the time has come for a reconsideration of this policy, in some areas at least.

Since about 1930 there has been a heavy decline in the stock of polar bears on the shores of Greenland. Protection is certainly necessary and the Danish Government has established a close season for the polar bear on the northern part of the east coast of Greenland.

There are many polar bears in the Spitsbergen archipelago, where the Norwegian Government has made a complete sanctuary of the Island of King Karl's Land, thought to be an important breeding-place.

The *Walrus* is an essential animal to the Eskimo. It provides meat for man and dog, blubber for heating, leather for harness, and tusks for trade. The Eskimos of the Thule district of north-west Greenland depend almost entirely on it throughout the winter. Yet the walrus is steadily decreasing.

The food of the walrus consists mainly of bivalves, which it must seek in comparatively shallow waters, and this makes it vulnerable on its known foraging grounds.

The Danish Government is aware of the importance of walrus conservation. Protected areas and close seasons have been established and walruses may be killed only by Greenlanders and in limited numbers at that.

Animals of the Arctic, because of their habits and distribution, need consideration on an international level. In order that necessary action may not be taken too late the International Union for the Protection of Nature has set up a committee under Professor Sparck, of Denmark, to consider the status and preservation of Arctic animals.

*London Times.*

# OBITUARY

## A. J. Wickwar

### AN APPRECIATION

ON the 20th December, 1954, there passed away, in his 83rd year, another of the old stalwarts of the Game Protection Society; a notable member of that small band of jungle-lovers who took such a deep interest in the welfare of the Game and Wild Life of the Island and who did so much, during the earlier years of the present century, to ensure its survival for posterity.

The late A. J. Wickwar was born in Ceylon on the 5th January, 1870; he was educated in England but returned to the Island to join the Survey Department, as an Assistant Surveyor, on the 1st September, 1889. In June, 1904, he was appointed Superintendent-in-charge, Topographical Surveys and on 1st October, 1914, rose to the rank of Assistant Surveyor-General. In November, 1915, he became Deputy Surveyor-General and, on the resignation of Mr. W. C. S. Ingles, in December, 1923, was promoted to Surveyor-General and appointment that he held until his retirement, after 37 years service, in April 1927.

During the latter part of his service, in addition to his normal duties, he officiated as Assistant Superintendent of Prisons; J.P., U.P.M.; Visitor to H.M. Prisons; a member of the Board of Improvement Commission for the Municipal Council, Colombo; a Director of the Widows' and Orphans' Pension Fund; a member of the Consultative Committee on roads; a nominated member of the Colombo Municipal Council and a member of the Local Government Board—he therefore led a very busy and full life while he remained an active Government servant.

It was while he was in charge of the Topographical Surveys, which took him into all corners of the Island, that he developed his great love of the jungles and their wild in-

habitants. Few men have had such a deep knowledge of the hidden depths of the forests as he possessed and few have penetrated to so many unknown and trackless areas as he had visited during the course of his duties or his pleasure trips.

On his retirement to the home that he had established at Malwatte, near Bandarawela in the Uva hills, he carried with him his love of the wild jungles and it was then that he was able to devote so much more of his leisure to making frequent camping trips into the jungles that continued to attract him so much. His favourite haunts were in that beautiful strip of country that lies between Panama and Kumana on the South Eastern coast and on beyond to the Kumbakkan Oya boundary of the Yala Strict Natural Reserve. It was here that he and the late George Crabbe, for many years the Honorary Secretary of the G.P.S., spent so many happy days observing, photographing and occasionally hunting the game and other animals that, in those days, teemed in these coastal jungles. It was here that he found the White Spotted Deer.\*

His knowledge of the Bagura country was immense and it was through his initiative and perseverance that the bund of Kiripokkuna was repaired and that lovely water-hole restored in order to provide much-needed water for the wild life during the long droughts that so severely affect these areas, parching the jungles, famishing the game and drying up all the water-holes on which the animals rely for the quenching of their thirst.

For many years he was a member of the Committee of the Game and Fauna Protection

---

\* Delightful days at Bagura and Kumana with Arthur Wickwar and George Crabbe are among my most cherished recollections. It was on one of those trips that we saw—to the amazement of us all, including the trackers—three white does among a flock of deer, that we at first mistook for goats. It was also on one of those trips that a marvellous shot by old Bandua of Kumana saved me from the onslaught of a she-bear and her well-grown cubs in the dense darkness.—R.L.S.

Society and his wide knowledge of the jungles and wise counsels were always at the disposal of the Society ; he rarely missed a meeting of any importance and on several occasions was a Vice-President of the Society. Not only so. He was also a frequent contributor to *Loris*, his series of articles " Things I Have Seen and Heard " being especially noteworthy.

Through his passing, the Society has lost a very firm friend and supporter and the Island a fine sportsman and a very courteous gentleman.

W. W. A. P.

### Mr. M. L. Wilkins

MR. M. L. WILKINS who died in England on March 4th, aged 81, was the eldest son of the late C. M. B. Wilkins, one of the coffee pioneers who came from Nova Scotia in 1840.

Starting as S.D. on Wereagalla and then Mipitikande by the time he was twenty-one, Mr. Wilkins was given charge of Mahaousa, Madulkelle, where he remained for 17 years till he became general manager of the Scottish Ceylon Tea Estates in succession to the late Mr. David Kerr.



*M. L. Wilkins*

He made Strathdon, Hatton, of which he was V.A., his headquarters and in addition to his local routine work found time to become visiting agent and director of several tea and rubber companies. In undertaking these responsibilities he gained a reputation for careful and far seeing advice.

Fifty-two years ago, he married the third daughter of the late owner, Mr. Woods, of Kandekettia Estate, Madulkelle. In 1939, he retired to England and was given a seat on the Board of the Scottish Ceylon Tea Estates which he retained till his death.

For relaxation he invariably went to the wilds, being one of the best of Ceylon's rifle and shotgun experts. Even in England he often beat competitors half his age at clay pigeon shooting at which latterly he always preferred to use under and over type of shotguns. He was one of the keenest and earliest supporters of the Game Protection Society and a close observer of wild life generally.

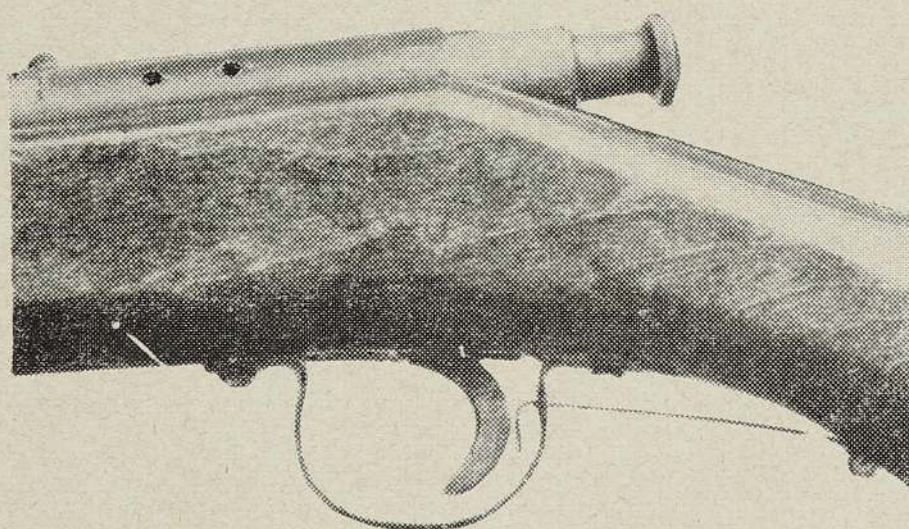
Mr. M. L. Wilkins retired in the country *Times.*

in Hampshire. Though he was a great shikari, this did not prevent him from waging an active campaign to save lives sacrificed needlessly in shooting accidents.

This veteran planter told me that many years ago in Ceylon he saw a friend fall on a steep hillside while out shooting. "He ended up with the muzzle of a loaded and cocked gun just under his chin! He then showed me a grip safety device. The gun could not be fired until this was gripped."

The device is shown in the accompanying photograph. It can only be fitted to a single-barrel gun and is made from a flexible strip of iron, say three inches by half an inch, only costing a few shillings. Mr. Wilkins added, "I am sure it could save life in Ceylon. Single-barrel guns are much used there and there are plenty of clever mechanics in the Island;"

A Planter.



*The safety device (strip of flexible iron behind the trigger) in position. It releases when the gun is gripped for firing.*

**Mr. A. C. Tutein-Nolthenius**

(Tribute in "Oryx"—*Journal of the Fauna Preservation Society*)

We hear with great regret of the death of Mr. A. C. Tutein-Nolthenius, who has worked unceasingly for the preservation of wild life in Ceylon.

His personality and drive were never more needed than now, when Ceylon's reputation as an example to Asiatic countries in proper nature conservation seems to be in jeopardy. We read in *Loris*, the journal of the Game and Fauna Protection Society, of the Government's proposal to plant a human population within the Wilpattu National Reserve. This follows reduction and eliminations in other reserves that

have taken place in recent years. It is the sort of thing which will continue to happen when, as in Ceylon, all reserves including national parks, come directly under a government department and can be altered and even abolished at the order of the Minister.

Mr. Nolthenius realized the necessity of an independent body between Government and the parks—the Board of Trustees of other countries—and in his favourable position as a member of the Ceylon parliament urged the formation of a National Trust to take over responsibility both for historic sites and nature.

At a general meeting of our Society in 1950 Mr. Nolthenius showed his film "Wanagatha Ahlaya" (Love of the Wild) and afterwards most kindly gave a copy to the film library.

---

**BOOK REVIEWS**

**THE TEMPLE TIGER AND MORE MAN-EATERS OF KUMAON**

By **Jim Corbett**. Published by the Oxford University Press. Price Rs. 6. 50.

THIS is the latest of Jim Corbett's fascinating books dealing with the hill folk of India, the jungle and its inhabitants and in which he describes more of his thrilling hunts after man-eaters.

Colonel Corbett risked his life on more than one occasion to relieve the hill people of a terror that is hard to imagine. These people, who rely entirely on a scant cultivation and their cattle for a livelihood, have a hard life which must be made unbearable when death lurks behind every bush in the form of a man-eating tiger or leopard. The full meaning of Colonel Corbett's actions may not be fully realised except, by those courageous people he has so unstintedly helped whenever called upon. In

this book he describes his hunt after the Tala Des man-eater carried out whilst he, himself, was far from well. It is typical of his courage and perseverance that he should drive himself to near breaking point so as not to destroy the hill people's trust in him. It is therefore no wonder they offered him their fullest friendship and loyalty making him welcome at every village he visited. Colonel Corbett states fear may not be a heritage to some fortunate few but he is not of their number. This is typical of a brave man who admits his fear of danger, but, his experiences prove his ability to counter his fear and hold it in check. Experience, as he rightly says, engenders confidence as he knows where to look for danger, but to keep cool and

collected at such a time needs courage with which only a few are blessed. The learning of jungle lore as with tracking cannot be learnt from text books ; it must be absorbed a little at a time and the absorption can go on indefinitely. The only place to learn these arts is in the forests and jungles by using one's senses of sight, hearing and smell to their fullest extent. It is a subject that becomes the more interesting as one gains knowledge. Colonel Corbett's success must be attributed to the training of his senses and knowing the meaning of what he sees and hears when in the forests.

This book maintains the high standard

achieved in the former volumes, but I felt his description of individual incidents were not as full as some he had described in his previous books. Nevertheless they hold the reader and convey the tense reality of the situations described. His description of the fight between the Temple Tiger and the Himalayan Bear makes one's blood tingle with excitement. It is to be hoped, the peoples of Kumaon have someone who will answer their call to assist them in their struggle for life, as readily as Colonel Corbett did without any consideration for himself.

C. E. NORRIS.

### SPORT IS WHERE YOU FIND IT

By **Philip K. Crowe**. Illustrated by Paul Brown. Published by D. Van Nostrand Company, Inc. New York and Toronto. Limited Edition. Rs. 40/-.

**H**ERE is a book written by a Sportsman for Sportsmen. The author is, above all, a sportsman of the best type, taking his sport where and when he can find it and loving every minute of it. During a busy and full life, he has seized each heaven-sent opportunity to gratify his out-door tastes in whatever part of the globe his duties have taken him, for as a serving officer or statesman he has travelled the world over.

First, we find him in India, pig-sticking and hunting with the best, then beagling in America his home-country, then in China with horse and gun, in Indo-China and so on almost all round the Northern Hemisphere. The author has had many unusual and extremely enviable opportunities to indulge in all kind of sporting activities, scattered world-wide, and no opportunity has been neglected. Although his chief love would seem to be the hunting of a gallant fox in the "Shires" in England, shooting, fishing, big-game stalking, and hare and other forms of hunting have all provided him with that intense enjoyment which he now passes on to his readers in the pages of his absorbing book.

The twelve chapters which complete the contents of the book give a very fair picture of the various types of sport that filled much of the leisure hours of the Anglo-Saxon races during the last half century before rising costs and crippling taxation placed so many entertaining pursuits and pastimes beyond the means of so many to whom they were, at one time, the chief enjoyment of life.

The spacious days of the recent past have gone—giving place to blatant democracy—but it is still interesting both to the younger generations as well as to the older, to read of the enjoyments of those times when life could be lived more comfortably, without too many irritating restrictions, and enjoyed to the full out in the wind and the rain, the sun and the frost, whenever and wherever sport was to be found.

This book, with its 181 pages, illustrated with excellent pen and ink sketches by Paul Brown and very attractively made up and reproduced is a delight to any sportsman.

W. W. A. P.

# Snippets

## Elephants in the Gal Oya Valley

### I

Is there or is there not a herd of wild elephants in Gal Oya, and even if there is, should the herd be captured?

This question is agitating the minds of officials and wild life enthusiasts.

When Major Aubrey Weinman, Superintendent of the Zoo, Mr. Sam Elapatha, an expert on elephant kraaling and capture, and Mr. Ivor Rodriguez, a well known sportsman went to Gal Oya they were told that a herd of over one hundred elephants were in the area.

They came back last week-end without seeing any wild elephant. Pressmen who lingered happened to see one wild elephant. And he was grazing quietly in the thick jungle well beyond the area under cultivation.

Here are the views of some of the officials on the spot :

Mr. S. Francis, Equipment Manager, Gal Oya, and an F.A.O. expert, who has been two and a half years there, said : " There is no big herd ; there can't be more than eight or ten in the area. They are no threat to cultivation. Leave them alone, is my opinion ; the elephant is dying out and there is no need to destroy any."

Dr. S. Szechowicz, Chief Forest Officer of the Gal Oya Board, also a F.A.O. man, and his brother, who is Assistant Equipment Manager, had the same opinion. They said that the colonists' crops had not been threatened, and they had not reported any threat. Their watch huts and simple methods of driving elephants off had been enough to keep the occasional curious wild elephant away. There was no need to kraal, capture or interfere with the elephants in any way.

Mr. E. Wanigasekere, Assistant Forest Officer, Gal Oya Board : " Our elephants should be preserved, not destroyed. If there is any threat, the elephants should be coaxed into the

sanctuary here at Gal Oya. They can be kept within it with elementary methods known to villagers for centuries."

*Daily News.*

### II

I have read with interest the various news items regarding damage caused by wild elephants to paddy cultivations in the Gal Oya Valley.

I am amazed at the steps suggested for the prevention of such damage. It would appear to me that the whole issue is being viewed from the wrong angle.

Nowhere in the world is the destruction or capture of elephants advocated as a measure for protecting cultivations. According to statistical data available to us from Africa, elephants abound in forest precincts immediately adjacent to intensively cultivated areas, and in one area alone in East Africa there are 70,000 elephants. Yet nowhere in these areas is shooting of an elephant permitted, except under very special circumstances and that too by a special grant issued by the Government, when the animal has become a killer.

The Kruger National Park, which is the greatest game sanctuary in the world, has on its immediate borders vast areas under citrus, banana, cotton and other crops sustaining a large canning industry. How are these cultivations protected from elephants, buffaloes and other wild animals? Let us turn our attention to the semi-Veddah of the Nilgala areas in Ceylon who cultivates paddy in the very heart of the Bintenne forests using irrigation facilities provided by the Gal Oya anicut. Does he resort to shooting or trapping in order to protect his cultivations? Then why is it that we in the Gal Oya Valley must resort to these methods?

Although no census has been taken of the elephant population of the Gal Oya Valley, it would be a gross exaggeration to say there are more than 50 to 75 animals spread out over the entire valley.



Ceylon is endeavouring to become a tourist centre, and it would be a foolish step to allow such indiscriminate destruction of the elephant which is symbolic of this beautiful Island, merely to suit the convenience of a cultivator who fails to take adequate precautions to protect his crop from damage.

It is within the scheme of development of the Gal Oya Valley, to make Inginiyagala town a show-place. It is, therefore, up to the authorities to protect the few elephants in the area.

Another interesting question is why action as proposed now was not taken when similar or even worse damage was caused to colonists' cultivations, and why only cultivations done by a rich company should be singled out for Government assistance. In the vicinity of this cultivation in Wawinna and Paragahakelle as far back as 1950-51, large areas were brought under paddy by the Gal Oya Development Board itself and the agricultural officer of the Board was able to protect these cultivations from damage by wild elephants without destroying or capturing them.

I am very well acquainted with the area which is now reported to be subject to damage by elephants. As Forester of the Gal Oya Development Board I traversed the length and breadth of this area long before the present company even thought of bringing it under cultivation, and I can assure you that as soon as full scale development of the Right Bank channel commences even the few elephants that roam the locality will go deeper into the adjoining forests. This is exactly what happened in the Mandur and Gonagalla areas of the Left Bank which were developed in previous years.

C. G. SCHUMACHER, *Times*.

### III

D. M. Punchirala (58), a settler in a colony at Uhana, about 14 miles from Amparai, and his 8-year-old son Buddhadasa who were on their way to a watch-hut in their paddy allotment, were attacked by a wild elephant.

Punchirala was crushed to death while the boy, who had been hurled a few feet away by the elephant, escaped to a watch-hut nearby and called for assistance.

An armed police party from Amparai conducted a search for the elephant, with no success. The injured boy was sent to the Kalmunai hospital with a broken rib.

## Elephants in China Bay

### I

Elephants have been causing damage to the Admiralty property in China Bay, and returning there in spite of various devices to drive them away. Permits to capture three animals were issued by Government.

Trappers sent by Major Weinman, Superintendent of the Zoo, combed the jungle between China Bay and Monkey Bridge for four days in search of the elephants but returned to their camp without success.

On a later occasion, Pakeer Mohamed and Kapadia Mohamed, the two ace trappers, laid fifteen traps in the rainy jungle, and succeeded in capturing a six-foot elephant. But the animal, helped by another nine-footer, broke away with the noose round its leg.

This incident scared the herd and they have vanished. Let us sincerely hope they will not return.

These operations evoked several protests in the press, of which the following are examples :—

### II

It will be interesting to recall what Dr. S. Szechowicz, the Chief Forest Officer of the Gal Oya Valley, and a F.A.O. man said on the occasion of the first "Operation Jumbo." To quote from a report : "Colonists' crops had not been threatened, and they had not reported any threat. Their watch huts and simple methods of driving had been enough to keep the occasional curious wild elephant away. There is no need to kraal, capture or interfere with the elephants in any way."

There is a great deal of truth in Dr. Szechowicz's observations. Simple methods resorted to by villagers from time immemorial, such as the erection of watch huts, lighting of huge fires and the constant sound of human voices is sufficient and effective to drive away the beasts.

### III

The Chief Warden of the Wild Life Department published in the papers sometime ago that there were only 850 wild elephants left in the Ceylon jungles, and that every year they were fast decreasing as so many elephants were being destroyed by different ways and means.

I cannot understand why permission has been given to the Zoo authorities to capture female elephants at China Bay as every female that is captured decreases the elephant population by a large number.

It is quite obvious that leaving the female elephant in the jungle accounts for an extra elephant being born every three years.

The six-foot elephant that was noosed at China Bay was a female, and that is the very reason that a nine-foot elephant helped to break the noose.

May I also know the reason why the Zoo authorities are capturing elephants when there are so many of them in the Zoo. I wonder whether it is for export and should like to know the necessity for exporting elephants.

Are we paid for them and what price does each elephant fetch, or do we get in return a parrot or reptile which is of no use to us in place of the elephant—our most valuable asset.

S. L. RATWATTE.

*Times.*

### IV

Your readers have read accounts of the "war" against the elephants at China Bay. It was not long ago, when in face of public opposition against the carving of the Wilpattu Sanctuary, the Minister of Lands, stated that

wild life and elephants must be sacrificed for the sake of "colonists."

What is the excuse today for the Government signing the "death warrants" of the China Bay elephants? It is certainly not "Colonists" or "food-production" this time.

Does the Government want now to preserve the bastions in this country and thereby sacrifice a national heritage.

There is another aspect. It is only in Ceylon that we hear of control of elephants by capture and destruction. In Africa where wild life is still untouched but treasured, and there is no danger of extinction of elephants, more prudent and protective measures are employed to control movements of elephants than in Ceylon which boasts only of 850 elephants.

Herds of elephants are kept confined to the jungles by the construction of moats and electrical devices to prevent them from straying into cultivated land. Trackers are employed to keep watch on wandering herds of elephants and are driven from areas where they may not do damage.

None of these methods is heard of in Ceylon but at one stroke of the pen the "death warrants" of these magnificent beasts of the jungle are signed in Colombo.

By employing these convenient and easy methods of capture and destruction is the Government discharging its duties to this country?

I ask is it too late even now to recall the death warrants of the China Bay elephants, and put an end to an imminent massacre?

NATURALIST.

*Times.*

### Ancient Penalty for Killing Elephants

A considerable amount of interest is prevalent now about the protection of the wild elephant. While reading P. E. P. Deraniyagala's paper on "Some Sinhala Combative, Field and Aquatic Sports and Games" (published by the National Museums of Ceylon), he states when dealing with elephant fights, that D'Oyly (1833) describes

the laws for protecting elephants and the capture of the animal as follows :—“ In provinces close to Senkadagala Maha Nuwara the slaughterer of a tusker was punished with whipping through the streets of the capital and imprisonment in a distant province. For killing a tuskless “ Aliya ” elephant, the flogging was less severe and the imprisonment was at Kandy ; in addition the culprit’s goods were liable to confiscation.

D. V. L. JAYATUNGA.

## Stag Hunt with Hounds

### I

There is an article in the *Field* (October, 1954) entitled “ Staghounds of Ceylon ” written by a well known sportsman. He says :—

“ The knife of the *coup de grace* has been superseded by the rifle, but the chase continues to require remarkable stamina to stay with hounds until the time they bring the deer to bay and a safe shot can be made.”

Two such hunts are described. On the first day, a gang of beaters was used, “ their wild cries punctuated by the sharp bang of the fire crackers.” The game was driven towards four guns loaded with S.G., a distance of about a hundred yards between them. On that occasion they had no luck ; but one of the trackers bagged a nice axis stag which “ butchered down to over a hundred pounds of meat.”

The next day they were more successful. A pack of four couple of dogs (harriers and beagles) was used for the morning’s sport. “ The plan was to station the guns along one side of the cover and then send several more guns in with the hounds to drive the quarry out. The real fun is to follow the hounds.” The bag on this occasion was five axis deer, three of which, out of a herd of a dozen, were said to be shot by one man.

Now is that legal? I was under the impression that a person’s licence covered only two animals?

I should also like to know whether it is legal,

under the present Wild Life Laws, to shoot deer driven by men or dogs. If so, is it not high time the law is amended to stop such wholesale slaughter?

Under the old laws, I believe, the knife was the only weapon permitted when hunting with hounds (as the spear is with the gypsies), and sambhur was the quarry. For, as the author of the article says : “ Unlike the spotted deer, which seldom if ever come to bay and turn on the pack, the sambhur stag will show great courage when cornered.”

And while we are about it : I have heard of monkeys being shot as bait for leopards. Can anything be more revolting? I suggest that monkeys (both langurs and macaques) so enchanting a feature of our jungles, be put on the protected list.

SAGITTARIUS in *Times*.

### II

Sagittarius’s letter was very interesting.

He failed to mention the time and place of the stag hunt. However, he will find the answers to his many questions on reading the following :—

(1) The statutory open season for shooting big game commences on November 1st and continues up to April 30th the following year.

(2) The Fauna and Flora Protection Ordinance, section 11 authorizes the licensee “ to shoot, hunt, kill or take game.” Further it states “ This licence does not authorize the use of a smooth bore gun for the purpose of shooting at or killing any animal.” The rifle should be used.

(3) The licensee shall not hunt, shoot, kill or take game between sunset and sunrise.

The ownership of animals found on private lands vests in the owner of the soil and is beyond the jurisdiction of the Department of Wild Life.

A party of two or more persons who are engaged at one and the same time in a hunt may possess two or more game licences within a

maximum of two animals allotted to each, making a total of four or more.

The word "hunt" denotes a chase by beaters or hounds or both. "Shoot or kill" denotes that the rifle or the spear may be used. "Take" denotes that the quarry may be taken alive.

Incidentally, it may be mentioned that the "Hill Wandruoo" or the Bear Monkey is on the protected list and it is illegal to use it as bait for leopard.

C. R. W. A. in *Times*.

Koslanda.

### Execution of a Crow

In Victoria we once witnessed the trial and execution of a crow, which must have erred against some law of the community. It was a very extraordinary sight, for the sky was black with the birds coming streaming in from the Gulf Islands and over the tree tops from inland, cawing as they came. They sat in a vast concourse in the trees all round the garden in judgment on one wretched crow, which was perched by itself in a tree in the midst of them. After much raucous talk and argument they fell upon the unfortunate bird, pecked it to death, then flew away whence they had come, leaving only the tattered fragments of the criminal behind.

### Fight Between Swan and Cormorant

The swan was making its way upstream on the Liffey when the cormorant surfaced a few feet away with a large eel in its beak. The swan turned on the new-comer, which dropped the eel and disappeared beneath the water. Later, the cormorant reappeared about a yard from the swan. As the swan tried to attack, the cormorant grasped its neck and held it under the water. A minute or two later, a drowned swan floated away and the cormorant went on searching for food.

ALFRED WILSON in *John Bull*.

### Evicted Birds Pay Rent

A young housewife, Mrs. M. Cairns, said to-day she was pleased the blackbirds in Meadows Avenue were now behaving themselves. It has not been that way during recent weeks.

She explained that letters to the house were being brought in from the street by passers-by. The postman asserted that he was putting them in the letter box all right, so it was decided that children must be responsible, and a padlock was put on the box.

Then Mrs. Cairns, on guard, saw a blackbird fly into the box and remove a letter just delivered. More observation revealed that two birds were trying to establish a nest of straw in the box and the letters were getting in their way.

The Cairns then narrowed the slot of the box, but the birds still managed to squirm through. The duel was only settled when a flap was tacked over the slot.

Some days later Mrs. Cairns was sorry she had been so tough on the birds, because it appeared they were willing to pay rent.

"I was in the garden looking at planes flying over when a blackbird came down out of a tree and dropped something at my feet," she said. "It was a 10/- note."

*N. Z. Evening Post.*

### Seal and Dog in River Drama

Whangarei—The seal which appeared at Parakao, 80 miles from the sea, attacked and killed a two-year-old cattle dog in the Mangakahia River yesterday evening.

Standing on the river bank, Mr. Pou, a grader, first saw a cow crossing the river at a ford where the depth in midsummer is usually two or three feet. Apparently the noise of the cow in the river attracted the seal.

Mr. Pou then noticed a strong young black and tan cattle dog approaching the ford. It went into the water and when swimming just a few feet out from the bank it was suddenly attacked by the seal.

The dog fought back courageously but the seal, more than six feet long and probably weighing over 200 lbs., grabbed it and dragged it beneath the muddy water. A few seconds later the seal reappeared with the dog, which was doing its best to fight off its attacker. It broke away for a second but the seal seized it again and dragged it under.

Once more the seal and the dog surfaced but the dog, severely cut and mauled, was obviously in a bad way. The seal pulled it below the water again and the fight was ended. The seal swam away with the lifeless dog held in its mouth.

*N. Z. Evening Post.*

### Otters

**T**HERE is the story of a man who wanted a perfect trout stream: he underwater-trapped otters and found his water crammed with eels. He caught the eels in cages baited with rabbit-guts; next year, the crevices between the stones of the brook were crowded with mullheads. They, too, eat trout spawn! So he put back some eels to eat the mullheads; then otters to keep down the eels; and his trout increased after the four-year cycle.

Otters, of course, do take fish. They also hunt much for sport (they once cleared four hundred fingering trout from a breeding pond I had). They will pursue salmon; but their main diet is eels, occasional rabbits and moorfowl (which also dip for spawn) and (in chalk streams) the destructive crayfish.

### They Would Have Their Little Joke

Drivers in the round-Australia reliability car trial are telling the story of a

carload of New Australians whose vehicle hit a large kangaroo on the road from Alice Springs to Darwin.

They propped up the apparently lifeless kangaroo on the roadside, dressed it in a hat and jacket, and took photographs.

The kangaroo suddenly recovered and disappeared into the bush, still wearing the hat and jacket, which had £300 in notes in a pocket.

*New Zealand Evening Post.*

### Batticaloa Graves—Gordon Cumming

Susanna Isabella Toussaint (nee Koch), with whom many presently living have kinship, died at Batticaloa on August 30th, 1861. Next to her grave is an inscription dated 1865, erected to the memory of John Randolph Gordon Cumming, the 4th son of a noble laird of Scotland. He settled down to sober coconut planting on the sandy wastes of Batticaloa, at a time when little was known about planting nuts. After 15 years of toil, continual outlay of capital and ceaseless watchfulness to defend the plantations from the ravages of elephants, porcupine, wild pig and mischievous black beetles, he was appointed by Governor Ward, "Timber Hunter and Chena Inspector."

In this capacity he distinguished himself as a cunning Forester and intrepid big-game hunter, beloved by the Veddhas of the back-woods. Almost on the eve of leaving to embark and re-visit the beautiful home in Altyre, Scotland, from which he had exiled himself, he died suddenly, and was laid to rest, beside a blue sea-lake.

# Correspondence

## “Don't Mutilate Your Cartridges”

Sir,

During a visit to one of the better known gun shops in Colombo I asked the Manager if he could supply me with soft-nosed cartridges for one of the .450 calibres. The rather surprising reply I received to this was :

“No, but all you have to do is cut off the head of the jacket on a solid, leaving the lead core exposed, and there you have a soft-nosed cartridge.”

Now this remark would not have surprised me had it come from some inexperienced hunter, but to come from a man who is expected to have some knowledge of sporting rifles and their cartridges only goes to emphasize the complete ignorance some sportsmen have concerning the danger of this practice.

When a cartridge is made it is designed to perform a definite duty and it is highly unwise to mutilate that cartridge in the hope that it will perform a function that it was not intended for. The majority of British rifle cartridges have been designed as either “solid” or “soft-nosed,” both of which have a jacket made of some such metal as cupro-nickel into which is inserted a lead “core.” The solid, or “full-patch” as it is sometimes known, has this core inserted from the base of the bullet whereas the soft-nosed has it inserted from the head. The duty of the former is to penetrate without getting deflected, distorted or disintegrating ; the latter, to expand uniformly as much as possible without breaking up. The amount of lead showing at the head of the bullet regulates the speed of expansion.

When the head or nose of a solid is cut or completely removed the jacket or metal envelope has become nothing more than a tube open at both ends with lead inside. If this cartridge is then fired you run the grave risk of having the lead core blown out whilst the jacket remains somewhere down the barrel. This in itself is of no real danger but when the next cartridge is inserted and fired this second bullet comes to

an enforced stop against the jacket of the first, and being sealed tightly in the bore the expanding gases are unable to emerge. Now there is no rifle that can withstand the immense pressure generated by these imprisoned gases and the result is something like this : the barrel bursts, the action and stock are completely shattered and the bolt is blown back into the shooters face, he will be lucky if he gets away with his life.

The biggest offender to this bullet mutilating business is the .303 owner who procures Mark VII army ammunition, and in the hope that it will function like any normal soft-nosed bullet (the Mark VII is a full-patch bullet) cuts, files or pierces the bullet head. If you have been lucky so far, do not contend that you will be equally fortunate in the future.

A. M. M. DAVIES.

*Ury Group,  
Passara.*

## Freshwater Eels

Sir,

The reference to a few large eels that lived in the depths of an abandoned quarry in our Zoo in Mr. Rodney Jonklaas' interesting article on the Tilapia—*Loris*, Vol. VI, No. 5, page 214—was brought to my mind recently when I read an article published in the A.B.C. Weekly on eels by Mr. Frank McNeill, Curator of Lower Invertebrates at the Australian Museum, Sydney.

Mr. McNeill's article and another by Mr. George Rees in the September number of “*Courier*” magazine relate the life story of the eel and its astonishing journey from the fresh waters of Western Europe, the Mediterranean and Eastern North America to spawn in the Sargasso Sea near Bermuda and of the return journey of the eel larvae, in their changing form, over thousands of miles to the habitats of their forbears.

It has occurred to me that the eels in the old quarry Mr. Jonklaas referred to would provide him, with his special

knowledge, with an opportunity to watch their habits and check their departure and the return of their progeny. This research may quite well result in the discovery of the spawning place of our eels and whether the strange urge of elvers to return to the home of their ancestors applies also in the case of the Ceylon eel.

It might prove interesting if Mr. Jonklaas could invite Mr. McNeill to collaborate with him.

The article from the A.B.C. Weekly referred to earlier in this letter is enclosed for the general information of readers of *Loris*.

J. A. MARTENSZ

Canberra,  
Australia.

(Extract from Mr. McNeill's article)

To a Danish professor named Schmidt must go the credit of a discovery which is a pointer to the behaviour of fresh-water eels all over the world.

Did you know they all embark on great ocean journeys?

During life their bodies become a darkish-brown with lots of yellow on the lower surface. At this stage they're called yellow eels and lead a lazy carefree life. Eventually a time arrives when a marked change and restlessness occurs; they alter to a silvery hue. Then off they start on the long journey to their breeding grounds.

It is after dark the great "eel runs" take place. They find their way into the large streams connecting with the sea from the most remote parts.

At night, when the air is moist and dew is present, they'll move from isolated areas of water over wide stretches of land to reach a flowing stream. Thousands will travel together down a river, and in places the water seems to boil with the swirl from their moving bodies.

When the sea is reached, the European eel hordes perform the remarkable feat of swimming slowly across the waters of the Atlantic Ocean, a

distance of over 2,000 miles, at a speed of only about nine miles a day.

Journey's end is the great breeding grounds in the Sargasso Sea, near Bermuda, off Central America.

The young eels hatch from their eggs at a depth of about 100 fathoms. They're quite unlike their parents—transparent, flattened from side to side, and reach a size and shape somewhat like a gum leaf. The name "leaf eel" is actually applied to them.

Only the young leaf eels make the great return journeys to the fresh-waters from whence their parents came. Adults remain behind and die.

Swimming and drifting along in the warm sea currents, the babies take at least three years to reach the coast of Europe. There they undergo a change in shape. The flattened bodies shrink to a smaller, thin and round, more eel-like form—the size of a small darning needle; and still quite transparent.

They unerringly negotiate the tiniest trickle of water draining from a rocky shoreline or through the sand of a beach. The more open streams, of course, make the passage far easier.

Once on their way in the fresh-water, the growth of the babies quickly increases. They become grey in colour, and at five inches or a little more are known as elvers—strong and alive, and now well fitted for the last swarming drive over unforeseen obstacles to distant inland parts.

Not for five to six years hence will the time arrive for this new generation of eels to follow the example of their parents and set out on that long journey to distant breeding grounds.

### Fantail Snipe

I wonder if any sportsman has shot a Fantail Snipe yet this season? I was out in a field near Chilaw last week when I put up a snipe which I recognised by its cry as a Fantail. Marking the spot where it had settled, I walked it up again and shot it, and was gratified to find that it was

indeed a Fantail. At the shot two or three other snipe rose and I am sure they too were Fantails.

Wait, in the second edition of "The Birds of Ceylon" (1925), says that the Fantail Snipe is a "very rare migrant." Perhaps the migration of these birds to Ceylon is becoming less rare nowadays, for my experience has been that I have shot or seen them at least once during almost every season for the last ten years.

I am sure that many Fantails are shot every season but they pass unrecognised among the Pintails. It is almost indistinguishable from the Pintail, which is our common snipe. Let me quote Wait verbatim:—"This species (the Fantail) in plumage closely resembles the Pintail but may be distinguished as follows:—The tail has no pin feathers: on the axillaries (the feathers under the wings, in the "arm-pit") the white bars are broader than the brown; the bill of the present species broadens slightly towards the tip, that of the Pintail does not; the outer web of the first primary is whitish instead of brown; the secondary quills have fairly conspicuous white tips."

Wait, however, seems to have left out the distinguishing feature which, to me, is the most striking. That is the cry of the bird. The cry of the Fantail is quite different from that of the Pintail. That sound is much too full of consonants for me to even attempt to set it down in letters! Suffice it to say that it is much shriller than the "cough" of the Pintail with which all snipe shooters are so familiar.

"GALLINAGO," in *Times*.

### Honorary Game Wardens

Sir,

One of the most interesting sections in the Kenya Wild Animals Protection Ordinance of 1951 is that devoted to the appointment of Honorary Game Wardens. The Kenya Game Department has found that the assistance given them by private persons was so valuable that

they have introduced a system of Honorary Wardens. These Honorary Wardens are private individuals who are genuinely interested in the preservation and welfare of Kenya's wild life, and whose knowledge in the preservation, control and management of wild life has fitted them for this responsible position. Their work and assistance to the Department is purely honorary and ex gratia. During 1950 there were eighty-seven Honorary Game Wardens but with the increase in the population and the spread of roads through Kenya, the Department realised that the wild life needed greater protection than ever and, realising the assistance these Honorary Wardens gave, nominated a further twenty-nine in 1951. By the end of 1952 there were 128 Honorary Game Wardens in Kenya. This practice of having Honorary Wardens is also in force in Uganda and, I think, Tanganyika.

In section 53, Part VI of the Kenya Wild Animals' Ordinance the Warden has been given the right to delegate or assign to any Honorary Warden any of the powers and duties conferred upon him by the ordinance. Without quoting each section verbatim, the powers of an Honorary Warden are:

1. Every licence or permit-holder must produce his licence or permit and his name and address upon being requested to do so.
2. An Honorary Warden has the right to inspect and search any premises, vehicle or baggage. He has the right to seize and take before a court any meat, trophy, gun, trap or snare capable of killing or capturing an animal or any article which appears to have been used or about to be used in contravention of the ordinance.
3. He has the right to enter any land in order to prevent or detect an offence against the ordinance.
4. He has the power to arrest an offender or suspected offender if he thinks that the culprit may otherwise escape or cause an undue delay in his being made answerable to justice.

Finally, an Honorary Game Warden has the right to exercise all the powers of a public



Prosecutor, subject to the directions of the Attorney-General.

It does not need imagination to realise the useful work and assistance these Honorary Wardens give the Department. In the words of the late Sir James Kirkpatrick, Senior Game Ranger for Kenya, "We obtain from these Honorary Wardens invaluable help, since it is obviously impossible for a very small Department such as this to adequately police the country. The reason for creating them Honorary Game Wardens is to give them the necessary powers of action when they come across an offender who is likely to be difficult to bring to justice if not arrested on the spot, and in addition to encourage interested persons to take an active part in preservation."

After studying the question of Honorary Wardens in Kenya I feel sure a similar system introduced into Ceylon's Game Ordinance would prove, provided it was not abused, as successful as it has done in East Africa. The Ceylon Wild Life Department is at present grossly understaffed, and any help given them by private individuals will help towards the protection of our very fast dwindling wild life. In section 31 of the Fauna and Flora Protection Ordinance it confers a power on every citizen to demand the

name and address of an offender to the Ordinance, default of which constitutes a punishable offence. In theory this is a perfectly sound section, but how many are the resulting convictions and how often is this power made use of by the public? In section 64 (1) (c) and section 65 there is a provision permitting the Governor to appoint any person to act as District or Honorary District Warden together with certain powers and duties. These District Wardens are mostly, if not all, Government servants who through no fault of their own have neither the time nor interest to take an active part in game protection in the field.

There are in Ceylon a number of people from the Wild Life Protection Society, the Ceylon Natural History Society and many others who have the knowledge and genuine interest of Ceylon's wild life at heart and who would, I am sure, be only too willing to give whatever help they could in protecting our wild life from total destruction. These are the people who could do an immense amount of tangible good in helping the Department, just as their prototypes in East Africa are doing there.

A. M. M. DAVIES.

*Ury Group,  
Passara.*

---

## NOTICE

### Volume No. 6 Index

Mr. G. Douglas Austin is now engaged upon the Index for Volume 6. The completed index will be issued with the December, 1955, issue of *Ioris* (Vol. 7, No. 2).



## *ask the typist*

She notices things about a typewriter that even a technician might miss, because eight hours of work every working day make her the best typewriter critic there is. Little things, like the free running of the ribbon and the setting of the margin, become very important things after a day's work. And who is better fitted to judge these little and important things than the typist?

Good design and precision engineering ensure that every Imperial typewriter will pass that most exacting of tests, the typist's.

# Imperial

**CARGILLS (Ceylon) LTD.**

*Sole Agents.*

**RETIRE**

and

**Enjoy it.**

A Book of Ways & Means

by

CECIL CHISHOLM

**Rs. 11-00**

**H. W. CAVE & CO., LTD.,**

**COLOMBO**

# FOR THE WILD LIFE ENTHUSIAST!!

BINOCULARS BY :  $\frac{\text{LEITZ}}{\text{WETZLAR}}$  &  $\frac{\text{ZEISS}}{\text{JENA}}$

**from Rs. 325/- to Rs. 750/-**

*Complete with Case and Strap*

Magnifications  $6 \times 30$  to  $15 \times 60$



CINE CAMERAS 8 MM & 16 MM

**PAILLARD BOLEX from Rs. 445/- to Rs. 2675/-**

*Either one lens, two lens or three lens Turret Models.*



STILL CAMERAS :— The World's Best

**from Rs. 32/- upwards to suit all—**

$35 \text{ MM to } 4'' \times 5''$

*MAKE YOUR CHOICE FROM THE WORLD'S FINEST RANGE !*

Rolleiflex & Rolleicord, Leica, Agfa  
Exacta — Robot — Linhof, Hasselblad  
Foca — Flash Equipment — Telephoto &  
Wide Angle lenses—Tripods—Filters, etc.

Ceylon's Premier Photo Store

**Photo—Cinex Limited.**

'Phone : 2577

GALLE FACE COURT 2, COLOMBO 3.



# “RUHUNU NATIONAL PARK”

—a Shell Film—

**At the premier of this film record in colour of Ceylon's wild life, Mr. P. D. Finn, General Manager of the Shell Co. of Ceylon Ltd., said :**

“Already the National Park is making a significant contribution to this ideal and to the promotion of a lively interest in nature, but there remain many who fail to appreciate the heritage that is theirs.

“It is, therefore, our hope that by bringing this film before a wide public throughout the country, and most important of all the children, we may in some degree assist in the creation of an awareness of the beauty that is to be found in the Island's wild life.”

**This is one of the many outstanding films in Shell's unique library—and there are over a hundred other films to choose from. We are only too pleased to arrange showings at Schools, Training Colleges, Business Centres, Scientific Societies and other Institutions. Please write to us for full particulars and a copy of our Shell Film Catalogue.**

## **SHELL—AN ISLAND-WIDE SERVICE**

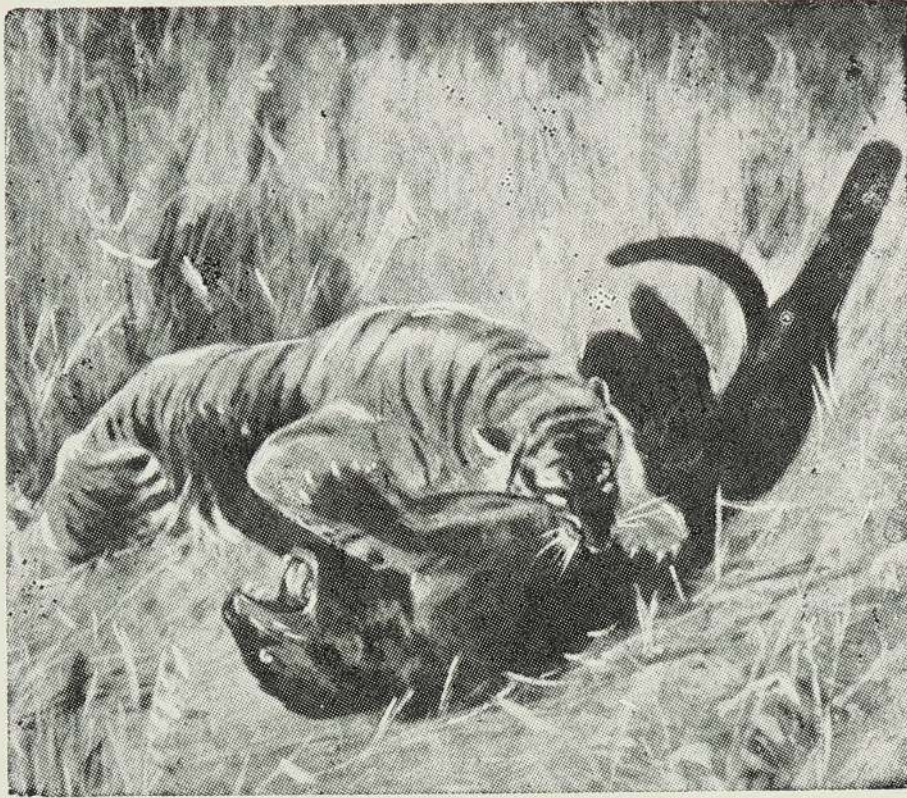
---

---

Printed at  
The Times of Ceylon, Ltd.,  
for the  
Wild Life Protection Society of Ceylon

---

---



## ***The Law of the Jungle***

### **KILL or BE KILLED**

—the stern, relentless law the untamed wild. Only strength and courage decide the right to survive. Life is brutal; yet, the savage grandeur of it stirs the hearts of all true sportsmen, and makes to them the call of the wild irresistible. To answer this call we equip you with everything you need.

# **NIMRODS**

LIMITED

the sporting people



# Big welcome for NEW FAMILY CAR



Meet the fine  
and thrifty

## MORRIS Cowley

It's here—in our Showrooms now—the car that motorists everywhere are acclaiming for its magnificent O.H.V. engine performance, its superb roominess and style, *coupled with the sort of economy that makes an irresistible appeal to the family man!* Come and try this great new Morris Cowley now—to-day's finest VALUE in motoring!

AT

BRITISH CAR CO., LTD.

"OXFORD HOUSE,"

Alston Place,

Colombo 2.



M.175D