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# JAFFNA SCIENCE ASSOCIATION

யாழ்ப்பாண விஞ்ஞான சங்கம்

JSA

## NEWSLETTER

செய்தி இதழ்

A QUARTERLY BULLETIN

VOLUME : 07

NUMBER : 01  
MARCH, 2001



### Editorial

The issue of volume 07 No1 of the JSA Newsletter is being released several months behind schedule. Although several reasons could be adduced for the delay, the Editor takes responsibility for the lapse and feels sorry for the delay.

#### Texts/ Lessons in A/L subjects

Within the resources available at hand, the JSA is striving hard, and join hands with the Department of Education and other related institutions, in finding ways and means of developing the standard of Education, with specific emphasis on science education, particularly in the case of Advanced Level students in the Tamil medium.

Inadequacy of reading materials in Tamil, lack of modern technical facilities for teaching and learning, and non-availability of materials and resources for practical work in science are some of the major drawbacks that the Tamil medium A/L students are facing today, particularly in the Jaffna peninsula and Vanni.

Keeping these in mind, the JSA has launched a project to produce useful reading materials in Science, Arts and Commerce subjects by pooling together the expertise and services of experienced Teachers and Education Officials and Lecturers from the University of Jaffna.

The JSA takes this opportunity to acknowledge with deep gratitude, the unstinting efforts of those who have volunteered to participate in the production of necessary reading materials.

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## SCHOOL SCIENCE PROGRAMME 2000/2001

- Exhibition Contest was held during January 11-13, 2001 at Jaffna Hindu College. Twenty seven Exhibits from Thirteen Schools were displayed at this Competition.

1<sup>st</sup> Place: "டைனமோவின் மூலம் மின்துறல்  
எரிதலும் ஆடலோட்ட வரையியும்"  
J/St. Patrick's College

2<sup>nd</sup> Place: "மணிதலும் நுளம்பும்"  
J/Jaffna Hindu Ladies College

3<sup>rd</sup> Place: "அழிவின் விளிம்பில்"  
J/Jaffna Hindu College

In addition, the students from following schools who participated in this contest will be awarded Certificates of Merit and all others will receive Certificates of Participation.

4<sup>th</sup> Place: "மீனவக் கைத்தொழிலும்  
சமகாலப் பிரச்சினையும்"  
J/Jaffna Central College

5<sup>th</sup> Place: "திருடனைப் பிடிக்க திருட்டுவழி"  
J/Nelliady Madhya Maha Vidyalayam

6<sup>th</sup> Place: "நீர் சுத்திகரிப்பு"  
J/Holy Family Convent

7<sup>th</sup> Place: "மின்காந்தத் தூண்டலும்  
பிரயோகமும்"  
J/Uduppidy American Mission  
Boys School

8<sup>th</sup> Place: "பென்சீலுடைய கலப்பு  
ஒழுக்குகள்"  
J/Jaffna Hindu Ladies College

9<sup>th</sup> Place: "வீட்டு மின் சுற்று"  
J/Jaffna Vembady Girls' High  
School

10<sup>th</sup> Place: "எளிய ஒலிபரப்பு சுற்று"  
J/Jaffna Hindu College

## ORATORICAL CONTEST

### FINAL RESULT

First Place:  
Mas. Ratnasingam Sarveswara  
J/Jaffna Hindu College

Second Place:  
Mas. Rajanayakam Julious Nishanthan  
J/St. Henry's College, Elavalai

Third Place:  
Ms. Augustin Thuirairajah Mary Robina  
J/Gnanasariyer College, Karaveddy

Certificate for participation in the Final Round

- Ms. Thavaruby Yoganathan  
J/Meesali Veerasingam Maha Vidyalayam
- Ms. Ahalya Kenapathippillai  
J/Vada Hindu Girls' College, Point Pedro.
- Ms. Piyadris Dominic  
J/Vayavilan M.M.V
- Ms. Valandeena Monaguru  
J/Sithampara College, Valvettithurai
- Ms. Sugjitha Ramachandran  
J/Vembady Girls High School
- Mas. Ganesalingam Kajenthiran  
J/Skandavarodaya College, Chunnakam.

### Quiz Contest

Final quiz contest was held on January 13, 2001 at Jaffna Hindu College. Ten students selected from the written contest participated in this competition. Students from thirty nine schools sat for the written contest.

The winners of final quiz contest are:

First place: Ms. R. Rajanthy  
J/Vembadi Girls High School

Second place: Mas. V. Thusyanthan  
J/Jaffna Hindu College

Third place: Mas. P. Nanthakumar  
J/Jaffna Hindu College



## JSA – Newsletter

### Editorial Staff

Mr.K.K.Arulvel (Sec.D)-Chief Editor  
Dr.(Mrs).P.Krishnarajah (Sec.A)  
Mrs.T. Mikunthan (Sec.B)  
Dr.R.Rajarajeswaran (Sec.C)

The Jaffna Science Association Newsletter will be published quarterly. All materials should be sent to the Chief Editor, JSA through the sectional editors.

Newsletters are available to all members free of charge. It can be distributed to non-members provided if they send the request with a self addressed 22cm x 9cm size envelope with stamp Rs:3.50

### Quiz Contest...Continued from page 2

The following students will be awarded certificates of merit.

- 1) Ms.K.Keama  
J/Jaffna College, Vaddukkodai
- 2) Mas.J.Vasuthevan  
J/Hartly College, Point Pedro
- 3) Mas.S.Sasikumar  
J/St.John's College, Jaffna
- 4) Mas.D.M.R.Kuxman  
J/St.Patrick's College, Jaffna
- 5) Mas.S.Janagan  
J/Hartly College, Point Pedro
- 6) Mas.M.Jeyanthan  
J/uduppiddy American Mission  
Boys School
- 7) Ms.P.Anusha  
J/Union College, Tellippalai

### Editorial...Continued from page-1

**Theme of the year:** Developmental challenges of the 21<sup>st</sup> century with reference to Jaffna.

The Jaffna Peninsula is experiencing several man made disasters such as displacement of people, destruction of buildings and dwelling places, loss of opportunities for industrial, agricultural and fishing pursuits, denial of accession to technological advances in Information Technology, erosion of natural resources and vegetation, and environmental

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pollution- all of which are consequences of continued escalation of the war.

A need has arisen to think of peace - to implement any accelerated efforts towards rehabilitation, reconstruction, and redevelopment, and on the basis of these activities decide on possibilities and procedures for further development. The theme of the year chosen by JSA is timely and noteworthy in the light of the Jaffna situation.

### List of New Life members – JSA

#### Section – A

1. Ms.S. Kamalini –  
J/ Jaffna Hindu Ladies College
2. Mr.K. Suganthan –  
Dept. of Botany, UJ
3. Mr.V.S.B Thuseetharan –  
J/St. John's College
4. Ms.D. Thuseetharan –  
J/ Chundikuli Girls College

#### Section – B

1. Mr.J.Velmurugu –  
Dept. of Agric.Biology, UJ
2. Mr.G. Thirukkumaran –  
Dept. of Agric.Bio, UJ
3. Ms.L. Tharmalingham –  
Dept. of Agronomy, UJ
4. Ms.L. Nageswaran –  
Dept. of Agric.Biology, UJ
5. Mr.J. Kalaichelvan –  
Dept. of Agric.Biology, UJ
6. Mr.N. Kamalathas –  
Dept. of Agric.Engin., UJ
7. Mr.S. Rajadurai –  
Dept. of Agronomy, UJ
8. Mr.K. Vadivalagan –  
Hatton National Bank, Jaffna
9. Mr.R.B. Nedumaran –
10. Ms.J. Sivagnanasundram –  
Dept. of Com.Sci., UJ
11. Ms.D. Mylvaganam –  
Dept. of Com.Sci., UJ
12. Dr.K.A. Srikrishnarajah –  
Fac. of App. Sci., UJ

#### Section – C

1. Dr.S. Kugathan –  
Eye Surgeon, Jaffna
2. Dr.R.Rajarajeswaran –  
Dept. of Pathology, UJ
3. Dr.N. Yoganathan –  
Medical Officer, UJ
4. Dr.S. (Ms) Nagendran –  
Visiting Physician, UJ



## Section D

1. Mr.S. Edward Reginold -  
Dept.of Botany, UJ
2. Ms.S. Anandaszyanam -  
Dept.of Mgt. Studies, UJ
3. Mr.A. Subramaniam -  
Dept. of Mgt. Studies, UJ
4. Mr.S. Balaputhiran -  
Dept.of Commerce, UJ

The JSA is a scholarly, non-political, and non-profit professional association. Membership open to persons having a Bachelor's degree. However, persons who have made valuable contribution to science could also be considered for membership by the executive committee.

## Knowledge base for G.C.E(A/L) Students

The knowledge base for Tamil G.C.E.(A/L) Students is inadequate and this is reflected in the University admission. The number of students admitted to various faculties specially in biology based courses is steadily decreasing since 1980's. These sentiments were voiced at the last Annual General meeting of the JSA. The JSA has appointed a subcommittee consisting of the members of the executive committee and special invitees. The subcommittee appointed Study Groups for various subjects. These study groups were entrusted with the task of preparing the quality study materials that are deemed necessary and urgent to enhance the knowledge of the students at the G.C.E(A/L). Editorial Board of the JSA edits these materials.

Accordingly JSA released the following two study materials under the knowledge base project on January 11, 2001 at the inaugural sessions of the final school science programme.

1. Mathematics Algebra -1  
Series No-1
2. Biology Molecular biology  
Series No-1

Materials prepared by the other study groups will soon be released long before.

-General Secretary

**Theme of the year:** Developmental challenges of the 21<sup>st</sup> Century with reference to Jaffna.

At the Annual Sessions of JSA to be held from April 04, 2001 a seminar focusing on the above theme has been arranged. The following speakers will address.

## Speakers

- 1.Prof (Ms). V. Arasaratnam-  
Bio Technology
- 2.Dr.S.Mahesan -  
Information Technology
- 3.Mr.S.Rajadurai -  
Agriculture
- 4.Prof C.Sivagnanasundaram -  
Health Science
- 5.Mr. W.Venkatesh  
Fisheries
- 6.Eng.K.Pooranachandran -  
Engineering challenges

A series of Lectures on the development of Man Power to promote scientific research has been organised by section A. Many people from various sectors are actively participating.

To develop Man Power and promote the young students to take up science as their carrier, a knowledge base project has already been started. Books on Algebra and Molecular Biology were released.

A Workshop on Management and Marketing with special reference to Jaffna is being planned for March 2001. All are welcome to participate.

- General Secretary



## SECTIONAL NEWS

### Section A

#### Accomplished Activities

The following seminars were held:

- Dr.S.Srisatkunarajah, Senior Lecturer, Department of Maths & Stats delivered a talk on "**Some models in population biology**" on July 26, 2000.
- Dr.S.N.Varnagulendran, BSMS (Cey) MD (Ind.), delivered a talk on "**Recent advances in herbal Medicine**" on August 30, 2000.
- Dr.S.Meena, Lecturer, Department of Chemistry, delivered a talk on "**Combinatorial and rapid screening approaches in homogenous catalysis**" on November 22, 2000.
- Lion.S.Pathmanathan, District Coordinator, delivered a talk on "**Leadership traits**" on October 20, 2000.
- Mrs. N.Gnanavelraj, Senior Lecturer, Department of Agricultural Chemistry, delivered a talk on "**Hazards of indiscriminate usage of nitrogen fertilizers with special reference to Jaffna district**" on December 19, 2000.

### Section B

#### Theme of the year

The theme of the year for the section B would be "Technological development in agro industries". Under this theme, different aspects of technological development in Agriculture, Biotechnology and Animal husbandry sectors would be considered.

#### Accomplished Activities

##### Popular talk

- Popular talk on "Strategies to develop seed sector for north east of Sri Lanka" was delivered by Mr.S. Rajadurai,

Dean, Faculty of Agriculture on September 29, 2000. In his talk, he discussed the importance of seed sector development, importance of seed certification program, conservation of germplasm of selected Jack and Mango fruit trees and development of improved seed varieties specially in Jaffna district. Further, he submitted approximate seed requirement of some important crops and a proposal for the seed and planning material development for north and east.

### Workshop

- Workshop for teachers and A/L biological science students in Valligamum zone of Jaffna district was conducted on December 29, 2000 to enlighten them in the field of Agricultural Biology. Mr.G.Mikunthan guided by Prof.V.K. Ganesalingum was in charge of this program. All the staff members of the Department of Agro Biology participated and the programme ended successfully. Prof.V.K.Ganesalingam delivered a valuable talk on "How to answer the question in A/L examination" and Prof.K.Balasubramaniam discussed about "Biotechnology based Biological Pest control". Specially lectures were conducted on microbiology, plant pathology, pathological techniques, weed and weed control, pest and integrated pest management, insect collection, killing and preservation. Demonstrations with specimens of pathogens, diseases, weeds, insect pest and instruments for insect collection were carried out to cover the practical aspects of their syllabi.

### Pamphlets

- The first quarterly publication of **Prayoga Vingnana Sudar 2 Kathir 1** of 1300 copies was printed and sold out. Contents of the pamphlets were
  - Factors affecting the composition of milk
  - Neem as an insecticide



- General information of some International Research Stations
- Factors destroying ozone layer
- WHO water quality standards
- DNA separation and purification (continuation of previous issue)
- Gene cloning
- Pest and Pest management

The second quarterly publication of **Prayoga Vingnana Sudar 2 Kathir 2** of 1000 copies had been printed and distributed for sale.

It includes

- Technique applied in shrimp industry in saline water
- Importance of genetic resource conservation
- Computer virus
- Clean milk production
- pest and pest management (continuation of previous issue)
- Questions and answers of quiz contest conducted by JSA on November 18, 2000.

#### Booklets

- Printing of booklets for farmers and A/L students is in progress. These booklets will be in Tamil covering the areas of agriculture, animal science, biotechnology, biochemistry and aquaculture.

#### Section C

##### Accomplished Activities

- Dr.D.Gunarajasingam delivered a talk on **Exercise Physiology**: on December 13, 2000, in Kopay Teachers Training College.
- Dr.D.C. Ambalavanar, delivered a talk on **Current approach to prosthetic problem** on January 29, 2000 in the Kailasapathy Auditorium.

தொழில்நுட்பத்துக்கு விஞ்ஞானம்

G.Senthan

J/St. John's College, Jaffna.

As per the decision of the JSA executive committee to publish the Essays which won the first three places at the Essay competition of the School Science Programme 2000, the Essay which won the first place is being published in this issue.

பிரபஞ்சம் என்ற பிரமாண்ட மேடையிலே, பூமி எனப்படும் இடைநிலைக் காட்சி அததியாயம் ஒன்றிலே, வாழ்க்கை என்னும் நாடகப்பகுதிக்காய் நடித்துக் கொண்டிருப்பவர்களை மானிடர்களெனின் அது மிகையன்றாம். கூர்ப்பின் அடிப்படையில் முன்னேறி, நாகரிகத்தின் பரிமாணத்திற்கேற்ப வளர்ச்சி பெற்று, நவஉலகின் நுனிப்புத்திசாலிகளாக நடமாடும் இவர்கள் ஆரம்ப காலங்களில் அஞ்ஞான இருட்போவைக்குள் அடங்கிக்கிடந்தார்கள். காலச்சக்கரத்தின் கடுகதியான ஓட்டத்தில் விஞ்ஞானமென்னும் வெளிச்சத்தினால் ஆட்கொள்ளப்பட்டு இன்று அதனையே நெறிப்படுத்தும் வல்லமை பெற்று விளங்குகின்றார்கள்.

இத்தகு மனிதர்களினால்தான் விஞ்ஞானத்திலிருந்து தொழில்நுட்பத்தை இனங்கண்டு கொள்ள முடிந்தது. உண்மையில் ஆராயுமிடத்து விஞ்ஞானமெனும் செவிலித்தாயின் வளர்ப்புக் குழந்தையே தொழில்நுட்பம் எனத் துணிந்து கூறவியலும் தாய் தன் குழந்தைக்காகத் தன்னையே தியாகம் செய்து வாழ்வதுபோல் விஞ்ஞானமும் தன்னால் வளர்த்தெடுக்கப்பட்ட தொழில் நுட்பத்திற்காகப் பல்வேறு வடிவங்களில் தொழிற்படுகின்றது.

தொழில்நுட்பம் என்பது, கருவிகளாலும் கைகளாலும் கூடிய ஆக்கத்திற்கு அறிவு முயற்சிகளையுடைய முறையாகும். பிரபல சிந்தனையாளர் Charles Singes இன் கருத்துப்படி "Science is a process which makes knowledge" என்பது அறிவைச் சட்டி வழிகாட்டும் விஞ்ஞானத்தின் செயன்முறைதான் தொழில் நுட்பம் என்ற ஊக்கத்தை எடுக்க உதவுகின்றது.

விஞ்ஞானமானது தொழில்நுட்ப வளர்ச்சிகளிற்கு எவ்வாறு வழிவகுத்தது எனச் சிந்தித்தால் தொழில்நுட்பத்திற்கு



உயிரியல் துறையைப் பொறுத்த  
மட்டில் தென்னாபிரிக்க வைத்தியர்  
கிறிஸ்டின் போனாட் முதன்முதலில்  
இதயமாற்றுச் சிகிச்சை செய்தமையாகக் கூட  
எள்ளி நகையாடும் வகையில்  
தொழில்நுட்பத்தின் முன்னேற்றம் வியாபித்து  
விட்டது. 1992 இல் ஈடில்மேனினாலும்  
ஹேலினாலும் அறிமுகப்படுத்தப் பட்டு  
“டோலி” ஆட்டினையும் “பைபிரோ” ஆண்  
எலியையும் உருவாக்கிய குளோனியங்  
முறையும், எட்டுத்திக்கையும் ஆட்டிப்படைக்  
கவல்ல அமெரிக்காவின் இன்றைய  
ஜனாதிபதியையே வெட்கித் தலைகுனிய  
வைத்த DNA Fingerprenting Technology  
உம் தாவரங்களிற்கும் விலங்குகளிற்கும்  
தாராளமான பயன் நல்க வல்ல Genetic  
Engineering முறையும் உயிரியல் துறையில்  
தொழில்நுட்பத்தின் பங்கை வெள்ளிடை  
மலையாக விளக்குகின்றன.

தொழிற்நுட்பத்திற்காய். தொழிற்நுட்ப  
விஞ்ஞானத்தின் பிரதிநிதிகளை  
ஹிரோஷிமா - நாகசாகிகியிலும், ரஷ்யாவின்  
சொனோபிஸிலும் நிகழ்ந்த சோகக்  
கதைகளின்மீறும் அறிந்து கொள்ளமுடியும்.

நிறைவாக, விஞ்ஞானமெனும் வியன்  
ஞானத்தின் வெளிப்பாடுகளான தொழில்  
நுட்பங்களின் வளர்ச்சிக்கு விஞ்ஞானம்  
என்றென்றும் துணைபுரியுமென்பது திண்ணம்.  
அவை ஆக்கபூர்வமான தோக்கில் எம்மால்  
பார்க்கப்படுமிடத்து நீள விசம்பும் நீலக்  
கடலும் நெடுவரையும் கொண்டுவெம்  
பூமித்தாயின் மடியில் பொலிவுற்று நாம்  
வாழலாம் என்பதும் உறுதியானதே.

- Dr. A.S. Soosai, Department of Geography delivered a talk on "Tertiary Education in Vanni Region: Recent crisis" on December 14, 2000.



## Executive Committee 2000 -2001

(Seventh A.G.M: April 07, 2000)

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(to be filled)

## JSA - Needs your support

Please become a Life / Ordinary/ Institutional member or renew your membership.

Applications for membership should be made on Association's application form which could be obtained from the General Secretary, JSA, C/o University of Jaffna, Sri Lanka.

## Wanted a House

The Jaffna Science Association is looking for a fairly spacious House/Building of Land on the basis of a Lease or for Purchase in the vicinity of the University of Jaffna.

For further details  
Please contact:

Dr. S. Srisatkunarajah  
Hon. Secretary/JSA  
Dept. of Mathematics & Statistics  
University of Jaffna.

Ninth A.G.M is scheduled to be held on  
April 06, 2001.

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Chief Editor  
Jaffna Science Association  
C/o Department of Commerce  
University of Jaffna  
Jaffna, Sri Lanka

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