

NA-22

**DIRECTORY OF SCIENTIFIC
RESEARCH PROJECTS
IN SRI LANKA**

1970 - 1973

NA-22

NATIONAL SCIENCE COUNCIL OF SRI LANKA

47/5 MAITLAND PLACE, COLOMBO - 7

SRI LANKA

DIRECTORY
OF
SCIENTIFIC RESEARCH PROJECTS
IN SRI LANKA
1970 - 1973

National Science Council of Sri Lanka
47/5, Maitland Place
Colombo 7
SRI LANKA

Foreword

One of the functions of the National Science Council of Sri Lanka, as defined in the Parliamentary Act No. 9 of 1968, under which it was established is "to collect and disseminate information relating to scientific and technical matters and to publish reports, periodicals and papers on matters scientific and technical".

Towards achieving this objective, it was decided to compile this Directory. The first Directory was compiled in 1970 by the Technical Library of the Ceylon Institute of Scientific and Industrial Research. The present Directory has attempted to up-date the information which was gathered in 1970. The current one covers the period 1970/73 and it is hoped that the National Science Council would be able to produce a Directory of this nature once every three years.

One of the topics that has come up for discussion in recent International Scientific Conferences has been the publication of Regional Directories of Scientific Research Projects. The general consensus of opinion at these meetings has been that each country should publish its own Directory, preferably with a given format. I hope that this Directory would fulfil a felt need, both at national and international level.

I have to acknowledge with thanks the efforts of Dr. Iranganie Thabrew, Scientific Officer of the National Science Council, who collected and collated the information on which this Directory is based. I also wish to thank Miss S.W. Lee for typing the manuscript.

G.C.N. Jayasuriya

Dr. G.C.N. Jayasuriya

Secretary - General

National Science Council of Sri Lanka,
47/5, Maitland Place,
Colombo 7.
SRI LANKA.

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Introduction

The first Directory of Scientific Research Projects in Sri Lanka was compiled in 1970 by the Technical Library of the Ceylon Institute of Scientific and Industrial Research. The importance of such a publication to both national and international scientists cannot be under-estimated. As part of its broad responsibilities for science in Sri Lanka, the National Science Council therefore, decided to update the above Directory.

The information in this Directory was gathered from questionnaires sent out in May 1973, to all Government Departments, Government Sponsored Institutes, Universities and Private Institutes engaged in scientific research. About 75% of the completed questionnaires were returned. However, it is regrettable that, in spite of several reminders, no replies were sent by some Institutes and Departments. The research projects in these Institutes/Departments are therefore not included in this Directory.

As a guide to using the index, the following points should be noted:

1. Material is catalogued
 - (a) according to discipline,
 - (b) within each discipline, by the Institutions arranged in alphabetical order,
 - (c) within each Institution, alphabetically, according to the name of the investigator.
2. As far as possible, the "UNESCO Classification by Discipline"⁻¹ is followed.
3. Where the name of more than one investigator was given, material is indexed alphabetically according to the first name in the group.

4. At the end of each subject grouping are listed, relevant "Research Publications" and "Papers presented at Conferences and Symposia", by the investigators listed in that section.
5. Except in a few instances, references to publications made by the investigators were not checked.
6. Where the date of commencement of project was given, it is indicated in parenthesis after the project title.

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1.1 A G R I C U L T U R E

A G R A R I A N R E S E A R C H

AGRARIAN RESEARCH AND TRAINING INSTITUTE

PRODUCTION AND MARKETING OF VEGETABLES. A CASE STUDY OF FOUR VILLAGES AT PALUGAMA (BADULLA DISTRICT)

Abeysekera, W.A.T.
Piyadasa, A.H.M.

Purpose is to identify the present vegetable marketing structure with regard to selected vegetables produced in the area. - (July, 1973)

ARTI AND UNIVERSITY OF CAMBRIDGE
PROJECT ON AGRARIAN CHANGES

Dias, H.

Aim is to (a) assess the recent changes in paddy cultivation in relation to the adoption of new varieties and improved cultural practices conducive to higher productivity; (b) to identify factors which either encourage or discourage adoption and (c) to study the socio-economic and ecological impact of adoption, specific attention being paid to income and investment pattern, supply of water and cropping pattern.

(1) REVIEW OF LITERATURE ON SETTLEMENT SCHEMES IN SRI LANKA

Ellman, A.O.
Ratnawera, D. de S.

Review of available literature on colonisation schemes, D.D.C. agricultural projects, youth schemes, cooperative farms and similar schemes. - (July, 1973)

A G R I C U L T U R E

AGRARIAN RESEARCH AND TRAINING INSTITUTE (Contd.)

(2) SURVEY AND EVALUATION OF CO-OPERATIVE FARMS YOUTH SETTLEMENTS AND D.D.C. AGRICULTURAL PROJECTS

Ellman, A.O.

Ratnaweera, D. de S.

Objectives: (a) to study and identify problems encountered in established Co-operative farms, D.D.C. projects and youth settlements, and to suggest ways of correcting short comings (b) to prepare planning and implementation procedures for new co-operative farm settlements, especially on estates acquired through land reforms. (c) to prepare training guide lines for Co-operative farm members and government officers concerned with the project.- (July, 1973)

(3) SPECIAL STUDY OF ONE CO-OPERATIVE FARM

Objectives: (a) to provide a focus for study of the planning and implementation problems of a co-operative farm as they arise (b) to suggest possible solutions to these problems (c) to establish a successful Co-operative farm for training and demonstration purposes.- (July, 1973)

A CASE STUDY IN A NUMBER OF SELECTED CULTIVATION COMMITTEE AREAS IN ANURADHAPURA, BATTICALOA AND KEGALLE TO ASCERTAIN FACTORS AFFECTING FERTILIZER USE IN PADDY PRODUCTION

Gunawardena, A.M.T.

Ranatunge, A.S.

Perera, E.K.

Objectives: (a) to examine reasons for

AGRARIAN RESEARCH

AGRARIAN RESEARCH AND TRAINING INSTITUTE (Contd.)

A CASE STUDY IN A NUMBER OF SELECTED CULTIVATION COMMITTEE AREAS IN ANURADHAPURA, BATTICALOA AND KEGALLE TO ASCERTAIN FACTORS AFFECTING FERTILIZER USE IN PADDY PRODUCTION (Contd.)

Gunawardena, A.M.T.
Ranatunge, A.S.
Perera, E.K.

relatively low consumption of fertilizer in the last three seasons in selected areas (b) to ascertain nature of information on fertilizer use that reaches the farmer (c) to gauge farmers knowledge on fertilizer use (d) to determine how environmental, social and organizational factors affect fertilizer consumption (e) to examine problems connected with the fertilizer distribution net work, particularly at village level.- (July, 1973.

A STUDY OF THE AGRARIAN SITUATION RELATING TO PADDY CULTIVATION IN THE DISTRICTS OF ANURADHAPURA, POLONNARUWA, HAMBANTOTA, COLOMBO AND KANDY

Izumi, K.
Dias, H.
Gunaratne, W.
Ranatunge, A.S.
Perera, E.K.
Abeysekera, H.A.T.
Gunawardena, A.M.T.

Purpose of above study was to study (a) the influence of certain socio-economic, environmental and attitudinal factors on the adoption of different cultural practices (viz. use of high yielding varieties and fertilizers, methods of planting, weed and pest control etc.) and the impact of such practices, (b) attitudes of the farmers towards various tenurical arrangements, (c) utilization of family,

AGRICULTURE

AGRARIAN RESEARCH AND TRAINING INSTITUTE (Contd.)

A STUDY OF THE AGRARIAN SITUATION RELATING TO PADDY CULTIVATION IN THE DISTRICTS OF ANURADHAPURA, POLONNARUWA, HAMBANTOTA, COLOMBO AND KANDY (Contd.)

Izumi, K.

Dias, H.

Gunaratne, W.

Ranatunge, A.S.

Perera, E.K.

Abeysekera, W.A.T.

Gunawardena, A.M.T.

hired and attam labour in paddy cultivation and employment among farmers, (d) the effectiveness of the different extension methods, communication media in promoting the adoption of changes in cultural practices.- (November, 1972)

(1) COST OF PRODUCTION OF OTHER FIELD CROPS IN PADDY FIELDS IN YALA --(a) CHILLIES, (b) GREEN GRAM, (c) SOYA BEANS, (d) GROUND NUTS

Izumi, K.

Ranatunge, A.S.

Aim of study is to ascertain cost and returns of crops cultivated in areas such as Elahera, Hingurakgoda, Polonnaruwa, where major programmes with these crops are underway. Farm record books would be utilized to collect the necessary cost data through the Agriculture Department extension staff.- (July, 1973)

(2) PILOT PROJECT TO STUDY COST OF PRODUCTION OF (1) PADDY (2) OTHER FIELD CROPS IN PADDY FIELDS IN YALA UNDER IRRIGATION: (a) CHILLIES (b) GROUND NUTS (c) GREEN GRAM

A study of cost of production of paddy

AGRARIAN RESEARCH AND TRAINING INSTITUTE (Contd.)

(2) PILOT PROJECT TO STUDY COST OF PRODUCTION OF (1) PADDY (2) OTHER FIELD CROPS IN PADDY FIELDS IN YALA UNDER IRRIGATION: (a) CHILLIES (b) GROUND NUTS (c) GREEN GRAM (Contd.)

Izumi, K.

Ranatunge, A.S.

and a few other crops in Yala 1972, in the districts of Hambantota, Polonnaruwa, Kurunegala, Kandy and Colombo using farm record books prepared by Production Economic Unit. (June, 1972)

THE STUDY OF SMALL FARM CREDIT -- A CASE STUDY OF BEMINIWATTE AREA

Khan, A.A.

An attempt to identify the main constraints in agricultural credit and other impacts for farmers in general, particularly small farmers, in relation to the institutional system for credit. This will be followed by an attempt to define a development strategy for farm credit related to such new development agencies as the Agricultural Productivity Committees and the service centres.--(July, 1973)

*AGRARIAN FIELD LABORATORY (BEMINIWATTE, KEGALLE DISTRICT)

Khan, A.A.

Gunawardena, A.H.T.

A field laboratory is required to study in depth, agrarian problems at

* In collaboration with other research staff of A.R.T.I.

A G R I C U L T U R E

AGRARIAN RESEARCH AND TRAINING INSTITUTE (Contd.)

AGRARIAN FIELD LABORATORY (BEMINIWATTE,
KEGALLE DISTRICT (Contd.)

Khan, A.A.

Gunawardena, A.M.T.

grass root level. The information required from such studies is useful for planning and policy making at higher level.--(August, 1973)

LAND USE AND MANAGEMENT IN COCONUT
SMALL-HOLDINGS IN THE COCONUT TRIANGLE
OF SRI LANKA, 1972

Ronner, I.

Gunaratne, W.

Dias, H.

The information from the above project is necessary to consider how best to utilise the land that would become available under the land reform act.--
(June, 1972)

RESEARCH PUBLICATIONS

IZUMI, K, AND RAMATUNGE, A.S. (1973) - Cost of production of Paddy;
Yala 1972 - in preparation

RONNER, I; GUNARATNE, W, AND DIAS, H. (1973) - Land use and management in cocenut small-holdings in the coconut triangle of Sri Lanka, 1972 - in preparation

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

DIAS, H. (1973) - A land reform policy in the context of HYV's -
Seminar on Economic and Social consequences of the

A G R A R I A N R E S E A R C H

AGRARIAN RESEARCH AND TRAINING INSTITUTE (Contd.)

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA (Contd.)

improved seeds - Inst. of Devel. Studies of the Univ. of Sussex and ARTI

GUMARATNE, W. (1973) - Effect of improved seed on rural institutions - Seminar on Economic and Social consequences of the improved seeds - Inst. of Devel. Studies of the Univ. of Sussex and ARTI

IZUMI, K. AND RANATUNGE, A.S. (1973 a) - Utilization of labour under HYV's in Sri Lanka - Seminar on Economic and Social consequences of the improved seeds - Inst. of Devel. Studies of the Univ. of Sussex and ARTI

IZUMI, K. AND RANATUNGE, A.S. (1973 b) - Some constraint on production from HYV's under existing conditions in Sri Lanka - Seminar on Economic and Social consequences of the improved seeds - Inst. of Devel. Studies of the Univ. of Sussex and ARTI

Agronomy

1.1 A G R I C U L T U R E

A G R O N O M Y

COCONUT RESEARCH INSTITUTE

AGROSTOLOGY DIVISION

FEASIBILITY TRIALS AND AGRONOMIC
TRIALS ON INTERCROPPING COCONUT
WITH FOOD CROPS AND AGRO-INDUSTRIAL
CROPS

- De Silva, N.T.M.H. (i) Study of the variation in yield and morphology due to differential moisture availability and light intensity of soya bean and green gram grown under coconut --(May, 1973)
- Feasibility trials of intercropping coconut with sunflower, soya bean, castor, ramie, green gram, black gram and cow pea --(May, 1973)
- De Silva, N.T.M.H. (ii) Investigation of the effects of
Gunaseena, H.P.M.⁻¹ nutrients and density on the yield of Manioc under coconut -- (April, 1973)

SOIL NUTRIENT STUDIES - GLASS HOUSE
EXPERIMENTS

- De Silva, N.T.M.H. (i) Comparison of the biological activity of soils where different
Weeraratne, C.S.⁻² pasture species were grown as inter-crops under coconut -- (1973)
- Ferdinandez, D.E.F. (ii) Experiments on fertility status of soils of different districts where

A G R I C U L T U R E

COCONUT RESEARCH INSTITUTE (Contd.)

AGROSTOLOGY DIVISION (Contd.)

SOIL NUTRIENT STUDIES - GLASS HOUSE
EXPERIMENTS (Contd.)

Ferdinandez, D.E.F.

pasture species have been grown, and such studies on soils where pasture species have not been grown - (1970-1972)

FEASIBILITY AND AGRONOMIC TRIALS ON
INTER-CROPPING COCONUT WITH PASTURE
AND FODDER SPECIES

Ferdinandez, D.E.F.

- (i) Effect of levels of N on productivity of Brachiaria milliformis under coconut in different rainfall regions - (1972)
- (ii) Study of the effects of levels of N, frequency and intensity of defoliation on the yield of Pangola grass and Setania grass under coconut - (1970)
- (iii) Study of the effects of defoliation and levels of N applied as $(NH_4)_2SO_4$ and urea on yield and c.p. content of Brachiaria milliformis under coconut - (1971)

Martin, M.P.L.D.

- (iv) (a) Determination of the optimum levels of N,P,K, required for growth and productivity of Pusa Giant Napier, under coconut.
- (b) Investigation of the effect of Pusa Giant Napier, fertilized at different levels of N,P,K, on the nut yield of coconut when grown in association - (June, 1973)

COCONUT RESEARCH INSTITUTE (Contd.)

AGROSTOLOGY DIVISION (Contd.)

FEASIBILITY AND AGRONOMIC TRIALS
ON INTER-CROPPING COCONUT WITH
PASTURE AND FODDER SPECIES (Contd.)

Martin, M.P.L.D.

- (v) Comparison of the productivity of three fodder species at high levels of nitrogen fertilization under coconut -- (April, 1973)
- (vi) Investigation of the effects of levels of nitrogen fertilization, intensity and frequency of defoliation on the productivity of Pusa Giant Napier -- (May, 1973)
- (vii) Comparison of the productivity of three pasture species, at high levels of nitrogen fertilization, under coconut -- (May -- June, 1973)
- (viii) Investigation of the effects of intensity and frequency of defoliation on the productivity of three fodder species under coconut -- (May -- June, 1973)

Rajaratnam, N. (Mrs.)

EFFECT OF SOIL CULTIVATION AND
PASTURE ESTABLISHMENT ON THE INCIDENCE AND RECOVERY FROM LEAF SCORCH
CONDITION OF COCONUT PALM IN GONAPINURALA AREA -- (1971)

DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH STATION, BORALANDA

Suntheralingam, K.

- (1) AGRONOMY OF CONDIMENTS (FENNEL,
CUMMIN, FENUGREENK, MUSTARD, CORIANDER)
(September, 1972)

AGRICULTURE

DEPARTMENT OF AGRICULTURE (Contd.)

AGRICULTURAL RESEARCH STATION, BORALANDA (Contd.)

- Suntheralingam, K.
- (2) MAIZE FERTILIZER CUM VARIETAL TRIALS-
(September, 1972)
 - (3) STUDY ON COOL-TOLERANCE OF PADDY -
(September, 1972)

AGRICULTURAL RESEARCH STATION, MAHA-ILUPPALLAMA

RESPONSE OF RICE TO POTASSIUM

- Anarasiri, S.L. Study of response of rice to potassium in Kagama.

SOYA BEAN TRIALS

- De Zoysa, A.O.C. Fertilizer trial to investigate the response of soya bean to different levels of P & K at four locations - viz. Maha-iluppallama, Gannoruwa, Mahiyangana and Angunakulapocossa.

- Dissanayake, Miss EFFECT OF THREE LEVELS OF P & K ON YIELD OF COTTON UNDER IRRIGATION DURING YALA

EFFECT OF FERTILIZER ON PASTURES

- Dissanayake, L. To determine the effect of large doses of fertilizer nitrogen on the yield and chemical composition of many varieties of grass.

CHILLIE AGRONOMY

- Manokaran, W.S. (i) An investigation into the effects of application of four levels of P & K

A G R O N O M Y

DEPARTMENT OF AGRICULTURE (Contd.)

AGRICULTURAL RESEARCH STATION, MAHA-ILUPPALLANA (Contd.)

CHILLIE AGRONOMY (Contd.)

Manokaran, W.S.

on the yield of dry chillies under irrigation.

- (ii) Investigation of the effects of two methods of establishment and two weed control methods using both pretreated and untreated seeds on subsequent growth and yield of different varieties of chillie.

RICE AGRONOMY

Manokaran, R.

Peiris, J.W.L.

- (i) The agronomic characters and yield performance of local and introduced varieties (4-4½ month age class).
- (ii) Factors affecting salt tolerance of rice varieties of different age class.
- (iii) Testing rice varieties in the laboratory for saline resistance.

FERTILIZER TRIALS ON FRUITS

Pinto, M.E.R.

Fertilizer trials on banana, pineapple, citrus fruits, grapes and mango.

RAIN FED RICE

Ponnathurai, S.

Growth and yield performance of selected rice varieties under up-land irrigated conditions.

AGRICULTURE

DEPARTMENT OF AGRICULTURE (Contd.)

AGRICULTURAL RESEARCH STATION, MAHA-ILUPPALLAMA(Contd.)

COTTON CULTIVATION

Sivanayagam, T. Growth and yield of cotton under different conditions of irrigation.

Sivanayagam, T. IRRIGATION AND WATER REQUIREMENTS OF CROPS IN CATCHMENT 'C' AREA
Lwes, J.A.

MULTIPLE CROPPING

Upasena, S.H. Multiple cropping in highland soils and rice fields.

AGRICULTURAL RESEARCH CENTRE, THIRUNELVELY

TRIALS ON SUBSIDIARY FOOD CROPS

Selvaratnam, J.⁻¹ Fertilizer, varietal and insecticidal
Pinto, M.B.R. trials on potatoes, chillies, bombay
Amarasiri, S.L.⁻² onions and vegetables - (1973)
Fernando, C.⁻³

CENTRAL AGRICULTURAL RESEARCH INSTITUTE, GANNORUMA

(a) CENTRAL ANALYTICAL LABORATORY

FERTILIZER REQUIREMENTS OF POTATO GROWN IN VARIOUS PARTS OF SRI LANKA

Kathirgamathaiyah, S. Field trials to determine the major
Fernando, B.L.⁻⁴ and minor element requirements of
Herath, H.M.E. potato in Nuwara Eliya district, Jaffna peninsula and Puttalam area -(1971)

1,2,3. Agricultural Research Station, Maha-iluppallama.

4. Agricultural Research Station, Sita Eliya, Nuwara Eliya.

DEPARTMENT OF AGRICULTURE (Contd.)

CENTRAL AGRICULTURAL RESEARCH INSTITUTE,
GANNORUWA (Contd.)

(b) DIVISION OF AGRICULTURAL
CHEMISTRY

FERTILIZER POTASSIUM VS. PADDY STRAW
ASH FOR RICE

Amarasiri, S.L.
Nadarajah, S.
Rodrigo, D.M.

Paddy straw ash, which contains appreciable quantities of potassium, when applied to rice soils increases the yield of rice. This project attempts to see whether fertilizer potassium could be substituted by potassium from paddy straw ash -
(1973)

DIRECT, RESIDUAL AND CUMULATIVE
EFFECTS OF PHOSPHORUS FERTILIZER
ON THE YIELD OF RICE

Nadarajah, S.
Rodrigo, D.M.

Presently, the Department of Agriculture recommends the application of basal fertilizer mixtures containing N, P and K. Since loss of P by leaching is negligible, and it is fixed by the soil, it is desirable to know whether this application can be withheld for a few seasons after application for a particular season. The above project attempts to find an answer to this question --
(1973)

A G R I C U L T U R E

DEPARTMENT OF AGRICULTURE (Contd.)

CENTRAL AGRICULTURAL RESEARCH INSTITUTE, GANNORUMA(Contd.)

(c) DIVISION OF BOTANY

Gunewardene, S.D.I.E.

NITROGEN RESPONSE OF NEWLY BREED RICE
VARIETIES - (1968)

Gunewardena, S.D.I.E

(1) AGRONOMIC INVESTIGATIONS WITH SUGAR CANE
IN WET AND INTERMEDIATE ZONES - (1972)

Wijetunga, H.

(2) AGRONOMIC INVESTIGATIONS WITH MAIZE,
WHEAT AND BARLEY IN THE WET ZONE --(1972)

MUTHU IYAN KADDU AGRICULTURAL STATION

FERTILIZER TRIALS ON ONIONS

Rasihah, V.

To determine the response of Bombay and Red onions to different levels and forms of nitrogen.

PADDY RESEARCH STATION, AMBALANTOTA

RICE AGRONOMY

Yogarathnam, P.

Gunasekera, A.L.

Study of the nitrogen response of improved rice varieties - (1970)

PADDY RESEARCH STATION, BOMBUMELA

RICE RESEARCH IN THE LOW COUNTRY WET ZONE

Jayawardena, S.D.G.

Pieris, M.

Duragajawera, M. (Mrs.)

Kottearachchi, S.⁻¹

Hemadasa, P.D.⁻²

Wijesinghe, B.V.S.⁻³

Field investigations of various problems in the wet zone rice cultivation. Project involves (a) investigations of Agronomic problems prevailing in the wet zone culture and (b) screening of rice varieties for iron toxicity, flood

1,2,3. Laboratory Assistants

DEPARTMENT OF AGRICULTURE (Contd.)

PADDY RESEARCH STATION, BOMBUELA(Contd.)

RICE RESEARCH IN THE LOW COUNTRY WEST ZONE (Contd.)

Jayawardena, S.D.G. tolerance, leaf rotter resistance and
Pieris, E. leaf and plant hopper - (Yala, 1973)
Duragajaweera, E.(Mrs.)
Kottearachchi, S.⁻¹
Hemadasa, P.D.⁻²
Wijesinghe, B.V.S.⁻³

PARANTHAN AGRICULTURAL STATION

Gunawardena, I.E. RICE NITROGEN RESPONSE TRIAL AT
Vivekanandan, A.S. PARANTHAN, IN CULTIVATOR'S HOLDINGS

Rodrigo, D.M. LONG-TERM FLEXIBILITY EXPERIMENTS
Nagarajah, S. WITH PHOSPHORUS IN CULTIVATOR'S
Vivekanandan, A.S. FIELD, PARANTHAN

Rodrigo, D.M. SPLIT APPLICATION OF NITROGEN TRIALS
Vivekanandan, A.S. IN CULTIVATOR'S FIELD AT PARANTHAN

Vivekanandan, A.S. CO-ORDINATED RICE VARIETAL TRIALS
Peiris, J.W.L.

Weerasinghe, S.P.R. NITROGEN X WEED CONTROL TRIAL IN
Vivekanandan, A.S. CULTIVATOR'S FIELDS AT PARANTHAN

REGIONAL AGRICULTURAL RESEARCH OFFICE,
BANDARAWELA

A CO-ORDINATED STUDY ON NITROGEN
FERTILIZATION AND WEED CONTROL

Gunawardena, I. This study was made to elucidate

A G R I C U L T U R E

DEPARTMENT OF AGRICULTURE(Contd.)

REGIONAL AGRICULTURAL RESEARCH OFFICE BANDARAWELA(Contd.)

A CO-ORDINATED STUDY ON NITROGEN FERTILIZATION AND WEED CONTROL (Contd.)

Gunawardena, I.

the effects of nitrogen, methods of weed control, and their **interactions** on the yield of rice. These experiments were carried out in cultivator's fields, in both wet and dry zones - (May, 1973)

Weerasinghe, S.P.R.

- (1) FERTILIZER RESPONSE TRIAL WITH MANIHOT ESCULANTA - (May, 1973)
- (2) FERTILIZER AND VARIETAL TRIALS WITH IPOMEA BATATAS - (May, 1973)

RUBBER RESEARCH INSTITUTE

BOTANY DEPARTMENT

Chandrasekera, L.B.

HEVEA -- YIELD, CLONE, SPACING, INTER-CROPPING AND POLY-CLONE TRIALS -
(1950, continuing)

SRI LANKA SUGAR CORPORATION, KANTALAI

AGRONOMY DIVISION

Jegasekera, E.H.W.

Kunara jah, R.

- (1) CULTURAL STUDIES WITH DIFFERENT METHODS OF PLANTING OF SUGAR CANE, IN LOW LYING AREAS - (1972/1973)
- (2) INTERCROPPING SUGAR CANE WITH SOYA BEAN - (1973)

SRI LANKA SUGAR CORPORATION, KANTALAI (Contd.)

AGRONOMY DIVISION

Kunarajah, R.

- (1) VARIETAL EVALUATION OF SUGAR CANE -
(1969, continuing)
- (2) MATURITY TREND OF SUGAR CANE AND ITS
RELATION TO AGE - (1973)
- (3) PRELIMINARY STUDIES ON CHEMICAL
RIPENING OF CANE - (1972)
- (4) STUDIES ON THE ROOTING BEHAVIOUR OF
SOME MAIN VARIETIES OF SUGAR CANE
IN RELATION TO TYPE OF SOIL AND
CULTIVATION - (1972/1973)
- (5) MATURITY TEST, ITS IMPACT ON HARVEST
SCHEDULES AND ITS RELATIONSHIP TO
JUICE QUALITY STATUS OF CANE AT THE
FACTORY - (1971, continuing)

N - P - K FERTILIZER RESPONSE STUDIES
IN SUGAR CANE UNDER IRRIGATED CONDITIONS

Kunarajah, R.

Kathiragamathiya, S.⁻¹

The fertilizer response of both plant and ratoon crops under irrigated conditions in the three main land classes at Kantalai to N - P - K are being evaluated by field trials -- (1973)

Kunarajah, R.

Sathiendrakumar, R.

FURTHER STUDIES ON CROP NUTRITION
N - P - K RESPONSE WITH NEW VARIETIES
OF SUGAR CANE - (1973)

AGRICULTURE

SRI LANKA SUGAR CORPORATION, KANTALAI (Contd.)

AGRONOMY DIVISION (Contd.)

CONSUMPTIVE USE OF WATER BY SUGAR CANE

Sivanayagam, T.⁻²
Kunarajah, R.

The consumptive use, irrigation frequencies for the crops of sugar cane are being evaluated at Kantalai
(1973)

TEA RESEARCH INSTITUTE, LOW COUNTRY STATION

STUDIES ON THE ROOT GROWTH OF TEA

Wettasinghe, D.T.
Watson, M.

- (i) Comparison of root systems of (a) seedling and clonal plants (b) different clones.
- (ii) Study of the development of the root system from the time of planting out in the field until maturity.
- (iii) The effect of soil factor on the spatial distribution of roots of mature tea.--
(January, 1973)

UNIVERSITY OF SRI LANKA, PIERADENIYA CAMPUS

DEPARTMENT OF AGRICULTURE

AGRONOMIC STUDIES IN MANIOC- MANIHOT ESCULENTA.L.

Gunaseena, H.P.M.

- (1) Research on agronomic practices that should be used when cultivating manioc

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

AGRONOMIC STUDIES IN MANIOT

MANIHOT ESCULENTA.L. (Contd.)

Gunasena, H.P.M.

on a commercial scale. These include the type of planting material that should be used, populations, fertilizer requirements etc. After establishing the standard agronomic practices, the crop will be grown under coconut as an intercrop on a large scale - (1970)

(2) FACTORS AFFECTING GRAIN STERILITY OF IMPROVED RICE VARIETIES

Gunasena, H.P.M.

Improved rice varieties that are presently cultivated in Sri Lanka, tend to give a large proportion of sterile grains. The work so far conducted indicates that grain sterility to some extent is caused by excessive use of nitrogen fertilizers - (1970)

(3) AGRONOMIC STUDIES ON THE CULTIVATION OF CASTOR - RICINUS COMMUNIS. L.

Castor is a crop suitable for the unirrigated upland areas of this country. However, the cultural practices and the varieties suitable for different areas have not been studied. The project envisages to investigate these aspects.- (1970)

A G R I C U L T U R E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

THE POSITION OF SOYA BEAN IN A PRO-
GRAMME OF MULTIPLE CROPPING

Gunaseena, H.P.M.

Herath, H.M.W.

The trials are intended to work crop combinations which could be used with soya bean. -- (1970)

Gunaseena, H.P.M.

* (1) AGRONOMIC ASPECTS OF GROWING TEMPERATURE CEREALS (WHEAT AND BARLEY) IN THE HILL COUNTRY OF CEYLON - (1970)

* (2) AGRONOMIC STUDIES ON SORGHUM WITH PARTICULAR REFERENCES TO RATOON CROPS--(1970)

* (3) EFFECT OF TIME OF APPLICATION AND LEVELS OF NITROGEN ON THE TUBER INITIATION OF THE POTATO UNDER DIFFERENT AGRO-CLIMATIC REGIMES - (1970)

* (4) A STUDY OF THE INTERACTIONS BETWEEN PLANT POPULATION AND MINERAL NUTRIENT SUPPLY ON THE GROWTH AND YIELD OF MAIZE-- (1970)

(1) GROWTH AND YIELD OF FIVE STRAINS OF LEMON GRASS AT THREE LEVELS OF NITROGEN

Herath, H.M.W.

Four new strains of lemon grass (*Cymbopogon citratus*) were introduced from Japan. Their growth and yield

* In collaboration with post-graduate students.

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)DEPARTMENT OF AGRICULTURE (Contd.)GROWTH AND YIELD OF FIVE STRAINS OF
LEMON GRASS AT THREE LEVELS OF
NITROGEN (Contd.)

Herath, H.M.W.

performances were tested along with the local strain. Response to levels of nitrogen, and yield of citral also investigated... (1971)

(2) SELECTION AND CULTURAL PRACTICES ON
CARDAMOM (ELATHERIA CARDAMOMUM.L.)

Purpose of experiment is to select high yielding clones which are responsive to high levels of fertilizer -(1972)

(3) EFFECT OF SPACING AND NUTRIENT LEVELS
ON THE GROWTH AND YIELD OF PEPPER

Study of the effect of close planting pepper as a monocrop, and its response to levels of nutrients - (1973)

AGRONOMY OF THE SHALLOT ONION (ALLIUM
ASCALONIUM)

Herath, H.M.W.

Arulanandy, V.⁻¹

Series of experiments will be conducted to identify other important areas, apart from traditional regions, where onion is grown commercially. Effect of seasons on shallot onion production causes for tip drying, storage studies etc., will be undertaken - (1973)

A G R I C U L T U R E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

CROPPING PATTERNS IN THE VEGETABLE
GROWING AREAS IN THE UP-COUNTRY WET ZONE

Herath, H.M.W.
Daluwatte, G.⁻²

After studying the existing cropping patterns in the up-country wet zone, various relay and mixed cropping patterns will be investigated in order to be able to recommend suitable cropping system for this area - (1972)

EFFECT OF FREQUENCY AND HEIGHT OF CUTTING
AND LEVELS OF FERTILIZER ON REGROWTH
AND YIELD OF LEMON GRASS (CYMBOPOGAN)

Herath, H.M.W.
R.O. Minor Export Crops

Determination of the optimum height and interval of cutting at different nutrient levels. A factorial experiment with three frequencies and two heights of cutting at two fertilizer levels - (1973)

STUDIES ON VEGETATIVE, REPRODUCTIVE
AND DROUGHT TOLERANT CHARACTERISTICS
OF CULTIVATED RICE (ORYZA SATIVA L.)
AND THEIR USE IN IMPROVEMENT OF
RAINFED RICE

Senanayake, Y.D.A.

The nature of vegetative and reproductive growth of different varieties of rice are examined under rainfed highland, irrigated highland and irrigated

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

STUDIES ON VEGETATIVE, REPRODUCTIVE AND DROUGHT TOLERANT CHARACTERISTICS OF CULTIVATED RICE (ORYZA SATIVA L.) AND THEIR USE IN IMPROVEMENT OF RAINFED RICE (Contd.)

Senanayake, Y.D.A.

lowland conditions. The information will be used to identify parameters to select for drought avoidance, drought tolerance and drought resistance - (April, 1972)

RESEARCH PUBLICATIONS

- ~~CHANDRASEKERA, L.B. (1964) - Treatment of cover crop seeds for improved germination. Q. J. Rubb. Res. Inst. Ceylon 40, 21 - 26~~
- CHANDRASEKERA, L.B. (1965) - Recommended clones and some factors that affect their performances in Ceylon. Q.J. Rubb. Res. Inst. Ceylon, 41, 55 - 62
- CHANDRASEKERA, L.B. (1967) - Performance of clones. Rubb. Res. Inst. Ceylon, Bull. 3, 17 - 19 & 27 - 29
- CHANDRASEKERA, L.B. (1968) - Symptoms of Brown Blast. Rubb. Res. Inst. Ceylon, Bull. 3, 153 - 154
- CHANDRASEKERA, L.B. (1972) - Recommended planting material, Rubb. Res. Inst. Ceylon, Bull. 7, 85 - 93
- CHANDRASEKERA, L.B. (1973) - A critical assessment of the currently available results of some ethrel trials in Sri Lanka. Q.J. Rubb. Res. Inst. Ceylon, 50

Biochemistry - Agricultural

1.1 A G R I C U L T U R E
B I O C H E M I S T R Y

CEYLON INSTITUTE OF SCIENTIFIC AND INDUSTRIAL RESEARCH

FOOD TECHNOLOGY DIVISION

Gunetilleke, K.G.
Perera, O.

PURIFICATION OF PAPAIN - (1973)

INDUSTRIAL MICROBIOLOGY SECTION

Jeyaraj, E.E.
Janz, E.R.
Amarakone, S.A.

EFFECT OF VEGETABLE JUICES ON
CYANOGENIC GLUCOSIDES OF MANIOC -
(1973)

MEDICAL RESEARCH INSTITUTE

BIOCHEMISTRY DIVISION

IRRADIATION EFFECTS ON YEASTS
ISOLATED FROM THE SAPS OF PALMS
GROWN IN CEYLON

Jayatilleke, P. (Miss)⁻¹
Sentheshanmuganathan, S.

Yeasts isolated from coconut, kithul and palmyrah saps were irradiated with UV light and morphological and biochemical studies carried out. The enzyme distribution in the irradiated and non-irradiated cells were investigated - (1971)

COMPARATIVE STUDIES OF YEASTS
ISOLATED FROM FERMENTED SAPS OF
PALMS GROWN IN CEYLON

Liyanaige, A.W.⁻²
Sentheshanmuganathan, S.

Identification, nutritional and biochemical studies on yeasts

B I O C H E M I S T R Y

TEA RESEARCH INSTITUTE (Contd.)

BIOCHEMISTRY DIVISION (Contd.)

CLINICAL APPLICATION OF TEA (Contd.)

- Wickremasinghe, R.L. (2) Use of tea for prevention of dental
Mahendra, C.C.⁻¹ caries - (1971)
Sentheshanmuganathan, S.⁻²
Mahadeva, K.⁻³
Karunanayake, E.⁻⁴

METHODS OF UPGRADING BLACK TEA

- Wickremasinghe, R.L. Study of the fundamental biochemistry
Perera, K.P.W.C. of tea manufacture and use of these
Munasinghe, T.A. findings for improving quality,
 flavour and colour of black tea
 liquors - (1970)

BIOCHEMISTRY OF PATHOLOGICAL CONDI-
TIONS IN TEA, AND BASIS OF CLONAL
RESISTANCE TO DISEASE

- Wickremasinghe, R.L. (1) Basis of differences in clonal
Perera, B.P.M. susceptibility to shot-hole borer
 infestation - (1972)

 (2) Fundamental biochemistry of tea
 bushes succumbing to the so called
 "Dimbula Disease" - (1972)

1,2. At Medical Research Institute

3,4. At Bandaranayake Memorial Ayurvedic Research Institute.

A G R I C U L T U R E

TEA RESEARCH INSTITUTE(Contd.)

BIOCHEMISTRY DIVISION (Contd.)

BIOCHEMICAL CHANGES DURING POST-PRUNE
GROWTH

Roberts, G.R.

Study of chemical constituents in the sap of tea bushes recovering after pruning, with a view to preventing death of pruned bushes - (1969)

STUDY OF BY-PRODUCTS OF TEA

Wickremasinghe, R.L.

(1) Extraction of tea seed oil and saponins from tea seed and tea root --(1970)

Roberts, G.R.

De Silva, U.L.L.

(2) Use of tea waste in leather production-- (1970)

BIOGENESIS OF TEA FLAVOUR

Wickremasinghe, R.L.

Sivapalan, K.

Study of the biochemistry of the reactions and conditions leading to the production of flavour in tea - (1970)

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF BIOCHEMISTRY

LIPASE ACTIVITY IN RICE BRAN, AND ITS
DEACTIVATION

Atukorala, T.M.C.

Abeynanda, M.T.

Rice bran (and its oil) becomes rancid on storage. This is attributed to a lipase present in the bran. It is hoped to investigate methods of improving the keeping qualities of bran and its oil - (October, 1973)

B I O C H E M I S T R Y

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS(Contd.)

DEPARTMENT OF BIOCHEMISTRY(Contd.)

BIOCHEMICAL CHANGES DURING MATURATION AND GERMINATION OF COCONUT

Balasubramaniam, K.
Wijesundera, S.
Hoover, A.A.
De Silva, M.A.T.
Atukorala. T.M.S.

Changes in enzymes and in carbohydrate component of kernel during maturation of coconut and during germination - (1968)

ENZYMATIC BREAKDOWN OF THE FIBROUS COMPONENTS OF COCONUT KERNEL

Wijesundera, S.
Balasubramaniam, K.

Search for suitable enzymes (β - mannosidases) which could effectively break down the galactomannans and mannans of the polysaccharides present in coconut kernel, so that the entire kernel might be made use of for human consumption - (1973)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF BOTANY

STUDIES ON THE FERMENTATION OF KITHUL SAP

Theivendirarajah, K.
Jayaseelan, S.

Analysis of the fresh 'kithul' sap for the various sugars. Further studies made on (a) utilization of sugars and production of alcohol during normal fermentation, (b) the effect of pH and other

A G R I C U L T U R E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS(Contd.)

DEPARTMENT OF BOTANY (Contd.)

STUDIES ON THE FERMENTATION OF KITHUL
SAP (Contd.)

Theivendirarajah, K.
Jayaseelan, S.

factors on alcohol production, (c) the effectiveness of barks of 'Hal' and leaves of 'Ankanda' in preventing fermentation, and (d) isolation of yeast strains and estimation of their ability to produce alcohol -(January, 1973)

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF CHEMISTRY

De Silva, K.T.D.

Senthoshanmuganathan, S.⁻¹

Mendis, P.

LIPASE ACTIVITY -RICE BRAN AND ITS
DEACTIVATION, UTILIZATION OF RICE
BRAN FOR HUMAN CONSUMPTION -(October,
1973)

RESEARCH PUBLICATIONS

- BALASUBRAMANIAM, K; ATUKORALA, T.M.S; WIJESUNDERA, S; HOOVER, A.A.
AND DE SILVA, M.A.T.(1973) - Biochemical changes
during germination of the coconut. Ann. Bot. 37,
439 - 445
- JAYATHILAKE, P. AND SENTHESHANMUGANATHAN, S. (1972) - The
effect of ultraviolet radiations on yeasts isolated
from the fermented saps of palms grown in Ceylon.
Proc. Ceylon Ass. Advmt Sci. I, 108
- KARUNANAYAKE, E.H; MAHADEVA, K; WEERAKOON, S.N. AND WICKREMASINGHE,
R.L. (1972) - Fluoride in black tea. Tea Q. 43,
111 - 113
- LIYANAGE, A.W. AND SENTHESHANMUGANATHAN, S. (1971) - Mechanism
of assimilation of amino acids by the yeasts isolated
from fermented saps of coconut (Cocos nucifera),
kithul (Karyota urens) and palmyrah (Borassus flabel-
lifer) using cell-free extracts. Proc. Ceylon Ass.
Advmt Sci. I, 86
- LIYANAGE, A.W. (1973) - Comparative studies of yeasts isolated from
fermented saps of palms grown in Ceylon. Thesis
submitted for M.Sc. degree, Vidyodaya Campus,
University of Sri Lanka.
- PERERA, R.L.L. AND DE SILVA, U.L.L. (1966) - Studies on the
quality and flavour of tea, 4. Observation on the
biosynthesis of volatile compounds. Tea Q. 40,
26 - 30
- PERERA, K.P.W.C. AND WICKREMASINGHE, R.L. (1972) - Properties
of Tea Polyphenoloxidase. Tea Q. 43, 153 - 163
- ROBERTS, G.R. AND DE SILVA, U.L.L. (1972) - Products from tea
seeds. I - Extraction and properties of tea seed
oil. Tea Q. 43, 89 - 90
- SENTHESHANMUGANATHAN, S. AND LIYANAGE, A.W. (1970) - Compara-
tive studies of yeasts isolated from fermented saps
of palms grown in Ceylon. Proc. Ceylon Ass. Advmt Sci.
I, 23

A G R I C U L T U R E

RESEARCH PUBLICATIONS (Contd.)

- TEI, Y; WICKREMASINGHE, R.L. AND PERERA, K.P.W.C. (1968) - Studies on the quality and flavour of tea. II - Gas chromatographic analyses of the aroma complex. Tea Q. 39, 81 - 86
- TIRIMANNE, A.S.L. AND WICKREMASINGHE, R.L. (1965) - Studies on the quality and flavour of black tea carotenoids. Tea Q. 36, 115 - 121
- TIRIMANNE, A.S.L. AND WICKREMASINGHE, R.L. (1966 a) - A study of the sterols and terpenes in black tea. Tea Q. 37, 134 - 139
- TIRIMANNE, A.S.L. AND WICKREMASINGHE, R.L. (1966 b) - Occurrence of vitamin E in black tea. Chem. and Ind., October, 1719
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- WICKREMASINGHE, R.L. AND PERERA, K.P.W.C. (1966) - Analysis of 'cream' of tea. Tea Q. 37, 131 - 133
- WICKREMASINGHE, R.L. AND PERERA, K.P.W.C. (1972 a) - Site of biosynthesis and translocation of theanine in the tea plant. Tea Q. 43, 175 - 179
- WICKREMASINGHE, R.L. AND PERERA, K.P.W.C. (1972 b) - Chemical changes during storage of black tea. Tea Q. 43, 147 - 152

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- WICKREMASINGHE, R.L. AND PERERA, V.H. (1966) - The blackness of tea and colour of tip. Tea Q. 37, 75 - 79
- WICKREMASINGHE, R.L.; ROBERTS, G.R. AND PERERA, B.P.M. (1967) - The localization of the PPO of tea leaf. Tea Q. 38, 309 - 310
- WICKREMASINGHE, R.L. AND SWAIN, T. (1964) - The flavour of black tea. Chem. and Ind. I. 1574 - 1575
- WICKREMASINGHE, R.L. AND SWAIN, T. (1965 a) - The accumulation of acid in bean callus tissue. Phytochem. 4, 687 - 691
- WICKREMASINGHE, R.L. AND SWAIN, T. (1965 b) - Studies on the quality and flavour of black tea. J. Sci. Fd. Agric. 16, 57 - 64
- WICKREMASINGHE, R.L.; WICK, EMILY, L. AND TEI, Y. (1973) - GC-MS analyses of flavoury and non-flavoury Ceylon black tea aroma concentrates, prepared by two different methods. J. Chromatog. 79, 75 - 80.

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- GUNASEMA, H.P.M. (1973) - Stand establishment with reference to improved rice varieties and weed control. International Rice Conference, IRRI, Los Banos, Philippines

Biometry & Statistics

1.1 A G R I C U L T U R E

B I O M E T R Y A N D S T A T I S T I C S

COCONUT RESEARCH INSTITUTE

BIOMETRY DIVISION

(1) CROP FORECASTING

Abeywardena, V.

An attempt to derive formulae to forecast coconut crops (by zones and for the whole island) using rainfall data - (March, 1969)

(2) A DROUGHT INDEX FOR COCONUT

Calculation of a drought index giving differential values to dry periods, depending on duration, intensity of drought as well as the intensity of rain prior to the dry spell - (November, 1970)

(3) CALIBRATION OF COCONUT EXPERIMENTS

Records are collected of various yield and vegetative characters of coconut, with a view to identifying the most efficient characters that could be used as pre-experimental varieties to be used in the error reduction of experiments - (November, 1970)

(4) INCREASING COCONUT YIELDS THROUGH WATERING

An experiment to ascertain the frequency and quantity of watering necessary during drought periods, and to ascertain the increase in yields achieved, thereby. At least

A G R I C U L T U R E

COCONUT RESEARCH INSTITUTE (Contd.)

BIOMETRY DIVISION (Contd.)

(4) INCREASING COCONUT YIELDS THROUGH WATERING (Contd.)

Abeywardena, V.

a two fold increase in yield is expected by a few waterings during critical periods - (January, 1973)

RUBBER RESEARCH INSTITUTE

DEPARTMENT OF BOTANY

RAINGUARD EXPERIMENTS ON HEVEA

Satchithananthavale, R.

Protection of tapping panel from rain, so as to increase number of tapping days - (1970)

STATISTICS DEPARTMENT

(1) A STUDY OF GROWTH CURVES OF RUBBER PLANTS

Gunasekera, J.

Census of girths are being taken from replantings at two locations where different clones are available. Asymptotic regression equations fitted to these data are to be used (a) to study variations among trees and between clones, and (b) to study future performances of the trees etc. - (July, 1971)

(2) LATEX FLOW CURVES

Stevens method has been found suitable to fit regression equations of the form $y = \alpha + \beta x$ to cumulative latex volumes at 5 min. intervals where α would represent

B I O M E T R Y A N D S T A T I S T I C S

RUBBER RESEARCH INSTITUTE (Contd.)

STATISTICS DEPARTMENT (Contd.)

(2) LATEX FLOW CURVES (Contd.)

Gunasekera, J.

the asymptotic value of y etc.

These findings may lead to an

index better than the plugging

index which is based on a 5 min.

vol. and the total vol.-(January, 1973)

(3) VARIABILITY IN RUBBER YIELDS DUE TO WEATHER FACTORS ETC.

Individual tree yields from a

number of clones in an area are

measured on all normal tapping days.

The effect of climatic factors such

as rainfall, sunshine, earth and

atmospheric temperature, winds etc.

and other factors such as time of

tapping on fields are studied to

find out if these effects are

different in different clones -

(January, 1973)

RESEARCH PUBLICATIONS

ABEYWARDENA, V. (1955 a) - Rainfall and Crop. Ceylon Cocon. Q. 6, 17 - 21

ABEYWARDENA, V. (1955 b) - An Agri-meorological project at CRI. Ceylon Cocon. Q. 6, 97 - 98

ABEYWARDENA, V. (1962 a) - The rainguage and estate management. Ceylon Cocon. Plrs. Rev. 11, 4

RESEARCH PUBLICATIONS (Contd.)

- ABEYWARDENA, V. (1962 b) - Crop forecasting. Annual Reports of the Biometrician, Ceylon Cocon. Res. Inst.
- ABEYWARDENA, V. (1968) - Forecasting coconut crops using rainfall data - a preliminary study. Ceylon. Cocon. Q. 19, 161 - 176
- ABEYWARDENA, V. (1970) - The efficiency of pre-experimental yield in the calibration of coconut experiments. Ceylon Cocon. Q. 21, 85 - 91
- ABEYWARDENA, V. (1964) - Statistical control of variability in coconut experiments. Emp. J. Exp. Agric. 32, 166
- ABEYWARDENA, V. (1971 a) - Yield variations in coconut. Ceylon Cocon. Q. 22, 97 - 103
- ABEYWARDENA, V. (1971 b) - An interim production function to forecast coconut production in Ceylon, using fertilizer consumption and rainfall data. Paper prepared for limited circulation among the departments of the Ministry of Plantation Crops.
- ABEYWARDENA, V. AND MATHES, T.D. (1971 c) - Crop losses in coconut through button shedding and immature nut fall. Ceylon Cocon. Plrs. Rev. September, 97 - 106

Botany - Agricultural

1.0 A G R I C U L T U R E

B O T A N Y

DEPARTMENT OF AGRICULTURE -- CENTRAL AGRICULTURAL RESEARCH INSTITUTE,

GANNORUWA

DIVISION OF BOTANY

Gunawardena, S.D.I.E.

CHEMICAL WEED CONTROL IN RICE (INCLU-

Siriwardena, T.G.D.

DING UPLAND AND KKKULAN VARIETIES)--

(1967-1973)

RUBBER RESEARCH INSTITUTE

BOTANY DEPARTMENT

Chandrasekera, L.B.

HEVEA -- TAPPING EXPERIMENTS --

(1950, continuing)

Satchithananthavale, R.

HEVEA -- YIELD STIMULATION EXPERIMENTS--

(1968)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF AGRICULTURE

(1) STUDIES IN WEED CONTROL IN UPLAND RICE
(ORYZA SATIVA. L.)

Gunasena, H.P.M.

A major drawback for the expansion of rice under upland culture is the lack of a suitable method of weed control. This study is intended to find such a method.

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

(2) STUDIES ON WEED CONTROL WITH
SPECIAL REFERENCE TO STAND ESTAB-
LISHMENT IN LOWLAND PADDY

Gunaseena, H.P.M.

Methods of weed control and stand establishment are inter-related in their effect on paddy yields. This study is designed to find out the best method of stand establishment and weed control for lowland rice culture.

(3) *WEED CONTROL ON TEA

(4) *LYSIMETRIC STUDIES ON THE EFFECT
OF MOISTURE REGIMES ON EVAPO-
TRANSPIRATION, GROWTH AND YIELD
OF RICE, MAIZE AND GROUND NUT

Gunaseena, H.P.M.

Senanayake, Y.D.A.

VEGETATIVE PROPAGATION OF TEA

POTATO SEED PRODUCTION

Herath, H.M.W.

Gunanayagam, V. (Miss)⁻¹

- Objectives are to determine:
- (i) the extent to which size and type of planting material affect the yield of seed potato,
 - (ii) whether there are differences in yields from seed produced from different planting material- (1972)

* With assistance of a post-graduate student.

1. Sita-Eliya Farm, Nuwara Eliya

A G R I C U L T U R E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

CHARACTERIZATION AND SELECTION OF
CITRONELLA STRAINS

Herath, H.M.W.

Senanayake, Y.D.A.

Wijesekera, R.O.B.⁻²

Dayananda, J.T.A.⁻³

Several cultivated semi and wild strains are found in Sri Lanka. Purpose of this investigation is to identify these strains on the basis of their morphological, anatomical and cytological characteristics - (1973)

THE COLD INDUCTION OF FLOWERING OF
TEMPERATE BIENNIAL VEGETABLES

Senanayake, Y.D.A.

Different cold temperature treatments are tested to determine if exotic vegetables like cabbage, carrots and beets could be induced to flower under local conditions, with the intention of eventually producing their seeds locally - (December, 1970)

RESEARCH PUBLICATIONS

AUMA, E.O. AND GUNASENA, H.P.M. (1972 a) - Effect of stand establishment and weed control on growth and yield of lowland I R 8 rice - Oryza sativa. L. Ind. J. of Agric. Sci. 72, 1040 - 1046

2. At C.I.S.I.R.

3. Research Student

RESEARCH PUBLICATIONS (Contd.)

- AUMA, E.O. AND GUNASIENA, H.P.M. (1972 b) - Effect of variety and stand establishment on the growth and yield of rice, Oryza sativa. L. Trop. Agric. (Ceylon), CXX VIII, 3 and 4, 81 - 91
- CHANDRASEKERA, L.B. (1967) - High level tapping. Rubb. Res. Inst. Ceylon Bull. 3, 29
- CHANDRASEKERA, L.B. (1968 a) - Double - four tapping. Rubb. Res. Inst. Ceylon Bull. 3, 151 - 152
- CHANDRASEKERA, L.B. (1968 b) - Reducing tapping costs. Rubb. Res. Inst. Ceylon Bull. 3, 152 - 153
- DE SILVA, C.A. AND SATCHUTHANANTHAVALI, R. (1961) - History and description of promising RRIC clones, I. Q. J. Rubb. Res. Inst. Ceylon 37, 112 - 128
- DE SILVA, C.A. AND SATCHUTHANANTHAVALI, R. (1962 a) - History and description of promising RRIC clones. II. Clones, RRIC 7, 41 and 45. Q. J. Rubb. Res. Inst. Ceylon 38, 1 - 10
- DE SILVA, C.A. AND SATCHUTHANANTHAVALI, R. (1962 b) - History and description of promising RRIC clones. III. Clones RRIC 86, 88 and 89. Q. J. Rubb. Res. Inst. Ceylon 38, 47 - 56
- DE SILVA, C.A. AND SATCHUTHANANTHAVALI, R. (1963) - History and description of promising RRIC clones. IV - Clones Nab 15 and RRIC 87. Q. J. Rubb. Res. Inst. Ceylon 39, 1 - 8
- PERIES, O.S. AND SATCHUTHANANTHAVALI, R. (1965) - Incidence, symptoms and histology of bark cracking in Hevea brasiliensis. Mull - Arg. Q. J. Rubb. Res. Inst. Ceylon 41, 90 - 101

Chemistry – Agricultural

1.1 A G R I C U L T U R E

C H E M I S T R Y

COCONUT RESEARCH INSTITUTE

CHEMISTRY DIVISION

PLANT APPROACH TO STUDIES ON NUTRI-
TION OF COCONUT USING TECHNIQUE
OF DIAGNOSTIC PLANT ANALYSIS

Jeganathan, M.

The project envisages the establishment of (a) visual symptoms for diagnosis of nutrient disorders, (b) critical values for essential nutrient elements by chemical analysis of foliage tissues for diagnostic purposes, and (c) as a complementary tool for fertilizer recommendations - (March, 1972)

SOIL CHEMISTRY DIVISION

SOIL APPROACH TO STUDIES ON NUTRI-
TION OF COCONUT USING TECHNIQUE
OF FIELD FERTILIZER TRIALS

Balakrishnamurti, T.S.

De Silva, M.A.T.

Ten field experiments are in progress.

The purpose of these experiments is:

- (i) to assess the fertilizer requirements of adult (bearing) and young (seedlings) palms under different environmental conditions,
- (ii) to compare different sources of nitrogen and phosphorus as fertilizers,
- (iii) to compare different frequencies of manuring,
- (iv) study methods of placement of fertilizers,

A G R I C U L T U R E

COCONUT RESEARCH INSTITUTE (Contd.)

SOIL CHEMISTRY DIVISION (Contd.)

SOIL APPROACH TO STUDIES ON NUTRITION
OF COCONUT USING TECHNIQUE OF FIELD
FERTILIZER TRIALS (Contd.)

- Balakrishnamurti, T.S. (v) to assess the effect of magnesium on
De Silva, M.A.T. four classes of young palms (seedlings)
and
(vi) micro-nutrient studies - (October, 1972)

DEPARTMENT OF AGRICULTURE , CENTRAL AGRICULTURAL RESEARCH INSTITUTE,
GANNORUWA

CENTRAL ANALYTICAL LABORATORY

STUDY OF CLAY MINERAL COMPOSITION OF
PADDY SOILS

- Kathirgamathaiyah, S. Studies of the secondary clay minerals
present in the clay fraction of selected paddy soils of Sri Lanka- (1972)

- Kathirgamathaiyah, S. STUDY OF POSSIBLE DETERIORATION OF
Nagarajah, S. PESTICIDES IN STORAGE UNDER VARIED
CLIMATIC CONDITIONS - (1973)

DIVISION OF AGRICULTURAL CHEMISTRY

CO-ORDINATED PROGRAMME ON THE USE OF
NUCLEAR TECHNIQUES IN RICE PRODUCTION
STUDIES

- Nagarajah, S. This project is conducted under a contract with the joint FAO/IAEA division
Jauffer, M.M.M. of Atomic Energy in Agriculture,
Willenberg, S.M.

C H E M I S T R Y

DEPARTMENT OF AGRICULTURE, CENTRAL AGRICULTURAL RESEARCH INSTITUTE,

GANNORUWA (Contd.)

DIVISION OF AGRICULTURAL CHEMISTRY (Contd.)

CO-ORDINATED PROGRAMME ON THE USE
OF NUCLEAR TECHNIQUES IN RICE
PRODUCTION STUDIES (Contd.)

Nagarajah, S.
Jauffer, M.M.M.
Willenberg, S.M.

Vienna, Austria. The project uses N - 15 labelled fertilizers to determine the efficiencies of nitrogen fertilizers for various cultural practices and varieties used in rice cultivation - (1970)

FORMS OF PHOSPHATE TRIALS

Nagarajah, S.
Rodrigo, D.M.⁻¹
Kathirgathaiyah, S.

The project is aimed at evaluating the suitability of local apatite (found at Eppawala) for use in rice cultivation. A comparison will be made between local apatite and other forms of imported phosphate fertilizers - (1973)

RUBBER RESEARCH INSTITUTE

SOILS CHEMISTRY DEPARTMENT

Silva, C.G.

THE NUTRIENT CONTENT OF RUBBER
SOILS OF CEYLON - (January, 1970)

A G R I C U L T U R E

RUBBER RESEARCH INSTITUTE (Contd.)

SOILS CHEMISTRY DEPARTMENT (Contd.)

UREASE ACTIVITY OF RUBBER SOILS OF
CEYLON

Silva, C.G.

Perera, A.M.A.

Determination of the enzymatic activity of urea in different great rubber soil groups and also, the effect of organic carbon, H and moisture on the urease activity - (May, 1969)

VOLATILIZATION OF AMMONIA FROM SURFACE
DRESSINGS OF UREA CONTAINING RUBBER
FERTILIZER MIXTURES

Silva, C.G.

Perera, A.M.A.

Peiris, D.R.

Different soil series contained in petri dishes were used in laboratory investigations. Field investigations were carried out by broadcasting at various moisture levels and temperatures - (November, 1970)

(1) WEED CONTROL UNDER HEVEA IN CEYLON

Yogarathnam, N.

Studies on the evaluation of the effectiveness and economy of the herbicide mixtures based on MSMA, used for weed control under Hevea in Ceylon - (1971)

(2) NUTRITION OF HEVEA SEEDLINGS

Investigation on nutritional requirements of Hevea brasiliensis seedlings grown in the field nursery - (1971)

UNIVERSITY OF SRI LANKA, PERADENIYA

DEPARTMENT OF AGRICULTURE

(1) MICRONUTRIENT STUDIES IN GREAT SOIL GROUPS OF CEYLON

Kalpage, F.S.C.P.
Pavanasasivam, V.

Soils selected from the different horizons of typical profiles of the great soils groups are analysed in the laboratory for both total and extractable forms of micro-nutrients like Manganese, Iron, Copper, Zinc and Molybdenum - (September, 1972)

(2) TRACE ELEMENT STUDIES IN WET PATANA SOILS OF SRI LANKA

Total and extractable amounts of Manganese, Copper, Iron, Molybdenum and Zinc were estimated in soils collected from Patana areas at Bopatalawa, Ambawela and Horton plains. These amounts are correlated with the physico-chemical properties of the soils - (June, 1970)

ADSORPTION AND DE-ADSORPTION OF PHOSPHORUS BY SOILS

Weeraratna, C.S.
Premakumar, V.

The amount of phosphorus adsorbed by soils at different rates of application and the rate of desorption of adsorbed phosphorus are determined. At present, two types of soils, viz. a rubber and a patana soil are being used - (1973)

A G R I C U L T U R E

UNIVERSITY OF SRI LANKA, PERADENIYA (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

MINERALIATION OF PRUNINGS IN TEA SOILS

Weeraratne, C.S.

Watson, M.¹

Tea soils incorporated with tea prunings are analysed at different stages to find out the rate at which the added organic materials get mineralised - (1973)

RESEARCH PUBLICATIONS

BALAKRISHNAMURTHI, T.S. (1968) - Comparison of different sources of nitrogen and phosphorous as fertilizers for coconut.
Ceylon Cocon. Q. 19, 49

BALAKRISHNAMURTHI, T.S. (1970) - Comparison of different sources of nitrogen and phosphorus as fertilizers for coconut.
Ceylon Cocon. Q. 21, 33 - 37

BALAKRISHNAMURTHI, T.S. (1971) - Comparison of different sources of nitrogen and phosphorus as fertilizers for coconut.
Ceylon Cocon. Q. 22, 37 - 45

KATHIRGAMATHAIYAH, S. (1972) - A study of clay minerals in some paddy soils of Ceylon. Proc. 28th Annual Sessions of Ceylon Ass. Advmt. Sci., 47 - 48

NAGARAJAH, S; JAUFFER, M.M.M. AND WILLENBERG, S.M. (1973) - Timing of nitrogen application - its effect on nitrogen utilization and protein content of rice.
in preparation.

1. At Tea Research Institute, Talawakelle

RESEARCH PUBLICATIONS (Contd.)

- NAGARAJAH, S; THENABADU, M.W; SOMAPALA, H; JAUFFER, M.M.M. AND WILLENBERG, S.M. (1973) - Mid-term drainage and nitrogen utilization by rice. Trop. Agric. (in press)
- PAVANASASIVAM, V. (1973) - Manganese studies in some soils with a high organic matter content. Plant and Soil, 38, 245 - 255
- PAVANASASIVAM, V. AND KALPAGE, F.S.C.P. (1973 a) - Micronutrients in soils, with reference to Ceylon - A Review. Trop. Agric. (to be published)
- PAVANASASIVAM, V. AND KALPAGE, F.S.C.P. (1973 b) - Status of molybdenum in some high organic matter content montane soils of Sri Lanka. Trop. Agric. (to be published)
- SILVA, C.G. AND PEREIRA, A.M.A. (1972) - A study of the urease activity in the rubber soils of Ceylon. Q. J. Rubb. Res. Inst. Ceylon 47, 30 - 35
- SILVA, C.G. (1971) - An evaluation of the nutrient status of rubber soils of Ceylon. Q. J. Rubb. Res. Inst. Ceylon, 48
- YOGARATNAM, N. (1971) - Weed control under Hevea in Ceylon with herbicide mixtures based on MSMA. Q. J. Rubb. Res. Inst. Ceylon, 48, 168 - 181
- YOGARATNAM, N. AND KARUNARATNE, A.D.M. (1972) - Fertilizer responses in Hevea brasiliensis seedlings grown in the field nursery. Q. J. Rubb. Res. Inst. Ceylon 49, 28 - 36

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- DE SILVA, M.A.T; ABEYWARDENA, V; GEORGE, G. AND BALASUBRAMANIAM, K. (1971) - Some factors affecting the bearing status and early flowering in Cocos nucifera (Var. typica) - 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.

A G R I C U L T U R E

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA (Contd.)

DE SILVA, M.A.T; APPUHAMY, P.A.D.G; MENDIS, B.J.A.F. AND GEORGE, G.D. (1972) - Influence of nutrient pH on the uptake and distribution of Fe, Mn, Cu, Zn, and B in coconut seedlings. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.

DE SILVA, M.A.T; MENDIS, R.J.A.F; APPUHAMY, P.A.D.G. AND GEORGE, G.D. (1972) - Effect of macronutrient deficiencies on the distribution of Fe, Mn, Cu, Zn, and B in leaf components of coconut seedlings. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.

KATHIRGAMATHAIYAH, S; RODRIGO, D.M. AND NAGARAJAH, S. (1973)- Eppawela rock phosphate as a source of phosphate fertilizer for paddy in the wet zone. 29th Annual Sessions of the Ceylon Ass. Advmt. Sci.

SILVA, C.G; PERERA, A.M.A. AND PEIRIS, D.R.(1972) - Volatilization of Ammonia from urea containing fertilizer mixtures. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.

Entomology – Agricultural

1.1 AGRICULTURE

ENTOMOLOGY

COCONUT RESEARCH INSTITUTE

CROP PROTECTION DIVISION

BIOLOGICAL CONTROL OF COCONUT PESTS

- Dharmadikari, P.R. (i) Coconut caterpillar - Nephantis serinopa
Mahindapala, R. Meyr (1957);
Kanagaratnam, P. (ii) Coconut scale, Aspidiotus destructor sign
Rohita, B.H. (1972);
Perera, P.A.C.R. (iii) Red weevil - Rhynchophorus ferrugineus
Subasinghe, S.M.P. (1972)
Kirthisinghe, J.K.F. (iv) Leaf scorch decline (1960), and
Velu, M.S. (v) Coconut leaf miner - Promecotheca
oumingi (1972).

The projects are aimed at controlling biologically, the pests of coconut. Techniques of mass breeding, life cycle studies etc. of parasites and predators are being carried out. In the case of leaf scorch decline, research is being carried out to find the **causal** agent.

DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH STATION, BORALANDA

Suntheralingam, K.

SCREENING PESTICIDES AGAINST PESTS IN
VEGETABLES - (January, 1971)

AGRICULTURAL RESEARCH STATION, MAHA-ILUPPALLAMA

(1) PESTS OF PULSES AND AGRO-INDUSTRIAL
CROPS

Ratnasiri, N. (Mrs.)
Fernando, J.

(a) Survey of insect pests in ground
nuts and soya bean crops.

DEPARTMENT OF AGRICULTURE (Contd.)

AGRICULTURAL RESEARCH STATION, MAHA-ILUPPALLAMA (Contd.)

(1) PESTS OF PULSES AND AGRO-INDUSTRIAL CROPS (Contd.)

Ratnasiri, N. (Mrs.)

Fernando, J.

(b) Study of effects of multiple cropping on pest population of crops concerned.

(c) Ecology and Biology studies on Heliothis armigora on different hosts.

(2) FRUIT PESTS

Identification of insect pests in fruits, their parasites and predators.

(3) INSECTICIDES AND PEST CONTROL IN CHILLIE

(a) Field screening of chemicals for the control of thrips and mites.

(b) Field screening of insecticides for the control of pod borer, Heliothis armigora.

(c) Pest control demonstration-Rajangane.

AGRICULTURAL RESEARCH CENTRE, THIRUNELVELY

Fernando, C.

PESTICIDAL TRIALS ON VEGETABLES

SRI LANKA SUGAR CORPORATION, KANTALAI

DEPARTMENT OF ENTOMOLOGY

(1) INVESTIGATIONS ON THE SHOOT BORER PEST SESAMIA INFERENS

Rajendra, A.

(a) Study of variation in juice

A G R I C U L T U R E

SRI LANKA SUGAR CORPORATION, KANTALAI (Contd.)

DEPARTMENT OF ENTOMOLOGY (Contd.)

(1) INVESTIGATIONS ON THE SHOOT BORER PEST
SESAMIA INFERENS (Contd.)

Rajendra, A.

quality due to borer damage in mature cane, and the resulting loss of recoverable sugar in the plant crop and ratoons-- (April, 1971)

(b) Investigations on the trend of shoot borer migration from cane field grasses-- (October, 1971)

(c) Studies on the pilot release of larval parasite Tetrastichus israeli for the control of the shoot borer pest--(April, 1972)

(d) Shoot borer incidence in relation to time of planting cane--(July, 1973)

(e) The influence of high dosage of nitrogen on borer susceptibility in sugar cane --(July, 1973)

(2) INVESTIGATIONS ON THE LEAF HOPPER PEST
PYRILLA PERPUSILLA SINHALENSIS

(a) Assessment of the leaf hopper incidence in sugar cane.

(b) Degree of parasitization by the egg parasite Tetrastichus pyrillae found locally.

(c) Assessment of loss of recoverable sugar due to leaf hopper attack-- (May, 1973)

(3) EVALUATION OF THE PEST PROBLEMS IN THE
SUGAR PLANTATIONS AT HINGURANA

Studies of the ecological conditions of

SRI LANKA SUGAR CORPORATION, KANTALAI (Contd.)

DEPARTMENT OF ENTOMOLOGY (Contd.)

(3) EVALUATION OF THE PEST PROBLEMS IN THE SUGAR PLANTATIONS AT HINGURANA (Contd.)

Rajendra, A.

the observation centres and the distribution of sugar cane insects in the plantations --(July, 1972)

(4) STUDIES ON THE ECOLOGY, NATURE OF DAMAGE AND METHODS OF CONTROL OF THE WILD BOAR PEST OF SUGAR CANE

Evaluation of the damage, behaviour of animal, its migratory pattern, seasonal variation and different methods of control for effective large scale operations --(October, 1972)

TEA RESEARCH INSTITUTE

MID-COUNTRY STATION, KANDY

Calnaido, D.

(1) SHOT-HOLE BORER RESEARCH --(1962)

Ranasinghe, M.A.S.K.

(2) ECOLOGICAL APPROACH TO PEST MANAGEMENT

Thurugnasuntheram, K.

Ecological studies on shot-hole borer pest (Xyleborus fornicatus) in particular, and ecological approach to pest management in tea, that will be effective, economical and safe - (1972)

A G R I C U L T U R E

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF BIOLOGICAL SCIENCES

STUDIES ON LEAF SCORCH DECLINE OF COCONUT

Gunasekera, S. A.
Kannangara, T.
Mahindapala, R.⁻¹

Project involves a study of the activity of the disease. The aetiology of the disease leading to the gradual death of diseased palm-heads thus lowering the yield in infected areas, is to date not known - (1971)

RESEARCH PUBLICATIONS

- CALNAIDO, D. (1971 a) - Differences in susceptibility of tea clones in Ceylon to shot-hole borer beetle, Xyleborus fornicatus Eichh. (Coleoptera : Scolytidae). Entomologies, 68, 300 - 307
- CALNAIDO, D. (1971 b) - An ecological approach to pest management in tea. Tea Q. 42, 175 - 181
- CALNAIDO, D. (1971 c) - Report on the Mid-country Station. Technical Report of the Tea Res. Inst. Ceylon for 1970, 143 - 147
- CALNAIDO, D. (1972 a) - Report on the Mid-country Station. Technical Report of the Tea Res. Inst. Ceylon for 1971, (in press)
- CALNAIDO, D. (1972 b) - An ecological approach to pest management in tea. Proc. of Symposia. Tea Res. Inst. Ceylon 1, 16 - 18

RESEARCH PUBLICATIONS (Contd.)

- CALNAIDO, D. (1972 c) - Differences in susceptibility of tea clones in Ceylon to shot-hole borer beetle, Xyloborus fornicatus Eichch. (Coleoptera : Scolytidae). Tea Q. 43, 45 - 52
- CALNAIDO, D. (1972 d) - The significance of a new outlook on the pest management of tea. Proc. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci. 1, 55
- CALNAIDO, D; RANASINGHE, M.A.S.K. AND THIRUGNANASUNTHERAM, K. (1972 a) - The control of the shot-hole borer beetle of tea. Proc. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci. 1, 53 - 54
- CALNAIDO, D; RANASINGHE, M.A.S.K. AND THIRUGNANASUNTHERAM, K. (1972 b) - The campling techniques for the shot-hole borer beetle pest of tea. Proc. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci. 1, 54
- CALNAIDO, D; THIRUGNANASUNTHERAM, K. AND RANASINGHE, M.A.S.K. (1972) - The pest ecology of the shot-hole borer beetle of tea. Proc. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci. 1, 52 - 53
- DE SILVA, R.L; WETTASINGHE, D.T. AND CALNAIDO, D. (1972) - Tea in North East India. Tea Q. 43, 62 - 84
- RAJENDRA, A. (1969) - Effective weed control will minimise borer damage. Sugar Bull. 5
- RAJENDRA, A. (1971 a) - Some observations on the shot borer immigrations in the sugar cane fields. Sugar Bull. 6
- RAJENDRA, A. (1971 b) - The variations in juice quality due to borer damage in mature cane and resulting loss of recoverable sugar in plant crop and ratoons. Report submitted to Committee for Co-ordinating Sugar Research.

A G R I C U L T U R E

RESEARCH PUBLICATIONS (Contd.)

- RAJENDRA, A. (1972 a) - Distribution status and population density of the pests of sugar cane at Hingurana. Report submitted to the Committee for Co-ordinating Sugar Cane Research.
- RAJENDRA, A. (1972 b) - Some observations on the behaviour, nature of damage and control of the wild boar in the sugar plantation of Kantalia. Report submitted to the Committee for Co-ordinating Sugar Cane Research
- RAJENDRA, A. (1973 a) - Destruction of the wild boar by poison baiting. Report submitted to the Committee Co-ordinating Sugar Cane Research.
- RAJENDRA, A. (1973 b) - Report on the outbreak of the shoot borer pest Sesamia inferens in Tract 16 A high lands, Kantalia. Report submitted to the Committee Co-ordinating Sugar Cane Research.

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- CALNAIDO, D. (1971) - Pests of tea and methods of control, with special reference to cultural practices - Symposium on plant pests. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.

Genetics & Plant Breeding

1.1 AGRICULTURE

GENETICS AND PLANT BREEDING

COCONUT RESEARCH INSTITUTE

BOTANY AND PLANT BREEDING SECTION

CROP IMPROVEMENT THROUGH BREEDING AND
SELECTION TECHNIQUES

Manthiriratne, M.A.P.

Aim of this project is to improve crop yields through selection and hybridization. Techniques of mass selection are employed for the former, and inter-variatal hybridization for the latter. This is necessarily a long term project-- (1970)

DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH STATION, BORALANDA

SCREENING OF UP-COUNTRY VEGETABLE VARIETIES,
AND VARIETAL TRIALS ON VEGETABLES
FOR SELECTING PROMISING VARIETIES

Herath, L.G.

Bock, M. (Miss)⁻¹

The vegetables include beans (Bush and Runner) cabbage, carrot, beet root, leeks, cauliflower, lettuce, tomatoes, capsicum, cucumber etc. At the end of the trials, production of foundation seed for the production of certified seed is envisaged --(January, 1971)

G E N E T I C S A N D P L A N T B R E E D I N G

DEPARTMENT OF AGRICULTURE (Contd.)

AGRICULTURAL RESEARCH STATION, BORALANDA (Contd.)

Suntheralingam, K.	<u>TOMATO BREEDING FOR WILT RESIS-</u>
De Vaz, C.R.	<u>TANCE - (1967 - 1973)</u>
Eliezer, A.R.S.	

AGRICULTURAL RESEARCH STATION, MAHA-ILUPPALLAMA

AGRO-INDUSTRIAL CROPS

De Zoysa, A.O.C.	Breeding trials on soya bean and
Jeyabalan, M.	gingelly.

CHILLIE BREEDING

Gunawardena, S.	Breeding and selection trials on
Regunathan, B.	varieties of chillie.

MAIZE BREEDING

Hindagala, C.B.	Growth and yield of several varie-
	ties of maize under irrigation.

PULSE BREEDING

Jeyabalan, M.	Selective breeding of varieties
	of ground nut, green gram and
	toor dhal.

RICE BREEDING

Manokaran, R.	Breeding trials on selected types
	of rice, mutation breeding,
	maintenance of genetic stocks
	and production of broeders seed
	of M I 273 (m) and M I 32 - 5.

A G R I C U L T U R E

DEPARTMENT OF AGRICULTURE (Contd.)

AGRICULTURAL RESEARCH STATION, MAHA-ILUPPALLAMA (Contd.)

BREEDING VEGETABLES

Regunathan, B. Testing the performance of several varieties of vegetables, e.g. Bean, Beet root, Brinjal, Carrot, Capsicum, Cucumber, Melon, Okra, Snake gourd, Sweet potatoes and Tomato.

(1) SPICES

Senanayake, L. (i) Screening the varieties of garlic, (a) to select a suitable variety for the dry zone, (b) for yield and bulb formation characteristics. (ii) Breeding trials with condiments such as Fennel, Fennugreek and Coriander under dry zone conditions.

(2) BREEDING OF ONIONS

Breeding trials on Bombay and Red onions.

CENTRAL AGRICULTURAL RESEARCH INSTITUTE, GANNORUWA

DIVISION OF BOTANY

Gunawardena, S.D.I.E. BREEDING OF LONG-AGED FLOOD TOLERANT RICE VARIETIES FOR YALA SEASON-(1971)

Gunawardena, S.D.I.E.
Fernando, G.A.K.
Perera, H.I.S. (Miss) USE OF INDUCED MUTATIONS FOR IMPROVEMENT OF RICE, TOOR DHAL, TURMERIC AND PAPAN - (1970)

Gunawardena, S.D.I.E.
Jinadasa, H. BREEDING OF COLD TOLERANT RICE VARIETIES - (1970)

G E N E T I C S A N D P L A N T B R E E D I N G

DEPARTMENT OF AGRICULTURE (Contd.)

CENTRAL AGRICULTURAL RESEARCH INSTITUTE, GANNORUWA

DIVISION OF BOTANY (Contd.)

- Gunawardena, S.D.I.E.
Perera, H.I.S.(Mrs.)
- BREEDING OF TOMATO (SALAD TYPE AND COOKING TYPE) HAVING RESISTANCE TO BACTERIAL WILT DISEASE - (1970)
- Gunawardena, S.D.I.E.
Sumanasinghe, R.M.K.(Mrs.)
- TRANSFER OF RESISTANCE TO GALLE MIDGE INTO LEADING RICE VARIETIES- (1968)
- Gunawardena, S.D.I.E.
Zaruk, M.T.M.
- (1) BREEDING OF RICE VARIETIES HAVING IMPROVED GENERAL CHARACTERISTICS WITH RESISTANCE TO BACTERIAL LEAF BLIGHT DISEASE - (1969)
- (2) BREEDING OF RICE VARIETIES HAVING IMPROVED PLANT TYPE AND HIGH YIELD POTENTIALS FITTING THE 3, 3½ & 4 TO 4½ MONTHS AGE CLASS
Adequate resistance to common pests and diseases and improved grain quality characteristics are the objectives of the programme --(1967)
- (3) BREEDING OF RICE VARIETIES HAVING PHOTO-PERIOD SENSITIVITY COUPLED WITH RESISTANCE TO FLOODS, BRONZING AND ILL-DRAINED SOILS CONDITIONS - (1969)

CENTRAL RICE BREEDING STATION, BATALAGODA

RICE BREEDING

Weeraratne, H.
Dhanapala, M.P.

Development of new high yielding strains/varieties of rice for

A G R I C U L T U R E

DEPARTMENT OF AGRICULTURE (Contd.)

CENTRAL RICE BREEDING STATION, BATALAGODA(Contd.)

RICE BREEDING (Contd.)

Weeraratne, H.
Dhanapala, M.P.

cultivation in different agro-climatic zones in Sri Lanka - (1938, continuing)

PADDY RESEARCH STATION, BOMBUELA

RICE BREEDING

Yogarathnam, P.

Existing rice varieties are crossed to improve grain quality, leaf quality, straw strength and resistance to BLB - (1970)

REGIONAL AGRICULTURAL RESEARCH OFFICE, BANDARAVELA

Weerasinghe, S.P.R.

- (1) SCREENING OF SEVERAL INTRODUCTIONS OF IPOMEA BATATAS - (May, 1973)
- (2) PRELIMINARY STUDY ON THE PERFORMANCE OF SOYA BEANS - (May, 1973)

GOVT. RICE RESEARCH STATION, PUSSELLAWA

DIVISION OF BOTANY

PADDY BREEDING FOR TOLERANCE TO CONDITIONS OF LOW TEMPERATURE

Gunawardena, S.D.I.E.
Jinadasa, H.
Fernando, G.A.R.
Karunaratne, D.M.N.G.

Breeding and testing of hybrid strains and other promising varieties of paddy tolerant to cold, low temperature conditions. Selection of hybrid progeny F_3 and F_5 progeny rows. Testing of hybrid strains and improved varieties for yields.

GENETICS AND PLANT BREEDING

RUBBER RESEARCH INSTITUTE

BOTANY DEPARTMENT

Samaranayake, A.C.I.(Mrs.) HEVEA - STOCK EXPERIMENTS AND
NURSERY PRACTICES - (1972)

GENETICS AND PLANT BREEDING SECTION

HEVEA IMPROVEMENT AND PROGENY TESTING

Fernando, D.M.	(i) Small and large scale Replicated
Jayasekera, N.E.M.	Multidistrict Hevea yield trials.
Ratnayake, C.M.B.	(ii) Progeny testing and plant selection.
Samaranayake, P.	(iii) Stock/scion relationships.
De Silva, M.S.C.	(iv) Hormones and antihormones -(1970)
Gunasekera, J.	
Abeywardena, V. ⁻¹	
Tambiah, M.S. ⁻²	
Senanayake, Y.D.A. ⁻³	

SRI LANKA SUGAR CORPORATION, KANTALAI

RESEARCH DIVISION

SUGAR BREEDING AND SELECTION

Jayatilake, P.K. Breeding of sugar cane varieties
which are adaptable for local condi-
tions, and resistant to the diseases
of economic importance-(1970)

-
1. Coconut Research Institute.
 2. University of Sri Lanka, Colombo Campus.
Now in Zambia
 3. Dept. of Agriculture, Peradeniya.

A G R I C U L T U R E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF AGRICULTURE

STRAIN SELECTION AND CULTURAL REQUIREMENTS
OF LEMON GRASS FOR THE MID-COUNTRY WET
ZONE OF SRI LANKA

Herath, H.M.W.

Purpose is to select one or two strains of lemon grass which would give the highest yield of oil and citral content. Study of optimum plant density, frequency of cutting, irrigation etc., will also be carried out - (1971)

A STUDY OF THE GROWTH PARAMETERS OF HEVEA
BRASILIENSIS ROOTSTOCK SEEDLINGS

Senanayake, Y.D.A.

Jayasekera, N.E.M.⁻¹

The growth of the stem, root and leaves of rootstock seedlings during different times is compared with the original germination vigor of the seeds to determine if cutting of rootstock seedlings could be done very early in the germination bed - (September, 1969)

GENETICAL ASPECTS OF BRONZING DISEASE IN
PADDY

Nandadasa, H.G.

Gunawardena, S.D.I.E.⁻²

Senarathne, A.U.⁻³

Bronzing is a common disease of paddy, occurring very commonly in wet zone cultivation of Sri Lanka. Toxicity due to excess Fe^{++} is an important causative factor.

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1. Rubber Research Institute.
 2. Botanist, C.A.R.I., Gannoruwa.
 3. Research Student, Dept. of Biology, Vidyodaya Campus.

GENETICS AND PLANT BREEDINGUNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)DEPARTMENT OF AGRICULTURE (Contd.)GENETICAL ASPECTS OF BRONZING DISEASE
IN PADDY (Contd.)

Nandadasa, H.G.

Gunawardena, S.D.I.E.⁻²Senaratne, A.U.⁻³

The degree of resistance varies depending on the variety of paddy. Some of the good yielding varieties are quite susceptible. Breeding experiments are carried out with the hope of introducing the resistant factors into high yielding varieties - (1972)

RESEARCH PUBLICATIONS

FERNANDO, D.M. (1970) - Breeding for multiple characters of economic importance in Hevea - preliminary assessment of recent selection. Q. J. Rubb. Res. Inst. Ceylon, 46, 7 - 119 (Reprinted from J. Rubb. Res. Inst. Malaya, 21, 27 - 37)

FERNANDO, D.M. (1971) - The yields and secondary characteristics of clone RRIC 102. Q. J. Rubb. Res. Inst. Ceylon, 48, 56 - 57

FERNANDO, D.M. AND DE SILVA, M.S.C. (1971) - A new basis for the selection of Hevea seedlings. Q. J. Rubb. Res. Inst. Ceylon, 48, 19 - 30

FERNANDO, D.M. AND TAMBIAH, M.S. (1970 a) - A study of the significance of latex in Hevea. Q. J. Rubb. Res. Inst. Ceylon 46, 69 - 77

A G R I C U L T U R ERESEARCH PUBLICATIONS (Contd.)

- FERNANDO, D.M. AND TAMBIAH, M.S. (1970 b) - Sieve tube diameters and yields in Hevea spp. - a preliminary study.
Q. J. Rubb. Res. Inst. Ceylon, 46, 88 - 92
- FERNANDO, D.M; TAMBIAH, M.S; ABEYWARDENA, V. AND SAMARANAYAKE, P. (1971) - A study of the heritability of oil content in colylodons of Hevea seedlings. Q. J. Rubb. Res. Inst. Ceylon, 47, 70 - 72
- FERNANDO, D.M. AND WIJESINGHE, W.A.C. (1970) - Some features of the growth and yields of RRIC 100. Q. J. Rubb. Res. Inst. Ceylon, 46, 78 - 87
- JAYASEKERA, M.E.M. AND SENANAYAKE, Y.D.A. (1971) - A study of growth parameters in a population of nursery rootstock seedlings of Hevea brasiliensis, cv. Tjir 1. Q. J. Rubb. Res. Inst. Ceylon, 48, 66 - 81
- SAMARANAYAKE, A.C.I. (1968) - Growth rate of PB 86 on different Hevea rootstocks. Q. J. Rubb. Res. Inst. Ceylon, 44, 27 - 28
- SAMARANAYAKE, A.C.I. (1969) - A ~~comparision~~ comparison of nursery techniques. Q. J. Rubb. Res. Inst. Ceylon, 45, 57 - 62
- SAMARANAYAKE, A.C.I. (1973) - The use of polythene film in bud grafting Hevea seedlings. Rubb. Res. Inst. Ceylon, Bull. 8, (in press)
- SENANAYAKE, Y.D.A. AND SAMARANAYAKE, P. (1970) - Intraspecific variation of stomatal density in Hevea brasiliensis (Mull. Arg.) Q. J. Rubb. Res. Inst. Ceylon, 46, 61 - 68
- WEERARATNE, H. (1954) - Hybridization techniques in rice. Trop. Agric., 110 (2), 93 - 97
- WEERARATNE, H. AND DHANAPALA, M.P. (1972) - Progress of rice breeding in Ceylon since 1960 - Rice Breeding, Los Banas, Philippines.

GENETICS AND PLANT BREEDING

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- FERNANDO, D.M. (1972 a) - Screening for disease resistance in rubber. First Symposium on International Co-operation in Hevea Breeding. Kuala Lumpur.
- FERNANDO, D.M. (1972 b) - Ideas on clone selection in rubber. First Symposium on International Co-operation in Hevea Breeding. Kuala Lumpur
- FERNANDO, D.M. (1973) -- Trends in the improvement of rubber planting material with particular reference to Sri Lanka. Second General Congress of SABRAO, New Delhi.
- JAYAWARDENA, S.D.G. (1972 a) - Screening of rice varieties for iron toxicity. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- JAYAWARDENA, S.D.G. (1972 b) - Times of harvesting of rice varieties in relation to grain quality. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- RATNAYAKE, C.M.B. (1973) - An assay of growth inhibitors in seed oil and normal and diseased bark of Hevea. Rubb. Conf. Sri Lanka.

Plant Pathology

1.1 A G R I C U L T U R E

P L A N T P A T H O L O G Y

DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH STATION, MAHA-ILUPPALLAMA

CONTROL OF WEEDS IN SOYA BEAN
PLANTATIONS

De Zoysa, A.O.C.

Screening of weedicides for the control of weeds in soya bean plantations.

FUNGAL DISEASES IN FRUITS

Pinto, M.E.R.
Shivanathan, P.

- (i) Red stem disease investigation in Jaffna.
- (ii) Evaluation of mildew-cides against the control of mildew disease.

FUNGAL DISEASES IN ONIONS

Shivanathan, P.

Screening of fungicides for the control of fungal diseases in Bombay onions and Red onions.

Wijewardene, D.

EFFECT OF FUNGICIDES AND INSECTI-
CIDES ON NODULATION IN SOYA BEAN -
POT EXPERIMENT

CENTRAL AGRICULTURAL RESEARCH INSTITUTE, GANNORUWA

DIVISION OF PLANT PATHOLOGY

INTERNATIONAL BACTERIAL BLIGHT
NURSERY (IBBN)

Seneviratne, S.N. de S.

Anandakrishnan, M.

Dodanwela, D.D.B.

Gunasingham, V.

Kauffman, H.E.

An international programme co-ordinated by the International Rice

A G R I C U L T U R E

DEPARTMENT OF AGRICULTURE (Contd.)

CENTRAL AGRICULTURAL RESEARCH INSTITUTE, GANNORUMA (Contd.)

DIVISION OF PLANT PATHOLOGY

INTERNATIONAL BACTERIAL BLIGHT NURSERY
(IBBN) (Contd.)

Seneviratne, S.N. de S. Research Institute with the objectives
Anandakrishnan, M. of discriminating germplasm resistant to
Dodanwela, D.D.B. bacterial blight (Xanthomonas oryzae),
Gunasingham, V. the identification of broad spectrum
Kauffman, H.E.⁻¹ bacterial blight resistant varieties and
the evaluation of the variation in the
virulence of the pathogen - (1972)

INTERNATIONAL TESTING FOR RESISTANCE TO
SHEATH BLIGHT

~~Seneviratne, S.N. de S.~~ An international programme co-ordinated
Fernando, W.W.V.P. by the International Rice Research
Dodanwela, D.D.B. Institute, to identify rice varieties
Ou, S.H.⁻² resistant to sheath blight (Corticium
sasakii)- (1973)

1,2. International Rice Research Institute.

P L A N T P A T H O L O G Y

DEPARTMENT OF AGRICULTURE (Contd.)

CENTRAL AGRICULTURAL RESEARCH INSTITUTE, GANNORUMA (Contd.)

DIVISION OF PLANT PATHOLOGY

INVESTIGATION ON THE SHEATH BLIGHT
DISEASE OF RICE (CORTICIUM SASAKII)

Seneviratne, S.N. de S.	Development of screening methods;
Fernando, W.W.V.P.	screening of varieties and identi-
Dodanwēla, D.D.B. ⁻¹	fication of donors for resistance;
Dayananda, H. ⁻²	estimation of crop losses;
Gunaratne Banda, G.A. ⁻³	evaluation of agro-chemicals for disease control - (1969)

INVESTIGATION ON THE BACTERIAL LEAF
BLIGHT DISEASE OF RICE (XANTHOMONAS
ORYZAE)

Seneviratne, S.N. de S.	Studies on the causal bacterium and
Fernando, P.S.Y.	its culture, epidemiology of the
Unamboowe, B.S.	disease; development of screening
Hemachandra, S.P. (Miss) ⁻⁴	methods; identification of donors
Gunasekera, A.R. ⁻⁵	of resistance; screening of varie-
Anandakrishnan, M. ⁻⁶	ties and progenies from breeding
Hemachandra, G.K. ⁻⁷	programmes, estimation of crop losses;
Dayananda, H.	evaluation of agro-chemicals for
Dodanwēla, D.D.B.	disease control - (1969)
Gunaratne Banda, G.A.	
Gnanasingham, V. ⁻⁸	
Wickremaratne, K. (Mrs.) ⁻⁹	

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- 1,2,3,6,7,8 . Lab-assistants and Sub-assistants.
4,5. Associated in the early stages of project.
9. Conductor.

A G R I C U L T U R E

DEPARTMENT OF AGRICULTURE (Contd.)

CENTRAL AGRICULTURAL RESEARCH INSTITUTE, GANNORUWA (Contd.)

DIVISION OF PLANT PATHOLOGY

INVESTIGATIONS ON BACTERIAL WILT IN
SOLANACEOUS CROPS CAUSED BY PSEUDOMONAS
SOLANACEARUM

Seneviratne, S.N. de S.
Hemachandra, G.K.⁻¹ Studies on the distribution of biotypes
of the causal organism, epidemiology,
screening of solanaceous varieties against
the disease - (1969)

INVESTIGATION OF SOIL BORNE DISEASES

Seneviratne, S.N. de S.
Hemachandra, G.K.
Anandakrishnan, M.⁻² Studies on the organisms associated
with nursery diseases and collar
infections and the formulation of
control measures - (1973)

ASSESSMENT OF THE INCIDENCE OF DISEASE
IN THE NEW IMPROVED RICE VARIETIES

Seneviratne, S.N. de S.
Unamboowe, B.S.
Wickremasinghe, D.L.
Hemachandra, G.K.
Anandakrishnan, M. Continuous observations on the inci-
dence of diseases in the new improved
varieties in the various agro-
climatic zones of the island, with the
object of ascertaining potential
dangers from rice diseases to the
expanded programme of cultivating
improved varieties - (1969)

P L A N T P A T H O L O G Y

DEPARTMENT OF AGRICULTURE (Contd.)

CENTRAL AGRICULTURAL RESEARCH INSTITUTE, GANNORUMA (Contd.)

DIVISION OF PLANT PATHOLOGY

INVESTIGATIONS ON SEED BORNE ORGANISMS IN RICE

Seneviratne, S.N. de S.	Studies on the seed borne pathogens
Wickremaratne, K. (Mrs.) ⁻¹	in rice, their effects on stand
Dodanwela, D.D.B.	establishment and the evaluation
Dayananda, H. ⁻²	of agro-chemicals for seed dis-
Gunaratne Banda, G.A. ⁻³	infection - (1972)

INVESTIGATIONS OF VIRUS DISEASES OF PASSION FRUIT

Seneviratne, S.N. de S.	Studies on the identification of
Wickremasinghe, D.L.	virus diseases, their incidence,
Anandakrishnan, M.	nature of spread and effects on
Dodanwela, D.D.B.	growth and productivity, virus
	characterisation; methods of control-
	(1973)

INTERNATIONAL BLAST NURSERIES (IBN)

Seneviratne, S.N. de S.	An international programme co-
Wickremasinghe, D.L.	ordinated by the International
Ou, S.H. ⁻⁴	Rice Research Institute, with the
	object of identifying rice varieties
	resistant to blast (<u>Pyricularia</u>
	<u>oryzae</u>)- (1969)

-
1. Conductor
 - 2,3. Lab-assistants
 - 4 . International Rice Research Institute.

A G R I C U L T U R E

DEPARTMENT OF AGRICULTURE (Contd.)

CENTRAL AGRICULTURAL RESEARCH INSTITUTE, GANNORUWA (Contd.)

DIVISION OF PLANT PATHOLOGY

INVESTIGATIONS ON THE BLAST DISEASE OF
RICE (PYRICULARIA ORYZAE)

Seneviratne, S.N. de S. Wickremasinghe, D.L. Fernando, W.W.V.P. Dodanwela, D.D.B.	Studies on the causal agent and the nature of epidemics in different agro-climatic zones; identification of donors of resistance, screening of varieties and progenies from breeding programmes, estimation of crop losses, evaluation of agro-chemicals for disease control- (1969)
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COLLECTION OF HERBACEOUS INDICATORS FOR
INVESTIGATION OF SAP TRANSMISSIBLE PLANT
VIRUSES.

Seneviratne, S.N. de S. Wickremasinghe, D.L. Weerasinghe, E.R.P. ⁻¹	Collection of species of test plants for sap transmission of plant viruses, their maintenance and multiplication - (1973)
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RUBBER RESEARCH INSTITUTE

PLANT PATHOLOGY SECTION

STUDIES ON BIOLOGY, PHYSIOLOGY AND
IDENTITY OF VARIOUS FUNGI WHICH ARE
RESPONSIBLE FOR LEAF, BARK, POD AND
ROOT DISEASES IN HEVEA

Liyanage, G.W.	(i) Identification of rubber wood decay
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1. Laboratory Sub-assistant

P L A N T P A T H O L O G YRUBBER RESEARCH INSTITUTE (Contd.)PIANT PATHOLOGY SECTION (Contd.)STUDIES ON BIOLOGY, PHYSIOLOGY AND
IDENTITY OF VARIOUS FUNGI WHICH ARE
RESPONSIBLE FOR LEAF, BARK, POD AND
ROOT DISEASES IN HEVEA (Contd.)

- Liyanage, G.W. causing fungi, and methods of stimulating decay by the use of selected strains of micro-organisms and treatment of wood - (1972)
- Liyanage, G.W. (ii) Assessment of the incidence of Oidium leaf diseases in the small holdings -- (1970)
- Peries, O.S. (iii) Competitive saprophytic ability of Fomes lignosus - (1972)
- Liyanage, A. de S. (iv) Forecasting outbreaks of leaf diseases of Hevea, using meteorological data - (1970)
- Peries, O.S. Abeywardena, V.
- Peries, O.S. (v) The relationship of soil fungi with soil types-(1972); screening of fungicides-(1972); studies on Gloesporium leaf disease-(1972); clonal susceptibility, survival, spread, control - laboratory testing of fungicides-(1972); studies on the saprophytic survival of Phytophthora in the soil-(1970)
- Peries, O.S. (vi) Studies on biology of bark, leaf and root diseases fungi - (1972)
- Satchuthananthavale, V.

A G R I C U L T U R E

RUBBER RESEARCH INSTITUTE (Contd.)

PLANT PATHOLOGY SECTION (Contd.)

STUDIES ON BIOLOGY, PHYSIOLOGY AND IDENTITY
OF VARIOUS FUNGI WHICH ARE RESPONSIBLE
FOR LEAF, BARK, POD AND ROOT DISEASES IN
HEVEA (Contd.)

- Satchuthananthavale, V. (vii) Field trials for the control of white root diseases in Hevea brasiliensis- (1970); nutrition and reproduction of selected isolates of Phytophthora spp, (1972); perennation of Phytophthora spp. on Hevea plant parts, (1972); studies on Bark Rot with reference to wound healing, spread of infection, anatomy of bark, micro-flora of bark and pod, (1972); studies on Formes lignosus with reference to survival of Formes lignosus and decomposition of wood, (1972)
- Satchuthananthavale, V. (viii) Physiology of disease resistance; studies on phytalexins -- (1972)
- Satchuthananthavale, R.

BACTERIAL COAGULATION OF LATEX

- Satchuthananthavale, V. Screening for more spp. of bacteria for coagulation and investigation on coconut water as a medium for culturing bacteria- (1971)
- Satchuthananthavale, R.

P L A N T P A T H O L O G Y

SRI LANKA SUGAR CORPORATION, KANTALAI

RESEARCH DIVISION

Aloysius, G.R.

- (1) SCREENING OF SUGAR CANE VARIETIES AGAINST SMUT-USTILAGO SCITAMINEA.
SYD.-(November, 1972)
- (2) INVESTIGATION OF THE DEGENERATION OR YIELD DECLINE IN SUGAR CANE RATOONS AND THE POSSIBLE ROLE PLAYED BY RATOON STUNTING DISEASE (VIRUS)-
(August, 1973)

UNIVERSITY OF SRI LANKA, COLOMBO

DEPARTMENT OF BOTANY

VIRUS DISEASES OF PAPAW

Kandiah, Umarany.

Sahajanathan, S.

Project involves (a) identification of the virus (b) survey of weeds as natural hosts of the virus and (c) possible means of control of the virus - (June, 1972)

UNIVERSITY OF SRI LANKA, PERADENIYA

DEPARTMENT OF AGRICULTURE

EVALUATION OF HERBICIDES FOR USE UNDER LOWLAND DIRECT SEEDED RICE CULTURE

Gunasena, H.P.M.*

These trials are intended to evaluate

* In collaboration with the International Rice Research Institute.

A G R I C U L T U R E

UNIVERSITY OF SRI LANKA, PERADENIYA (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

EVALUATION OF HERBICIDES FOR USE UNDER
LOWLAND DIRECT SEEDED RICE CULTURE (Contd.)

Gunasena, H.P.M.

suitable herbicides for lowland direct seeded, lowland transplanted and for upland rice. A large number of liquid and granular herbicides have been tested in the past -- (May, 1970)

THE DEVELOPMENT OF A RAPID SCREENING
TECHNIQUE FOR PAPAW VIRUS

Senanayake, Y.D.A.

Different systems of virus transmission are tested on seedlings at different stages of growth to determine a reproducible screening technique, to isolate seedlings that are either tolerant or resistant to the disease from mass population -- (February, 1971)

AN INVESTIGATION OF VIRUS DISEASES OF
PASSION FRUIT PASSIFLORA EDULIS L.
FORMA FLAVICARPA

Wickremasinghe, D.L.

Seneviratne, S.N. de S.⁻¹

Senanayake, Y.D.A.

A study of the virus diseases of passion fruit plants of Sri Lanka is made in order to identify the types of virus diseases, their modes of transmission and possible methods of control-- (January, 1973)

P L A N T P A T H O L O G Y

UNIVERSITY OF SRI LANKA, VIDYALANKARA CAMPUS

DEPARTMENT OF BOTANY

STUDY OF SOME PROBLEMS ASSOCIATED
WITH THE DEVELOPMENT OF MYCORRHIZA
IN PINE PLANTATIONS IN CEYLON

Balasooriya, I.
De Silva, L.R.M.

- (i) Examination of nature and distribution of mycorrhiza in some pine plantations.
- (ii) Isolation and laboratory studies on the mycorrhizal fungus.
- (iii) Laboratory and field studies to determine the conditions necessary for the successful establishment of mycorrhiza - (July, 1972)

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF BIOLOGICAL SCIENCES

CONTROL OF BLUE-STAIN ON UPGRADED
RUBBER WOOD

Gunasekera, S.A.
Sumanaweera, H.A.N.

Aim is to prevent growth of blue-stain fungi; which cause undesirable staining in upgraded (Boson treated) rubber wood - (1971)

RESEARCH PUBLICATIONS

GUNASENA, H.P.M. (1973 a) - Evaluation of herbicides for direct seeded lowland rice. I. Nat. Agric. Soc. of Ceylon, 8. (in press)

A G R I C U L T U R E

RESEARCH PUBLICATIONS (Contd.)

- GUNASENA, H.P.M. (1973 b) - Evaluation of herbicides for direct weeded lowland rice. II. Nat. Agric. Soc. of Ceylon, 8, (in press)
- LIYANAGE, A. De S; PERIES, O.S. AND SEBASTIAN, R.D. (1971) - Assessment of the incidence of Oidium leaf fall and economics of its control in the small-holdings. Q. J. Rubb. Res. Inst. Ceylon, 48, 112 - 124
- PERIES, O.S. (1959) - Studies on production of toxing by Pomes lignosus. 1. Preliminary investigations. Q. J. Rubb. Res. Inst. Ceylon, 35, 38 - 40.
- PERIES, O.S. (1961 a) - Studies on strawberry mildew. Ph.D. Thesis, University of Bristol, U.K.
- PERIES, O.S. (1961 b) - Over wintering of Sphaerotheca humuli on strawberry plants. Plant Pathology, 10
- PERIES, O.S. (1961 c) - Studies on strawberry mildew. Rep. Agric. Hort. Res. Station, Bristol, 153 - 163
- PERIES, O.S. (1962 a) - Studies on strawberry mildew caused by Sphaerotheca macularis (Wall ex Fries) Jaczewaki. 1. Biology of the fungus. Annals of Applied Biology, 50, 211 - 224
- PERIES, O.S. (1962 b) - Studies on strawberry mildew caused by Sphaerotheca macularis (Wall ex Fries) Jaczewaki. II. Host parasite relationships on foliage of strawberry varieties. Annals of Applied Biology, 50, 225 - 233
- PERIES, O.S. (1962 c) - Methods used by the Rubber Research Institute of Ceylon for testing water miscible fungicides for the control of bark rot of Hevea. Ibid. 38, 57 - 61

P L A N T P A T H O L O G YRESEARCH PUBLICATIONS (Conts.)

- PERIES, O.S. (1963 a) - Histological studies on the bark cracking disorder of Hevea brasiliensis (Mull. Arg.)
Proc. 19th Annual Sessions, Ceylon Ass. Advmt. Sci.,
12 - 13
- PERIES, O.S. (1963 b) - Field evaluations of methods for the control of White root disease (Fomes lignosus) of Hevea. Q. J. Rubb. Res. Inst. Ceylon, 39,
9 - 15
- PERIES, O.S. (1963 c) - Pure culture inoculation of Hevea roots with Fomes lignosus Ibid, 39, 16 - 17
- PERIES, O.S. (1963 d) - The incidence, control and economic importance of Oidium leaf disease on Ceylon rubber.
Ibid, 39, 65 - 72
- PERIES, O.S. (1963 e) - Field experiments for the control of Oidium leaf disease of Hevea. Ibid, 39, 72 - 80
- PERIES, O.S. (1964) - Incidence, symptoms and histology of bark cracking in Hevea brasiliensis (Mull. Arg.)
Trop. Agric., Trinidad, 41, 265 - 276
- PERIES, O.S. (1965 a) - A virus as causal agent of bark cracking in Hevea brasiliensis. Nat. (London) 205, 224 - 226
- PERIES, O.S. (1965 b) - Recent developments in the control of the diseases of the Hevea rubber tree. Q. J. Rubb. Res. Inst. Ceylon, 41, 33 - 46
- PERIES, O.S. (1965 c) - Control of white root disease (Fomes lignosus) of Hevea brasiliensis. Ibid. 41,
81 - 89
- PERIES, O.S. (1966 a) - A host induced change in the morphology of a powdery mildew fungus. Nat. London, 212,
540 - 541

A G R I C U L T U R ERESEARCH PUBLICATIONS (Contd.)

- PERIES, O.S. (1966 b) - Studies on the biology of Phytophthora meadii. McRae. Trans. Brit. Mycol. Soc. 49,
311 - 325
- PERIES, O.S. (1966 c) - Nomenclature of Phytophthora. spp. causing bark, pod and twig diseases of the rubber tree in Ceylon. Q. J. Rubb. Res. Inst. Ceylon,
42, 3 - 10
- PERIES, O.S. (1966 d) - The distribution of the different sexual compatibility types of Phytophthora meadii in Ceylon. Ibid. 42, 11 - 20
- PERIES, O.S. (1966 e) - Present status and methods of control of leaf and panel diseases of Hevea in South East Asian and African countries. Ibid. 42,
3 - 4, 35 - 47
- PERIES, O.S. (1966 f) - Studies on copper fungicides I. Biological efficacy of copper spray deposits containing various 'Stickers'. Ibid. 42, 53 - 56
- PERIES, O.S. (1966 g) - The economics of disease control in Hevea. Rubb. Res. Inst. Ceylon, Bull. 1,(2),
27 - 33
- PERIES, O.S. (1968 a) - Coconut leaf scorch disease - Ceylon Cocon. Q. 3, 109 - 115
- PERIES, O.S. (1968 b) - Problems of crop disease control with chemicals. Q. J. Rubb. Res. Inst. Ceylon 44,
44 - 48
- PERIES, O.S. (1969 a) - Studies on epidemiology of Phytophthora leaf disease of Hevea brasiliensis in Ceylon. J. Rubb. Res. Inst. Malaya 21, 73 - 78
- PERIES, O.S. (1969 b) - Resistance of plants to fungal and bacterial diseases. Vidyodaya J. Arts.Sci. Lett. 1, 213 - 219 (in sinhala)

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- PERIES, O.S. (1970 a) - The use of organo-mercurial fungicides for the control of Gloeosporium leaf disease of Hevea in Ceylon. Trop. Agric. Trin. 47 (3) 221 - 228
- PERIES, O.S. (1970 b) - Environmental factors affecting plant disease incidence. Tea Q. 42, 188 - 195
- PERIES, O.S. (1970 c) - Economics of control of the white root disease (Fomes lignosus) of Hevea brasiliensis in Ceylon. Root disease and soil borne pathogenes. Edited by T.A. Toussoun and P.H. Nelson, University of California Press, Berkeley.
- PERIES, O.S. (1971) - Subsidiary products of economic importance from the rubber tree. Ind. Ceylon 2, 19 - 32.
- PERIES, O.S. (1973 a) - A critical assessment of the influence of weather on the incidence of Hevea diseases. Proc. Int. Rubb. Conf. Sri Lanka, (in press)
- PERIES, O.S. (1973 b) - The control of white root disease in Sri Lanka. Proc. Int. Rubb. Conf. 1973 (in press)
- PERIES, O.S. (1973 c) - Phytophthora leaf disease of Hevea, its incidence, symptoms and control. Contribution to Guide to Tropical Diseases. Edited by the Tropical Institute, University of Geissen (in press)
- PERIES, O.S. (1973 d) - Studies on the relationship between weather and incidence of leaf diseases of Hevea. Proc. of the S.E.A. Regional Symp. in plant diseases Vol. II - Perennial Crops. Edited by Varghese, G.H.; Lim, T.M. and Semangeon, H. (in press)
- PERIES, O.S. (1973 e) - The effect of weather on plant disease incidence. J. Ceylon Met. Soc. 1, 15 - 20

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- PERIES, O.S. (1973 f) - Incidence, symptoms and control of Oidium leaf disease of Hevea. Contribution to "Guide to Tropical Disease". Edited by the Tropical Institute, University of Geissen.
- PERIES, O.S. AND DANTANARAYANA, D.M. (1970) - Compatibility and variation in Phytophthora cultures isolated from Hevea brasiliensis in Ceylon.
- PERIES, O.S. AND FERNANDO, T.M. (1971) - Studies on the biology of Phytophthora meadii. Q. J. Rubb. Res. Inst. Ceylon 49, 13 - 27
- PERIES, O.S. AND IRUGALBANDARA, Z.E. (1973) - Histology of Fomes infected Hevea roots. Ann. Appl. Biol. 73, 1 - 7
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- SATCHUTHANANTHAVALLE, R. AND SATCHUTHANANTHAVALLE, V. (1971) - Bacterial coagulation of latex. Q. J. Rubb. Res. Inst. Ceylon, 48 182 - 192
- SATCHUTHANANTHAVALLE, R. AND SATCHUTHANANTHAVALLE, V; NADARAJAH, M. AND AMARASINGHE, I (1971) - Possibilities of bacterial coagulation in raw rubber manufacture. Q. J. Rubb. Res. Inst. Ceylon 48, 193 - 201
- SATCHUTHANANTHAVALLE, V. (1971) - Black stripe or bark rot of Hevea. Q. J. Rubb. Res. Inst. Ceylon, 48, 125 - 135

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- SATCHUTHANANTHAVALE, V. AND HALANGODA, L. (1971) - Sulphur in the control of white root disease. Q. J. Rubb. Res. Inst. Ceylon, 48, 82 - 91
- SENEVIRATNE, S.N. DE S. AND FERNANDO, W.W.V.P. (1972 a) - A comparison of the efficacy of Benlate and certain other fungicidal treatments for the control of rice blast (Pyricularia oryzae). Proc. Ceylon Ass. Advmt. Sci. 1, 60 - 61
- SENEVIRATNE, S.N. DE S. AND FERNANDO, W.W.V.P. (1972 b) - The effects of treatment with certain agro-chemicals on the incidence of and crop losses caused by sheath blight of rice (Corticium sasakii) Proc. Ceylon Ass. Advmt. Sci. 1, 58 - 59
- SENEVIRATNE, S.N. DE S; HEMACHANDRA, S.P; FERNANDO, P.S.Y; GUNASINGHAM, V. AND DAYANANDA, H. (1972) - A programme for the screening of rice varieties and hybrids against bacterial leaf blight. (Xanthomonas oryzae) Proc. Ceylon Ass. Advmt. Sci. 1, 56 - 57
- SENEVIRATNE, S.N. DE S; UNAMBOOWE, B.S; GUNASINGHAM, V; HEMACHANDRA, G.K; GUNASEKERA, A.L. AND WICKREMARATNE, K. (1972) - The effects of treatment with certain agro-chemical on the incidence of and crop losses caused by bacterial leaf blight of rice (Xanthomonas oryzae) Proc. Ceylon Ass. Advmt. Sci. 1, 57 - 58
- SENEVIRATNE, S.N. DE S; UNAMBOOWE, B.S. AND WICKREMASINGHE, D.L. (1972) - The present position with respect to the incidence of rice diseases in Sri Lanka. Proc. Ceylon Ass. Advmt. Sci. 1, 55 - 56

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RESEARCH PUBLICATIONS (Contd.)

SENEVIRATNE, S.N. DE S. AND WICKREMASINGHE, D.L. (1972 a) -
Factors influencing the incidence of blast and
the relationship of disease ratings in highland
nursery tests to blast incidence under conditions
of normal cultivation . Proc. Ceylon Ass. Advmt.
Sci. 1, 59 - 60

SENEVIRATNE, S.N. DE S. AND WICKREMASINGHE, D.L. (1972 b) -
Virus diseases affecting passion fruit
(Passiflora edulis var. flavicarpa) in Sri Lanka.
Proc. Ceylon Ass. Advmt. Sci. 1, 62 - 63

PAPERS PRESENTED AT INTERNATIONAL SYMPOSIA

AND CONFERENCES

PERIES, O.S. (1971) - Changes in the yield and fruit quality of
pineapple associated with nitrogen fertilization.
27th Annual Sessions of the Ceylon Ass. Advmt.
Sci.

PERIES, O.S. (1973) - A critical study of the use of weather
data for the economic control of Hevea diseases.
Rubb. Conf., Sri Lanka

SENEVIRATNE, S.N. DE S. (1973) - Significant results of recent
research on rice disease in Sri Lanka. A
review. Int. Rice Res. Conf., Los Banas,
Philippines.

Animal Husbandry

1.2 A N I M A L H U S B A N D R Y

UNIVERSITY OF SRI LANKA, PERADENIYA

DEPARTMENT OF ANIMAL HUSBANDRY

PASTURE DEVELOPMENT AND MANAGEMENT (MID-COUNTRY CROP DIVERSIFICATION PROGRAMME)

Appadurai, R.R.
Goonewardena, L.A.

Studies have been undertaken to study performance of pasture and fodder species considered suitable for planting on un-economic plantations in the mid-country, under the programme of crop diversification. These include (a) an evaluation of herbage productivity and feeding value of several species under cutting and grazing managements at various fertilizer levels, (b) the use of high nitrogen pastures as a means of increasing stocking rates/acre, and (c) targets for animal production from well managed pastures - (1970)

PROTEIN AND ENERGY SUPPLEMENTATION IN ANIMAL FEEDING

Rajaguru, A.S.B.
Wijesinghe, M.S.
Wethimuni, S.G. de S.

Energy Supplements - Waste wheat flour, manioc meal.

Protein Supplements - Rubber seed meal, gingelly meal and meat meal. The project is designed to evaluate the levels of supplementation, possible limitations and the economics of using these locally available energy and protein sources for animal feeding - (1970)

RESEARCH PUBLICATIONS

- APPADURAI, R.R. (1973) - Pasture development and management on marginal plantations in Central Sri Lanka. 3rd World Conference on Animal Production, Melbourne Australia - Pre.Conf. Vol. 3(a) 1 - 17
- GOONEWARDENA, L.A. AND APPADURAI, R.R. (1972) - Animal production potential of three important fodder grasses of Sri Lanka. 1. Live-weight gains with sheep. Trop. Agric. 128, 1 - 10
- RAJAGURU, A.S.B. AND WETTIMUNI, S.G. DE S. (1970) - Levels of meat meal supplementation in broiler finisher rations. J. Nat. Agric. Soc. Ceylon, 7, 1 - 17

Fisheries & Wild Life

1.3 F I S H E R I E S A N D W I L D L I F E

FISHERIES RESEARCH STATION

RESEARCH DIVISION

(1) BIOLOGY OF HALMESSA

Canagaratnam, P.

Anchovilla indica and A.commer sonir are two prominent species of Halmessa occurring in our fishery. Time of occurrence, size distribution, maturity and feeding habits are being studied from catches obtained in the coastal fishery operations work at present confined to the area Moratuwa, Negombo - (1969)

(2) RESOURCES STUDY OF THE COASTAL FISHERIES FROM PANADURA TO NEGOMBO

Assess the quality (varieties) and quantity taken by both traditional and non-traditional fishing crafts operating in this area. Sampling carried out once weekly in selected centres. Supplemented with data from statistics division for assessing resources - (1965)

(1) SURVEY OF PEARL OYSTER BANKS

De Bruin, G.M.P.

Search for presence of pearl oyster on traditional oyster banks and other areas to find out whether they are found in commercial quantities for a fishery.

(2) EXPLORATION OF DEEP WATERS FOR LOBSTER AND PRAWN RESOURCES

Survey of continental slope for deep water lobsters and prawns for getting a commercial fishery - (1972)

F I S H E R I E S A N D W I L D L I F E

FISHERIES RESEARCH STATION (Contd.)

RESEARCH DIVISION(Contd.)

(3) CROWN OF THORNS STARFISH PROBLEM

De Bruin, G.H.P.

Survey of populations of crown of thorns starfish on East coast and North West coast, to determine population strength and damage to coral formations - (1971)

FISH RESOURCES AND PRODUCTIVITY OF THE DEEPER WATERS AROUND SRI LANKA.
(A JOINT SRI LANKA/USSR PROJECT)

Demidenko, U.K.⁻¹

Evasiko, G.U.⁻²

Kolesnikov, V.P.⁻³

Pedorenko, A.J.⁻⁴

Krjukov, S.S.⁻⁵

All officers in the

Fisheries Research Station.

A research vessel was supplied by USSR in 1972 to carry out a survey of the resources available in the continental slope around Sri Lanka, and in the pelagic waters outside the continental shelf. Project lasted one year - (1972)

(1) CULTURE OF THE RED SEAWEED GELIDIUM ACCEROSA

Durairatnam, M.

Study of the growth rate, monthly, of Gelidiella accerosa, off Mandativu, Jaffna and explore the possibility of increasing availability by resorting to culture of the seaweed - (1969)

F I S H E R I E S A N D W I L D L I F E

F I S H E R I E S R E S E A R C H S T A T I O N (C o n t d .)

R E S E A R C H D I V I S I O N (C o n t d .)

(2) STUDY OF THE GROWTH RATE AND ABUNDANCE
OF SARGASSUM CRASSIFOLIUM

Durairatnam, M.

Sargassum crassifolium is a source of alginate, which is used in the textile industry. The project aims at determining the extent of sodium alginate that could be made available to the industry--
(1969)

SHARK FISHERIES IN SRI LANKA

Goonewardena, T.P.

Investigation of (a) the fisheries in waters around Sri Lanka, (b) the species and (c) breeding of sharks --(1950)

CHEMICAL ANALYSIS OF FRESH AND CURED FISH
IN SRI LANKA

Gunasekera, E. St. C.
Peiris, T.S.S.

As a preliminary step towards the best possible utilization of fish found in Sri Lanka, proximate chemical analyses (moisture, ash, fat and protein content) of fresh fish are made -- (1957)

BIOLOGY OF THE INDIAN MACKEREL AND
SCAD MACKEREL

Gunawardene, T.P.

Investigation of (a) the fisheries in waters around Sri Lanka, (b) the species, (c) age and growth, (d) food (e) breeding period, and (f) parasites of mackerel fishes -- (1959)

F I S H E R I E S A N D W I L D L I F EF I S H E R I E S R E S E A R C H S T A T I O N (C o n t d .)R E S E A R C H D I V I S I O N (C o n t d .)A Q U A C U L T U R E I N F R E S H W A T E R

Indrasena, H.H.A.

Ponds have been constructed in estates where a perennial supply of water is available. Young fish have been stocked in them, so that they could be grown to a table size - (1970)

B A I T F I S H F R O M S K I P J A C K F I S H I N G

Joseph, B.D.L.

Determining suitable varieties for use as livebait for skipjack pole and line fishery around Sri Lanka; potential resources and biology of those varieties - (1973)

P R O D U C T I V I T Y S T U D I E S I N F R E S H W A T E R S

Mendis, A.S.

Indrasena, H.H.A.

Productivity of inland fresh waters is being studied so as to determine the kinds and numbers of fish fingerlings that should be stocked in these waters to increase fish production - (1958)

S K I P J A C K F I S H I N G D E V E L O P M E N T P R O J E C T

Mendis, A.S.

Sivasubramaniam, K.

Joseph, B.D.L.

Samarasinghe, J.R.D.S.

De Bruin, G.H.P.

To establish a modern skipjack fishery with live bait (pole and line) and other methods, in waters around Sri Lanka, including a supporting fishery to provide the necessary live bait and promotion of exploitation of other pelagic fisheries - (1973)

F I S H E R I E S A N D W I L D L I F E

F I S H E R I E S R E S E A R C H S T A T I O N (C o n t d .)

R E S E A R C H D I V I S I O N (C o n t d .)

A S S E S S I N G T H E F R E S H N E S S O F F I S H

Peiris, T.S.S.

Deterioration of fish starts soon after death due to chemical and bacteriological activities. Hence, chemical and physical methods are used to assess the degree of freshness of fish - (1970)

S T U D I E S O F F I N F I S H A N D S H E L L F I S H T H A T
A R E A V A I L A B L E F O R C U L T U R E I N B R A C K I S H
W A T E R

Raphel, Y.I.

Samarakeon, J.I.*

Jayamaha, S.

Kurumoerthy, M.

Project aims are determining the species of fin fish and shell fish (crustaceans, molluscs) that are available and are suitable for culture purposes in the many lagoons and river estuaries found in Sri Lanka - (1969)

(1) B E C H E D E M E R S T U D I E S

Sachithanathan, K.

- (a) Study of the biology of Holothuria scabra.
- (b) Studies in methods of processing and packing.
- (c) Survey of holothurian resources-- (1969)

* Has now left the Department.

F I S H E R I E S A N D W I L D L I F E

FISHERIES RESEARCH STATION (Contd.)

RESEARCH DIVISION (Contd.)

(2) PROBLEMS IN HANDLING AND PROCESSING
FISH AND FISHERY PRODUCTS

Sachithanathan, K.

- (a) Survey of fishery products.
- (b) Studies on methods of handling fish etc., and their improvement.
- (c) Studies on quality of frozen fish.
- (d) Proximate composition studies -- (1969)

POND CONSTRUCTION AND CULTURE
TECHNIQUES

Samarakoon, J.I.
Jayamaha, S.
Kurumoorthy, M.

Fish culture, particularly in brackish water has only been started in Sri Lanka recently, and the type of pond to be used has to be determined. Investigations are carried out both in mud ponds and in cement ponds to determine the best type and size of ponds suitable for culture of various species. Attempts are also made to carry out mixed culture such as prawns and fish -- (1972)

PHYSICAL OCEANOGRAPHY IN RELATION
TO FISHERY DEVELOPMENT IN SRI LANKA

Samarasinghe, J.R. de S.

- (a) To determine bottom configuration of the coastal waters and its relationship to fish distribution, using echograms.

F I S H E R I E S A N D W I L D L I F E

FISHERIES RESEARCH STATION (Contd.)

RESEARCH DIVISION (Contd.)

PHYSICAL OCEANOGRAPHY IN RELATION TO
FISHERY DEVELOPMENT IN SRI LANKA (Contd.)

Samarasingho, J.R. de S. (b) To determine the oceanographic factors that affect the availability of fishes, especially tunas - (1973)

FISHING BOAT TECHNOLOGY

Samaratunga, R.C. To evaluate the most suitable types of fishing boats for use in our fisheries, depending on the fish resources available and the types of gear to be employed for their capture - (October, 1973)

(1) PREDATORS AND PREDATION OF TUNA LONGLINE
CATCHES

Sivasubramaniam, K. A study to contribute knowledge of the abundance and behaviour of predators in tuna fishing grounds and to consider ways and means of reducing loss due to predation of tuna catches - (1963)

(2) EVALUATION OF SKIPJACK AND OTHER TUNA
RESOURCES AND THEIR BIOLOGY

Assessment of the status of the stocks of tuna and tuna like fish found in the surface and deep swimming layers of the Indian Ocean, particularly around Sri Lanka. Potential tuna resources for the development of pole and line fishery for Skipjack tuna around Sri Lanka - (1963)

F I S H E R I E S A N D W I L D L I F E

FISHERIES RESEARCH STATION (Contd.)

RESEARCH DIVISION (Contd.)

(3) ECONOMIC FEASIBILITY OF DEVELOPING
OFF SHORE AND OCEANIC TUNA FISHING

Sivasubramaniam, K.

(a) Feasibility of establishing tuna longtime fishery from bases in the Indian Ocean utilizing available resources, shore facilities, shipyards, trained personnel and exporting the catches.

(b) Evaluation of the resources, suitable class of vessels and methods of fishing for the establishment of an economically viable surface fishery for tunas and bonitos in the off shore and near oceanic ranges around Sri Lanka - (1970)

FISHING GEAR TECHNOLOGY

Weerasooriya, K.T.

To determine by experimentation and research, the most suitable type of fishing gear to be employed for use to capture the different varieties of fish resources available for exploitation - (October, 1973)

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF BIOLOGICAL SCIENCES

STUDIES ON THE PENAEID PRAWN
FISHERY OF CEYLON LAGOONS.2 FOOD
OF PENAEID PRAWNS OF THE BOLGODA

Jinadasa, J.

The above studies are an essential

F I S H E R I E S A N D W I L D L I F E

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF BIOLOGICAL SCIENCES (Contd.)

STUDIES ON THE PENAEID PRAWN FISHERY
OF CEYLON LAGOONS. 2. FOOD OF PENAEID
PRAWNS OF THE BOLGODA (Contd.)

Jinadasa, J.

pre-requisite for the development of a
method of prawn farming in Ceylon -
(1967)

Weerakoon, A.C.J.
Uluwita, K.⁻¹

STUDIES ON THE PENAEID PRAWN FISHERY OF
CEYLON LAGOONS. 1. THE JA-KOTTU PRAWN
FISHERY OF THE BOLGODA AND THE EFFECTS
ON IT OF SEASONAL CHANGES IN THE HYDRO-
LOGY OF THE LAGOON - (1973)

Sivasubramaniam, K.⁻²
Jinadasa, J.

A STUDY OF CEYLON'S FLYING FISH FISHERY
Considerable savings in foreign exchange
and reduction in the cost of production
of tuna will follow if the obscure flying-
fish fishery off Trincomalee can be deve-
loped to provide sufficient quantities
of flying fish for use as bait. To
assess this possibility, the study
of the local flying fish fishery was
undertaken - (1969)

-
1. Post-graduate Student - Vidyodaya Campus
 2. Research Officer, Fisheries Research Station, Colombo 3.

F I S H E R I E S A N D W I L D L I F E

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF BIOLOGICAL SCIENCES (Contd.)

ENVIRONMENTAL FACTORS AFFECTING THE
AVAILABILITY OF TUNAS IN CEYLON
WATERS

Sivasubramaniam, K.
Kularatne, M.A.R.⁻¹

With the mechanisation of the local fishing industry, particularly the introduction of a class of 11 ton fishing boats, it becomes increasingly important to understand how the availability of tunas (including Balayas) in our off shore waters varies with changes in the marine environment -- (1972)

RESEARCH PUBLICATIONS

- CANAGARATNAM, P. (1965) - Coastal fishery. Bull. Fish. Res. Stn. Ceylon, 18, 53 - 58
- CANAGARATNAM, P. (1970) - Use of beach/^{seine} data in the assessment of stocks of Anchovilla species in the coastal water around Ceylon. IPFC/SCI/4, 14th Sessions, 14
- DE BRUIN, G.H.P. (1972) - The Crown of thorns starfish. Acanthaster planci (Linne) in Ceylon. Bull. Fish. Res. Stn. Ceylon, 23, 37 - 41

1. Post-graduate, Research Student, Vidyodaya Campus.

F I S H E R I E S A N D W I L D L I F E

RESEARCH PUBLICATIONS (Contd.)

- GOONEWARDENE, T.P. (1971) - The hammerhead shark of Ceylon.
Bull. Fish. Res. Stn. Ceylon, 22, 1 - 3
- JINADASA, J. (1971) - Taxonomic notes on a collection of flying fishes in Ceylon waters. Bull. Fish. Res. Stn. Ceylon, 22, 1, 5 - 16
- JINADASA, J. (1972) - Bionomics of the flying fish *Hirundichthys coromandelensis* Hornell. M.Sc. Thesis, Vidyodaya Campus, University of Sri Lanka, Nugegoda.
- NAGAKURA, K. AND SACHITHANANTHAN, K. (1971) - Proximate composition of four types of dried fish in Ceylon. Bull. of Tokai reg. fish. res. lab. 65, 75 - 80
- PEIRIS, T.S.S. AND GERO, J. (1972) - Chemical analyses of some Ceylon fishes--2. Bull. Fish. Res. Stn. Ceylon, 23, 1 - 7
- SIVASUBRAMANIAM, K. (1970 a) - Biology of the exploited stock of mackerel tuna, *E. affinis* (cantor), off the South-West region of Ceylon. Bull. Fish. Res. Stn. Ceylon, 21 (1) 7 - 16
- SIVASUBRAMANIAM, K. (1970 b) - Surface and sub-surface fisheries for young and immature yellowfin tuna (*T. albacares*) around Ceylon. Bull. Fish. Res. Stn. Ceylon, 21 (2), 113 - 122
- SIVASUBRAMANIAM, K. (1971 a) - An aerial survey for surface tuna resources in the seas around Ceylon. Bull. Fish. Res. Stn. Ceylon, 22 (1 and 2), 17 - 22
- SIVASUBRAMANIAM, K. (1971 b) - Ceylon's tuna longline fishing effort and catch distribution in the Indian Ocean, 1967 - 1970. Bull. Fish. Res. Stn. Ceylon, 22, (1 and 2), 39 - 46

F I S H E R I E S A N D W I L D L I F E

RESEARCH PUBLICATIONS (Contd.)

- SIVASUBRAMANIAM, K. (1971 c) - Apparent abundance of yellowfin and big eye tuna in the inshore, offshore and near-oceanic ranges around Ceylon. Bull. Fish. Res. Stn. Ceylon, 22 (1 and 2), 23 - 38
- SIVASUBRAMANIAM, K. (1972 a) - Report of the meeting of the IOFC/IPFC ad hoc working party scientists on stock assessment of tuna. Rome, 7 - 9 June. FAO report IOFC/TM/72/4.
- SIVASUBRAMANIAM, K. (1972 b) - Skipjack tuna (K.pelagicus L.) Resources in the seas around Ceylon. Bull. Fish. Res. Stn. Ceylon, 23, (1 and 2), 19 - 28
- SIVASUBRAMANIAM, K. (1973) - Economic feasibility of small boat tuna longlining from bases in the Indian Ocean, FAO publication, (in press)
- ULUWITA, K. (1973) - Studies on the penaeid prawn fishery of Ceylon lagoons. M.Sc. Thesis, Vidyodaya Campus, University of Sri Lanka, Nugegoda - in preparation.

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- SIVASUBRAMANIAM, K. AND JINADASA, J. (1971 a) - Spawning behaviour of the flying-fish (Hirundichthys coromandelensis Hornell. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- SIVASUBRAMANIAM, K. AND JINADASA, J. (1971 b) - Exploitation of the flying-fish resource of the East coast of Ceylon. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.

F I S H E R I E S A N D W I L D L I F E

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA (Contd.)

SIVASUBRAMANIAM, K. AND JINADASA, J. (1972 a) -- Predators of the flying-fish Hirundichthys coromandelensis Hornell and its suitability as a bait fish. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.

SIVASUBRAMANIAM, K. AND JINADASA, J. (1972 b) -- Oceanographic factors of the coastal waters off Trincomalee. 28th Annual Sessions of the Ceylon Ass. Advmt. of Sci.

Food Processing & Storage

1.4 F O O D P R O C E S S I N G A N D S T O R A G E

C E Y L O N I N S T I T U T E O F S C I E N T I F I C A N D I N D U S T R I A L R E S E A R C H

F O O D T E C H N O L O G Y D I V I S I O N

- Gunatilake, K.G.
- (1) PROCESSING MANIOC--(1971)
 - (2) PROCESSING SOYA BEANS--(1973)
 - (3) NOVEL PROCESS FOR OIL AND PROTEIN SEPARATION IN COCONUT--(1965)
 - (4) PREPARATION OF CANNED OR BOTTLED COCONUT CREAM--(1972)
 - (5) PROCESSING FRUIT JUICES--(1972)

Laurentius, S.F. BREAD IMPROVEMENT PROJECT--(1972)

I N D U S T R I A L M I C R O B I O L O G Y S E C T I O N

V I A B I L I T Y O F C H I L L I E S E E D S

Jeyaraj, E.E.
Fernando, G.W.⁻¹

Viability as a function of moisture content and controlled atmospheric storage - (1971)

P R E S E R V E D B O T T L E D / C A N N E D T E A

Jeyaraj, E.E.
Janz, E.R.
Jayatissa, P.M.

For use as flavoured iced tea - (1969-71)

P R E S E R V E D C O C O N U T C R E A M

Jeyaraj, E.E.
Jayatissa, P.M.
Vanniasinkam, Anandi

Improvements in emulsification etc. --(1972)

FOOD PROCESSING AND STORAGE

CEYLON INSTITUTE OF SCIENTIFIC AND INDUSTRIAL RESEARCH (Contd.)

NATURAL PRODUCTS DIVISION

REGENERATION OF DRY FISH WASTE

Wijesekera, R.O.B.

Bamunuarachchi, A.⁻¹

A method to deoderise and re-utilize dry fish waste products is being developed - (June, 1971)

COCONUT PROCESSING BOARD

RESEARCH AND DEVELOPMENT DIVISION

COCONUT CREAM PROJECT

Vitarana, K. (Mrs)

Kulatunga, R.A.

Gunatileke, K.G.⁻²

Abeysekera, S.A.⁻³

De Silva, K.T.D.⁻⁴

Bamunuarachchi, A.⁻⁵

The project aims at developing a process for the preparation of a stabilized cream or milk which could be preserved at room temperature. The project consists of two stages; viz: laboratory research and pilot plant stage -(1972)

CO-OPERATIVE WHOLESALE ESTABLISHMENT

RESEARCH AND DEVELOPMENT DIVISION

De Silva, A.M.A.A.

UTILIZATION OF DRIED FISH IN

NEW PRODUCT DEVELOPMENT - (1971)

1. Vidyodaya Campus

2 & 3. C.I.S.I.R.

4 & 5. Vidyodaya Campus

F O O D P R O C E S S I N G A N D S T O R A G E

CO-OPERATIVE WHOLESALE ESTABLISHMENT (Contd.)

RESEARCH AND DEVELOPMENT DIVISION (Contd.)

BIOLOGICAL EFFECTS OF ULTRA-VIOLET
RADIATIONS

- De Silva, N.N.
Gamage, G. (Mrs)
- (i) Effect of UV on stability of cell membranes in micro-organisms.
 - (ii) Combination effects of UV, salt and moisture on development of rancidity - (1972)

De Silva, N.N.
Wijewardhane, K.L.R.F.

UTILIZATION OF CASHEW - (1973)

- (1) UTILIZATION OF DATES
Fernando, G.K.L.J.
Study of the problems of packaging and storage of dates as well as its utilization for manufacture of vinegar - (1971)
- (2) PACKAGING AND STORAGE OF FOOD - (1971)
- (3) STORAGE AND PRESERVATION OF GRAIN
A further continuation of insect survey in stored food - (1973)

USES OF MANIOC

Gamage, G.(Mrs)
Maximum utilization of manioc, especially as food, by upgrading its nutritive value with supplementation - (1971)

CHEMICAL RESIDUES IN FOOD

Navaratne, S.
Investigations of techniques for undertaking a survey of fertilizer and

FOOD PROCESSING AND STORAGE

CO-OPERATIVE WHOLESALE ESTABLISHMENT (Contd.)

RESEARCH AND DEVELOPMENT DIVISION (Contd.)

CHEMICAL RESIDUES IN FOOD (Contd.)

Navaratne, S.

insect residues in food (specially imported foods) as well as various preservatives in processed food - (1972)

Siriwardhana, D.N.

(1) FERMENTED MILK PRODUCTS - (1973)

(2) PROCESSING OF PASSION FRUIT

Utilization of passion fruit waste and better processing methods for the juice - (1972)

DEPARTMENT FOR DEVELOPMENT OF MARKETING

FRUIT AND VEGETABLE UTILISATION LABORATORY

COMMERCIAL UTILISATION OF LIMES

Alles, L.A.C.

Gnanasuriyam, S.M.

Wijeratne, W.B.

Somaratne, A.M.L.B.

Initial field study on cultivation of limes. Cold storage tried at three different temperatures-- 45°C, 48°C and 51°C respectively. Preparation of Candied Lime Peel and Lime Oil are under investigation -(April, 1973)

FERMENTATION OF WASTE FRUIT

JUICE IN THE PRODUCTION OF ALCOHOL, WINE AND VINEGAR

Alles, L.A.C.

Liyanaige, A. W.

De Almeida, Malini

Pineapple juice has been fermented using various types of yeasts

FOOD PROCESSING AND STORAGE

DEPARTMENT FOR DEVELOPMENT OF MARKETING (Contd.)

FRUIT AND VEGETABLE UTILISATION LABORATORY (Contd.)

FERMENTATION OF WASTE FRUIT JUICE IN
THE PRODUCTION OF ALCOHOL, WINE AND
VINEGAR (Contd.)

Alles, L.A.C.
Liyanage, A.W.
De Almeida, Malini

in the production of alcohol and wine. So far, only 7% alcohol has been obtained from Pineapple juice using the yeasts locally available. The aim of the project is to increase the yield of alcohol in the first instance, and make wine and vinegar using Pineapple juice -- (March, 1972)

FREEZE CONCENTRATION OF PASSION FRUIT
JUICE

Alles, L.A.C.
Ratnatunga, Malini
Wijeratne, W.B.

Although low temperature evaporative concentration of fruit juices is the standard method employed in commercial practice, the relatively low energy consumption in isolating a given weight of water in the form of ice rather than as vapour and the retention of the full flavour in the former method, stimulated a programme of investigations on freeze concentration of fruit juices. The findings will be scaled upto the pilot scale and thence to actual commercial production --(February, 1973)

F O O D P R O C E S S I N G A N D S T O R A G E

DEPARTMENT FOR DEVELOPMENT OF MARKETING (Cont .)

FRUIT AND VEGETABLE UTILIZATION LABORATORY (Contd.)

CORROSION OF TIN PLATE BY PASSION
FRUIT JUICE

Alles, L.A.C.

Somaratne, A.M.L.B.

The unusually low pH and extreme vulnerability of fresh passion fruit flavour by dissolved tin from the internal tin layer of the tin plate container, necessitated accurate information on safe shelf-life of thermally sterilised passion fruit juice under local conditions of temperature and also the evaluation of tin plate can with various types of internal lacquer coating on shelf life of passion fruit juice. These investigations were carried out and the quality of the juice evaluated after pre-determined periods of storage -- (January, 1971)

UTILIZATION OF PASSION FRUIT PEEL
FOR ANIMAL FEED

Alles, L.A.C.

Wijeratne, W.B.

Somaratne, A.M.L.B.

Commercial utilization of passion fruit yields approximately 6,000,000 lbs. of fruit peel annually, which can be processed into carbohydrate animal foods. Project involves construction of an experimental dryer and working out factors affecting drying of the peel, and also yield and quality of the product for evaluation on animal feed trends subsequently--(October, 1973)

FOOD PROCESSING AND STORAGE

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF BIOCHEMISTRY

PRODUCTION OF CHEESE AS A COTTAGE INDUSTRY

Ratnayake, I. Sujiva
Fonseka, Ivy⁻¹
Weerasena⁻²

Aims are : (a) to find locally available rennet.
(b) to see if cheese could ripen at one temperature, to give a cheese with a long shelf life.
(c) prevent growth of moulds on cheese, during the whole process -(1973)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF AGRICULTURE

(1) INVESTIGATIONS INTO THE PROCESSING AND PRESERVATION OF AVACADO

Pulle, M.W.

Attempts to reduce or eliminate deterioration of Avacado are viewed from the chemical analysis and processing of the fruit. Special attention is directed towards lipid and enzymic breakdown. Utilization of the Avacado in various processing forms is envisaged-(January, 1973)

1. Dept. of Microbiology
2. Technical Assistant

F O O D P R O C E S S I N G A N D S T O R A G E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

(2) PREPARATION AND PROCESSING OF CHEESE
FROM NON-DAIRY PRODUCTS

Pulle, M.W.

The exorbitant price of cheese and often scarcities of this item precipitated the investigation into preparation of cheese from non-dairy products. Soya bean, dhal and pulses have been used as protein sources. Coagulation effected by lactic and with flavour compounds are conducted to produce a

consumer preference product.

(January, 1973)

STUDIES ON THE VIABILITY OF CROP SEEDS

Senanayake, Y.D.A.

Different types of storage conditions investigated, using seeds of chillies and onions to determine the most suitable conditions of storage to prolong the viability of seeds. A cytological study is also conducted to determine if the loss of viability is related to chromosome aberrations --(March, 1972)

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF CHEMISTRY

De Silva, K.T.D.

CHEMICAL, PHYSICAL AND STORAGE

Bamunuarachchi, A.

PROPERTIES OF COCONUT MILK-(1972)

Forestry & Forest Products

1.5 F O R E S T R Y A N D F O R E S T P R O D U C T S

F O R E S T D E P A R T M E N T

R E S E A R C H S E C T I O N

T I M B E R U T I L I Z A T I O N R E S E A R C H

- Tisseverasinghe, A.E.K.
Jayanetti, D.L.
Soyza, A.M.T.
- (i) Determination of the following characteristics in Etamba, Aridda, Kekuna, Diyataliya and Kirihembiliya:
 - a) moisture content and density,
 - b) mechanical properties,
 - c) shrinkage volume,
 - d) effect of timber thickness, stock variables on air drying time and drying quality and also the kiln characteristics - (1970)
 - (ii) Determination of the resistance to pressure impregnation of different local species of timber - (1970)
 - (iii) Inspection in service - (1970)
 - (iv) Treatment of timber by pressure and non-pressure processes - (1970)
 - (v) Field tests for preservatives - (1970)

S I L V I C U L T U R A L R E S E A R C H

- Wijesinghe, L.C.A.
de S.
Vivekanandan, K.
- (i) Teak espacement trials - (1970)
 - (ii) Mixtures at time of planting. To determine the possibility of establishing silviculturally and economically sound mixed stands of species - (1970)
 - (iii) Under planting. Trials on the introduction of economically useful species as an under storey in existing plantation, e.g. Bamboo under Teak, Mahogany under Albizzia etc. - (1970)

F O R E S T R Y A N D F O R E S T P R O D U C T S

F O R E S T D E P A R T M E N T (Contd.)

R E S E A R C H S E C T I O N (Contd.)

S I L V I C U L T U R A L R E S E A R C H (Contd.)

- Wijesinghe, L.C.A.
de S.
Vivekanandan, K.
- (iv) Planting trials of new species such as Pines, Anthocephalus chinensis, Dendrocalamus strictus and Eucalyptus deglupta in the different climatic zones of the island - (1970)
 - (v) Seed orchard trials - (1970)
 - (vi) Provenance trials. To test the difference in growth of teak and pinus trees raised from seed of different origins -(1970)
 - (vii) Collection, storage and testing of forest seeds - (1970)
 - (viii) The use of polythene tubes in nursery transplanting; determination of optimum size of plant and tube - (1970)
 - (ix) Determination of optimum size of planting stock of teak - (1970)
 - (x) Fertilizer trials in Montane Zone - (1970)
 - (xi) Pine and Teak thinning trials -(1970)
 - (xii) Trials with Arborescences. To find effective and economical Arborescences -- (1970)
 - (xiii) Vegetation propagation. To determine possibility of propagation by cuttings of the important timber species -(1970)
 - (xiv) Weed control in nurseries - (1970)
 - (xv) Control of harmful insects in nurseries - (1970)
 - (xvi) Effect of applying artificial fertilizer in nurseries of Teak and other species - (1970)

FORESTRY AND FOREST PRODUCTS

FOREST DEPARTMENT (Contd.)

RESEARCH SECTION (Contd.)

SILVICULTURAL RESEARCH (Contd.)

- Wijesinghe, L.C.A. (xvii) Fire protection measure. To
de S. investigate the use of planting
Vivekanandan, K. fire hardy species as fire belts
 in plantations susceptible to
 annual fires - (1970)
- (xviii) Use of chemicals for the prepara-
 tion of fire lines. Comparison
 of this method with manual
 clearing - (1970)
- (xix) Increment studies of forest species
 in sample plots - (1970)
- (xx) Thinning and final yield calculations
 in plantation species -(1970)

RESEARCH PUBLICATIONS

- TISSEVERASINGHE, A.E.K; JAYANETTI, D.L. AND SOYZA, A.M.T. (1970 -
1973) - Timber utilization Research. Sri Lanka Forester (Ceylon Forester)
- WIJESINGHE, L.C.A. DE S. AND VIVEKANANDAN, K. (1970 - 1973) -
Silvicultural Research. a) Sri Lanka Forester (Ceylon Forester) b) Administration Report of the Conservator of Forests.

Horticulture

1.6 H O R T I C U L T U R E

DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH STATION, MAHA-ILUPPALLAMA

BREEDING OF FRUITS

Pinto, M.E.R.

Brooding trials on bananas, citrus fruits, grapes, mango, papaw, passion fruit, pineapple and other fruits.

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF AGRICULTURE

EFFECT OF SYSTEM OF PLANTING AND SPACING ON PINEAPPLE PRODUCTION - VARIETY KEW

Herath, H.M.W.

Suckers produced from pineapple butts are grown according to three systems, (a) single row, (b) double row, (c) triple row. The spacing between two single rows or a set of rows is maintained at 6 ft., while spacing within an individual row is at 1, $1\frac{1}{2}$ and 2 ft. Growth rate and yield data will be recorded - (1972)

GROWTH PHENOMENA OF THE APPLE AND PEAR IN THE HIGHLANDS OF SRI LANKA

Herath, E.

Senanayake, Y.D.A.

The nature of vegetative and reproductive growth of apple and pear in the highlands of Sri Lanka

H O R T I C U L T U R E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

GROWTH PHENOMENA OF THE APPLE AND PEAR IN
THE HIGHLANDS OF SRI LANKA (Contd.)

Herath, E.

Senanayake, Y.D.A.

is studied in relation to the climatic conditions. The study should identify the new ecological niches for their commercial cultivation and also identify suitable methods for the induction of flowering and fruit setting - (October, 1972)

(1) THE INFLUENCE OF FIVE DIFFERENT HORMONES
ON THE FLOWERING AND FRUITING OF PINEAPPLE
VAR. KEW.

Senanayake, Y.D.A.

Five hormones (calcium carbide, NAA tablets, phymone, planofix and shell-stone P) are evaluated to determine their influence on the flowering and fruiting of pineapples in the mid-country intermediate zone. The costs and returns of their use are also being studied - (April, 1973)

(2) THE INFLUENCE OF PLANT DENSITY AND IRRIGATION ON THE GROWTH AND YIELD OF PINEAPPLE VAR.KEW IN THE MID-COUNTRY INTERMEDIATE ZONE

The optimum plant density under both irrigated and non-irrigated management of pineapple in the mid-country intermediate zone is not known. In this study, irrigated and non-irrigated plots ranging from 12,500 plants to 22,500 plants per

H O R T I C U L T U R E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

- (2) THE INFLUENCE OF PLANT DENSITY AND IRRIGATION ON THE GROWTH AND YIELD OF PINEAPPLE VAR. KEW IN THE MID-COUNTRY INTERMEDIATE ZONE (Contd.)

Senanayake, Y.D.A.

acre are tested in order to determine the nature of growth and reproduction and the economics of management under the two systems --(May, 1973)

- (3) THE INDUCTION OF ECONOMICALLY IMPORTANT MUTANTS IN LOCAL HORTICULTURAL PLANTS

Seeds of local horticultural plants are exposed to gamma rays at different dosages to first determine the optimum dosage for each type of seed to induce mutants. Mutants will be evaluated to isolate economically important ones - (October, 1973)

THE INFLUENCE OF CROWN LEAVES ON THE FRUIT YIELD OF PINEAPPLE VAR. KEW.

Senanayake, Y.D.A.

Gunaseena, H.P.M.

The crown being photosynthetically active, could influence the fruit yield. In this project, different treatments are given to

H O R T I C U L T U R E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF AGRICULTURE (Contd.)

THE INFLUENCE OF CROWN LEAVES ON THE
FRUIT YIELD OF PINEAPPLE VAR. KEW (Contd.)

Senanayake, Y.D.A.

Gunaseena, H.P.M.

the crown to determine if the variation of the photosynthetic area influences the growth, size and weight of the fruit - (1973)

INFLUENCE OF CALCIUM CARBIDE AND ETHREL
ON FLOWERING AND FRUIT PRODUCTION IN
PINEAPPLE VAR. KEW

Senanayake, Y.D.A.

Herath, H.M.W.

The influence of these two hormones on the time of flowering and fruit yields and the economics of their use are being evaluated with the objective of determining the optimum level of CaC_2 and ethrel - (April, 1973)

EFFECT OF FERTILIZERS ON THE YIELD AND
FRUIT QUALITY OF PINEAPPLE

Peries, O.S.⁻¹

Wanasinghe, K.J.

With the growth of the fruit canning industry in Ceylon, and the need to expand exports of canned fruit, work to improve the quality and yield of fruit becomes of great importance. The effect of fertilizers on the yield and fruit quality of pineapple was therefore investigated - (1968)

1. Director, Rubber Resesrch Institute, Agalawatta.

H O R T I C U L T U R E

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

PERIES, O.S. AND MANASINGHE, K.J. (1971) - Change in yield and fruit quality of pineapple, associated with nitrogen fertilization. 27th Annual Sessions of Ceylon Ass. Advmt. Sci.

Veterinary Research

1.7 V E T E R I N A R Y R E S E A R C H

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF VETERINARY CLINICAL STUDIES

SEROLOGICAL INVESTIGATION OF ABBAT-
TOIR AND ALLIED WORKERS IN SRI LANKA
WITH REFERENCE TO BRUCELLOSIS

Amarasekera, S.K.R.
Edirisinghe, S.⁻¹
Athuraliya, D.⁻²
Kodituwakku, G.E.
Wijewantha, E.A.

Incidence of brucellosis among meat handlers and dairy workers had not been subjected to investigation in Sri Lanka although incidences of brucellosis have been recorded in many cattle farms -- (October, 1973)

STUDIES ON BLOOD CALCIUM AND PHOS-
PHORUS LEVELS IN INDIGENOUS AND
EXOTIC BREEDS OF CATTLE IN SRI LANKA

Kodituwakku, G.E.*
De Silva, G.A.K.
Kuruwita, V.Y.
Amarasekera, S.K.R.
Sivakanesan, R.

A scientific study of the blood calcium and phosphorus levels in dairy cattle in Sri Lanka is being carried out on account of the evidence on exotic breeds of cattle losing their production capacity when imported to Sri Lanka --(October, 1973)

TESTICULAR CHANGES IN VASECTO-
MOIZED ANIMALS

Kodituwakku, G.E.
Panabokke, R.G.⁻³
Kuruwita, V.Y.

Animals are subjected to vasectomy by the different surgical methods adopted for human male sterilization.

-
- 1,3. Medical School, Peradeniya Campus
 2. Municipal Veterinary Surgeon, Kandy
 - * In collaboration with Research workers at School of Veterinary Science, Peradeniya.

V E T E R I N A R Y R E S E A R C H

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF VETERINARY CLINICAL STUDIES (Contd.)

TESTICULAR CHANGES IN VASECTOMIZED
ANIMALS (Contd.)

Kodituwakku, G.E.
Panabokke, R.G.
Kuruwita, V.Y.

The possibility of irreversible damage to the testes is being investigated -- (October, 1973)

INCIDENCE AND TYPE OF MASTITIS IN DAIRY
CATTLE

Kodituwakku, G.E.*
Wijewantha, E.A.
Amarasekera, S.K.R.
Kuruwita, V.Y.

The incidence of clinical and sub-clinical mastitis in cattle farms in the Kandy district is to be investigated with reference to the type of micro-organism, the possibility of human 'carriers' and the sanitation of farm buildings and equipment - (October, 1973)

* In collaboration with Research workers at School of Veterinary Science, Peradeniya.

2. ENGINEERING AND TECHNOLOGY

2.1 CIVIL ENGINEERING

HIGHWAYS DEPARTMENT

BITUMEN DIVISION

(1) LIME DRILLING AS A MEANS OF STRENGTHENING
SUBGRADES

Yoganandan, G.M.

The usual method of stabilisation of soils becomes difficult under existing pavement. Much equipment are also needed. Drill holes filled with lime slurry are tried out on an experimental scale, making use of iron migration to stabilise soil - (March, 1972)

(2) SOFTENING OF BITUMEN IN SURFACING - ITS
CAUSES

Controlled applications of bitumen are laid out at various temperatures, rates of application etc. Fuel is spilt over these, and degree of softening determined. The effects of various cover materials such as coarse sand, fine sand, lime, cement, sawdust are also studies - (April, 1972)

CONCRETE DIVISION

AGGREGATE GRADATION LIMITS FOR MEDIUM
STRENGTH CONCRETE

Senanayake, D.D.

An investigation of fine and coarse aggregates generally available in the country, for use in current concrete

C I V I L E N G I N E E R I N G

HIGHWAYS DEPARTMENT (Contd.)

BITUMEN DIVISION (Contd.)

AGGREGATE GRADATION LIMITS FOR
MEDIUM STRENGTH CONCRETE-(Contd.)

Senanayake, D.D.

works. Simplified procedure to classify these failures and remedial measures, useful to the practicing engineer would be devised to suit local conditions - (1972)

SOILS DIVISION

A STUDY OF ROAD FAILURES AND
THEIR REMEDIAL MEASURES

Gunawardhane, H.D.T.N.

Samarasinghe, N.P.

Mallawaratchie, D.P.

Several localised road failures in the island are studied in detail to determine the causes of failures and to classify these failures. Economical remedial measures for such failures are discussed - (July, 1970)

(1) ENGINEERING PROPERTIES OF SOILS IN
SRI LANKA WITH SPECIAL REFERENCE
TO HIGHWAYS

Samarasinghe, N.P.

Mallawaratchie, D.P.

Data obtained by testing soils from all parts of the island for several years are summarised and analysed to (a) determine correlations between physical properties, (b) predict the suitability of a soil (i) as a fill material, subgrade and base in rural and urban highways

E N G I N E E R I N G A N D T E C H N O L O G Y

HIGHWAYS DEPARTMENT (Contd.)

SOILS DIVISION (Contd.)

(1) ENGINEERING PROPERTIES OF SOILS IN SRI LANKA WITH SPECIAL REFERENCE TO HIGHWAYS
(Contd.)

Samarasinghe, N.P.

and (ii) for lime stabilization by

Mallawaratchie, D.P.

performing a few classification tests -
(1970)

(2) THE CONSTRUCTION OF ROAD AND HOUSES ON PEATY SOIL DEPOSITS

The engineering properties of peat and peaty soil in marshy lands mainly in and around Colombo, are summarised and analysed in order to give an economical solution to the construction of roads and houses on these lands. The methods of construction of roads on peaty soil in the other countries are also studied in order to determine the suitability of these for local conditions - (September, 1970)

(3) FOUNDATION CONDITIONS FOR BRIDGES AND BUILDINGS IN SRI LANKA

Bridges and building sites in all parts of the island are studied to determine the foundation conditions for these structures in Sri Lanka. The foundation conditions of Colombo Municipal area is studied in detail - (June, 1970)

C I V I L E N G I N E E R I N G

HIGHWAYS DEPARTMENT (Contd.)

SOILS DIVISION (Contd.)

(1) *FIELD TRIALS OF RUBBERIZED BITUMEN

Yoganandan, G.M.

Field trials are carried out on roads incorporating a control section with 80% per straight run bitumen; 1%, 2%, 3% and 4% rubberized bitumen and the performance evaluated from the point of view of maintenance requirements, life of pavement etc.-- (September, 1966)

(2) *CUTBACK PRUNING OF EARTH ROADS

Pruning of earth roads has been carried out on a number of roads. It has been found to be a low cost method of construction, giving a comfortable riding quality. Maintenance is easy and inexpensive -- (October, 1970)

IRRIGATION DEPARTMENT

HYDRAULICS RESEARCH LABORATORY

ENERGY DISSIPATION AT POLGOLLA
BARRAGE (MAHAWELI PROJECT)

Gomes, P.D.H.N.
Subasinghe, N.G.
Ranepura, N.

This model was undertaken to check

* In collaboration with the Territorial Civil Engineering Organization.

ENGINEERING AND TECHNOLOGY

IRRIGATION DEPARTMENT (Contd.)

HYDRAULICS RESEARCH LABORATORY (Contd.)

ENERGY DISSIPATION AT POLGOLLA BARRAGE
(MAHAWELI PROJECT) (Contd.)

Gomes, P.D.H.N.
Subasinghe, N.G.
Ranepura, N.

the performances of the proposed barrage at Polgolla, and to determine operating criteria for the spillway gates -
(August, 1970)

DESIGN OF TUNNEL INTAKE AT POLGOLLA
(MAHAWELI PROJECT)

Gomes, P.D.H.N.
Theiventhiram, A.
Liyanage, T.D.H.

Model studies were carried out on a number of designs for this intake structure at the Polgolla Headworks -
(March, 1971)

SPILLWAY DESIGN FOR BOWATENNE COMPLEX
(MAHAWELI PROJECT)

Gunawardena, A.D.S.
Subasinghe, N.G.
Fernando, H.D.H.

A model study to check the performance of the proposed design for the spillway at Bowatenne in the Mahaweli project -
(March, 1973)

DESIGN OF ENERGY DISSIPATOR FOR UKUWELA
POWER HOUSE (MAHAWELI PROJECT)

Karunakaran, N.
Sisiraratne, Y.M.
Rasalingam, N.

A model investigation to perfect a design for a suitable stilling chamber at the power house at Ukuwela, to dissipate the high energy flow through the irrigation outlet, when the turbines were not operating--(June, 1970)

C I V I L E N G I N E E R I N G

IRRIGATION DEPARTMENT (Contd.)

HYDRAULICS RESEARCH LABORATORY (Contd.)

SEDIMENT EXCLUSION AT POLGOLLA
BARRAGE (MAHAWELI PROJECT)

Karunaratne, K.B.E. de S.
Gunawardena, A.D.S.
Theiventhiram, A.
Liyanage, T.D.H.

Various methods were tested to minimise the heavy deposition of silt from the Mahaweli in the approach to channel to the Intake structure of the Polgolla Barrage - (September, 1971)

PREVENTION OF SAND BAR FORMATION
AT WELLOWATTE CANAL OUTLET

Karunaratne, K.B.E. de S.
Karunakaran, N.
Kapukotuwa, C.

Model studies to ease the drainage and pollution problem at the Wellawatte canal mouth - (October, 1972)

DESIGN OF NEW TYPE CHANNEL FALLS

Karunaratne, K.B.E. de S.
Ranepura, N.

The conventional types of channel falls - notch, cascade, etc. are not satisfactory. Studies were therefore undertaken to evolve a suitable design which could be prefabricated and assembled at site, economically and expeditiously - (January, 1973)

HYDROLOGY DIVISION

PUNCHIMIRISWATTE EXPERIMENTAL
CATCHMENT

Ranatunga, D.G.L.
Gomez, G.E.M.
Ariyasena, K.A.

The objective is to study the

ENGINEERING AND TECHNOLOGY

IRRIGATION DEPARTMENT (Contd.)

HYDROLOGY DIVISION (Contd.)

PUNCHIMIRISWATTE EXPERIMENTAL CATCHMENT
(Contd.)

Ranatunga, D.G.L. relationship between rainfall and run-
Gomez, G.E.M. off with particular emphasis on the
Ariyasena, K.A. aspect of mathematical modelling -
(August, 1970)

SOIL MECHANICS AND MATERIAL TESTING LABORATORY

- Gunasekera, H.A.S.N. (1) BORROW AREA INVESTIGATIONS FOR QUALITY
AND QUANTITY OF MATERIAL FOR PROPOSED
RESERVOIR SCHEMES AND LABORATORY
TESTING OF SAMPLES FOR DESIGN PARAMETERS
- (2) LABORATORY TESTING FOR QUALITY OF
CONCRETE AGGREGATES, DESIGN OF CONCRETE
MIXES AND QUALITY CONTROL ON CONSTRUCTION
OF POLGOLLA DAM
- (3) FOUNDATION INVESTIGATIONS FOR PROPOSED
BUILDINGS

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF CIVIL ENGINEERING

MODEL PILES TESTED IN FINE SAND

Balasubramaniam, A.S. Timber, reinforced concrete and steel
Gunasekera, M.H.D.C. model piles are tested in fine sand
contained in a specially designed
container with facilities for driving
and testing piles.

C I V I L E N G I N E E R I N G

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF CIVIL ENGINEERING (Contd.)

MODEL PILES TESTED IN FINE SAND (Contd.)

Balasubramaniam, A.S.

Gunasekera, M.H.D.C.

The load-settlement relationships and the bearing capacities are studied for piles of different lengths. Group action of piles, effect of diameter and shape will also be investigated - (1972)

DEVELOPMENT OF HIGH STRENGTH MATERIALS

De Silva, A.R.T.

Investigation of the mechanical properties of ceramic reinforced metals. Locally found metallic service failures are also being analysed with a view to improving local production.

ENGINEERING PROPERTIES OF LATERITIC SOILS

Karunaratne, G.P.

A study is being made of consolidation and shear properties of large diameter samples of lateritic soils with a view to correlating them with numerous landslides in the hill country of Sri Lanka. A study of strength of local rocks is also being made.

ENGINEERING AND TECHNOLOGY

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF CIVIL ENGINEERING (Contd.)

LOAD CELLS FOR MEASURING NORMAL STRESS,
SHEAR STRESS AND ECCENTRICITY OF LOAD

Tonnekoon, B.L.

Jeyapalan, K.

Very small load cells capable of measuring normal and shear stresses and eccentricity of load are being developed. These consist of electrical resistance strain gauge type and can be used in several earth pressure experiments where it is necessary to determine the distribution of stress over a contact area - (1972)

RESEARCH PUBLICATIONS

- DE SILVA, A.R.T. (1972) - Metallurgical analysis of service failures. Bull. Inst. Eng. Ceylon Dec. 1972
- DE SILVA, A.R.T. (1973) - Metallurgical factors which led to the cracks on a rotating cement kiln tyre. Proc. Inst. Day, Inst. Eng. Ceylon March, 1973
- DE SILVA, A.R.T. AND CHADWICK, G.A. (1970) - Fatigue behaviour of unidirectionally solidified Fe-Fe₂B eutectic alloy. Met. Sc. J. 4, 63
- DE SILVA, A.R.T. AND CHADWICK, G.A. (1972) - The thermal stability of fibrous Fe-Fe₂B eutectic alloy. Met. Sc. J. 6, 157
- GUNASEKERA, W.D.C. (1973) - Model piles tested in fine sand .. M.Sc. Thesis, University of Ceylon, Peradeniya

C I V I L E N G I N E E R I N G

RESEARCH PUBLICATIONS (Contd.)

YOGANANDAN, G.M. (1971) - Lime stabilization of roads in
Ceylon. Proc. Inst. Eng. Ceylon

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

BALASUBRAMANIAM, A.S. AND GUNASEKERA, M.H.D.C. (1972) -

Reinforced concrete model piles tested in
fine sand. 28th Annual Sessions of the Ceylon
Ass. Advmt. Sci.

DE SILVA, A.R.T. (1970) - High strength materials from the Melt.
26th Annual Sessions of the Ceylon Ass. Advmt.
Sci.

DE SILVA, A.R.T. (1972) - Failure of Railway Drawbar Hooks.
28th Annual Sessions of the Ceylon Ass. Advmt.
Sci.

DE SILVA, A.R.T. AND INPANATHAN, S. (1971) - Tensile and
compressive properties of plywood. 27th
Annual Sessions of the Ceylon Ass. Advmt. Sci

DE SILVA, A.R.T. AND THALAGALA, L.V. (1971) - Creep of
hotrolled mild steel bars. 27th Annual
Sessions of the Ceylon Ass. Advmt. Sci.

FERNANDO, M.J. AND YOGANANDAN, G.M. (1972) - Lime production
in Ceylon. Inst. of Eng. Ceylon, Inst. ...
Day, April

GOMES, P.D.H.N. (1970) - Some aspects of energy dissipation
and gate control of Polgolla barrage. 26th
Annual Sessions of the Ceylon Ass. Advmt. Sci.

E N G I N E E R I N G A N D T E C H N O L O G Y

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA (Contd.)

JAYATILAKA, A. AND DE SILVA, A.R.T. (1972) - Fatigue resistance of rotating shafts. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.

KARUNAKARAN, N. (1970) - Energy dissipation studies for Polgolla power house irrigation outlet. 26th Annual Sessions of the Ceylon Ass. Advmt. Sci.

KARUNARATNE, K.B.E. DE S. AND GUNAWARDEMA, A.D.S. (1970) - Sediment control of Rawana Oya by a submerged spur wall in Mahaweli Ganga. 26th Annual Sessions of the Ceylon Ass. Advmt. Sci.

YOGANANDAN, G.M. (1973) - Modified materials in road construction in Sri Lanka. Road Conference for Asia and Australasia, June

Electrical & Electronic Engineering

2. E N G I N E E R I N G A N D T E C H N O L O G Y

2.2 E L E C T R I C A L A N D E L E C T R O N I C E N G I N E E R I N G

UNIVERSITY OF SRI LANKA, KATUBEDDA CAMPUS

DEPARTMENT OF ELECTRICAL ENGINEERING

POWER SYSTEM STUDIES - SRI LANKA
(CEYLON) ELECTRIC POWER NETWORK

Karunaratne, S.

Power system studies, with a view to optimally operate the Ceylon Electric Power Network, during the post 1976 and post 1980 periods -(October, 1972)

SENSITIVITY ANALYSIS OF SRI LANKA POWER SYSTEM

Karunaratne, S.
Sriyananda, H.

Study of change of state, due to a small change in control in the Sri Lanka power system - (October, 1972)

SYSTEM PARAMETER ESTIMATION

Sriyananda, H.

Further development of the use of (a) extended Kalman Fitter (b) the method of 'potential functions' for the estimation of system parameter- (October, 1972)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

ELECTRONIC VIBRATION MONITOR AND VIBRATION TRANSDUCER

Devasirvathan, D.M.J.
Cabraal, R.A.

This device enables the observation

E L E C T R I C A L A N D E L E C T R O N I C E N G I -
N E E R I N G

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF ELECTRICAL & ELECTRONIC ENGINEERING
(Contd.)

ELECTRICAL VIBRATION MONITOR AND
VIBRATION TRANSDUCER (Contd.)

Devasirvathan, D.M.J.
Cabraal, R.A.⁻¹

of the vibrating wave forms (both steady and transient) on a C.R.O. and the measurement of the amplitude of vibration up to $\frac{1}{2}$ " with resolution of $1/1000$ ". It is built of locally available material at a fraction of the cost of a device of comparable resolution-
(1973)

STUDIES FOR THE 1980 SRI LANKA
POWER SYSTEM

David, A.K.
Final year undergraduates

The steady state operational, transient stability and fault conditions of the projected 1980 system. The relative merits of the Samanalawewa Project and the thermal alternative. The reactive compensation requirements -
(1973)

1. Asst. Lecturer, Mechanical Engineering

ENGINEERING AND TECHNOLOGY

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF ELECTRICAL & ELECTRONIC ENGINEERING (Contd.)

TRANSIENT STABILITY STUDIES

Devotta, J.B.K.

Final year under-
graduate

Development of an accurate model for obtaining the response of synchronous machines on power systems in event of small and large disturbances. The problem is to be stimulated and solved using the digital computer available in the University - (1973)

PLANNING OF SMALL POWER SYSTEMS

Fernando, K.P.N.

Investigation of analytical techniques for the planned development of small power systems. The Sri Lanka system being used as an illustrative example. Computer techniques and programmes are developed - (1971)

DEVELOPMENT OF ELECTRONIC EQUIPMENT FOR
TEACHING AND RESEARCH

Gunawardena, J.H.

Rambukwella, N.B.

Dhanendran, M.

Fourth year undergraduate

Development of

- a) Power Supplies
- b) Audiosignal generator
- c) Transistorised
milivoltmeter
- d) Swept frequency
generator and
- e) Servo controlled a.c.
supply - (1969)

ELECTRICAL AND ELECTRONIC ENGINEERING

RESEARCH PUBLICATIONS

- KARUNARATNE, S. (1973 a) - Use of D.C. network analyses for A.C. load flow studies. The Inst. Eng. Ceylon - Transactions for 1973
- KARUNARATNE, S. (1973 b) - Power system design studies for the Ceylon (Sri Lanka) electric power network - post 1976 and post 1980 periods. Report presented to the Mahaweli Development Board
- SRIYANANDA, H. (1972) - Application of the method of potential functions to fault diagnosis. Electronics Lett. 8, 6
- SRIYANANDA, H. AND TOMILL, D.R. (1973) - Prediction of human operator performance. I.E.E.E.- Transactions on reliability, 22, 2

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- FERNANDO, P.N. (1972) - Dynamic programming techniques applied to power system planning. Paper read before the Inst. Elec. Eng.(London), Ceylon Branch
- GUNAWARDENA, J.A.(1970) - Low voltage stabilised power supplies. 26th Annual Sessions of the Ceylon Ass. Advmt. Sci.

2 E N G I N E E R I N G A N D T E C H N O L O G Y

2.3 M E C H A N I C A L E N G I N E E R I N G

CEYLON GOVERNMENT RAILWAY

OFFICE OF THE CHIEF ENGINEER (CONSTRUCTION)

CONCRETE RAILWAY SLEEPERS OF THE
TWIN BLOCK TYPE

De Silva, L.S.

Design and fabrication of concrete railway sleepers of the twin block type with a tiebar of old rail and double elastic fastenings for use on the Broad Gauge railway tracks - (1972)

UNIVERSITY OF SRI LANKA, KATUBEDDE CAMPUS

DEPARTMENT OF MECHANICAL ENGINEERING

BATTERY POWERED PASSENGER CAR

De Silva, P.A.

The car is to be completed using the maximum amount of locally available raw materials. It is to have a range of 40 - 50 miles and carry 3 - 4 passengers. The cost is expected to be about Rs. 15,000/- - (1972)

AEROGENERATOR (WINDMILL GENERATOR)

Herath, K.

Rajalingam, G.

De Silva, P.A.

The windmill is to be made as far as possible with locally available raw materials. The cost will be about Rs. 3,000/- . The design is such, that it is possible to turn them out in a reasonably equipped machine shop - (1972)

3. M E D I C A L S C I E N C E S

3.1 A N A T O M Y

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF ANATOMY

STUDIES ON BONE TISSUE

Chandraraj, S. (Mrs)

- 1) Effects of physical activity.
- 2) Denervation
- 3) Protein deprivation -- (1970)

VASCULAR STUDIES OF THE HUMAN
PLACENTA IN CEYLON

Satchithanathan, Subadhra

An anatomical, histological and radiographic study of the vascular tree of the human placenta in Ceylon. A detail study of the vascular pattern of placenta of different age groups is being carried out with an attempt to establish a developmental pattern - (1971)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF ANATOMY

AN AUTORADIOGRAPHIC STUDY OF RNA
TURNOVER IN HYPOTHALAMIC NEURO-
SECRETORY NEURONES

Bandaranaike, R.C.

A determination of the rate of RNA turnover in the neuro-secretory neurones or the hypothalamic supra-optic and paraventricular

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF ANATOMY (Contd.)

AN AUTORADIOGRAPHIC STUDY OF RNA TURNOVER
IN HYPOTHALAMIC NEURO-SECRETORY NEURONES
(Contd.)

Bandaranaike, R.C.

nuclei under different conditions, with a view to comparing the activity in these two groups of cells under these same conditions - (September, 1969)

A STUDY OF THE RELATIONSHIP BETWEEN THE
NUMBER OF ODONTOBLASTS AND THE THICKNESS
OF PREDENTINE IN NORMAL AND PATHOLOGICAL
DENTAL TISSUES IN DIFFERENT AGE GROUPS

Fernando, T.D.

Serial sections of normal and pathological incisor and canine teeth of different age groups are taken. The thickness of predentine and number of odontoblasts in relation to various regions are counted - (September, 1973)

DEVELOPMENT OF A SUITABLE SURGICAL TECH-
NIQUE FOR THE EXTRACTION OF CANNINE
TEETH IN DOGS

Fernando, T.D.

Department of
Veterinary Sciences

Radiographs of canine teeth are taken with a view to studying, (i) alveolar bone (ii) length of canine roots, (iii) relationship of canine apices to other important structures.

This data will be used to develop suitable surgical techniques - (September, 1973)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF ANATOMY (Contd.)

EARLY DEVELOPMENT OF THYROID GLAND
IN TADPOLES OF XENOPUS LAEVIS

Jayatilake, A.D.P.

Electron microscopic study of the cellular structure of the thyroid gland in early stages of development - (July, 1971)

EFFECTS OF AFLATOXIN B₁ ON
LIVERS OF AMPHIBIAN LARVAE AND
DUCKLINGS

Jayatilake, A.D.B.

Maxwell, D.S.⁻¹

Samarajeewa, U.

Kirupananthan, S.

Charvanapavan, N.

Livers of tadpoles of Rhacophorus leucomystax maculatus and day old Khaki campbel ducklings were examined by electron microscopy -- (July, 1971)

RESEARCH PUBLICATIONS

BANDARANAIKE, R.C. (1970) - Nucleocytoplasmic transfer rates of RNA in hypothalamic neurosecretory neurones. Proc. Ceylon Ass. Advmt. Sci. 1, 7

1. University of California, Los Angeles

M E D I C A L S C I E N C E S

RESEARCH PUBLICATIONS (Contd.)

JAYATILAKA, A.D.P. (1970) - Histological studies on the ox epiphysis cerebri. Ceylon Vet. J. 18, 105 - 110

JOSEPH, T.A.S. AND JAYATILAKA, A.D.P. (1970) - Changes observed in the median eminence, the adenohypophysis and the thyroid gland in Rhacophorus leucomystax maculatus (Gray) during metamorphosis. Ceylon J. Med. Sci., 19, 34 - 40

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

BANDARANAIKE, R.C. (1970) - Incorporation of tritiated uridine by hypothalamic neurosecretory cells. International Brain Research Organization Workshop, Peradeniya

CHANDRARAJ, S. AND WIJERATNE, E.E. (1970) - Effects of physical activity on bone growth and its vascularity. 25th Annual Sessions of the Ceylon Ass. Advmt. Sci.

JAYATILAKE, A.D.P. (1973) - An electron microscopic study of the changes in the thyroid gland in Xenopus laevis (Daudin) tadpoles in the pre-metamorphic period. 29th Annual Sessions of the Ceylon Ass. Advmt. Sci.

JAYATILAKE, A.D.P. AND MAXWELL, D.S. (1973) - An ultrastructural investigations of the effects of aflatoxin B₁ on the hepatocytes of Xenopus laevis tadpoles. 29th Annual Sessions of the Ceylon Ass. Advmt. Sci.

KIRUPAMANTHAN, S; JAYATILAKE, A.D.P. AND SAMARAJEWA, U. (1973) - Electron microscopic study of livers in Rhacophorus leucomystax maculatus tadpoles,

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA (Contd.)

treated with aflatoxin B₁. 29th Annual
Sessions of the Ceylon Ass. Advmt. Sci.

SANARAJEEWA, U; CHARAVANAPAVAN, N. AND JAYATILAKE, A.D.P.
(1973) - Electron microscopic study of the
changes in the thyroid gland in Xenopus laevis
(Daudin) tadpoles in the pre-metamorphic period.
29th Annual Sessions of the Ceylon Ass. Advmt. Sci.

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3. M E D I C A L S C I E N C E S

3.2 B A C T E R I O L O G Y A N D G E N E T I C S

MEDICAL RESEARCH INSTITUTE

DEPARTMENT OF HEALTH SCIENCES

*GENUS SPECIFIC SINGLE ANTIGEN FOR
THE SERO-DIAGNOSIS OF LEPTOSPIROSIS

Nityananda, K.

Sulzer Catherine, R⁻¹

This antigen is prepared from L. semaranga patoc I, and tested in parallel using the antigens that are now in use against known positive and patients test sera - (December, 1969)

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF MICROBIOLOGY

(1) BACTERIAL SYNERGISTIC GANGRENE

Chapman, T.E.D.

Manawadu, S.S.

Skin infections of the limb, particularly the lower limb, and the terminal portion of fingers and toes, on cultural examination, revealed a pure growth of a mixture of s.aureus and s.pyogenis.

The lesions, although exposed to gross contamination reveal no cultural evidence of the presence

* Project abandoned after completion of preliminary studies.

1. Leptospirosis Laboratory, C.D.C., Atlanta, Georgia.

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF MICROBIOLOGY (Contd.)

(1) BACTERIAL SYNERGISTIC GANGRENE (Contd.)

Chapman, T.E.D.

Manawadu, S.S.

of any other species. Elucidation of the mechanisms involved in production of lesions and the possibility of a "metabolite" in the exudate, which could be inhibitory to other species are being studied - (1970)

(2) TUBERCULOUS ADENITIS

The demonstration of acid fast bacilli in smears made from biopsies of suspicious lymph glands and subsequent cultural and biochemical examinations with a view to identifying the species - (1971)

(3) NEONATAL (a) MENINGITIS, (b) BACTERAEMIA, (c) WOUND INFECTIONS

Cultural examination of appropriate specimens - CSF, blood, wound exudate from neonates at De Soyza Maternity Hospital in order to establish the pathogens responsible for the disease stage, with a view to instituting appropriate treatment and preventive measures - (1972)

STUDIES ON RHINOSPORIDIOSIS

De Fonseka, C.I. (Mrs)

Chapman, T.E.D.

(a) Pathogenicity of Rh.seeberi to mice.

(b) Attempts to establish infection in chick embryo.

B A C T E R I O L O G Y A N D G E N E T I C S

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF MICROBIOLOGY (Contd.)

STUDIES ON RHINOSPORIDIOSIS (Contd.)

De Fonseka, C.I. (Mrs)

If (a) and (b) are successful -

(c) Attempts to isolate Rh. seoberi from different sources.

(d) Detection of antihodies in cases of Rhinosporidiosis and in people in endemic areas - (1972)

GENITAL YEAST INFECTION IN CEYLON -
INCIDENCE, DISTRIBUTION OF SPECIES,
PRESENCE OF PRECIPITINS

De Fonseka, C.I.(Mrs)

Ranjithan, C. (Mrs)

Following groups have or will be studied.

- (i) (a) Patients attending a gynaecology clinic at D.M. Hospital.
 - (b) Antenatal patients admitted to Ward 3 of the D.M.Hospital.
 - (c) Patients attending an antenatal clinic at Kotte.
 - (d) Normal non-pregnant women of child bearing age (controls)
 - (e) Patients attending a F.P. Clinic.
 - (f) Patients attending a V.D. Clinic.
- (ii) Neonates born to patients in group (b) - (1971)

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF MICROBIOLOGY (Contd.)

SURVEY OF INCIDENCE OF RESPIRATORY SYNCY-
TIAL VIRUS INFECTION IN CHILDHOOD AND THE
CONTRIBUTION OF OTHER VIRUSES TO RESPIRA-
TORY ILLNESS IN THIS AGE GROUPS

Doss, A.F.

The contribution of different virus groups to respiratory illness in children, is unknown in this country. Such a survey, to study (a) relative infection by different viruses and (b) their seasonal occurrence, may help to make vaccines available for the prevention of these diseases - (1973)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF ANATOMY

(1) PROBLEM OF INTERSEX IN SRI LANKA

Wickramanayake, Eugene

A continuing project started in January 1969, consisting of sex chromatin studies in new borns, screening for sex chromosomal aberrations in mentally deficient children and cases referred from hospital clinics. The presence of chromosomal aberration is confirmed with leucocyte culture. Gonadal pathology is studied in biopsies from hypogodic and intersex patients - (January, 1969)

B A C T E R I O L O G Y A N D G E N E T I C S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF ANATOMY (Contd.)

(2) GENETIC COMPONENT OF CONGENITAL ANOMALIES IN SRI LANKA

Wickramanayake, Eugene

A continuing project started in 1969 in collaboration with hospital clinics, mainly paediatric and orthopaedic, consisting of pedigree analysis and chromosome studies where necessary --(June, 1969)

(3) DISTRIBUTION OF PHENOTYPES AT POLYMORPHIC LOCI IN DIFFERENT ETHNIC GROUPS IN SRI LANKA

All entering medical, dental and veterinary science students, since 1968, are tested for ABO, MN and PTC loci. Haptoglobins and transferins are scored on samples of sera from Blood Bank, General Hospital, Kandy - (1969)

GENETIC SURVEY OF VEDDAHS OF DAMBANA

Wickremanayake, Eugene

Wickremanayake, T.W.⁻¹

Sri Pathmanathan, R.

Ellepola, S.B.⁻²

A complete genetical survey of the veddahs of this colony is carried out - (June, 1971)

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1. Dept. of Biochemistry, Peradeniya
 2. General Hospital, Badulla

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF BACTERIOLOGY

(1) MYCOTOXINS IN FOOD STUFFS

Arsecularatne, S.N.

Production of aflatoxin by Aspergillus flavus on food products (with special reference to coconut products, viz. poonac, coconut oil and copra) is under investigations. The work is mainly on variation of toxin production with climatic changes, use of different methods for detoxification and prevention of toxin production and the effects of these toxins on humans and animals - (1970)

(2) TOXICITY OF PALMYRAH PALM

A study of the toxic effects of fleshy young shoots of the palmyrah palm (Borassus flabellifer-kottakelangu), in relation to liver disease and removal of any toxins in it during preparation of various food (flour) for human consumption - (1972)

(1) DRUG SENSITIVITY OF ACID FAST BACILLI ISOLATED IN CEYLON

Pinto, M.R.M.

Arsecularatne, S.N.

To determine drug sensitivity - resistance patterns of tubercle bacilli and anonymous ~~myco~~ bacteria isolated from Ceylonese patients to streptomycin, INAH, PAS, Thiacetazone, Kanamycin, Viomycin, Cycloserine, Pyrazinamide, Ethionamide, Rifampicin, Ethambutol, and Capreomycin - (January, 1969)

B A C T E R I O L O G Y A N D G E N E T I C S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF BACTERIOLOGY (Contd.)

(2) AN EVALUATION OF TAKAHASHI'S ANTI-TUBERCLE PHOSPHATIDE KAT IN TUBERCULOSIS AND LEPROSY

Pinto, M.R.M.

Arsecularatne, S.N.

A carrier particle (kaolin) agglutination test using phosphatide antigen-antibody systems proposed for the sero-diagnosis of tuberculosis and leprosy in routine practice was evaluated - (1971)

(3) STUDIES ON THE DIFFERENTIAL TUBERCULIN TEST

a) Studies on reaction patterns in the following groups, using purified protein derivatives (from Myco. tuberculosis, Myco. kansasii, Myco. serofulaceum, Myco. batteyi, Myco. avium and Myco. fortuitum)

(i) General populations, (ii) Tuberculosis patients, (iii) Leprosy patients and (iv) BCG vaccinated persons;

b) Investigation of pattern of reactions to PPDS from Myco. platypocillus in general populations and tuberculosis patients;

c) The alternations in response to the differential tuberculin test following BCG vaccination - (1970)

M E D I C I N E S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF BACTERIOLOGY (Contd.)

(4) STUDIES ON MYCOBACTERIA ISOLATED FROM THE
CEYLON ENVIRONMENT

Pinto, M.R.M.

Arsecularatne, S.N.

Mycobacteria isolated from environmental sources in Ceylon have been studied with the purpose of investigating their characteristics and establishing their identity - (January, 1969)

(5) THE IDENTITY AND CHARACTERISTICS OF ACID
FAST BACILLI ISOLATED FROM PATIENTS IN
CEYLON

To determine (a) the identity of acid fast bacilli whether tubercle bacilli (human or bovine) or anonymous mycobacteria; and (b) the biochemical characteristics of each - (January, 1969)

STUDIES OF EXTRA-PULMONARY TUBERCULOSIS
IN CEYLON

Pinto, M.R.M.

Barr, Kumarakulasinghe, C.

A general study aimed at determining patterns of tuberculin sensitivity, evaluating the response to an antibody test and the identity of acid fast bacilli isolated from patients -(1972)

STUDIES OF MYCOBACTERIOSES IN ANIMALS
IN CEYLON

Pinto, M.R.M.

Wanasinghe, D.D.⁻¹

Patterns of tuberculin sensitivity are

B A C T E R I O L O G Y A N D G E N E T I C S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF BACTERIOLOGY (Contd.)

STUDIES OF MYCOBACTERIOSES IN
ANIMALS IN CEYLON (Contd.)

Pinto, M.R.M.

Wanasinghe, D.D.

being evaluated in various domesticated species viz. cattle buffaloes, sheep and pigs with the standard differential tuberculin test using PPD's - Mammalian and Avian. The pattern of reactivity in cattle buffaloes is also being evaluated using two other PPD's M. kansasii and M. batayi. - (1972)

(1) FIELD SURVEY OF AFLATOXIN CONTAMINATION IN COMMERCIAL COCONUT PRODUCTS

Samarajeewa, U.⁻¹

Arsecularatne, S.N.

Variation of aflatoxin contamination in copra, poonac and coconut oil, with respect to climatic conditions and different practices during processing is under investigation - (January, 1973)

(2) DETOXIFICATION OF AFLATOXINS IN COMMERCIAL COCONUT PRODUCTS

Use of natural methods for detoxification of aflatoxins in commercial coconut products, without affecting the food value - (1973)

1. Research Student, Coconut Processing Board, Colombo.

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF BACTERIOLOGY (Contd.)

(3) BIOLOGICAL EFFECTS OF AFLATOXINS AND
RELATED FUNGAL METABOLITES

Samarajeewa, U.

Arsecularatne, S.N.

Fungal metabolites having similar properties and produced along with aflatoxins are being studied to investigate their toxicity and interference on assay procedures - (1973)

(4) METHODS OF ASSAY FOR AFLATOXINS IN COCONUT
PRODUCTS

Several analytical procedures already established for assay of aflatoxins in peanut products were modified for coconut products. The modified methods were compared and the best procedure for assay of aflatoxins in coconut products was established -- (February, 1972)

IMMUNOLOGICAL STUDY OF RELAPSES IN
ENTERIC FEVERS

Sreekaran, N.

Arsecularatne, S.N.

A study into the various aetiological factors that may cause relapses in enteric fever. This includes follow up of cases, study of contacts and normal population - (March, 1973)

CLINICAL AND BACTERIOLOGICAL REASSESS-
MENT OF ENTERIC FEVERS IN CEYLON

Sreekaran, N.

Arsecularatne, S.N.

Varagunam, T.

A clinical and bacteriological survey of patients admitted to the general hospital, Kandy, with a tentative diagnosis of enteric fever - (March, 1973)

B A C T E R I O L O G Y A N D G E N E T I C S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE

THE TRANSFER OF DRUG RESISTANCE
FROM MULTIRESISTANT COLIFORMS IN
THE INTESTINE

Seneviratne, Kamalini
Seneviratne, B.

There is a high prevalence of multiple drug resistant strains of E. coli in Ceylon. The possibility that these strains might transfer the resistance pattern via R - factors to other non E. coli coliforms such as Salmonella and Shigella, which are also resident in the intestine, is being investigated.

THE BACTERIOLOGY OF ACUTE CHEST
INFECTIONS IN CEYLON

Seneviratne, B.
Thevanesan, Vasanthi

The antibiotic sensitivity pattern of common organisms in the intestinal tract in Ceylonese is different from that in the West, because of the widespread use and abuse of antibiotics. The effects of this therapy on the alterations in the bacteriological pattern in chest infections in Ceylon, are now being explored.

M E D I C A L S C I E N C E SRESEARCH PUBLICATIONS

- ARSECULARATNE, S.N. AND BANDUNATHA, C.H.S.R. (1972) - Variation of aflatoxin content of cultures of Aspergillus flavus with duration of incubation and its relation to studies on aflatoxin production. J. of App. Bacteriol. 35(1), 43 - 52
- ARSECULARATNE, S.N. AND DE SILVA, D.M. (1971) - Aflatoxin contamination in coconut products. Cey. J. Med. Sci., 20, 60 - 75
- ARSECULARATNE, S.N; DE SILVA, L.M. AND BANDUNATHA, C.H.S.R. (1969) - The use of tadpoles of Bufo melanostictus (Schneider) Rhacophorus leucomystax maculatus (Gray) and Uperoden sp. in the bioassay of aflatoxins. Brit. J. Exp. Path., 50, 285
- ARSECULARATNE, S.N; DE SILVA, L.M; WIJESUNDERA, S. AND BANDUNATHA, C.H.S.R. (1969) - Coconut as a medium for the experimental production of aflatoxin. App.Microbiology 18, 88 - 94
- ARSECULARATNE, S.N; PANABOKKE, R.G; TENNEKOON, G.E. AND BANDUNATHA, C.H.S.R. (1971) - Toxic effects of Borassus flabelifer (palmyrah palm) in rats. Brit. J. Exp. Path. 52, 524
- BONGSO, T.A. AND PINTO, M.R.M. (1972) - Studies of tuberculin sensitivity in livestock in Ceylon. 1. Patterns of sensitivity in cattle. Cey. Vet. J. - December
- PINTO, M.R.M. AND ARSECULARATNE, S.N. (1973) - I. An evaluation of Takahashi antitubercle phosphatide-KAT in pulmonary tuberculosis. II. An evaluation of Takahashi antitubercle phosphatide KAT in leprosy - in preparation

B A C T E R I O L O G Y A N D G E N E T I C S

RESEARCH PUBLICATIONS (Contd.)

- PINTO, M.R.M.; ARSECULARATNE, S.N. AND URAGODA, C.G. (1973) -
The differential tuberculin test in a B.C.G.
vaccinated group. Tubercle, London, June
- PINTO, M.R.M.; ARSECULARATNE, S.N.; URAGODA, C.G. AND HIEMAWARDANA,
D.M. (1972) - Differential tuberculin testing
in rural population in Ceylon. Tubercle, London,
September
- PINTO, M.R.M.; ARSECULARATNE, S.N.; URAGODA, C.G. AND HIEMAWARDANA,
D.M. (1973) - The differential tuberculin test
in tuberculosis patients. Tubercle, London, March
- PINTO, M.R.M.; ARSECULARATNE, S.N. AND WELIANGE, L.V. (1973) -
The differential tuberculin test in leprosy.
Leprosy Review, in the press.
- PINTO, M.R.M.; BARR KUMARAKULASINGHE, C. AND ARSECULARATNE, S.N.
(1972) - A report of an anomalous result to the
differential tuberculin test in a tuberculosis
patient. Letter to the editor, Tubercle, London
- PINTO, M.R.M.; WANASINGHE, D.D. AND RAVINDRAN, K.V. (1973) -
1. Studies of tuberculin sensitivity in livestock
in Ceylon. 2. Patterns of sensitivity in
Buffalo (Bubalus bubalis bubalis) Cey. Vet. J.
March
- SAMARAJEWA, U. (1972) - Aflatoxins in coconut products .
Ceylon Coconut Q. in the press
- SAMARAJEWA, U. AND ARSECULARATNE, S.N. - Methods for assay
of aflatoxins in coconut products. J. Ass.
of Official Analytical Chemists - in the press
- WICKRAMANAYAKE, EUGENE AND FERNANDO, W.H. (1970) - The
testicular feminisation syndrome - a clinical
and cytogenetic investigation. Proc. 26th Annual
Sessions of the Ceylon Ass. Advmt. Sci., 8

M E D I C A L S C I E N C E S

RESEARCH PUBLICATIONS (Contd.)

WICKRAMANAYAKE, EUGENE. (1971) - Sex chromatin studies in population groups. Proc. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci., 22 - 23

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

ARSECULARATNE, S.N; PANABOKKE, R.G. AND TENNEKOON, G.E. (1970) - Toxic effects of Kottakelangu (*Borassus flaballifer*) in rats. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.

ARSECULARATNE, S.N. AND TENNEKOON, G.E. (1971) - Histological reactions of the tadpole liver to toxic compounds: The specificity of the aflatoxin induced nuclear abnormalities. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.

PINTO, M.R.M; ARSECULARATNE, S.N; NAVARATNAM, C; KARALLIYADDA, J.B; GUNARATNE, M.M. AND WELIANGE, L.V. (1972) - The mycobacteria of the Ceylon environment. 1. A preliminary study. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.

PINTO, M.R.M; ARSECULARATNE, S.N. AND URAGODA, C.G. (1969 a) - Immunological reactions in mycobacterial infections. I. Skin sensitivity patterns of Ceylonese to six mycobacterial antigens. 25th Annual Sessions of the Ceylon Ass. Advmt.Sci.

PINTO, M.R.M; ARSECULARATNE, S.N. AND URAGODA, C.G. (1969 b) - An evaluation of the Kaolin Agglutination test (KAT) in the diagnosis of tuberculosis.2. 25th Annual Sessions of the Ceylon Ass. Advmt.Sci.

B A C T E R I O L O G Y A N D G E N E T I C S

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA (Contd.)

- PINTO, M.R.M; ARSECULARATNE, S.N; URAGODA, C.G. AND DASAN, P.
(1971) - Drug resistance of mycobacterium tuberculosis in Ceylon. I & II. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- PINTO, M.R.M; ARSECULARATNE, S.N; URAGODA, C.G. AND WELIANGE, L.V. (1971) - Immunological reaction in mycobacterial infections -3. Geographical variation in sensitivity to PPD antigens in Ceylon. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- PINTO, M.R.M; ARSECULARATNE, S.N. AND WELIANGE, L.V. (1971) - Immunological reactions in mycobacterial infections - 4. The kaolin agglutination test (KAT) in leprosy. 27th Annual Sessions of the Ceylon Ass. Advmt.Sci.
- PINTO, M.R.M; ARSECULARATNE, S.N; URAGODA, C.G. AND WELIANGE, L.V. (1972 a) - The identity of acid fast bacilli from patients diagnosed as having "Tuberculosis" (pulmonary disease) in Ceylon. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- PINTO, M.R.M; ARSECULARATNE, S.N; URAGODA, C.G. AND WELIANGE, L.V. (1972 b) - The identity of mycobacterial infections in Ceylon as determined by the differential tuberculin test. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- SAMARAJEEMA, U AND ARSECULARATNE, S.N. (1972) - Methods of estimation of aflatoxins in coconut products. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.

M E D I C A L S C I E N C E S

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA (Contd.)

- WANASINGHE, D.D; PINTO, M.R.M. AND RAVINDRAN, K.V. (1972) -
Tuberculin sensitivity in the buffalo
(Bubalus bubalis bubalis) 28th Annual Sessions
of the Ceylon Ass. Advmt. Sci.
- WICKREMANAYAKE, EUGENE. (1971) - Chromosome studies in errors
of sex determination and sex differentiation
amongst Ceylonese. IVth International Congress
of Genetics, Paris
- WICKREMANAYAKE, EUGENE. (1973 a) - Recent advances in human
cytogenetics. 29th Annual Sessions of the
Ceylon Ass. Advmt. Sci.
- WICKREMANAYAKE, EUGENE. (1973 b) - Sex determination and
differentiation in man. 29th Annual Sessions
of the Ceylon Ass. Advmt. Sci.

3. M E D I C A L S C I E N C E S

3.3 B I O C H E M I S T R Y

MEDICAL RESEARCH INSTITUTE

DEPARTMENT OF BIOCHEMISTRY

PENTOSURIA IN VIRAL DISEASES

Aiyathurai, J.E.J.⁻¹
Thalagahagoda, S.⁻²
Kuruppu, D.P.⁻³
Sentheshanmuganathan, S. indicated the presence of a pentose. Experiments were conducted to identify this pentose, and to determine its origin - (1972)

SOME STUDIES ON HUMAN SERUM CHOLINESTERASE AND ITS ACTION TOWARDS ORGANOPHOSPHORUS INSECTICIDES

Gunawardena, T.W.⁻⁴
Rajaratnam, M.
Ratnapala, B.P.
Organophosphorus compounds are used widely as vector controls in malaria and fialaria campaigns. The effect of these compounds on cholinesterase was studied. The reversal by PAM was also studied. Family members of patients sensitive to suxa-methonium chloride, were investigated for their typical and atypical cholines-terase levels - (1969)

DEVELOPMENT OF A RAPID METHOD FOR THE SEPARATION OF PROTEIN BOUND AND IONIZED CALCIUM IN BLOOD

Perera, D.J.B.⁻⁵
Satchithanandan, S. The accepted methods of determining ionized calcium in plasma (biological and

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- 1,2,3. At Paediatric Unit, General Hospital, Ragama.
 4. Anaesthetist, General Hospital, Colombo.
 5. Pathologist, Medical Research Institute.

MEDICAL RESEARCH INSTITUTE (Contd.)

DEPARTMENT OF BIOCHEMISTRY (Contd.)

DEVELOPMENT OF A RAPID METHOD FOR
THE SEPARATION OF PROTEIN BOUND
AND IONIZED CALCIUM IN BLOOD(Contd.)

Perera, D.J.B.

Satchithanandan, S.

chemical) are time consuming. A new technique was developed using sephadex - (1969)

ESTABLISHMENT OF A NEW BIOCHEMICAL
PARAMETER IN THE DIAGNOSIS OF
RETINOBLASTOMA

Sentheshanmuganathan, S.

Dias, P.L.R.⁻¹

It is known that malignant tumours at different sites in the body are associated with an increased lactic dehydrogenase activity in the corresponding body fluid. An increase in the aqueous humour ~~enzyme~~ in the cases of intraocular malignancy was observed - (1970)

BIOCHEMICAL STUDIES OF SEMINAL
PLASMA OF ELEPHANT (ELEPHAS
MAXIMUS)

Sentheshanmuganathan, S.

Jainudeen, M.R.⁻²

Fernando, S.T.⁻³

Basic biochemical information obtained on semen may be helpful for successful preservation of semen used for artificial insemination - (1971)

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1. In Physiology Department, Medical Faculty, Colombo.
 - 2,3. Faculty of Veterinary Medicine, Peradeniya.

M E D I C A L S C I E N C E S

MEDICAL RESEARCH INSTITUTE (Contd.)

DEPARTMENT OF BIOCHEMISTRY (Contd.)

DEVELOPMENT OF A SHORTER METHOD FOR THE ESTIMATION OF HISTAMINE IN BLOOD

Sentheshanmuganathan, S. The development of a short routine method
Karunanayake, E.⁻¹ for the estimation of histamine in blood.
The clinical norm for Ceylon was also
established - (1969)

BIOCHEMICAL AND PATHOLOGICAL STUDIES ON THE EFFECT OF TEA AND COFFEE ON RATS

Sentheshanmuganathan, S. Considerable evidence exists which links
Mahendra, C.C.⁻² elevated serum lipid levels with the
Perera, W.D.A.⁻³ development of arteriosclerosis and its
Wickremasinghe, R.L.⁻⁴ principal lethal manifestation, coronary
heart disease. It has been suggested that
coffee drinking may be a factor in the
causation of arteriosclerosis, and tea
drinking a factor in its prevention,
through an action on serum lipid levels.
The present study was undertaken to
determine the effect on serum lipid
levels of long-term feeding of diets
with tea and coffee to adult rats -
(1971)

1. At Ayurvedic Research Inst., Nawinna.

2 & 3. Nutrition Department, Medical Research Institute.

4. At Tea Research Institute.

B I O C H E M I S T R Y

MEDICAL RESEARCH INSTITUTE (Contd.)

DEPARTMENT OF BIOCHEMISTRY (Contd.)

ANAEMIA CONTROL PROJECT

Sentheshanmuganathan, S.
Nagarajah, N.
Perera, I.B.D.
De Mel, B.V. (Mrs)⁻¹
Perera, D.J.B.⁻²
Medical Officers from
outstation hospitals

Field and laboratory studies of anaemia state in pregnant and lactating mothers. Involves estimation of blood iron binding capacity, Vitamin B₁₂ and folic acid - (1970)

(1) SOME BIOCHEMICAL STUDIES IN HEART DISEASES

Sentheshanmuganathan, S.
Premachandra, P. (Mrs)
De Silva, D.K.D.
Perera, C.S.⁻³
Ramachandran,⁻⁴

Studies on the lipid and enzyme levels of patients admitted to hospitals with myocardial infraction. These levels were followed at three intervals-at onset of disease, one week after attack and at time of discharge - (1973)

(2) INVESTIGATION OF FAMILY MEMBERS OF PATIENTS WITH XANTHAMATOSIS

The project was undertaken with object of tracing the origins from the family tree - (1973)

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1. Nutrition Department, M.R.I.
 2. Pathology Department, M.R.I.
 - 3 & 4 . At General Hospital, Ragama.

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)DEPARTMENT OF MEDICINE (Contd.)THE NORMAL HAEMOGLOBIN CONCENTRATION IN CEYLON

Hettiarachchi, J.
 Seneviratne, Kamalini
 Seneviratne, B.

Despite much work in anaemia in this country, the normal haemoglobin concentration has not been determined. Fit, healthy adults are given all the haematinics (Iron, B₁₂, Folic acid, Vitamin C and protein) and the Hb measured serially until there is no further rise.

THE IMPORTANCE OF DRINKING WATER CALCIUM IN CEYLON

Seneviratne, B.
 Seneviratne, Kamalini

It has been well established that the calcium intake of Ceylonese is very low. A study is being made of the distribution and concentration of calcium in drinking water, to assess what contribution this makes to the calcium balance in Ceylonese.

THE NATURE OF THE FALL IN PLASMA CALCIUM AFTER A PHOSPHATE INFUSION

Seneviratne, B.
 Swaminathan, R.
 Barr Kumarakulasinghe, C.⁻¹

The infusion of phosphate intravenously produces a fall in the plasma calcium. The nature and

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

THE NATURE OF THE FALL IN PLASMA CALCIUM
AFTER A PHOSPHATE INFUSION

Seneviratne, B. causes of this fall have not been
Swaminathan, R. explained. The recent discovery of
Barr Kumarakulasinghe, C. thyrocalcitonin raises the possibility
 that this hormone may be connected with
 the above phenomenon. It is therefore
 intended to determine the rôle of
 thyrocalcitonin in the fall in plasma
 calcium produced by phosphate infusion.

DEPARTMENT OF BIOCHEMISTRY

PATHOGENESIS OF ENDEMIC GOITRE IN SRI
LANKA

Galappathie, L. In one or more areas in the endemic zone
Piyasena, R.D. (as mapped out by the M.R.I.), study
Herath, K.B. iodine metabolism and search for goitro-
Barr Kumarakulasinghe, C. genic factors that might enhance the
Wickremanayake, T.W. effect of dietary iodine deficiency,
JeyaRaj, E.E.⁻¹ comparing with comparable districts
Janz, E.R.⁻² in the non-endemic zone - (1973)

RESEARCH PUBLICATIONS

- AIYATHURAI, J.E.J; THALGAHAGODA, S; KURUPPU, D.P. AND SENTHE-SHANMUGANATHAN, S. (1972) - Pentosurari and viral diseases. Proc. Ceylon Ass. Advmt. Sci I, 30
- BALASUBRAMANIAM, K. AND WIJESUNDERA, S. (1971) - Multiple forms of acid phosphatases in the lysosomes of rat liver. Ceylon J. Med. Sci. 20, 52 - 59
- DIAS, P.L.R; SENTHE SHANMUGANATHAN, S. AND RAJARATNAM, M. (1971) - Lactic dehydrogenase activity of aqueous humour in retinoblastoma. Brit. J. of Ophthalmology, 55, 130 - 132
- GAMBICKI, M; HERATH, K.B; PIYASENA, R.D. AND WICKREMANAYAKE, T.W. (1973) - Thyroid radioiodine uptake studies on some euthyroid in Sri Lankians. Ceylon Med. J. (in the press)
- MAHENDRA, C.C; SENTHE SHANMUGANATHAN, S; WICKREMASINGHE, R.L. AND PERERA, N.P.A. (1972) - Effect of tea and coffee on the serum lipid levels of rat. Proc. Ceylon Ass. Advmt. Sci. I. 17
- SENTHE SHANMUGANATHAN, S. AND GUNAWARDENE, T.W. (1971) - Investigation of family members of patients sensitive to suxamethonium. Proc. Ceylon Ass. Advmt. Sci. I, 23
- SENTHE SHANMUGANATHAN, S; JAINUDEEN, M.R. AND FERNANDO, S.T. (1972) - Certain biochemical constituents of seminal plasma of elephant. (Elephus maximus)- Am. J. Vet. Sci., 33, 649 - 651
- SENTHE SHANMUGANATHAN, S. AND KARUNANAYAKE, E. (1970) - A shortened method for the colorimetric estimation of histamine in blood and the establishment of clinical norm for Ceylonese subjects. Proc. Ceylon Ass. Advmt. Sci. I. 96

M E D I C I N E S C I E N C E S

RESEARCH AND PUBLICATIONS (Contd.)

SENTHIL SHANMUGANATHAN, S. AND RAJARATNAM, M. (1970) - Some studies on human serum cholinesterase and its action towards organophosphorus insecticides. Proc. Ceylon Ass. Advmt. Sci. I. 94

SENTHIL SHANMUGANATHAN, S; SATCHITHANANDAN, S. AND PERERA, D.J.B. (1970) - A rapid method for the separation of protein bound and the establishment of the clinical norm for Ceylon subjects. Ceylon J. Med. Sci., 19, 1 - 14

F O R E N S I C M E D I C I N E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF MEDICINE

POISONING IN CEYLON - THE PATTERN,
CAUSES AND MORTALITY RATE

Seneviratne, B.
Thambipillai, Shanthi

Ceylon, being an agricultural country, the pattern of poisoning is likely to be different to that in the West. A survey was made of the causes and effects of poisoning in Kandy, with special emphasis on the problem of insecticides as a major cause of poisoning in Ceylon, and to determine whether this problem is sufficiently acute to justify a poisoning unit - (1972)

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- KODAGODA, N; BALASOORIYA, B.A.W. AND WIJAYARATNAM, GNANESWAMY,
S. (1971) - Effects of paraquat on the rabbit foetus. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- SENEVIRATNE, B; THAMBIPILLAI, SHANTHI; WILLIAMS, EMPAVATHY AND
POOVANAMPILLAI, VASANTHI (1972) - Poisoning:
A two year study. 28th Annual Sessions of the Ass. Advmt. Sci.

3. M E D I C A L S C I E N C E S

3.5 M E D I C I N E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF MEDICINE

A STUDY OF ASTHMA IN KANDY

Gunawardene, K.
Seneviratne, B.

About 20% of the admissions to medical wards in Kandy are due to Asthma. A study is being made of the allergic basis and the effects of disodium cromoglycate on Asthma in this country.

ANAEMIA IN TWO ECONOMICALLY
IMPORTANT COMMUNITIES IN CEYLON

Hettiarachchi, J.
Seneviratne, B.

A study of the incidence of anaemia in both tea estate workers and agricultural workers in the N.C.P. to see what the prevalence of anaemia is in these two economically important communities in Ceylon. An extension of this project is to see whether the correction of their haemoglobin level plays any part in an increased work output in these two groups of workers.

THE DIET IN FOLIC ACID DEFICIENT
ANAEMIAS. THE SOURCE AND
AVAILABILITY OF FOOD FOLATES

Hettiarachchi, J.
Seneviratne, B.
Seneviratne, Kamalini

Folic acid is found in a variety of vegetables commonly consumed by Ceylonese. Despite this,

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

THE DIET IN FOLIC ACID DEFICIENT ANAEMIAS.

THE SOURCE AND AVAILABILITY OF FOOD

FOLATES (Contd.)

Hettiarachchi, J.

Seneviratne, B.

Seneviratne, Kamalini

folic acid deficiency is a common cause of megaloblastic anaemia in Ceylon. The causes of this deficiency are being studied, with special reference to the presence of inhibitory factors in food which prevent the utilization of folic acid from vegetables.

BROMOSULPHTHALEIN RETENTION IN ANAEMIA

Hettiarachchi, J.

Seneviratne, B.

BSP retention is usually regarded as one of the best tests of hepatocellular dysfunction. Gross abnormalities in BSP retention have been found in severe anaemia. This can be corrected with the correction of anaemia. Investigations are being carried out to find out whether this BSP retention is due to impaired hepatic blood flow, hepatic anoxia or cirrhosis of the liver.

AN EVALUATION OF THE DRUG THERAPY OF

URINARY TRACT INFECTIONS IN CEYLON

Hettiarachchi, J.

Seneviratne, Kamalini

Seneviratne, B.

In view of the findings that E.coli, even in a first attack of urinary tract infection are very often (63%) resistant to sulphanemides, the

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

AN EVALUATION OF THE DRUG THERAPY
OF URINARY TRACT INFECTIONS IN CEYLON

Hettiarachchi, J.
Seneviratne, Kamalini
Seneviratne, B.

authors are evaluating the alternatives to sulphanemides, as a first line of therapy in acute urinary tract infections in Ceylon.

THE PRESENTATION OF HYPERPARATHYROIDISM IN CEYLON

Seneviratne, B.
Hettiarachchi, J.

Hyperparathyroidism may present as renal calculi or as metabolic bone disease. The authors had a clinical impression that in Ceylon, renal calculi are rarely caused by hyperparathyroidism. The presentation of known cases of hyperparathyroidism and recurrent renal calculi are being studied to see how many of them are due to hyperparathyroidism.

THE PATHOGENESIS OF RICKETS IN
CEYLON

Seneviratne, B.
Hettiarachchi, J.
Amarasinghe, M.

A study of rickets in Ceylon (both classical and late onset rickets), to determine what percentage is due to Vitamin D/Calcium deficiency, and how many are due to inborn errors of metabolism. A

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

THE PATHOGENESIS OF RICKETS IN CEYLON
(Contd.)

Seneviratne, B.
Hettiarachchi, J.
Amarasinghe, M.

peculiar variety of rickets, with a normal plasma calcium and phosphate which is not of dietary origin, has been found in Ceylon. Further investigations are in progress to determine the nature of the phosphate, which is produced by these patients.

(1) SOME PROBLEMS IN THE MANAGEMENT OF ANAEMIA
IN THE TEA ESTATE WORKERS IN CEYLON

Seneviratne, B.
Hettiarachchi, J.
Seneviratne, Kamalini

Anaemia patients from the Hantane tea estate are given - therapy, initially with oral iron, later with the megaloblastic drugs. The patients are being followed up to determine whether they take the iron, and if they do not, the reasons for this. Experiments are also in progress to determine what other alternative forms of iron therapy are possible in this economically important group of people, and to see whether fortification of some food component or total dose infusion of iron are better than oral therapy.

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

(2) RE-INFECTION RATE IN HOOKWORM DISEASE
AND ASSESSMENT OF THE FEASIBILITY OF
ANTIHELMINTHIC THERAPY IN CEYLON

Seneviratne, B.
Hettiarachchi, J.
Seneviratne, Kamalini

An assessment of antihelminthic therapy in the management of hookworm disease in Ceylon. Patients with heavy hookworm infection are given antihelminthic therapy, and are then advised on the preventive measures which they should adopt when they return to their environment. They are then followed up to determine whether they get re-infected and if so, when they reach their pre-treatment levels.

(3) VITAMIN B₁₂ ABSORPTION IN NUTRITIONAL
MEGALBLASTIC ANAEMIAS

There have been reports that subjects with severe Vitamin B₁₂ deficiency are unable to absorb oral Vitamin B₁₂ because of an abnormality of intestinal villus function as a consequence of Vitamin B₁₂ deficiency. A study was made of the absorption of both Vitamin B₁₂ and folate in patients with a severe deficiency of Vitamin B₁₂ and/or folic acid.

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

(4) ANTIBIOTIC SENSITIVITY PATTERN OF URINARY TRACT INFECTIONS IN CEYLON

Seneviratne, B.

Hettiarachchi, J.

Seneviratne, Kamalini

In Ceylon, antibiotics are used extensively for treatment of minor respiratory, skin and wound infections. The present study is concerned with the bacteriology and antibiotic activity pattern of urinary pathogens in both a first and recurrent attack of urinary tract infection in Ceylon.

(1) SOME PROBLEMS IN THE MANAGEMENT OF DIABETES IN THE TROPICS

Seneviratne, B.

Thambipillai, Shanthi

There are several basic problems in the management of diabetes in this country; e.g. lack of adequate refrigeration for storage of insulin, lack of money to purchase insulin, illiteracy of the populace etc. Each of these factors are being assessed.

(2) DISACCHARIDASE DEFICIENCY IN CEYLONESE

Investigation to determine whether intestinal lactose deficiency in Ceylonese is an isolated genetically determined deficiency, or whether this is part of a generalised deficiency of all intestinal enzymes as a consequence of damage to the intestinal mucosa by intestinal infections.

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

Seneviratne, B.
Thambipillai, Shanthi

(3) HAEMOGLOBINOPATHIES IN CEYLON

A study of the distribution of abnormal haemoglobins in Ceylon, using the finger prick method.

(4) THE OCCURENCE AND SIGNIFICANCE OF HAEMOGLOBIN D IN CEYLON

Haemoglobin D has been found to be the second most common haemoglobin in Ceylon. An attempt has been made to correlate its presence with the immigration of people into Ceylon from North India, where this haemoglobin is very common.

(5) THE MANAGEMENT OF ACUTE URINARY TRACT INFECTIONS IN CEYLON

The standard management of acute urinary tract infections in Ceylon involves a complete radiological investigation of the urinary tract after the second attack. The present study is concerned with the evaluation of the role of intravenous pyclography, cystoscopy and other detailed investigations in recurrent urinary tract infections in Ceylon, with a view to determining whether these special investigations play any useful part in the management of patients in this country.

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

LACTASE DEFICIENCY IN CEYLONESE

Seneviratne, B.

Thambipillai, Shanthi

Hettiarachchi, J.

A study of the prevalence of lactase deficiency in Ceylon using the lactase tolerance test and the assay of intestinal lactase by jejunal biopsy, both in adults and in children.

THE TREATMENT OF PULMONARY AMOEBIASIS

Uragoda, C.G.

Seneviratne, B.

Chloroquine is known to be concentrated in lung tissue. Cases of pulmonary amoebiasis have been treated with chloroquine and the results of this therapy which can be done on an out-patient basis assessed.

RESEARCH PUBLICATIONS

HETTLARACHCHI, J. AND SENEVIRATNE, B. (1973) - Bromsulphthalein retention in anaemia. Proc. Ceylon Ass. Advmt. Sci. (in press)

HETTLARACHCHI, J; SENEVIRATNA, B. AND SENEVIRATNE, KAMALINI (1973) - Some problems in the management of anaemia in tea estate workers in Ceylon. J. Trop. Med. and Hyg. (in press)

HETTLARACHCHI, J; SENEVIRATNE, KAMALINI. AND SENEVIRATNE, B. (1973) - Comparative efficacy of sulphanemide and Co-trienoxazole in urinary-tract infections in Ceylon. Lancet, II, 225

RESEARCH PUBLICATIONS (Contd.)

- SENEVIRATNE, B; HETTIARACHCHI, J. AND SENEVIRATNE, KAMALINI
(1973) - Vitamin B₁₂ absorption in nutritional
megaloblastic anaemia. Brit. J. Nutrition.
(in press)
- SENEVIRATNE, B ; SENEVIRATNE, KAMALINI. AND HETTIARACHCHI, J.
(1973) -- The bacteriology and antibiotic
sensitivity pattern of acute urinary tract
infections in Ceylon. Lancet, II, 222
- SENEVIRATNE, B; THAMBIPILLAI, SHANTHI, AND HETTIARACHCHI, J.
(1973) - Lactose tolerance tests in Ceylonese.
To be published.

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- SENEVIRATNE, B; HETTIARACHCHI, J. AND SENEVIRATNE, KAMALINI
(1972) - Vitamin B₁₂ absorption in nutritional
megaloblastic anaemia. 28th Annual Sessions
of the Ceylon Ass. Advmt. Sci.
- SENEVIRATNE, B; HETTIARACHCHI, J. AND SENEVIRATNE, KAMALINI
(1973 a) - The comparative efficacy of
pyrantel pamoate, bethovenium hydroxynaphthoate and
tetrahydrothiopyrene in hookworm disease.
29th Annual Sessions of the Ceylon Ass. Advmt.
Sci.
- SENEVIRATNE, B; HETTIARACHCHI, J. AND SENEVIRATNE, KAMALINI
(1973 b) - Anaemia in two economically
important communities in Ceylon. 29th Annual
Sessions of the Ceylon Ass. Advmt. Sci.

M E D I C A L S C I E N C E S

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA (Contd.)

- SENEVIRATNE, B; HETTIARACHCHI, J. AND THAMBIPILLAI, SHANTHI
(1972) - Lactase deficiency in Ceylonese.
28th Annual Sessions of the Ceylon Ass. Advmt.
Sci.
- SENEVIRATNE, B. AND THAMBIPILLAI, SHANTHI (1972) -- Structurally
abnormal haemoglobins in Kandy. 28th Annual
Sessions of the Ceylon Ass. Advmt. Sci.
- SENEVIRATNE, B. AND THAMBIPILLAI, SHANTHI (1973 a) - A simple
fingerprick method of population screening for
abnormal haemoglobin. 29th Annual Sessions of
the Ceylon Ass. Advmt. Sci.
- SENEVIRATNE, B. AND THAMBIPILLAI, SHANTHI (1973 b) - Haemoglobin
D in Ceylon. 29th Annual Sessions of the
Ceylon Ass. Advmt. Sci.
- SENEVIRATNE, B; URAGODA, C. AND HETTIARACHCHI, J. (1971) -
The treatment of pulmonary amoebiasis with
chloroquine. 27th Annual Sessions of the
Ceylon Ass. Advmt. Sci.

Paediatrics

3. M E D I C A L S C I E N C E S

3.6 P A E D I A T R I C S

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF PAEDIATRICS

STUDY OF THE PATTERN OF RENAL DISEASE
IN SRI LANKA

Nallainathan, S.

All children with renal disease are admitted to Ward I, Lady Ridgeway Hospital, and study made with special reference to the pattern of urinary tract infections and the types of nephrotic syndrome.

ASSESSMENT OF GESTATIONAL AGE IN
CEYLONESE BABIES USING EXTERNAL
CHARACTERISTICS

Nallainathan, S.

Nanayakkara, J.C.(Mrs)

All newborn babies within a period of one month were examined by two paediatricians in order to assess their gestational age, using four external characteristics - skin colour, skin texture, breast tissue and ear firmness. A comparison was made to elicit any inter obser differences and assessed gestational age was compared with the calculated gestational age -
(1973)

CHROMOSOMAL STUDY OF MENTALLY DEFICIENT CHILDREN

Soysa, Priyani, E.

Up to date, five patients and families have been examined for chromosomal

Paediatrics

P A E D I A T R I C S

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF PAEDIATRICS (Contd.)

CHROMOSOMAL STUDY OF MENTALLY
DEFICIENT CHILDREN (Contd.)

Soysa, Priyani, E.

defects, so as to relate mental deficiency to such chromosomal defects.

(1) STUDY OF LOW BIRTH WEIGHT BABIES

Soysa, Priyani, E.

De Silva, D. (Mrs)

A study of the incidence, different types of low birth weight babies born in the University Obstetrics Unit - (1971)

(2) FEEDING OF LOW BIRTH WEIGHT BABIES

Purpose of study was to find out the ideal milk for the low birth weight baby and also the ideal concentration of artificial milk - (1973)

SEROLOGY SURVEY IN A RANDOM POPU-
LATION IN CEYLON WITH REGARD TO
AUSTRALIA ANTIGEN

Soysa, Priyani, E.

Nagaratnam, N.⁻¹

De Silva, W.A.S.⁻²

Warnasuriya, N.D.⁻³

Mahadevan, R.

Clark, R.

Intravenous blood samples were collected from approximately 1,600 randomly selected in patients, medical students, nurses and blood donors. They were screened for HAA using the counter electrophoresis method.

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1. Physician General Hospital, Gampaha
 2. Lecturer in Medicine, Colombo
 3. Registrar, Faculty of Medicine, Colombo.

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF PAEDIATRICS (Contd.)

STUDY OF THE HEIGHTS AND WEIGHTS OF HEALTHY
SCHOOL CHILDREN AGED 5 - 14 YEARS

Soysa, Priyani, E.	Aim of study was to find out the average
Nallainathan, S.	heights and weights of healthy children
Manayakkara, J.C.(Mrs)	between 5 years and 14 years and plot
Lamabadusuriya, S.P.	the normal growth chart for children of
De Silva, D. (Mrs)	this age group. The children were
	healthy boys and girls from leading
	schools in Colombo.

MALNUTRITION AND INFECTION

Soysa, Priyani, E.	Bacteriological and therapeutic studies
Pieris, F.	in diarrhoeas, including feeding regions.
Arulananthan, K.	
Warnasuriya, N.D.	

PROSPECTIVE STUDY OF WHIPWORM INFECTION
AMONG ADMISSIONS TO CHILDRENS HOSPITAL

Soysa, Priyani, E.	All admissions to University Unit,
Warnasuriya, N.	childrens hospital with pertinent
	symptoms were screened for whipworm
	infection. Those found to be positive,
	were studied in detail, clinically as
	well as by investigation, e.g. ova
	count, histological studies, biochemical
	investigations etc. Clinical trials
	using various drugs were also carried
	out.

P A E D I A T R I C S

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF PAEDIATRICS (Contd.)

HAEMOGLOBIN SURVEY IN CEYLONESE
SCHOOL CHILDREN AND OUTPATIENTS AT
GENERAL HOSPITALS

Soysa, Priyani, E.
Warnasuriya, N.
De Silva, W.A.S.
Nagaratnam, N.
Blackwell, R.Q.⁻¹
Ogren, N.⁻²
Abeyratne, D.D.⁻³

Blood samples were collected into capillary tubes after finger pricking from approximately 21,000 Ceylonese school children and outpatients at General Hospital.

They were screened electrophoretically in starch gel for abnormal haemoglobin variants. The abnormalities were confirmed by structure analysis.

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENTS OF PAEDIATRICS; OBSTETRICS AND
GYNAECOLOGY & BIOCHEMISTRY

STUDY OF URINARY TRACT INFECTION
IN CHILDREN

Gunaratna, N.P.S
Arsecularatne, S.N.
Wijayaratnam, S.
Karaliyadde, J.B.

Study of the bacteriology and radiological features in urinary tract infections in children -
(1972)

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- 1 & 2 . U.S. Naval Medical Research Unit.
 3. Medical Laboratory Technologist, Faculty of Medicine,
Colombo.

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

STUDY OF NUTRITIONAL ANAEMIA IN PREGNANT
WOMEN AND CHILDREN

Gunaratna, N.P.S. An attempt to find out the incidence of
Wickremanayake, T.W. nutritional anaemia in pregnant women and
Balasingham, K. children in the Kandy area by measuring
Piyasena, R. their Hb% PCV, serum iron and total iron
Gunaratna, M. binding capacity, serum B₁₂ and serum
Shantha, Miss K. folate (the last two using radio-isotopes)
De Mel, Mrs B.V.⁻¹ (May, 1973)
Senthe Shanmuganathan,
S.⁻²

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

DE SILVA, D. AND SOYSA, PRIYANI, E. (1971) - Study on low birth
weight babies. 8th Annual Sessions of the Ceylon
Paediatric Association.

NALLAINATHAN, S. AND NANAYAKKARA, J.C. (1973) - Assessment of
gestational age in Ceylonese babies using
external characteristics - preliminary report. 10th
Annual Sessions of the Ceylon Paediatric Associa-
tion.

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA (Contd.)

SOYSA, PRIYANI, E. AND DE SILVA, D. (1973) - Feeding of low birth weight babies. Preliminary report. 10th Annual Sessions of the Ceylon Paediatric Association.

SOYSA, PRIYANI, E. AND WARNASURIYA, N. (1973) - Prospective study of whipworm infections among admissions to childrens hospital. Preliminary report. 10th Annual Sessions of the Ceylon Paediatrics Association.

Parasitology

3. M E D I C A L S C I E N C E S

3.7 P A R A S I T O L O G Y

MEDICAL RESEARCH INSTITUTE

PARASITOLOGY DEPARTMENT

(1) INDIRECT HAEMAGGLUTINATION AND
INDIRECT FLUORESCENT TEST ANTIBODIES
IN BLOOD SENT FOR LEPTOSPIROSIS
SEROLOGY

Kulasiri, C. de S.

To assess the possible cases of acute toxoplasmosis among these patients, and to study the specificity of these two tests with regard to antibodies against leptospira - (February, 1972)

(2) INDIRECT HAEMAGGLUTINATION TEST AND
INDIRECT FLUORESCENT TESTS ANTIBODIES
AGAINST TOXOPLASMA GONDII IN PATIENTS
WITH DIABETES MELLITUS AND NEPHRITIS

Distribution of IHA and IFA antibodies in these patients are studied to find whether immunodeficiency has any effect on their antibody levels - (April, 1973)

TOXOPLASMA ANTIBODIES IN NEONATES
AND THEIR MOTHERS

Kulasiri, C. de S. -1
Sugathapala, K.M. -2
Perera, G.L.S.

IHA and IFA antibodies in neonates and mothers are studied to determine the distribution of

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1. Paediatric House Officer, Colombo South Hospital, Kalubowila.
 2. Paediatric House Officer, De Soysa Maternity Home, Colombo.

M E D I C A L S C I E N C E S

MEDICAL RESEARCH INSTITUTE (Contd.)

PARASITOLOGY DEPARTMENT (Contd.)

TOXOPLASMA ANTIBODIES IN NEONATES AND
THEIR MOTHERS (Contd.)

Kulasiri, C. de S. these antibodies in women, and to study
Sugathapala, K.M. the length of duration of such maternal
Perera, G.L.S. antibodies in infants - (June, 1972)

INDIRECT HAEMAGGLUTINATION AND INDIRECT
FLUORESCENT TEST ANTIBODIES AGAINST
TOXOPLASMA GONDII IN SRI LANKA

Kulasiri, C. de S. Purpose of project is to assess the
Wijeratnam, Y. frequency of distribution of titres
Amarasinghe, D.K.C. measured by these two tests in the normal
 population, so that physicians could
 interpret the results of these tests in
 their laboratory diagnosis of toxoplasmosis --
 (May, 1971)

DIVISION OF ENTOMOLOGY

TRANSMISSION OF FILARIDS AND PLASMODIA
OF BIRDS BY THE MOSQUITO MANSONIA
CRASSIPES

Niles, W.J. The filaroid with a short prepatent
Dissanaike, A.S.⁻¹ period, labelled as Cardiofilaria nilesi
Kulasiri, C. de S.⁻² has been established as a continuous
Fernando, S.S.E.(Mrs) culture in the laboratory by cyclical

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1. Dept. of Parasitology, Medical Faculty, Colombo
 2. Dept. of Parasitology, M.R.I.

PARASITOLOGY

MEDICAL RESEARCH INSTITUTE (Contd.)

DIVISION OF ENTOMOLOGY (Contd.)

TRANSMISSION OF FILARIDS AND
PLASMODIA OF BIRDS BY THE MOSQUITO
MANSONIA CRASSIPES (Contd.)

Niles, W.J.

Dissanaike, A.S.

Kulasiri, C. de S.

Fernando, S.S.E. (Mrs)

transmission through M. crassipes.
The infected chickens are now used
as experimental models for studies
on the biology of the parasite and
chemotherapy studies.

A strain of Plasmodium juxtancleare isolated into chickens by
innoculations of sporozoites from
wild caught M. crassipes is also
being maintained and studied.

(1973)

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF PARASITOLOGY

(1) INVESTIGATIONS OF VECTORS OF
MALARIA PARASITES OF BIRDS AND
REPTILES

De Jong, A.C. (Mrs)

This involves the trapping of
mosquitoes and other insects in
areas where infected birds and
reptiles have been found. Attempts
to establish laboratory colonies
of vectors particularly M. crassipes
and culicoides sp. will be made --

(1971)

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF PARASITOLOGY (Contd.)

(2) INVESTIGATION OF LIFE CYCLES OF SARCOCYSTIS, COCCIDIA AND OTHER RELATED ORGANISMS IN RODENTS AND OTHER VERTEBRATES

De Jong, A.C. (Mrs)

Project involves feeding experiments using laboratory animals such as hamsters, mice and rats with sarcocystis obtained from buffaloes from the Municipal slaughterhouse with a view to elucidating the hitherto unknown life cycle of sarcocystis. A survey of other vertebrate animals will be done to ascertain rates of infection with coccidia - (1971)

(1) SIMIAN MALARIA

Dissanayake, A.S.

Continuation of investigations started in 1963 with WHO grants and temporarily stopped from 1967-1970. Project involves search for any new parasites and hosts, especially susceptibility of black monkeys to isolated parasites. Also attempts to infect local monkeys with human malaria has been done in South America using immuno-suppressive drugs - (1963)

(2) FILARIASIS

Involves investigations on Bancroftian filariasis. Attempts to infect a laboratory animal e.g. hamster, rat etc., with Wuchereria bancrofti with the help of immuno-suppressive drugs - (1967-1970)

PARASITOLOGY

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF PARASITOLOGY (Contd.)

(3) LEISHMANIASIS

Dissanayake, A.S.

A case of Kala Azar was detected in an English girl who spent six weeks in Ceylon in a jungle area; project involves examination of wild animals and a search for infection in these and sand fly vector - (1969)

(4) BLOOD PARASITES OF BIRDS

Study of bird parasites especially those in the blood - (1969)

(1) SERO EPIDEMIOLOGY OF MALARIA IN CEYLON

Ponnadurai, T.

It has been found that serological techniques show promise in being more sensitive indices of epidemiological status in malaria, than the conventional spleen ratio and blood slide indices. This project is being carried out to evaluate the indirect fluorescent antibody technique in assessing the epidemiology of malaria in Ceylon - (1971)

(2) EVALUATION OF SERO-DIAGNOSTIC METHODS FOR FILARIASIS

There is a great need to evaluate the sensitivity and specificity of the indirect fluorescent antibody

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF PARASITOLOGY (Contd.)

(2) EVALUATION OF SERO-DIAGNOSTIC METHODS FOR
FILARIASIS (Contd.)

Ponnadurai, T.

technique for the diagnosis of filariasis.

It is proposed to investigate the influence of other helminth infections on the diagnosis of filariasis by the above mentioned techniques - (1971)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF MEDICINE

IDENTIFICATION OF HOOKWORMS IN CEYLON

Hettiarachchi, J.

Patients with hookworms are being given

Seneviratne, B.

tetrachloroethylene and the worms in the

Seneviratne, Kamalini

stools after a saline purgative identified

in order to determine the relative

incidence of Nector americanus and

Ancylostoma duodenale infections in

Ceylon.

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF BIOLOGICAL SCIENCES

SARCOSPORIDIOSIS IN FARM ANIMALS IN

SRI LANKA

Kulasiri, C. de S.

Post-mortem material from cattle,

Samaraweera, H.P.⁻¹

buffaloes, pigs, fowls, dogs and cats

1. Post-graduate Student, Vidyodaya Campus

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF BIOLOGICAL SCIENCES (Contd.)

SARCOSPORIDIOSIS IN FARM ANIMALS
IN SRI LANKA (Contd.)

Kulasiri, C. de S.
Samaraweera, H.P.

were studied to determine the
presence of sarcocystis infection
in these animals -- (1969)

RESEARCH PUBLICATIONS

- DISSANAIKE, A.S. AND FERNANDO, M.A. (1965) - Cardiofilaria
nilesi n.sp. recovered from a chicken experimentally
infected with infective larvae from Mansonia
crassipes. J. Helminth 39, 151 - 158
- DISSANAIKE, A.S. AND NILES, W.J. (1967) - On two infective
filarial larvae in Mansonia crassipes with a
note on other infective larvae in wild caught
mosquitoes in Ceylon. J. Helminth, 41, 291
- NILES, W.J. (1962) - Natural infections of developing animal
filariae in the fat body of Mansonia crassipes.
Trans. R. Soc. Trop. Med. Hyg., 56, 437
- NILES, W.J. (1963) - Natural infection of Mansonia coquilettidia
crassipes with an unidentified Plasmodium.
Trans. R. Soc. Trop. Med. Hyg. 57, 489
- NILES, W.J.; FERNANDO, M.A. AND DISSANAIKE, A.S. (1965) -
Mansonia crassipes as the natural vector of
filaroids, Plasmodium gallinaceum and other
plasmodia of fowls in Ceylon. Nature, Lond.,
205, 411-412

RESEARCH PUBLICATIONS (Contd.)

- NILES, W.J. (1966) - Mansonia crassipes, a vector of bird
filaroids in Ceylon. Ceylon J. Med. Sci., 15,
41 - 44
- NILES, W.J. AND KULASIRI, C.DE S. (1967) - A note on the
vector of Plasmodium jurtanucleare in Ceylon.
Ceylon J. Med. Sci. 16, 26 - 27
- NILES, W.J. AND KULASIRI, C. DE S. (1970) -- Studies on
Cardiofilaria nilesi in experimental chickens.
Ceylon J. Med. Sci., 19, 18 - 28
- SAMARAWEEERA, H.P. (1973) - The prevalence of sarcosporidiosis
among farm animals in Ceylon. M.Sc. Thesis,
Vidyodaya Campus, University of Sri Lanka,
Nugegoda, in preparation.
- SAMARAWEEERA, H.P. AND KULASIRI, C. DE S. (1969) -- Sarcosporidiosis
in goats in Ceylon. Ceylon J. Med. Sci., 18,
47 - 50

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- SAMARAWEEERA, H.P. (1971) - Incidence of Sarcosporidiosis
in some farm animals in Ceylon. 27th Annual
Sessions of the Ceylon Ass. Advmt. Sci.
- SENEVIRATNE, B; HETTIARACHCHI, J. AND SENEVIRATNE, KAMALINI.
(1973) - The comparative efficacy of
pyrantil pamoate, bethovenium hydroxynapthoate
and tetrachlorethylene in hookworm disease .
29th Annual Sessions of the Ceylon Ass. Advmt.
Sci.

3. M E D I C A L S C I E N C E S

3.8 P A T H O L O G Y

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF PATHOLOGY

- Amarasekera, L.R. A STUDY OF THYROID DISEASES AMONG CEYLONESE
- Atygalle, Daphne (1) LESIONS PRODUCED IN RAT LUNGS BY INJECTIONS
OF CEMENT.
- (2) PANCREATIC DISEASE AMONG CEYLONESE.
- (3) RESEARCH WORK ON CARDIOMYOPATHIES.
- (4) EXFOLIATIVE CYTOLOGY.
- (5) MALIGNANT LESIONS OF THE LIVER IN CEYLONESE.
- (6) THE PATTERN OF NEOPLASTIC DISEASE AMONG
HOSPITAL PATIENTS.
- Seneviratne, C. (Mrs) FATTY DEGENERATION OF VISCERA AND
Aiyadurai, T.G.J. ENCEPHALOPATHY
- Seneviratne, C. (Mrs) STUDY OF GLOMERULAR NEPHRITIS IN CHILDREN
Bulugahapitiya, D.T.D. USING CUTANEOUS RENAL BIOPSY.
- Vijeyaratnam, (1) HISTOCHEMICAL STUDIES: ENDOMETRIUM,
Gnaneswary THYROID - C - CELLS, BRAIN TUMOURS
- (2) LYMPHOCYTIC INFILTRATION OF TUMOURS AND
ITS RELATIONSHIP TO THE DEGREE OF
MALIGNANCY AS ASSESSED BY OTHER HISTO-
LOGICAL FEATURES.
- (3) EXPERIMENTAL PARAQUAT POISONING.
- Vijeyaratnam, CHRONIC RENAL FAILURE
Gnaneswary
- Thanabalasunderam, R.S.

P A T H O L O G Y

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF PATHOLOGY (Contd.)

- Yoganathan, M. (Mrs)
- (1) THE LIVER IN CHRONIC ALCOHOLISM.
 - (2) HEPATIC MANIFESTATION DURING AMOEBIC DYSENTRY.
 - (3) RENAL COMPLICATIONS OF DIABETES MELLITUS.
 - (4) RENAL COMPLICATIONS OF HUMAN LEPTOSPIROSIS.

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF MEDICINE

THE REJECTION OF BLOOD DONORS IN CEYLON

Seneviratne, B.

Blood donors rejected on the basis of the copper sulphate test are being examined to determine whether the abnormal mobility of blood in copper sulphate is due to an abnormal haemoglobin concentration or an abnormality of plasma proteins.

A SIMPLE FINGER-PRICK METHOD FOR SCREENING FOR HAEMOGLOBINOPATHIES

Thambipillai, Shanthi
Seneviratne, B.

The authors have investigated and evolved a simple technique by which samples of blood can be

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

A SIMPLE FINGER-PRICK METHOD FOR SCREENING
FOR HAEMOGLOBINOPATHIES (Contd.)

Thambipillai, Shanthi
Seneviratne, B.

collected by unskilled people and sent by post to a central laboratory for detection of haemoglobinopathies. Using the technique, twelve cases of abnormal haemoglobin have been detected among 4000 children.

RESEARCH PUBLICATIONS

ATTYGALLE, DAPHNE (1970) - Brodies Tumour of the breast. Ceylon Med.J.

SENEVIRATNE, B. AND THAMBIPILLAI, SHANTHI (1973)- A simple finger-prick method of population screening for abnormal haemoglobins. To be published.

VIJAYARATNAM, GNANESWARY (1971) - Experimental paraquat poisoning. A histological and electron optical study of the changes in the lung. J. Path. 193, 123

VIJAYARATNAM, GNANESWARY (1972 a) - Pulmonary histiocytes stimulating desquamative interstitial pneumonia in rats receiving oral pramindole. J.Path. 108, 105

VIJAYARATNAM, GNANESWARY (1972 b) - Origin of pulmonary alveolar macrophage, studied in the iprindole treated rat. J.Path. 108, 115

P A T H O L O G Y

RESEARCH PUBLICATIONS (Contd.)

- YOGANATHAN, M; BASARATNAM, R. AND PAUL, A.T.S. (1970) - Medias-
tinal cysts and tumours. Ceylon Med. J.
- YOGANATHAN, M. (1972) - Interior vena caval obstruction and the
nephrotic syndrome. J. of the Colombo Gen.
Hosp. 3.

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- ATYGALLE, DAPHNE (1970 a) - The nature of interstitial pneumonitis.
Annual Sessions of the Ceylon Med. Ass.
- ATYGALLE, DAPHNE (1970 b) - Lung lesions produced by the
inhalation of the dust of paddy husk. 26th
Annual Sessions of the Ceylon Ass. Advmt. Sci.
- VIJAYARATNAM, GNANESWARY (1971 a) - The origin of the pulmonary
alveolar macrophage studied in the iprindole
treated rat. 122 nd Meeting of the Pathological
Society of Gt. Britain.
- VIJAYARATNAM, GNANESWARY (1971 b) - Effects of paraquat on
the rabbit foetus. 27th Annual Sessions of the
Ceylon Ass. Advmt. Sci.

Pharmacology

3. M E D I C A L S C I E N C E S

3.9 P H A R M A C O L O G Y

BANDARANAIKE MEMORIAL AYURVEDIC RESEARCH INSTITUTE

DIVISION OF RESEARCH

(1) EVALUATION OF THE EFFECT OF AYURVEDIC
DRUGS ON ECZEMA

Chandrasekera, H.I.

Pilot studies were carried out on the effects of administering (a) purified Balsomodendron mukul and (b) Psoralea corylifolia, both internally and externally, on patients suffering from eczema - (1969)

(2) STUDY OF THE EFFECT OF BUTEA FRONDOSA
ON ASCARIASIS - (1969)

EVALUATION OF THE EFFECT OF AYURVEDIC
DRUGS ON PSORIASIS

Chandrasekera, H.I.

Samarasekera, W.A.F.

Waidyatilaka, S.O.A.D.L.

Waidyatilake, B.S.

Studies on the effect of (a) Cassia tora as a single drug, and (b) combination of Kitibari lepa, 'patolakatukabheeru' decoction and 'panohatikta ghrita guggala' on psoriasis. The Cassia tora was given as follows:

(1) juice of leaves with bees honey.

(2) powder of seeds and a decoction - (1969)

M E D I C A L S C I E N C E S

BANDARANAIKE MEMORIAL AYURVEDIC RESEARCH INSTITUTE (Contd.)

DIVISION OF RESEARCH (Contd.)

APPLICATION OF THIN LAYER CHROMATOGRAPHY
FOR QUALITY CONTROL OF AYURVEDIC DRUGS

- Harunanayake, E.
Arunachalam, S.
Weerakoon, S.N.
Thillainathan, J. (Mrs)
Sivasamy, S.
- a) Application of thin layer chromatography for quality control of drugs.
b) **Analysis of Seetharama pills** obtained in the market was carried out and compared with standard pills, to detect adulteration - (1971)

EVALUATION OF THE EFFECT OF HARIDRA
(SAFFRON) ON ASTHMA AND THE ABSOLUTE
EOSINOPHIL COUNT

- Mahadeva, K.
Arunachalam, S.
- Roasted saffron was given to Asthmatic patients in the form of a powder and the effect was studied on Asthmatic attacks and the absolute eosinophil count.
- This work was a repetition of a report from India - (1971)

ASSESSMENT OF THE EFFICACY OF 'PUNARNAVA
MANDOORA' ON PANDU (ANAEMIA)

- Mahadeva, K.
Arunachalam, S.
Dissanayake, S. (Mrs)
Thillainathan, J. (Mrs)
Dharmawardana, K.G.⁻¹
Arkely, V.⁻²
- A pilot study was initiated to carry out the above. 'Punarnava mandoora' is an ancient preparation consisting of several herbs and iron compound prepared in a special way. It is possible that the addition of herbs may prevent any gastric intolerance and may assist quick absorption - (June, 1973)

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1. At Radio-Isotope Centre, Colombo Campus
 2. Dept. of Chemistry, Colombo Campus

PHARMACOLOGY

BANDARANAIKE MEMORIAL AYURVEDIC RESEARCH INSTITUTE (Contd.)

DIVISION OF RESEARCH (Contd.)

THE EFFECT OF AYURVEDIC DRUGS ON
LEUCODERMA (SUDU KABARA)

Mahadeva, K.

Chandrasekera, H.I.

Dharmasena, K.D.

Senaratne

'Vacuchi' (Psoralea corylifolia)

in the form of a powder was given to leucoderma patients, internally and also applied externally as an oily preparation. The patients reported every fortnight and records were maintained on proformas regarding their progress - (1970)

EVALUATION OF THE EFFECT OF AYURVEDIC DRUGS IN THE TREATMENT OF BRONCHIAL ASTHMA

Mahadeva, K.

Chandrasekera, H.I.

Rajapaksa, D.H.

Dharmasena, K.D.

Karunanayake, B.

Weerakoon, Mrs. S.

Thillainathan, Mrs. J.

Arunachalam, S.

Goonatilaka, S.

Patients who had bronchial asthma less than five years duration, and between the ages of 15 to 50 years were selected for the trial.

The patients were treated and dieted in the hospital environment for one month, followed by a placebo the next month. In the third month, their progress was followed up in their own homes - (May, 1969)

EVALUATION OF THE EFFECTS OF AYURVEDIC DRUGS ON RENAL CALCULI

Mahadeva, K.

Perera, G.N.

Alwis, W.

Ayurvedic drugs were prepared at

M E D I C A L S C I E N C E S

BANDARANAIKE MEMORIAL AYURVEDIC RESEARCH INSTITUTE (Contd.)

DEPARTMENT OF RESEARCH (Contd.)

EVALUATION OF THE EFFECTS OF AYURVEDIC
DRUGS ON RENAL CALCULI (Contd.)

Mahadeva, K.
Perera, G.N.⁻¹
Alwis, W.⁻²

the Institute, and their effects studied
on patients houses at the General
Hospital, Colombo - (May, 1971)

EVALUATION OF THE EFFECT OF AYURVEDIC
DRUGS ON ARTHROPATHY

Rajapakse, D.H.
Heenkenda, R.B.
Waidyawansa, D.P.R.

A pilot clinically controlled study was
carried out on the effect of Ayurvedic
drugs on rheumatoid arthritis -(1969)

MEDICAL RESEARCH INSTITUTE

PHARMACOLOGY DEPARTMENT

(1) ANTHISTAMINIC ACTIVITY OF EXTRACTS OF
INDIGENOUS PLANTS USED IN AYURVEDIC
MEDICINE

Perera, B.A.V.
Lecamwasam, D.S.S.
De Silva, H.N.

Alcoholic and aqueous extracts are obtained
and tested against contractions of
isolated smooth muscle of guineapigs
intestines causes by histamine. These
extracts were also tested in anaesthisated guinea
pigs - for relief of broncho-constric-
tion caused by histamine -(January, 1970)

-
1. Genito-Urinary Specialist, General Hospital, Colombo.
 2. Principal, Ayurvedic College.

PHARMACOLOGY

MEDICAL RESEARCH INSTITUTE (Contd.)

PHARMACOLOGY DEPARTMENT (Contd.)

(2) CATECHOLAMINE ESTIMATION IN PROGNOSIS OF MYOCARDIAL INFARCTION

Perera, B.A.V.

Lecamwasan, D.S.S.

De Silva, H.N.

Estimation of catecholamines in patients having myocardial infarction has been found to give increased excretions in those who are prone to complications -
(May, 1971)

(3) ANTI-HISTAMINE EFFECTS OF EXTRACTS OF 'WALBIN KIOMBA' AND 'DUMIELA'

(January, 1972)

(4) HYPOGLYCAEMIC ACTIVITY OF EXTRACTS OF THE ROOTS OF FIGUS RELIGIOSA

(BO TREE) (May, 1971)

QUALITY CONTROL LABORATORY (DRUGS)

BIOLOGICAL AVAILABILITY OF PHARMACEUTICALS

De Silva, K.T.Y.

Jayarathne, Rohini (Mrs)

Lenagala, L.A.D.

Jehagnanendran, V.R.B.

Study of in-vivo and in-vitro absorption of drugs which show differences in biological availability and correlation of in-vitro and in-vivo data.

M E D I C I N E S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF PHARMACOLOGY

PROTEIN BINDING OF DRUGS

Balasubramaniam, K. The degree of attachment of sulphadimidine
Padmaperuma, D.S.(Miss) to human serum albumin *in vitro* was
measured. Pooled sera from volunteers
and patients were studied --(January, 1971)

Bibile, S.W. A SIMPLE METHOD FOR DETECTING CATECHOLA-
MINES IN URINE - (January, 1970)

QUALITY CONTROL OF DRUGS IMPORTED INTO
SRI LANKA

Bibile, S.W. The following tests were done on the
Balasubramaniam, K. drugs imported.
Perera, B.J.C. 1. Tablets/Capsules -- Disintegration
Jeyapalam, S.G. 2. Tablets/Capsules -- Disintegration
Jayaratna, Rohini, D. time.
Padmaperuma, D.S.(Miss) 3. Bioavailability --(March, 1973)
Pamunuwa, I.(Miss)

RESEARCH PUBLICATIONS

ARUNACHALAM, S; GUNATILAKA, S; SIVASAMY, S. AND PERERA, N. (1971) -
Pilot study to assess the effect of Haridra
(Turmeric) on asthma and the absolute eosinophil
count. Ayurveda Pradeepika 2, 25

RESEARCH PUBLICATIONS (Contd.)

- ARUNACHALAM, S; SIVASAMY, S. AND PERERA, N. (1971) - Mootrasmari (renal calculi) Ayurveda Pradeepika, 3.
- BALASUBRAMANIAM, K. (1971) - Guide lines for evaluating the efficacy of Ayurvedic treatment in anaemia (Pandu). Ayurveda Pradeepika, 2.
- BALASUBRAMANIAM, K. (1972 a) - Binding of Sulphadimidine to human serum protein. Proc. 5th Int. Cong. Pharm.
- BALASUBRAMANIAM, K. (1972 b) - Binding of Sulphadimidine to serum proteins in patients with hypoalbuminaemia. Ceylon Ass. Advmt. Sci. abstracts (1972)
- CHANDRASEKERA, H.I. (1969) - Study of Psoralea corylifolia on pustular eczema. Ayurveda Pradeepika, 1 (2), 3-6
- CHANDRASEKERA, H.I. (1970) - Study of Cassia tora on psoriasis. Ayurveda Pradeepika, 1 (4), 6
- CHANDRASEKERA, H.I. (1971) - Study of Balsamodendron mukul on eczema. Ayurveda Pradeepika, 2 (4), 11
- CHANDRASEKERA, H.I; SAMARASEKERA, W.A.F; WAIDYATILAKA, S.O.A.D.L. AND WAIDYATILAKA, B.S. (1969) - Kitibha rogeen sirudemku pilibanda hathareemak. Ayurveda Pradeepika, 1 (1), 20-24
- DHARMASEKERA, K.D. (1971) - Leucoderma (vitiligo). Ayurveda Pradeepika, 2 (4) 14
- DUNULLE, ROHINI (1970) - A simple diagnostic test for pheochromocytoma. Ceylon Ass. Advmt. Sci. Abstracts (1970)
- JAYARATNE, ROHINI, D. (1972) - The detection of catecholamines in urine using thin layer chromatography. J. Sci. Technol. 16, 28 - 30

M E D I C I N E S C I E N C E S

RESEARCH PUBLICATIONS (Contd.)

- KARUNANAYAKE, E; WEERARATNA, S.N; THILLAINATHAN, J; ARUNACHALAM, S.
AND SIVASAMY, S. (1971) -- Chromatography --
Application of thin layer for quality control
of "seetharama". Ayurveda Pradeepika, 3 (1)
- MAHADEVA, K. (1969 a) -- Method of evaluating the efficacy of
Ayurvedic drugs in the treatment of Asthma.
Ayurveda Pradeepika, 1 (2), 65
- MAHADEVA, K. (1969 b) -- Pilot study of evaluating the efficacy
of drugs on Asthma by Ayurvedic specialists.
Ayurveda Pradeepika, 1, 63
- MAHADEVA, K; ARUNACHALAM, S; DHARMAJENA, K.D. AND BALASUBRAMANIAM,
K. (1971) -- Guide-lines for evaluating the
efficacy of Ayurvedic treatment in anaemia
(Pandu) -- Ayurveda Pradeepika, 3, 10 - 12
- RAJAPAKSA, D.H; HEENKENDA, R.B. AND WALDYAWANSA, D.P.R. (1969) --
A pilot study of rheumatoid arthritis.
Ayurveda Pradeepika 1, 93

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- LECAMPASAM, D.S.S; DE SILVA, H.N. AND PERERA, B.B.V. (1970)-
Estimation of catecholamines in the prognosis
of myocardial infarction. 25th Annual Sessions
of the Ceylon Ass. Advnat. Sci.

3. M E D I C A L S C I E N C E S

3.10 P H Y S I O L O G Y

BANDARANAIKE MEMORIAL AYURVEDIC RESEARCH INSTITUTE

DIVISION OF RESEARCH

STUDY OF THE EFFECT OF DIET AND CLIMATE ON ASTHMATIC ATTACKS

Mahadeva, K.

Arunachalam, S.

The daily diet, temperature and the asthmatic state of patients in the hospital were recorded and analysed to see whether there was any correlation - (December, 1969)

(1) STUDY OF SALT INTAKE

Mahadeva, K.

Karunanayake, E.

The daily salt intake of adults was carried out in order to determine the basis for planning the iodization programme in the endemic goitre areas of Ceylon - (1970)

(2) ESTIMATION OF THE HISTAMINE CONTENT OF HEALTHY ADULTS

The histamine content of normal healthy adults were compared with those of eczema and asthma patients - (1970)

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF PHYSIOLOGY

PATHOGENESIS OF DIABETIC NEUROPATHY

Seneviratne, K.M.

Nimalasuriya, A.

Senanayake, N.

Peiris, O.A.

An experimental study designed to

P H Y S I O L O G Y

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF PHYSIOLOGY (Contd.)

PATHOGENESIS OF DIABETIC NEUROPATHY
(Contd.)

Seneviratne, K.N.
Nimalasuriya, A.
Senanayake, N.
Peiris, O.A.

investigate the cause and progress of the nerve lesion which occurs in human and experimental diabetes.-- (1971)

PROPERTIES OF THE NODAL-GAP SUBSTANCE
OF PERIPHERAL NERVE

Seneviratne, K.N.
Weerasuriya, A.

An inquiry into the electrical and histochemical properties of the mucopolysaccharide substance found in the node of myelinated peripheral nerves - (1972)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF MEDICINE

POTASSIUM EQUILIBRIUM IN PATIENTS
WITH LIVER DISEASE

Seneviratne, B.
Thambipillai, Shanthy

Absorbed potassium must be temporarily stored in cells until it is excreted by the kidney. The authors feel that the major site of this storage is the liver. Experiments are now in progress to determine the effects of liver injury, both acute and chronic, on the effects of hepatic uptake of potassium and consequently on the plasma K^+ level after an oral dose of potassium - (1969)

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF PHYSIOLOGY (Contd.)

HAEMATOLOGICAL NORMS FOR A POPULATION OF
INDIAN ESTATE WORKERS

Breckenridge, Mrs. M.A.C. This study sets out to establish whether Indian Estate Labourers suffer from severe anaemia, and also to determine the type of anaemia with a view to getting a lead on aetiology --(August, 1972)

ENERGY EXPENDITURE IN TROPICAL AGRICULTURAL
WORKERS

Hottiarachchi, E.S.G.
Mahendran, C.C.⁻¹
De Mel, Mrs. B.V.⁻²
Poleman, T.⁻³

The measurement of heart rate is used to obtain indirect estimate of energy expenditure during activities which is inadequately sampled by conventional methods of energy expenditure -
(June, 1971)

1 & 2. Nutrition Department, Medical Research Institute.

3. Cornell University, New York.

RESEARCH PUBLICATIONS

- DHARMASENA, K.D. AND MAHADEVA, D. (1969) - Study of Allergy amongst Asthmatics patients. Ajurveda Pradeepika, 1,(3), 73
- MAHADEVA, K. AND KARUNANAYAKE, B. (1970) - Salt intake of Ceylon. Brit. J. of Nut., 24, 811
- SENEVIRATNE, K.N. (1971) - Blood peripheral nerve barriers in diabetes. Proc. Ceylon Ass. Advmt. Sci., 1, 25
- SENEVIRATNE, K.N. (1972) - Permeability of blood nerve barriers in the diabetic rat. J. of Neurology, Neurosurgery and Psychiatry, 35, 156 - 162
- SENEVIRATNE, K.N. (1973) - Nodal gap substance of peripheral nerve. J. of Neurology, Neurosurgery and Psychiatry - in press.
- SENEVIRATNE, K.N.; NIMALASURIYA, A. AND SEMANAYAKE, N. (1973) - Post-ischaemic paraesthesiae in human diabetes mellitus. J. Neurology, Neurosurgery and Psychiatry, 36, 210 - 214
- SENEVIRATNE, K.N. AND PEIRIS, O.A. (1970 a) - The role of diffusion barriers in determining the excitability of peripheral nerve. J. of Neurology, Neurosurgery and Psychiatry, 33, 310 - 318
- SENEVIRATNE, K.N. AND PEIRIS, O.A. (1970 b) - Peripheral nerve function in chronic liver disease. J. of Neurology, Neurosurgery and Psychiatry, 33, 609 - 614
- SENEVIRATNE, K.N. AND VAIRAVANADAN, S. (1972) - Nodal gap substance of diabetic nerve. Proc. Ceylon Ass. Advmt. Sci., 1, 35

M E D I C A L S C I E N C E S

RESEARCH PUBLICATIONS (Contd.)

SENEVIRATNE, K.N. AND WEERASURIYA, A. (1972 a) -- Properties of the paranodal gap substances of diabetic nerve. Proc. Ceylon Ass. Advnt Sci., 1, 36

SENEVIRATNE, K.N. AND WEERASURIYA, A. (1972 b) Effects of hyperkalaemia on the excitability of peripheral nerve. J. of Neurology, Neuro-surgery and Psychiatry, 35, 149 - 155

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

KARUNANAYAKE, E. AND SHANMUGANATHAN, S. (1970) -- A shortened method for the colorimetric estimation of histamine in blood and the establishment of clinical norms for Ceylonese subjects. 26th Annual Sessions of the Ceylon Ass. Advnt. Sci.

SENEVIRATNE, B. (1969 a) -- Aldosterone potassium balance and the plasma potassium level. 25th Annual Sessions of the Ceylon Ass. Advnt. Sci.

SENEVIRATNE, B. (1969 b) -- Difficulties in excreting orally administered potassium in fluid retention states. 25th Annual Sessions of the Ceylon Ass. Advnt. Sci.

Psychiatry

3. M E D I C A L S C I E N C E S

3.11 P S Y C H I A T R Y

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF PSYCHIATRY

Dissanayake, S.A.W. STUDY OF SUICIDE IN CEYLON -- (January, 1972)

PILOT STUDY ON THE USE OF FOLLOW-UP DATA
IN PSYCHIATRIC EPIDEMIOLOGY

Wijesinghe, C.P. Tracing of psychiatric patients discharged
Sartorius, N.⁻¹ from Mental Hospital, Angoda, in the
years 1960 -- 1965 and 1970 -- (March, 1971)

Wijesinghe, C.P. (1) CONCEPTS AND CHOICE OF TREATMENT AMONG
CEYLONESE PATIENTS -- (October, 1971)

(2) NATIONAL HEALTH MANPOWER STUDY
(MEDICAL EDUCATION) -- (January, 1972)

COMMUNITY PSYCHIATRY PROJECT AND EPIDEMIO-
LOGICAL SURVEY

Wijesinghe, C.P. Objectives of project are :

Dissanayake, S.A.W. 1. Community Psychiatric service to be
Fernando, P.M.T. established in the Kotte Urban
De Silva, W.P. Council area.
Dissanayake, P.L.V.N. 2. Determine the prevalence and nature
of Psychiatric morbidity --
(June, 1972)

PUBLIC HEALTH & PREVENTIVE
MEDICINE

MEDICAL RESEARCH INSTITUTE (Contd.)

RABIES DEPARTMENT (Contd.)

THE STUDY OF WILD LIFE RABIES IN
CEYLON WITH A VIEW TO DETECTING
RESERVOIR, IF ANY

Sathasivam, A.

Ramakrishnan, K.⁻¹

Jayaratne, B.M.⁻²

The project consists of shooting and trapping of mammals suspected of being rabies carriers, like the jackal, mongoose, civet cat, pole cat, bat, etc. Direct examination of the brain (and brown fat in the case of bats) and also virus isolation studies are carried out together with serology - (1969)

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF PUBLIC HEALTH & PREVENTIVE MEDICINE

EPIDEMIOLOGY OF CONGENITAL MAL-
FORMATIONS IN SRI LANKA

Corea, S.M.X.

A follow-up study of consecutive births occurring in 70 hospitals in the island, drawn from all 22 districts. The study will provide information as regards incidence of congenital malformations in Sri Lanka and it is

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF PUBLIC HEALTH & PREVENTIVE MEDICINE (Contd.)

EPIDEMIOLOGY OF CONGENITAL MALFORMATIONS
IN SRI LANKA (Contd.)

Correa, S.M.X.

hoped to determine etiological factors
that give rise to these malformations --
(September, 1972)

ARTHEROSCLEROSIS IN SRI LANKA

Ranasinghe, H.⁻¹
Pathmanathan, C.⁻²
De Fonseka, T.E.J.

An autopsy study of the aorta and
coronary arteries collected from consecu-
tive medico-legal autopsies performed by
the Department of Forensic Medicine,
Peradeniya Campus -- (June, 1970)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF AGRICULTURE

SANITARY ASPECTS OF SOME LOCAL EATING
HOUSES

Pulle, M.W.
Kailasepethy

This investigation was started due to the
recent incidents of food poisoning.
Project will be carried out initially in
Kandy restaurants.

Samples of raw material, prepared food,
cooking utensils, air and water to be
subject to bacteriological analysis --
(May, 1973)

-
1. In Dept. of Forensic Medicine, Peradeniya
 2. In Tea Research Institute, Talawakella

PUBLIC HEALTH & PREVENTIVE MEDICINE

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE

ADULT KWASHIORKOR IN CEYLON

Seneviratne, B.

Kwashiorkor is well recognized in children. An identical syndrome is believed to occur in adult Ceylonese. A study is now being made to determine the pattern of adult malnutrition in Ceylon.

THE STERILITY OF "STERILE" EQUIPMENT IN CEYLON HOSPITALS

Seneviratne, B.

Achong, Joyce

There is no central sterile supply in any hospital in Ceylon. An investigation was made of the adequacy of the present sterilization procedures in the General Hospital, Kandy.

SUBCLINICAL OSTEOMELACIA IN CEYLON

Seneviratne, B.

Hettiarachchi, J.

Thambipillai, Shanthi

The calcium intake of Ceylonese is very low. This could result in either an adaptation by which people have been able to utilize fully the dietary intake, or, it could result in subclinical osteomelacia. Using the calcium infusion test of Mordin and Frazer, an evaluation is being made of the prevalence of osteomelacia in Ceylon.

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

DENTAL CARIES IN CEYLON -- ITS INCIDENCE
AND REGIONAL VARIATION

Seneviratne, B.

Hettiarachchi, J.

Thambipillai, Shanthi

Seneviratne, Kamalini

An extensive study of dental caries is in progress to determine whether the distribution of fluoride containing water in Ceylon, is also reflected in a division of the island into land areas - one with a high incidence of dental caries and the other with a low incidence.

(1) DISTRIBUTION OF FLUORIDE CONTAINING
WATER IN CEYLON

Seneviratne, B.

Seneviratne, Kamalini

Four hundred and fifty samples of water from all parts of the island are being analysed for fluoride, in order to determine the distribution and concentration of fluoride containing water in Ceylon.

(2) THE OPTIMAL FLUORIDE CONCENTRATION FOR
THE PREVENTION OF DENTAL CARIES IN CEYLON

A significantly higher incidence of caries is found in the wet zone, as compared to the dry zone of Ceylon. The water in the wet zone (containing 60% of the country's population) is free of fluoride. Investigations are now in progress to determine what the optimal concentration of fluoride should be for the prevention of dental caries in the wet zone of Ceylon.

PUBLIC HEALTH & PREVENTIVE MEDICINE

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

THE ASSESSMENT OF THE FLUORIDE INTAKE
OF A COMMUNITY DRINKING FROM WELLS:
LOCAL VARIATION IN THE FLUORIDE
CONTENT OF WELL WATER

Seneviratne, B.
Seneviratne, Kamalini
Hettiarachchi, J.
Thambipillai, Shanthi

The distribution of fluoride containing water in an area could be determined by the random sampling from wells. The accuracy of this method of water collection is being investigated by determining the local fluoride concentration in adjacent wells.

The possibility of using school children as indices of the fluoride concentration of well water has been explored by examining the teeth of those children who have been resident in that area for dental mottling.

THE CONSEQUENCES OF BETEL CHEWING

Seneviratne, B.
Thambipillai, Shanthi

Although cancer of the cheek and oesophagus have been ascribed to betel chewing, the prevalence of this habit in these disorders have not been evaluated against that in normal people. An attempt is therefore being made to do this, having matched the patients and controls with regard to age, sex, education etc. which have been found to affect the chewing habit.

M E D I C I N E S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

DENTAL FLUOROSIS WITHOUT AN INCREASE IN
FLUORIDE IN DRINKING WATER

Seneviratne, B.
Thambipillai, Shanthi
Hettiarachchi, J.
Seneviratne, Kamalini

In a study of the distribution of dental mottling, extensive dental mottling was found in a small percentage of children who have always been resident in the fluoride free wet zone of Ceylon. Investigations are now in progress to determine whether these children have a defect of fluoride excretion, whereby, they are unable to handle a normal fluoride intake such as present in three cups of tea (1 p.p.m of fluoride).

BETEL CHEWING IN CEYLON

Seneviratne, B.
Uragoda, C.G.

Betel chewing is known to cause cancer, especially of the cheek, and possibly of the oesophagus. Although the incidence of betel chewing in these disorders is known, no study has been made of betel chewing habits in normal Ceylonese. Such data is essential to find the correlation between betel chewing and various cancers. A study was therefore made of betel chewing in randomly selected people in Kandy.

P U B L I C H E A L T H & P R E V E N T I V E M E D I C I N E

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF MEDICINE (Contd.)

ENDEMIC FLUOROSIS IN CEYLON

Thambipillai, Shanthi
Mettiarachchi, J.
Seneviratne, Kamalini

Endemic fluorosis has not been described in Ceylon. Brown mottled teeth are common in the dry zone of Ceylon. A study was made to see if the brown mottling was due to dental fluorosis.

THE PATTERN OF HOSPITAL ADMISSIONS
IN CEYLON

Thevanesan, Vasanthi
Seneviratne, B.

A knowledge of the pattern and reasons for hospital admissions will be of use in assessing what can be done to decrease overcrowding, areas where student teaching and research should be concentrated etc. An analysis is being made of the hospital admissions to the general hospital, Kandy, over a period of a year.

TOBACCO SMOKING IN CEYLON

Uragoda, C.G.
Seneviratne, B.

The rarity of lung cancer in Ceylon could be due either to a low consumption of tobacco or a resistance of the broncho-pulmonary system to neoplastic change. A survey has been made of the tobacco smoking habits in Ceylonese to find out what the per capita use of tobacco is.

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF PREVENTIVE & SOCIAL MEDICINE

Abeykoon, P.

A STUDY OF POSTPARTUM AMENORRHOEA - (1973)

- (1) A STUDY OF THE WEIGHT INCREASE IN PREGNANT MOTHERS ATTENDING ANTENATAL CLINICS

Abeykoon, P.

Samarawickrema, G.P.

This study will be carried out at the Antenatal Clinics of the Hindagala Community Health Project for period of five years - (1973)

- (2) CAUSES OF DEATH OF INFANTS, PRESCHOOL AND SCHOOL CHILDREN AND MOTHERS OF THE HINDAGALA COMMUNITY PROJECT AND THE KADUGANNAMA PERIPHERAL UNIT - UNIVERSITY PROJECT. (100 CASES FROM EACH PROJECT) - (1973)

BEFORE AND AFTER STUDY OF THE HINDAGALA COMMUNITY HEALTH PROJECT

Fernando, M.A.

At the commencement of this programme (in 1965), a medico-social survey was carried out to determine the demographic characteristics, health problems and health education and to determine the extent to which the medical care services were being provided and utilized by the community. Having carried out this survey, community services were established.

The after study will be carried out to evaluate the effects of the provision of services by means of an "After Medico Social Survey" of the same community - (1971)

PUBLIC HEALTH & PREVENTIVE MEDICINE

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF PREVENTIVE & SOCIAL MEDICINE (Contd.)

A CONTROLLED STUDY OF THE PREVALENCE
AND CONTROL OF ASCARIASIS AND THE
EFFECT OF ASCARIASIS ON THE GROWTH
AND DEVELOPMENT OF YOUNG CHILDREN

Fernando, M.A.
Schmidt, W.M.¹
Sivagnanasundram, C.
Abeykoon, P.
Samarawickrema, G.P.
Balasuriya, S.

Investigation of the hypothesis that (a) a programme of systematic treatment of ascaris infestation over a given period of time will reduce the work load to such a level, that the cycle of parasitism is arrested, (b) as treatment continues, the re-infestation interval will become longer --
(1967)

A STUDY OF THE CHARACTERISTICS OF
FAMILY PLANNING ACCEPTORS

Jayaweera, D.A.
Abeykoon, P.

Identification of factors influencing behavioural patterns among eligible females practicing contraception, with a view to designing and implementing health education programmes aimed at more effective motivation for sustained practice of family planning among

1. At Harvard School of Public Health, Boston, U.S.A.

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF PREVENTIVE & SOCIAL MEDICINE (Contd.)

A STUDY OF THE CHARACTERISTICS OF FAMILY
PLANNING ACCEPTORS (Contd.)

Jayaweera, B.A.

these target audiences in the country.

Abeykoon, P.

This study would also enable the Medical School and the Health Education Division of the Ministry of Health to collaborate in the conduct of studies in Family Health - (September 1973)

A STUDY OF THE UTILIZATION OF SELECTED
PERIPHERAL UNITS

Sivagnanasunderam, C.

Part I consists of finding out the areas served by the P.U. and the factors that determine this distribution, e.g. availability of transport, presence of other medical facilities, efficiency of the P.U. etc. Part II consists of a detailed study on the out-patient and in-patient care, disease pattern, duration of stay, facilities for diagnosis and treatment, referral pattern etc. - (1972)

Abeykoon, P.

(1) A STUDY OF THE ATTITUDES, BELIEFS AND
PRACTICES OF AYURVEDIC PHYSICIANS IN
THE FIELD OF MATERNAL AND CHILD HEALTH.
A STUDY OF THE PATTERN OF DISEASES IN
AYURVEDIC PRACTICE

Sivagnanasunderam, C.

A 10% random sample of registered Ayurvedic Physicians (about 1000)

Samarawickrema, G.P.

PUBLIC HEALTH & PREVENTIVE MEDICINE

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF PREVENTIVE & SOCIAL MEDICINE (Contd.)

- (1) A STUDY OF THE ATTITUDES, BELIEFS AND PRACTICES OF AYURVEDIC PRACTITIONERS IN THE FIELD OF MATERNAL AND CHILD HEALTH. A STUDY OF THE PATTERN OF DISEASES IN AYURVEDIC PRACTICE (Contd.)

Sivagnanasunderam, C.
Samarawickrema, G.P.

will be chosen to complete a structured postal questionnaire on the above topics - (1972)

- (2) A STUDY OF THE PATTERN OF ILLNESS IN GENERAL PRACTICE

A study of the pattern of illness seen by 132 General practitioners in Sri Lanka - (1972)

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

VISION SURVEY OF 2000 CHILDREN IN THE 4 - 6 YEAR AGE GROUP

Fernando, P.C.B.
Wirasinghe, P.A.¹
Aturaliya, U.²
Perera, D.B.A.³
Wijesinghe, L.B.
Abeywickrema, S.W.

The survey was in three parts.
1.A Questionnaire
2.A 5 minutes preliminary test.
3.A half hour comprehensive test
(October, 1971)

1 & 2 . At Eye Hospital, Colombo.
3. Optometrist, Private Sector

M E D I C A L S C I E N C E S

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF PREVENTIVE & SOCIAL MEDICINE (Contd.)

VISION SURVEY OF 2000 CHILDREN IN THE
4 - 6 YEAR AGE GROUP (Contd.)

Edirisinghe, G.
Edirisinghe, M.
Gomes, J.
Kasilingam, P.
Mendis, B.M.C.
Subasinghe, R.
Wijetunga, U.C.I.
Wijetunga, V.R.

RESEARCH PUBLICATIONS

- KARUNANAYAKE, E; DHARMASENA, K.D. AND MAHADEVA, K. (1969) - Fluoridation of water supplies as a prevention of dental caries. Ayurveda Pradeepika, 1 (2), 59
- KARUNANAYAKE, E; MAHADEVA, K; WEERAKOON, S.N. AND WICKREMASINGHE, R.L. (1972) - Fluoride in Black Tea. Tea Quarterly, 43, 111
- SENEVIRATNE, B; HETTIARACHCHI, J; THAMBIPILLAI, SHANTHI AND SENEVIRATNE, KAMALINI (1973) - Endemic fluorosis in Ceylon. Trans. Roy. Soc. Trop. Med. and Hyg. (in press)
- SENEVIRATNE, B. AND SENEVIRATNE, KAMALINI (1973 a) - Distribution of fluoride containing water in Ceylon. To be published.

PUBLIC HEALTH & PREVENTIVE MEDICINE

RESEARCH PUBLICATIONS(Contd.)

- ~~SENEVIRATNE, B.; SENEVIRATNE, KAMALINI; HETTIARACHCHI, J. AND~~
THAMBIPILLAI, SHANTHI (1973 b) - The assessment
of the fluoride intake of a community drinking
from wells: local variations in the fluoride
content of well water. Bull. WHO (in press)
- SENEVIRATNE, B. AND URAGODA, C.G. (1970) - A survey of betel
chewing. Proc. Ceylon Ass. Advmt. Sci., 26
- SENEVIRATNE, B. AND URAGODA, C.G. (1973) - Betel chewing in
Ceylon. Amer. J. Trop. Med. and Hyg. 22, 418
- URAGODA, C. AND SENEVIRATNE, B. (1971) - Tobacco smoking in
Ceylon. J. Trop. Med. and Hyg. 74, 145

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- RANASINGHE, H; PATHMANATHAN, C. AND DE FONSEKA, T.E.J. (1971) -
Artherosclerosis in Ceylon and autopsy study
of the aorta and coronary arteries. 27th
Annual Sessions of the Ceylon Ass. Advmt. Sci.
- SATHIASIVAM, A. (1971) - "Wild life rabies". 27th Annual
Sessions of the Ceylon Ass. Advmt. Sci.
- SENEVIRATNE, B. AND ACHONG, JOYCE (1970) - A bacteriological
study of the "sterile equipment" in a large
teaching hospital in Ceylon. 26th Annual
Sessions of the Ceylon Ass. Advmt. Sci.

M E D I C A L S C I E N C E S

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA (Contd.)

- SENEVIRATNE, B; HETTIARACHCHI, J; THAMBIPILLAI, SHANTHI AND
SENEVIRATNE, KAMALINI (1972) - Endemic
fluorosis in Ceylon (a) the distribution of
fluoride containing water, (b) dental caries.
28th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- THAMBIPILLAI, S; HETTIARACHCHI, J. AND SENEVIRATNE, B. (1973) -
Calcium retention in adult Ceylonese. 29th
Annual Sessions of the Ceylon Ass. Advmt. Sci.

3. M E D I C A L S C I E N C E S

3.13 S U R G E R Y

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF SURGERY

TROPICAL LYMPHOEDEMA

Sherifdeen, A.K.

De Silva, K.M.C.⁻¹

Lymphangiograms and their evaluation in
patients suffering from lymphoedema.
Serological investigation for evidence
of filariasis.

1. Radiologist, General Hospital, Colombo

4. N A T U R A L S C I E N C E S

4.1 B O T A N Y

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF BOTANY

DEVELOPMENT OF A CULTURE OF YEAST GIVING
A HIGHER YIELD OF ALCOHOL

Senoviratne, A.S. (Mrs)
Jayawardena, Sarojini,
P.K.

Project involves (a) a survey of the naturally and commercially available yeasts in order to develop a strain that would give a high yield of alcohol with no losses in the fermentation medium, (b) determination of the optimal substrate concentration, inoculum, pH etc. to obtain the maximum yield --(October, 1972)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF BOTANY

A STUDY OF AXINANDRA ZEYLANICA

Dassanayake, M.D.
Paranavithane, S.

The genus Axinandra appears to be of importance in relation to the evolution of the families Melastomaceae, Rhizophoraceae and Lythraceae. The study of the endemic species Axinandra zeylanica is being made with a view to elucidating its position -- (January, 1973)

CHROMOSOME STUDIES OF THE CEYLON LILIACEAE, AMARYLLIDACEAE, HYPOXIDACEAE AND OXALIDACEAE

Dassanayake, M.D.
Theivendirarajah, K.
Kulatunga, S.

Studying the number, morphology and other

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF BOTANY (Contd.)

CHROMOSOME STUDIES OF THE CEYLON
LILIACEAE, AMARYLLIDACEAE, HYPOXI-
DACEAE AND OXALIDACEAE (Contd.)

Dassanayake, M.D.

Theivendirarajah, K.

Kulatunga, S.

special features of the chromosomes in all the species of the above families. It is hoped to extend this study to other families as well - (January, 1972)

PRELIMINARY GENETIC STUDIES ON THE
BLUE GREEN ALGA - ANACYSTIS NIDULANS

Theivendirarajah, K.

Genetics of Blue-green algae is not known. The inability to isolate single seeded colonies on solid agar medium makes it rather difficult to subject them to any genetic analysis. In this project, experiments are carried out to isolate single cell colonies on solid agar medium using Anacystis nidulans, which is a unicellular alga -- (October, 1972)

4.2 C H E M I S T R Y

A N A L Y T I C A L

GOVERNMENT ANALYSTS DEPARTMENT

CHEMICAL INVESTIGATION OF SUGAR
"SPENT WASH" AND FUSEL OIL

Bandaranaike, W.M.
Anandarajah, A.⁻¹

Purpose is (a) to find a suitable use for fusel oil which at the moment is a waste product, (b) to determine whether spent wash is suitable to irrigate sugar plantations, and (c) extract yeast from spent wash.

SURVEY OF PESTICIDE RESIDUES IN FOOD

De Silva, M.E.M.S.

Survey of some of the common items of food to determine levels of contamination with pesticide residues.

INVESTIGATION INTO QUANTITATIVE
DETERMINATION OF POLYNOSIC FIBRES
IN MIXTURES WITH OTHER FIBRES

Dissanaike, E.B.
De Silva, M.O.C.

Polynosic fibres (a special type of regenerated cellulose) are a new development in the textile industry. They are characterised by a high initial wet modulus of elasticity and a relatively low degree of swelling in Sodium Hydroxide solution. There are no known chemical methods for determining quantitatively the amount of polynosic fibre in a particular blend - (1972)

C H E M I S T R Y

GOVERNMENT ANALYSTS DEPARTMENT (Contd.)

AN INVESTIGATION INTO THE PHYSICAL AND
CHEMICAL PROPERTIES OF FLUID AND BALLPOINT
PEN INKS BY THE APPLICATION OF OPTICAL
AND CHEMICAL ANALYTICAL TECHNIQUES

Samaranayake, A.D.H.
Manatunga, P.H.
Thangaratnavel, N.

The project involves the application of photographic techniques in the ultraviolet and infrared regions of the spectrum, thin layer chromatography and spectrophotometry.

MERCURY IN FISH

Satkunanthan, C.
Kandasamy, T.

A survey of the mercury content of local fish both fresh and canned.

QUALITY CONTROL LABORATORY (DRUGS)

STABILITY OF ASPIRIN TABLETS IN STRIP PACKS

De Silva, K.T.Y.
Maitreepala, W.A.

A study of the degradation of Aspirin, stored in bottles and stored and packed in cellophane and alufoil strips. Study of the permeability of strip packs and correlation with parameters such as disintegration and salicylic acid content.

Chemistry - Industrial

4.2 C H E M I S T R Y

I N D U S T R I A L

C E Y L O N C E R A M I C C O R P O R A T I O N

R E S E A R C H A N D D E V E L O P M E N T S E C T I O N

R E S E A R C H T O W A R D S P R O D U C T I O N O F F I L T E R
C A N D L E S U S I N G L O C A L R A W M A T E R I A L S

Attanayake, N.L.

Sivanadian, T.

Fernando, E.

Alles

Developing a body mixture with 100% local raw materials, making and firing techniques, for a candle filtering water -- (May, 1971)

R E S E A R C H T O W A R D S P R E P A R A T I O N O F C E R A M I C
S T A I N S U S I N G M A I N L Y L O C A L C L A Y A N D
M I N E R A L S

Dissanaike, N.

Mahalingham, K.

Siriwardena, A.

Areez, A.

Weerasooriya

Kulatunga

Development of production techniques for ceramic glaze stains, using mainly local raw materials, such as coloured clays, mineral sands and rocks -- (June, 1972)

R E S E A R C H T O W A R D S U S E O F L O C A L Z I R C O N A S
A N O P A C I F I E R F O R G L A Z E

Dissanaike, N.

Siriwardena, M.

Fernando, E.

Weerasooriya

Development of an opaque glaze for crockery by opacifying the transparent glaze. Use of Zircon (supplied by the Mineral Sands Corporation) as the opacifier. Improvement of grinding technique for local Zircon, so as to obtain optimum particle size -- (February, 1972)

CEYLON CERAMIC CORPORATION (Contd.)

RESEARCH AND DEVELOPMENT SECTION (Contd.)

MANUFACTURE OF ULTRAMARINE BLUE,
USING LOCAL MATERIAL

Dissanaike, N.	Development of a formula containing
Sivanadian, T.	mainly local raw materials; manu-
Gunasekera, S.	facturing technique inclusive of
Peiris, S.	furnace for firing for ultramarine
Fernando, L.	blue - (August, 1972)

RESEARCH TOWARDS REPLACEMENT OF
LOCAL BALL CLAY IN CERAMIC EARTHEN-
WARE BODY

Sivanadian, T.	Developing an earthenware body to
Dissanaike, N.	match the existing glaze, replacing
Goonewardena, Y.A.	local ball clay for the imported
Fernando, E.	variety - (January, 1972)
Munasinghe, S.A.	
Weerasooriya	
Alles	

RESEARCH TOWARDS THE DEVELOPMENT OF
A LOW FUSING FRITT FOR GLAZES USING
MAINLY LOCAL MATERIALS

Sivanadian, T.	Development of a fritt, suitable
Fernando, E.	for a low fusing glaze for
Weerasooriya	crookery using local raw materials.
Kulatunga	Conversion of the fritt into a
	glaze, matching the present crookery
	body - (July, 1971)

C H E M I S T R Y

CAYLON CERAMIC CORPORATION (Contd.)

RESEARCH AND DEVELOPMENT SECTION (Contd.)

REPLACEMENT OF SILICA SAND FOR QUARTZ
IN CROCKERY BODY AND GLAZE

Sivanadian, T.
Siriwardena, A.
Fernando, E.
Weerasooriya

Aim is to replace the quartz component in the crockery body and glaze compositions by silica sands which does not require pre-softening. Also reduction in processing time, wear and tear of machinery - (May, 1973)

MANUFACTURE OF LOW AND MEDIUM ALUMINA
REFRACTORIES

Sri Patma
Amarakoon
Perera, D.

The manufacture of refractories containing low and medium quantities of Alumina and local raw materials.-- (June, 1973)

CAYLON INSTITUTE OF SCIENTIFIC AND INDUSTRIAL RESEARCH

CHIEF RESEARCH OFFICER'S SECTION

Perera, B.S. (Mrs)

- (1) EXAMINATION OF FATTY OILS - (January, 1973)
- (2) RICE BRAN EXTRACTION PLANT (SOLVENT)-
(April, 1973)
- (3) GINGELLY OIL DEODERISATION PLANT-
(April, 1973)
- (4) SYNTHETIC DETERGENTS - (January, 1973)

I N D U S T R I A L

CEYLON PLYWOOD CORPORATION

QUALITY CONTROL/RESEARCH- CHIPBOARD
FACTORY

Munasinghe, B.K.S.

- (1) REDUCTION OF PARACOL 404 A (WAX
EMULSION) IN THE CIBA RECOMMENDED
GLUE FORMULATION FROM 18 PARTS TO
4 PARTS/100 PARTS OF AEROLITE
(RESIN) - WITHOUT AFFECTING ITS
SWELLING PROPERTIES, BUT IMPROVING
OTHER PROPERTIES - (July, 1972)

- (2) USE OF PARAFFIN WAX IN PLACE
OF WAX EMULSION WHICH IS IMPORTED

Paraffin wax is melted, sprayed on to flowing water and obtained in a very fine powdery form. This can be mixed with the other constituents of the glue mixture and used in the manufacture of chipboard. This eliminates the necessity of an emulsifying agent - (July, 1972)

QUALITY CONTROL/RESEARCH DIVISION - GINTOTA

COMPILING OF AN IDENTIFICATION
KEY FOR THE LOCAL PLYWOOD SPECIES,
TAKING INTO CONSIDERATION THE
MICROSCOPIC STRUCTURE OF WOOD

Wanasinghe, K.J.

Jayarathne, R.A.⁻¹

Microscopic structure of the plywood timber species will be studied

1. Technical Assistant

C H E M I S T R Y

CEYLON PLYWOOD CORPORATION (Contd.)

QUALITY CONTROL/RESEARCH DIVISION -- GINTOTA (Contd.)

COMPILING OF AN 'IDENTIFICATION KEY' FOR
THE LOCAL PLYWOOD SPECIES, TAKING INTO
CONSIDERATION THE MICROSCOPIC STRUCTURE
OF WOOD (Contd.)

Manasinghe, K.J.

Jayarathne, R.A.

and the timber will be classified into different groups based on the nature of the arrangement of the wood elements viz. vessels, fibres, parenchyma and rays. Features observed in the samples for identification will be compared with the features recorded in the classification - (June, 1973)

RECONSTRUCTION OF A 'FLUSH DOOR CORE'
USING WASTE VENEER

Manasinghe, K.J.

Jayarathne, R.A.

Fernando, M.J.E.⁻¹

At present, pieces of solid timber are used for the assembly of local plywood flush-door cores. An attempt will be made to construct a light weight honeycomb type of core using waste veneer obtained from the plywood factory - (May, 1973)

I N D U S T R I A L

CEYLON PLYWOOD CORPORATION (Contd.)

QUALITY CONTROL/RESEARCH DIVISION -- KOSGAMA

- Allis, V.M.
Colombathanthri, S.⁻¹
Wijesuriya, R.⁻²
Perera, M.H.⁻³
Jayasinghe, K.S.⁻⁴
- (1) REPLACEMENT OF HARDNER TH 8 A BY AMONNIUM CHLORIDE FROM TEA CHEST GLUE MIXTURE - (November, 1972)
 - (2) REPLACEMENT OF HARDNER EJ 11 (USED FOR EDGE VENEERING) WITH AMONNIUM CHLORIDE AND HEXAMINE --(November, 1972)
 - (3) REDUCTION OF HARDNER M 59 FOR COMMERCIAL GRADE (MR TYPE) AND MARINE GRADE (BR TYPE) BY 50 - 60% - (November, 1972)
 - (4) INCREASING THE EXTENSION OF TEA CHEST GLUE MIXTURE FROM 75% TO 90% BY WEIGHT WITH WHEAT FLOUR, REDUCING THE CONSUMPTION OF AEROLITE BY 0.021 kg/M² PRESSED AREA - (November, 1972)
- SUBSTITUTION OF KAOLIN FOR WHEAT FLOUR AS AN EXTENDER IN THE TEA CHEST GLUE MIXTURE
- Eliyathamby, D.A.R.(Miss)
Amarasinghe, U.P.P.
- This involves a feasibility study of using kaolin as an extender for glue mixture instead of wheat flour which involves foreign exchange -- (June, 1972)

C H E M I S T R Y

CEYLON PLYWOOD CORPORATION (Contd.)

QUALITY CONTROL/RESEARCH DIVISION - KOSGAMA (Contd.)

Eliyathamby, D.A.R.(Miss)	<u>PARTIAL OR TOTAL SUBSTITUTION OF NATURAL</u>
Amarasinghe, U.P.P.	<u>RUBBER LATEX FOR UREA FORMALDEHYDE USED</u>
Nadara jah, M. ⁻¹	<u>IN TEA CHEST GLUE MIXTURE -(June, 1972)</u>
Tharmalingam, R. ⁻²	

HIGHWAYS DEPARTMENT

CHEMISTRY DIVISION

(1) ADHESION AND STRIPPING CHARACTERISTICS OF
ROAD BINDERS

Fernando, M.J.

The bituminous coating on aggregates is permeable to polar liquids such as water. The adhesion and stripping is affected by the nature of the binder and nature of the aggregate. Making use of a new stripping test, the effect of binders, modified with additives is studied. The index of retained strength is also used to evaluate the various types of modified binders - (January, 1971)

(2) PREPARATION AND EVALUATION OF RUBBERIZED
BITUMEN MASTERBATCHES

Attempts are made to prepare 10% 14%, 16% rubber bitumen concentrates in convenient forms to be added in the field.

1,2. At Rubber Research Institute

I N D U S T R I A L

HIGHWAYS DEPARTMENT (Contd.)

CHEMISTRY DIVISION (Contd.)

(2) PREPARATION AND EVALUATION OF
RUBBERIZED BITUMEN MASTERBATCHES
(Contd.)

Fernando, M.J.

To study the long-term effects of rubber bitumen concentrates, a 2% solution is prepared from the concentrate and its properties studied on a comparative basis at regular intervals of time with a straight run 2% solution - (January, 1973)

(3) A NEW STRIPPING TEST TO EVALUATE
ROAD AGGREGATES

The usual "Boil Test" and "Water Immunisation Test" used for bitumen are inadequate to study the stripping characteristics of road surfaces. Attempts are made to develop a new quantitative test based on the solubility of exposed area of aggregate after stripping- (January, 1970)

SOME ASPECTS OF LIME STABILIZATION
OF SOILS

Fernando, M.J.

Mallawaratchi, D.P.

A comprehensive project on lime stabilization was launched to study the effective lime content

C H E M I S T R Y

HIGHWAYS DEPARTMENT (Contd.)

CHEMISTRY DIVISION (Contd.)

SOME ASPECTS OF LIME STABILIZATION OF SOILS (Contd.)

Fernando, M.J.
Mallawaratchi, D.P.

of a particular soil, suitability of a soil, effect of organic matter, use of dolomitic lime and other admixtures in soil stabilization of more commonly available soil types in Sri Lanka - (June, 1972)

ROAD MARKING PAINT

Fernando, M.J.
Weerasuriya, U.¹

Since there is a severe shortage of imported road marking paints, attempts are being made to compound a suitable road-marking paint using our own chlorinated rubber, and other local raw materials. Field trials are conducted at the same time to study the durability under local traffic and weather conditions -(July, 1972)

LIME PRODUCTION IN CEYLON

Fernando, M.J.
Yoganandan, G.M.

A survey is carried out to collect all available information on the present methods of production of lime in Ceylon and suggest ways and means of improving the quality of the product without in any way adversely affecting the cottage industry. Study includes (i) lime from coral and limestone (ii) lime from dolomitic limestone -(January, 1971)

1. At C.I.S.I.R.

RUBBER RESEARCH INSTITUTE

RUBBER CHEMISTRY DEPARTMENT

LEATHER WASTE AS A FILLER IN RUBBER
COMPOUNDING

Fernando, W.S.E.
Balasingham, C.G.

Leather waste could be successfully used as a replacement for imported organic fillers like high styrene resin, (Butakon, Duranit, etc.) Further experiments would be conducted to find other uses for this waste, and finally implementation on a commercial scale --(December, 1972)

PREPARATION OF LATEX MASTERBATCHES

Karunaratne, S.W.

Use of Tapioca for the preparation of latex/starch masterbatches will be investigated. The extent of reinforcement when starch is added in this form will be investigated -- (July, 1973)

THE EFFECT OF ETHREL STIMULATION
ON RAW RUBBER PROPERTIES

Karunaratne, S.W.
Balasingham, K.
Dekumpitiya, A.S.

Study is aimed at finding out whether there are any effects due to stimulation on raw rubber properties, which will downgrade the rubber. The study is undertaken on a clonal basis -- (January, 1972)

C H E M I S T R Y

RUBBER RESEARCH INSTITUTE (Contd.)

RUBBER CHEMISTRY DEPARTMENT (Contd.)

USE OF GRAFTED OR OTHERWISE MODIFIED
NATURAL RUBBER LATEX AS AN ADHESIVE FOR
PRINTING OF TEXTILES

Karunaratne, S.W.
Piyadasa, K.A.

The main aim is to graft cellulose to natural rubber either directly or via a third constituent which will easily graft on to both types of polymers. Irradiation will also be tried as one of the techniques for inducing the formation of free radicals - (April, 1973)

TECHNOLOGY OF THE MANUFACTURE OF NEW
PROCESS RUBBER

Karunaratne, S.W.
Tharmalingam, R.

Different process lines will be studied for the preparation of high quality rubber from scrap material. Chemicals other than oxalic acid and phosphoric acid will be tried out as a soaking medium to improve the PRI of scrap rubber from Sri Lanka. Speciality grades of new forms of rubber will be evaluated, once the block rubber demonstration project starts operating -(January, 1968)

PROPERTIES OF PALE CREPE FROM SRI LANKA

Karunaratne, S.W.
Tharmalingam, R.
Goonewardena, L.
Medagama, D.D.

Technology of processing pale crepe is considered with special reference to such factors as discoloration on storage, mill breakdown, UV and sunlight degradation and hardness. Technical qualities

I N D U S T R I A L

RUBBER RESEARCH INSTITUTE (Contd.)

RUBBER CHEMISTRY DEPARTMENT (Contd.)

PROPERTIES OF PALE CRIEPE FROM SRI LANKA (Contd.)

Karunaratne, S.W.
Tharmalingam, R.
Goonewardena, L.
Medagama, D.D.

which should be standardised will also be investigated. Curing characteristics will be studied using the Monsanto Rheometer -- (January, 1969)

RUBBER IN ANICUTS

Mendis, D.L.O.⁻¹
Tharmalingam, R.
Goonewardena, L.

The objective of the project is to develop anicuts using rubber to preserve water in irrigation tanks to be used during the dry weather. The anicuts used at present are very difficult to install or dismantle when required --(February, 1973)

DEVELOPMENT OF NATURAL RUBBER - PORTLAND CEMENT, MIXED FOR PRACTICAL APPLICATIONS

Nadarajah, M.
De Silva, K.P.N.

The development of suitable natural rubber latices for mixing with portland cement without coagulation will be investigated and its uses promoted. Some possible uses are in flooring and in repairing broken concrete structures -- (January, 1970)

1. In Ministry of Planning and Employment

C H E M I S T R Y

RUBBER RESEARCH INSTITUTE (Contd.)

RUBBER CHEMISTRY DEPARTMENT (Contd.)

USE OF EASY PROCESSING RUBBER IN TYRE
MANUFACTURE

Nadarajah, M.

Fernando, W.S.E.

Narangoda, H.

Hot room treatment and premastication of rubber can be eliminated by adding to field latex, a mineral oil which is a physical plasticiser at 11% on the rubber. Work will be done on the preparation and properties of this type of rubber and its uses in tyre manufacture - (January, 1971)

CONVERSION OF CONVENTIONAL RAW RUBBER TO
BLOCK RUBBER AT THE PACKING STAGE

Tharmalingam, R.

Nadarajah, M.

Dekumpitiya, A.S.

A method of conversion and the economic feasibility. The technique will facilitate the conversion of our crepe rubber and sheet to block form without changing the present pattern of the raw rubber industry in Sri Lanka - (June, 1973)

Yapa, P.A.J.

Dayaratne, W.C.

USE OF FACTORY EFFLUENTS - (May, 1973)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF CHEMISTRY

PREPARATION OF A THIN BOILING STARCH FROM
MANIOC STARCH FOR THE TEXTILE INDUSTRY

Kumar, Savithri

Jayasuriya, D.S.

Silva, S.⁻¹

Locally manufactured manioc starch was

I N D U S T R I A L

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF CHEMISTRY (Contd.)

PREPARATION OF A THIN BOILING STARCH
FROM MANIOC STARCH FOR THE TEXTILE
INDUSTRY (Contd.)

Kumar, Savithri

Jayasuriya, D.S.

Silva, S.

modified to a viscosity comparable to that of an imported thin boiling starch (from corn starch) by treatments with acid. The modified starch was stabilized for use in the textile industry by the addition of glyceryl monostearate - (1972)

STUDY OF RAW MATERIALS USED IN
CEMENT INDUSTRY

Selvaratnam, M.

Dias, H.W.

Thevarajah, A.

Herath Banda, R.M.

Elkaduwa, R.B.

The physical properties of latex (and modified latex) cement mixtures were studied under various conditions - (1969)

GRAFT POLYMERISATION OF RUBBER LATEX
WITH VARIOUS MONOMERS

Selvaratnam, M.

Sotheeswaran, S.

Suseeladevy, S.

Effect of solvents, initiators, concentrations, temperatures on the graft polymerisation of natural rubber with various monomers are being investigated - (1972)

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF CHEMISTRY

Dharmawardena, M.W.C.

Ratnayake, S.

PREPARATION OF COMMERCIAL GRADE PPT.
CHALK --(October, 1973)

C H E M I S T R YRESEARCH PUBLICATIONS

- FERNANDO, M.J. AND YOGANANDAN, G.M. (1972) - Lime production in Ceylon. Part I. (coral stone and sea shells). Research Notes, Research and Development Office, Highways Department, Ratmalana, February
- KARUNARATNE, S.W. (1971) - Preparation of Heveacrumb from 1st fraction coagulum. Q.J. Rubb. Res. Inst. Ceylon, 48, 253
- KARUNARATNE, S.W; BALASINGHAM, K. AND DEKUMPITIYA, A.S. (1973) - The effect of ethrel stimulation on raw rubber properties. Q. Rep. Rubb. Res. Inst. Ceylon, 1st Q. 1973
- KARUNARATNE, S.W. AND PIYADASA, K.A. (1973) - Use of grafted or otherwise modified natural rubber latex as an adhesive for printing of textiles. Q. Rep. Rubb. Res. Inst. Ceylon, 2nd Q. 1973
- KARUNARATNE, S.W. AND THARMALINGAM, R. (1973) - Production of technically specified rubber by the cenat process. Q.J. Rubb. Res. Inst. Ceylon, - in press
- KARUNARATNE, S.W; THARMALINGAM, R; GOONEWARDENA, L. AND MEDAGAMA, D.D. (1969) - Properties of palm crepe from Ceylon. Rubb. Res. Inst. Ceylon - Annual Review (1969)
- NADARAJAH, M. AND NARANGODA, H. (1973) - Easy processing natural rubber. J.I.R.C. I, 117 - 120
- NADARAJAH, M; PIERIS, H. AND DE SILVA, K.P.N. (1973) - Development of natural rubber portland cement mixes for practical applications. Rubb. Res. Inst. Ceylon Bull. 8, (in press)
- WEERARATNE, W.G; NADARAJAH, M; ELIYATAMBY, D.A.R; AMARASINGHE, U.P.P. AND LIYANAGE, N. (1973) - The use of Natural rubber as an adhesive for plywood. Q.J. Rubb. Res. Inst. Ceylon - (in press)

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- ELIYATAMBY, D.A.R. (MISS) AND NADARAJAH, M. (1972) - Natural rubber latex/urea formaldehyde blend as on adhesive for plywood. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- ELKADUWA, R.B. AND DIAS, H.W. (1972) - The effect of dolomite on compressive strength and sulphate resistance of Portland Cement. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- FERNANDO, M.J. (1972) - A new method of testing adhesion and stripping characteristics of road binders. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- FERNANDO, M.J. AND YOGANANDAN, G.M. (1972) - Lime production in Ceylon. Institution day, Inst. of Eng.(Cey.) April
- SUSEELADEVY, S; SELVARATNAM, M. AND SOTHEESWARAN, S. (1973) - Graft polymerisation of rubber latex - International Rubber Research Conference, Sri Lanka
- THEVARASAH, A. AND SELVARATNAM, M. (1969) - Effect of latex on the physical properties of cement and concrete. 25th Annual Sessions of the Ceylon Ass. Advmt. Sci.

Chemistry - Inorganic

4.2 C H E M I S T R Y

I N O R G A N I C

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF CHEMISTRY

Pereira, W.P.D. (Mrs)

Fernando, J.N.O.

REDUCTION OF CONTAMINANTS IN THE
MANUFACTURE OF CAUSTIC SODA AND
BY-PRODUCTS -(1973)

METAL CHELATE STUDIES AND THEIR
SIGNIFICANCE IN THE CHEMISTRY OF
TITANIUM MINERALS AND THALLIUM
GROUP OF ELEMENTS

Ramakrishna, R.S.

Fernandopulle, M.

Pathmanathan, S.

Gunawardena, H.D.

Thuraisingham, R.

Kanagaratnam, M.

Senarat Yapa, D.A.T.A.

(a) Preparation and study of the thermodynamic properties of metal chelates of Group III B and IV A elements. (b) Relative co-ordinating abilities of oxygen, sulphur and selenium containing ligands -(1966)

Siriwardena, P.P.G.L.

Dharmawardena, K.G.

(1) ENERGY TRANSFER IN SOLID INORGANIC
COMPOUNDS - (1973)

(2) RADIATION EFFECTS ON SELECTED
FOOD MATERIALS - INITIAL STUDY
ON MANIOC - (1973)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF CHEMISTRY

(1) CHEMICAL ANALYSIS OF THE SOURCE
OF DRINKING WATER IN KANDY

Dias, H.W.

Ileperuma, O.A.

Investigation of the mineral composition of river Mahaweli water

C H E M I S T R Y

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF CHEMISTRY (Contd.)

(1) CHEMICAL ANALYSIS OF THE SOURCE OF
DRINKING WATER IN KANDY (Contd.)

Gunawardena, R.P. in the proximity of intake points for
Francis, K.G. purification - (1972)

Elkaduwa, R.B.

(2) CO-ORDINATION CHEMISTRY OF SOME METALS
WITH ORGANIC LIGANDS

Goonatilake, H.W.

Wijekoon, W.M.D.

Bandara, H.M.N.

Somawardhana, W.C.

Perera, N.J.

Seneviratne, R.T.R.U.

Wimalasena, B.H.D.T.H.

Study of stereochemical aspects of co-
ordination compounds of the first
transition series of elements -(1972)

(3) A STUDY OF SRI LANKA MINERALS

Attempts are made to evolve industrially
applicable methods for the extraction of
valuable metal compounds from mineral sands.
Isolation and utilization of minerals used
as raw materials in local industries. Methods
of chemical analysis of minerals -(1972)

UNIVERSITY OF SRI LANKA, VIDYALANKARA CAMPUS

DEPARTMENT OF CHEMISTRY

Ariyaratne, J.K.P.

Rajapakse, D.

CHEMICAL AGENTS TOXIC SPECIFICALLY TO
SALVINIA - (1969)

Ariyaratne, J.K.P.

Rajapakse, D.

Balasooriya, I.

QUANTITATIVE DETERMINATION OF OXYGEN
CONSUMED BY PLANTS - (1973)

I N O R G A N I C

UNIVERSITY OF SRI LANKA, VIDYALANKARA CAMPUS (Contd.)

DEPARTMENT OF CHEMISTRY (Contd.)

- Ariyaratne, J.K.P.
Rajapakse, D.
Green, M.L.H.⁻¹
- (1) COMPOUNDS CONTAINING CARBON - SILICON
DOUBLE BONDS - (1973)
- (2) STUDY OF ORGANOMETALLIC PENICILLINS -
(1973)

TERADICATION OF SALVINIA BY CHEMICAL
MEANS

- Ariyaratne, J.K.P.
Siriwardena, P.P.G.L.⁻²
Balasooriya, I.
Rajapakse, D.
Jayasooriya, U.A.
Dassanayake, N.L.
- Study of a simple chemical system
which is toxic specifically to
salvinia only -(1969)

- Siriwardena, P.P.G.L.
Ariyaratne, J.K.P.
Dharmawardena, K.G.⁻³
Balasooriya, I.⁻⁴
- RADIOCHEMICAL STUDIES OF THE WEEDI-
CIDAL AND TRANSLOCATION PROPERTIES
OF SMALL ORGANIC MOLECULES IN PLANTS -
(1972)

-
1. At the Inorganic Chemistry Laboratory, University of Oxford, U.K.
 - 2,3. Radioisotope Laboratory, Colombo Campus.
 4. Department of Botany, Vidyalankara Campus

C H E M I S T R YRESEARCH PUBLICATIONS

- RAMAKRISHNA, R.S. AND FERNANDOPULLE, M.E. (1971) - Complexes of Thallium and Thallium III with thiasalicylic (o - mercaptobenzoic acid) and salicylic acid. J. Inorg. and Nucl. Chem., 33, 1940 - 1942
- RAMAKRISHNA, R.S. AND FERNANDOPULLE, M.E. (1972) - The spectrophotometric determination of thallium (III) by ternary complex formation Analytica Chemica Acta, 60, 87 - 92
- RAMAKRISHNA, R.S.; FERNANDOPULLE, M.E. AND NALLIAH, B. (1971) - Spectrophotometric and Electrometric studies on the composition and stability of the Vanadyl complex of o - mercaptobenzoic acid. J. Inorg. and Nucl. Chem., 33, 2071 - 2075
- RAMAKRISHNA, R.S. AND GUNAWARDENA, H.D. (1973) - Use of the Titanium (IV) chelate of salicylic acid for a selective absorptiometric determination of Titanium. Talanta 20, 21 - 26
- RAMAKRISHNA, R.S. AND IRVING, H.M.N.H. (1970) - Studies with Dithizone; Part XX - "On the non-existence of selenium dithizonate". Analytica Chemica Acta, 49, 9 - 17
- RAMAKRISHNA, R.S. AND THURASINGHAM, R. (1973) - Polarographic studies of the thiocyanates and selenocyanates of Thallium, Indium and Gallium. J. Inorg. and Nucl. Chem. - in press)

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- RAMAKRISHNA, R.S. AND FERNANDOPULLE, M.E. (1970) - A mixed ligand complex of Thallium III with pyridine and CN5. 26th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- RAMAKRISHNA, R.S. AND GUNAWARDENA, H.D. (1970) - Solvent extraction studies of the Fe (III) - Ti(IV) System. 26th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- RAMAKRISHNA, R.S. AND GUNAWARDENA, H.D. (1971) - Synergistic effect of Pyridine on the extractability of the Ti (IV) - salicylic acid chelate. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- RAMAKRISHNA, R.S. AND GUNAWARDENA, H.D. (1972) - Extraction constant of the Pyridine adduct of Titanyl salicylate. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- RAMAKRISHNA, R.S. AND PATHMANABAN, S. (1970) - Pyridine adduct of Vanadyl Thiosalicylic acid chelate. 26th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- RAMAKRISHNA, R.S. AND PATHMANABAN, S. (1971) - Studies on the VO^{2+} Thiomalic acid system. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- RAMAKRISHNA, R.S. AND THURAISINGHAM, R. (1971) - Polarographic studies of the thiocyanates and selenocyanates of Thallium, Indium and Gallium. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- RAMAKRISHNA, WIJESSEKERA, T.P. AND KANAGARATNAM, (1972) - VO^{2+} - Citric acid and its reaction with Al^{3+} . 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.

Chemistry - Natural Products

4.2 C H E M I S T R Y

N A T U R A L P R O D U C T S

CEYLON INSTITUTE OF SCIENTIFIC AND INDUSTRIAL RESEARCH

DIVISION OF NATURAL PRODUCTS

*TRANSFORMATION OF TERPENOIDS

Wijesekera, R.O.B.
Rajapakse, Lakshimi, S.

The effect of visible and UV light on Terpenoids studied by monitoring by means of Gas Liquid chromatography. This is relevant to the keeping qualities and storage conditions of essential oils and their constituents --(1972)

THE ISOLATION OF CHEMICAL COMPOUNDS OF PHARMACEUTICAL INTEREST FROM ENDEMIC PLANTS - (2). STUDIES ON CEYLON LICHENS

Wijesekera, R.O.B.
De Silva, K.T.D.⁻¹
Andrody, A.L.⁻²
Ledere, E.⁻³
Polonsky, J.⁻⁴
Gontarel, R.⁻⁵
Das, B.C.⁻⁶

Studies on compounds of pharmaceutical interest have been carried out by the authors for over 10 years. Plants like Samadera indica, Kolanhena mitis have been investigated for the presence of bitter principles and alkaloids. Investigations are now in progress for a systematic study of Ceylon Lichens for such compounds that may be of importance pharmaceutically --(January, 1973)

* Temporarily suspended

- 1,2. At Vidyalaya Campus, University of Sri Lanka
3,4,5,6. Institute de Chemie des Substances Naturelles Gif -- sur --
Yvette, Paris (C.N.R.S.)

C H E M I S T R Y

CEYLON INSTITUTE OF SCIENTIFIC AND INDUSTRIAL RESEARCH (Contd.)

DIVISION OF NATURAL PRODUCTS (Contd.)

DEVELOPMENT OF NEW ANALYTICAL TECHNIQUES
FOR ASSESSMENT OF QUALITY IN ESSENTIAL
OILS

Wijesekera, R.O.B. Use of techniques such as Gas Liquid
Jayawardena, A.L. chromatography and Infrared Spectroscopy
Senanayake, U.M. for studies in essential oils leads to
Rajapakse, Lakshimi, S. the quantitative estimation of the major
Fonseka, Kanthi, H. constitutents of these oils. By use
 of these techniques, one is able to
 develop analytical techniques for repe-
 titive use in quality assessment -
 (January, 1972)

(1) VARIETAL CHANGES IN THE CHEMICAL COMPOSI-
TION OF ESSENTIAL OILS OF THE CYMPOPOGAN
SPECIES

Wijesekera, R.O.B. The project seeks to use instrumental
Ponnuchamy, S. techniques for the study of the variation
Herath, H.M.W.⁻¹ in the chemical composition of volatile
 oils in various species of citronella and
 mana grasses - (1971)

N A T U R A L P R O D U C T S

CEYLON INSTITUTE OF SCIENTIFIC AND INDUSTRIAL RESEARCH (Contd.)

DIVISION OF NATURAL PRODUCTS (Contd.)

(2) CULTIVATION OF CYMPOPOGAN

Wijesekera, R.O.B.

Ponnuchamy, S.

Herath, H.M.W.

Selection of varieties of cympopogan grasses for cultivation based on composition of volatile oils and their content of industrially valuable aromatic chemicals; effect of fertilizers on chemical composition of these species -
(January, 1972)

(1) *SYNTHESIS OF ORGANIC COMPOUNDS WITH LIKELY ANTIOXIDANT ACTIVITY

Wijesekera, R.O.B.

Ratnayake, V.U.

Derivatives of Gallic acid are well known antioxidants. A new synthesis of Galloylglycollic acid has been worked out; this synthesis is to be used to make derivative of Galloylglycollic acid to test their potential as antioxidants in food and toilet preparations - (January, 1973)

(2) SYNTHESIS OF AROMATIC CHEMICALS FROM CONSTITUENTS OF ESSENTIAL OILS

Chemical separation of the major constituents of essential oils like Cinnamon Bark and Leaf, Synthesis of perfumery chemicals (derivatives from them). Equipment for pilot plant work in this connection has also been designed. (January, 1973)

1, Peradeniya Campus, University of Sri Lanka

* Temporarily suspended

C H E M I S T R Y

CEYLON INSTITUTE OF SCIENTIFIC AND INDUSTRIAL RESEARCH (Contd.)

DIVISION OF NATURAL PRODUCTS (Contd.)

CHEMICAL STUDIES ON THE CONSTITUENTS OF
ESSENTIAL OILS IN SPICES OF SRI LANKA

Wijesekera, R.O.B.	The project involves the study of the chemical constituents of the steam volatile oils of plants - particularly spices. The techniques used are mainly Gas-Liquid Chromatography and Infrared Spectroscopy. The aim is to identify the chemical constituents and develop analytical techniques for assessment of quality - (May, 1970)
Senanayake, U.M.	
Jayawardena, A.L.	
Rajapakse, Lakshimi, S.	
Fonseka, Kanthi, H.	

IMPROVEMENT IN THE TECHNOLOGY OF THE
DISTILLATION OF ESSENTIAL OILS

Wijesekera, R.O.B.	The design of improved equipment for distillation of essential oils from aromatic grasses and spices. (Two Ceylon patents filed) - (January, 1972)
Wijerathna, B.	
Ratnasingham, K.	
Devanathan, M.A.V. ⁻¹	
Wijetunga, M.U.C.	
Ponnuchamy, S.	
Laurentius, S.F.	

1. At Tea Research Institute

N A T U R A L P R O D U C T S

CEYLON PLYWOODS CORPORATION

QUALITY CONTROL/RESEARCH(CHIPPARD FACTORY)

Munasinghe, B.K.S.

- (1) REDUCTION OF AMMONIUM CHLORIDE IN THE HARDNER SOLUTION RECOMMENDED BY CIBA (GRIEG) - (December, 1974)
- (2) COMPLETE ELIMINATION OF HEXAMETHYLENE TETRA - AMINE (HEXAMINE) FROM THE HARDNER FORMULATION RECOMMENDED BY CIBA (GRIEG) - (March, 1972)

RUBBER RESEARCH INSTITUTE

RUBBER CHEMISTRY DEPARTMENT

PREPARATION OF VISCOSE RAYON FROM RUBBER WOOD

Karunaratne, S.W.

Piyadasa, K.A.

Preliminary studies on the preparation of cellulose in pulp form by digestion with HNO_3 , followed by xanthation to give a viscose mass good enough for extrusion will be carried out -(July, 1973)

*COLLECTION AND USE OF RUBBER SEED IN SRI LANKA - EXTRACTION OF RUBBER SEED OIL AND ITS USES IN ALKYD RESIN

Nadarajah, M.

Tharmalingam, R.

Dayaratne, W.C.

Abeysinghe, A.

Production of alkyd resin for paint manufacture and possibilities of exporting the oil or alkyd resin

1. Ministry of Plantation Industries

* In collaboration with the State Engineering Corporation

C H E M I S T R Y

RUBBER RESEARCH INSTITUTE (Contd.)

RUBBER CHEMISTRY DEPARTMENT (Contd.)

COLLECTION AND USE OF RUBBER SEED IN SRI
LANKA - EXTRACTION OF RUBBER SEED OIL AND
ITS USES IN ALKYD RESIN (Contd.)

Nadarajah, M. are being investigated. A more efficient
Tharmalingam, R. method of expelling oil from rubber seed
Dayaratne, W.C. is being worked out by the State Engineering
Abeyasinghe, A. Corporation - (July, 1969)
State Engineering
Corporation

SRI LANKA TYRE CORPORATION

CENTRAL LABORATORY

- Wickremaratne, I.A.
- (1) MANUFACTURE OF AUTOMOBILE TUBES, USING
COMPOUNDS BASED ON 100% NATURAL RUBBER -
(January, 1973)
 - (2) MANUFACTURE OF HEAT RESISTANT AND DURABLE
CURING BAGS USING (a) 100% NATURAL RUBBER,
(b) BLEND OF NATURAL AND SYNTHETIC
RUBBER - (August, 1973)
 - (3) USE OF BLENDS OF NATURAL AND SYNTHETIC
RUBBERS IN THE MANUFACTURE OF AUTOMOBILE
TYRES AND TUBES - (January, 1973)

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF CHEMISTRY

Arkley, V. INVESTIGATION OF NATURAL PRODUCTS OF
Mahendran, M. CEYLON OF POSSIBLE MEDICINAL USE - (1973)

N A T U R A L P R O D U C T S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF AGRICULTURE

COMPARISON OF THE CHEMICAL AND
NUTRIENT STATUS OF COCONUT WATER
OBTAINED FROM KING AND GREEN COCONUTS

Pulle, M.W.

Isono, M.⁻¹

Work undertaken chiefly as a result of the wide disparity in price of the two commodities. Detailed chemical analyses conducted on the two sources at various stages of maturity. Samples obtained from Kandy area. Nutritive values calculated from analyses. Reported values compared with other popular beverages --(October, 1972)

DEPARTMENT OF CHEMISTRY

CHEMICAL INVESTIGATION OF THE ENDEMIC PLANTS OF CEYLON

Sultanbawa, M.U.S.

Wannigama, G.P.

Sotheeswaran, S.

Bandaranaike, W.M.

Kumar, V.

Kumar, Savithri

Mageswaran, S.

Ollis, W.D.⁻²

Thompson, R.H.⁻³

Bladon, P.⁻⁴

Studies on the extractives of the bark, timber, flower, fruits, leaves, etc. of endemic plants -
a) to provide data for the utilisation of minor forest products.
b) to provide information on the medicinal uses of the endemic species.
c) to obtain information on chemical taxonomy.

-
1. Exchange student from Dept. of Food Science, Obihiro Univ., Japan
 2. Professor, University of Sheffield
 3. Professor, University of Aberdeen
 4. Professor, University of Strathclyde

C H E M I S T R Y

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF CHEMISTRY (Contd.)

CHEMICAL INVESTIGATION OF THE ENDEMIC PLANTS
OF CEYLON (Contd.)

Sultanbawa, M.U.S.	d)to determine the structure of the compounds
Wannigama, G.P.	isolated.
Sotheeswaran, S.	e)to train the B.Sc. special and post-
Bandaranaike, W.M.	graduate students in research and problems
Kumar, V.	of relevance to Sri Lanka. (1968 ,continuing)
Kumar, Savithri	
Mageswaran, S.	
Ollis, W.D.	
Thompson, R.H.	
Bladon, P.	

CHEMICAL INVESTIGATION OF PLANTS OF THE
APOCYANACEAE ENDEMIC TO CEYLON

Wannigama, G.P.	Search for alkaloids in fruits, leaves, bark
Sirisena, D.M.	of the endemic Apocyanaceae. Isolation of
Wijesundera, R.C.	pure compounds - (1970)
Kandiah, S.	
Cave, A. ⁻¹	

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF CHEMISTRY

De Silva, K.T.D.	<u>CHEMISTRY OF SOME NATURE MEDICINAL PLANTS</u>
Kaluarachchi, S.	<u>AND THEIR PHARMACOLOGICAL ACTIONS</u> -(July
	1972)

1. Institute de Chimie des Substances Naturelles, Yvette, France.

N A T U R A L P R O D U C T S

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF CHEMISTRY (Contd.)

De Silva, K.T.D.
Surawectra, A.T.

CHEMISTRY AND STANDARDISATION OF
AYURVEDIC DRUGS - (October, 1973)

RESEARCH PUBLICATIONS

- DAHANAYAKE, M; SOMANATHAN, R. AND SULTANBAWA, M.U.S. (1972) -
Extractives of Calophyllum walkeri Wight and
Calophyllum pulcherrimum Wall, Guttiferae.
Proc. Ceylon Ass. Advmt. Sci., 28, 129
- DISSANAYAKE, S; BANDARANAIKE, W.M; SULTANBAWA, M.U.S. AND
CROMBIE, L. (1971) - Extractives of the
flowers of Horsfieldia iryagedhi (Gaertn) Warb.
(S. 'Ruk') Myristicaceae. Proc. Ceylon Ass. Advmt.
Sci., 27, 73
- GUNASEKERA, S.P; SOTHEESWARAN, S. AND SULTANBAWA, M.U.S. (1972) -
Isolation and characterisation of some triter-
penoid acids from the resins of Dipterocarpus
hispidus Thw (S. 'buhora') Dipterocarpus zeylanicus
Thw (S. 'galhora') and Doona congestiflora Thw
(S. 'tiniya'), Dipterocarpaceae. Proc. Ceylon
Ass. Advmt. Sci. 28, 123
- GUNASEKERA, S.P. AND SULTANBAWA, M.U.S. (1971 a) - Extractives
of Hynocarpus octandra L (S. 'waldivul') Flacour-
tiaceae. Proc. Ceylon Ass. Advmt. Sci., 27, 71

C H E M I S T R YRESEARCH PUBLICATIONS (Contd.)

- GUNASEKERA, S.P. AND SULTANBAWA, M.U.S. (1971 b) - Extractives of Trichadenia zeylanica Thw (S.'tololtitta') Flacourtiaceae. Proc. Ceylon Ass. Advmt. Sci. 27, 72
- GUNASEKERA, S.P. AND SULTANBAWA, M.U.S. (1972 a) - Isolation and partial structures of six new triterpenoids from Trichadenia zeylanica Thw (S.'tololtitta') Flacourtiaceae. Proc. Ceylon Ass. Advmt. Sci., 28, 119
- GUNASEKERA, S.P. AND SULTANBAWA, M.U.S. (1972 b) - Extractives of Hydnocarpus venenata Gaertn (S.'makulu') Flacourtiaceae. Proc. 28th Annual Sessions of the Ass. Advmt. Sci., 120
- GUNASEKERA, S.P. AND SULTANBAWA, M.U.S. (1973 a) - Chemical investigation of Ceylonese plants. Part V. Four new friedelane carboxylic acids from the bark of Trichadenia zeylanica Thw (Flacourtiaceae) Tetrahedron Lett., in the press
- GUNASEKERA, S.P. AND SULTANBAWA, M.U.S. (1973 b) - Chemical investigation of Ceylonese plants. Part IV. Six new triterpenoids from the bark of Hydnocarpus octandra Thw (Flacourtiaceae) Chem. and Ind., in the press
- GUNASEKERA, S.P.; SULTANBAWA, M.U.S. AND BALASUBRAMANIAM, S. (1973) - Chemical Investigation of Ceylonese plants. Part II. Isolation of Mangostin from the barks of Hydnocarpus octandra Thw. and Hydnocarpus venenata Gaertn (Flacourtiaceae) Phytochem., 12, 232

N A T U R A L P R O D U C T SRESEARCH PUBLICATIONS (Contd.)

- GUNATILAKE, P.A. AND SULTANBAWA, M.U.S. (1972) - Extractives of Madhuca nerifolia Thw. H.J. Lam (S. 'Ganmi'). Sapotaceae. Proc. Ceylon Ass. Advmt. Sci., 28, 124
- GUNATILAKA, A.A.J. AND SULTANBAWA, M.U.S. (1973) - Chemical investigation of Ceylonese plants. Part III. Extractives of the fruits of Argyreia populifolia. Choisy. (convolvulaceae) J. Chem. Soc. Perkin I. 1155
- JANOT, M.A; LIEBOEUF, M; CAVE, A; GONTAREL, R. AND HIJESEKERA, R.O.B. (1968) - Steroidal Alkaloids: Milliphylline - the first natural amino-glyco cardenolide isolated from the leaves of Hollarrhena mitis R.B. (Apocyanaceae) C.R. Acad. Sc. Paris 267, 1050 - 1052
- KITAGAWA, I; INADA, A; YOSIOKA, I; SULTANBAWA, M.U.S. AND SOMANATHAN, R. (1972) - Protobassic acid, a genuine sapogenol of seed kernel of Madhuca longifolia L. Chem. Pharm. Bull. 20, 630
- KITAGAWA, I; NAKANISHI, I; ITO, Y; YOSIOKA, I. AND SULTANBAWA, M.U.S. (1972) - On the constituents of seeds of Horsfieldia irryaghedhi Warb I. Chem. Pharm. Bull. (Japan) 20, 2278
- KURUPPU, K.D.M; BANDARANAIKE, W.M. AND SULTANBAWA, M.U.S. (1971) - Examination of gumexudate of Canarium zeylanicum (Retz) Bl. (S. 'Kekuna') Burseraceae. Proc. Ceylon Ass. Advmt. Sci. 27, 73
- NADARAJAH, M. (1969) - Collection and utilization of rubber seed in Ceylon. Rubb. Res. Inst. Ceylon Bull. 4, 23 - 31

C H E M I S T R YRESEARCH PUBLICATIONS (Contd.)

- NADARAJAH, M; ABEYSINGHE, A; DAYARATNE, W.C. AND THARNALINGAM, R.
(1973) - Potentialities of rubber seed collection and its utilization in Sri Lanka. Rubb. Res. Inst. Ceylon Bull. 8, (in press)
- PAVANASASIVAM, G. AND SULTANBAWA, M.U.S. (1973) - Chemical investigation of Ceylonese plants. Part VI. The occurrence of Cycloartenyl acetate, Cycloartenol and Cycloartenone in the barks of Artocarpus species (Moraceae) Phytochem., in the press
- SELLIAH, S.S; RAMACHANDRAN, S. AND SULTANBAWA, M.U.S. (1972) - Extractive of Mesua ferrea L. (M. Salicina Pl and Tri) Guttiferae. Proc. Ceylon Ass. Advmt. Sci., 28, 129
- SELLIAH, S.S. AND SULTANBAWA, M.U.S. (1971 a) - Biflavanoids of Carcinia terpnophylla Thw. (S.Kokatiya) Guttiferae. Proc. Ceylon Ass. Advmt. Sci., 27, 71
- SELLIAH, S.S. AND SULTANBAWA, M.U.S. (1971 b) - Extractives of Kayea stylosa Thw. (S. swoanda) Guttiferae. Proc. Ceylon Ass. Advmt. Sci., 27, 81
- SELLIAH, S.S. AND SULTANBAWA, M.U.S. (1972) - Extractives of Calophyllum cuneifolium Thw. Guttiferae. Proc. Ceylon Ass. Advmt. Sci. 28, 121
- SELLIAH, S.S; SULTANBAWA, M.U.S. AND OLLIS, W.D. (1972) - Extractives of Garcinia echinocarpa Thw. (S. madog) Guttiferae. Proc. Ceylon Ass. Advmt. Sci., 28, 124
- SOMANATHAN, R. AND SULTANBAWA, M.U.S. (1972) - Chemical investigation of Ceylonese plants. Part I. Extractives of Calophyllum calaba and Calophyllum bracteatum Thw. (Guttiferae) J. Chem. Soc. Perkin, I. 1935

Chemistry – Organic

4.2 C H E M I S T R Y

O R G A N I C

RUBBER RESEARCH INSTITUTE

RUBBER CHEMISTRY DEPARTMENT

PREPARATION AND USES OF CHLORINATED RUBBER

Nadarajah, M.
Kirubakaran, J.K.
Jayasinghe, P.P.

The present method for preparation of chlorinated rubber will be modified to prepare soluble chlorinated rubber and an attempt will be made to produce and use this substance commercially --(June, 1971)

PREPARATION AND USES OF CYCLISED RUBBER

Nadarajah, M.
Narangoda, H.
Balasingham, C.G.

Work will be done to (a) lower time and temperature of the reaction during manufacture of cyclised rubber, (b) manufacture it in Sri Lanka on a commercial scale and (c) use it as a reinforcing filler in natural rubber and in paints --(July, 1969)

PREPARATION AND USES OF RUBBER HYDROCHLORIDE

Nadarajah, M.
Tharmalingam, R.
Kasinathan, S.

The possibilities of preparing rubber hydrochloride in Sri Lanka and its possible uses will be investigated -- (January, 1972)

USE OF PAPAIN AS A LATEX COAGULANT

Nadarajah, M.
Yapa, P.A.J.
Balasingham, C.G.
Kasinathan, S.

The use of papain as a general coagulant for natural rubber latex in conjunction with formic acid for raw rubber manufacture will be investigated -- (June, 1972)

Yapa, P.A.J.

NON-RUBBER CONSTITUENTS IN HEVEA LATEX --
(April, 1973)

RUBBER RESEARCH INSTITUTE (Contd.)

RUBBER CHEMISTRY DEPARTMENT (Contd.)

Yapa, P.A.J.
Kasinathan, S.

ANTIOXIDANTS IN RUBBER SEED OIL -
(June, 1973)

RESEARCH PUBLICATIONS

- NADARAJAH, M; NARANGODA, H; BALASINGHAM, C.G; KIRUBAKARAN, J.K.
AND JAYASINGHE, P.P. (1973) - Preparation and
uses of cyclised rubber and of chlorinated rubber -
Sri Lanka International Rubber Conference -pre-print.
- NADARAJAH, M; YAPA, P.A.J; BALASINGHAM, C.G. AND KASINATHAN, S.
(1973) - Papain as a coagulant for natural rubber
latex. Sri Lanka International Rubber Conference -
pre-print.

4.2 C H E M I S T R Y

P H Y S I C A L

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF CHEMISTRY

FARADIC IMPEDANCE OF SOLID ELECTRODES

Canagaratne, S.G. Electrode kinetics of solid metals
Karunatilake, S.A.G.R. (in the first instance Ag/Ag⁺) was
Devanathan, M.A.V.⁻¹ investigated by measurement of the
 faradic impedance of the system as
 a function of frequency - (1969)

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF CHEMISTRY

Dharmawardena, M.W.C. (1) RESPONSE PROPERTIES OF ELECTRONS
 IN METALS - (April, 1973)
 (2) QUANTUM THEORY OF PLASMAS - (November,
 1970)

Dharmawardena, M.W.C. DIELECTRIC PROPERTIES OF POLYMERS -
Ratnayake, S. (September, 1973)

Wijayanayake, R.H. EFFECTS OF SOLUTES IN AZEOTROPES -
Weerasinghe, N.C.A. (August, 1972)

1. At Tea Research Institute

C H E M I S T R Y

RESEARCH PUBLICATIONS

CANAGARATNE, S.G. AND KARUNATILAKA, S.A.G.R. (1973) - Analysis of faradic impedance data. J. Electro Anal. Chem. - (in the press)

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

CANAGARATNE, S.G; KARUNATILAKA, S.A.G.R. AND DEVANATHAN, M.A.V. (1969) -and (1970) - Faradic impedance of solid electrodes. 25th and 26th Annual Sessions of the Ceylon Ass. Advmt. Sci.

4. N A T U R A L S C I E N C E S

4.3 E C O L O G Y

CEYLON INSTITUTE OF SCIENTIFIC AND INDUSTRIAL RESEARCH

INDUSTRIAL MICROBIOLOGY SECTION

JeyaRaj, E.E.	<u>POLLUTION STUDIES IN THE KELANI</u>
Siriwardena, P.P.G.L. ⁻¹	<u>RIVER - (1972)</u>
Dharmawardene, K.G. ⁻²	
Fernando, W.S. ⁻³	
Gunatilake, W.D.A. ⁻⁴	
De Silva, D.	
Sathkunandan, C. ⁻⁵	
Costa, H. ⁻⁶	

MEDICAL RESEARCH INSTITUTE

DIVISION OF ENTOMOLOGY

ECOLOGICAL STUDIES ON POPULATIONS
OF CULEX PIPIENS FATIGANS WIEDEMANN -
VECTOR OF FILARIASIS DUE TO WUCHERERIA
BANCROFTI IN SRI LANKA

Samarawickrema, W.A.	A study of (i) age composition of
Jayasekera, Nalini	natural populations of <u>Culex pipiens</u>
	<u>Fatigans</u> in relation to filariasis
	transmission in Peliyagoda;

-
- 1,2. At Radio-isotope Centre
 - 3,4. Vidyodaya Campus
 5. Govt. Analysts Department
 6. Vidyalankara Campus

N A T U R A L S C I E N C E S

MEDICAL RESEARCH INSTITUTE (Contd.)

DIVISION OF ENTOMOLOGY (Contd.)

ECOLOGICAL STUDIES ON POPULATIONS OF
CULEX PIPIENS FATIGANS WIEDEMANN-
VECTOR OF MALARIASIS DUE TO WUCHERERIA
BANCROFTI IN SRI LANKA (Contd.)

Samarawickrema, W.A.

Jayasekera, Nalini

(ii) the dispersal and longevity of this mosquito by means of mark-release-recapture experiments using radio-isotope p^{32} and poster paint. Results are used to estimate the absolute population of the species in the area at the time -- (1962, continuing)

ECOLOGY OF MOSQUITOES BREEDING IN RICE
FIELDS ASSOCIATED WITH ENCEPHALITIS
SYNDROME

Samarawickrema, W.A.

Jayasekera, Nalini

Vitarana, U.J.⁻¹

Some mosquitoes belonging to the Culex vishnui complex transmit Japanese encephalitis in the S.E.Asian region. Aim of project is to determine what numbers of the complex are present in Sri Lanka and to study their identity, distribution, ecology, behaviour and transmission potential to disease.

1. Virologist collaborating in virus isolation from mosquitos

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF ZOOLOGY

Arudpragasam, K.D.

SURVEY (BIOLOGICAL) OF JAFFNA
LAGOON WITH SPECIAL REFERENCE TO
PRAWN CULTURE - (1971/1972)

Atapattu, Damayanthi, H.

De Silva, C.

PRELIMINARY STUDIES OF SANDY BEACHES
WITH SPECIAL REFERENCE TO THE
EDIBLE BIVALVES - (June, 1973)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF AGRICULTURE

A STUDY OF THE FACTORS AFFECTING
GROWTH AND REPRODUCTION OF SALVINIA
AURICULATA WITH A VIEW TO FINDING
A METHOD OF BIOLOGICAL CONTROL

Herath, H.M.W.

The chemical control of salvinia appears to have been unsuccessful. This study is therefore aimed at finding a suitable method of biological control, e.g. using insects, snails, algae, etc. - (1971)

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF BIOLOGICAL SCIENCES

THE CONTROL OF EUPHATORIUM ODORATUM,
A PERNICIOUS WEED OF COCONUT PLANTA-
TIONS IN THE LOW COUNTRY OF CEYLON

Peries, O.S.

Weerakoon, W.L.

Eupatorium is one of the most

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF BIOLOGICAL SCIENCES (Contd.)

THE CONTROL OF EUPHATORIUM ODORATUM, A
PERNICIOUS WEED OF COCONUT PLANTATIONS
IN THE LOW COUNTRY OF CEYLON (Contd.)

Peries, O.S.⁻¹

Weerakoon, W.L.

damaging weeds of coconut plantations in the low country of Ceylon. Knowledge of its ecology will facilitate control, reduce expenditure (including foreign exchange on weedicides) and minimise pollution of the countryside by weedicides -- (1968)

(1) EFFECT OF STEEL FACTORY EFFLUENTS ON THE
FRESH WATERS AT ORUWELA

Weerakoon, A.C.J.

Ariyawansa, K.B.⁻²

This is the first attempt by any industrial organization in Ceylon to monitor the effects of its industrial effluents and to control them. No satisfactory steps to abate or prevent environmental pollution by any industry can be taken until knowledge has been gathered of the nature and degree of (quantative measure) the effects of the effluents of that industry -- (1968)

-
1. Director, Rubber Research Institute, Agalawatte
 2. Post-graduate student, Dept. of Biological Sciences, Vidyodaya Campus

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF BIOLOGICAL SCIENCES (Contd.)

(2) INCIDENCE AND SOURCES OF AQUATIC
POLLUTION IN THE CANAL SYSTEM OF
COLOMBO TOWN

Weerakoon, A.C.J.
Ariyawansa, K.B.

A study of the effects of pollution and the factors contributing to it. This survey has already led to the beginnings of action by the authorities to abate the nuisance ..
(1970)

RESEARCH PUBLICATIONS

- ARIYAWANSA, K.B. (1973) - (a) Effect of steel factory effluents on the fresh water at Oruwela, (b) Incidence and source of aquatic pollution in the canal system of Colombo Town. M.Sc. Thesis, Vidyodaya Campus, University of Sri Lanka, Nugegoda. in preparation
- SAMARAWICKREMA, W.A. (1962) - Follicular relics in wild caught Culex pipiens Fatigans Wiedemann. Ceylon Bull. Wld. Hlth. Org., 27, 637 - 640
- SAMARAWICKREMA, W.A. (1967) - A study of the age composition of natural populations of Culex pipiens Fatigans Wiedemann in relation to transmission of filariasis due to Wuchereria bancrofti Cobbold. Ceylon Bull. Wld. Hlth. Org., 37, 117 - 137

N A T U R A L S C I E N C E S

RESEARCH PUBLICATIONS (Contd.)

- SAMARAWICKREMA, W.A. (1967) - Studies on the duration of the egg laying cycle and dispersal habits of the mosquito Culex pipiens Fatigans by means of mark-release-recapture experiments using poster paint and P^{32} . Proc. Ceylon Ass. Advmt. Sci., 1,
51
- SAMARAWICKREMA, W.A. (1973) - Studies on the dispersal and longevity of Culex pipiens Fatigans in Ceylon by means of mark-release-recapture experiments using radio-isotope P^{32} (in preparation)
- WEERAKOON, A.C.J. AND ARIYAWANSA, K.B. (1972) - Sewer canals - pollution in Colombo waterways. Loris XII, 232 -237
- WEERAKOON, W.L. (1972) - The Control of Euphatorium odoratum, a pernicious weed of coconut plantations in the low country of Ceylon. M.Sc. Thesis, Vidyodaya Campus, University of Sri Lanka, Nugegoda.

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- WEERAKOON, A.C.J. AND ARIYAWANSA, K.B. (1971) - A survey of the incidence of pollution in the canals in the city of Colombo. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.

4. N A T U R A L S C I E N C E S

4.4 G E O L O G Y

GEOLOGICAL SURVEY DEPARTMENT

DETERMINATION OF TRACE MATERIALS- MAINLY
Ca²⁺, Mg²⁺, Mn²⁺, K⁺ IN RUBBER SOILS AND
RUBBER LEAF EXTRACTS

De Silva, N.R.
Peries, O.S.⁻¹
Silva, C.G.⁻²

Rubber soil and rubber leaf extracts from selected areas in the Kalutara district (approx. 2000 acres) are being analysed for Ca²⁺, Mg²⁺, Mn²⁺ and K⁺ using Atomic Absorption Spectrophotometry. The areas sampled are ones in which rubber replanting has been done in the period 1952 - 1963 -- (December, 1972)

PETROGENESIS OF AMPHIBOLITE AND GRANULITE
FACIES ROCKS OF SRI LANKA

Hapuarachchi, D.J.A.C.

Sub-division of the granulite facies in Sri Lanka based on physical factors such as high load pressures and the partial pressures of water vapor and carbon dioxide. Temperatures and pressures also reach the amphibolite facies in some areas -- (1956, continuing)

(1) STUDY OF BAUXITE RESOURCES OF SRI LANKA

Herath, J.W.

A study of the clay mineralogy of lateritic and other soils of the Island, in order to find out whether high alumina clays which approach the composition of bauxite occurs within the country --(1955, continuing)

GEOLOGICAL SURVEY DEPARTMENT (Contd.)

(2) *INDUSTRIAL CLAYS OF SRI LANKA

Herath, J.W.

The geology, mineralogy and ceramic properties of the industrial clays of Sri Lanka --(1955, continuing)

WATER QUALITY IN TWO SELECTED RIVER BASINS OF SRI LANKA

Pattiaratchi, D.B.

Fonseka, J.P.R.

De Silva, N.R.

Dias, D.P.

Investigation of the quality of surface and ground water in the Kaluganga and Kala Oya river basins (located in the wet and dry zones respectively) to classify the waters in respect of their properties -- (January, 1973)

Pattiaratchi, D.B.

Fonseka, J.P.R.

Hapuarachchi, D.J.A.C.

Wickremasinghe, O.C.

*ORIGIN AND CHEMISTRY OF SRI LANKA GRAPHITE - (1972)

ORIGIN AND CHEMISTRY OF SRI LANKA APATITE BEARING CARBONALITE

Pattiaratchi, D.B.

Fonseka, J.P.R.

Wickremasinghe, O.C.

Seneviratne, L.K.

Murugiah, V.

Studies of the Eppawela carbonate deposits, the chemistry of the bulk rock, apatite and trace elements -- (1972)

* Research partly carried out at (a) Division of Building Research, C.S.I.R.O., Australia and (b) Dept. of Applied Mineral Science, University of Leeds

N A T U R A L S C I E N C E S

GEOLOGICAL SURVEY DEPARTMENT (Contd.)

GRAVITY MAP OF SRI LANKA

Pattiaratchi, D.B.
Ranasinghe, V.V.C.
Hatherton, T.⁻¹

Joint project with the department of geophysics New Zealand to produce a gravity map of Sri Lanka and to interpret the gravity anomalies - (November, 1971)

STUDY OF ELECTRO-MAGNETIC ANOMALIES IN SRI LANKA

Ranasinghe, V.V.C.

A study is being made of the EM anomalies of the field work carried out in relation to electrically conducting ore bodies in the ground. Research is presently being done to interpret these anomalies to locate precisely these subsurface conducting bodies - (1969)

CHEMICAL AND SPECTROCHEMICAL STUDY OF RARE-MINERALS OF SRI LANKA

Wickremasinghe, O.C.

At present, there is little or no analytical data on the rare earth minerals of Ceylon. The project involves a chemical and spectrochemical study of rare earth minerals from pegmatites and also from the heavy minerals of the gem gravels of Ceylon -(1973)

IRRIGATION DEPARTMENT

GEOLOGY & HYDROGEOLOGY DIVISION

Wijesinghe, M.W.P.

(1) PUTTALAM -- PALAVI EXTENSION PROJECT

Deep artesian aquifers have been located by drillings underlying a saline water table aquifer, bordering the Puttalam Lagoon. --(June, 1972)

(2) JAFFNA PENINSULA EXTENSION PROJECT

Having completed the preliminary surveys on the fresh water storage and hydrogeological problems, detailed investigations are being made on a regional basis, to evaluate the tremendous leakage of fresh aquifers to waste -- (January, 1973)

(3) PARANTHAN -- MULLAITIVU EXTENSION PROJECT

Investigators have located aquifers of artesian and under-water table conditions in areas of Puthu-Kudiyiruppu and Paranthan respectively -- (October, 1971)

(4) VANATHAVILLU EXTENSION PROJECT

Exploratory surveys and drilling for ground water resources in the peripheral regions of Vanathavillu artesian aquifer namely Aruwakalu and Karudi pooval --(May, 1970)

N A T U R A L S C I E N C E S

IRRIGATION DEPARTMENT (Contd.)

GEOLOGY & HYDROGEOLOGY DIVISION (Contd.)

(5) MANNAR - POONERYN EXTENSION PROJECT

Wijosinghe, M.W.P.

Preliminary geophysical and drilling investigations to subsurface fresh water resources in the limestone belt Mannar-Pooneryn. Two extensive deep aquifers around Mulankavil have been located where detailed aquifer investigations are now being done - (January, 1970)

DEMARCATIION OF AGRO-ECOLOGICAL ZONES OF SRI LANKA

De Alwis, K.A.

Jayawardena, N.S.

Intergrating the soil landscape environmental and agronomic parameters, synthesising the distinctive agro-ecological regionals as a first approximation -(1972)

Dimantha, S.

MORPHO-GENETIC AND CAPABILITY STUDIES ON THE BOG AND HALF BOG SOILS OF THE SOUTH WEST LOW COUNTRY WET ZONE - (1970)

Jayawardene, N.S.

Balasunderam, R.

(1) LAND CLASSIFICATION CRITERIA FOR PLANTATION AND AGRICULTURE - (1971)

(2) LAND CLASSIFICATION CRITERIA FOR IRRIGATED FARMING

Quantifying both soil characteristic and economic returns for land classification standards - (1971)

IRRIGATION DEPARTMENT (Contd.)

GEOLOGY & HYDROGEOLOGY DIVISION (Contd.)

Joshua, W.D.

PLANT-SOIL WATER ENERGY RELATIONSHIPS
AND CHARACTERISTICS OF SRI LANKA SOILS -
(1972)

Panabokke, C.R.

De Alwis, K.A.

Joshua, W.D.

Somasiri, S.

Jayawardena, N.S.

Dimantha, S.

Balasunderan, R.

NATIONAL SOIL SURVEY OF CEYLON

Mapping, identification, classification and investigation of the soil resources of Sri Lanka -
(Dry zone - 1960; Wet zone 1970)

Panabokke, C.R.

Joshua, W.D.

Somasiri, S.

ON FARM IRRIGATION LAYOUT ALTERNATIVES - (1972)

Somasiri, S.

PARAMETERS FOR DRAINAGE DESIGN AND
OPERATION ON SOIL LANDSCAPES OF
SRI LANKA - (1972)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF GEOLOGY

GEOLOGICAL STUDIES IN THE NORTH
WESTERN PART OF CEYLON

Gunatilake, H.A.

This investigation is divided into two parts as follows -

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF GEOLOGY (Contd.)

GEOLOGICAL STUDIES IN THE NORTH WESTERN
PART OF CEYLON (Contd.)

Gunatilake, H.A.

- (a) Recent sedimentation in the N - W coast of Sri Lanka (to be completed in March 1974)
- (b) A study of the Miocene Limestone of the Western and N - W part of Sri Lanka - (1973)

GEOLOGY AND MORPHOLOGICAL STUDIES OF THE
UDUWELA AREA

Vitanage, P.W.

Dissanayake, C.B.

Silva, K.K.M.W.

Dahanayake, K.G.A.

Liyanarachchi, D.T.P.

A detailed geological and morphological mapping of the Uduwela area was carried out to provide a base map and background information for the delegates and participants for the second seminar on geochemical prospecting methods and techniques held at the Dept. of Geology, Peradeniya. The report describes the geology and morphology of the area around Kehelkotuwa Ela on the Ampitiya - Uduwela Road, Kandy area, Ceylon - (1970)

PREPARATION OF A MAP SHOWING POTENTIAL
AREAS IN THE CENTRAL HIGHLANDS OF CEYLON
FOR PROSPECTING FOR BAUXITE DEPOSITS

Vitanage, P.W.

Jayasinghe, N.R.

Eriyagama, S.C.

In 1971, a field camp was held in co-operation with the Ministry of Education to train the necessary personnel for sampling of mineral deposits (including bauxite) in various parts of the island.

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF GEOLOGY (Contd.)

PREPARATION OF A MAP SHOWING POTENTIAL
AREAS IN THE CENTRAL HIGHLANDS OF
CEYLON FOR PROSPECTING FOR BAUXITE
DEPOSITS (Contd.)

Vitanage, P.W.

Jayasinghe, N.R.

Eriyagama, S.C.

Arrangements are now being made by the staff of the Geology Department to prepare a map showing the potential areas for prospecting for bauxite deposits in the Central Highlands of Ceylon --(1971/73)

(1) RECONNAISSANCE ECONOMIC MINERAL
SURVEY OF MAHAWELI AND MAHA OYA
DRAINAGE BASINS

Vitanage, P.W.

Staff of Geology Dept.

It is proposed to carry out a reconnaissance survey of the place deposits and other minerals in the two drainage basins Mahaweli and Maha Oya. During the last few years, limited geological surveys of these drainage basins have been carried out as part of the field mapping programme for geology students -- (1971/73)

(2) THE GEOLOGY OF THE AREA AROUND
THE PROPOSED TUNNEL TRACE, MASKELIYA
OYA PROJECT, STAGE II

The main purpose of the investigations was to determine the feasibility of shifting the tunnel axis South-Westward to reduce the length of the

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF GEOLOGY (Contd.)

(2) THE GEOLOGY OF THE AREA AROUND THE PROPOSED
TUNNEL TRACE, MASKELIYA OYA PROJECT,
STAGE II (Contd.)

Vitanage, P.W.

Staff of Geology Dept.

adits. As the available surface geological information and the bore-hole data were inadequate for this purpose, the author carried out a further field study of the geology and structure along the original tunnel line and on either side of the tunnel trace during April and May - (1970)

(3) A STUDY OF GEOMORPHOLOGY AND THE MORPHO-
TECTONIC OF CEYLON AND PREPARATION OF A
 $\frac{1}{2}$ INCH. WALL-MAP SHOWING MORPHOLOGY AND
MORPHOTECTONICS OF CEYLON

Purpose of present study is to clarify and evaluate the significance of the striking and persistent inter-relationship of the lithology and structure of the pre-cambrian terrain and the present morphological features, small as well as large scale, in the different parts of the island. The present study has also been planned as a synthesis of the geological and morphological field investigations carried out by the author since 1953 in various parts of Ceylon - (1970)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF GEOLOGY (Contd.)

ECONOMIC MINERAL SURVEY OF UDA

WALAWE AREA

Vitanage, P.W.
Staff of Geology Dept.
Senior Geology Student

The purpose of the survey was to locate any potential gem and other economic mineral deposits especially below the dam site in the Uda-Walawe drainage basin. Heavy minerals were collected by planning all the stream below the dam site and along the channel. In addition to the sampling by planning, reconnaissance geological mapping was carried out along the spill way and in the main quarries -
(1969/73)

RESEARCH PUBLICATIONS

DE SILVA, K.A. AND JAYAWARDENE, N.S. (1972) - Demarcation of Agro Geological Zones. National Atlas Series.

HAPUARACHCHI, D.J.A.C. (1959) - Preliminary metamorphic facies studies of the rocks of the Kirindi Oya Basin (Abs.) Proc. 15th Annual Sessions of the Ceylon Ass. Advmt. Sci., 1, 26

N A T U R A L S C I E N C E SRESEARCH PUBLICATIONS (Contd.)

- HAPUARACHCHI, D.J.A.C. (1961 a) - On the incidence of hornblende and biotite in the granulite facies rocks of areas in the south-west and south-east of Ceylon. (Abs.) Proc. 17th Annual Sessions of the Ceylon Ass. Advmt. Sci., 1, 24
- HAPUARACHCHI, D.J.A.C. (1961 b) - On the occurrence of porthitic orthoclase in some of the microcline-bearing biotite or biotite-hornblende gneisses in the middle and southern parts of the Kirindi Oya basin (Abs.) Proc. 17th Annual Sessions of the Ceylon Ass. Advmt. Sci., 1, 25
- HAPUARACHCHI, D.J.A.C. (1961 c) - The imprints of two metamorphisms in the Kirindi Oya basin (Abs.) Proc. 17th Annual Sessions of the Ceylon Ass. Advmt. Sci., 1, 28
- HAPUARACHCHI, D.J.A.C. (1962) - A new approach to the problems of metamorphism in Ceylon. Proc. 17th Annual Sessions of the Ceylon Ass. Advmt. Sci., 2, 109 -134
- HAPUARACHCHI, D.J.A.C. (1965 a) - The geology of the eastern part of the Gampaha Sheet, Part I - Petrology (Abs.) Proc. 21st Annual Sessions of the Ceylon Ass. Advmt. Sci., 1, 44
- HAPUARACHCHI, D.J.A.C. (1965 b) - The geology of the eastern part of the Gampaha Sheet, Part II - Structure (Abs.) Proc. 21st Annual Sessions of the Ceylon Ass. Advmt. Sci., 1, 44
- HAPUARACHCHI, D.J.A.C. (1965 c) - Hornblende granulite subfacies mineral assemblages from areas in South West and South East Ceylon. (Abs.) Proc. 21st Annual Sessions of the Ceylon Ass. Advmt. Sci., 1, 46

RESEARCH PUBLICATIONS (Contd.)

- HAPUARACHCHI, D.J.A.C. (1967) - Hornblende-granulite subfacies mineral assemblages from areas in Ceylon. Geol. Mag., 104, 29 - 34
- HAPUARACHCHI, D.J.A.C. (1968) - Cordierite and Wollastonite bearing rocks of south western Ceylon. Geol. Mag., 105, 317 - 324
- HAPUARACHCHI, D.J.A.C. (1971) - Garnet-diopside granulites - A new rock type and their significance (Abs.) Proc. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci., 1, 59
- HAPUARACHCHI, D.J.A.C. (1972 a) - Granulites of Ceylon. Metamorphic temperatures. (Abs.) Proc. 28th Annual Sessions of the Ceylon Ass. Advmt. Sci., 1, 93
- HAPUARACHCHI, D.J.A.C. (1972 b) - Evolution of the granulites and sub-divisions of the granulites facies in Ceylon. Geol. Mag., 109(5), 435 - 443
- HENRECK, R. AND SIRIMANNE, C.H.L. (1968) - Geology and ground water resources in Vanathavillu area. Ministry of Land, Irrigation and Power, Govt. of Ceylon Publication
- JAYAWARDANE, N.S. AND BALASUNDARAM, R. (1973) - Land classification of irrigated farming. Land classification in Mahaweli Ganga Development Project Vol. III, Feasibility study for Stage II.
- PANABOKKE, C.R. (1972) - The soil map of Ceylon
- VITANAGE, P.W. (1979 a) - A study of the Gemorphology and Morphotectonics of Ceylon. Proc. of the 2nd Annual Sessions on Geochemical Prospecting Methods and Techniques, Mineral Resources Development Series, 38, 391 - 405, U.N. W.Y.

N A T U R A L R E S O U R C E S

RESEARCH PUBLICATIONS (Contd.)

- VITANAGE, P.W. (1970 b) - Report on the Geology of the Maskeliya Oya Project Area. Ceylon Electricity Board, H.O.P. II Hydro Project - To be published
- VITANAGE, P.W. (1972) - Post precambrian uplifts and regional neotectonics movements in Ceylon. Proc. 24th International Geological Congress, Montreal Canada
642 - 654
- VITANAGE, P.W; DISSANAYAKE, C.B; SILVA, K.K.M.W; DAHANAYAKE, K.G.A. AND LIYANAARACHCHI, D.T.P. (1970) - Geology and morphology of the Udewela area. Proc. of the 2nd Annual Sessions of Geochemical Prospecting Methods and Techniques Mia. Res. Develop. Series, No. 38, U.N., N.Y. 411 - 413

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- BALENDRAN, V.S; SIRIMANNE, C.H.L. & ARUMUGAM, S. (1968) - Ground water in Jaffna. 24th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- WIJESINGHE, M.W.P. (1971) - Hydrogeology of some areas in the north western sedimentary belt of Ceylon. 41st Annual Sessions of the Central Board of Irrigation and Power, India.
- WIJESINGHE, M.W.P. (1972) - Underground water resources. International Hydrological Decade Seminar

Microbiology

4. N A T U R A L S C I E N C E S

4.5 M I C R O B I O L O G Y

C E Y L O N I N S T I T U T E O F S C I E N T I F I C A N D I N D U S T R I A L R E S E A R C H

I N D U S T R I A L M I C R O B I O L O G Y S E C T I O N

R E T T I N G O F C O I R

JeyaRaj, E.E.
De Silva, Marina⁻¹

Microbiological and biochemical studies for acceleration and improvement of retting - (1970-1971)

D E V E L O P M E N T O F A P R O C E S S O F T E R M I N A L S T E R I L I -
Z A T I O N O F D E S S I C A T E D C O C O N U T

JeyaRaj, E.E.
Jayatissa, P.M.
De Silva, Marina
Selvaraj, Ranjana

Process was developed using coliform cultures as indicator - (1968-1971)

U S E F U L P R O D U C T S F R O M M A N I O C U S I N G M I C R O B I A L
M E T H O D S

JeyaRaj, E.E.
Janz, E.R.
Amarakone, S.A.

Screening microbial cultures for utilization of starch to produce glucose etc. Utilization of wastes for obtaining mould and SCP, alcohol, etc. Abatement of pollution by wastes. Detoxification of manioc products - (1972)

B I O L O G Y A N D B I O C H E M I S T R Y O F Y E A S T S I S O -
L A T E D F R O M L O C A L R A W M A T E R I A L S

JeyaRaj, E.E.
Vanniasinkam, Anandi
Jayatissa, P.M.
Amarakone, S.A.

Fermentation of (a) mature coconut water to obtain a spirit with flavour of coconut arrack, (b) tea cider - (1967)

1. Presently at the National Science Council

M I C R O B I O L O G Y

COCONUT PROCESSING BOARD

RESEARCH & DEVELOPMENT DIVISION

WHITE FIBRE PROJECT

Kulatunga, R.A.

Subasinghe, P.

Devadasan, V. (Miss)

Hemachandra, M.A.P.

1. Laboratory Research:- Investigations into the microbiological and biochemical aspects of retting of coconut husks with a view to shortening the retting period and to improve the quality of the fibre.
2. Field Research:- Experimentations on retting to be carried out in pits, tanks and lagoon (in Ratgama) to determine the best and economical methods of retting and causes of off-coloured fibre. Introduction of new machinery for fibre extraction and spinning yarn -(October, 1972)

CO-OPERATIVE WHOLESALE ESTABLISHMENT

RESEARCH AND DEVELOPMENT DIVISION

FUNGI AND MOULDS IN FOOD

De Silva, N.N.

Study of the fungal flora of different items of food, especially pulses, with respect to their spoilage by fungi -(1972)

TYPE-CULTURE COLLECTIONS

De Silva, N.N.

Illeperuma, U. (Miss)

Study of the properties of microbiological cultures, especially in relation to food spoilage -(1970)

N A T U R A L S C I E N C E S

DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH STATION, MAHAILUPPALLAMA

SOYA BEAN BACTERIA

Wijewardena, D.

- a) To evaluate the performance of the strain of bacteria 'Nitrogin' on soya bean varieties at different location in co-ordinated trials.
- b) A study of the survival of bacteria in soil.
- c) Isolation and testing of rhizobial bacterial strains affecting soya beans.

RUBBER RESEARCH INSTITUTE

RUBBER CHEMISTRY DEPARTMENT

MOULD GROWTH IN RIBBED SMOKED SHEET

Dayaratne, W.C.

Nadarajah, M.

The use of Santobrite (Sodium Pentachlorophenate) as a fungicide (to prevent mould growth in RSS) in the collecting depots and at packers stores will be investigated.

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF BIOLOGICAL SCIENCES

STUDIES ON THERMOPHILIC FUNGI OF

'KOHUBUTH'

Gunasekera, S.A.

Investigation of the fungi which thrive at high temperatures in Kohubuth dumps and poonac causing fires --(1969)

M I C R O B I O L O G Y

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF BIOLOGICAL SCIENCES (Contd.)

AN INVESTIGATION OF THE MICROBIOLOGY
OF RETTING OF COCONUT HUSK IN COIR
PRODUCTION

Gunasekera, S.A.

Weerasekera, W.M.K. (Miss)

Studies on micro-organisms responsible for retting with a view to hastening the long drawn out retting process and obtaining fibre of good quality - (1972)

A TECHNIQUE FOR THE QUANTITATIVE
STUDY OF DYNAMIC GROWTH PATTERNS OF
MICRO-ORGANISMS ON AGAR MEDIA

Nandadasa, H.G.

Fernando, P.C.B.⁻¹

Paulis, D.V.N.M. (Miss)⁻²

An optical densitometry technique for the study of the growth of micro-organisms in agar media has been largely limited to liquid media. Certain aspects of microbial colony growth like characteristic morphological patterns of colony growth and cellular differentiation within colonies has been poorly studied. The present technique has potential application in this and many other fields of microbiology -(1972)

1. Physics Department, Vidyodaya Campus

2. Research Student, Physics Department, Vidyodaya Campus

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF BIOLOGICAL SCIENCES (Contd.)

GENETICS OF LACTIC ACID BACTERIA IN MILK
CURDS

Mandadasa, H.G.

Rohita, H.B.⁻¹

Several types of bacteria are associated with the formation of the different kinds of milk curds produced in Ceylon. The type of bacterian seems to be one of the major factors determining the quality of the product. Genetical investigations will help to isolate new strains of bacteria with improved qualities -(1972)

RESEARCH PUBLICATIONS

- DAYARATNE, W.C. AND MUNASINGHE, H.L. (1971) -- Mould contamination of rubber. Q. J. Rubb. Res. Inst. Ceylon, 48, 136 - 146
- HEINISCH, K.F. AND MADARAJAH, M. (1961) - Preservation of sheet rubber against mould. Part I. Q.J. Rubb. Res. Inst. Ceylon, 37, 43 - 48
- HEINISCH, K.F; MADARAJAH, M. AND MUTHUKUDA, D.S. (1962) - Preservation of sheet rubber against mould. Part II. Q.J. Rubb. Res. Inst. Ceylon, 38, 40 - 46

-
1. Research Student, Dept. of Biology, Vidyodaya Campus, presently at the Coconut Research Institute

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- HEINISCH, K.F. AND NADARAJAH, M. (1960) - Investigations on mould growth on sheet rubber. Natural Rubber Research Conference, Kuala Lumpur.
- JANZ, E.R. AND AMARAKONE, S.A. (1973) - Production of the starch hydrolyzing enzyme gluco-amylase. I. General aspects; II. Effect of nitrogen source in mould culture medium. Annual Sessions of the Ceylon Inst. Chem.
- JEYARAJ, E.E. AND DE SILVA, MARINA (1970) - Retting of coir. 26th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- JEYARAJ, E.E. AND JAYATISSA, P.M. (1972) - Utilization of coconut water to obtain potable spirit. UNESCO/ICRO work study, Kuala Lumpur, on waste recovery by micro-organisms.

Physics

4. N A T U R A L S C I E N C E S

4.6 P H Y S I C S

CEYLON INSTITUTE OF SCIENTIFIC AND INDUSTRIAL RESEARCH

APPLIED PHYSICS SECTION

A STUDY OF THE LOWER EQUATORIAL
IONOSPHERE MAKING USE OF GROUND
BASED RADIOWAVE ABSORPTION MEASURE-
MENTS

Gnanalingam, S.
Ratnasiri, P.A.J.
Anandasivam, K.
Kane, J.A.⁻¹

Vertical incidence absorption was systematically measured by pulse reflection method on several radio frequencies in the range 2.0-5.4 MHz from 1964 - 1970. A limited series of measurements were also made on 570 KHz and 1.33 MHz. The data obtained is being analyzed to derive quantitative empirical relationships which describe the main features of equatorial absorption. Theoretical studies are being pursued to explain these relationships in terms of the ion-pair production and loss processes that occur in the lower ionosphere --
(January, 1964)

1. NASA, Goddard space flight centre

N A T U R A L S C I E N C E SCeylon Institute of Scientific and Industrial Research (Contd.)APPLIED PHYSICS SECTION (Contd.)A THEORETICAL INVESTIGATION OF THE DISTRIBUTION OF MINOR NEUTRAL CONSTITUENTS AND IONIC SPECIES IN THE UPPER ATMOSPHERE

Ratnasiri, P.A.J.

A photochemical model of the upper atmosphere incorporating the effects of diffusive transport has been developed. The model describes the diurnal variation of the height distribution of the minor neutral constituents, O_3 , $O_2(1\Delta)$, $O(3P)$, $O(1D)$, H, H_2 , OH, HO_2 , H_2O_2 , NO, NO_2 , N, N_2O , CO and CH_4 . The dependence of these distributions on various factors that influence them is being investigated. These studies are being extended to cover the height distribution of the ionic species present in the lower ionosphere - (February, 1972)

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUSDEPARTMENT OF PHYSICSPOLARISATION CHARACTERISTICS OF GEOMAGNETIC MICROPULSATIONS RECORDED IN COLOMBO AND JAFFNA

Kannangara, M.L.T.

Kunaratnam, K.

The general characteristics of micropulsation have been investigated at the Colombo Campus since 1964. This project focusses attention particularly on the polarisation characteristics of these

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)DEPARTMENT OF PHYSICS (Contd.)

Kannangara, M.L.T.

Kunaratnam, K.

POLARISATION CHARACTERISTICS OF
GEOMAGNETIC MICROPULSATIONS RECOR-
DED IN COLOMBO AND JAFFNA (Contd.)

disturbances, especially to see if the equatorial electrojet current in the ionosphere has any connection with these polarisation characteristics. With this in view, a portable recovering equipment has been made and recordings of micropulsations are now being taken in Jaffna by Dr. K.Kunaratnam.

Mutukumarana, T. de S.

- (1) THE STRUCTURE OF MICA CLEAVAGE SURFACES AND THE EFFECT CAUSED BY HEAT
- (2) THE STRUCTURE OF SILVER LAYERS DEPOSITED ON FUSED QUARTZ AND GLASS
- (3) THE STRUCTURE OF SILVER LAYERS DEPOSITED ON MICA
- (4) THE EFFECT OF SUBSEQUENT HEAT TREATMENT ON THE SILVER DEPOSIT
- (5) THE FORMATION OF HEXAGONAL SILVER AND THE CONTAMINATION OF FILMS IN THE LABORATORY ATMOSPHERE
- (6) MUSCOVITE MICA ULTRAFINES

Muscovite mica was crushed and particles of different sizes (fractions) including the ultra-fines obtained in an elutriator.

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS (Contd.)

DEPARTMENT OF PHYSICS (Contd.)

(6) MUSCOVITE MICA ULTRAFINES (Contd.)

Mutukumarana, T. de S. It was intended to heat the ultrafines to 200°C and above, and observe any changes in structure with the X-ray diffractometer in the Dept. of Chemistry. The globular formation of the ultrafines was observed, but the structure determination could not be done as the diffractometer was shifted to the Department of Chemistry in Peradeniya.

STRUCTURE OF THE SURFACE OF A MICA CLEAVAGE

Mutukumarana, T. de S.
Kelanlawela, K.R.S.S. An attempt is being made to make a study of the structure of the surface of a mica cleavage at room temperature, and after heating to 200°C, and above by multiple beam interferometry.

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF PHYSICS

A THEORETICAL INVESTIGATION OF THE
ELECTRICAL PROPERTIES OF COMPOSITE
MATERIALS

Davies, W.E.A. The purpose of this project is to obtain correlations in the form of explicit formulae, between the electrical properties and the geometrical arrangement of the constituent phases --(February, 1972)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)DEPARTMENT OF PHYSICS (Contd.)AN INVESTIGATION OF THE DIELECTRIC
PROPERTIES OF RUBBERIZED COIR
FIBRE

Davies, W.E.A.

Jayaweera, A.R.

This project is designed to measure the dielectric constants of rubberized coir fibre mattress of a function of the volume fraction of coir. Theoretically, the sample is treated as a composite of rubberized fibre and air. The results obtained are also directly applicable to thermal conductivity, electrical conductivity and magnetic permeability - (May, 1972)

INVESTIGATING MAGNETIC FIELDS USING
THE PRINCIPLES OF PROTON MAGNETIC
RESONANCE

Dayaratne, L.H.

Jayathilaka Banda, P.M.

The purpose of this project is to build a magnetometer using the principle of proton magnetic resonance. No magnetometer on this principle has been developed and constructed in Sri Lanka. This project will not only provide training and experience in the technical know-how, but will also enable physicists to carry out precision magnetic measurements with a magnetometer that is locally constructed at about 1/5th the cost of an imported instrument - (June, 1972)

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF PHYSICS (Contd.)

Dissanayake, G.A. INVESTIGATION OF THE PROPERTIES OF LOCAL
Karunaratne, B.S.B. TIMBER MATERIAL, INCLUDING THEIR STRENGTH,
Gunasoma, K.A. ELASTICITY AND CREEP -- (January, 1973)

(1) SPIN WAVES IN ANTIFERROMAGNETS

Fairclough, T.J. Study of the effect of an applied stress
on the stability of an antiferromagnet --
(March, 1973)

(2) SPIN WAVE IN ANTIFERROMAGNETS

Study of spin wave modes in strongly
anisotropic antiferromagnets --(March, 1973)

SPIN WAVE IN ANTIFERROMAGNETS

Leclananda, S.A. Study of the effect on the stability of
Fairclough, T.J. antiferromagnetic configurations of a
second order term in the cubic anisotropy
energy - (January, 1973)

THE INTRODUCTION OF A TIMELAG TO THE
EQUATION OF EXPONENTIAL GROWTH

Panohalingam, K. A study is being made of the effects of
Fairclough, T.J. lagging the time variable on the exponen-
tial growth situation. The lagged equa-
tions are being studied with various
initial conditions - (March, 1973)

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF PHYSICS (Contd.)

INVESTIGATION OF THE PHYSICAL PRO-
PERTIES OF BUILDING MATERIALS MANU-
FACTURED FROM COCONUT HUSK

Sundaralingam, K.
Ramachandran, C.

Suitable test boards and blocks manufactured from coconut husk with different bonding media will be studied from the point of view of their physical properties including mechanical strength, electrical and thermal conductivities etc., in order to assess their possible application as building materials - (May, 1973)

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF PHYSICS

A STUDY OF THE PHYSICAL PROPERTIES
OF LOCAL FRUIT JUICES IN RELATION
TO THE CANNING INDUSTRY

Attanayake, N.
Alles, L.A.C.⁻¹
Fernando, P.C.B.

A knowledge of physical properties like viscosity, specific heat, thermal conductivity, particle size spectra etc, are useful for designing or giving specifications

1. At fruit and vegetable utilization laboratory, Narahenpita.

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF PHYSICS (Contd.)

A STUDY OF THE PHYSICAL PROPERTIES OF LOCAL
FRUIT JUICES IN RELATION TO THE CANNING
INDUSTRY (Contd.)

Attanayake, N.
Alles, L.A.C.
Fernando, P.C.B.

for machinery to produce fruit juices utilizing local fruits. A systematic study which will yield this data has just been initiated beginning with passion fruit juice - (October, 1973)

DEVELOPMENT OF LOW-COST PORTABLE ELECTRO-
NIC DEFIBRILATORS FOR VENTRICLE DEFI-
BRILATION OF THE HUMAN HEART

Buel, T.⁻¹
Wijesinghe, M.P.

Two types of ventricular defibrilators have been developed for clinical use;
a) a monopulse solid-state defibrilator which may be carried by the doctor for emergency treatment weighing about 6 lbs. and powered by re-chargable Ni-Cd Cells.
b) a double pulse, low energy difibrilator of new method of applying the electrical energy directly to the heart, without open heart surgery -(April, 1971)

AN INVESTIGATION OF Pc I (Pearl) GEOMAG-
NETIC MICROPULSATIONS

Fernando, P.C.B.

There is no published date on Pc I (Pearl) pulsations at the dip equator. The telluric current detector set up at Vidyodaya (a station 5° South of dip

P H Y S I C SUNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)DEPARTMENT OF PHYSICS (Contd.)AN INVESTIGATION OF Pc I (Pearl)
GEOMAGNETIC MICROPULSATIONS (Contd.)

Fernando, P.C.B.

equator) was suitably modified to record Pc I (pearl type) pulsations. Events were recorded during period 13.3.70 to 29.7.70 and various characteristics of these identified. A mechanism for equatorial pearl pulsations was suggested.

DESIGN, CONSTRUCTION AND OPERATION
OF AN INEXPENSIVE ULTRA-LOW
FREQUENCY OSCILLATOR

Conventional electronic oscillators are not readily available at frequencies 0.1 Hz (or periods γ 10 sec). An oscillator which can produce a sinusoidal voltage upto ~~1~~ 1 hour has been designed and constructed. (January, 1970)

THE DESIGN AND INSTALATION OF A
RECONDITIONARY UNIT FOR DEFECTIVE
MERCURY ARC RECTIFIERS

Fernando, P.C.B.

Fonseka, W.R.⁻¹Sebastian, A.R.⁻²

A reconditioning plant for metal-single anode-mercury arc rectifiers was set up in the Physics laboratory

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF PHYSICS (Contd.)

THE DESIGN AND INSTALATION OF A RECON-
DITIONARY UNIT FOR DEFECTIVE MERCURY
ARC RECTIFIERS (Contd.)

Fernando, P.C.B.

Fonseka, W.R.

Sebastian, A.R.

at Vidyodaya Campus. The construction of all the components for the unit was carried out at the Steel Corporation Workshops - (November, 1972)

DEVELOPMENT OF AN INSTRUMENT TO OBSERVE
THE INTERIOR STRUCTURE AND FLAWS IN
LARGE UNCUT GEM STONES

Fernando, P.C.B.

Pattiaratchi, D.B.⁻¹

Valuation of gem stones must be made using tests which do not alter the stone in any way (e.g. cutting or polishing). A device for observing the structure and flaws inside an uncut stone satisfying the above criteria has been constructed and operated -(April, 1973)

SOLAR NEUTRINO PUZZLE

Tennakone, K.

In this investigation, the null results of the Davies experiment is attributed to the anomalous properties of neutrinos, such as the existence of a number of neutrino states or an anomalous interaction of neutrinos with the gravitational field. It is shown that such anomalous properties of neutrivnos does not contradict existing experimental data - (September, 1972)

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF PHYSICS (Contd.)

GENERAL RELATIVITY IN PARTICLE
PHYSICS

Tennakone, K.

The field equations of general relativity are used to describe the structure of space time in the neighbourhood of hadronic matters. An attempt is made to interpret elementary particles as black holes in the strong gravitational field (September, 1972)

CONSTRUCTION OF A RADIOTELESCOPE

Wijesinghe, M.P.

Peiris, C.

A 20 ft. diameter parabolic reflector has been constructed for use as a radio telescope -
a) with the intention of performing astrophysical measurements that can be carried out favourably on account of our location near the equator,
b) for the reception of television signals from earth satellites -
(January, 1970)

ELECTRO-EROSION MACHINING TECHNIQUES

Wimalasiri, D.H.U.

Wijesinghe, M.P.

Project is directed towards evolving a satisfactory theory of the physical process of and the

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF PHYSICS (Contd.)

ELECTRO-EROSION MACHINING TECHNIQUES (Contd.)

Himalasiri, D.H.U.

use of locally available raw materials

Wijesinghe, M.P.

(e.g. coconut oil as a quenching medium
and graphite as an electrode material),
in electro-erosion -(July, 1972)

RESEARCH PUBLICATIONS

DAVIES, W.E.A. (1973) - The dielectric constant of fibre composites.
J. of Physics D: Applied Physics -(to be published.)

FERNANDO, P.C.B. (1973) - Design, construction and operation of an
inexpensive ultra-low frequency oscillator. Am. J.
of Physics - (in the press)

GHANALINGAM, S. (1972) - Equatorial ionospheric absorption during
half a solar cycle (1964 - 1970). Goddard space
flight centre Publ. X-625-72-276.

KANNANGARA, M.L.T. (1972) - Some polarization characteristics of
Pc. 3 - 5. Micropulsations observed at Colombo,
Ceylon. J. of Geophysical Res. (space physics), 77,
6161 - 6167

MUTUCUMARANA, T. DE S. (1961) - Oriented Crystal Growth in Electro-
lytes in relation to ionic diffusion in the
electrolyte. Acta Crystallographica 14, 66. and
Acta Crystallographica, 7, 666

RESEARCH PUBLICATIONS (Contd.)

- PANCHALINGAM, K. AND FAIRCLOUGH, T.J. (1973) - The introduction of time lag to the equation of exponential growth. Am. J. of Physics - (to be published)
- TENNEKONE, K. (1973 a) - Can solar neutrinos have anomalous gravitational red shifts? Lettere Al Nuovo Cimento, I, 358
- TENNEKONE, K. (1973 b) - Electron and proton as black holes in F. gravity field. Physics Rev. (to be published)
- TENNEKONE, K. (1973 c) - Muon electron mass ratio and strong gravity. Physics Lett. (in the press)
- TENNEKONE, K. AND PAKVASA, S. (1973) - Neutrino spectrum and the solar-neutrino experiment - Lettere Al Nuovo Cimento, 6, 675

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- BUEL, T. AND WIJESINGHE, M.P. (1973) - "DC - injector - A method for ventricular defibrillation" - Asian Cardiologists Conference, Singapore
- FERNANDO, P.C.B. (1971) - An investigation of Pc I (pearl) Geomagnetic micropulsations. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- FERNANDO, P.C.B.; FONSEKA, W.R. AND SEBASTIAN, A.R. (1973) - The design and installation of a reconditionary unit for defective mercury arc rectifiers. 29th Annual Sessions of the Ceylon Ass. Advmt. Sci.

N A T U R A L S C I E N C E S

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA (Contd.)

GMANALINGAM, S. (1972) - Equatorial ionospheric absorption
during half a solar cycle (1964-1970).
USNC - URSI Spring Meeting, Washington D.C.

4. N A T U R A L S C I E N C E S

4.7 Z O O L O G Y

DEPARTMENT OF NATIONAL MUSEUMS

DIVISION OF ZOOLOGY

(1) VENOMOUS SNAKES OF CEYLON

De Silva, P.H.D.H.

This is a publication in two parts - the first dealing with dentition, venom and venom apparatus and second part with the venomous species - (1973)

(2) SOME ASPECTS OF THE FAUNA OF CEYLON

Review of the work done so far in this field with observations regarding environmental factors promoting speciation, especially in regard to the vertebrate species and sub-species - (1972)

DIVISION OF ENTOMOLOGY

(1) THE ARACHNIDA OF CEYLON

Gunawardena, W.T.T.P.(Mrs)

Study of the spiders of Sri Lanka to publish a guide to the spiders of Sri Lanka -- (1973)

(2) BLOYSTEMATIC STUDIES OF THE INSECTS OF CEYLON - (1969)

(3) THE BRACONIDAE OF CEYLON

Collecting and studying the Braconidae (a group of parasitic wasps (Hymenoptera) of economic importance to Sri Lanka) with a view to publishing "A monograph on the taxonomic study of Braconidae" -- (1972)

Z O O L O G Y

DEPARTMENT OF NATIONAL MUSEUMS (Contd.)

DIVISION OF ZOOLOGY (Contd.)

THE GERRIDAE AND VELLIDAE OF CEYLON

Karunaratne, G.P.B.

Collecting and studying Ceylon material on the aquatic bug families Gerridae and Vellidae, with view to publishing a "Monograph on the Taxonomic study of the Gerridae and Vellidae of Ceylon " - (1971)

MEDICAL RESEARCH INSTITUTE

DIVISION OF ENTOMOLOGY

(1) BIONOMICS OF THE MOSQUITOES AEDES AEGYPTI AND AEDES ALBOPICTUS IN RELATION TO THE TRANSMISSION OF HAEMORRAEGIC DENGUE

Samarawickrema, W.A.
Jayasekera, Nalini

Work is in progress on the biting habits, competitive behaviours and infection rates etc. of Aedes aegypti (transmitter of dengue haemorrhagic fever and chikungunya) and Aedes albopictus, in order to attempt to forecast future epidemics.

(2) LABORATORY AND FIELD STUDIES ON THE MOSQUITO TOXORHYNCHITES SPLENDENS

Aims of project is to gather information on the life cycle, larval habitats and biology of the predatory mosquito Toxorhynchites in the

N A T U R A L S C I E N C E S

MEDICAL RESEARCH INSTITUTE (Contd.)

DIVISION OF ENTOMOLOGY (Contd.)

(2) LABORATORY AND FIELD STUDIES ON THE
MOSQUITO TOXORHYNCHITES (Contd.)

Samarawickrema, W.A.
Jayasekera, Nalini

field and also attempt to colonise the species in the laboratory on a large scale with a view to using the larval and adult material in field trials in biological control of Aedes and other mosquitos.

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF ZOOLOGY

A STUDY OF ASSIMILATION, RESPIRATION AND
GROWTH IN PROMECOTHECA CUMINGI, BARY

Wignarajah, S.
Abeykoon, M. (Miss)
Weerasekera, D.A.⁻¹

Quantitative studies on assimilation, growth and respiration of all stages in the life cycle of P. cumingi were made under laboratory and natural conditions - (April, 1972 - February, 1973)

LEAF DEFOLIATES AND SKELETONIZERS IN
TEAK

Wignarajah, S. -2
Vivekanandan, K.

Population study of the numbers of defoliates in study area, together with its biology is being carried out with a view to suggest methods for its control in infested areas.

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1. Laboratory Technician, Radio-isotope Centre, Colombo Campus
 2. Forest Department, Colombo.

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS

DEPARTMENT OF ZOOLOGY

(1) HISTOLOGICAL OBSERVATIONS ON THE
REPRODUCTIVE SYSTEM OF THE SNAIL
ACHATINA FULICA

Breckenridge, W.R.

Fallil, S.F.M. (Miss)

The functional organization of the reproductive system of the snail was studied using dissections as well as sections of the entire tract. Material fixed in a variety of fixatives was sectioned and stained for study - (1969)

(2) STUDIES ON THE REPRODUCTIVE PHYSIO-
LOGY OF THE SNAIL ACHATINA FULICA I

Attention in this study is focussed on egg formation, structure and histochemistry of the egg shell and the possible control of egg laying. Routine histological and histochemical methods are being employed in this study - (1971)

(3) STUDIES ON THE REPRODUCTIVE PHYSIO-
LOGY OF THE LAND SNAIL ACHATINA
FULICA. II.

This was primarily a histochemical study to amplify observations made in the previous study. The different parts of the reproductive tract of mature and egg laying snails were fixed, sectioned and subjected to a battery of histochemical tests in order to increase our understanding of the functioning of the different parts - (1972)

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF ZOOLOGY (Contd.)

CONTINUED STUDIES ON THE REPRODUCTIVE
PHYSIOLOGY OF THE SNAIL ACHATINA FULICA

Breckenridge, W.R.
Jesudas, S. (Miss)

This study is primarily concerned with the possible control of reproduction and it involves a study of the brain and possible endocrine mechanisms. Routine histological and histochemical methods as well as simple operation are to be employed in this study. Work is in progress - (1973)

HISTOLOGICAL AND HISTOCHEMICAL STUDY OF
THE SKIN OF THE BURROWING AMBIBIBIAN
ICHTHYOPHIS GLUTINOSUS

Breckenridge, W.R.
Murugapillai, R.

Pieces of skin from different regions of the body were fixed in different fluids, embedded, sectioned and stained with a variety of histological and histochemical stains - (1971)

LIFE HISTORY STUDIES ON THE TREMATODES
OF MEAT CATTLE, BUFFALOES AND GOATS IN
SRI LANKA

Crusz, H.
Rajaratnam, V. (Mrs)

Following on the author's island-wide survey (1952) of trematode infestations in meat cattle, buffaloes and goats in Sri Lanka, and the incrimination of dry zone water bodies as sources of infestation, investigations have been carried

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF ZOOLOGY (Contd.)

LIFE HISTORY STUDIES ON THE TRIEMA-
TODES OF MEAT CATTLE, BUFFALOES AND
GOATS IN SRI LANKA (Contd.)

Crusz, H.

Rajaratnam, V. (Mrs)

out and are continuing, to determine the nature, incidence and population fluctuations of the intermediate hosts of the parasites - (1952/67; continuing)

THE PARASITES OF THE RELICT FAUNA
OF CEYLON

Crusz, H.

Sanmugasunderam, V. (Mrs)

Ching, C.C. (Miss)

Studies on the parasites of relict and other endemic animals of Sri Lanka with a view to determining (a) the degree of endemicity of our fauna (b) the relationship of our fauna to that of neighbouring countries (c) possible evolutionary trends in hosts as indicated by their parasites - (1967)

(1) THE DEVELOPMENT OF THE TESTES IN
THE ADULT SITOPHILUS ZEAMAI AND
THE DETERMINATION OF DIFFERENCE
IN THE STRUCTURE OF TESTES BETWEEN
S. ZEAMAI AND S. ORYZA (LINN)

Ganeshalingam, V.K.

Project involves a study of the morphological differentiation in the structure of the testes of S. zeamais from the day on which

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF ZOOLOGY (Contd.)

- (1) THE DEVELOPMENT OF THE TESTES IN THE ADULT SITOPHILUS ZEAMAIIS AND THE DETERMINATION OF DIFFERENCE IN THE STRUCTURE OF TESTES BETWEEN S. ZEAMAIIS AND S.ORYZA (LINN) (Contd.)

Ganeshalingam, V.K.

the adult is hatched out to the day when it dies naturally. This is done by rearing the weavils in the laboratory and by making whole mount preparations and microtome sections of the testes of S.zeamais and S. oryza - (1970)

- (2) MORPHOLOGICAL STUDIES ON THE DIFFERENTIATION IN THE OVARY OF THE ADULT SITOPHILUS ZEAMAIIS (MOTSCH)

Project involves study of the morphological differentiation in the structure of the ovary S. zeamais from the day on which the adult is hatched out to the day when it dies naturally. This was done by rearing the weavils on rice grain under laboratory conditions and making whole mount preparations and microtome sections of the ovaries from the weavils of known age - (1970)

SURVEY OF PLANT PARASITIC NEMATODES IN AGRICULTURAL CROPS

Wijekoon, S. (Mrs)

Identification of Nematodes associated with agricultural crops (both in the soil as well as in plants). Estimation of crops

Z O O L O G Y

UNIVERSITY OF SRI LANKA, PERADENIYA CAMPUS (Contd.)

DEPARTMENT OF ZOOLOGY (Contd.)

SURVEY OF PLANT PARASITIC NEMATODES
IN AGRICULTURAL CROPS (Contd.)

Wijekoon, S. (Mrs)

damage and where possible numbers of Nematodes. Both laboratory and green house experiments are being carried out - (1970)

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS

DEPARTMENT OF BIOLOGICAL SCIENCES

STUDY OF THE POSSIBLE MUTAGENIC
EFFECTS OF PESTICIDES COMMONLY
USED IN SRI LANKA

Ratnayake, W.E.

Jayasuriya, V.U. de S.

Using Drosophila melanogaster as the test organism, various pesticides are screened for induced mutations, particularly sex-linked trends (using M - 5 stock), deletions (attached - x methods) and crossing over. Treatment is via the food medium of the larvae or adult injections and feeding. This study is important in view of the possible genetic effects on human beings of pesticides commonly used in Sri Lanka - (1971)

N A T U R A L S C I E N C E S

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF BIOLOGICAL SCIENCES (Contd.)

STUDY OF THE EFFECT OF MUTAGENS ON CULEX
MOSQUITOES TO OBTAIN CHROMOSOMAL ABERRA-
TIONS FOR USE IN ITS CONTROL

Ratnayake, W.E.
Jayasekera, Nalini

Chemical mutagens and irradiations are used to induce chromosomal aberrations in mosquitoes, and they are screened to obtain translocations (semi-sterility) which can be used in control programmes of the mosquito vector of human filariasis in Sri Lanka - (1971)

STUDIES ON THE FORMAL GENETICS OF CULEX
PIPIENS FATIGANS - THE MOSQUITO VECTOR
OF FILARIASIS

Ratnayake, W.E.
Samaraweera, Indra

Project involves a screening of laboratory bred Culex mosquitoes for visible (larval, pupal and adult) mutations arising spontaneously or under the action of mutagenic chemicals or irradiations. It is hoped thereafter to use them for studies of chromosomal aberrations like translocations for possible use in the control of the mosquito vector of filariasis (human) in Sri Lanka - (1972)

ECOLOGY AND MICROBIOLOGY OF PROTOZOA
OF PADDY FIELDS

Weidyasekera, P.L.D.
Wijekoon, Sriya⁻¹

Project involves (a) understanding of factors responsible for soil fertility,

UNIVERSITY OF SRI LANKA, VIDYODAYA CAMPUS (Contd.)

DEPARTMENT OF BIOLOGICAL SCIENCES (Contd.)

ECOLOGY AND MICROBIOLOGY OF PROTOZOA
OF PADDY FIELDS (Contd.)

Waidyasekera, P.L.D.
Wijekoon, Sriya

and (b) an investigation of the diversity of protozoa fauna and their development for use as indicators of saprobiosis - (1972)

STUDIES ON THE PHYSIOLOGY OF SOIL
PROTOZOA (A) GROWTH AND NUTRITION,
(B) ENCYSTMENT PATTERNS

Waidyasekera, P.L.D.

Project is an attempt to understand some of the factors contributing to soil fertility - (1969)

RESEARCH PUBLICATIONS

BRECKENRIDGE, W.R. AND FALLIL, S.F.M. (1973) - Histological observations on the reproductive tract of Achatina fulica (Gastropoda: Pulmanata, Stylomatophora) Ceylon J. Sci. Biol. Sci. (in the press)

BRECKENRIDGE, W.R. AND MURUGAPILLAI, R. (1973) - Mucous glands in the skin of Ichthyophis glutinosus. (To be published)

N A T U R A L S C I E N C E S

RESEARCH PUBLICATIONS (Contd.)

- CRUSZ, H. (1973) - Nature conservation in Sri Lanka. (Ceylon).
Biological Conservation. 3. (in the press)
- CRUSZ, H; HILLS, E.V. (1970) - Parasites of the relict fauna
of Ceylon. I. Acanthocephalus serendibensis sp.
nov. from the Ceylonhorn-nosed lizard,
Ceratophora stoddarti Gray. Annales de Parasitologie humaine et Comparée, 45, 13 - 19
- CRUSZ, H. AND SHANMUGASUNDERAM, V. (1971) - Parasites of the
relict fauna of Ceylon. II. New species of
cyclophyllidean cestodes from small hill-
vertebrates. Ibid, 46, 575 - 588
- CRUSZ, H. AND SHANMUGASUNDERAM, V. (1973 a) - Parasites of the
relict fauna of Ceylon. III. Nematodes from a
rhacophorid frog and reptiles of the hill
country. Ibid. (in the press)
- CRUSZ, H. AND SHANMUGASUNDERAM, V. (1973 b) - Parasites of the
relict fauna of Ceylon. IV. Zeylanurotrema
lyriocephali gen. et. sp. nov. and other
trematodes from mountain lizards and a rodent.
Ibid. (in the press)
- GANESHALINGAM, V.K. (1973) - Morphological studies on the
differentiation of the ovary of adult
Sitophilus zeamais Motsch. Ceylon J. Sci.
Biol. Sci. (to be published)
- SAMARAWICKREMA, W.A. (1966) - Breeding and prevalence of the
mosquito Aedes aegypti in some coastal towns
in Ceylon in relation to the recent dengue-
like epidemic. Proc. Ceylon Ass. Advmt. Sci.
pt 1,14

RESEARCH PUBLICATIONS (Contd.)

- SAMARAWICKREMA, W.A. (1974) - A study of Aedes aegypti and Aedes albopictus in Ceylon I. Adult population fluctuation and age composition of the populations. (in preparation)
- SAMARAWICKREMA, W.A. (1974) - A study of Aedes aegypti and Aedes albopictus in Ceylon II. Larval indices and preferred larval habitats. (in preparation)
- SAMARAWICKREMA, W.A. (1974) - A study of Aedes aegypti and Aedes albopictus in Ceylon III. Competition between the two species. (in preparation)
- WIGNARAJAH, S. (1973) - Assimilation in Promecotheca cumingi. Baly using gravimetric and radio-isotope techniques. FAO/IAEA 15th Journal, Austria

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

- BRECKENRIDGE, W.R. AND MURUGAPILLAI, R. (1971) - Mucous secretion in the skin of Ichthyophis glutinosus. 27th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- FALLIL, S.F.M. AND BRECKENRIDGE, W.R. (1972) - Histology and histochemistry of the uterus of Achatina Fulica (gastropoda: pulmonata, stylommatophora). 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- GAMESHALINGAM, V.K. (1972) - The development of the ovary in the adult Sitophilus zeamais Motsch (coleoptera, curculionidae). 28th Annual Sessions of the Ceylon Ass. Advmt. Sci.
- WALDYASEKERA, P.L.D. (1970) - Encystment pattern of a ciliate Colpoda sp. isolated from soil - 26th Annual Sessions of the Ceylon Ass. Advmt. Sci.

SOCIAL SCIENCES

Bibliography

5. S O C I A L S C I E N C E S

5.1 B I B L I O G R A P H Y

DEPARTMENT OF NATIONAL MUSEUMS

SURVEY OF INFORMATION RESOURCES
PERTAINING TO THE SCIENCES (PURE,
APPLIED AND SOCIAL SCIENCES) IN
SRI LANKA

De Silva, V.B. (Miss)

Nothsinghe, C.L.M. (Miss)⁻¹

Study involves (a) data collection (to be collated in directory format), (b) evaluation of resources and services and (c) observations on the directions a national programme of information services should take in its initial period while operating on a conventional basis - (October, 1972)

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF ANATOMY

TRENDS IN THE MEDICAL SCHOOL
CURRICULUM IN NORTH AMERICA

Bandaranayake, R.C.

Poorman, D.

A survey of the literature relating to the medical school curriculum in North America over the last two decades, to determine the trends in the curriculum - (February, 1973)

1. At the C.I.S.I.R.

Education

5. S O C I A L S C I E N C E S

5.2 E D U C A T I O N

UNIVERSITY OF SRI LANKA, COLOMBO CAMPUS

DEPARTMENT OF ANATOMY

EVALUATION OF TEACHING IN THE
FACULTY OF MEDICINE

Bandaranayake, R.C.

The development of a questionnaire (to be answered by students) using the "critical incidents technique" to evaluate the teaching of individual teachers in the Faculty of Medicine, to serve as feedback for the teacher concerned to improve his/her teaching - (August, 1970)

PAPERS PRESENTED AT CONFERENCES AND SYMPOSIA

BANDARANAYAKE, R.C. (1971) - An evaluation of teaching in the Department of Anatomy. Kandy Society of Medicine

Sociology

5. SOCIAL SCIENCES

5.3 SOCIOLOGY

DEPARTMENT OF NATIONAL MUSEUMS

DIVISION OF ANTHROPOLOGY

LAND AND SOCIETY: THE STUDY OF A
LOW COUNTRY WET-ZONE SINHALA
VILLAGE

Senaratne, S.P.F.

This study involves the identification and examination of the pattern of land ownership and utilization against the background of the related social structure. It is hoped that this study will lead to a model which includes the main variables which effect the problem of land in the wet zone --
(January, 1973)