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PLANT PROTECTION NEWS

Compiled by
SPC Plant Protection Officer
Bob Ikin

INTRODUCTION

The first issue of the *Plant Protection News* that I compiled was based mainly on material that had accumulated on the desk of the Plant Protection Officer after the departure of my predecessor Ivor Firman in April 1982.

In six months the situation has changed somewhat with Plant Pathologists falling over one another in a fight for space. The commissioning of the FAO-UNDP/SPC* project is the beginning of a new era for plant protection in the Pacific and is a concerted effort by these organisations to increase the technical expertise available in the Region.

The project's aim is to establish a regional plant protection service which will help governments solve their plant protection problems. In order to keep countries informed of developments in this new project which combines root crop development with plant protection and other regional activities, the *News* will be produced on a more regular basis.

FAO-UNDP/SPC PROJECT RAS/83/001 FOR STRENGTHENING PLANT PROTECTION AND ROOT CROPS DEVELOPMENT IN THE SOUTH PACIFIC

This project is now located at the South Pacific Commission centre in Suva, Fiji, where it shares accommodation with the SPC Media Centre staff and the SPC Plant Protection Officer. It has its origins in two previous projects: RAS/74/017 Root Crops Development and RAS/79/044 Strengthening Plant Quarantine and Plant Protection. In effect these two projects have now merged and, at the same time, become more closely associated with the work of SPC.

The new project became established in Suva in July 1983 and the former Root Crops office on the Alafua Campus of USP's School of Agriculture was closed. Project staff at the Suva headquarters are:

Ivor Firman, Team Leader/Plant Protection Officer, who was formerly SPC Plant Protection Officer and at one time Plant Pathologist with the Fiji Department of Agriculture;

Grahame Jackson, Crop Improvement Officer, who was formerly Plant Pathologist with Solomon Islands Division of Agriculture;

Jim Breen, Extension Agronomist, who was formerly with the Root Crops Project;

Malti Prasad, Project Secretary, who formerly worked with George Stride and the Plant Protection Project.

* FAO: Food and Agriculture Organization.
UNDP: United Nations Development Programme.
SPC: South Pacific Commission.

The project operates in association with **Bob Ikin**, SPC Plant Protection Officer, and the work programmes of FAO and SPC in plant protection are integrated as far as possible. It is also anticipated that a close collaboration with the SPC Tropical Agriculturalist can be developed when this post is renewed, Michel Lambert having left SPC during 1983.

Project staff in the field are:

Paul Van Wijmeersch, an FAO Associate Expert Agronomist from Belgium, working in Tonga;

Arne Larsen, an FAO Associate Expert Agronomist from Denmark, working in Vanuatu;

Zaheer Patel, a UN volunteer plant breeder from India, working in Solomon Islands;

Sama Gunawardhana, a UN volunteer agronomist from Sri Lanka, working in Papua New Guinea;

Andres Tacadao, a UN volunteer agronomist from the Philippines, working in Western Samoa.

Arne Larsen leaves the project in January 1984 and Carmen Passera, Associate Expert Information/Documentation, formerly based in Western Samoa, and Riccardo Mattei, Associate Expert Agronomist, formerly based in Fiji, left during 1983 as did Albert Peters who was the Root Crops Technician in Samoa. It is hoped that some new staff can be recruited in the near future.

The work of FAO and SPC in plant protection and root crops is already well known in the region. The new project will continue and further develop this work and will also focus on some particular areas. Detailed field work can only take place in countries where the project has staff and the extent of such work is dependent on the project's resources and the wishes of the individual countries, so the details can be expected to change from time to time. In their respective countries the project field staff will be involved with all or some of the following main activities:

- collecting, describing, evaluating and selecting local root crop varieties for pest and disease resistance and improved yield;
- liaison with other project staff and local quarantine authorities in introducing and subsequently evaluating improved root crop varieties;
- assisting with in-service training, demonstrations and field days;
- monitoring plant protection and quarantine activities in the country and reporting on problems to Suva headquarters.

In addition, there may be specific activities related to the needs of the individual countries or to the opportunities available there. Thus, in Solomon Islands there is a major plant breeding programme; in Fiji and Tonga there has been work on cassava chipping and drying; in Western Samoa and Tonga various legume/root crop trials are in progress; in Papua New Guinea chemical control of *Papuana* beetle is being investigated; while in Vanuatu a major emphasis was on describing root crop cultivars. Much of this work has regional significance. At the same time every effort is made to ensure the involvement of extension staff and farmers in the individual countries.

Suva headquarters staff, as well as providing information, specialist advice, arranging consultancies, and making appropriate field visits, will also be involved with some specific activities. One of these will be to arrange for the safe introduction of elite root crop germplasm which will involve co-ordinating and monitoring the necessary techniques and quarantine procedures.

A small laboratory is being fitted out for tissue culture and plant pathology work. Training courses and workshops will be arranged dealing with a wide range of topics such as plant quarantine, plant breeding, and pesticide use. In all this work as well as in the production of related plant protection publications, the project will be collaborating with SPC.

Departments of agriculture in the region will receive full details of the project's work programme; enquiries should be addressed to Project RAS/83/001, UNDP, Private Mail Bag, Suva, Fiji.

NEW PEST AND DISEASES

1. Insect problems in coconuts in Palau

Mr Jean-François Julia of IRHO (Institut de recherches pour les huiles et oléagineux), Santo, Vanuatu was engaged by the South Pacific Commission as a consultant to investigate insect problems associated with the coconut crop in the Republic of Palau.

During August Mr Julia visited Palau with the intention of (1) identifying a weevil which was causing damage and recommending action for its control, and (2) assessing the damage caused by rhinoceros beetle and indicating if *Baculovirus* would still be an effective control. Virus for the biological control of rhinoceros beetle had been released some years ago in Palau, and Mr Julia anticipated that a re-introduction would be required. Arrangements were made with other research organisations in the Pacific for a supply of virus-infected third stage larvae and these were released.

A more complete account of the consultancy will be provided in a later newsletter.

2. Disease of flame tree in the Northern Mariana Islands

Recent research by Charles Hodges of the Institute of Pacific Islands Forestry, USDA (United States Department of Agriculture), Honolulu, and Joaquin Tenorio of the Government of the Commonwealth of the Northern Mariana Islands, Saipan, has determined the cause of two serious diseases -- one on breadfruit, the other on flame tree (*Delonix regia*) and its close relatives.

The diseases are caused by *Phellinus noxius* and spread from tree to tree by root contact after infection of damaged limbs or stumps by basidiospores. The foci of the disease outbreaks on the island of Rota indicated that flame trees were often the centre of outbreaks and that the largest and probably the oldest outbreaks were around the airport. The fungus was not detected by E.E. Trujillo who visited the islands of Saipan and Rota in 1969 and 1971 on behalf of the South Pacific Commission. So it is likely that the disease was introduced into the islands on timber dunnage through the airport. This is the first record of the disease in the Northern Pacific although it has been recorded from Western Samoa, Fiji, Solomon Islands and other South Pacific Islands. It is recognised that the fungus causes infection through wounding, and therefore to safeguard street and yard plantings it is suggested that pruned or damaged branches be promptly treated with a wound dressing compound.

The disease has been shown to cause serious economic losses on plantation crops such as rubber, coffee, tea, cocoa and timber trees and on the Mariana Islands it is causing losses to *Leucaena leucocephala* and breadfruit. The losses in the flame tree have some economic importance because the tree has considerable aesthetic value in street and roadside plantings for local residents and tourists alike.

The flame tree is considered the 'Commonwealth Tree' and each May, when the trees are at their peak bloom, a Flame Tree Festival is held on Saipan, the principal island.

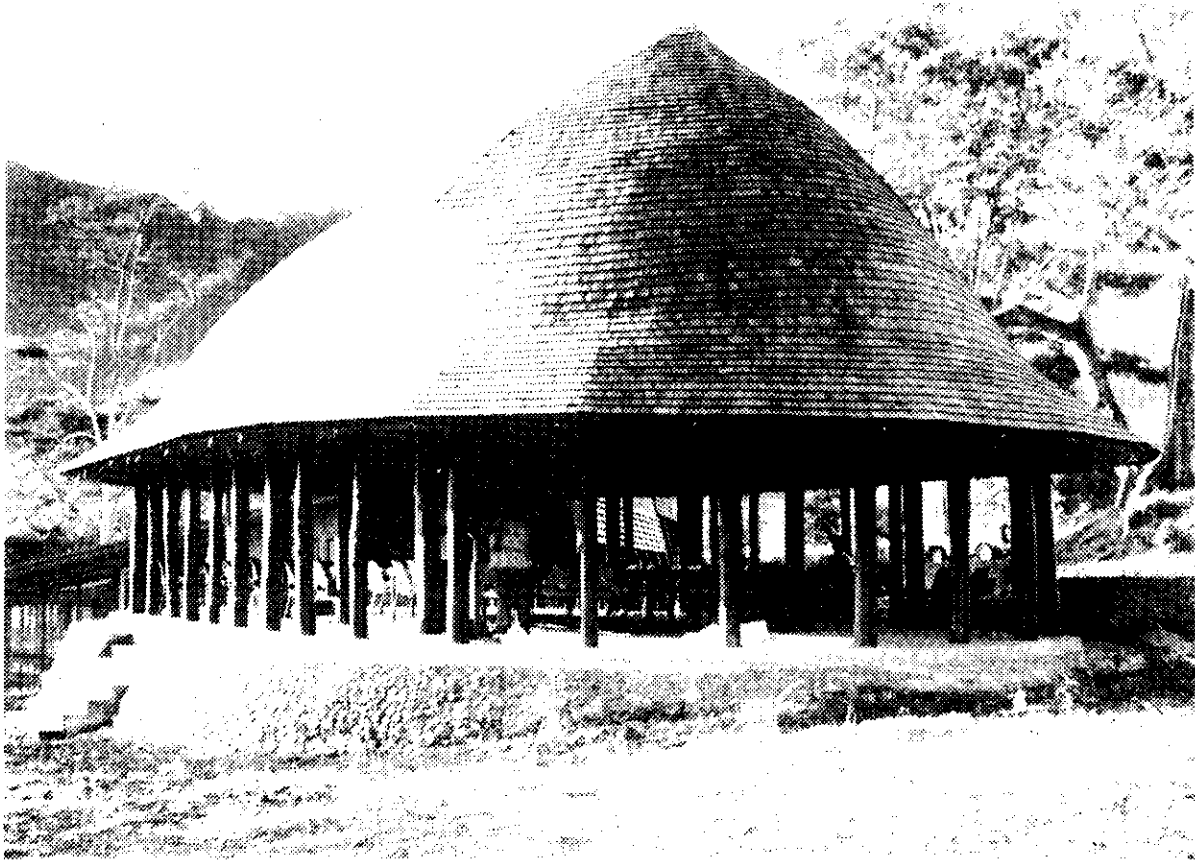
References

Hodges, C.S. and J.A. Tenorio. *A root disease of Delonix regia in the Mariana Islands caused by Phellinus noxius plant disease* (in press).

Trujillo, E.E. (1971). The breadfruit diseases of the Pacific Basin. *South Pacific Commission Information Document No. 27*. Noumea, New Caledonia, 28 pp.

COMMONWEALTH WORKSHOP ON POST-HARVEST LOSSES, SOUTH PACIFIC, HELD AT USP ALAFUA CAMPUS, WESTERN SAMOA, 25-31 MAY 1983

This workshop is one of a series organised on a worldwide basis by the Commonwealth Secretariat in an attempt to focus on the types of food losses found after harvest, their causes, economic value and possible prevention. This was the first workshop to be held in the Pacific Region; others have been held in the Caribbean, Africa and Asia, and it was evident from the little factual data presented that this workshop was to be an important stimulus for those responsible for assessing both post- and pre-harvest food losses.



The fale of the Institute of Research Extension and Training in Agriculture (IRETA) at the USP Campus, Alafua, Western Samoa. A gift of the European Economic Community, the fale was opened by the Prime Minister of Western Samoa, Tofilau Eti, on 24 May 1983 for the Commonwealth Workshop on Post-Harvest Losses, South Pacific.

At the beginning of the workshop, Commonwealth countries within the Region were invited to give an outline of what they perceived to be the extent of the losses of their major crops after harvest and if possible to give an estimate of the value. Many countries found the latter item difficult to quantify because the highly perishable nature of most Pacific foods meant that the crop was only harvested when required and when surpluses occurred some was preserved and the remainder was utilised as animal feed.

Another session of the workshop concentrated on particular crops which are of particular interest in the Region; outlines were given of the types of losses found, their causes, both physiological and plant pathological, their extent and possible prevention. Traditional Pacific regional methods of food preservation and storage were outlined as well as those from other parts of the world. Traditional hot air drying and solar drying were emphasised as methods that could be used for bananas, root crops, spices and for fish.



Osaso Aukuso of the Department of Agriculture, Western Samoa, explaining to Lemuel Maleatha, the Solomon Islands delegate to the Post-Harvest Losses Workshop, the visual aids used for demonstrations of taro army worm control. The posters were on display at the Nu'u Crop Development Centre visited by delegates to the workshop.

Pacific Island countries also find that the perishable nature of many of their commodities presents considerable problems when attempts are made to export them; these problems were discussed and possible solutions suggested.

At the conclusion of the workshop, statements by the individual countries on how they perceive their major problems were presented. In general, they believed that there was considerable evidence to suggest post-harvest losses did reduce the food yield of their countries. More research was needed to define their problems.

It was suggested that another workshop be held in about five years' time.



Dr K.C. Lai, Commonwealth Secretariat, The Honourable J. Netzler, Minister of Agriculture, Western Samoa, Dr R. Azard, Commonwealth Secretariat, Dr S. Moengangongo, USP Rural Development Centre, Tonga, and Professor Felix Wendt, USP, Western Samoa, during the final session of the Workshop on Post-Harvest Losses, South Pacific, held at the USP Campus, Alafua, Western Samoa.

MEETINGS

International Plant Pathology Congress, Melbourne, Australia, August 1983

This congress, held every four years by the International Society for Plant Pathology, was the first to be held in the southern hemisphere and also the first to be held within the South Pacific Region. Some plant pathologists within the South Pacific Commission area were able to attend, and the seminars on tropical crops drew interest from the participants from Papua New Guinea, New Caledonia, Western Samoa and French Polynesia in particular. It was the first time that a full session was devoted to tropical crops, and, although not attended by as many people as some other sessions, the session did give participants from the Pacific the opportunity to meet colleagues from Africa, Asia, the Caribbean and the Americas who work on tropical pests and diseases. The next congress will be held in Japan in 1987.

During the congress two ancillary meetings of professional organisations were held: that of the Commonwealth Plant Pathologists and of the Australasian Plant Pathology Society. Both meetings expressed concern at the reorganisation of the Commonwealth Agricultural Bureaux (CAB) which would affect the services available to the Region. They were particularly concerned that the identification services should not be adversely affected.

CAB were asked to consider the views of the meetings.

SOUTH PACIFIC COMMISSION TRAINING COURSES AND WORKSHOPS IN 1984

All training courses and workshops organised by the South Pacific Commission will be run in conjunction with the FAO-UNDP/SPC project RAS/83/001. Please note the following provisional dates for your diary:

February 1984 13 - 17	Fourth Regional Meeting on Plant Protection, Noumea, New Caledonia
April 1984 9 - 13	Sub-regional Workshop on Plant Quarantine Guidelines, Suva, Fiji.
September 1984	Workshop on <i>Pythium</i> diseases of root crops, Suva, Fiji.
November 1984	Workshop on tissue culture techniques, Suva, Fiji.
Mid-year 1984?	Sub-regional Workshop on Pest and Disease Recognition, Viani, Tonga.

PUBLICATIONS

A number of South Pacific Commission Advisory Leaflets are at present being printed and will be available within the next few months. These were prepared by the Department of Scientific and Industrial Research (DSIR), New Zealand, on behalf of SPC and include the following:

- No. 15 Tomato leaf mould
- No. 16 Cottony cushion scale, Seychelles scale and Egyptian fluted scale
- No. 17 Coconut Hispine beetle (*Brontispa longissima*)
- No. 18 Queensland fruit fly.

In addition, other titles are being prepared by authors and it is anticipated that the regular production of these useful guides to pests and diseases in the Pacific will continue. Reprints and revisions of some leaflets are also under way.

With the production of O.O. Stout's *Plant quarantine guidelines within the Pacific Region* the major quarantine recommendation of the UNDP-FAO/SPEC Pests and Diseases Survey in the South Pacific is completed. This manual summarises the survey results for crops of economic importance, despite the fact that the survey results for viruses and insects have not been published. Unfortunately, it is a bulky document which requires continuous reference to Volume II, the *Treatment manual*.

As working documents for the April 1984 Plant Quarantine Guidelines Workshop, Bob Ikin and Ivor Firman have produced simplified recommendations for the handling of the more important of these crops. After full discussion and possible revision by the workshop, these recommendations will be published by the South Pacific Commission. In this way a handy single sheet of information will be available for ready reference by plant quarantine officers, importers and exporters alike.

GIANT AFRICAN SNAIL

In the last *Plant Protection News* (No. 91 -- June 1983) the potential threat to Giant African Snail-free South Pacific countries was highlighted by the experiences of Fiji during 1983. In September the vigilance at Suva wharf paid off when a container from New Zealand

was found infested with snails. Fortunately not *Achatina fulica*, but a common garden snail not previously recorded in Fiji, and because of this it was treated with the same caution as any new interception.

Those countries in which Giant African Snail *does* occur may take a leaf out of the book of the enterprising gourmets of Vanuatu. In a recent edition of *Trade industry scene* (November 1983) produced by the South Pacific Bureau for Economic Co-operation (SPEC), the venture of the SENAC company in exporting twenty tonnes of processed snail meat each month to France was praised as a new development for the Region. Despite ten kilograms of snails yielding only one kilogram of meat, sixty snail collectors regularly gather enough live snails to produce the twenty tonnes of meat. At the moment, the snails are exported in bulk, but canning in Vanuatu is planned.

However, we cannot recommend the introduction of the snail to countries where it does not occur just to satisfy an export demand. The introduction of the snail does not only pose a threat to all agricultural crops but also to human health for the snail is a vector of other serious diseases such as eosinophilic meningitis. The illustration used in the SPEC bulletin and a similar article in the *Fiji Sun* newspaper were provided by the South Pacific Commission.

PERSONNEL CHANGES

Lance Smee, Assistant-Director General, Plant Quarantine, from the Department of Health, Canberra, Australia, retired in September 1983. Lance's successor is Mick Catley, an entomologist, who has been involved in work in Papua New Guinea, Western Samoa, and for a time was employed by the South Pacific Commission as a consultant in biological control. The interest that Australian Plant Quarantine continues to show within the Region therefore is likely to be maintained.

Neils von Keyserlingk during one of his visits to Fiji mentioned that Ofa Fakalata, entomologist at the Viani Research Farm in Tonga, is currently in England doing post-graduate study in entomology at the Imperial College Field Station, Ascot, Berkshire.

Bal Ram Singh, formerly Chief Agricultural Quarantine Officer, Ministry of Agriculture, Fiji, is now Development Manager for W.A. Flick (Fiji) Pty Ltd, so spends as much time as before on the wharf in Suva and Lautoka, but nowadays out of uniform.

NIUE PLANT QUARANTINE REQUIREMENTS

The Niue Plant Quarantine Act, 1982, ruled that all plant and plant products intended for export to Niue must be accompanied by a phytosanitary or Plant Health Certificate from the exporting country, signed or certified by a quarantine inspector stating that:

Taros/Yams are free from pests and diseases, soil or any form of fungus, bacterium, or virus, or any living stage of any invertebrate animal, which may directly or indirectly injure or cause an unhealthy condition in any fruit, plant, or any type of fruit or plant product or vegetable.

Further, all containers used for packing must be free from any wood-borer, weevil, and soil contamination.

All items intended for import to Niue are permitted subject to the production of an 'Import Entry Permit' issued by the Niue Department of Agriculture.

For further information, contact the Director of Agriculture, P.O. Box 3, Alofi, Niue, or Telephone No. 31 or 32B.

ETHYLENE DIBROMIDE – POSSIBLE WITHDRAWAL OF FUMIGANT

Ethylene Dibromide (EDB), which is extensively used as a fumigant for fresh fruit exports and as a soil treatment chemical, has been linked to the causes of cancer in laboratory animals in the United States of America by the Environmental Protection Agency. Because of this, the US Government authority responsible for the control of hazardous chemicals has placed an emergency ban on most of its uses.

The problems with the use of EDB have been evident for some time; successive revisions of the USDA¹, APHIS² regulations concerning its use as a fumigant have been tightened, and alternatives to its use have appeared. The safe working levels for operators using it have gradually lowered until operator contact was banned completely.

Although the American decision is to take effect immediately, it is possible that the chemical will still be in use for up to two years. However, it is obvious that any long-term plans for the use of EDB as an insecticide and nematocide applied to the soil should be re-assessed.

Unfortunately, for exports of some tropical fruit crops from countries where fruit flies occur, there is at present little alternative to EDB; a period of storage at low temperature is the only alternative.

It is likely that Australia and New Zealand will also ban EDB.

BIOLOGICAL CONTROL

During a visit to Tuvalu in September, Plant Protection Officer Bob Ikin and FAO Root Crop Agronomist Jim Breen released *Cyrtorhinus fulvus*, the egg predator of the taro leafhopper, *Tarophagus proserpina*, in taro pits adjacent to the airport at Funafuti. The predators were collected in Fiji with the help of staff at the Koronivia Research Station. The *Cyrtorhinus* are required on Vaitupu, one of the northern atolls of the Tuvalu group. Unfortunately, with the withdrawal of the regular seaplane flight to Vaitupu it was necessary to establish them at Funafuti for later transfer to Vaitupu by ship.

Charles Borman, Chief Agricultural Officer of Funafuti, reported that he had seen some of the predators still active in the released area in November so it appears that the initial one hundred *Cyrtorhinus* may have been sufficient to establish the insect in Tuvalu.

BIOLOGICAL CONTROL FOLLOW-UP

An interesting long-term assessment on the release of biological control insects yielded positive results in July 1983. Niels von Keyserlingk of the Tongan-German Integrated Plant and Harvest Protection Project came to Fiji to meet with Dr Ron Paine from England and they flew to Taveuni, Fiji, in an attempt to recover insect parasites of the coconut spike moth (*Tirathaba rufivena*) that Dr Paine had released in 1933-34.

According to Mr von Keyserlingk, Dr Paine, still sprightly in his eighties, kept up a busy working pace and many coconut spathes were examined. Some pupae and larvae which were

1. USDA: United States Department of Agriculture.
2. APHIS: Animal and Plant Health Inspection Service.

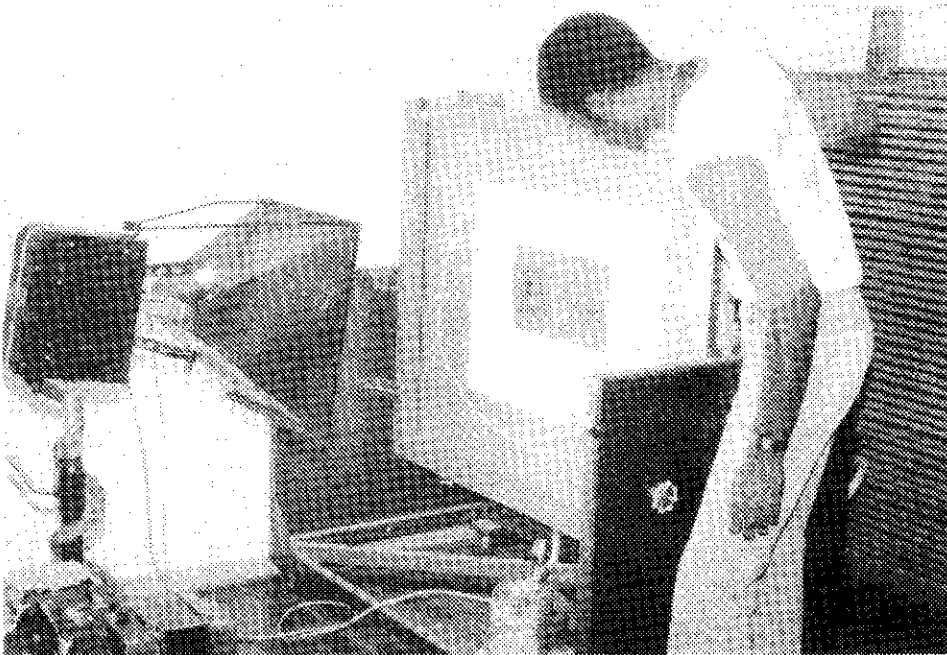
candidates for parasitism were brought back for examination at Koronivia Research Station and several yielded *Agyrophylax basifulva* and *Apantele tirathabae*. The parasitism in Taveuni is so successful that the spike moth is now considered to be a pest of little economic importance. The success made the task of finding the insect and its parasites a difficult one.

Some of the larvae of *Tirathaba* were taken back to Tonga by Mr von Kerserlingk for further observation in the Biological Control Laboratory at Viani. It is now possible for the control of the spike moth in Tonga to proceed with a good chance of success.

Dr Paine was a pioneer of biological control in the Pacific having introduced the *Tirathaba* parasites during his first appointment in Fiji. He collected the insects in Java on his outward journey to Fiji and it is likely that the coconut trees onto which the original insects were released in 1933 are those from which pest and its parasite were recovered in 1983. Little or no replanting of coconuts has been done on Taveuni.

REPRINT OF POSTERS

With the help of the SPC Audio Visual Officer, Detlef Blümel, and students attending a course in Suva, further copies of the plant protection posters have been printed. These illustrate the dangers of introducing a number of pests into the Region including Giant African Snail, Queensland fruit fly and Citrus red mite. A limited number of copies are available from the SPC Plant Protection Officer in Suva.



Willis Jemmis of the Ministry of Education, Vanuatu, a participant in a Media Training Course in Reprographics held at Suva, is seen assisting in the exposure of two illustrations for screenprinting of posters for the plant protection programme.

A REMINDER

News of regional plant protection interest is needed for our next edition. We want to hear about:

Changes or additions to plant protection staff.

Changes or additions to legislation (e.g. plant quarantine or pesticide legislation).

News of new research programmes, recent important research findings, etc.

News of aid programmes in plant protection.

Recent publications on any aspect of plant pathology, entomology, nematology, weed control, vertebrate pests, etc.

New records of, or important outbreaks of, pests, diseases and weeds.

New biological control agents introduced for testing.

New local recommendations for pest, disease and weed control.

News of training courses held or to be held.

News of meetings, seminars, etc.

News of local staff in training overseas and of visiting scientists.

Such information should be sent to the SPC Plant Protection Officer, Box 2119, Suva, Fiji.

AGRICULTURE

ISSUED IN THIS SERIES

1. Annual Conference of O.I.E. held in Paris, 13th-18th May 1968. Report of South Pacific Commission Observer. September 1968. *Livestock Production and Health*
4. 'A' Level: Australia's Notification on Bovine Pleuropneumonia Regulations. March 1968. *Plant and Animal Quarantine*
5. Study Tour to Noumea, Brisbane, Territory of Papua and New Guinea and British Solomon Islands Protectorate. March 1969. *Tropical Crops*
6. 'A' Level: Agricultural Education - Bulletin No. 1. April 1969. *Agricultural Education and Extension*
9. 'A' Level: Agricultural Education - Bulletin No. 2. May 1969. *Agricultural Education and Extension*
10. 'A' Level: Agricultural Education - Bulletin No. 3. November 1969. *Agricultural Education and Extension*
11. Agricultural Extension Workshop - Western Samoa. November 1969. *Agricultural Education and Extension*
12. Asian-Pacific Weed Science Society. December 1969. *Tropical Crops*
13. The Status and Potential of the Chilli Industry in the Solomon Islands. December 1969. *Tropical Crops*
22. Breadfruit Diseases in the South Pacific. June 1970. *Tropical Crops*
23. Second World Consultation on Forest Tree Breeding. June 1970. *Forestry*
24. Agricultural Research in the South Pacific. July 1970. *Tropical Crops
Livestock Production and Health*
25. Crown-of-Thorns Starfish. July 1970. *Fisheries*
26. Counter-Attack - Crown-of-Thorns Starfish. September 1970. *Fisheries*
28. Asian Coconut Community. January 1971. *Tropical Crops*
29. O.I.E./F.A.O. Regional Conference on Epizootics in Asia, the Far East and Oceania. January 1971. *Livestock Production and Health*
30. Plant Pest Control. January 1971. *Tropical Crops
Plant and Animal Quarantine*
31. The Effect of Cultural Method and Size of Planting Material on the Yield of *Colocasia esculenta*. February 1971. *Tropical Crops*
33. Weed control. August 1971. *Tropical Crops*
34. Taro. August 1971. *Agricultural Research*
35. Transmission of Virus Samples. August 1971. *Plant and Animal Quarantine*
37. Training Programmes for Out-of-School Rural Youth. March 1972. *Agricultural Education and Extension*
43. The Fifth FAO Regional Conference on Animal Production and Health in the Far East. December 1972. *Livestock Production and Health*

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| 47. Useful References for Animal Production and Agricultural Extension Workers of the South Pacific Commission territories. March 1973. | <i>Animal Production</i> |
| 50. South Pacific Agricultural Extension Survey - 1967. April 1973. | <i>Agricultural Education and Extension</i> |
| 52. Fruit Cultivation. June 1973. | <i>Tropical Crops</i> |
| 54. Shellfish Poisoning in the South Pacific. February 1974. | <i>Fisheries</i> |
| 55. Special Project - Vegetable Production in the South Pacific. January 1974. | <i>Tropical Crops</i> |
| 56. Comments on Experiments Recently Undertaken in some Pacific Islands on certain varieties of Vegetables. March 1974. | <i>Tropical Crops</i> |
| 58. Some Aspects of Pasture Research and Development. April 1974. | <i>Livestock Production</i> |
| 62. Potential of Animal Feed Production in Western Samoa. November 1974. | <i>Livestock Production and Health</i> |
| 63. Names of Food Plants in Niue Island (South Pacific). November 1974. | <i>Tropical Crops</i> |
| 64. Some Effects of Temperature on Pasture Germination and Growth. April 1975. | <i>Livestock Production and Health</i> |
| 65. The Marketing of Fresh Vegetables. May 1975. | <i>Vegetable Production</i> |
| 66. Special Project on Vegetable Production - Results of 1974 Variety Trials. June 1975. | <i>Tropical Crops</i> |
| 67. Principal 1974 Vegetable Growing Results for the Pirae Agricultural Research Station, Tahiti (French Polynesia). June 1975. | <i>Tropical Crops</i> |
| 68. Evaluation of Broiler (Meat Chicken) Performance. September 1975. | <i>Livestock Production and Health</i> |
| 71. Preliminary Information on the Intestinal Parasites of Livestock in Tongatapu, Tonga. March 1976. | <i>Livestock Production and Health</i> |
| 72. Expérimentation fourragère en Polynésie française. Mars 1976. (<i>Will not be issued in English</i>) | <i>Livestock Production</i> |
| 73. Vegetable trials in 'Motu' environment, Huahine (French Polynesia). March 1976. | <i>Tropical Crops</i> |
| 76. Results of 1975-76 soya bean trials in certain South Pacific Territories. October 1976. | <i>Tropical Crops</i> |
| 80. Special project for the development of vegetable production in the South Pacific. April 1978. | <i>Vegetable Production</i> |
| 82. Red ring disease and palm weevil - threats to the coconut palm. July 1979. | <i>Plant Protection</i> |
| 83. Coconut disease caused by <i>Marasmiellus cocophilus</i> in Solomon Islands. October 1979. | <i>Plant Protection</i> |
| 84. Plant Protection News. January 1980. | <i>Plant Protection</i> |
| 85. Using the predatory ant, <i>Oecophylla smaragdina</i> , to control insect pests of coconuts and cocoa. June 1980. | <i>Plant Protection</i> |
| 86. Plant Protection News. August 1980. | <i>Plant Protection</i> |
| 87. Trials for village Solar Driers in the South Pacific. August 1980. | <i>Agriculture</i> |

88. Plant Protection News. February 1981.
89. Plant Protection News. January 1982.
90. Plant Protection News. April 1982.
91. Plant Protection News. June 1983.

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