INFORMATION CIRCULAR

Date 31 OCT. 1980
August 1980

Classification
Plant Protection

Serial No.
86

PLANT PROTECTION NEWS

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This is the third Plant Protection News and the second to be published both as an SPC *Information Circular* and in the *South Pacific Bulletin.* The *Information Circular* is distributed to agricultural departments whereas the inclusion of the news in the *Bulletin* brings plant protection to the notice of a wider public.

SPC ACTIVITIES

The most important event since the last Plant Protection News was SPC's Third Regional Meeting on Plant Protection held in Port-Moresby, Papua New Guinea from 28 April to 2 May 1980. An account of the meeting has already appeared in the *Bulletin* and an official meeting report has also been prepared.

The logo used for the meeting (Fig. 1) and designed by Iava Geita will be of special interest to weed scientists.

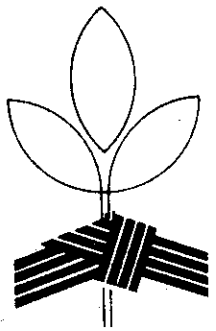

Fig. 1: Logo used for the Third Regional Meeting on Plant Protection.

It shows a traditional knot tied with 'kunai grass' which means 'do not touch' or 'keep away' thus affording protection to the plant from *Homo sapiens* damage! Kunai grass is one of the names used in Papua New Guinea for *Imperata cylindrica.* On a worldwide basis this is considered to be one of the 18 worst weed species* although it also has some beneficial uses including thatching and, it seems, plant protection.

Some of the countries represented at the SPC meeting are also members of the Asia and Pacific Plant Protection Commission (APPPC); these were Australia, Fiji, France, New Zealand, Papua New Guinea, Solomon Islands, the United Kingdom and Western Samoa. The opportunity was therefore taken to hold a brief meeting of the *ad hoc* APPPC Pacific Working Group and especially to welcome Dr Huang Ke-Xun, the new FAO Regional Plant Protection Officer and Executive Secretary of APPPC. The Working Group identified three subjects that it would particularly like to be discussed at the next (12th) full session of APPPC, namely:

1. A realistic approach to quarantine facilities and treatments
2. Quarantine training and
3. Germ plasm especially root crops.

* See *The world's worst weeds* by Holm, Plucknett, Pancho and Herberger, University Press of Hawaii for the East West Center, 1977.

The *ad hoc* APPPC Pacific Working Group arose from an initiative by SPC and the interested countries at the last APPPC meeting in Nepal (see *South Pacific Bulletin* 26 (1): 39-42). The idea was that it should pay particular attention to matters of plant protection in the Pacific and to crops of special importance there. It should also stimulate work to enable the free flow of agricultural commodities both within and outside of the region.

Fig. 2: From left to right, Douglas Malosu, Deputy Director of Agriculture (New Hebrides) with G. Temu (Assistant Secretary for Agriculture), Gapi Kula (Plant Pathologist) and Roy Evara, Minister of Primary Industry, Papua New Guinea after the opening of the SPC Third Regional Meeting on Plant Protection.

In addition to Dr Huang Ke-Xun, FAO was also represented in Papua New Guinea by Terry Bourke, Plant Protection Adviser in Western Samoa and by George Stride. The latter will be remembered as the project manager of the UNDP/FAO-SPEC Survey of Agricultural Pests and Diseases. That project has now finished but during March and April Dr Stride was again in Fiji, this time working with the SPC Plant Protection Officer on a proposal for a joint FAO/SPC project to strengthen plant protection services in the Pacific. Such a project was recommended by the SPC Sixth Regional Conference of Permanent Heads of Agricultural and Livestock Production.

VISITORS

Early in 1980 Dr R. Muniappan, Associate Director of the Guam Agricultural Experiment Station, University of Guam visited the SPC offices in Fiji. Dr Muniappan is an entomologist with a special interest in biological control (see his article in *South Pacific Bulletin* 28 (1): 5-7) and so arrangements were made for him to visit Dr M. Kamath of the Fiji Department of Agriculture who has similar interests (Fig. 3).

Also visiting Fiji, this time from New Zealand, were entomologist Peter Maddison and photographer Barry Eykel from the Department of Scientific and Industrial Research (DSIR). Peter is no stranger to Fiji, having worked there with George Stride on the Survey of Agricultural Pests and Diseases. He was soon out in the field with Richard Viner of the Legalega Research Station near Nadi collecting insects (Fig. 4).

Fig. 3: Dr Kamath (left) and Dr Muniappan (right) in the insectary at Koronivia Research Station.

Fig. 4: Richard Viner and Peter Maddison collecting insects at Legalega Research Station, Fiji.

Barry was on hand to take photographs of the more interesting finds and was quick to get down to grass root level ! (Figs. 5 and 6). Their visit was mainly to take photographs for SPC *Plant Protection Advisory Leaflets.* (DSIR scientists will contribute 12 or more leaflets to the series which will at least double the number so far available.) From Fiji they went on to Tonga and Western Samoa.

Fig. 5: Barry Eykel taking photographs of maize pests.

Fig. 6: Getting down to grass root level.

Another visitor to Fiji, Tonga and Western Samoa was Dale Bottrell of the University of California. He was here to assist in assessing pesticide use in US AID-financed projects in the region. There are Federal guidelines governing the use of pesticides on such projects; school garden projects carried out mainly by Peace Corps volunteers are among activities covered by the guidelines.

Dr Bottrell's main interest is in integrated pest management which as well as using physical and chemical methods of pest control, seeks to integrate these with biological control methods. He prepared the report of the US Council on Environmental Quality dealing with this subject (US Government Printing Office, 1979).

PITCAIRN NEEDS PLANT PROTECTION

The following is an article from *Pitcairn Miscellany,* October 1979 by Roy P. Clark, entitled Pitcairn: past and present.

I think it was perhaps a decade before my event to Pitcairn Island in 1909 that this island entered into a modern transition. This change was brought about obviously by sea-ships and trade. Schooners began to call at the island to barter for, mostly arrowroot and fungi; articles being prised were dress goods, cooking utensils, coal irons (for ironing clothes) etc.

In my early years here I recall with vivid pleasure how near Pitcairn Island was to an earthly paradise because of its unaffected, beautiful nature, or almost so. There were no noxious weeds of any kind, save two - a flower bush called 'Lantana' and a sort of variety of Wandering Jew we termed 'Cow grass'. There was practically no taint of blight or insects on all nature. Produce like vegetables and fruits were lovely clear skinned and fruit was not worm eaten. Seed planted (vegetables) yielded back again 80 to 100. Tree rot was unknown and all fruit trees yielded bountifully. Seed was planted with anticipated pleasure of knowing crops would not be destroyed by blight, pests and insects, like they are today; 67 years after my arrival here.

In 1914 an enterprising, enthusiastic Pastor suggested that we on Pitcairn build a schooner for the further projection of the Gospel. This was done and the 'Messenger' made trips to Mangareva and Tahiti bringing back to Pitcairn diverse articles of trade with plants, seeds, fruits; also horses and dogs. I'm not an antropologist, but I know sufficient to realize that ships going from one country to another from port to port carry with them more 'wogs' than imaginable: plants, weeds, insect life, bugs and blight that destroy millions in money by destruction in their country.

Then shortly after the opening of the Panama Canal in 1914 frequent boats and passenger steamers began to make regular visits at the island. It takes little thought to visualize how ships of any description became the mode of how bugs, insects, blights, etc. came to Pitcairn Island.

Let us take a candid look at the island today. Insecticides are sold on the island for the spraying of trees and vegetables. A common expression among the islanders is 'Can't get anything now without spraying'. 'Cursed blight or bugs have ruined all my tomatoes'. Bill comes past Jim's house with a spraying can on his shoulder. 'Going out to spray,' says Jim. Bill replies with a downcast expression of discouragement on his face. 'Got to, if not bugs are going to ruin my whole garden of beans.'

And so it goes on from day to day, season to season. No spraying of the gardens and it would be futile to plant. Our guavas and rose apples are spoiled by a white worm, Tomatoes are bored through the skin and cause a black rot. Thousands of mangoe trees on the island, and only a handful of mangoes, the same with avocado pears, years ago they were both in abundance, today avocado pears are few. Coconut trees died by the hundreds, but now seem to have made a come-back. The banana, one of our staple foods is dying out, and it is common thought that within ten years there will be much anxiety on the island and soon to follow will be another of our staple goods - the sweet potato.

Our oranges, so far, have not been attacked by blight or insects, but the trees have and many trees are dying out because of what we call 'an orange rot'. One step further - A good few of the islanders use fertilizing agency, blood and bone, and nitrogen mostly. Even the land itself is getting old like a garment, and it seems that if we islanders and the youth do not put forth some effort-a move to save Pitcairn Island in the not far off future, some really drastic measures will have to be taken to save Pitcairn from losing it's identity, and the island be used for an entirely different reason than it is now. I predict we are in the last stages of this island's history as a community.

PEST AND DISEASE REPORTS

The Serpentine Leaf Miner, *Liriomyza sativae,* is still spreading throughout the region. In the last Plant Protection News it was newly reported from the Cook Islands. It has subsequently (January 1980) been found in New Caledonia. This is a pest which can be very damaging on a wide range of crops, especially tomatoes.

From the New Hebrides Mr P.N. Byrne, FAO Cocoa Development Adviser reports that the giant termite (*Neotermes* sp.) recently has been recorded as a pest of cocoa (Fig. 7). Its distribution has not been fully determined but so far it has been found on the islands of Efate, Pentecost, Malekula, Espiritu Santo and Aoba. The economic importance of *Neotermes* as a cocoa pest in the New Hebrides is not known but it is regarded as a potential major pest. It has not so far been found on any other host plants there. Recommendations for prevention and control are being based on those of Dr E.S.C. Smith for Papua New Guinea where a similar problem exists (Lowlands Agricultural Experiment Station, *Information Bulletin* No. 17, 1979).

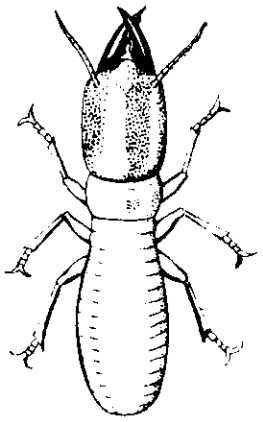

Fig. 7: Giant cocoa termite (*Neotermes* sp.). Drawing from Smith, 1979 (see reference in text).

The 1978 *Annual Report* of the Guam Agricultural Experiment Station records the presence of Panama wilt of bananas (caused by the fungus *Fusarium oxysporum* f. sp. *cubense*) at two separate locations on Guam. The plantations have been severely damaged and the disease appears to be spreading. The disease has not previously been reported on Guam. Within the SPC region Panama disease has been reported from Fiji, Papua New Guinea and the Trust Territory of the Pacific Islands but the Fiji and Papua New Guinea reports are considered to be very doubtful and there is no evidence that the disease exists in those countries. It is a very serious disease which has caused more than 100,000 acres of banana-growing land to be abandoned in Central and South America.

PLANT QUARANTINE MATTERS

The Asia and Pacific Plant Protection Commission (APPPC) has published a most useful document entitled *Plant quarantine in Asia and Pacific.* It explains the agricultural and biological basis of the quarantine recommendations made by APPPC. The information contained in the publication was mainly prepared by Mr J.R. Morschel, Assistant Director-General, Plant

Quarantine, Department of Health, Australia. Because the actual recommendations are technical and worded as such an attempt has been made to explain the reasons for the recommendations in a way that can be readily understood by the non-specialist.

Fiji has been pleased to welcome Bob Thompson a Peace Corps volunteer with many years experience as a plant quarantine officer in the USA and Puerto Rico. He is working together with Fiji's Produce Inspector, Balram Singh, to improve quarantine procedures in the country. Stanley Miyake, Area Director of Plant Quarantine from Hawaii also paid a brief visit to Fiji recently.

MORE NEWS

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 Office, 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*

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