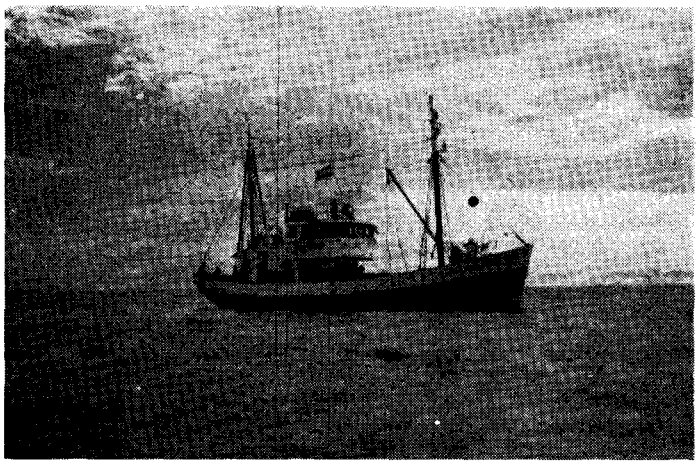


Above: The Administration's fisheries research vessel "De Goede Hoop". Right: On this coral island ninety miles from Manokwari, on the north coast of the territory, the Department of Fisheries is assisting local fishermen to salt down their catches for later sale on the mainland. The hut provides temporary living quarters for fisheries officers.

SPC Fisheries Survey In Netherlands New Guinea

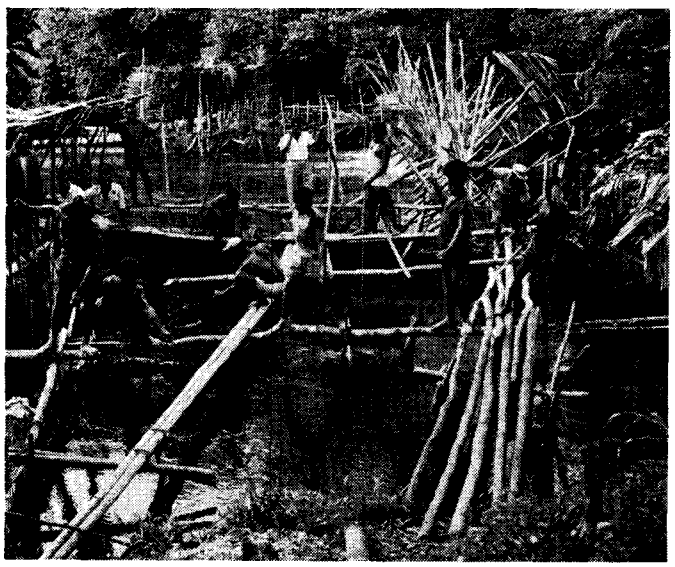
The preservation and marketing of fish, small boat design, improvement of fishing gear, conservation of shellfish, and stocking of inland waters were among matters studied recently in Netherlands New Guinea by the Commission's fisheries officer, Mr. H. van Pel. He spent two months in the territory investigating marine and inland fisheries resources and advising the Administration on their development.

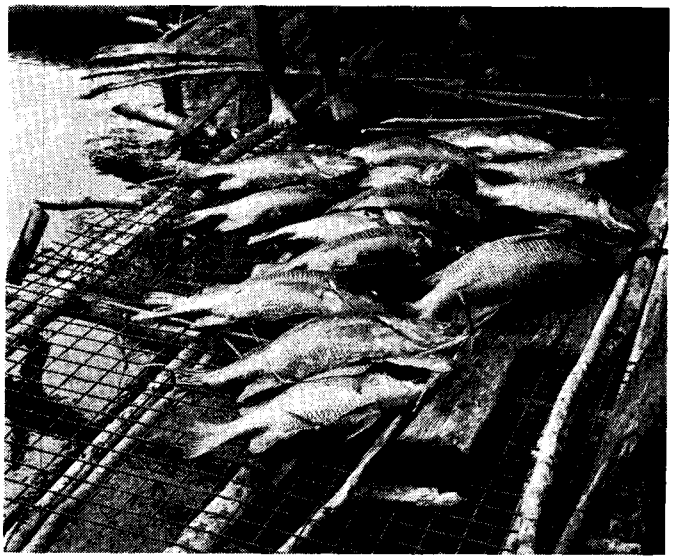
By H. VAN PEL

AN important part of the investigations into the marine fisheries resources of the territory was carried out during an eight-day cruise in the fisheries research vessel *De Goede Hoop*. The Director of Fisheries, Mr. W. A. Mackenzie, accompanied me on this trip.

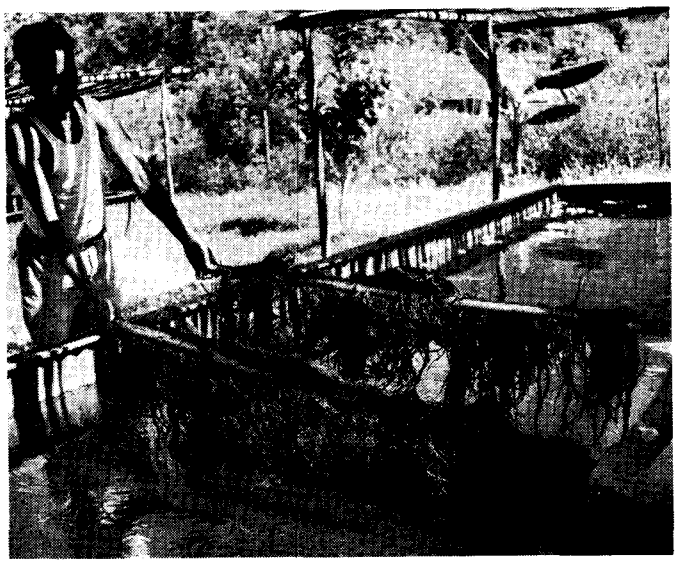
We carried out experiments in handling and trolling which resulted in good catches of schnapper, Spanish mackerel, barracouda, trevally, jobfish, dolphin, tuna and shark.

Most of the fish taken were caught with six trolling lines while the ship, using an echo-sounder, followed a zigzag course along the edge of a steep submarine reef. One evening while anchored on the reef in six fathoms of water we took over forty red schnapper (*Lutianidae*) in two hours. We returned to port with four tons of fish in the ship's refrigerated hold.





Above: In a trap built in the effluent from Lake Sentani, near Hollandia, Papuans spear schnapper migrating to spawning grounds at sea. Right: Part of the catch, which included fish up to thirty inches long weighing around ten pounds.



Above: Breeding tank for carp transplanted from Manila to Netherlands New Guinea last December. The fish-egg collector has been lifted to show the fibre which normally floats in the water, and on which the eggs collect. Right: A family fish pond nearly ready for stocking.

Fishing full-time we could have taken one ton per day.

Investigation Of Inland Fisheries

The main purpose of the inland fisheries survey was to find ways of increasing the aquatic food resources, not only of the lakes but of other inland waters.

With Mr. G. A. Reeskamp, Agriculture Officer, visits were made, mainly by hydroplane, to the large lakes in the region. These included the three Wissel lakes, one of which is 5734 feet above sea level. They are noted chiefly for the fresh-water crayfish caught in them, which provide most of the protein in the diet of the people living on their shores.

I also visited the Ajamaroe lakes which in addition to crayfish contain sepat Siam (*Trichogaster pectoralis,* R.) and kissing gourami (*Helostoma temmincki,* G. & V.). The latter species were introduced from Indonesia—an introduction that has proved very successful and of great benefit to the people.

Sentani Lake, near Hollandia, is the largest of the lakes in Netherlands New Guinea. Its greatest diameter is 16.8 miles. While populated mainly with fresh-water species, it is remarkable that some sea fish are also found in its waters. We watched Papuans spearing snapper in traps they had built in the effluent of the lake.

In general, our investigations in inland waters included observations on water temperature and transparency, *p*H (acidity) tests, lake bottoms, fish foods, water plants and insects, fish species and their breeding grounds, and local fishing gear.

Coconut Trees Threatened With Destruction

(Continued from page 22)

studied separately. Furthermore, the disease does not appear on palms under four years old; it is therefore believed that the symptoms appear, at the earliest, during the first two years following contamination. Under these conditions, it is anticipated that the research work under way at the Experimental Station at Guinobatan will be lengthy and costly.

The best means of fighting a virus disease is to discover varieties which are immune to it. Dr. W. C. Price (of the United States), virologist from the Food and Agriculture Organization now in charge of research on "cadang-cadang" in the Philippines, has recommended that coconut seeds imported from all over the world be planted at the Experimental Station at Guinobatan. As soon as the means of transmitting the disease have been discovered, it will be possible to test the individual resistance of each variety and it is probable that certain varieties will prove to be immune to "cadang-cadang".

Unfortunately, the funds devoted to this research work are not sufficient. Dr. Price has suggested that the Government should levy a tax of 1d. per 100 kgs. of exported copra and that the sums thus collected be paid into a special fund devoted to research work on "cadang-cadang". He is convinced that the disease can be conquered within a short time, provided the industry is willing thus to supply the necessary funds to finance the research work carried out at Guinobatan.

Re-Planting Old Coconut Land

(Continued from page 26)

Scientific selection and the development of a desirable and fixed species of coconut is such a long-term project that it may only be undertaken properly by a government agricultural station. For instance, before a guarantee of proven qualities could be given for seed nuts by a nurseryman, he would require to possess a grove of coconuts, each of identical breeding (the result of many generations of selected material), and his grove would have to be separated from ordinary plantation palms by a considerable distance to prevent undesirable hybridization.

Notwithstanding the foregoing, seed nuts taken and planted from superior plantation palms, after strict culling in the nursery, will unquestionably achieve a better average in growth and bearing qualities than can be hoped for from seed coconuts gathered at random.

In plantations with good healthy palms, re-planting is unlikely to be considered until the trees have reached an age of over sixty years. At such an age the height of their crowns is generally forty feet or more above the ground level. Supposing the palms are spaced the usual thirty feet apart, there should be ample sunlight penetration for re-planting between the rows without the removal of the old palms. The advantage of gaining a substantial income from the old while the new are coming into bearing will not be overlooked by most planters.

Steep hillside re-planting, where erosion is likely to have taken a heavy toll of soil nutrients, is perhaps inadvisable without a small pilot project, and soil analysis is helpful anywhere.

Most estates contain areas of good fertile coastal flats, and unless the soil there is unusually poor, re-planting in such fields should not be unsuccessful.