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SOUTH PACIFIC COMMISSION

TENTH REGIONAL TECHNICAL MEETING ON FISHERIES

(Noumea, New Caledonia, 13 - 17 March 1978)

AMERICAN SAMOA BAITFISH PROJECT

by

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The Office of Marine Resources began its mollie (Poecilia) culture programme in 1971. Until 1976, mainly due to limitations of space, large scale production was not achieved. When the project was moved to a natural pond in Tofuna in October 1977, production increased to an estimated 3½ million fish by December of that year. Some of the problems encountered are parasites, disease, and predators.

Field trials were held in 1974. The results prompted the Government of American Samoa to schedule larger scale trials in 1978.

The PTDF chartered the F/V J-Ann, a 67-foot live bait fishing vessel from San Diego to do the trials. The J-Ann arrived in Pago Pago on the 4th of January, 1978. She fish 14 days during the month of January around American and Western Samoa. School fished were fairly frequent, about four to six per day. Approximately 442 scoops (345,000 mollies or 2,200 pounds) were thrown. About 17 tons of skipjack and yellowfins were caught. The trials will be continued for the next two months.

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History of the Baitfish Project

Since 1971, the Office of Marine Resources has been involved in a "mollie" (Poecilia mexicana) culture program, raising mollies as potential live bait for skipjack tuna. Until recently, large scale production was not achieved.

The initial program site was on Coconut Point in Nu'uuli Village, but it was later moved to Taputimu Agricultural Station where more favorable conditions existed. Several factors inhibited large scale production at that site also, the major detrimental factor being lack of space.

In September 1976, the Office of Marine Resources received approval from the Federal Aviation Agency office in Honolulu to utilize one of the airport ponds in Tafuna to raise baitfish. In October of the same year, the Baitfish Project was moved from Taputimu to Tafuna where it is located now. This has proven to be a more natural environment and has resulted in increased production. In December of 1977, there were an estimated three and a half million fish in our enclosures. (See Figures 1 and 2).

Problems

The effects of parasites and diseases cannot be over-emphasized. Copepods on the brood stock were first noticed in June, 1977. By July 1, the copepods had attacked fish in almost every enclosure. They sufficiently weakened the fish so that bacteria and fungi took hold. At the end of July, a major disease epidemic was experienced that destroyed about 500,000 fish. (This was about 15% of the total fish stock). For some reason, the fry sized fishes were more resistant to the disease than the adults.

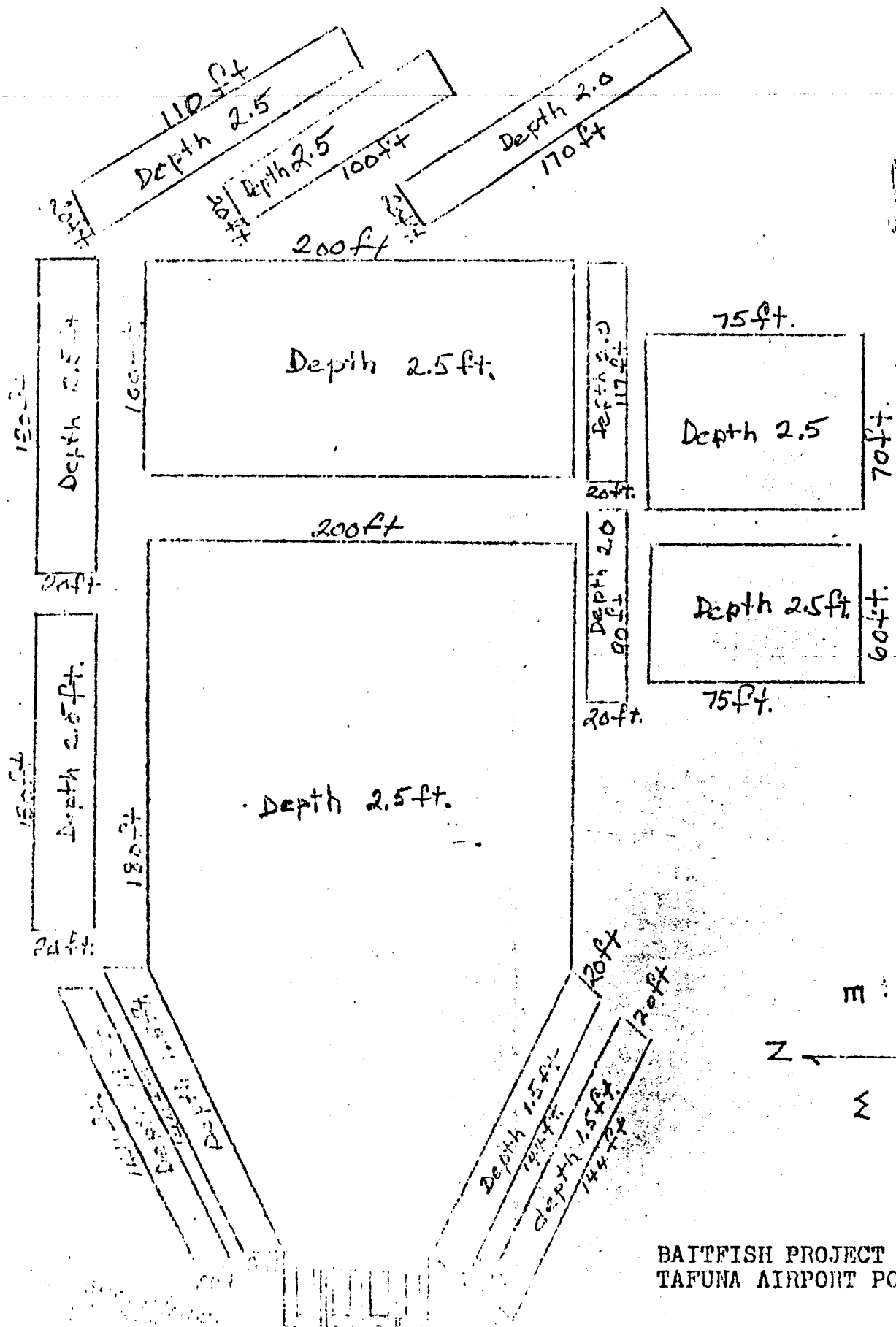
Apogon lateralis is a constant problem since they feed on fries. They are extremely not shy and difficult to seine. They seem to appear in the enclosures from nowhere. Reef herons and terns also feed on the fish in the ponds.

Live Bait Trial

The results of the field trials from February to April of 1974, prompted the Government of American Samoa to expand and improve its bait culture facilities. (Dr. Stanley N. Swerdloff discussed the results of these trials at the South Pacific Commission Seventh Technical Meeting on Fisheries in 1974). Larger scale mollie trials were scheduled for the early part of 1978.

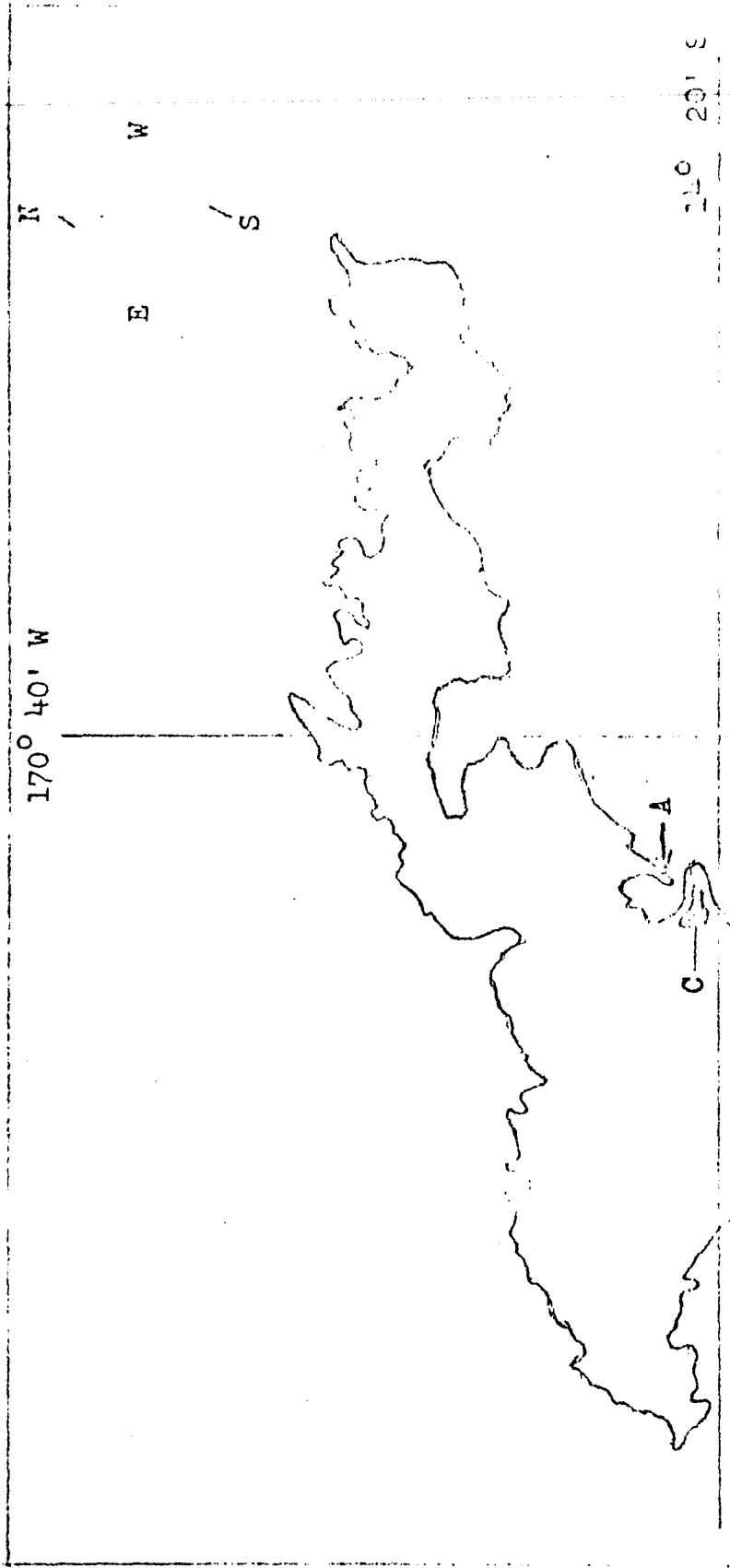
Pacific Tuna Development Fisheries chartered the F/V J-Ann, a 67-foot livebait fishing vessel from San Diego to do the trials. The J-Ann arrived in Pago Pago on the 4th of January, 1978. She fished 14 days during the month of January around American and Western Samoa. Schools fished were fairly frequent, about four to six per day. Approximately 442 scoops (345,000 mollies or 2,210 pounds) were thrown. About 17 tons of skipjack were caught.

On February 14, the J-Ann left for Fiji with a full load of mollies. She hoped to obtain wild bait there to compare with mollies. (Attempts to catch wild bait in Pago Harbor have been unsuccessful). She is expected to return to American Samoa to continue with the trial.



BAITFISH PROJECT
TAFUNA AIRPORT POND

Figure II



- A. Coconut Point, Malindi Village
- B. Kaputima Agricultural Station
- C. Talama Airfield Pond

Map No. 1

