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Reporting of the programme's work

The Skipjack Programme, right from its commencement, maintained the same rigorous reporting schedule that had been a feature of the Papua New Guinea Tuna Program: all components of the programme's work were covered in great detail and published as quickly as possible. The schedule included a preliminary country report for every country and territory that the *Hatsutori Maru* visited. These reports were completed and distributed as soon as possible after the conclusion of the fieldwork in the respective country. As a consequence, 12 preliminary country reports were produced in 1978.

A final country report for every country and territory was produced after the conclusion of the three years of fieldwork and analyses of the relevant tag return data, and related catch data from commercial fleets operating in or near the survey area. These final reports took much longer to materialise because they could not be completed until the relevant tag returns were documented and analysed. As tags could still be returned more than two years after they were released, extension of the time taken for final reports to be completed was inevitable. An annual report for each calendar year summarised the programme's operational and field activities in the prescribed year.

The detail covered not only tuna tagging but also the biological sampling of tuna that were caught but not tagged. This extra information provided data that were used to estimate growth, feeding behaviour and reproduction. Blood genetics and parasite occurrence were also catalogued and used for the description of stock structure. In addition, there was a huge amount

of data and analyses on the hundreds of baitfish species that were captured in most countries and territories by a variety of gears in both night and daytime sampling.

The first 'annual' report was for the calendar year 1977 (Kearney 1978). The programme's fieldwork commenced on October 5, 1977, so this report had fewer results than the following three. This was balanced by having more description of methods adopted for use throughout the programme, including data capture and processing methodologies.

Sampling techniques for all aspects of each of the programme's activities are described in the numerous technical reports that were produced for specific activities or datasets – for example, SPC (1980) on genetic analyses; Kearney and Gillett (1982) on methods used for tagging; Argue (1982) on biological data sampling; Hallier, Kearney and Gillett (1982) on bait-fishing methods; Argue, Conand and Whyman (1983) on juvenile tuna from tuna stomachs; Kearney (1983), which provides a programme final summary report; and Sibert, Kearney and Lawson (1983) on skipjack growth estimates. In addition is a suite of papers that describes the data processing and analytical techniques used in fisheries assessments – for example, Kleiber and Maynard (1982) and Kleiber, Argue and Kearney (1987).

The annual report of the programme for 1978 (Kearney 1979) was the first to cover a full calendar year. The period covered begins on January 1, when the *Hatsutori Maru* was in New Caledonia, halfway through a very successful period of tagging. Extensive details of the programme's activities for the whole of that year are provided in that annual report. Of relevance to activities in subsequent years was that in 1978, two of the donors increased their contribution to the programme for the next year: Australia's increase was from AU$250,000 to AU$283,000, whereas Japan, which had previously funded three months of vessel charter, at an approximate cost of $168,000, changed to a cash contribution of $180,000. These increases I took to be expressions of the donors' growing confidence in the programme.

Also of considerable significance for the future activities of the programme was that, for a variety of reasons, including exchange rate changes that were largely in our favour in that year, sales of fish and bank interest, total income for the year exceeded expenditure by $89,605. It was also noteworthy that during the year, the auditor general of Australia approved the way the programme's accounts had been maintained. This was of seminal importance, as the Skipjack Programme was outside the SPC's budget and

was the first to have its own independent executive processes. As I was personally responsible for all expenditure, the favourable auditor's report was hugely important to me.

In 1978, a significant addition to the staff of the programme was made with the recruitment of Dr Pierre Kleiber as the first senior scientist. He took up this position in May. A second senior scientist, Sandy Argue, was appointed to take up the position in March 1979.

Pierre had only been in the job a few months when he concluded that the arrangements we had for using the New Caledonian government computer for the compilation and analysis of our data were inadequate to achieve the level of excellence in science to which we were committed. It did not take him long to convince me that we had to do something serious to solve the problem. Two consultants were employed to advise on how best to address the issues. Both concluded that the only realistic solution was that we buy our own computer, one with enough power to accommodate the amount of data we envisaged handling and the intricate analyses of the tagging data that would be the foundation of our assessments of the size and dynamics of the skipjack population.

Buying a computer in 1978 was a hugely different task from what it is in 2026. Cost was a major problem, but not the only one. Firstly, I had to get the donors to agree that this was the way to go. Bearing in mind that there was only one computer in New Caledonia and this was owned by the government, this was not an insignificant issue. There was some concern by one or two donors that if every other enterprise in New Caledonia, including the SPC, could get by without a computer, why couldn't we? My answer that we needed to do much higher quality assessments of much more complicated datasets than did other enterprises, including the SPC, did not immediately allay their concerns totally. However, my discussions with representatives of individual donor governments led me to believe that the task of convincing them was not going to be impossible, but some work did need to be done.

The fact that we had significant savings, approximately $90,000, from the previous year facilitated the progress of my discussions with donor governments. We had demonstrated that I was a responsible financial manager, and the purchase would not cost the donors more money – at least

not much more. When I sought the approval of the donors to buy the computer, two of them simply said, 'We have given you the money. If you believe it is a priority and you have the money, just go ahead'.

The second annual meeting of the Programme's Intergovernmental Administrative/Finance Committee was held on October 10, 1978, while the delegates had gathered for the Eighteenth South Pacific Conference. At this meeting, the budget and accounting procedures for the programme were approved, and the auditor's report was accepted. It was most significant that it was agreed that if additional funding for the programme was required for whatever reason, then I, as the programme coordinator, should first attempt to obtain such funding from the existing donor governments. I took this to be an expression of pride in the 'ownership' of the programme, which the existing donors did not wish to see shared with 'interlopers' who had not taken the initial risk of funding an unproven enterprise. I advised the donors that I had already had a visit from South Korean representatives asking to be allowed to become a donor to the programme at a level of US$200,000 per year. The existing donors then agreed that if more funding was required than the current donors chose to fund, the programme coordinator could approach outside sources. Again, I took this to be a strong show of confidence in the management of the programme and support for it.

While at the South Pacific Conference, the donors had been getting very positive feedback from the Pacific Island delegates, the fisheries officers had been doing their bit.

Eventually, it was agreed at that meeting that the programme's savings could be used to purchase the proposed computer in pursuit of the standard of excellence in analysis to which the programme was committed. I had little doubt that if we needed a 'bit' more money to get the right computer, one or more of the donors would help. Australia and Japan had already demonstrated their willingness to take unilateral action in increasing their contributions to the programme. My confidence that all would be well with the level of funding for the computer was reinforced by their agreement that if extra funding was necessary, the existing donors had just authorised me to go to other donors if necessary. South Korea would almost certainly welcome the opportunity to help.

Price was obviously a major factor. Preliminary quotes from the few companies that made and sold computers in those days began at around $100,000. But it got worse. Most of the few companies that marketed suitable

computers would not sell to clients in countries that were considered not to have adequate capabilities to maintain and service their machines. Hewlett-Packard (HP) and Texas Instruments were the only two that offered us a computer that Pierre and our two consultants considered would do what we needed. After several rather brief discussions by phone, Texas Instruments withdrew their offer. They considered New Caledonia too 'remote' and not computer 'friendly'. Even though I now had the agreement of the donors to buy a computer, we were still going to be at the mercy of HP.

My job now was to convince HP to sell us an adequate computer at a reasonable price. After numerous phone calls to HP's regional office in Melbourne, it was obvious a face-to-face discussion was going to be necessary. They clearly had some serious reservations. So, Pierre Kleiber and I went to Melbourne.

Negotiations were far from straightforward: an outcome I had anticipated. HP finally agreed to sell us an HP Series 1000 mainframe with a 40-megabyte hard drive for about $100,000. The hard drive alone cost US$60,000. (I have never met anybody else who has paid $60,000 for 40 megabytes, and in 2026 currency conversion, this was approximately half a million US dollars.) I felt that this qualified me to be considered as either mad or a pioneer in computing! But this was not all. I had to agree that the computer would have its own air-conditioned, dust-free room with an appropriately buffered and isolated power supply, plus an appropriately qualified technician/scientist to run it full-time. To get the contract across the line, I also had to agree that one of our staff would undertake a training course at the HP head office in California. Dr Kleiber had a trip in front of him, which, in hindsight, he agrees he enjoyed.

From December 4 to 8, 1978, an 'Ad Hoc Meeting of the Expert Committee on Tropical Skipjack' was convened in Noumea to design fisheries catch statistics forms for use by all countries and territories of the region. That the Skipjack Programme should adopt responsibility for a regional data collection and analysis system had been confirmed by the 'Ad Hoc Meeting of Scientists to Discuss Skipjack Fisheries Developments and Research Requirements' that I had convened in Noumea from December 5 to 10, 1976. The members of the Expert Committee, of whom I was one, were, on my advice, pre-empting the arrival of a suitable computer.

Acceptance of standard forms by the regional fisheries officers would, in effect, commit the Skipjack Programme to the processing of them and production of computerised summaries and analyses. If we did not do it, nobody else would. The donors had somewhat of a problem with this action. Some of them felt that becoming the regional repository for tuna catch and effort data was beyond what they had committed to. I justified this commitment on the grounds that the tuna fisheries data were required to be used in combination with our tagging data for our analyses of the total skipjack resources of the region.

The move to commit to catch and effort data processing was in effect the beginning of the adoption by the programme of one of the primary responsibilities intended for the broad membership of the Regional Fisheries Agency. Such an agency was first proposed and then described in my two Law of the Sea papers delivered to the meetings convened by the South Pacific Forum in Suva in 1976 and 1977 (see Chapter 8). These meetings had resulted in the production of a draft convention to establish a South Pacific regional fisheries agency. I had for some time been championing the need for a regional agency that had the membership of all the countries and territories of the region. There appeared to be little chance the SPC executive would provide leadership on this issue, even though the SPC was the only organisation with the broad membership to do so. It had to be done, and we in the Skipjack Programme were the only ones who had the capability to do it.

The year 1978 was a very successful one for the programme from more perspectives than just buying a computer and entering regional fisheries data collection: it was an excellent year for activities on the *Hatsutori Maru*. A total of 13 countries and territories were surveyed: New Caledonia, New Hebrides, Fiji, Tonga, Wallis and Futuna, Western Samoa, American Samoa, Tuvalu, the Gilbert Islands, the Trust Territory of the Pacific Islands, Tokelau, the Cook Islands and French Polynesia. A total of 47,031 skipjack and other tuna were tagged; 7,901 biological samples were taken from tuna that were captured but not tagged, and 17,254 buckets of bait were captured, and samples were systematically analysed. The tagging results were outstanding, with an average of 244 fish tagged per fishing day. This included a world record of 2,910 tagged on one day, on May 20, near Wallis Island. The people of Wallis and Futuna were so impressed by the work on the *Hatsutori Maru* that they struck a series of beautiful stamps to commemorate it (Figure 7). The total number of tagged fish released exceeded the target number for the year by more than 40 per cent.

It is noteworthy that of the 276 days the *Hatsutori Maru* was in the survey area, 194 were spent fishing, 41 days travelling and only 41 days or part thereof in port. Many of the number of days recorded as being 'in port' were, in reality, often only parts of days. In other words, one day, or only part of one day, per week, was spent in port over the whole of the charter period. Considering that refuelling and obtaining supplies took longer than anticipated, particularly in some of the more remote areas visited, and that on top of daytime activities, 146 nights were spent fishing for bait, this constitutes a remarkable performance by all crew and scientists. Equally impressive was that not a single hour was lost due to mechanical problems with the vessel: a great reason to be extremely happy with the charter arrangements. I constantly reflected on the comparison with the Fisheries Research Vessel *Tagula* in the days of the Papua New Guinea Skipjack Tagging Program, when half of the possible fishing time was lost due to mechanical failure of the research vessel.

This text is taken from *Pacific Skipjack: The Remarkable Story Behind the World's Biggest Tuna Fishery*, by Bob Kearney, published 2026 by ANU Press, The Australian National University, Canberra, Australia.

doi.org/10.22459/PS.2026.15