



**BEEKEEPING DEVELOPMENT PROGRAMMES IN THE TROPICAL AND
SUB TROPICAL PACIFIC**

by G.M. WALTON

*(Apicultural Advisory Officer, Ministry of Agriculture
and Fisheries, New Zealand)*

*(From "Apiculture in Tropical Climates", IBRA, London
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Introduction

The Pacific ocean covers almost one third of the surface of the earth. With the exception of the major continents bordering the Pacific, very little is heard about tropical and Subtropical beekeeping in this region (Fig. 1). It is apiculturally distinct from the other tropical regions. With the exception of some Island groups on the western periphery (Indonesia, Philippines, Taiwan), the Pacific has no indigenous *Apis* species. The European races of *Apis mellifera* that are present have been introduced by man during the last two centuries. *Apis mellifera adansonii* has not been introduced to the Pacific region - fortunately. In the absence of a long association with honeybees, the peoples of the tropical and subtropical Pacific (the Melanesians, Micronesians and Polynesians) have not developed any traditional or cultural associations with honeybees.

In recent years considerable interest has been generated in beekeeping within the Pacific region, and a number of development programmes are currently under way. Part of this new awareness can be attributed to the emergence of a number of small independent Pacific nations, each looking for ways of improving the economic and cultural welfare of its peoples.

New Zealand Apicultural Aid Programmes

As a Pacific country New Zealand has directed most of its development aid efforts towards its neighbours in the Pacific region. In recent years New Zealand has been associated with beekeeping development programmes in the following countries:

1. Papua New Guinea

New Guinea is the largest single island land mass in the Pacific Ocean. Two countries, Papua New Guinea in the east, and Indonesia (Irian Jaya) in the west, share this mountainous land.

European honeybees have become well established in the Highland regions of Papua New Guinea (12). Early beekeeping development was stimulated by expatriates, including the missionaries (2). In recent years an active development programme has been promoted by the Papua New Guinea Department of Agriculture, Stock and Fisheries (DASF). A beekeeping teaching programme has been introduced into all high schools in the Western Highlands, and village beekeeping projects have been encouraged. The DASF is evaluating the potential of beekeeping at cottage, semi-commercial or small-holder, and commercial levels (17). A research programme is also under way, examining floral sources, climatic effects and hive types. Two young DASF officers are currently undertaking six

months of practical training and study in Australia.

As part of its bilateral aid programme, New Zealand is assisting Papua New Guinea by providing beekeeping advisers, hives, and servicing equipment. The aims of the aid project are to determine the potential for beekeeping in the Goroka area of the Eastern Highlands District, and to provide training for beekeeping advisers and persons wishing to take on beekeeping as a commercial or small-holder venture (16). An experienced New Zealand beekeeper has recently been sent to Goroka for two years to help the DASF establish the project. During this period it is proposed to increase the number of Government-owned hives to 500, and to operate them as a honey-producing venture, any profits being used for further beekeeping research and development. During the second year emphasis will be placed on expanding the industry by:

- (i) selling hives to potential beekeepers in areas where beekeeping is known to be feasible
- (ii) extending the advisory service
- (iii) providing extraction and marketing facilities for beekeepers
- (iv) assessing the beekeeping potential of other areas

2. Niue

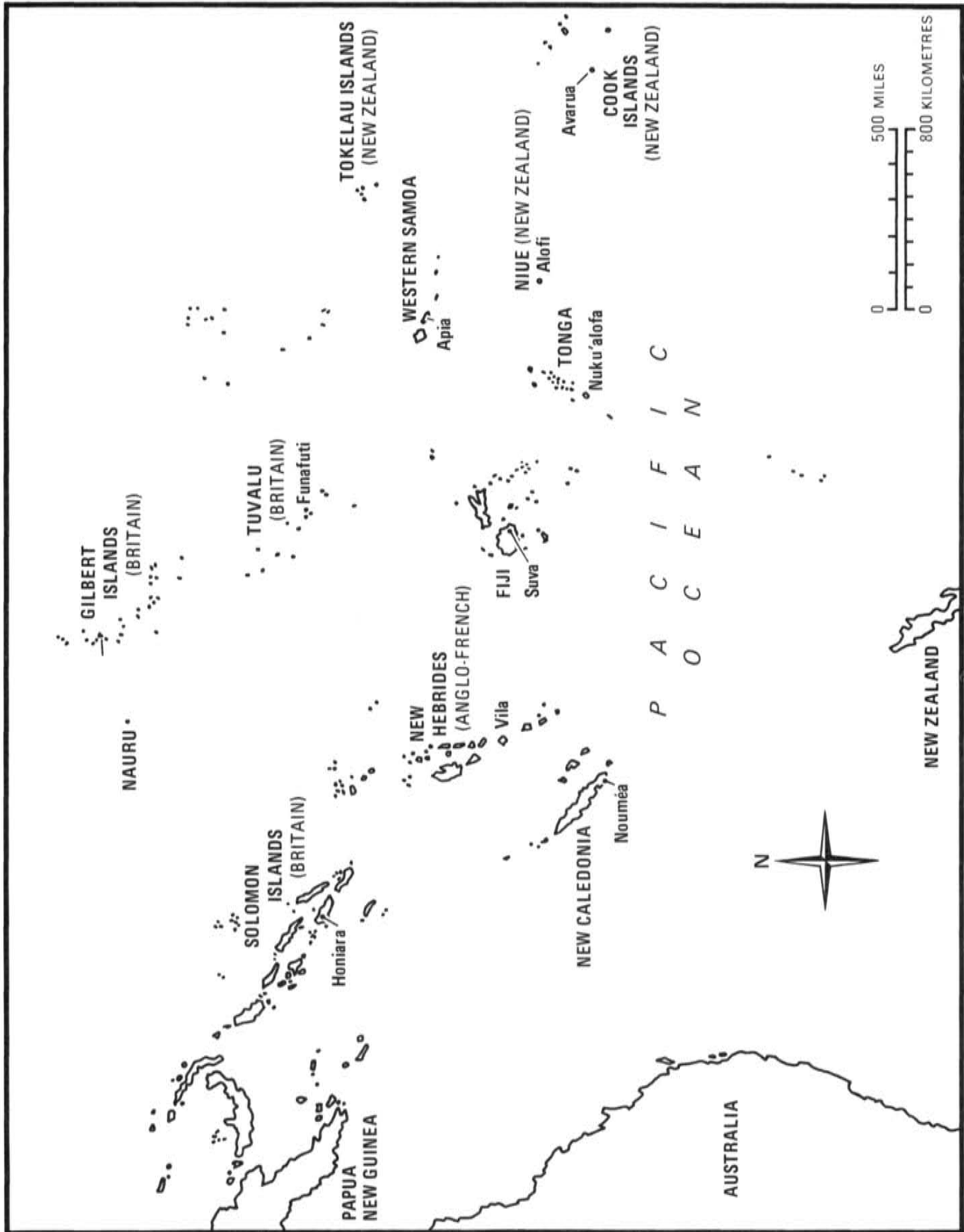
For its size the island of Niue is probably the most intensively bee-farmed country in the world. With an area of only 259 square kilometers, this island contains one commercial beekeeping unit of 1200 hives, producing an average of 50 tons of honey per year (8). The honey industry is second only to the passionfruit industry as an export revenue earner for Niue.

New Zealand has been closely associated with the development of beekeeping on Niue Island. At the invitation of the Niue Island administration, a New Zealand Ministry of Agriculture and Fisheries adviser assessed the prospects of commercial honey production in 1966. As a result of a most favourable report, a New Zealand beekeeper, Mr. J.B. MacKisack, in association with the Niue Island Development Board, transferred 650 hives from New Zealand in 1967 (11,19). Honey from Niue Island is marketed through the New Zealand Honey Marketing Authority depot in Auckland.

Earlier this year the New Zealand Ministry of Foreign Affairs sponsored a three-month training programme in New Zealand for the manager of the Niue Island honey company, on aspects of hive management and honey marketing.

3. Tonga

More recently, another New Zealand commercial beekeeper, Mr. D.L. Ward, in association with the Government of Tonga, has established a honey-producing business on the main island of Tongatapu (260 sq km). Four hundred hives were shipped from New Zealand in 1971-1972 (21). A New Zealand aid grant of \$NZ16,000 in 1975 increased the hive holding to 900. Tonga is hoping to develop a queen-exporting industry.



The Pacific: map showing named localities

Other islands in the Tonga group, including Vavau (119 sq km) and Eua (87 sq km) may be able to sustain honey-producing enterprises (20).

4. Gilbert Islands

The Gilbert Islands are a series of 16 atolls (average area 16.5 sq km) spanning the central Pacific equator. At the request of the administration, New Zealand sent an adviser in 1975 to determine the feasibility of establishing beekeeping operations in the Gilberts. With the exception of the Line Islands, there are no honeybees in the Gilbert group.

A number of features of the atoll environment limit the opportunities for commercial or semi-commercial beekeeping development. These features include the limited foraging terrain, an unreliable fresh water supply, isolation from sources of supply and markets, and a high human population density (16). Small numbers of hives could do well in the atoll situation. Exceptional honey yields per hive have been recorded on Wake Island (7,10) well to the north of the Gilbert Group, and bees have also done well on Canton Island in the Phoenix Group.

5. Western Samoa

Western Samoa consists of two large islands, Upolo (1114 sq km) and Savavai'i (1820 sq km). Beekeeping on an amateur scale has existed for many years, but there is also a potential for commercial operations (19). The Government of Western Samoa has recently sought New Zealand assistance in evaluating their islands for honey production, and this may be forthcoming. An independent survey has been made by a New Zealand citizen with a view to establishing a private beekeeping venture there (14).

Other Aid Projects

In addition to the assistance given by the New Zealand Government through its bilateral aid programmes, there are other beekeeping development projects in the Pacific. These include Rarotonga and Fiji.

Rarotonga

Rarotonga is the largest island (67 sq km) in the Cook Islands group. The Auckland Bee Club of New Zealand has embarked on an ambitious community beekeeping project, that could be the forerunner of other village beekeeping projects in the Pacific. Ten hives were recently established on Rarotonga, and a further shipment of 10 hives is planned (14). The hives will form the nucleus of a demonstration apiary under the supervision of a local Department of Agriculture officer.

Fiji

The Fiji Islands are about as far south of the equator as the Hawaiian Islands are north of it, and in land mass are slightly larger (18,272 km). Fiji appears to offer considerable potential for beekeeping development (6, 9). At present beekeeping is limited to amateur or small-scale commercial operations.

A beekeeping survey initiated by an amateur beekeeper in Suva is being carried out with the approval of the Fiji Department of Agriculture. Its objects are to evaluate the potential for honey production, to study the feasibility of a beekeeping cottage industry, and to provide a means of educating the population about bees and beekeeping (5).

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