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The Chatham Islands: Home of the Most Southern Naturally Occurring Palm in the World, *Rhopalostylis* “Chatham”

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Imagine the vast open Pacific Ocean, far to the south at 44°S latitude and some 850 km to the east of New Zealand. This region is known as the Roaring Forties, that part of the Pacific often swept by gales. During the rather bleak winters drift-ice can sometimes be seen being tossed around in a towering swell. It is here, in the middle of a vast expanse of ocean that the Chatham Islands are situated, not exactly the kind of place associated with the image of palm fronds and sandy beaches. It is rather surprising perhaps to know that in protected valleys the climate is mild, allowing plants to grow not usually associated with these latitudes.

In this lonely group of islands a native species of palm occurs. How it ever got there is a riddle. Known on the island as the nikau palm it is closely related to the New Zealand nikau palm *Rhopalostylis sapida*. There is some doubt whether the Chatham Island form represents the same species. Current taxonomic studies will decide its true identity in the future.

Although part of New Zealand politically, the Chatham group of islands has its own identity. The isolation of these islands created an independent society of people who have fashioned an existence around the available resources on the islands. Most of the forest land has been converted to pasture lands. Fishing is a major industry. All modern needs are imported, the only links with the islands being by aircraft from New Zealand. In addition there is a monthly freight service by boat.

The group consists of four principal islands—Chatham, Pitt, South East, and Mangere. There are a group of smaller islands and rocky outcrops, which all form part of the so-called Chatham Rise below the Ocean. Contact with the

outside world is only possible through Chatham Island, the largest in the group, some 90,000 hectares in size. As twenty percent of the island is covered in water, it is in effect a large lagoon surrounded by mostly flat land with stunted vegetation. Small volcanoes break this flat treeless landscape. Forests at one time were extensive, particularly near the coast. Very little is now left of the original forest cover; what is left continues to be destroyed by grazing stock and opossums.

Little regeneration of forest is taking place. The New Zealand Department of Conservation has set aside several remnant forest areas as reserves. It is rather satisfying to see that where stock is fenced off, regeneration of forest occurs. Unfortunately these efforts, although very commendable, are too little and too late. However, it is only because of these conservation efforts that some remnant populations of the Chatham Island nikau still exist on the Islands.

The Chatham Island nikau warrants special attention because of its beautiful shape and form. To my knowledge this palm has never been recognized in New Zealand as a palm worthy of cultivation. In Europe, however, the Chatham Island nikau was recognized as being suitable as an indoor palm. It was available in the trade before 1928. The palm in its juvenile form is very graceful. Its branches are elegantly curved, and its leaflets very wide and shiny green in appearance. The stem is solidly rooted unlike *Howea*, which often has unstable stems susceptible to bending over. Furthermore, the nikau grows well indoors. In its mature form the palm takes a characteristically shaving brush type appearance, much like the other forms of nikau found in New Zealand. The palms observed on the Chathams grow as tall as 15 m. Young mature



1. Nikau palms on Chatham Island, New Zealand. 4. The southernmost palms in the world—nikau palms on Pitt Island, Chatham Islands. The photo shows a valley filled with palms. It would be most unusual to see such a great number of large nikaus in New Zealand.

palms produce copious amounts of comparatively large, bright red seeds. The large size of the inflorescence dictates the similarly large crownshaft, a notable feature of the palm. The stiff leaves on the mature palms provide excellent protection for the young developing leaves within the crown of leaves. Frequent strong winds would damage these palms otherwise. Most palms show little wind damage. In spite of the cold latitude in which these plants grow there is no evidence of frost damage. This does not mean however that this form of nikau is more hardy than other forms. Frost tolerance ranges to -4°C . Beyond this temperature leaf damage will occur.

My wife and I visited the Chathams last January (1996) to see for ourselves these last remnant forests where the nikau palm occurs. The flight to the Islands takes almost two hours from Wellington to Waitangi, Chatham Island. Arriving at the Chathams one can see the vague out-

line of the island partly shrouded in mist, miles of deserted coastline, endless beaches, low scrub and clearings, and here and there small volcanic mountains long since silenced. A lonely airstrip in the middle of nowhere greeted us on arrival. A reception building and an adjacent hangar were all that showed us any signs of human activity. A half-hour ride brought us to Waitangi, the cultural center of the island. Most of the islanders, a mixture of Polynesians (Maori and part Moriori) and Europeans congregate at the hotel to mix socially in the pub, providing a great chance for us to meet the locals.

We were able to visit the only place on the island where the Chatham Island nikau grows in any quantity. A small reserve, situated on a gently rising slope near the base of a volcanic outcrop, gave us a chance to observe the nikau firsthand. The reserve is fenced off from stock. In contrast to the surrounding countryside this re-



2. Close-up of a mature nikau, Chatham Island. 3. Regeneration of nikau palms on Chatham Island.

serve was a cool forest haven. Weka birds scurried around on the forest floor and fantails darted among the trees. The tops of the trees were taking the brunt of the wind, while for us it was a fascinating walk among the forest trees, only a remnant of what was once common on the Chathams. Nearly all the nikau palms were growing on open ground, forming an open canopy (Fig. 1). Most of the palms were tall, around 10 m in height. The palms were in good health, many showing a good crop of seeds (Fig. 2). However, regeneration was absent. Only on the edge of the broadwood forest itself was vigorous regeneration of palms was evident (Fig. 3). Beyond this reserve no further palms were seen; few if any can possibly stand up to the harsh climatic conditions without the shelter of companion trees.

My objective in this trip to the Chatham Islands was to see the most southern occurring native palms in the world. In order to find these one has to travel farther south to the adjacent Pitt Island, some 40 km southeast of Chatham Island. It can only be reached by an infrequent air service dependent on suitable flying conditions, a rather hit and miss kind of schedule. The one major stand of nikau palms is on the southern

end of the island, the only part that shows any verdant vegetation, most of the area having long been cleared of forest to make way for pastoral farming. It was rather surprising to discover this green valley after walking through scrubby stunted fernland. Palms could be observed on the distant sky-line, but it was not until we entered the valley itself that the magnitude of this reserve was realized (Fig. 4). In contrast to the reserve on Chatham Island there was little remnant forest left. The palms themselves were the dominant species with low shrublike undergrowth of mainly tree ferns (*Dicksonia* sp.). Much of the undergrowth was damaged by pigrooting and the grazing of sheep, still taking place in this reserve. The palms were all very tall, 15 m or more, all of about the same age, my estimate about 200 years. Palms were senile, showing little flowering or seed set. No young palms were seen. Nevertheless the reserve is impressive, a pleasant valley filled with nikau palms, a subtropical haven, the last southern outpost of palms, and all somewhat unreal. The South Pole is the nearest landmass south of this spot. Why should nikau palms grow in such an isolated lonely place at 44°S 18'S latitude?