# PSEUDOPANAX GILLIESII - WHANGAROA 1972

Katie Reynolds

"There is absolutely nothing half so worth while as simply messing about in boats" - The Wind in the Willows.

With these sentiments I most heartily agree! Add a little messing about with Botany and the companionship of good friends and the situation is idyllic!

In the Summer of 1972 we cruised to Whangaroa in our good ship "Valerie". The crew were, my husband Bill, Captain/Engineer, Win Parkinson, artist, Frank Newhook and I. Frank had only just received his clearance after major surgery. Ignoring his thoughts on the matter we three deemed it advisable that exercise for him should be gentle and moderate. Botanising from the dinghy was ideal. "Valerie" took us round the harbour, up to Cone Rock and out to Stephensons Island, ensuring that we enjoyed the fish diet prescribed by Frank. Each night we returned to our snug and beautiful anchorage in Rere Bay. Choosing a time of tide to suit, half tide rising, we rowed over to the "Canyon" - Wairakau, and up the stream there. We were all in accord that nothing must mar the magic serenity of this lovely spot; even the gentle put-put of our low-key outboard was banned. Rowing quietly we could lie alongside the sheer walls of the Canyon, moss clad and studded with a kaleidoscope of plants. A little further along we could stand off and look into the shoreline bush, stepping ashore to investigate anything of interest. This way we really did see the Wood and the Trees.

It was during one of these jaunts up the Canyon that we exclaimed, "Hi! that one is different!" Closer examination confirmed this impression. I think that it was the subtle difference in green that showed it up among the Pseudopanax arboreus and the P. lessonii with which it grew. None of us knew it so I posted a sample to Alan Esler, who straightway identified it, P. gilliesii. Having its name we now looked for it round the harbour, and, on the northern side found it in several stations. There was one, about a four metre mature tree with many small seedlings on the ground beneath it. Again P. arboreus and P. lessonii grew in this group. I took three seedlings and one cutting from this "mother" tree, and all grew - and grow - in my garden.

A few years later - I think 1976 or '77 - John Bartlett and friend visited me and saw my garden. Subsequently they walked in from Totara North, beyond Papakura (St Peters) to the kauris above Taranui Bay. There they found many Pseudopanax gilliesii as they recorded. It was a wet Easter Monday that they called here with a considerable amount of material, initially checking the identity. They left me four cuttings, all of which grew.

My first cutting-grown plant flowered 3 to 4 years after planting and, as expected from its source, is female. In 1983 another plant flowered and to my great delight is monoecious. On the terminal umbels the inner female flowers are racemosely arranged. They are ringed by an outer circle of male flowers with large perky anthers which shed cream pollen copiously on inflorescence and on leaves. Fruits have set and are swelling satisfactorily. My job now until they mature is to keep them free of predatory green vegetable beetles and stick insects, the seed eaters.

Pseudopanax gilliesii is a very attractive garden plant. Mine keep pruned and shapely because of the numerous requests I have for cutting wood. The brief flowering time, mid-November, differs from that of P. lessonii, January and that of P. arboreus, August. Although there are many unifoliate leaves as well as some irregularly lobed the overall appearance is of trifoliate leaves. This is in contrast to raukawa, P. edgerleyi with its large shining unifoliate leaves on mature plants. The fresh green that brought it to our attention in Whangaroa strikes a pleasant note in my garden and my memory.

25 January 1984

## FRUIT SET AND SEED GERMINATION OF RHABDOTHAMNUS SOLANDRI (GESNERIACEAE)

R.E. Beever

Rhabdothamnus solandri, our sole indigenous member of the gesneriad family, in a familiar shrub in Auckland forests advertising its presence by its dainty orange and red flowers. As D. Petrie (TNZI, 35 321-3, 1903; 45 264,1913) concluded it is one of our few bird-pollinated plants. In ABS Newsletter, 38(2) 24-5, 1983 I described an experiment which demonstrated that active pollination is necessary to effect fruit set; flowers left to their own devices do not set. In Table 1 some more details of this experiment are given along with an estimate of the number of seeds formed per ovary. At the time of dehiscence the dry fruits contained a large number of plump seeds and also many relatively small collapsed seed-like structures which were presumably unfertilised ovules. The seeds escape through slit-like cracks in the fruit wall in the manner of pepper being shaken from a pepper-pot. Although rather less than half of the total number of ovules were fertilised, mean seed number per fruit still exceeded 100. These figures relate of course to fruits resulting from hand pollination and I suspect that natural pollination will not be quite as successful.

The seeds themselves are small measuring in mm 0.53 ± 0.03 x 0.31 ± 0.03 (length x breadth ± S.D. based on 10 seeds from a naturally pollinated specimen collected at Hukutaia Domain ex Little Barrier stock). I tested the germination of seed samples from 5 artificially pollinated fruits by sowing them on moist filter paper in petri dishes and incubated the plates in our porch, shaded from direct sunlight. The first seeds germinated about 30 days after sowing both from seeds sown within a few days of collection and, in one case, after being stored dry for 78 days after collection. The time course of germination of 2 fruits is illustrated in Fig. 1. Final germination for seed from 5 fruits was 71 ± 16% (mean ± S.D.)

Fig. 1 shows a selection of various stages of germination up to the cotyledon stage. Germination is clearly epigeous with the hypocotyl region below the cotyledons elongating to elevate the cotyledons which soon became green. About 100 days after sowing the first true leaves began to appear. These young seedlings are very small and tender and many I transplanted