

bands of hairs; branching intravaginal); *R. unarede* (lemma more or less glabrous between its two bands of hairs; branching extravaginal)

C. Upper lemma hairs exceeding tip of palea but not reaching tip of awn column: *R. caespitosum*

D. Upper lemma hairs more or less equal to tip of palea: *R. pilosum* (palea tip just reaching awn sinus;

branching intravaginal); *R. racemosum* (palea tip exceeding awn sinus, callus relatively elongate with the hairs not reaching the lower row of lemma hairs; branching extravaginal)

E. Upper lemma hairs not reaching tip of palea: *R. clavatum* (awn c. 5 mm long); *R. penicillatum* (awn c. 10 mm long).

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The story of *Sophora godleyi*

Maureen Young

Dr. Eric Godley (1919 - 2010), a past Director of the former Botany Division of DSIR, spent the final years of his life in retirement homes in Christchurch. While visiting that city in October 2008 I called on him in my capacity as vice president of the Auckland Botanical Society (ABS) with an interest in the history of the Society and a desire to contact our oldest members. Eric was a founding member of ABS, joining on its establishment in 1937 when he was an 18 year old university student. One subject I broached with him was a request that he might write something for our *Journal* about his interest in kowhai and the naming of *Sophora godleyi* (we chuckled in relief that it hadn't been named *S. godleyanus* – *Ranunculus godleyanus* was named after John Robert Godley, the founder of the Canterbury settlement); this was to be an addition to the series on plants named after Bot Soc members. Eric explained that he was busy writing a Dictionary of Botanists, but said that he would do his best to fit it in sometime. By the time he came to write for the *Journal* he had forgotten what I had asked for, but with his memory jogged by the publication by ABS of the book "*Natural History of Rangitoto Island*" (Wilcox 2007), he instead wrote the eminently suitable article "*Rangitoto remembered at ninety*" (Godley 2009).

Eric's interest in kowhai had first been an emotional response when he was a member of the Devonport Boy Scout pack, camping in the countryside at Albany and swimming in creeks with kowhai petals scattered over the ground and water. This would have been c. 1931 when he was 11 or 12 years old (pers. comm.). In 1958/59 he took part in an expedition to Southern Chile (Godley 1959) as a centennial celebration of the publishing of Darwin's *On the Origin of Species*. While there it occurred to him that the pelú in Chile seemed to be the same as our New Zealand kowhai, *S. microphylla*. Indeed, pelú was formerly known as a subspecies of *S. microphylla*, was later named *S. macnabiana*, and finally *S. cassioides*. When Eric observed the yellow pelú seeds washed up on the beaches, just as we see kowhai seeds in New

Zealand, he wondered about the dispersal possibilities of these seeds floating from country to country in sea water. This led to his well known experiment of leaving kowhai seeds to soak for years in saltwater. On planting some seeds each year he found that although fewer seeds germinated with the passage of time, after ten years there were still a few that were viable.

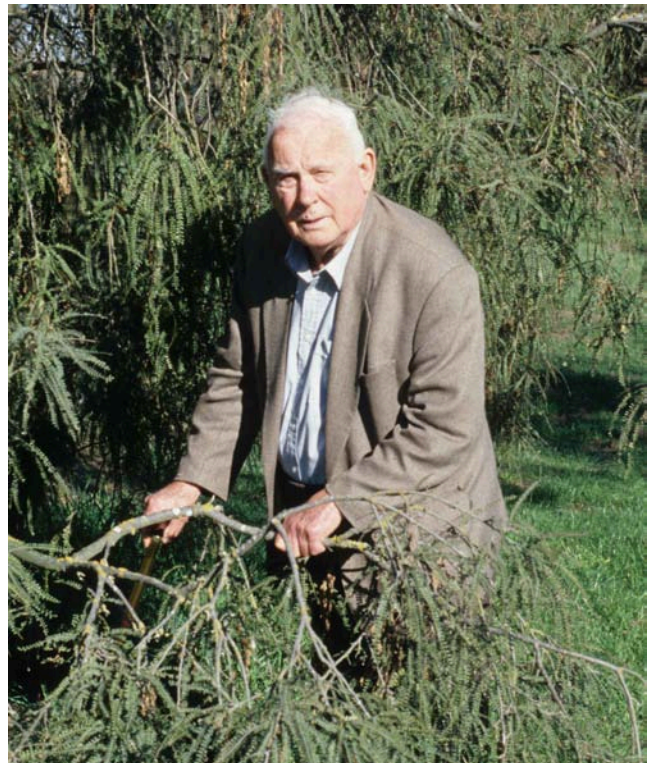


Fig. 1. Eric Godley with *Sophora godleyi* at Lincoln. Photo: Peter Heenan.

Leonard Cockayne, on querying the origin of New Zealand's divaricating shrubs, pondered on why *S. microphylla* as it was then known, sometimes had a divaricating juvenile form and sometimes did not. Eric followed up this question by undertaking a long term study and experimentally grew seedlings at Lincoln of kowhai from a wide range of sites throughout the

country, and in particular noted the length of time before flowering, and the length of time spent in a divaricating juvenile form, if at all.

In 1961, when Volume 1 of the New Zealand Flora was published (Allan 1961), three species and two varieties of *Sophora* were accepted (*S. prostrata*, *S. tetraptera*, and *S. microphylla* with var. *longicarinata* and var. *fulvida*), and with notes rejecting Cockayne's *S. chathamica*. In 2001 a revision of the taxonomy of *Sophora* in New Zealand was published by Heenan et al. (2001). They recognised seven species in the *S. microphylla* "complex": accepting *S. microphylla* and *S. longicarinata* (see Heenan 1998), reinstating *S. chathamica*, elevating *S. microphylla* var. *fulvida* to species rank as *S. fulvida*, and describing as new species *S. godleyi*, and *S. molloyi*. *Sophora godleyi* grows on calcareous mudstone and sandstone in eastern Taranaki, King Country, Whanganui, Rangitikei and Manawatu.

Acknowledgements

My thanks to Peter de Lange and Peter Heenan for their comments on a first draft of this article, and to Peter Heenan for permission to use his photograph.

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Rewarewa and toru, our two native members of the Proteaceae

Mike Wilcox

The Proteaceae is a large, ancient southern Gondwanan family, best represented in Australia, South Africa and New Caledonia, but also occurring in Madagascar, South America, New Guinea, Indonesia, Sri Lanka, China, some Pacific islands, and in New Zealand. There are about 1700 species and 80 genera, the largest being *Grevillea* (362 spp.), *Hakea* (149 spp.), *Protea* (114 spp.), *Persoonia* (100 spp.), *Helicia* (100 spp.), *Dryandra* (93 spp.) and *Banksia* (76 spp.). The family features numerous species which are monotypic endemics, well-known examples being white waratah (*Agastachys odorata*) from Tasmania, northern silky oak (*Cardwellia sublimis*) from north Queensland, Atherton oak (*Athertonia diversifolia*) from north Queensland, notro (*Embothrium coccineum*) from Chile, and avellano (*Gevuina avellana*) from Chile.

Both New Zealand members of the Proteaceae, *Toronia toru* and *Knightia excelsa*, are also monotypic endemics. There were several other genera of Proteaceae present in New Zealand 30-45 million years ago (including *Banksia*, *Hicksbeachia*, *Kermadecia*, *Macadamia*, and *Musgravea*), and up until the Pleistocene ice ages of the recent past, but these have all become extinct (Holden 1982; Dawson 1988; Pole 1998; Gibbs 2007; Carpenter et al. 2010). *Knightia* itself is ancient in New Zealand, with fossil pollen known from the Upper Cretaceous onwards, and also from Antarctica and Australia.

Toronia toru (A.Cunn.) L.A.S.Johnson & B.G.Briggs
According to Beever (1991) *Toronia toru* has three alternative Maori names: "toro" used in the north (which it would confusingly share with *Myrsine salicina*) – and used by Cockayne & Phillips Turner