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In pursuit of *Pittosporum pimeleoides*, Part 2

Maureen Young

As noted in my previous article on *Pittosporum pimeleoides* (Young 2007), June/July is the flowering period for this species.. At the moment I have an 80 cm tall plant (subsp. *pimeleioides*, provenance unknown) growing in a pot (Fig. 1). In April 2009 a single bunch of flowers appeared among the whorled

Fig. 1. *Pittosporum pimeleoides* subsp. *majus* (aka *P. michiei*) in an eponymous pot made by Ross Michie. Photo: Alison Wesley, 18 July 2009.

leaves crowded towards the end of one branchlet tip, and I was disappointed that it was presumably going to be such a poor flowering year. However, soon afterwards each branchlet tip produced a new whorl of branchlets, multiplying the leaf mass of the plant many times over. By mid June each new whorl was supporting up to six flowers, each on a slender pedicel c. 1 cm long. I estimate that in total the flowers on the whole plant would number in the low thousands, rather than hundreds. The number of flowers in each umbel indicated that it is a functionally male plant as functionally female plants are generally considered to have single, pairs or three flowers in each umbel. However, by October there were eight immature capsules beginning to swell, confirming that there was a little of Venus sprinkled among the Martians.

Fig. 2. Male flowers on *P. pimeleoides* subsp. *majus*. Photo: Alison Wesley, 18 July 2009.

In bud the petals are a deep maroon colour, but when the flowers open the outside of the floral tube is striped maroon and yellow, reminiscent of the Pied Piper's pantaloons, and the inside is a smudgy maroon-yellow (Fig. 2). They are not conspicuous and with only a casual glance one could miss that the plant was flowering. However, the moths were in no doubt - when I turned on the porch light at night I inevitably disturbed several moths that had been attracted by the pleasant scent. Some of the moths have been identified as *Pseudocoremia leucelaea* – conifer flash, *Rhapsa scotosialis* – slender owlet, *Mythimna seperata*, northern armyworm, *Hydriomena* sp., looper moth, and *Gelechiid* sp., litter moth.

Fig. 3. The wider leaved form of *P. pimeleoides* that is found on the roadside near Whangaroa. Photo: Bill Campbell, 3 Oct 2007.

On 29 June, as Helen Cogle, Anne Fraser and I were driving south from Te Paki we detoured a short way along the road to Whangaroa (Fig. 3) to check the population that grows on the roadside there. While still metres from the plants we could see that they were flowering well, as the flowers were all pale yellow and much fatter than the ones on my plant at home. The Whangaroa plants tend to have leaves towards the wide end of the scale, and it was interesting to see that the flowers followed suit. It has been suggested to me (P.J. de Lange, pers. comm.) that these Whangaroa plants fit into *P. pimeleoides* subsp. *reflexum* (R.Cunn.) Kirk, but the description of this subspecies by Cheeseman (1925) and Allan (1961) stresses that it has narrow leaves. Having seen many plants in a variety of habitats, I personally would find it difficult to separate the species into two subspecies using the width of the leaves as a criterion, as variability is the name of the game.

Fig. 4. *P. pimeleoides* growing in Akeake Reserve, Opito Bay, Bay of Islands. Photo: Barbara Parris, 3 July 2009.

Determined not to be a "summergreen" botanist, I visited Kerikeri on 3 July 2009, and in the good company of Barbara Parris went to the Akeake Reserve, east of Opito Bay. All along the well-lit ridge top, under a sparse kanuka canopy, the numerous plants were in full flower (Fig. 4). At one place there was a swarm of seedlings, each bearing at least one umbel of flowers, even those plants that barely reached 3 cm in height. In view of the previously observed moth pollination we were interested to watch a honey bee busily working her way over the flowers on one of the plants.

Using the number of flowers in an umbel to determine the sex of the plants – a very rough and ready guide as it turned out – I was able to estimate that female plants outnumbered male by a ratio of c. 3:2. On many of the female plants I was assisted in my guesswork by the swelling ovaries, or the green or ripe capsules present. It has been observed (Godley 1968) that the capsules take two years to mature. Our experience confirmed this; some of the female plants had obviously swollen ovaries where this year's corollas had been shed, green capsules from last year, and ripe capsules from the year before that. Some of the ripe capsules had dehisced, showing a small amount of extremely sticky yellow mucilage surrounding the seeds. Godley stated that this species of *Pittosporum* has bivalved fruit which open along one suture only but, in the plants I examined, I found that eventually the second suture splits too. His assertion that the fruit are distinctly gibbous (pouched) due to the unequal number of developing seeds on the two sides of the placenta, was not very obvious to us in the field, though the capsules were slightly asymmetrical in shape. However, on counting the seeds in a few capsules it was found that there was a difference – 3 to 5 seeds on one side, 5 to 7 on the other.

On my way home I ignored the "track closed" tape and visited the Kauri Walk off Oromahoe Road, Opua Forest. Here I was expecting to see a similar flowering episode, but was surprised to find that although some flowers were present they were not there in the numbers that I had seen earlier in the day. These plants grow on the shady side of a ridge, and I can only suppose that they flower better in a well-lit situation. Estimating the sex ratio was much more difficult, though again many of the female plants gave me a clue. This time there seemed to be twice as many female as male, but I admit to it being a very unreliable count.

As an aside, I must say that it is a great shame that this well-benched, gravelled walkway is not maintained. Under the kauri/tanekaha canopy not only was *P. pimeleoides* flowering, but so too were the many slender shrubs of *Alseuosmia banksii*. Kirk's daisy (*Brachyglottis kirkii* var. *angustior*) was plentiful, and other plants of interest were fan fern (*Schizaea dichotoma*), mairehau (*Leionema nudum*), and the small greenhood orchid (*Diplodium trullifolium*).

Dracophyllum latifolium trees had rather slender leaves – maybe it is the entity that was previously named *D. matthewsii*.

My little decumbent plant of *P. pimeleoides* subsp. *majus* (formerly *P. michiei*) growing in my colourful pot made by Ross Michie, also flowered well from mid June to early August, with 8 of its 10 branchlets bearing up to 8 flowers per umbel. These flowers were somewhat larger and more yellow in colour than those of my *P. pimeleoides* subsp. *pimeleioides* plant.

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Identifying *Schoenus brevifolius*, *S. tendo* and *Lepidosperma filiforme*

Rhys Gardner

The distinctions I promoted between the first two of these leafless sedges (Gardner 2008) were tested this last June by Mark Smale and myself during our checking of plots laid out in the Far North's "gumland scrub" (sometimes called heath or heathland, e.g. Enright 1989). In addition, both the areas visited, one on the Karikari Penisula and the other near the start of the Spirits Bay Road, contained a great deal of the similar-looking *Lepidosperma filiforme*.

Fig. 1. *Lepidosperma filiforme.* Habit. Near Te Paki; *Gleichenia dicarpa* and M. Smale for scale. Photo: R.O. Gardner, June 2009.

In fact, there was no *S. tendo* in our plots, which consisted mainly of waist-high manuka (*Leptospermum scoparium*) among rather sparse, short, erect-stemmed growths of *Schoenus brevifolius* and taller, yellower, fan-shaped tussocks of *L. filiforme* (Fig. 1). This habit difference, and the profuse flowering of the latter compared to the general sterility of the former, made distinguishing between them straighforward in the field.

In the herbarium, the culms of *L. filiforme* are seen to be slightly less robust than those of *S. brevifolius* (but larger than those of *S. tendo*), and have a septate pith; the pith is septate in *S. tendo* too but is continuous in *L. filiforme* (Fig. 2).

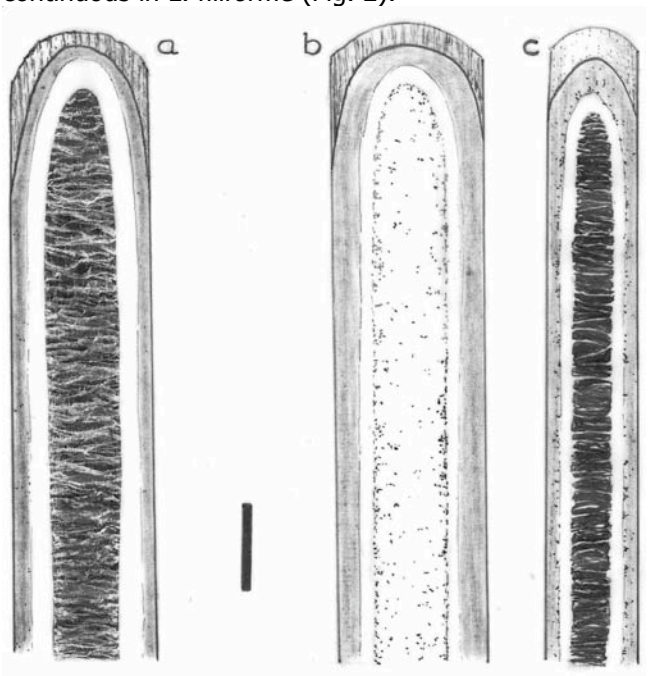

Fig. 2. Sectioned mid-culms.
A. *L. filiforme*. Central part of pith septate (sometimes appearing coarsely so if razor is not sufficiently sharp !). AK 273144.
B. *Schoenus brevifolius*. Central part of pith continuous but copiously speckled with areas of red-brown cells. AK 35703.
C. *S. tendo*. Central part of pith septate ("holes" rather large compared to those of *L. filiforme*). AK 265242. Scale = 1 mm.

I do not understand why *S. tendo* should be absent