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Heterodichogamy in *Ascarina lucida* (Chloranthaceae).

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Ascarina lucida (Chloranthaceae) is an endemic New Zealand wind-pollinated small tree. Its sexual system has been described variously, as dioecious, gynodioecious, or monoecious with strong protandry. Inflorescences are terminal thyrses of 2–3-flowered cymules. Flowers are unisexual and highly reduced: each male flower is a single anther with about 80,000 small pollen grains and each female flower is a single carpel with one ovule. I counted flowers weekly over three months on 30 plants at Ōkiwi Bay, Marlborough. The plants are dimorphic and flower in two pulses. In July, protogynous plants present stigmas and protandrous plants have dehiscent anthers. By September, protogynous plants have dehiscent anthers and protandrous plants present stigmas. In protandrous plants, the pulses were separated by 1–2 weeks when no flowers were open. In protogynous plants the few-flowered tails of the female and male phases overlapped by 2–3 weeks. Only one plant had a few dehiscing anthers and receptive stigmas simultaneously. These findings add *Ascarina* to the few plants known to exhibit heterodichogamy, a reciprocal dimorphism for dichogamy where about half the plants are protogynous and half are protandrous. This is the first record of heterodichogamy in Chloranthaceae and in the New Zealand flora.

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