



Star Performers

New Zealand Flax for Summer

Phormium tenax

harakeke, kōrari (Northland)

flax, New Zealand flax, swamp flax

Phormium cookianum

wharariki

mountain flax



Native New Zealand Flax: *Phormium tenax* from Sealers Creek in Auckland Island. Anthers protrude from the top of the tubular flower. The honey bee has a large orange flax pollen pellet on hind leg. Photo Finn Scheele ©Trees for Bees NZ

New Zealand Flax is a Star Performer because the pollen has the highest protein that we have ever measured (up to 45%), and plenty of pollen is produced. This native plant flowers anytime from October to January depending on the location and variety. We worked with *Phormium tenax* and *Phormium cookianum* at the Flax Collection at Manaaki Whenua, Lincoln. There is a great range in size of the flowering stalks and tufts of long linear leaves. Flowers are mostly red but some varieties are yellow. NZ flax is used for weaving ([harakeke pages](#)) and as an ornamental.

Pollen: Each flower has six large anthers that extend well beyond the top of the floral tube so access to pollen is easy for bees. Honey bees mix the pollen with nectar to form a pellet but native bees (*Leioproctus* spp. and *Lasioglossum* spp.) pack the pollen dry without nectar. In contrast, another type of native bee, the masked bee (*Hylaeus* spp.), consumes the pollen to store in its crop for

regurgitation at the nest to make a ball of pollen as provision for each fertilised egg.



Hylaeus native bee "eating" the pollen to store in its crop. Photo by Finn Scheele ©Trees for Bees NZ

Nectar: Flax flowers produce copious nectar (> 70 to 100 µl) which sometimes fills the floral tube to the top so even honey bees with their 7 mm long tongue can get the nectar; at least until the level is reduced to below their reach. Since honey bees are prevented from entering the narrow floral tube they will then go to the bottom of the flower to take nectar from between the petals which are not fused.