



NZ FOREST SPECIES & THEIR FRUIT

Written by Warwick Silvester, March 2020

So we are all sitting at home wondering what to do and trying to be positive about our situation. Well here is a good news story from Tanes Tree Trust. I took a last walk into our bush reserve (Pukemokemoke) a few days ago before the lockdown and, as I have heard at this time of year, the bird song down by the stream was raucous, strident and urgent: actually quite magical. Why? Well the podocarps are in fruit. Especially **kahikatea** which is just loaded this year. Autumn is a wonderful time for fruit. We are all enjoying the harvest of apples, pears, figs and feijoas right now. The bush is also being fruitful and now is the time to collect seed to establish your own small nursery. Here then is a quick run down of some of our native species that are fruiting right now. Then we can talk about germinating and growing them.



Here the ubiquitous **karamu** grows everywhere and is a great early succession species.

Even more common and useful as a pioneer is **manuka** whose woody capsules house as many as 100 tiny seeds. Manuka retains its fruit throughout the year, while the much smaller capsules of kanuka are quickly shed.



I only found this one **totara** fruit, perhaps I was a bit late, normally they provide a rich harvest for birds and their colour is most striking.

Now here is a more unusual one, this is **kohia**, the sole member of the passion fruit family in NZ. Open the fruit and you won't mistake the passion fruit look of the seeds inside. I was a bit confused to find **kohia** plants with many fruit while other large plants had none, until I realised that kohia, like many of the podocarps, are dioicous with separate male and female plants.





Here the common and vigorous **mahoe**. They have been struggling in the drought and this one having lost most of its leaves was pouring all its energy into fruiting.



And then there is **kaikomako** which is just finishing fruiting at the moment. Reputed to be the favourite fruit of the bellbird, but sadly we don't have bellbirds at Pukemokemoke.



And of course, the common **tarata** with its large fruit opening to produce black sticky seeds

Take a look at spinoff to see how others like to collect native fruits as rongoa and kai.

<https://thespinoff.co.nz/atea/26-03-2018/autumn-harvest-native-berries-and-the-rongoa-journey/>

Germination of native seeds. The problems of germination of native NZ seeds has been studied by several botanists, not the least of which was Colin Burrows whose intriguing paper: **Burrows, C. J. 1994: *The seeds always know best.* *New Zealand journal of botany* 32: 349-363.** exemplifies the enormous range of delay and dormancy characteristics that are displayed. Such as:

Fruit factors Just to get started one should realise that the edible fruits of many species often contain factors that may delay germination for years. To overcome this either get a tame tui to eat the fruit and sow the guano, OR rub the seed through a coarse sieve and extract the seed.

Tiny seed such as manuka need light to germinate so sow on top of soil, and also for all **species DO NOT USE STERILISED** soil! All forest species are mycorrhizal and gain this fungus at the seedling stage from the soil.

Stratification. For many species dormancy is a mechanism to control germination until the temperature rises. So seed that is kept moist in the fridge for 4-6 weeks germinates rapidly.

Scarification. Very hard seed such as kowhai need to have the hard coat broken to let water in. Rough sandpaper or even side cutters does the trick.

So there's a project for your COVID live in. Perhaps the most rewarding though is to collect trays of litter under trees, water well and watch the results. Sometimes surprising, privet can be most common, but kahikatea is widely spread.

Written by Warwick Silvester, on the second day of lock down, March 2020.