

Fantastic and remarkable trees 2. *Pittosporum undulatum* Vent.

Pierre Binggeli

Pittosporum undulatum Vent. (Pittosporaceae), a native of Australia, is an evergreen tree that can grow to a height of 30 m.

The Blue Mountains of Jamaica are steadily being invaded by *P. undulatum*. In a number of areas the species already forms nearly monotypic stands. There are very few stands of natural forest on the slopes of either side of the ridge leading to John Crow Peak from Morces Gap that are free of *P. undulatum* regeneration.



Figure 1: Western Blue Mountains – ridge between John Crow Peak (left) from Morces Gap (right), natural forest and *Pittosporum undulatum* dominated forests are restricted to the upper and steeper slopes. Lower slopes consist of a mosaic dominated by remnants of pine plantations and carpets of ferns (light green).

When battered by hurricanes this tree manages to survive even when it is blown down. The species is extremely tolerant of disturbance and the death of an isolated adult individual has yet to be recorded. The regenerative powers of *P. undulatum* are great but it does not appear to be able to propagate itself by suckering and rooting of fallen stems has yet to be recorded. *Pittosporum undulatum* is readily blown down by strong winds but always appears to survive such dramatic events. However, it suffers little from such dramatic disturbance. Upright branches grow as new stems and the fallen trunk readily produces large quantities of epicormic shoots, some of which fill canopy gaps.

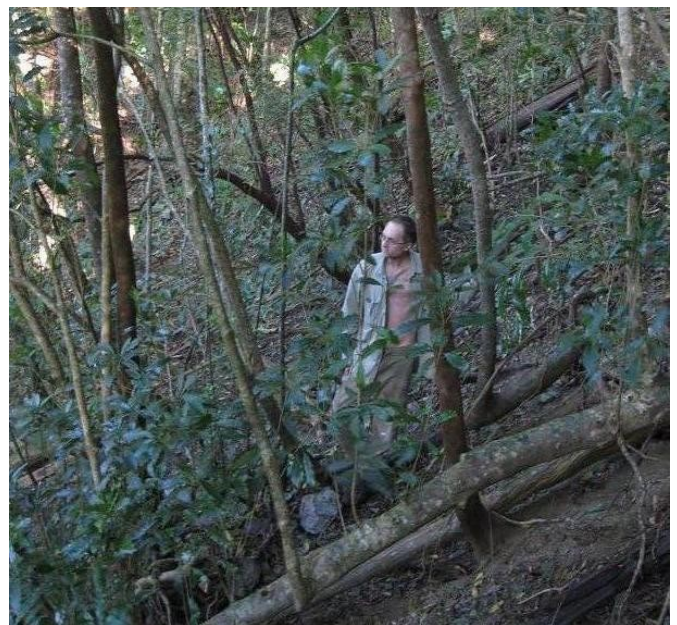


Figure 2: fallen-down *Pittosporum undulatum*, in the foreground, readily survive disturbance and thrive.



Figure 3: Upright branches rapidly grow to fill any gap in the canopy and/or new epicormic shoots readily grown from the fallen trunk.



Figure 4. Upturned *Pittosporum undulatum* with its horizontal root plate. Red arrow points at the original stem that is still alive and growing. A few new shoots have been initiated on the root plate (e.g. yellow arrow).

In March 2010 an extreme case of survival was observed on the southern slopes of the ridge. In a steep gully, that was partly free of trees, a remarkable *P. undulatum* was found on a steep (ca 35°) slope. The tree had been uprooted and fell downhill, ending up upside down and the root plate horizontal (Fig. 3). The root plate was mostly free of soil with some scant vegetation (Fig. 4) indicating that it had upturned a few years ago. Prior to falling over the tree had been growing on a rocky slope that has a limited amount of soil, thus providing poor stability to the tree. Although the whole root plate had overturn and only a few small root had not been severed, the tree was still alive in spring 2010. In fact the main stem was alive and formed a U bend and was growing vigorously upward. All main roots of the plate were alive forming an intricate mesh of interconnecting roots and supported a human weight without any noticeable movement. At the edge of the plate two roots had produced a new shoot each (Fig. 3). A few young trees were also growing through the plate.

Further information and links:

[Blue Mountains](#)

[Pittosporum undulatum](#)



Figure 5. Upturned root plate of *Pittosporum undulatum*. The two stems on the left are saplings of other species growing through the root plate. Note how the roots are intricately interconnected, thus readily able to withstand the weight of a human (the 2 stems to the left are 3-4 cm in diameter).