

Orchids and insects



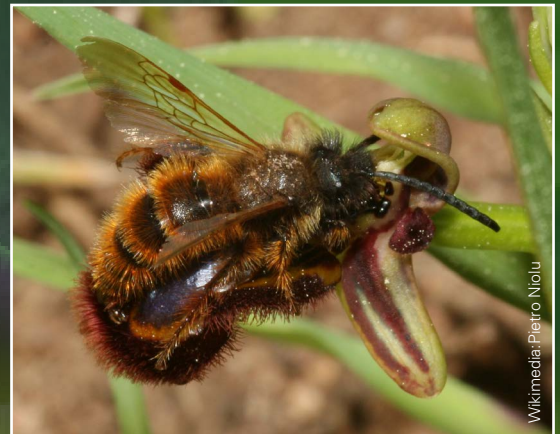
Jenny Thynne, Brisbane

This blue-banded bee has pollinia of the Cooktown orchid stuck to its thorax. The bee may transfer these to another orchid flower, thereby fertilising it.

Like many plants, orchids rely on insects to carry pollen from one flower to another in order to reproduce. Many plants offer a reward to pollinators, and so do some orchids. However, a good many do not and in these cases they simply deceive the insect. In the most extreme cases, the orchid mimics a female wasp, even down to the scents it makes, to attract a male. The male tries to mate with the pretend female and in the process, picks up pollen which is transferred to another flower when it is fooled again!



Wikimedia:Esculapio



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The flower of the mirror orchid closely resembles the female wasp of the species *Dasyscolia ciliata*. A male wasp is seduced into 'mating' with the flower. The top of the flower comes down due to the wasp's weight and sticks pollen onto its back (thorax). See how it works here: <http://youtu.be/h8l3cqpgnA>



An orchid's name can be a guide to the insect which pollinates it. The bee orchid is an example. However, other names reflect the flower's appearance – this is the Australian flying duck orchid *Caleana major*, drawn by Ferdinand Bauer in 1803. It is pollinated by sawflies.



PLOS ONE: Menz et al

Evolution of a relationship



In 2007, biologists from Harvard University, USA, reported finding a fossilized bee, trapped in amber dating from 15-20 million years ago. On its back were perfectly preserved orchid pollinia, showing that the association between orchids and insects evolved a long time ago.



The Australian hammer orchids have an elaborate flower matched by an elaborate pollination mechanism which you can see at <http://youtu.be/wmgKABRCZpo>

The green fringed orchid of North America is pollinated by butterflies. ▶



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