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### Conservation of the Jervis Bay Leek Orchid, *Prasophyllum affine*, and its pollinators

A neglected aspect of orchid conservation in the wild is the specific protection of pollinators and pollinator habitat resources. The need to protect the pollinators of the endangered Jervis Bay Leek Orchid, *Prasophyllum affine*, in New South Wales, Australia, was raised by the recovery team established to recommend strategies to conserve the orchid in the face of a real estate development proposal that threatened one of the largest remaining populations. The recovery team posed the following questions regarding the orchid's pollinators:

- What are the pollinators of *P. affine*?
- Where do they breed?
- What are their breeding requirements?
- What other food plants do they utilise besides *P. affine*?
- What area is needed to conserve viable pollinator populations?

Research over three seasons showed that *P. affine* was pollinated by a suite of nectar-feeding wasps and ants (Hymenoptera) that belonged to a large pollinator guild dependent on plants with white-coloured, shallow, open, cup-shaped flowers. The dominant pollinator of *P. affine* at the development site was a thynnine wasp, *Ariphron* sp. Breeding areas of *Ariphron* sp. were detected by observing the characteristic patrolling behaviour of thynnine males seeking females and observations of males responding to the sex pheromone signals emitted by the wingless females. The main adult food plants of *Ariphron* sp. were members of the family Myrtaceae, particularly *Leptospermum* spp. and *Eucalyptus obstans*. *Hakea teretifolia* (Proteaceae) was also important. The information on *Ariphron* breeding areas, food plant populations and *P. affine* distribution was used to design an environmental protection zone within the development area that is linked by corridors of native vegetation to the nearby Jervis Bay National Park.