

Glossy-leafed hammer orchid

Endangered flora of Western Australia

If you think you have seen this orchid, please call the Department of Environment and Conservation's (DEC's) Swan Region on (08) 9368 4399, South West Region on (08) 9725 4300 or Moora District on (08) 9652 1911.



Commonly known as glossy-leafed hammer orchid, *Drakaea elastica* is a slender stemmed orchid to 30 centimetres high with a single, distinctively glossy, bright green, prostrate, heart-shaped leaf, one to two centimetres in diameter. The leaf emerges in May and starts to wither by the time the orchid flowers in September.



The single flower is three to four centimetres long with a hinged 'hammer' (labellum). It is pollinated by the males of a single species of wasp with the labellum resembling the flightless female wasp resting on a stalk of grass. The glands on the labellum produce a pheromone (chemical attractant) that mimics the pheromone emitted by the female wasp. Following the pheromone, the male wasp zigzags upwind and lands on the labellum. When the male tries to fly off with the supposed female

mate, the hinged labellum causes the wasp to knock against the column of the flower, resulting in either the deposit or removal of pollen.

Flowers occur in late September to October and occasionally early November. It is important to note that each plant may not flower every year. The plant dies back to a dormant underground tuber over summer. The best time to look for the plant is in July and August, when the leaves are conspicuous.



Top left: The lip of the glossy-leafed hammer orchid flower resembles a flightless female wasp to attract pollinators.

Above left: The distinctive, highly glossy-leaves are about thumbnail size.

Photos – Andrew Brown

Above: Glossy-leafed hammer orchid often occurs in small clusters.

Photo – Martin Caswell

Recovery of a species


DEC is committed to ensuring that critically endangered taxa do not become extinct in the wild. This is done through the preparation of a Recovery Plan or Interim Recovery Plan (IRP), which outline the recovery actions that are required to urgently address those threatening processes most affecting the ongoing survival of the threatened species in the wild and begin the recovery process.

IRPs are prepared by DEC and implemented by regional or district recovery teams consisting of representatives from DEC, Botanic Gardens and Parks Authority, community groups, private landowners, local shires and various government organisations.

Historically, populations have been found between Cataby and the Busselton area. Unfortunately, a number of these are now extinct due to clearing for development or agriculture and the remaining populations are mainly small. Glossy-leafed hammer orchid grows in deep sandy soils in low-lying areas alongside winter-wet swamps, typically in banksia (*Banksia menziesii*, *B. attenuata* and *B. ilicifolia*) woodland or spearwood (*Kunzea glabrescens*) thicket vegetation. Within this habitat type, it is restricted to areas that also support a species of fungus essential to the germination and survival of the



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orchid. These are usually open areas with bare sand or only light leaf litter within otherwise dense vegetation.

Glossy-leafed hammer orchid often occurs with other species of orchid, such as king-in-his-carriage (*Drakaea glyptodon*), warty hammer orchid (*D. livida*), and flying duck orchid (*Paracaleana nigrita*), as well as other more commonly found orchids. Glossy-leafed hammer orchid is closely related to kneeling hammer orchid (*D. concolor*), which can be distinguished by its dull, dark green leaf, generally earlier flowering period (August to September) and distribution in the Kalbarri area. Glossy-leafed hammer orchid can be distinguished from both warty hammer orchid and king-in-his-carriage by its glossy green leaves, although all are of similar size and shape. King-in-his-carriage is relatively common and has a grey, often prominently veined leaf, while warty hammer orchid has a dull grey-green leaf.

Due to small population size, increased threats from habitat degradation and clearing for urban development, glossy-leafed hammer orchid was declared as rare flora in 1988 under the Western Australian *Wildlife Conservation Act 1950* and is ranked as critically endangered. It is ranked endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. DEC has set up threatened flora recovery teams in the South West Region, Swan Region and Moora District to coordinate recovery actions addressing the most threatening processes affecting its survival in the wild.

Glossy-leafed hammer orchid is currently known from 42 populations, 27 of which contain fewer than 15 plants. More than half of all known plants are located in just one population, while

The glossy-leafed hammer orchid IRP will be deemed a success if the total number of mature (flowering) plants and/or the area of occupancy is maintained or increases by 20 per cent or more over the term of the plan.

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Above: Glossy-leafed hammer orchid often occurs in open areas under tall, dense vegetation.
Photo – Martin Caswell

Right: Searching for this species takes a keen eye.
Photo – Andrew Brown



almost 90 per cent of plants occur within seven populations. These sites are therefore of high value for the conservation of the species, while maintenance of a range of other sites across the distribution of the species is important to ensure the conservation of the species and its genetic variation.

DEC is very keen to know of any other populations. If you are unable to contact the regional or district offices on the numbers provided, please contact DEC's Species and Communities Branch on (08) 9334 0422.

Recovery actions that have been recommended and will be progressively implemented to protect the species include:

- continued liaison with shires, private property owners and other relevant land managers in order to conserve and manage populations of the species;
- monitoring the health of the populations regularly;
- searching for new populations when leaves are conspicuous (June to August);
- reducing the impact of grazing on seed production;
- limiting weed invasion;
- developing and implementing a fire management strategy and a disease management strategy;
- collecting and storing seed and fungus material at the Botanic Gardens and Parks Authority; and
- investigating and understanding the species' genetics, population dynamics and the habitat requirements of its pollinator and associated mycorrhizal fungus.