

# Threatened Species Assessment

## *Xylocopa aeratus* Metallic Green Carpenter Bee

### Description

*Xylocopa aeratus* Smith

*X. aeratus* is an endemic Australian species belonging to the hymenopteran family Apidae. It is an iconic species being the largest bee in southern Australia (up to 2cm) and having a brilliant blue-green metallic integument. (DESS 2015)

As its name implies, the bee is a metallic green in colour, although it may appear purplish or bluish from some angles. A large stocky bee (at nearly 2 cm (0.79 in), one of the largest native bees in southern Australia, it is often heard by its loud low-pitched buzzing while flying between flowers. The male has yellow face markings. The bee does have a sting which is potentially painful, although no stings have been recorded. (Wikipedia 2021).

### Current conservation status

Listed as Threatened in Victoria under *Flora and Fauna Guarantee Act 1988* (SAC 2001).

Categorised as Regionally extinct in the 2013 Advisory list of threatened vertebrate fauna in Victoria (DSE 2013).

### Proposed conservation status

Extinct (EX) in Victoria.

### Criteria for Extinct status

As per Schedule 1 of the Flora and Fauna Guarantee Regulations 2020, the primary criterion for the category of threat 'extinct' is met if –

- (a) exhaustive surveys throughout the taxon's historic range fail to record an individual member of the taxon; and
- (b) those surveys were conducted over a time frame appropriate to the taxon's life cycle and life form, in known or expected habitat and at appropriate times (diurnal, seasonal, annual).

Historical records of the species were retrieved from the Victorian Biodiversity Atlas. A 50km buffer was placed around each location, and all surveys of appropriate surveying method to date were retrieved. In total, 282 appropriate surveys have taken place within the historic range with no records of *X. aeratus* since 1904.

#### Victorian Biodiversity Atlas search results

Number of known historical locations	1
Last known record	1904
Total recorded surveys to date within 50km of all historical locations	282
Survey methods searched	Sweep net



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## Historical distribution

The natural distribution was south-eastern New South Wales from Sydney southwards (where it overlaps with *X. bombylans*), and into Victoria and south-eastern South Australia. However, the green carpenter bee went extinct on mainland South Australia in 1906 and in Victoria in 1938. Apart from conservation areas around Sydney, and in the Great Dividing Range, it exists only on the western half of Kangaroo Island in SA. (Wikipedia 2021)

## References

DSE (2013) *Advisory List of Threatened Fauna in Victoria - 2013*. Department of Sustainability and Environment, Melbourne.

DESS (2015). Biology, distribution and conservation of Green carpenter bee (*Xylocopa aeratus*: Apidae) on Kangaroo Island, South Australia. Technical Report. D'Estrees Entomology Science Services. Retrieved from: <http://www.dess.net.au/Glatz%20et%20al%202015%20Xylocopa%20aeratus%20report.pdf>

SAC (2001). Flora and Fauna Guarantee Scientific Advisory Committee: Final Recommendation on a Nomination for Listing. Nomination No. 529 *Xylocopa aeratus*.

Wikipedia (2021). *Xylocopa aeratus*. Retrieved from: [https://en.wikipedia.org/wiki/Xylocopa\\_aerata#:~:text=Xylocopa%20aerata%2C%20the%20golden-green%20carpenter%20bee%20or%20green,2020%20is%20on%20Kangaroo%20Island%20in%20South%20Australia.](https://en.wikipedia.org/wiki/Xylocopa_aerata#:~:text=Xylocopa%20aerata%2C%20the%20golden-green%20carpenter%20bee%20or%20green,2020%20is%20on%20Kangaroo%20Island%20in%20South%20Australia.)