Carpenter Bees - *Xyolocapa aruana and Xylocapa lieftincki*

Preamble - The Carpenter Bee (*Xylocapa spp*.) and the Jagera Tree
On Saturday morning I was priviliged to witness what was, for me at least, a rare and wonderfull sight. I awoke about 7.30 and noticed an unusual buzzing noise outside my bedroom window. On investigation I discovered that the Jagera tree 4 metres away from the building was coverered by buzzing, feasting, large black and yellow bees. They looked like Carpenter Bees (*Xylocapa spp.*), Australias largest native bee species but my experience of this species is that they are solitary and I had never before seen more than one at a time and a conservative rough estimate of what I was seeing in the flowers on this tree was in the neighbourhood of 500-1,000.
I netted one and on examining it closer discovered that it was a female Carpenter Bee. I can only draw the conclusion that this tree was so attractive that it had drawn the solitary individuals of this species from quite some distance for a special seasonal feast. There were other smaller species of native bee also joining in, but their presence was somewhat eclipsed by the multitude of 3.2cm apx.(1") buzzing, female Carpenters. There did'nt seem to be any males present.

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**Identification**

There are two species that are so similar it was only relatively recently that they were recognised as separate. The females are almost identical and it is the males that differ and only by identifying the male were the species *Xyolocapa aruana* and *Xylocapa lieftincki* recognised. .
Female Carpenter bees have a thorax densly covered with golden yellow hairs with an oval space at the centre giving the appearance of a black elliptical spot amongst the yellow (see pic ). Occasionally small lines showing the black body are present on either side of the ellipse. Their abdomen and head are black as are their wings. Males are slightly smaller and their abdomen and thorax are both covered with the same dense hairs as the female thorax giving the appearance of a solid colour which is usually a yellow brown in eastern Qld.

**Habitat and Distribution**

Habitat is similar for both species with a preference for open forested areas and shrubs but both can also be found in suburban and agricultural environments*. Xyolocapa aruana* has a range that extends from NSW to Papua New Guinea and *Xylocapa lieftincki* is more often found further inland from NSW to Cape York and only in Australia. The range off both species extends across the top to the Northern Territory where males are more of an olive-green colour.

**Behaviour and Breeding**

Known to be territorial around their nests, they will defend their 'area' against other bees, flying insects and even birds. These bees excavate tunnel-like nests with a single entrance ,but often containing more than one tunnel, in solid or decaying wood or the stems of pithy shrubs. Females buzz loudly when visiting flowering plants to collect pollen and nectar to feed their offspring. An egg is laid on a 'loaf-like stored mass of pollen in the "burrows". As females are the food collectors for the young they are far more commonly seen than the males. The males, however, are known to co-habit in the "burrows", along with females and pupa. Sometimes groups with more than one female will co-habit. Carpenter bees are even known to emit a loud buzzing at night if their nests are threatened (E. Vanderduys pers.comment) One of the most interesting things about these bees is although rarely observed in nests they appear to exhibit a rudimentary social structure that may be the forerunner of "hive" bees.

**References**

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