

## NESTS OF THE PLATYPUS *ORNITHORHYNCHUS ANATINUS* IN A TASMANIAN CAVE

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### BACKGROUND

Platypuses *Ornithorhynchus anatinus* are known to occasionally frequent cave systems in Tasmania (Lichon, 1999) and when two nest-like mounds were photographed in a stream cave, platypuses were thought to be responsible. It was difficult, however, to identify the 'nests' from the photographs. Besides the platypus, the common ringtail possum and the Tasmanian devil were suggested as being responsible. The cave was visited to further examine the 'nests' and to try and locate any indirect signs (e.g., tracks, scats, hair) that would assist in identifying the occupier.

### OBSERVATIONS

The first nest (Figure 1) was located about 160 m upstream of the cave outflow, the only known entrance to this cave. It was situated in a dry recess, approximately 70 cm above the water level, on the true left bank of the stream (facing downstream). The outer surface of the nest was approximately 59 cm across. The nest appeared to have a lid of the fibrous roots and associated hairs that commonly form a wiry thatch on the outer trunk of *Dicksonia antarctica*. This would suggest deliberate stripping of the roots at the base of *Dicksonia* trunks, as they do not make up a large proportion of the litter on the forest floor (Fred Duncan, pers. comm.). When the lid of the nest was removed there was an inner core of 20-30 dry *Acacia melanoxylon* phyllodes (leaf-like organs). Small amounts of leaf material from a eucalypt (probably *Eucalyptus obliqua*), *Pittosporum bicolor*, *Nematolepis squamea*, *Pomaderris apetala* and *Eucryphia lucida* were also identified. A few branchlets of the moss *Thuidium furfurosom* were also present. All species are common in wet forest and riparian environments in the general area. An inner depression of about 16 cm across, lined with dry leaves and phyllodes, was found in the base of the nest on top of a platform of roots and *Dicksonia* 'thatch'. There appeared to be a smooth defined 'platypus slide' about 200 cm long, running from the nest to the stream. However, apart from this 'slide' there were no other visible tracks or scats.



**Figure 1.** The first nest. Units on the measuring-tape are in inches and cm.

The second nest (Figure 2) was located further upstream, approximately 200 m from the cave outflow. The nest material was more scattered and appeared older than the first. The nest was located on the true right bank of the stream (facing downstream), on a shelf approximately 1 m above the water level. There also appeared to be a platypus ‘slide’ about 400 cm long, running from the nest to the water (Figure 4). The nest material was similar to the first nest. The ‘lid’ material was scattered over the ledge; however, the inner depression lined with leaves and the underlying platform of roots and *Dicksonia* ‘thatch’ was still intact.

## DISCUSSION

The location and structure of the nests indicate that they were constructed and used by the platypus, rather than a more terrestrial animal. This conclusion is supported by the presence, at both nest sites, of the distinctive platypus ‘slides’ made by the animals’ ventral surface dragging along the ground as they travel to

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and from the nest, and by platypus hair. The structure of the first nest, in particular, was similar to the description of a nest in a platypus natal burrow at Upper Esk, monitored in collaboration with the ABC (Munks, Spencer and Parer, unpublished data).



**Figure 2.** The second nest.

The Tasmanian platypus has always been felt to be slightly 'different' to its mainland relatives. Studies have shown that it is bigger and, at a sub-specific level, is genetically distinct from its mainland counterpart (Munks and Nicol, 2000). It appears to be more opportunistic in its choice of burrow sites than has previously been reported for mainland individuals (Otley *et al.*, 2000) and has been reported caving, snowboarding and surfing (Radick *et al.*, 2001). With regards to breeding, the nests described in this paper and the anecdotal report of a similar nest structure in Gunns Plains Cave (Nick Mooney, pers. comm.) indicate that female platypus will select sites other than the more traditional burrows within consolidated earth banks, to rear their young.

#### REFERENCES

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