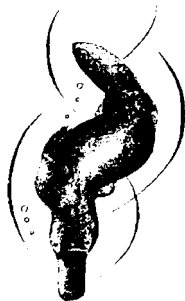


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A NOTE ON THE ANALYSIS OF A SERIES OF DASYURID SCATS

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On 4 January 1991 a series of scats were collected along a track running through a moorland/low dense scrub ecotone near Donaghys Hill Lookout (approximately 1 km north-east of the junction of the Franklin and Collingwood Rivers). Mixed forest also occurs within a few hundred metres of the site.

Five of these scats were found at one latrine site while the sixth was approximately 50 metres away. The scats were 13mm to 21mm in diameter and consisted of three to four segments of varying lengths. They contained fur, feathers, bone and a small component of insect remains. The only plant material found was a few blades of grass twisted into the tapering end of one scat.

It was impossible to say with certainty what animal had deposited the scats. However, silhouettes and photographs of the scats were shown to a number of experts in scat identification who narrowed the possibilities down to either a Tasmanian devil (*Sarcophilus harrisi*) or a spotted-tailed quoll (*Dasyurus maculatus*).

Nevertheless, a detailed examination of the contents of the scats was undertaken and provided an unexpectedly rich variety of prey species. Table 1 lists the prey species found.

Two other scats of similar dimensions were also collected from this site on the 8th July, 1991, and were found to contain several prey items. These are listed in Table 2. The skeleton of a juvenile swamp rat (*Rattus lutreolus*) was also found nearby.

Species present	Number	Material Present
Mammals		
<i>Pseudocheirus peregrinus</i>	1	calcaneum, claws, metatarsals
<i>Rattus</i> sp. (<i>lutreolus</i> ?)	2	incisors, upper molars, mandible
<i>Pseudomys higginsii</i>	1	incisors, upper molars, mandible
<i>Nyctophilus gouldii</i>	1	mandibles
<i>Antechinus</i> sp.	1	mandibles, bullae
<i>Cercartetus lepidus</i>	1	mandibles, upper molars
Birds		
<i>Lathamus discolor</i>	1	feathers, bone fragments, entire foot

Table 1 Prey Species Present in a Series of Predator Scats at Donaghys Hill on 4 January 1991

The identification of mammals and birds was based on comparisons with reference material and previously recorded measurements and descriptions. Insect remains consisted of *Coleoptera elytra* and these fragments only constituted a very small proportion of the material present in the scats.

One scat contained the mandible of a long-tailed mouse (*Pseudomys higginsii*), the leg of a swift parrot (*Lathamus discolor*) and the mandibles of a Gould's long-eared bat (*Nyctophilus gouldii*). This is an interesting record as only feral cats have been recorded preying on the long-eared bats, *Nyctophilus geoffroii* (Maddock, 1983). However, its presence as a prey item should not be regarded as unusual as the Tasmanian *Nyctophilus* spp. are known to frequent the lower shrub layers, have a slow flight and occasionally land on foliage to take prey (O'Neill and Taylor, 1986) making them available to a range of predators.

It is unfortunate that the scats could not be positively identified as six of the species found here were not listed by Green and Scarborough (1990) as being

Species present	Number	Material Present
Mammals		
<i>Pseudomys higginsii</i>	1	incisors, molars, vertebrae, claws, calcaneum
<i>Rattus</i> sp. (<i>lutreolus</i> ?)	1	molars (from juvenile)
<i>Cercartetus nanus</i>	1	mandible, molars, premolars

Table 2 Prey Species Present in a Series of Predator Scats at Donaghys Hill on 8 July 1991

prey items of *D. maculatus* in Tasmania. These were, the long-tailed mouse (*P. higginsii*), *Antechinus* spp., eastern pygmy possum (*C. nanus*), little pygmy possum (*C. lepidus*), Gould's long-eared bat (*N. gouldii*) and the swift parrot (*L. discolor*). *C. lepidus* has been listed as a probable prey item by Green (1979), but never confirmed.

Similarly, the last three prey species mentioned above have not been listed in the diet of the Tasmanian devil by Green (1969), Guiler (1970) or Taylor (1986).

These records should not be regarded as unusual prey species for these predators, but simply indicate the lack of detailed knowledge that exists of the diet of *D. maculatus* and *S. harrisii*.

Finally, even though other studies have shown that limitations exist with the use of predator scat analysis, when compared to the more conventional fauna survey techniques, it is recognised for its ability to provide uncommon, inconspicuous and untrappable species (Friend, 1978). The analysis of owl pellets has similar value as a fauna survey tool (Mooney, in press; Wakefield, 1960). This particular case provides further evidence of the value of scat analysis as a fauna survey technique and also of the need for further work in the area of Dasyurid diets.

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REFERENCES

- Friend, G.R. (1978) A comparison of predator scat analysis with the conventional techniques in a mammal survey of contrasting habitats in Gippsland, Victoria. *Aust. Wildl. Res.*, 5, pp. 75-84.
- Green, R.H. (1967) Notes on the devil (*Sarcophilus harrisii*) and the quoll (*Dasyurus viverrinus*) in north-eastern Tasmania. Records of the Queen Victoria Museum No.27.
- Green, R.H. (1979) The little pygmy possum, *Cercartetus lepidus*, in Tasmania. Records of the Queen Victoria Museum No.68.
- Green, R.H. and Scarborough, T.J. (1990) The spotted-tailed quoll *Dasyurus maculatus* (DASYURIDAE, MARSUPIALIA) in Tasmania. *The Tasmanian Naturalist*, 100, pp. 1-13.
- Guiler, E.R. (1970) Observations on the Tasmanian devil *Sarcophilus harrisii* (MARSUPIALIA: DASYURIDAE). I. Numbers, home range, movements, and food in two populations. *Aust. J. Zool.*, 18, pp. 49-62.

- Maddock, T.H. (1983) Lesser long-eared bat *Nyctophilus geoffroii*, In R. Strahan (Ed): *Complete Book of Australian Mammals*, Angus and Robertson, Sydney: 331.
- Mooney, N.J.(in press) Diet of the masked owl in Tasmania.
- O'Neill, M.G. and Taylor, R.J. (1986) Flight patterns and foraging behaviour of Tasmanian bats. *Aust. Wildl. Res.*, 13, pp. 427-432.
- Taylor, R.J. (1986) Notes on the diet of the carnivorous mammals of the upper Henty River region, western Tasmania. *Papers and Proceedings of the Royal Society of Tasmania*, 120, pp. 7-10.
- Wakefield, N.A., (1960). Recent mammal bones in the Buchan district - 1. *The Victorian Naturalist*, 77(6), pp. 159-162.

AN OBSERVATION OF APPARENT PLATYPUS NESTING BEHAVIOUR

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A platypus (*Ornithorhynchus anatinus*) was recently observed by the three authors carrying a swatch of grasses and sedges in its tail, a behaviour not known to us as having been recorded for this species in the wild. The platypus was initially spotted swimming on the surface in a small tarn, and its tail could be seen to be curled around something. After several minutes it emerged from the tarn carrying grasses etc. in its tail, and it crossed through open grassland to the bank of the Vale River, where it dived and was not seen again.

Captive animals have been observed to line their nesting burrows with leaves and grasses collected by the female in her bill from the water and carried to the burrow in the tail (Grant 1984). In Tasmania, platypus eggs are laid about September or October with young emerging about 4.5 months later (Green, 1973).

This observation took place mid-afternoon on 26 November 1991 in *Poa labillardieri* tussock grassland in karst at the Vale of Belvoir, approximately one kilometre north of the Cradle Mountain Link Road. It was an overcast and damp day. The platypus did not appear to notice us and we watched it from a distance of 3—5m for almost five minutes.

REFERENCES

- Grant, T. (1984) *The Platypus*. NSW University Press, Kensington, Australia.
- Green, R.H.C. (1973) *The mammals of Tasmania*, The Author, Launceston.