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Feral cat as a nightly predator of egg-laying Moluccan megapodes *Eulipoa wallacei*

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The Moluccan island of Haruku holds one of the largest communal nesting grounds of the Moluccan megapode *Eulipoa wallacei* (Aves: Megapodiidae). Four sandy fields in the coastal forest of 'Tanjung Maleo' just south of Kailolo village are used at night by a total population of 4200 female birds to lay eggs in self dug burrows. Maximum numbers of egg-laying females on the Tanjung Maleo nesting grounds could be as high as 200-240 per night in the dry seasons of 1993-1997. Once the egg is laid, the bird leaves the nesting ground and solar heat incubated the eggs. Heij (1995, 2001), Heij *et al*. (1997) and Heij & Rompas (1997, 1999) reported on the ongoing study of the (breeding)biology of the Moluccan megapode on the Tanjung Maleo nesting grounds.

Predators

The habit of communal egg laying at night by *Eulipoa wallacei* is unique among megapodes (Jones *et al.* 1995) and probably evolved as a kind of anti-predator strategy. Nevertheless, Heij *et al.* (1997) encountered no less than 16 species of predators on the nesting grounds, ranging from ants (*Solenopsis*) that infested newly hatched chicks to egg-collecting humans (*Homo sapiens*). Most of the predatory species focussed on eggs and fledglings. The feral cat (*Felis catus*) was in fact the only non-human predator that was seen at night trying to catch adult birds that were digging burrows or laying eggs. However, no actual kills (or traces of it) were seen (Heij *et al.* 1997). During the day, feral cats were seen to catch chicks that had just emerged from the soil (Heij *et al.* 1997) and once a cat was observed while chasing adult Moluccan megapodes and Forsten's megapodes (*Megapodius forstenii*) that roamed the forest floor that surrounds the nesting grounds (C.J. Heij, pers. obs. 1996).

New observation

On the night of 1-2 December 1998, during one of his regular visits to the Tanjung Maleo nesting grounds, the author observed an adult feral cat (*Felis catus* LINNAEUS, 1758) that posted near the entrance of a freshly dug *Eulipoa*-burrow, apparently waiting till the bird had laid her egg and would leave the burrow. Scared by the flash after a picture was taken (Fig. 1a), the cat ran off into the forest and the author left the site to check the neighbouring sandy field for digging activities. Next morning at first light, footprints of a cat and some *Eulipoa*-feathers were present in front of a burrow (Fig. 1b) and, after a search, at one site in the forest (about 50 m from the burrow) four freshly killed adult Moluccan megapodes were found. Of each bird the contents of the abdominal cavity and (part of) the pectoral muscles were missing (Fig. 1c), apparently eaten by the same cat. One of the prey-remains still contained a mature (but broken) egg, indicating that this bird was caught while digging a burrow.

This case clearly shows that the feral cat is a nightly predator of egg-laying Moluccan megapodes. It should however be noted that *Felis catus* is not indigenous (but introduced) in the Moluccas (Flannery 1995) and therefore not a natural predator of *Eulipoa wallacei*. When feral cat populations increase on islands or at sites where communal nesting grounds occur (see Heij *et al.* 1997 for locations) and the cats learn how easy it is to

Figure 1 **a** feral cat *Felis catus* posting in front of a freshly dug burrow of a Moluccan megapode *Eulipoa wallacei;* **b** footprints of feral cat and feathers of Moluccan megapode at the entrance of an *Eulipoa*-burrow; **c** remains of an adult Moluccan megapode caught by a feral cat; **d** cage used by local villagers of Kailolo, Haruku Island to capture feral cats at the Tanjung Maleo nesting grounds. [photo's: C.J. Heij, 1-2 December 1998]

catch a Moluccan megapode, they may become a serious threat to the survival of this species. On Haruku, Tanjung Maleo, where the local human population has a long tradition of harvesting *Eulipoa*-eggs, exterminating all predators of the Moluccan megapode (other than *Homo sapiens*) is part of the maintenance of the nesting ground (Heij *et al.* 1997). The cat, depicted in Figure 1a, was trapped in an ingenious cage (Fig. 1d) by the egg-collectors the same day, and killed at once.

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