

## **Incidence of Fish Hook Ingestion by Komodo dragons**

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The Komodo dragon (*Varanus komodoensis*), a large robust monitor lizard, persists on the 5 islands in Eastern Indonesia (Ciofi and de Boer 2004). The waters surrounding these islands are intensively utilized for marine resources and in particular line and net fishing are prolific. For other reptiles, particularly freshwater and marine turtles, incidental injury and mortality through ingestion of fishing hooks during routine foraging activities are not uncommon (Polovina et al. 2000). However, similar incidents of reptile by-catch in terrestrial species is poorly documented, even though many large lizards such as monitors are semi-aquatic, or cohabit and forage within coastal areas in which intense fishing activities persist. Here we report two incidents of ingestion of fishing hooks by Komodo dragons during routine monitoring of island populations between 2002 and 2006.

Annual mark-recapture studies were conducted at 10 sites across 4 islands within Komodo National Park between 2002 and 2006 and resulted in 827 individual dragons captures. From this sample, 2 cases of fishhook ingestion were reported. The first case, comprised a small monitor (Animal ID: 00063A9978, 69.35 cm SVL, 7 kg) captured at Loh Buaya (8° 39' 21.7" S; 119° 43' 06.2" E) on Rinca Island and appeared to have occurred recently as the line protruding from its mouth was still relatively long and the nylon in good condition (Figure 1). Based on the line weight it is suspected that the hook ingested by this lizard was relatively small. This lizard was recaptured in 2005, without any evidence of the protruding fishing line (however if the hook was remaining is unknown). The individual appeared to be in good condition as it had grown 8.75 cm in SVL and increased its mass by 1.45 kg since its previous capture. The second lizard, an adult male (Animal ID: 000643A7EC, 127.75 cm SVL, 41.8 kg) was captured on 19 June 2004 also from Rinca Island at Loh Tongker (8° 45' 31.1" S; 119° 42' 57.3" E) a small coastal valley on the southeast coast. In this incident the hook ingested was considerably larger and typical of those used for capturing large pelagic species on long line. This hook was shackled with 2 strands of heavy trace wire (Figure 2). It appeared that the hook was ingested several weeks to months earlier as indicated by the lesion induced by abrasion from the trace wire. In 2005, this adult male was recaptured, there was no evidence of the protruding trace but it was unknown if the hook still resided within the animal. The weight of this male had decreased by 8.8 kg from 2004 and 20 kg from its first capture in 2003 despite growing relatively little in length (4 cm in SVL).

Consumptions of fishing hooks by Komodo dragons, albeit rare, is a likely consequence of these

lizards' prodigious scavenging capacity coinciding with discarded fishing gear that finds its way into the intertidal areas exposed on the low tide. As yet we do not know what effects hook ingestion might incur for the specific individuals dragons, however, given that mortality occurs readily in other reptiles, it is possible that at least in the case of the second animal there may be negative consequences.

### Literature Cited

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Figure 1. An immature Komodo dragon with ingested fishing tackle with protruding monofilament nylon line captured at Loh Buaya on Rinca Island



Figure 2. An incident of fish hook ingestion by an adult male Komodo dragon. This dragon has ingested a large hook connected to wire trace that has abraded to the lower jaw resulting in a small lesion.