

## Observation of a Wild Pair of Spiny-tailed Monitors (*Varanus acanthurus*) Engaged in Breeding Activity

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**Abstract:** Because of the alert and secretive nature of monitors, observations of reproductive events in the wild are somewhat rare, especially in smaller species belonging to the subgenus *Odatria*. A wild pair of *Varanus acanthurus* was observed copulating on the grounds of the Alice Springs Desert Park, NT. August through October 2010 had above average rainfall, and a warm sunny day on 8 October was likely a trigger for this event.

The spiny-tailed monitor, *Varanus acanthurus*, has an extensive range across northern Australia, which includes the region of Alice Springs in the southern part of the Northern Territory. This species is generally associated with sandy or stony areas and often shelters in burrows excavated beneath rocks (Husband, 1980). Typical of most deserts, the extremes of this area include temperature, moisture levels, and prey abundance. Reproductive activity of *V. acanthurus* in captivity usually coincides with warming temperatures, increases in moisture levels, and prey abundance, which provide the energy necessary for reproductive output (pers. obs.).

During August, September, and the first week of October 2010, the Alice Springs area saw copious amounts of rainfall, making it one of the wettest years on record.

At 1100 h on 8 October 2010, myself, my father, and Jochem van der Reijden were searching a rock pile in the Alice Springs Desert Park for *V. acanthurus*, in an area where the species had previously been observed by Jochem (pers. comm.). Some rustling was heard across from the rock pile we were searching, and upon further investigation, a pair of *V. acanthurus* (both ca. 25.4-30.5 cm in snout to vent length) was observed copulating underneath a small rock ledge, near the entrance to a



Fig. 1. Copulating pair of *Varanus acanthurus*.



Fig. 2. Male *V. acanthurus* basking.

burrow (Fig. 1). Observed copulation took place for around three minutes while photographs were taken, being careful not to disturb the pair. The female retreated down a burrow under the rock, possibly as a result of our intrusion, leaving the male in place. It remained there for several minutes tongue-flicking, and was apparently unaware of or unconcerned by our presence. The female then emerged from the first burrow, moving underneath vegetation and rock overhangs to another burrow situated underneath a large rock approximately one meter away. The male then moved from the site of copulation to a sunny spot on the nearest rock to bask (Fig. 2). Around two minutes after moving to the second burrow, the female also emerged to bask on a rock situated between the two burrows (Fig. 3). After basking for approximately five minutes, the male retreated to a burrow and the female was left to bask undisturbed (Fig. 4).

The background color of the female matched the yellow-orange base color of the surrounding rocks (Fig. 4), whereas the male had a more reddish ground color (Fig. 2). The dorsal ocelli of the female were mostly interconnected, making for an intricate maze-like pattern. Spots in the centers of the ocelli were present in the male, but were largely absent in the pattern of the female. Both animals were fairly robust with fat tails, suggesting prominent fat reserves or a recent abundance of prey. This was not surprising, as plentiful amounts of locusts and other insects were observed throughout the surrounding area, which are commonly taken by this species (King, 2008). The burrows appeared to be well-used, and the surface of the soil was damp from the rain of the previous week.

Ovaries and ova of *V. acanthurus* have been shown to increase in size from April to May, remaining enlarged from June to October, and oviductal eggs were present



Fig. 3. Female *V. acanthurus* basking



Fig. 4. Female (left) and male (right) *V. acanthurus* basking

between August to November (King & Rhodes, 1982). Based on observations in captivity, *V. acanthurus* has a gestation period of around two to four weeks (Husband & Bonnett, 2009). This would place oviposition for the female *V. acanthurus* in the present report towards the end of October or early November, thus falling within the timeframe reported by King & Rhodes (1982).

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#### References

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