HERPETOLOGICAL NOTES

FURTHER COMMENTS ON SIDEWINDING IN AUSTRALIAN ELAPID SNAKES WITH A REPORT ON SIDEWINDING IN A PYGOPODID LIZARD

Raymond T. Hoser,
PO Box 599, Doncaster, Victoria, 3108, Australia.
E-mail: adder@smuggled.com

Scanlon (2001) gave a listing of known cases of side-winding in Australian elapids, and speculated as to why this habit has evolved.

However in his paper, Scanlon omitted reference to one Australian species that I have found to be among the most prominent sidewinders. That is the Desert Death Adder (*Acanthophis pyrrhus*).

Hoser (1995) wrote:

"*Acanthophis* are relatively slow moving and therefore easy to capture when found crossing roads. The only exception to this is with Desert Death Adders which move with surprising speed in a sidewinder-like motion when startled crossing a road. My own experience is that I usually miss at least one in ten Desert Death Adders seen crossing roads. Those snakes disappear into roadside vegetation before they are caught."

This statement was based on a number of field trips to the Pilbara region of Western Australia, where I observed large numbers of this species.

I have also seen side-winding motions in North-west West Australian Death Adders (*Acanthophis* sp.), in the Kununurra region of Western Australia (although far less frequently and less efficiently than in *A. pyrrhus*) and once in an adult Common Scalyfoot (*Pygopus lepidopodus*) in the Mount Glorious region of Queensland (relatively near Brisbane city). In both the latter species, side-winding was again observed as a quick escape mechanism when the animals are startled by an oncoming car when crossing a road.

The sidewinding observed in the *Pygopus lepidopodus* appeared to be of the method involving a locomotory method involving all points of the body contacting the ground during one cycle (leaving a series of parallel J-shaped tracks), and which has the human observer seeing the reptile in an s-shape at a distance. It did not involve the tail-based leaping or springing movements commonly exhibited by startled pygopods.

Scanlon (2001) gave a number of possible reasons as to why side-winding evolved in snakes.

Based on my observations on wild *Acanthophis* in which side-winding was observed (when a quick escape was sought), I can only conclude that side-winding's principal evolutionary advantage is to ensure a quick escape for a snake when under potential threat.

Another possibility is that the movement also makes it harder for a potential predator to grab and attack the reptile, but at this stage, the possibility is probably pure conjecture.

I suggest that side-winding evolved as a means of rapid transit over potentially unstable substrates. It appears to be most prominent among smaller species of snake and perhaps larger snakes such as boids may be effectively precluded from evolving such an escape mechanism due to the relatively larger amounts of energy expended by attempting such motion.

REFERENCES

Hoser, R.T. 1995. Australia's Death Adders, Genus *Acanthophis*. The Reptilian 3(4): 7-21 + cover, 3(5): 27-34.

Scanlon, J.D. 2001. Sidewinding in Terrestrial Australian Elapid Snakes. Herpetofauna 31(1): 11-18.