

ABOUT OUR COVER: *Lanthanotus borneensis*



Lanthanotus borneensis, the Bornean Earless Monitor, surely among herpetology's "holy grails," is a 200-mm (SVL) varanoid lizard whose common name reflects the lack of an ear opening. This poorly known, enigmatic species is considered to be the sole living representative of the family Lanthanotidae. The only other taxon allocated to the Lanthanotidae is *Cherminotus longifrons*, from the Upper Cretaceous

in the Gobi Desert, Mongolia (Borsuk-Bialynicka 1984. *Palaeontol. Polonica* 46:5–105), although this taxonomic allocation has been challenged (Gao and Norell 2000. *Bull. Amer. Mus. Nat. Hist.* 249:1–118).

The name *Lanthanotus* is derived from Greek, meaning "hidden ears," but a shallow tympanic cavity is present. Males show blunt, rectangular jaws, while females have relatively pointed jaws. The dorsal surface is brownish-orange, sometimes with a dark vertebral stripe, and the venter is yellow with brownish-orange and ochre mottling; the tongue is pink.

The Lanthanotidae has been assigned to the anguimorph lizard (McDowell and Bogert 1954. *Bull. Am. Mus. Nat. Hist.* 105:1–142), but the relationships among these families have been the subject of debate. Lee's cladistic analysis (1997. *Phil. Trans. Royal Soc. London B* 352:53–91), based on osteological characters, reveals that the lanthanotids and varanids are the closest relatives of snakes. An early molecular study of Fuller et al. (1998. *Mol. Phylogen. Evol.* 9:294–307), using 12S rRNA sequences, showed surprisingly low sequence divergence between these two groups, and a sister-taxa relationship was revealed by Ast (2001. *Cladistics* 17:211–226). More recent molecular studies of global squamates using nuclear genes confirm the position of the Lanthanotidae within the Anguimorpha, with a sister relationship with the Varanidae; these two lineages, along with Shinisauridae, are sister to the Helodermatidae and other members of the Anguimorpha (Wiens et al. 2012. *Biol. Letters* 8:1043–1046; Pyron et al. 2013. *BMC Evol. Biol.* 13:93). The most recent common ancestor node for the family corresponds to the

Mid-Cretaceous, 108 mya (Douglas et al. 2010. *Mol. Phylogen. Evol.* 55:153–167).

Described by Fritz Steindachner (1877. *Denkschr. Kais. Akad. Wiss., Wien* 38:93–96) based on a specimen now in the Vienna Museum of Natural History (Naturhistorisches Museum Wien 16365) from Sarawak, *Lanthanotus borneensis* is known to inhabit lowland forests and low hills of northwestern Borneo, including the states of Sarawak (Malaysia) and Kalimantan Barat (Indonesia), and is seldom encountered. Consequently, little is known of its field biology, and this subfossorial and aquatic species feeds on earthworms and crustaceans, and probably fish. Nocturnal, its daytime retreats include burrows up to about 30 cm, under vegetation, rocks, and litter of rocky stream banks. Semi-torpid by day, at night it forages on land and in water. Typically sluggish, it can flatten its body when touched, and other behaviors associated with threat response includes struggling, defecating, hissing, and biting. Skin is shed in a single piece, similar to that in some other anguimorph squamates and snakes. Mating has been observed in early February, females producing 2–5 oval, leathery-shelled eggs that measure ca. 30 mm in length.

Our cover image was captured by **Indraneil Das** in western Sarawak, East Malaysia (Borneo), using a Nikon D600 and AF-S VR Micro-Nikkor 105mm f/2.8G IF-ED lens. Shutter speed set at 1/60 sec, f/18, using an off-camera Nikon SB-910 flash unit, attached to a Lastolite Ezybox Hotshoe.

Das is Professor at the Institute of Biodiversity and Environmental Conservation, Universiti Malaysia Sarawak. His current research centers on ecology and conservation of amphibians and reptiles, especially the role of fragmentation and other landscape change, and the systematics and natural history of these species, especially in tropical Asia. His work on *Lanthanotus* was supported by a Mohammed bin Zayed Species Conservation Grant.



PHOTO BY PUIYONG MIN

SSAR BUSINESS

2013 Annual Meeting, Albuquerque, New Mexico

The 56th Annual Meeting of SSAR took place from 10–15 July 2013 at the Albuquerque Convention Center in Albuquerque, New Mexico, USA (Fig. 1). Organizing societies this year were Society for the Study of Amphibians and Reptiles (along with the International Society for the History and Bibliography of Herpetology), American Elasmobranch Society (celebrating its 29th annual meeting), American Society of Ichthyologists and Herpetologists (celebrating its 93rd annual meeting) and The Herpetologists' League (celebrating its 71st annual meeting). The meeting was hosted by the University of New Mexico and the Museum of Southwestern Biology. The local hosts were Tom Turner, Lex Snyder, Steve Ross, Tom Giermakowski, Steven Platania, Norman

Mercado-Silva, and Mason Ryan. They were assisted by a small army of volunteers including Meghan Balk, Olivia Chavez, Tracy Diver, Elizabeth Gallagher, Levi Gray, Victoria Hansen, Angela Hung, Ian Latella, Lorraine McInnes, Tyler Pilger, Jolene Rearick, Mason Ryan, Brad Truett, and Rhiannon West. Thanks to K-State University Division of Continuing Education. We thank all of the above for a fun and successful meeting.

Nearly 900 herpetologists and ichthyologists attended the meeting. This number includes 417 students and 303 members of SSAR. The meeting included 45 oral sessions and five symposia. Symposia topics included "Detectability and Studying Rare Species: When Cryptic Natural Histories Defy both Conventional