



Biotope of *Davewakeum miriamae* at Sakaerat Experimental Research Station, showing the rocks on which lizards were found.

The Thai endemic, Miriam's Legless Skink, *Davewakeum miriamae* Heyer, 1972

Olivier S. G. Pauwels

Département des Vertébrés Récents, Institut Royal des Sciences Naturelles de Belgique (osgpauwels@yahoo.fr)

Photographs by the author.

Although discovered nearly four decades ago, Miriam's Legless Skink (*Davewakeum miriamae*) is still one of the least known Thai skinks. We "rediscovered" it and provide the first picture of a live specimen with illustrations of its biotope.

In 1972, Dr. William Ronald Heyer described a new genus and species of skink from dry evergreen forest in northeastern Thailand, *Davewakeum miriamae*. The new taxa were dedicated respectively to Dr. David B. Wake (University of California, Berkeley) and to Miriam Harriet Muedeking, Ron Heyer's wife, the latter having collected the very first specimen of the type series. The holotype was collected by the late Sukhum Pongsapipatana, a promising Thai herpetologist who tragically died too young, hit by a car in 1974.

As mentioned in the original description, the 17 types were originally deposited at the Field Museum of Natural History (FMNH, Chicago); however, four paratypes were later sent on exchange to other institutions (FMNH 18542–545, sent respectively to the Museum of Comparative Zoology, Harvard; Los Angeles County Museum of Natural History, Los Angeles; the British Museum, London; and the Thailand Institute of

Scientific and Technological Research, Bangkok) (A. Resetar, pers. comm., January 2008).

The distinctiveness of the taxon at the generic level, mainly justified on cranial and scalation features, has always been accepted. Brandley et al. (2005) and Greer (2002) stressed the morphological similarities between *Davewakeum* and the other Southeast Asian genus *Brachymeles*, but recognized these genera as clearly distinct from each other. The genus *Davewakeum* remains monotypic.

The Thai common name of *Davewakeum* is *ching-laen-duang Pakthongchai* (Nabhitabhata et al. 2004, Thirakhupt 2000). Its English name is *Miriam's Legless Skink*. We suggest the French name *scinque apode de Miriam* and the Dutch/Flemish name *Miriam's pootloze skink*.

The holotype of Miriam's Legless Skink was collected at "Khao Saton, 300 m. above the Kasetsart University Forestry Station, 60 km. S of Nakhon Ratchasima on Highway 304, Amphoe [= District] Pak Thong Chai, Changwat [= Province] Nakhon Ratchasima, Thailand"; the paratypes all came from this locality with the exception of one that was collected at "Sakaerat Experiment Station, Amphoe Pak Thong Chai, Changwat Nakhon Ratchasima." Nabhitabhata et al. (2004) listed the species from Sakaerat and Wang Nam Khieo (Subdistrict), both in Pak Thong Chai District in Nakhon Ratchasima Province, the only district and province from which the species is known.

Ron Heyer's team found specimens in dry evergreen forest (partially cleared in the case of the Sakaerat paratype). They were found by daytime underground (1–15 cm deep), often along tree buttresses or under rocks (Heyer 1972, Heyer and Berven 1973, Inger and Colwell 1977). In contrast, one specimen (Sakaerat's paratype) was found active at 2140 h on the forest floor less than a meter from a stream. Whether the species is diurnal or active at night remains unknown, although the latter observation alone suggests a nocturnal cycle. At one site in Khao Saton, as many as ten individuals were found in a 4-m² area, in syntopy with the semi-fossorial skink *Riopa bowringi* (Günther, 1864) (Heyer 1972). The diet of *Davewakeum* is totally unknown, but most probably includes various small leaf litter invertebrates. Its reproductive biology is also unknown.

During an afternoon in November 2004, in dry evergreen forest at Tham Jong Ang ("King Cobra Cave"; altitude ca. 400 m asl), Sakaerat Experimental Research Station (SERS), we dug



Live adult *Davewakeum miriamae* from Sakaerat Experimental Research Station.

a large hole in a boulder filled with humus, and found two adult *Davewakeum miriamae* a few centimeters from each other. As soon as they were exhumed, they became extremely excited and crawled surprisingly quickly; one even managed to escape by letting itself fall from the boulder and disappearing into a rock crevice, the other was caught but immediately lost its tail (voucher IRSNB 17009). The species is very common at SERS, where it is encountered frequently when gardening and digging (T. Artchawakom, pers. comm., November 2004). The biotope of *Davewakeum miriamae*, the dry evergreen forest of Sakaerat, was described in detail by Lamotte et al. (1997).

Despite an apparently localized distribution, the species does not appear to be threatened. Thirakhupt (2000: 163) briefly reviewed its conservation status, qualified its commercial value as low, and its biology and ecology as unknown and thus not sufficient to clearly establish its status ("data deficient"). The species is listed as "near-threatened" in the Thailand Red Data list by Nabhitabhata and Chan-ard (2005), who forgot to indicate its endemism to Thailand; however, no information was provided to justify this near-threatened status. The species is not included in the 2007 IUCN Red List of Threatened Species (IUCN 2007). We have not seen or heard about the species in the Thai or international reptile pet trade. Its fossorial habits, small size, and dull coloration make it unappealing for hobbyists. At the time of its discovery, the species appeared to be locally common (Heyer 1972) in dry evergreen forest, and it remains common at least in Sakaerat. The Sakaerat site was nominated as a UNESCO-MAB Biosphere Reserve and hence benefits from some protective status. Investigators may yet be able to document the presence of the species in Thap Lan National Park (Nakhon Ratchasima Province), just south of the known localities, and in adjacent Khao Yai National Park to the west and part of the same low mountain range (the southern part of the Phetchabun Mountain Range) that separates the Khorat Basin from the Central Valley of Thailand.

Acknowledgements

We are grateful to Taksin Artchawakom, Director of SERS, for his kind hospitality and support, to Chucheep Teak



Overview of the dry evergreen forest at Sakaerat Experimental Research Station.



Miriam and Ron Heyer at the Smithsonian Institution (Washington, D.C.) in December 2007.

Chimsunchart (Phetchaburi) for her help with the translation of Thai herpetological literature, to Dr. Lawan Chanhome (Thai Red Cross Society), Kirati Kunya (Korat Zoo), and Montri Sumontha (Ranong Fisheries Station) for companionship in the field, and to Dr. Ron Heyer (Smithsonian Institution, Washington, D.C.), Pascal A.R. Pauwels (Brussels), Alan Reseter (FMNH), and Dr. Surachit Waengsothorn (Thailand Institute of Scientific and Technological Research, Bangkok) for useful information.

Literature Cited

- Brandley, M.C., A. Schmitz, and T.W. Reeder. 2005. Partitioned Bayesian analyses, partition choice, and the phylogenetic relationships of scincid lizards. *Systematic Biology* 54:373–390.
- Greer, A.E. 2002. The loss of the external ear opening in scincid lizards. *Journal of Herpetology* 36:544–555.
- Heyer, W.R. 1972. A new limbless skink (Reptilia: Scincidae) from Thailand with comments on the generic status of the limbless skinks of Southeast Asia. *Fieldiana Zoology* 58:109–129.
- Heyer, W.R. and K.A. Berven. 1973. Species diversities of herpetofaunal samples from similar microhabitats at two tropical sites. *Ecology* 54:642–645.
- Inger, R.F. and R.K. Colwell. 1977. Organization of contiguous communities of amphibians and reptiles in Thailand. *Ecological Monographs* 47:229–253.
- IUCN 2007. 2007 IUCN Red List of Threatened Species. The IUCN Species Survival Commission, Gland, Switzerland. <www.iucnredlist.org>.
- Lamotte, S., J. Gajaseeni, and F. Malaisse. 1998. Structure diversity in three forest types of northeastern Thailand (Sakaerat Reserve, Pak Tong Chai). *Biotechnology, Agronomy, Society and Environment* 2:192–202.
- Nabhitabhata, J. and T. Chan-ard. 2005. *Thailand Red Data: Mammals, Reptiles and Amphibians*. Office of Natural Resources and Environmental Policy and Planning, Bangkok.
- Nabhitabhata, J., T. Chan-ard, and Y. Chuaynkern. "2000" 2004. *Checklist of Amphibians and Reptiles in Thailand*. Office of Environmental Policy and Planning, Bangkok.
- Thirakhupt, K. 2000. Amphibians and reptiles, pp. 149–171. In: *Review of Biodiversity Research in Thailand*. Biodiversity Research and Training Program, Bangkok (in Thai).