

Additional Locality of an Endemic Legless Skink, *Isopachys roulei* (Angel, 1920)(Squamata, Scincidae) from Northeastern Thailand

**Kirati Kunya^{*1}, Sumat Kamolnorrath², Tanya Chan-ard³,
Michael Cota³ and Sunchai Makchai³**

¹*Nakhonratchasima Zoo, 111 M. 1, Ratchasima/Pak Tongchai Rd.
Chaimonkol, Muang Nakon Ratchasima 30000 Thailand*

²*Conservation Research and Education Division, The Zoological Park Organization
Under The Royal Patronage of H.M. The King, Thailand*

³*Natural History Museum, National Science Museum, Thailand,
Technopolis, Khlong 5, Khlong Luang, Pathum Thani 12120 Thailand*

ABSTRACT: A single specimen of a legless skink in the genus *Isopachys* Lönnberg, 1916 was identified as *I. roulei* (Angel, 1920). The specimen described here was found living in a different habitat far from the type locality. The new location is recorded as a new locality for this species.

KEY WORDS: *Isopachys roulei*, Lygosomine.

INTRODUCTION

The genus *Isopachys* Lönnberg, 1916 are scincid lizards, which lack external appendages. Four species of this genus are known in Thailand. They are *I. anguinoides* (Boulenger, 1914), *I. roulei* (Angel, 1920), *I. gyldenstolpei* Lönnberg, 1916 and *I. borealis* Lang and Böhme, 1990. Most specimens of this legless skink have been taken in dry sandy soils in which they can easily burrow. *I. anguinoides*, *I. gyldenstolpei* and *I. roulei* have been collected beneath rotten logs and grass and under debris of various types (Smith, 1935; Taylor, 1963). Only *I. borealis* has been taken in top soils of cultivated land (sweet potato and pineapple plantations) in clearings with moderate sunlight (Lang and Böhme, 1991). The Thailand Natural History Museum (THNHM) has received a specimen which clearly belongs to this genus from the Northeastern Region of

Thailand. It is identified as *Isopachys roulei*.

MATERIALS AND METHODS

A single specimen (THNHM 15362) was collected from Ban Lampiakpattana, Tambon Nonsomboon, Amphoe Soeng Sang, Nakhon Ratchasima Province, Thailand (latitude 14° 19.545' N; longitude 102° 25.473' E) by Kirati Kunya dated 13 January 2009. The specimen was preserved in 10% buffered formalin and later transferred to 70% ethanol.

The snout-vent length and tail length of this single specimen has been measured with a calliper to the nearest 0.1 mm. A comparison of the main characteristics with a large series of legless skinks in the genus *Isopachys* in the THNHM was made by following the study of Lang and Böhme (1990) as shown in Table 1.

*Corresponding author.

E-mail: kkunya2006@yahoo.com

Specimens examined

Isopachys anguinoides - THNHM 3041-46, Nong Kae, Prachuap Khiri Khan, coll.: Soderberg and Norlander, 2 June 1966; THNHM 3028-29, 3037-40, Nong Kae, Prachuap Khiri Khan, coll.: P. Soderberg, 23-25 June 1996; THNHM 11285-93, Hat Wanakorn, Thap Sakae, Prachuap Khiri Khan, col.: Chan-ard and Chauynkern, 11 April 2001; THNHM 1285-87, 1315-27, Pa-La-U, Prachuap Khiri Khan, coll.: Chan-ard and Chauynkern, 15-20 December 2002; THNHM 1313-14, Ban Krang, Kaeng Krachan, Petchburi, col.: Chan-ard and Chauynkern, 21 December 2002; THNHM 1258-60, Ban Krang, Kaeng Krachan, Petchburi, col.: Chan-ard and Chauynkern, 27 July 2004; THNHM 10147-48, Cha-Um, Phetchaburi, coll.: Chan-ard, Mekchai and Lhaoteaw, 25 October 2006.

Isopachys borealis - THNHM 15366, Lansak, Uthai Thani, coll.: a staff of Khao Nang Ram Wildlife Research Station, no date reported.

Isopachys gyldenstolpei - THNHM 3056-57 (no data); THNHM 13877-78, Nong Kae, Prachuap Khiri Khan, coll.: P. Soderberg, 23 June 1966; THNHM 13879-80, Kanchanaburi, coll.: J. Fluker, 9 August 1966; THNHM 1306-12, 1466-67, Cha-um, Phetchaburi, coll.: Chan-ard and Chauynkern, 21 June 2004.

Isopachys roulei - THNHM 3047, Chom Thian, Bang Lamung, Chonburi, coll.: P. Soderberg, March, 1964.

RESULTS

The measurements of the single specimen agree with Taylor's (1965) description and that of Lang and Böhme (1990). Its snout-vent length is 75.2 mm and the tail length is 42.1 mm, which is

smaller than Taylor's specimens. Its snout is flattened anteriorly, somewhat wedge-shaped. The nasals are very large, broadly in contact mesially. Frontonasal and prefrontal scales are present. The frontonasals are separated. Limbs are absent. The scale number on the mid-body is 18 rows. A dark marking occurs on the top of the head. The body is fawn to buff with two dark lines from the occiput to the end of the tail. The tail tip is blunt. The chin, belly, and the area under the tail are dark.

A series of Taylor (1965) specimens is known from Bangsaen, Chonburi Province which we believe is the type locality. We have another single specimen (THNHM 3047) from Chom Thian, Bang Lamung, Chonburi, which was collected by P. Soderberg in 1964. These localities are close to coastal areas. This new locality in Nakhon Ratchasima Province is very far from the sea and sandy beaches. The specimen was caught in sandy soil in a cassava plantation close to a farmer's house. It was found when the house owner carried the soil to place in his backyard. We identify this location as a new habitat for this species.

CONCLUSION

The morphology of a legless skink which was collected from Nakhon Ratchasima Province matches *Isopachys roulei*, when compared with the original description, and when examining specimens in the Thailand Natural History Museum (THNHM). The type locality of this scincid species is recorded as Bang Saen, Chonburi Province. Many specimens that have previously been found in the neighbouring Chom Thian Beach area are deposited in THNHM collection. The new record establishes a new locality for this species.

Table 1. Comparative table of characteristics differentiating the four recognized species of *Isopachys* with THNHM 15362 (modified from Lang and Böhme, 1991).

	<i>anguinoides</i>	<i>roulei</i>	<i>gyldenstolpei</i>	<i>borealis</i>	THNHM 15362
Nasal scales	separated	contact	contact	contact	contact
Frontal/ frontonasal	equal	FN larger	fused	FN smaller	FN larger
Frontoparietals	contact	separated	separated	separated	separated
Prefrontal scales	paired	paired	fused with frontal	fused with frontal	paired
Third temporal scale	present	present	fused	present	present
Post mental scale	present	fused	fused	fused	fused
# supralabials	5	4	4	5	4
# scales at neck	26-27	20-23	29-31	23-28	22
# scales at midbody	21-24	18	24-28	20-22	18
# scales at tail	15-18	14-15	19	14-17	15
# scales parietal-vent	108	125-135	203	140-152	133
SVL (mm)	60-71	82-106	167-220	77-177	75.2
Tail tip shape	tapering	tapering	blunt	blunt	tapering

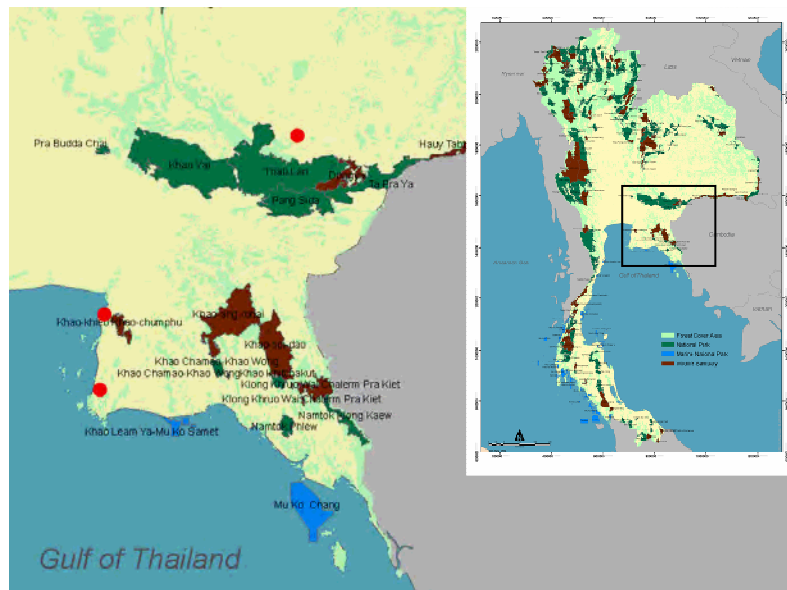


Figure 1. Map of Thailand shows the localities of *Isopachys roulei*, the red circle on top is the new locality in Nakhon Ratchasima Province, other in the middle is type locality, and below is Chom Thian Beach in Chon Buri Province.

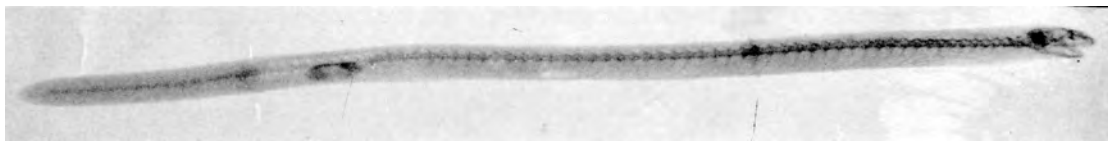


Figure 2. *Isopachys roulei* THNHM 15362.



Figure 3. *Isopachys roulei* THNHM 15362 (a) dorsal, and (b) ventral view.

ACKNOWLEDGEMENTS

We wish to thank Dr. Sophon Dumnui (Director General of The Zoological Park Organization Under The Royal Patronage of H.M. The King, Thailand); Mr. Bunyat Insuwan (Director of Nakhonratchasima Zoo The Zoological Park Organization Under The Royal Patronage of H.M. The King, Thailand); Mr. Vichai Chanrattanachai (Nakhonratchasima Zoo, The Zoological Park Organization Under The Royal Patronage of H.M. The King, Thailand); and Mr. Inn Shidacha (61 M00 6 Ban Lampiakpattana, Soengsang District, Nakhon Ratchasima Province), for facilitating our field work. We also thank the Thailand Natural History Museum (THNHM) for permission to study their specimens of *Isopachys* spp.

REFERENCES

- Lang, M. and W. Böhme, 1991. Description and phylogenetic position of a new species of *Isopachys* from Central Thailand and Southern Burma (Squamata: Scincidae). *Bulletin de L'Institut Royal Des Sciences Naturelles de Belgique, Biologie*. 60: 231-240.
- Smith, M.A. 1935. The fauna of British India, including Ceylon and Burma. Reptilia and Amphibia. Vol.II. Sauria. Taylor and Francis, London. xii + 440 pp.
- Taylor, E.H. 1963. The lizards of Thailand. *University of Kansas Science Bulletin*. 44(14): 687-1077.