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A Record of *Utivarachna phyllicola* (Araneae, Trachelidae) from Lampi Island, Southern Myanmar

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Abstract *Utivarachna phyllicola* Deeleman-Reinhold, 2001 (Araneae, Trachelidae) hitherto known from Thailand, Indonesia (Sumatra), Malaysia (Borneo) and Myanmar (near Kawthaung) was collected from Lampi Island belonging to the Myeik Archipelago, Tanintharyi Region (former Tenasserim), southern Myanmar. This species is recorded from Myanmar for the second time, and this paper represents the first report of the family Trachelidae from Myanmar. This interesting spider is described and illustrated on the basis of the newly obtained material.
Key words : Arachnida, spiders, Myanmar, Burma, Tenasserim, taxonomy.

Introduction

Trachelids are small hunting spiders living on trees and bushes of the tropical and warmer regions in the world, and the family includes 250 species in 20 genera. More than 70% of the species of the family are known from South America and Africa, while only about 60 species are recorded from Asia. From Myanmar, no trachelid was recorded so far (Ono *et al.*, 2018, 2019; Ono, 2021) due to the complicated political situation that has affected the history of the country.

Utivarachna is an Asian genus of Trachelidae established by Kishida (1940) based on the monotypic *U. fukasawana* Kishida, 1940 from Borneo, and 22 species are at present known in the genus from Indonesia, Malaysia, Brunei, India, Sri Lanka, Thailand, Myanmar, Taiwan and China (Deeleman-Reinhold, 2001; Zhao and Peng, 2014; Liu *et al.*, 2020; World Spider Catalog, 2022). In view of this wide distribution, ocuurrence of the genus in Myanmar was not surprising.

As expected, *Utivarachna phyllicola* Deeleman-Reinhold, 2001, was collected on Lampi Island belonging to the Myeik Archipelago, autonomously in Bokepying Township, Tanintharyi Region (former Tenasserim), southern Myanmar, during a botanical survey made by Dr. Nobuyuki Tanaka as a part of the expeditions under a joint research project between the National Museum of Nature and Science, Japan, and the Forest Department of the Ministry of Natural Resources and Environmental Conservation, Myanmar (Ono *et al.*, 2018, 2019; Tanaka, 2021).

The Myeik Archipelago consists of several hundreds of islands distributed along the western coastline of the Malay Peninsula for 600 km in the Andaman Sea. This sea area has been isolated from modern civilization under the traditional lifestyle of the fishing tribe Moken, and the islands are covered with thick tropical growth, which preserves the habitat of some endangered animals. Lampi Island has been protected as a national marine park through eliminating human

intervention as much as possible (Beffasti, Galanti and Miorin, 2016). A primitively segmented spider, *Liphistius tanakai* Ono and Aung, 2020, belonging to the suborder Mesothelae (Liphistiidae) was recently discovered and described from this island (Ono and Aung, 2017, 2020).

Utivarachna phyllicola was hitherto known from Thailand (Khao Yai National Park in the Nakhon Ratchasima Province), Indonesia (Sumatra), Malaysia (Mt. Kinabalu, Sabah, Borneo), and Myanmar (Thahtay Kyun Island near Kawthaung) and is recorded here from Myanmar for the second time. Because it was recorded as a corinnid (Dankittipakul *et al.* 2011), this paper represents the first report of the family Trachelidae from Myanmar. This interesting spider is described and illustrated in the present paper on the basis of the newly obtained material.

Materials and Methods

Data of the study material: one adult male legally collected in an evergreen forest of Lampi Island, Myeik Archipelago, west of Malay Peninsula, Bokepying Township, Tanintharyi Region, Myanmar, 8–II–2018, collected by Nobuyuki Tanaka, provisionally preserved in the arachnid collection of the Department of Zoology, National Museum of Nature and Science, Japan (NMNS) [it will be transferred into the Biodiversity Research Centre (BRC) of the Forest Research Institute, Forest Department, Ministry of Natural Resources and Environmental Conservation at Yezin, Nay Pyi Taw, Myanmar, in the near future].

The specimen was fixed in 76% ethanol and observed and photographed under a Leica MZ 18 microscope and a Nikon digital camera control unit DS-L3 at the Department of Zoology of the National Museum of Nature and Science, Tsukuba. Important parts of the spider, especially, marginal teeth of the chelicera, pedicel, palpal organ and spinnerets are illustrated.

Abbreviations used are as follows: ALE, anterior lateral eye; AME, anterior median eye; AME–AME: distance between AMEs; AME–ALE: distance between AME and ALE; PLE, posterior lateral eye; PME, posterior median eye.

Taxonomy

Family Trachelidae Simon, 1897

Genus *Utivarachna* Kishida, 1940

Utivarachna phyllicola Deeleman-Reinhold, 2001

Utivarachna phyllicola Deeleman-Reinhold, 2001, pp. 386–388, figs. 604–609. Holotype: male, and one female and one male paratypes from humid evergreen forest near the entrance of tourist center, about 1,000 m alt., in the Khao Yai National Park, Nakhon Ratchasima Province, Thailand, 3–7–III–1986, P. R. and C. L. Deeleman leg., preserved in the Naturalis Biodiversity Center, Leiden (Rijksmuseum van Natuurlijke Historie), not examined.

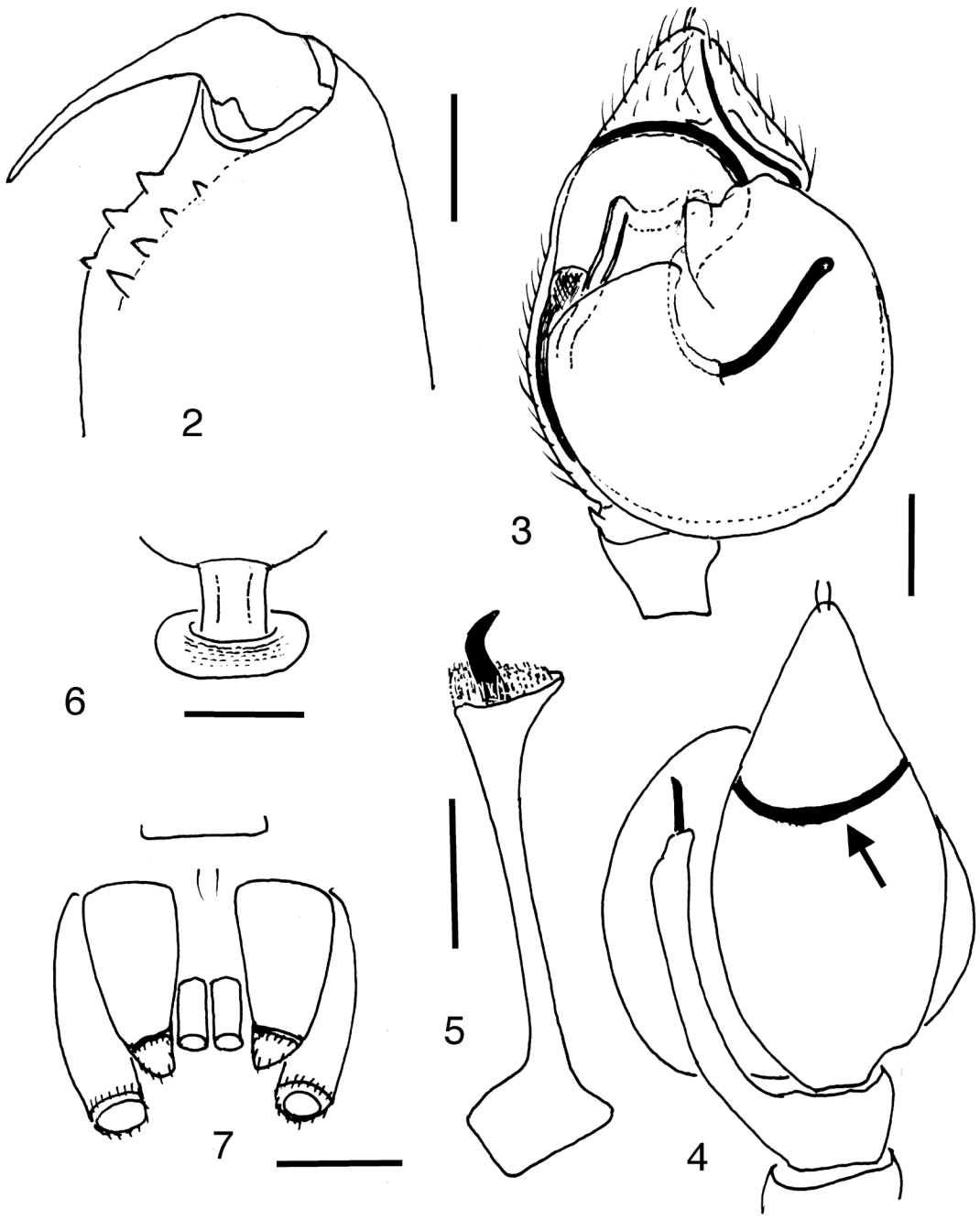
Diagnosis. This species is very unique in having an extremely developed, retrolateral tibial apophysis of the male palp (Fig. 4), and is easily distinguishable from other *Utivarachna* species. However, we are not sure which species group it belongs to, because the subdivision proposed by Deeleman-Reinhold (2001) should be reviewed. In the key of the article (p. 372), *Utivarachna phyllicola* was treated as a species group of its own with characteristics including some variable features of the eyes and chelicerae. For instance, the posterior eye row shows different phases by the viewing angle, and the number of teeth on the retromargin of the fang furrow of the chelicera can be variable, as it is four in the present specimen, not three as specified in the key. The comparison of the palpal organs and female genitalia among species was also insufficient. Focusing on the structure of the male palp among species of the genus, in fact, *Utivarachna phyllicola* seems to be related to the species of the *U. kinabaluensis* group established by the same author, namely, *U. kinabaluensis* Deeleman-Reinhold, 2001, from Sabah, Borneo and *U. bucculenta* Deeleman-Reinhold, 2001, from Khao Yai National Park,

Fig. 1. *Utivarachna phyllicola* Deeleman-Reinhold, 2001, a male from Lampi Island, Myanmar. Body length: 3.6 mm.

Thailand.

Description. Based on a single male specimen from southern Myanmar. Measurements. Body length 3.60 mm; prosoma length 1.65 mm, width 1.33 mm; opisthosoma length 1.95 mm, width 1.20 mm; lengths of legs [total length (femur + patella + tibia + metatarsus + tarsus)]: I 5.04 mm (1.58 + 0.60 + 1.23 + 1.03 + 0.60), II 4.88 mm (1.47 + 0.58 + 1.20 + 1.03 + 0.60), III 3.45 mm (1.13 + 0.38 + 0.77 + 0.82 + 0.35), IV 4.53 mm (1.30 + 0.45 + 1.00 + 1.28 + 0.50). Leg formula: I–II–IV–III.

Prosoma. Carapace wholly granulated, longer than wide (length/width 1.25), posteriorly narrowed to the width of the pedicel, with a small but distinct fovea (Fig. 1). Anterior eye row procurved, posterior eye row slightly procurved or straight in dorsal view, differs depending on the viewing angle. AME round, other eyes oval. ALE > PME > PLE > AME (10 : 8 : 7 : 6), AME–AME < AME–ALE (3 : 4), PME–PME > PME–PLE (8 : 7), ALE and PLE close to each other. Median ocular area as long as wide, wider behind than in front (6 : 4). Clypeus narrow, as same as the diameter of AME. Chelicera with three teeth on the promargin of fang furrow, four teeth on the retromargin (Fig. 2). Maxillae wide and round distally, labium longer than wide (length/width 1.20), sternum slightly longer than wide (length/width 1.06). Legs without spines and strong hairs, coxae of legs I and II remarkably long, as long as tibia of the legs, metatarsi of legs I and II ventrally with rows of thin hairs with granular base, metatarsi of legs III and IV



Figs. 2–7. *Utivarachna phyllicola* Deeleman-Reinhold, 2001, a male from Lampi Island, Myanmar. 2. Left chelicera, ventral view. 3. Palpal organ of the left palp, ventral view. 4. Tibia and cymbium of the left palp, dorsal view. The arrow indicates the location of the embolus visible through the cuticle of the cymbium. 5. Retrolateral tibial apophysis of left male palp, lateral view. 6. Pedicel with membranous base, ventral view. 7. Spinnerets, ventral view. Scales: 0.2 mm.

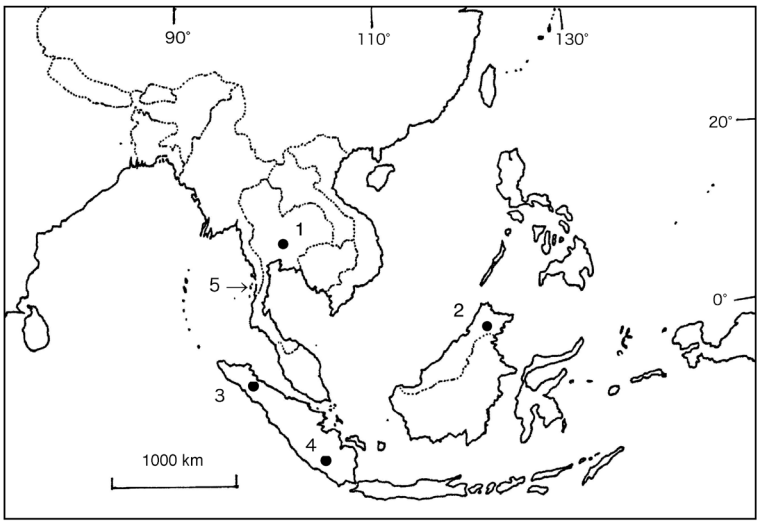


Fig. 8. Records of *Utivarachna phyllicola* Deeleman-Reinhold, 2001, in southeast Asia. ●: 1. Khao Yai National Park in the Nakhon Ratchasima Province, Thailand (the type locality). 2. Mt. Kinabalu, Sabah, Borneo, Malaysia. 3. Ketambe, Gunung Leuser National Park, northern Sumatra, Indonesia. 4. Mt. Singgalang, Jambi Province, western Sumatra, Indonesia. All recorded by Deeleman-Reinhold (2001). →: 5. Lampi Island, west of Malay Peninsula, Bokepying Township, Tanintharyi Region, Myanmar (the present record). The previous record in Myanmar was made by Dankittipakul *et al.* (2011) from Thahtay Kyun Island near Kawthaung, in the same area and about 90 km South of Lampi Island.

apically with scopula, tarsus with claw tuft and two claws which are small and not pectinate.

Male palp (Figs. 3–5). The basal part of femur slightly bent downward, without swelling or apophysis, the length of patella one-third of the femur, tibia basally short, the retrolateral tibial apophysis large, its apical part furnished with a sclerotized hook and the surrounding membrane (Figs. 4–5). Cymbium longer than wide, apically with two strong hairs, palpal organ large and globular, without distinct tegular apophysis and conductor, embolus filiform, long, coiled around the tegulum and visible through the cymbium as shown by the arrow on Fig. 4, the tip of embolus reaches the end of the cymbium.

Opisthosoma. Bullet-shaped, longer than wide (length/width 1.63), covered with an indistinct, thin dorsal plate (Fig. 1). Pedicel relatively short, cylindrical, basally covered by membranous structure (Fig. 6). Colulus absent, replaced by a pair of vestigial hairs, all spinnerets without distinct large spigots, anterior-lateral spinnerets semi-cylindrical, thicker than others, median ones small and short, posterior-lateral ones longest (Fig. 7).

Coloration and markings (Fig. 1). Prosoma: Carapace brown with three pairs of black dots on both sides; chelicerae, maxillae, labium and sternum brown; coxa, trochanter, the basal two thirds of femur of leg I and the middle part of femur of leg II also brown, other segments of leg I and II yellow; legs III and IV basally light yellowish brown, distally yellow. Opisthosoma: dorsal plate light yellowish brown with indistinct markings; other parts yellowish white; spinnerets yellow.

Distribution (Fig. 8). Myanmar (Tanintharyi Region); Thailand, Indonesia (Sumatra), Malaysia (Borneo).

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