Acarologia is proudly non-profit, with no page charges and free open access

Please help us maintain this system by encouraging your institutes to subscribe to the print version of the journal and by sending us your high quality research on the Acari.

Subscriptions: Year 2019 (Volume 59): 450 €
http://www1.montpellier.inra.fr/CBGP/acarologia/subscribe.php
Previous volumes (2010-2017): 250 € / year (4 issues)
Acarologia, CBGP, CS 30016, 34988 MONTFERRIER-sur-LEZ Cedex, France

The digitalization of Acarologia papers prior to 2000 was supported by Agropolis Fondation under the reference ID 1500-024 through the « Investissements d’avenir » programme (Labex Agro: ANR-10-LABX-0001-01)

Acarologia is under free license and distributed under the terms of the Creative Commons-BY-NC-ND which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author and source are credited.
RISCUS, A NEW CUNAXID GENUS FROM THAILAND
(ACARI: ACTINEDIDA: CUNAXIDAE)

by J. Den HEYER

(Accepted December 2005)

INTRODUCTION

Very little is known about the ecology of the new genus Riscus here described except for the data of its locality. However, when its palpi are compared with palpi of cunaxids, it can be concluded that it should be also predatory. The type material (all four on one slide) will be deposited in the National Mite Collection of ARC-PPRI in Pretoria (Tshwane), RSA

Family CUNAXIDAE

DEN HEYER (1974-1980), SEPASGOSORIAN (1984) and SMILEY (1975,1992) give ample reasons to identify lower taxons and mention most of the literature this taxon is associated with. The classification system proposed by DEN HEYER (1980) is adhered to. The setal notation for dorsum and ventrum according to KETHLEY (1990) but setal types according to DEN HEYER (1977 & 1981). To include the new genus the key to the genera of the subfamily Cunaxinae is adapted as follows:

KEY TO THE GENERA
OF THE SUBFAMILY CUNAXINAE OUDEMANS, 1902

1. Tarsal lobes small; no para-anal setae; palp telofemur with dorsal st seta; tribus Cunaxini ............ 2
   — Tarsal lobes prominent; para-anal setae present; palp telofemur with dorsal spine-like seta...tribus Armascini................................. 3

2. Dorsal plates never reticulated; st -setae on coxae II-IV 1-3-2 ......... Cunaxa Von Heyden, 1826
   — Dorsal plates reticulated; st -setae on coxae II-IV 1-3-1.................... 4.

3. Spine-like seta on palp genu only; st -setae on coxae II-IV 1(♂) or 2(♀)—3-3... Armascirus Den Heyer, 1978
   — Spine-like setae on palp telofemur and genu; st-setae on coxae II-IV 3-3-3. ........ Dactyloscirus Berlese, 1916

4. Palpal telofemur with one apophysis; sensillae setose; tarsi I and II with one blunt-pointed solenidion each. ........ Rubrostetrus Den Heyer, 1978

Summary: The characteristics of a new monotypic cunaxid genus Riscus are provided. A new species from Thailand, Riscus thailandensis, is described and figured. A key to the five genera of the subfamily Cunaxinae Oudemans 1902 is also given.

Résumé : Les caractéristiques du nouveau genre monotypique Riscus sont données. La nouvelle espèce de Thaïlande, Riscus thailandensis est décrite et dessinée. Une clef pour les cinq genres de la sous-famille Cunaxinae Oudemans 1902 est également fournie.
Figs. 1-4. Riscus thailandensis spec. nov 1a. — Trichobothrium vi; 1b. — Trichobothrium sei; 1c. — Dorsum; 2. — Venter; 3. — Genital region; 4. — Holotype ♂ with egg and ovum showing size ratios.
— Palpal telofemur without apophyses; sensillae densely pilose; tarsi I and II with two blunt-pointed solenidia each. ................. Riscus gen. nov.

**Riscus** gen. nov.

Type species: *Riscus thailandensis* spec. nov.

This genus is placed in the tribus Cunaxini because it satisfies the characteristics of this taxon as stated by *Den Heyer* (1980), viz. relatively small tarsal lobes, presence on the palpal telofemur with dorsal st setae and absence of para-anal setae. This genus is recognised by the palpal chaetotaxy being: trochanter, nil; basifemur, 1 sts; telofemur, 1 sts; genu, 3 sts; tibiotarsus, 1 spine-like seta, 3 sts, 1 terminal solenidion, 1 terminal claw. The tibiotarsi project with two-third of their lengths past the apex of the hypostome. Propodosomal trichobothria vi and sci finely, densely pilose. The female genital setae arranged in two straight rows on either side of the median line. The formula for solenidia on tarsi I-IV is 6-3-0-0 whereas that for the tibiae I-IV is 2-1-0-0 and genua I-IV is 2-2-1-1.

***Riscus thailandensis*** spec. nov.

No information exists on its natural appearance since only the mounted specimens have been studied. The sclerotisation in these mites is weak. In the adult females it reaches its highest manifestation but then mainly in the gnathosoma. The tritonymph is poorly sclerotised whereas in the deutonymph there is hardly any sign of it.

**Female (Figs. 1-13) Dimensions.** Length of body (excluding gnathosoma): 211-226 μ; width of body 139-142 μ; lengths of: gnathosoma: 82-85 μ; palp:55-59 μ; chelicera: 69-72 μ; hypognathum: 68-71 μ; legs: I, 123-132 μ; II, 117-128 μ; III 143-152 μ; IV 148-163 μ; sensillae: vi 75-83 μ, sci 88-89 μ.

**Dorsum** (Figs. 1a, b & c). Propodosomal plate single, very weakly sclerotised, finely reticulated, with 1 pair each of trichobothria vi, setae ve, setae sce and trichobothria sci; covers the propodosoma. Trichobothria (Figs 1a & b) only finely, densely pilose. Setae sce stout, as long as distance between their bases; ve setae less stout, ± half diameter of sce setae; ve setae as long as distance to nearest sce seta. Naso and eyes absent. Alveoli of sci on integumental bulges.

Setae e 1, c 2, d 1 and e 1 small, short and thin. Setae f and h stout and long; latter pair somewhat longer than former. Anal valves with one pair of ps 1 setae. Integumental striae mostly smooth, pattern in Fig. 1c.

**Venter** (Figs. 2 & 3). Coxal plates weakly sclerotised; demarcated by internal apodemes only; striae very fine, often broken. No sejugal grooves detected. 1 Pair propodogastral, six pairs of hysterogastral setae present. 1 Paragenital setae laterad to weakly sclerotised genital plates (Figs. 2 & 3); four g setae, arranged in almost straight, near median, line. Pair of anal setae ps2 present. Ventral striae mostly smooth and unbroken.

Two pairs of genital papillae uneven in size, anterior pair largest. Latter pair constricted, creates impression of being divided. Fig. 4 shows size of egg and ovum relative to body size.

**Gnathosoma** (Figs. 5-8). Hypognathum heavier sclerotised then rest of body parts; carries prominent setae bg 2, 3, and 4; bg 1 less prominent. Width: length ratio is 1.71. Ventral striation pattern shown in Fig. 6. Laterodorsal regions of hypognathum, dorsal aspects of palpal segments, proximal halves of the chelicerae with densely packed integumental papillae.

Chelicerae typically three-jointed; proximal segment and proximal half of second segment much broader than distal cheliceral half which narrows towards chelae. One seta on segment II just behind attachment of chela (Fig. 7). Peglike setae (proprio-receptors) occur on surface of hypognathal coxal region, lateral to cheliceral bases. Palpi extend from mesial spine-like seta of tibiotarsus passed entomalae. Femur not divided; possesses ventral ridges indicating a fusion. One stout seta carried dorsally just behind “joint”; another occurs dorsodistally. Genu with three setae; 1 dorsodistally, 1 ventroproximally, 1 dorsolaterally on distal half (Fig. 8). Tibiotarsus carries mesally single palpal spine-like seta; furthermore, one st seta ventrally in close vicinity to spine, 1 dorsal st seta distally, another close by ventrally, one dorsoterminal solenidion and terminal claw.
Legs (Figs. 7-10). Legs shorter than body, leg IV being longest. Pretarsi of legs I and II smaller than those of legs III and IV (being well-developed). Femora III and IV show very clear division ridges. Femora I and II with only faint ventral fusion lines.

Leg chaetotaxy: coxae I-IV 3 sts, 1 pe—1 sts—3 sts—1sts; trochanters I–IV 1 sts—1sts—2 sts—1 sts; basifemora I-IV 1 ms, 2 sts—3 sts—2 sts—1 sts; telofemora I-IV 4 sts—4 sts—4 sts—4 sts; genua I-IV [1 long bsl, 2 asl], [2 asl], 4 sts—2 asl, 5 sts—1 asl, 5 sts—1asl, 4 sts; tibiae I-IV [1 long bsl, 1 asl, 1 sts], 4 sts—[1 asl, 1 sts], 4 sts—1 asl, 5 sts—1T, 4 sts; tarsi I-IV [1 long bsl, 1 pe], 4 asl 2 tsl, 13 sts—1 long bsl, 1 asl, 1 tsl, 15 sts—1 tsl, 13 or 14 sts—12 sts.

Tritonymph (TN)

Dimensions: Length body (excl. gnathosoma), 177 µ; width body 114 µ; lengths of : gnathosoma, 65 µ; palps, 43 µ; chelicerae, 46–49 µ; hypognathum, 54; legs I,103-108 µ; II, 97-99 µ; III, 106-111 µ; IV, 117 µ; sensillae : vi, 69-69 µ; sci, 59-60 µ. Smaller tritonymph resembles female in many aspects. Can be identified by a clear ecdysis line, one that is as clearly present as in the deutonymph.

Dorsum. Resembles female in dorsal chaetotaxy.

Venter. Genital valves a bit smaller in size than in ♀♂; same number of g-setae. One pair para-anal setae in close distance to anteroventral aspect of anal opening. One pair paragenital setae occur in line with anterior margins of genital valves. Three pairs of hysterogastral setae present; no propodogastral setae.

Gnathosoma. Weakly sclerotized, relatively smaller; general chaetotaxy of its different components similar as in ♀♀ and TN.

Legs. Sts-setae drastically less than in ♀♀ and TN; situation similar with regard to solenidia on tarsi I. Division of femora resembles that of TN. Leg chaetotaxy differs from tritonymph as follows: basifemora I—IV, 2 sts—2 sts—1 sts—0; telofemora I, 4 sts; genua IV, 1 asl, 3 or 4 sts; tibiae I-II, 1 asl, 5 sts—1 asl, 5 sts; tarsi I—IV, 2 bsl, 1 pe, 3 asl, 11 sts—2 bsl, 1 tsl, 11 sts—1 tsl, 9 sts—9 sts.

Male, protonymph and larva. Unknown.

Material studied. All specimens on one slide: 1 holotype ♀ (with ovum), 1 paratype ♀, 1 paratype tritonymph, 1 paratype deutonymph from Mangifera indica L., Kanchanaburi, Thailand on 1992/04/01 by Manita Kongchuensin.

Etymology. The genus name Riscus is an anagram of the name Scirus as used by Hermann (1804) for the first described cunaxid species. The species name is derived from the country where it was collected.
Figs. 11-13, *Riscus thailandensis* spec. nov. 13. — Leg III; 12. — Leg IV; 13. — Tarsus (distal portion), leg IV.
ACKNOWLEDGEMENTS

I wish to express my sincere gratitude to Dr. EA Ueckermann, chief acarologist at the ARC-PPRI, Pretoria, RSA for the constant support, enthusiasm and incentives to bring me back into the fold of active research in acarine taxonomy. The ARC-PPRI is thanked for material put at my disposal as well as for financial assistance rendered. I also thank the Department of Zoology and Entomology of the Qwa-Qwa Campus of the Free State University for providing part of the infra-structure required that made this research possible. The translation of the résumé to French by Mrs Katja de Haas is very much appreciated.

REFERENCES


