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STUDIES ON ERIOPHYOID MITES (ACARI: ERIOPHYOIDEA). XXXVII

BY Jan BOCZEK * and Angsumarn CHANDRAPATYA **

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ERIOPHYID MITES

SUMMARY: Three new genera and four new species of Thailand vagrant eriophyoid mites from Thailand are described and illustrated. *Combretus thailandus* n.gen., n.sp. lives on leaves of *Combretum quadrangulare* (Combretaceae); *Bangkophyes fici* n.gen., n.sp. on *Ficus hispida* (Moraceae); *Casearius wormiformis* n.gen., n.sp. on *Casearia grewiaefolia* (Flacortiaceae); *Epitrimerus combreti* n.sp., on *Combretum quadrangulare* (Combretaceae).

ERIOPHYOIDES

Résumé : Cet article décrit et illustre trois nouveaux genres et quatre nouvelles espèces d’ériophyoidés de Thaïlande. *Combretus thailandus* n. gen., n.sp. circule sur les feuilles de *Combretum thailandus* (Combretaceae); *Bangkophyes fici* n. gen., n.sp. sur *Ficus hispida* (Moraceae); *Casearius wormiformis* n. gen., n.sp. sur *Casearia grewiaefolia* (Flacortiaceae); *Epitrimerus combreti* n.sp., est récolté sur *Combretum quadrangulare* (Combretaceae).

Three new genera and four new vagrant species of eriophyoid mites from Thailand are described and illustrated. Type material has been deposited at the Department of Applied Entomology, Warsaw Agricultural University, Warsaw, and at the Department of Entomology, Kasetsart University, Bangkok. Part XXXVI of this series was published: Chandrapatya, Boczek, 2000. All measurements are in micrometers.

*COMBRETUS* n. gen.

This phyllocoptine mite has tadpole body shape with not differentiated opisthosome into smooth dorsal and ventral annuli; dorsally with short ridge of three annuli, next five dorsal annuli forming narrow trough. Prodorsal shield large clover-leaflet in shape with anterior rounded lobe over gnathosoma, with dorsal tubercles far ahead of rear shield margin and minute scapular setae directed to the rear and diverging. Lateral and three pairs of ventral setae (d, e, f) present. First coxae with one pair of setae. Empodium simple; female genitalia close to coxae.

This new genus is close to *Neodicrothrix* Mohanasundaram, 1984, and *Dicrothrix* Keifer, 1966, but it can be distinguished on the basis of differences in dorsal annuli, setae and shield structure. In *Dicrothrix* first dorsal annuli broadened laterally, second ventral setae missing. In *Neodicrothrix* foretibial and hindpatellar and first and second ventral setae missing. In the new genus first dorsal annuli not broadened laterally; foretibial setae present; three pairs of ventral setae present; only first forecoxal setae missing.

**Type species :** *Combretus thailandus* n.sp.

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**Combretus thailandus** n. sp. (Fig. 1)

**FEMALE:** 208 (range of 10 specimens 163-226) long; 77 wide; 60 thick; tadpole shape brown in colour. Gnathosoma 35 long; antapical seta 6 long. Chelicerae 26 long, normal. Prodorsal shield clover-leaflet shape 78 (71-80) long, 77 wide with 8 long lobe over gnathosoma anteriorly rounded, design of v-shaped subcentral lines distally only; dorsal tubercles 38 ahead of rear shield margin 25 apart; scapular (sc)setae 4 long directed to the rear and diverging. Leg I 34 long; tibia 9 long with seta 2 long; tarsus 5 long,
solenidion 10 long knobbed, empodium 5 long 4-rayed. Leg II 30 long; tibia 8 long; tarsus 5 long, solenidion 11 long knobbed, empodium 5 long; coxae smooth. Sternum of two adjoining lines 11 long. First forecoxal tubercles and setae missing; second tubercles 4 apart, setae 14 long, hindcoxal tubercles 27 apart, seta 30 long. Opisthosoma of 22(21-23) smooth dorsal annuli and about 26 smooth ventral annuli; first dorsal annuli forming low ridge and further annuli forming trough. Lateral (c2) setae 17 long on ventral annulus 2; first ventral (d) setae 28 long on ventral annulus 6; second ventral (e) setae 5 long on ventral annulus 11; third (f) ventral setae 20 long on 5th annulus from the rear. Accessory setae missing. Female genitalia between ventral annuli 1 and 4, 19 long and 22 wide; coverflap smooth: genital (3a) setae 12 long, tubercles 10 apart.

**MALE:** 205 long, prodorsal shield 65 long; opisthosoma of 22 dorsal annuli and 23 ventral annuli; genitalkia 14 wide, genital setae 13 long, tubercles 9 apart.

**HOST PLANT:** Combretum quadrangulare K. (Combretaceae) medicinal plant.

**RELATION TO HOST PLANT:** vagrant on lower leaf surface.

**TYPE MATERIAL:** holotype female collected on 20 October, 1998, in Amphor Hua Hin, Prachuap, Khirikhian Province (sample 1029.1) by the second author. Paratypes: 25 females.

**BANGKOPHYES** n.gen.

This phyllocoptine mite has fusiform body with evenly arched not differentiated opisthosoma into dorsal and ventral annuli. At least some dorsal annuli wavy and broken with some longitudinal striae. Prodorsal shield subrhomboidal, smooth with anteriorly rounded lobe over gnathosoma, with dorsal tubercles on rear shield margin pointing scapular setae posteriorly and diverging. Legs of six segments with all setae present. Genitalia not appressed to coxae, coxae with three pairs of setae; lateral, first and third ventral setae present, second ventral setae missing; empodium simple; solenidion of second leg twice longer than of first leg.

This new genus is close to *Indotegolophus* Chakrabarti, Mondal and Roy, 1980, and *Keiferana* Channabasavanna 1966, but it can be distinguished by the size of rostrum and number of setae. In *Indotegolophus* opisthosoma differentiated into broader dorsal and narrower ventral annuli; three pairs of ventral and coxal setae present. In *Keiferana* opisthosoma not differentiated; rostrum large, dorsal tubercles fingerlike; three pairs of coxal and ventral setae present. In the new genus rostrum small; opisthosoma not differentiated; dorsal tubercles small; second ventral (e) setae absent; dorsal annuli wavy.

**TYPE SPECIES:** *Bangkophyes fici* n.sp.

**Bangkophyes fici** n. gen., n. sp. (Fig. 2)

**FEMALE:** 217 (range of 10 specimens 215-250) long; 60 wide; 64 thick; fusiform, orange in colour. Gnathosoma 20 long; antapical seta 3 long. Chelicerae 15 long, normal. Prodorsal shield subrhomboidal 37 (33-40) long, 49 wide with 11 long lobe over gnathosoma anteriorly rounded smooth; dorsal tubercles on rear shield margin 22 apart; scapular (sc) setae 7 long directed to the rear and diverging. Leg I 25 long; tibia 4 long with seta 7 long; tarsus 8 long, solenidion 5 long slightly knobbed, empodium 5 long 4-rayed. Leg II 23 long; tibia 4 long; tarsus 6 long, solenidion 10 long slightly knobbed, empodium 5 long; coxae smooth. Sternum 4 long. First forecoxal tubercles 9 apart, setae 7 long; second tubercles 5 apart, setae 14 long, hindcoxal tubercles 17 apart, setae 28 long. Opisthosoma of 28(26-29) smooth evenly arched rings. Lateral (c2) setae 9 long on ventral annulus 5; first ventral (d) setae 11 long on ventral annulus 9; second ventral (e) setae missing; third (f) ventral setae 24 long on 6th annulus from the rear. Accessory setae missing. Female genitalia 19 long and 20 wide relatively close to coxae; coverflap smooth: genital (3a) setae 8 long, tubercles 12 apart.

**MALE:** not seen.

**HOST PLANT:** Ficus hispida L. f. ST. (Moraceae)

**RELATION TO HOST PLANT:** vagrant on lower leaf surface.
Fig. 2. *Bangkophyes fici* n. gen., n. sp. D. — dorsal mite. GF. — genital region, female. LM. — lateral mite. T. — tarsal empodium and solenidion.
**Type Material:** holotype female collected on March 31, 1998, by the second author in Amphor Bangkok Noi, Bangkok (sample 725). Paratypes: 53 females.

**Casearius** n.gen.

This wormlike mite belongs to Cecidophyinae because its genitalia are appressed to coxae but close to Eriophyinae because body wormlike; subtriangular prodorsal shield with rounded anteriorly lobe over gnathosoma and with scapular setae situated close to rear shield margin, directed laterally. Opisthosoma not differentiated into dorsal and ventral striae; some dorsal annuli with longitudinal striae; ventral annuli with bands of broken transversal mini lines. Coxae with lacking second pair of setae and third pair of setae on fingerlike tubercles. Legs six segmented with all normal setae. Empodium simple, solenidion of second leg twice longer than of first leg.

This new genus is close to *Cecidophyes* Nalepa, 1887, and *Milleniophyes* Chandrapaty and Boczek, 2000, but it can be distinguished on the basis of differences in body shape, shield structure, number of coxal setae and tarsal solenidia. In *Cecidophyes* and *Milleniophyes* body fusiform; dorsal tubercles and scapular setae missing; solenidia of both pairs of legs of similar length. In *Cecidophyes* three pairs of coxal and two pairs of ventral setae. In *Milleniophyes* two pairs of coxal and ventral setae. In the new genus body wormlike; prodorsal shield with scapular setae; two pairs of coxal and ventral setae; solenidia of second pair of legs twice longer than of first legs.

**Type Species:** *Casearius wormiformis* n.sp.

**Casearius wormiformis** n.gen., n.sp. (Fig. 3)

**Female:** 249 (range of 10 specimens 199-271) long; 48 wide; 38 thick; wormlike, brown in colour. Gnathosoma 20 long; antapical seta absent. Chelicerae 17 long, normal. Prodorsal shield subtriangular 22 (20-28) long, 48 wide with 4 long lobe over gnathosoma anteriorly rounded, proximally with oval longitudinal cell and transversal wavy line distally; dorsal tubercles 8 ahead of rear shield margin 25 apart; scapular setae 3 long directed laterally. Leg I 18 long; tibia 3 long with seta 19 long; tarsus 8 long, solenidion 4 long knobbed, empodium 4 long 5-rayed. Leg II 15 long; tibia 3 long; tarsus 5 long, solenidion 11 long knobbed, empodium 4 long; coxae smooth. First coxae touched not forming sternum. First forecoxal tubercles 4 apart, setae 5 long; second tubercles and setae missing, hindcoxal tubercles 16 apart, seta 20 long. Opisthosoma of 23(22-24) smooth evenly arched rings. Some dorsal annuli with longitudinal striae; on ventral annuli bands of broken mini -lines. Lateral (cE) setae 5 long on ventral annulus 4; first ventral (d) and second ventral (e) setae missing; third (f) ventral setae 16 long on 5th annulus from the rear. Accessory setae missing. Female genitalia appressed to coxae 14 long and 18 wide; coverflap smooth; genital (3a) setae 9 long, tubercles 7 apart.

**Male:** 223 long; prodorsal shield 22 long; opisthosoma of 23 rings; genitalia 17 wide; genital (3a) setae 8 long, tubercles 8 apart.

**Host Plant:** *Casearia graviicofolia* Vent. (Flacourtiaeae).

**Relation to Host Plant:** vagrant on lower leaf surface.

**Type Material:** holotype female collected on October 15, 1998, by the second author in Amphor Siracha, Chon Buri Province (sample 1003). Paratypes: 76 females.

**Epitrimerus combreti** n. sp. (Fig. 4)

**Female:** 130 (range of 10 specimens 116-138) long; 55 wide; 50 thick; spindleform, yellow in colour. Gnathosoma 24 long; antapical seta 10 long. Chelicerae 20 long, normal. Prodorsal shield semicircular 35 (34-44) long, 55 wide with 8 long broad, anteriorly rounded lobe over gnathosoma, distally with broken admedian line; dorsal tubercles 8 ahead of rear shield margin 17 apart; scapular setae 3 long directed centrally. Leg I 28 long; tibia 10 long with seta 4 long; tarsus 8 long, solenidion 8 long knobbed, empodium...
5 long 4-rayed. Leg II 26 long; tibia 7 long; tarsus 6 long, solenidion 7 long knobbed, empodium 5 long; coxae smooth. Sternum 8 long. First forecoxal tubercles 10 apart, setae 5 long; second tubercles 8 apart setae 28 long, hindcoxal tubercles 18 apart, seta 29 long. Opisthosoma of 29(28-31) smooth dorsal annuli and 68 ventral annuli. Dorsal annuli forming three low longitudinal ridges, central ridge made of 20 annuli. Lateral (c) setae 33 long on ventral annulus 10; first ventral (d) setae 40 long on ventral annulus 28; second ventral (e) setae 2 long on ventral annulus 44; third (f) ventral setae 23 long on 6th annulus from the rear. Accessory setae missing. Female genitalia between ventral annuli 8 and 11, 14 long and 24 wide; coverflap with granules: genital (3a) setae 12 long, tubercles 11 apart.

**MALE:** 116 long; prodorsal shield 36 long; opisthosoma of 29 dorsal and 59 ventral annuli; genitalia 14 wide; genital (3a) setae 8 long, tubercles 10 apart.

**HOST PLANT:** *Combretum quadrangulare* (Combretaceae)(medicinal plant).

**RELATION TO HOST PLANT:** vagrant on lower leaf surface.

**TYPE MATERIAL:** holotype female collected on April 17, 1998, by the second author in Amphor Muang, Nakhon Pathom Province (sample 762). Paratypes: 37 females.

This new species is close to *Epitricherus trilobus* (Nai.), 1891, but it can be distinguished by the pattern of shield and epigynium and host plant family. In *E. trilobus* prodorsal shield with admedian and submedian lines; epigynium with longitudinal striae; host plant family Capriliaceae. In the new species shield only with admedian lines distally; epigynium with granules and host plant family Combretaceae.

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