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THREE NEW ERIOPHYID SPECIES (ACARI: ERIOPHYOIDEA) FROM NORTH BENGAL, INDIA.

BY R.K. PANDIT & S. CHAKRABARTI (Accepted September 2007)

NEW SPECIES ERIOPHYIDS ACARI NORTH BENGAL

SUMMARY: Three new species of eriophyids collected from North Bengal districts, India are described and figured: Neorhynacus lakoochii sp. n. infesting Artocarpus lakoocha; Cosetacus prostetii sp. n. infesting Dipterocanthus prostetus and Tegolophus parviflorii sp. n. infesting Lagerstroemia parviflora.

INTRODUCTION

Surveys conducted for eriophyid mites in Sub-himalaya West Bengal during October and November 1994-1995 yielded three new species, one each under the subfamily Rhyncaphytoptinae, Cecido­phyinae and Phyllocoptinae. These new species are described, figured and their relationship with related species are described in this paper. The nature of damages to the host plant by these mites are also mentioned. All measurements are expressed in micrometers (\( \mu m \)). For females, each measurement of the holotype followed by the corresponding ranges for the paratypes. All the slides bearing the type material are presently deposited in the collection of the Biosystematics Research Unit, Department of Zoology, University of Kalyani, Kalyani 741 235, India.

Neorhynacus lakoochii sp. nov.
(Figs. 1-7)

FEMALE: Body spindle shaped, robust and chelicerae large, set at right angle to the cephalothorax, brownish in colour, 182.0 (166.1-182.5) long, 29.8 (29.8-37.3) wide. Gnathosoma 46.6 (42.5-46.6) long, shortly curved down; dorsal pedipalp genual seta 9 long. Prodorsal shield 29.8 (28.8-37.3) long, 60.6 (59.7-65.3) wide; suboval; anterior lobe lacking; shield design represent a network of cells, median and admedian line complete, a tier of 14 cells present extending along anterolateral prodorsal shield margin; 8 cells occur on the middle shield and 6 cells present on rear shield. Prodorsal scapular tubercles ahead of rear prodorsal shield margin, prodorsal scapular seta short directing up. Leg I from the trochanter base 35.4 (32.6-37.3) long; femur 14 (9-14) long, basiventral femoral seta absent; genu 3.7 (3.7-4.6) long, with antaxial genual seta 37.3 (25.0-37.3) long; tibia 4.6 (3.7-4.6) long, without seta; tarsus 9.3 (9.3-11.0) long, axial fastigial tarsal seta 9.3 (9.3-11.0) long and axial fastigial tarsal seta...
FIGS. 1-7. Neorhynacus lakoochii sp. nov.; 1.—lateral view of body; 2.—dorsal view of prodorsal shield; 3.—ventral view of coxogenital region; 4.—apodeme; 5.—Leg I; 6.—Leg II; 7.—Tarsal empodium.

22.4 (21.4-22.4) long and paraxial unguinal seta short; tarsal solenidion 7.4 (7.4-9.3) long, other characters as in Leg I. Coxal plates 1 contiguous with distinct prosternal apodeme line; 1b tubercles and seta present at about middle of coxal plates 1, 1a tubercles at base of coxal plates 1, a little above the line joining the 2a tubercles; coxal plates ornamented with small lines.

Opisthosoma with 65 (62-65) non microtuberculate dorsal annuli and 73 (72-85) microtuberculate ventral annuli; microtubercules more or less round and located on the ventral annuli. Seta c2 absent; seta d 53 (42-56) long on ventral annulus 25 (25-31); seta e 6.5 (5.6-11.2) long on ventral annulus 44 (44-48); seta f 21.4 (18.2-25.0) long on ventral annulus 9 (7-10) from rear end; seta h1 absent; seta h2 39.2 (37.3-40.0) long. Genitalia 19.6 (18.6-21.0) long, 28 (26-30) wide; genital coverflap smooth, seta 3a 6.5 (6.3-9.3) long.

MALE: Unknown.


RELATION TO HOST: The species is found as simple leaf vagrant on ventral surface among hairs, without causing any symptom of injury.

REMARKS: Mohanasundaram (1981) described the genus Neorhynacus with N. rajendri sp. nov. as the type from Walayar forest, Tamil Nadu, India. Ghosh & Chakrabarti (1982) described second species N. combrestis under this genus. N. lakoochii sp. nov. is the third species under the genus. N. lakoochii sp. n. differs from the above two species in having non
Cosetacus prosteti sp. nov.
(Figs. 8-14)

FEMALE: Body 121.6 (120.0-132.0) long and 48.6 (46.2-52.0) wide; worm like, white in colour. Gnathosoma short 18.6 (16.8-18.6) with dorsal pedipalp genua seta 4-5 long. Prodorsal shield suboval, 25.2 (21.0-25.2) long and 37.3 (33.6-37.3) wide; prodorsal shield design obscure; median and admedian line faint; prodorsal scapular tubercles on rear shield margin, 18.6 (18.6-20.0) apart, prodorsal scapular seta 26.2 (26.0-28.0) long; directing divergently rear.

Leg I 23 (22.4-24.0) long from trochanter base; femur 8.4 (8.4-10.0) long with basiventral femoral seta 5.6 (4.0-5.6) long; genu 3.7 (2.8-3.7) long, antaxial genual seta 17.7 (17.7-18.6) long; tibia 4.6 (4.6-5.6) long, paraxial tibial seta absent, tarsus 7.4 (7.6-8.0) long with paraxial and antaxial festigal tarsal setae, each 21.5 (20.0-22.0) long; tarsal solenidion 6.5 (6.5-7.0) long; empodial featherclaw simple, 4-rayed. Leg II 20.5 (20.5-21.4) long from trochanter base; antaxial genual seta 10.2 (9.3-11.0) long, tarsal solenidian simple longer than leg I 7.4 (6.5-7.4) long, other characters as in leg I. Coxal plates 1 fused with clear prosternal apodeme; coxal area smooth. 1b tubercles placed at the level of coxal plates I approximation; 1a tubercles set well ahead of line between the 2a tubercles.

Opisthosoma with narrow completely microtuberculated dorsal and ventral annuli which are approximately equal dorsoventrally, 74 (60-74) in number;

microtuberculated dorsal annuli, distinct prodorsal apodeme and the details of shield structure.

ETYMOLOGY: The name lakoochii is from the specific designation of the host plant Atocarpus lakoocha.
c2 seta 18.6 (17.0-20.2) long on ventral annulus 12(10-12); seta d 32.6 (32.6-37.3) long on ventral annulus 26 (22-27); seta e 9.3 (9.3-11.2) long on ventral annulus 44 (36-44); seta f 16.8 (14.0-18.6) long on ventral annulus 6(6-7) from rear; seta h2 42 (42.0-46.5) long; seta h1 7.4 (6.5-9.3) long. Genitalia more or less appressed to the coxal plates II, 9.8 (9.3-11.2) long and 20.5 (18.6-22.0) wide; seta 3a 6.5 (6.5-7.3) long; genital coverflap with 10 (10-12) longitudinal lines.

MALE: Unknown.


RELATION TO HOST: This mite inhabits within the erinum of leaves. During heavy infestation white colour erinea developed on both leaf surfaces which result distortion of leaves and apical buds.

REMARKS: So far, 3 species are known under the genus Cosetacus (Keifer, 1966b). C. camellae (Keifer, 1945) from Santamaria, California, USA. and two species viz. C. citrifolis Das & Chakrabarti, 1985 from Jamtara, Santalparaganas, Bihar and C. eupatori Chakrabarti & Pandit, 1997 from Maynaguri, Jalpaiguri, West Bengal, India. C. prostetii sp. nov. is distinct from the above species by the presence of seta h1, genital coverflap with single rank of the above 10-14 longitudinal scoring and entire prodorsal shield structure.

ETYMOLOGY: The name Prostetii is from the specific designation of the host plant Dipterocanthus prostetius.

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Tegolophus parviflorii sp. nov.
(Figs. 15-22)

FEMALE: Body 150 (145-155) long, 60 (60-65) wide; worm like, fusiform, yellowish in colour. Gnathosoma 14 (13-15) long, curved down; dorsal pedipalp genual seta 4.6 (4.6-6.0) long. Prodorsal shield 50 (50-55) long, 72 (72-75) wide, broadly lobe infront; median line obliterete, oblique admedian line present on 0.2 part of posterior prodorsal shield; submedian line simuate, present on 0.75 part of rear margin of prodorsal shield; prodorsal scapular tubercules located at the rear margin, 30 (28-33) apart; prodorsal scapular seta 9 (8-9) long, directed straight back. Leg I 30 (29-32) long from base of trochanter; femur 10 (9-10) long, basiventral femoral seta 10 (9-10) long; genu 3.0 (2.5-3.0) long with antaxial genual seta 35 (33-35) long; tibia 4 (4-5) long, paraxial tibial seta 8 (7-8) long; tarsus 4 (4-5) long, paraxial fastigial tarsal seta 20 (16-20) long; tarsal solenidion 6 (6-9) long, distinctly knobbed; empodial featherclaw 4-rayed. Leg II from trochanter base 25 (24-26) long; other characters as in leg I. Coxal plates contiguous with distinct prosternal apodeme; coxal surface smooth; 1b tubercles placed below the anterior coxal approximation, 1a tubercles ahead of the level of 2a tubercles.

Opisthosoma with 21 (20-23) smooth dorsal annuli and 45 (43-50) microtuberculated ventral annuli, three ridges, one middorsal and other two subdorsal present; seta c2 25 (23-26) long, on ventral annulus 5 (5-7); seta d 23 (22-25) long, on ventral annulus 15 (14-15); seta e 10 (9-11) long, on ventral annulus 31 (30-32); seta f 15 (14-15) long on ventral annulus 6 (6-7) from rear end; seta h2 50 (40-52) long; seta h1 absent. Genitalia 19 (18-20) long and 24 (22-25) wide, female genital coverflap with 15 (14-15) longitudinal scoring, seta 3a 9 (9-11) long.

MALE: Unknown.

HOLOTYPE: Female (marked), on slide (no. 1256/67/1995); India: West Bengal: Darjeeling, RongTong, 15.x.1995 from Lagerstroemia parviflora (Lythraceae), coll. R. K. PANDIT. Paratypes: 6 Females on slide bearing holotype and 15 females on 2 slides (nos. 1257-1258/6711995); collection data as in holotype.

RELATION TO HOST: The mites are vagrant on lower surface of leaves. No apparent damage symptoms on host plant was observed.

REMARKS: Genus Tegolophus Keifer 1961 contains 42 species including 18 from India (AMRINE JR et al. 1994). Tegolophus parviflorii sp. n. in having broad dorsal annuli and narrow ventral annuli, 4-rayed
empodial featherclaw and absence of microtubercles on dorsal annuli, comes close to *T. hassani* Keifer, 1959 and *T. indica* Chakrabarti & Mondal 1979. The present new species differs from above two species in having entire prodorsal shield structure, smooth coxal plates and heart shape structure of female genital coverflap.

**ETYMOLOGY:** The name *parviflorii* is from the specific designation of the host plant *Lagerstroemia parviflora*.

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