

THE GENUS *NIHELIA* (ACARINA, CHEYLETIDAE)

BY

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Summary

Nihelia squamosa n. sp. is described and figured from a squirrel, *Menetes* sp. (Sciuridae), from Thailand. A key to the species of *Nihelia* is given. New synonymy: *Hemicheyletus* Lawrence, 1961 nec 1954 equals *Nihelia* Domrow and Baker, 1960.

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Nihelia is one of the cheyletid genera whose members are all ectoparasites of vertebrates, in this case, small mammals. Three species have already been described (LAWRENCE, 1948, 1954, 1956, 1961; DOMROW and BAKER, 1960), while a fourth species is described below from a Thai squirrel.

Genus *NIHELIA* Domrow and Baker.

Hemicheyletus LAWRENCE, 1954, *Ann. Natal Mus.* 13 (1) : 74. Unavailable under Article 13 (b). Type species not designated.

Nihelia DOMROW and BAKER, 1960, *Stud. Inst. Med. Res., Malaya* 29 : 194. Type species by monotypy *N. calcarata* DOMROW and BAKER, 1960, *loc. cit.*, p. 194.

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Acarologia, t. V, fasc. 2, 1963.

Hemicheyletus LAWRENCE, 1961, *Publ. S. Afr. Inst. Med. Res.* 9 : 113. Type species by original designation *Cheletiella curvidens* LAWRENCE, 1948, *Parasitology* 39 : 40. *New synonymy*.

Key to species of *Nihelia* Domrow and Baker

1. Females 2
Males 5
2. With ten dorsal setae squamose..... *squamosa* n. sp.
With all dorsal setae filiform..... 3
3. Terminal segment of palpus with several fingerlike teeth ; second dorsal shield with twelve setae. From lemur..... *lemuricola* (Lawrence)
Terminal segment of palpus with strong claw ; second dorsal shield with sixteen setae. From mongoose..... 4
4. Ventral opisthosomal plate present. From *Herpestes*, South Africa.....
curvidens (Lawrence)
Ventral opisthosomal plate absent. From *Herpestes*, Thailand.....
calcarata Domrow and Baker
5. Genu IV with strong ventral spur ; without strongly branched seta in anterolateral corners of first dorsal shield..... *lemuricola* (Lawrence)
Genu IV without ventral spur ; with strongly branched seta in anterolateral corners of first dorsal shield..... 6
6. Branched anterolateral seta on first dorsal shield borne on distinct projection.....
curvidens (Lawrence)
Branched anterolateral seta on first dorsal shield not borne on distinct projection...
calcarata Domrow and Baker

NIHELIA LEMURICOLA (Lawrence), n. comb.

Cheletiella lemuricola LAWRENCE, 1948, *Parasitology* 39 : 39.

Hemicheyletus lemuricola, LAWRENCE, 1954, *Ann. Natal Mus.* 13 (1) : 74.

Hemicheyletus lemuricola, LAWRENCE, 1961, *Publ. S. Afr. Inst. Med. Res.* 9 : 114.

From a lemur, *Otolemur crassicaudatus garnetti* (= *Galago garnetti*), Natal, South Africa.

NIHELIA CURVIDENS (Lawrence), n. comb.

Cheletiella curvidens LAWRENCE, 1948, *Parasitology* 39 : 40.

Hemicheyletus curvidens, LAWRENCE, 1954, *Ann. Natal Mus.* 13 (1) : 74.

Hemicheyletus curvidens, LAWRENCE, 1956, *Ann. Natal Mus.* 13 (3) : 338.

Hemicheyletus curvidens, LAWRENCE, 1961, *Publ. S. Afr. Inst. Med. Res.* 9 : 114.

From a mongoose, *Herpestes sanguineus punctulatus* (= *Myonax cauri punctulatus*), Natal, South Africa. Also recorded from *H. s. sanguineus*, Transvaal.

NIHELIA CALCARATA DOMROW and Baker.

Nihelia calcarata DOMROW and BAKER, 1960, *Stud. Inst. Med. Res., Malaya* 29 : 194.

From a mongoose, *Herpestes* sp., Thailand.

This species is very similar to *N. curvidens* (Lawrence), also from a mongoose, but is separated as in the key above. Dr. LAWRENCE agrees.

***Nihelia squamosa*, n. sp.**

Figs. 1, 2.

Type material. Holotype female, U. S. National Museum No. 2854, collected from a squirrel, *Menetes* sp. B 17719 (Sciuridae), Pang Nam Un, a village in the Bun Yun district, Nan province, 7 kilometers east of the Phrae-Nan border, between Ban Rong Kwang and Ban Klang Wiang, Thailand, January 1, 1953, H. G. DEIGMAN.

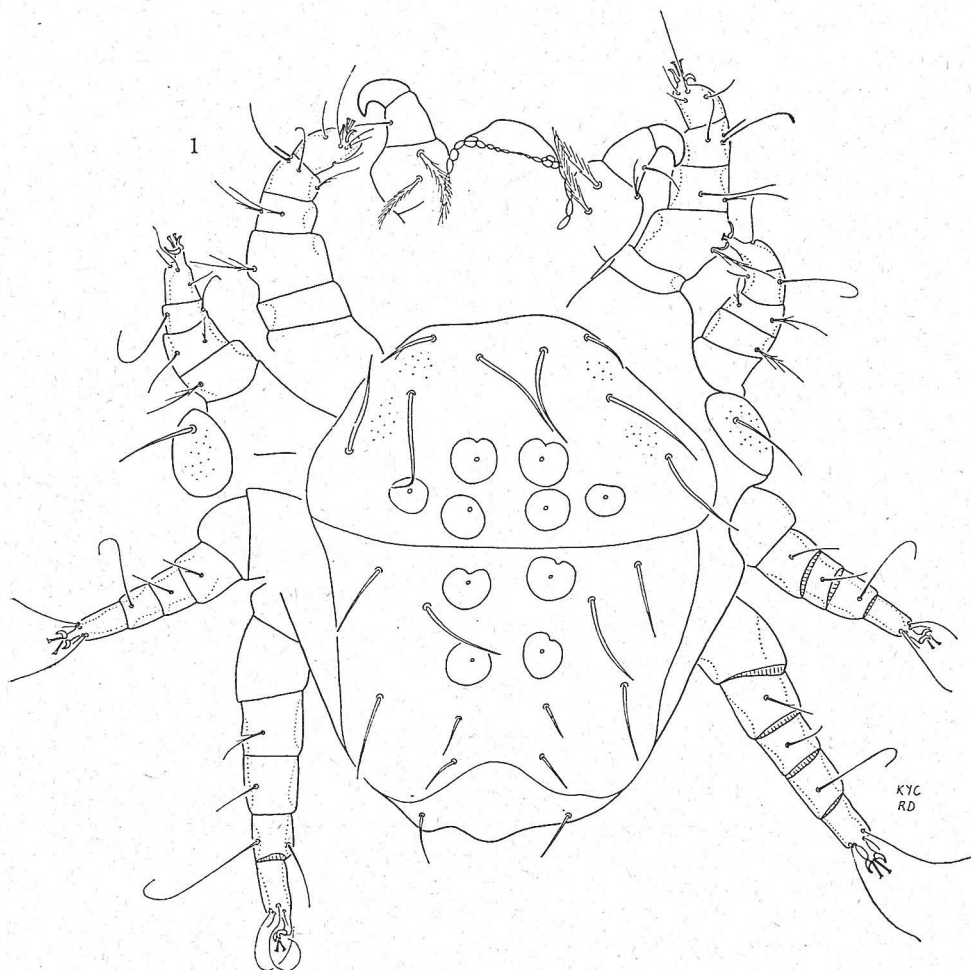


FIG. 1. — *Nihelia squamosa*, n. sp. Dorsum of female.

Diagnosis. *Nihelia squamosa* may be immediately recognized by its peculiar squamose dorsal setae, a character present in none of the other known species.

Female. Body wall fractured anterolaterally, but idiosoma broadly oval, 256 μ long from anterior margin of first dorsal shield to end of body. First dorsal shield

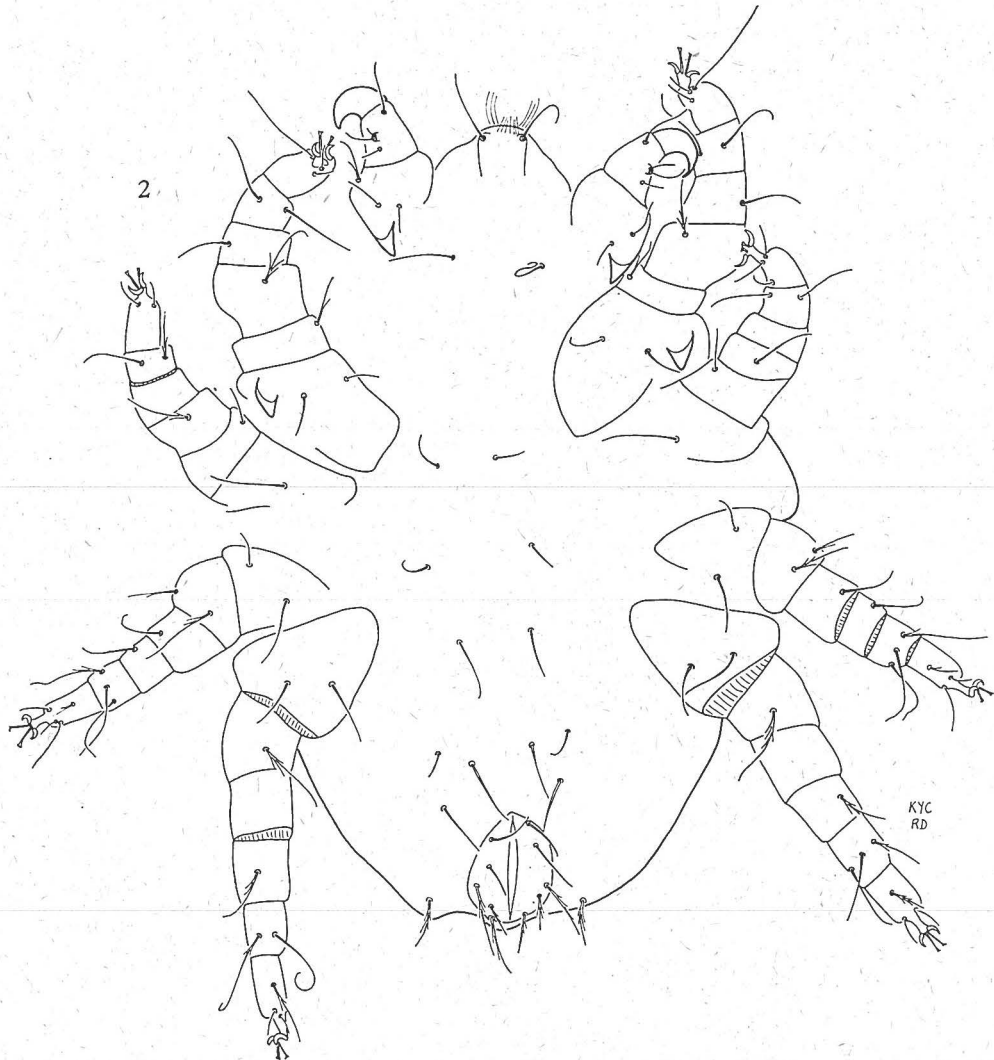


FIG. 2. — *Nihelia squamosa*, n. sp. Venter of female.

almost twice as wide as deep, with six longer and two shorter filiform setae anterolaterally, and six squamose setae posteriorly. Second dorsal shield slightly wider than long, excavate posteriorly; with six longer and four shorter filiform setae posterolaterally, and four squamose setae anteriorly. A platelet bearing a single

filiform seta is present on either side of the first dorsal shield. Terminal body cuticle with two filiform setae.

Venter with six filiform intercoxal setae. Anus flanked anteriorly by four longer and two shorter filiform setae, and posteriorly by two branched setae. Anus with ten setae of irregular length, the anterior ones filiform, the posterior branched.

Gnathosoma stout; ventral surface with two setae basally, and two setae and bristles apically. Lateral arms of peritremes with five to seven oval « segments, » connected by a transverse row of segments which become ever smaller medially. Palpal femur with three weak setae ventrolaterally, and two strongly branched setae dorsally; posteroventral angle of femur armed with strong retrorse spur; genu and tibia fused, with three simple setae; tarsus minute, completely obscured dorsally by preceding segment, with two simple setae; palpal claw simple, curved sharply ventrad.

All legs with five free segments, the coxae forming part of the body wall. Coxal setal formula 2.1.2.2; coxae I also having stout retrorse spur in posterodistal angle. Leg setation undistinguished except for tibiae and tarsi; tibia I with tibiala dorso-distally; all tarsi with two elongate setae dorsodistally, and two minute pretarsal setae both dorsally and ventrally. Each tarsus with two claws, and pulvillus formed of two divergent, distally expanded rods.

Male. Unknown.

REFERENCES

- DOMROW (R.) and BAKER (E. W.), 1960. — Malaysian parasites XLIV. A new genus of mites from a Thai mongoose (Acarina, Cheyletidae). *Stud. Inst. Med. Res., Malaya* 29 : 194-197.
- LAWRENCE (R. F.), 1948. — Some new pilicolous mites from South African mammals. *Parasitology* 39 : 39-42.
- LAWRENCE (R. F.), 1954. — The known African species of Cheyletidae and Pseudocheylidae (Acarina, Prostigmata). *Ann. Natal Mus.* 13 (1) : 65-77.
- LAWRENCE (R. F.), 1956. — Studies on South African fur-mites (Trombidiformes and Sarcoptiformes). *Ann. Natal Mus.* 13 (3) : 337-375.
- LAWRENCE (R. F.) (in ZUMPT (F.), ed.), 1961. — The arthropod parasites of vertebrates in Africa south of the Sahara. *Publ. S. Afr. Inst. Med. Res.* 9 : 1-457.

ADDENDUM

***Nihelia quinta*, n. sp.**

Fig. 3.

Type material. Holotype female in U.S. National Museum, Washington, collected from a tree-shrew, *Tupaia glis* B 45812, Subang, Selangor, Malaya, December 28, 1956, U.S. Army Medical Research Unit (Kuala Lumpur), commanding officer Lt. Col. Robert TRAUB MSC.

Diagnosis. *N. quinta* may be immediately recognized by its peculiar peritremes, its heavily spined gnathobase, and its minute palpi. Further, the dorsal plates bear only ten setae each. In the two parasites of mongooses (*N. curvidens* and *N. calcarata*), the dorsal setal pattern is 14 + 16. In *N. squamosa* it is 14 + 14, and in *L. lemuricola* 14 + 12.

Female. A large species, with idiosoma 560 μ long in slightly flattened specimen. First dorsal shield narrower anteriorly than posteriorly, wider than long, and bearing 10 paired setae arranged as shown. Second dorsal shield subquadrate, but with sinuous lateral and posterior margins; also with 10 paired submarginal setae, the subterminal pair being only half as strong as the remainder. All stronger setae weakly barbed along shaft.

Sternal area with six setae, two between coxae I and four between coxae III and IV. Anus preceded by six setae arranged 2.4, and flanked closely by a further five pairs. Posterolateral body cuticle with a further two pairs of setae.

Gnathosoma strongly sclerotized. Each anterolateral angle of gnathobase extended into an immense striate hook, which is curved downwardly and back. Peritremes striking, the typical "M" formation (but with greatly expanded side-arms) distinct on focussing deeply, but obscured by a second, and equally distinct, surface formation. Rostrum with two subapical setae dorsally, and two rather more proximal setae ventrally. Palpi minute, squeezed into space remaining between hooks and rostrum; segmentation indistinct, but with two strong setae dorsally. Tarsus obscured, apparently with a dentate and three or four simple setae.

Leg segmentation, setation, and ambulacra generally as in *N. squamosa*. Coxal formula 2.1.2.2. Coxae I with strong bi-lobed spur in posterodistal angle. Tibiae I with bladed seta anteroventrally.

Male. Unknown.

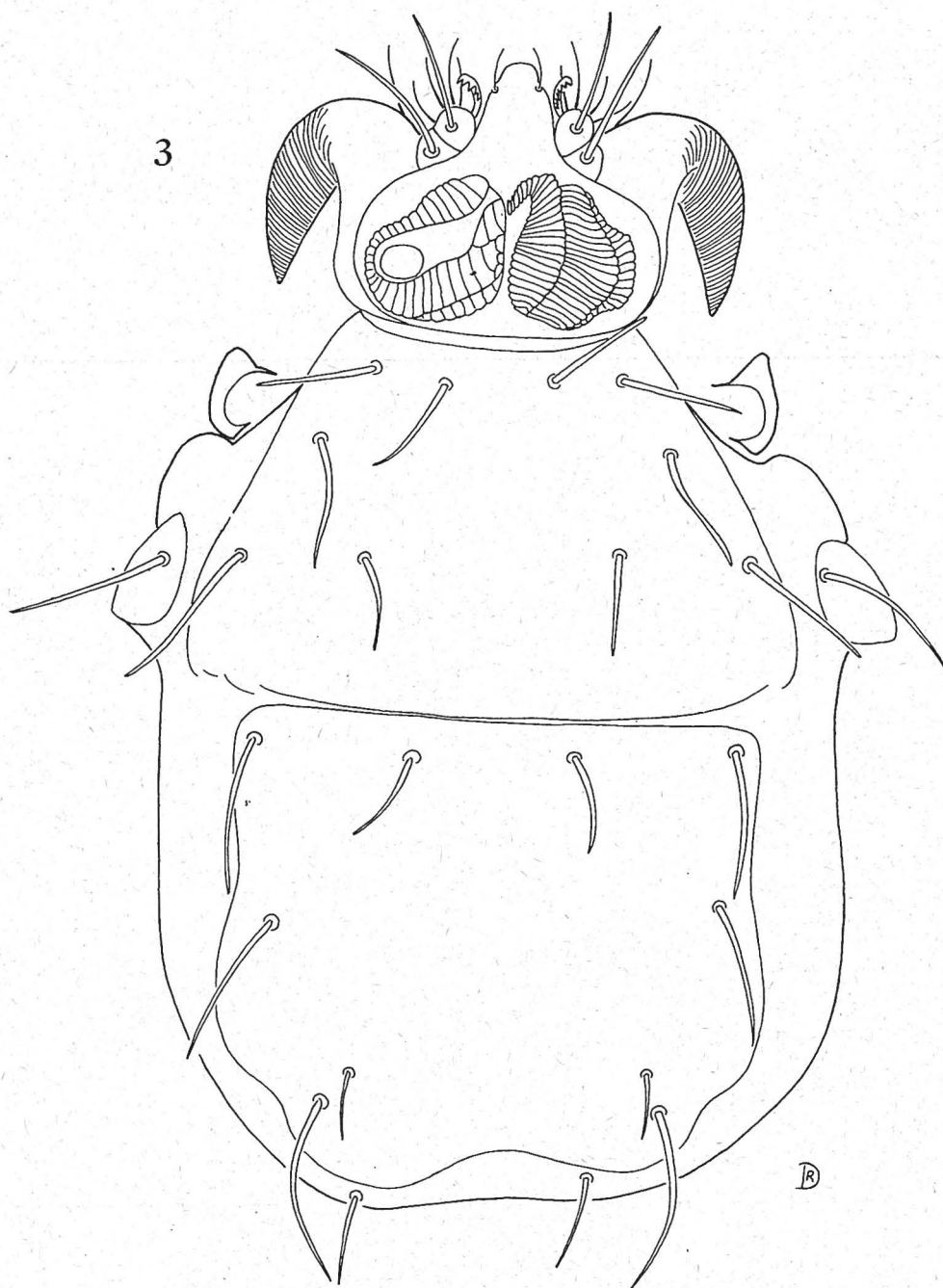


FIG. 3. — *Nihelia quinta*, n. sp. Dorsum of female.