

A NEW *KLAPPERICHES* (ACARI: ORIBATIDA: CARABODIDAE) FROM SOUTHERN FLORIDA, USA

BY R. Marcel REEVES *

TAXONOMY
ORIBATEI
FLORIDA

SUMMARY: Adults of *Klapperiches littoristicus* n. sp. are described from beach litter from southern Florida. The genus has previously been known from one species from the Dominican Republic. The new species differs by having shorter, spoon-shaped interlamellar and notogastral setae, shorter adanal setae, and a fan-shaped sensillus.

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RÉSUMÉ : Les adultes de *Klapperiches littoristicus* n. sp. sont décrits d'après des échantillons des plages du sud de la Floride. Le genre, jusqu'à présent, était connu seulement par une espèce de la République Dominicaine. Cette nouvelle espèce est d'une taille plus courte avec les poils interlamellaires et gastronomiques en forme d'une cuillère, les poils adanaux plus courts, et un sensillus en forme d'éventail.

The genus *Klapperiches* was proposed by MAHUNKA in 1978 for his new species *K. nigrosetosus* from the Dominican Republic, which remained the only species in the genus at the time of BALOGH & BALOGH's (1992) key to world genera. The genus is represented in Puerto Rico, Bahamas and southern Florida by at least seven undescribed species that appear restricted to low lying coastal habitats (REEVES, unpublished data). One of these new species is described in this paper.

Terminology and abbreviations are those developed by F. GRANDJEAN, as summarized by BALOGH & MAHUNKA (1983). All measurements are given in micrometers (μm), and taken from specimens mounted temporarily on cavity slides. Specimen measurements are as follows: total length (tip of rostrum to posterior edge of notogaster); width (widest part of notogaster). All of the above body measurements are expressed as a mean ($n=10$ for ♀, $n=8$ for ♂) followed by the range in parentheses.

Scanning electron micrographs (SEMs) were from mites stored in 70% ethyl alcohol, ultrasonically cleaned, air dried, placed onto tape on 1/2 inch (1.27 cm) aluminum stubs, and coated with 20 nm AuPd in a Jummer IV sputter coater before observation in an AMR1000 Scanning Electron Microscope.

Klapperiches littoristicus n. sp.

Fig. 1-12

Diagnostic characters

Body surface mostly tuberculate. Rostral and lamellar setae simple, arched mediad, lamellar inserted behind rostral and near inner margin of lamellae. Interlamellar setae spoon-shaped, similar to notogastral setae. Sensillus fan-shaped, minutely barbed. Ten pairs of spoon-shaped notogastral setae present. Epimeral setal formula 1-1-3-3. Genitoanal region setal formula 4-1-2-3.

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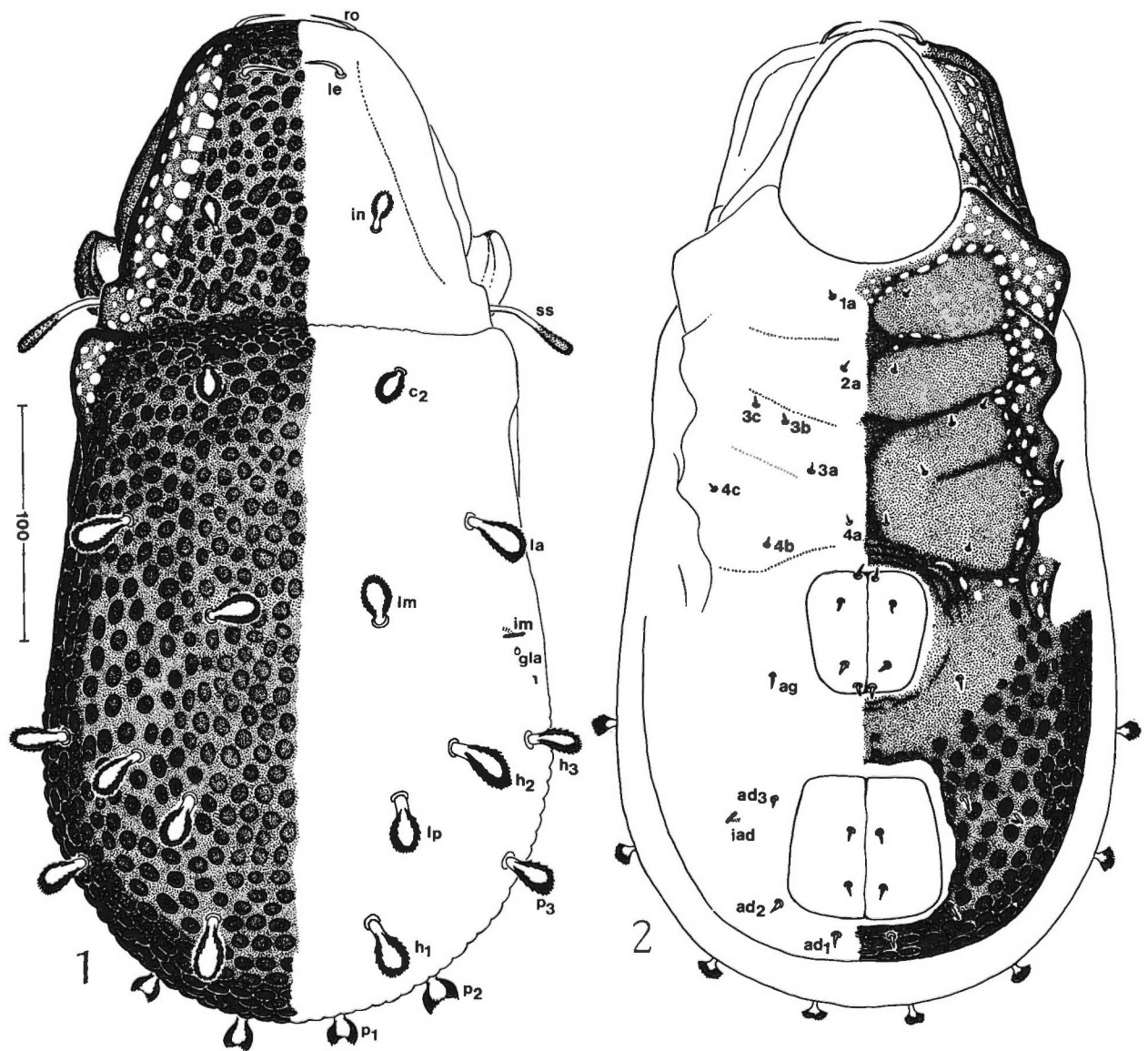


FIG. 1-2: *Klapperiches littoristicus* n. sp., adult, gnathosoma and legs removed.
1. — Dorsal aspect. 2. — Ventral aspect. See text for explanation of abbreviations. Scale bar in micrometers.

ADULT

Measurements. Total length: ♀ 404 (380-430), ♂ 338 (305-360). Width: ♀ 200 (180-210), ♂ 162 (150-175).

Integument. Brown. Body surface mostly tuberculate, tubercles on prodorsum often irregular in shape, those of notogaster close, separated by less than tubercle diameter. Dorsal surfaces of lamellae, bothridium and humeral angle of notogaster foveate-

reticulate, epimera granulate with foveate margins. Cerotegument absent.

Prodorsum (Figs. 1, 3, 5, 9). Dorsosejugal depression a narrow slit. Rostral (*ro*) and lamellar (*le*) setae simple, arched mediad, *le* inserted near inner margin of lamella. Interlamellar (*in*) setae spoon-shaped, barbed on convex surface (Fig. 10), inserted near base of and between lamellae. Sensillus (*ss*) narrowly clavate in dorsal view (Fig. 1, 11), fan-shaped in anterior view (Fig. 5), minutely barbed. Bothridial rim notched.

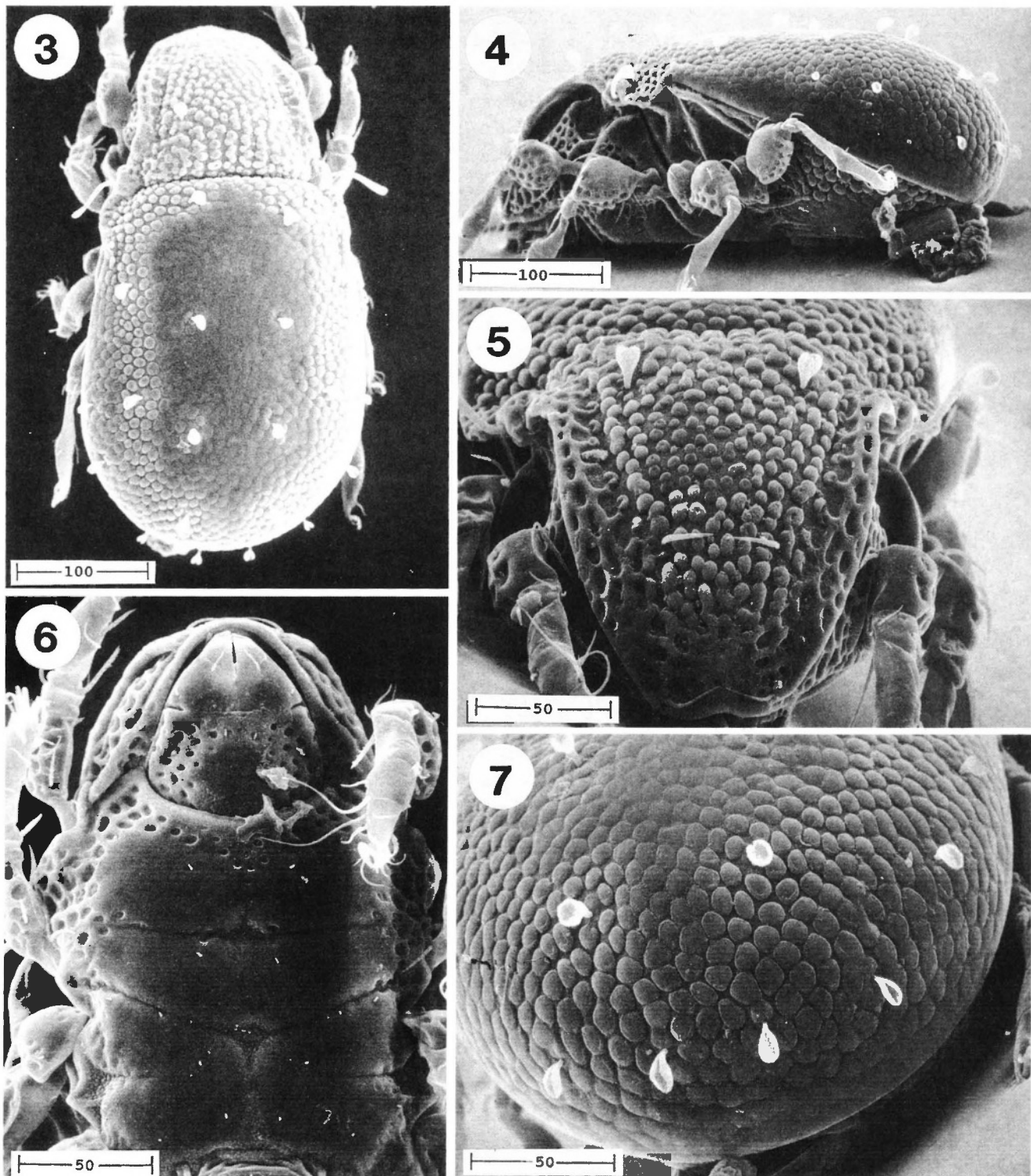


FIG. 3-7: *Klapperiches littoristicus* n. sp., adult.

3. — Dorsal aspect. 4. — Lateral aspect. 5. — Prodorsum, anterior view. 6. — Gnathosomal and epimeral regions. 7. — Notogaster, posterior view. Scale bar in micrometers.

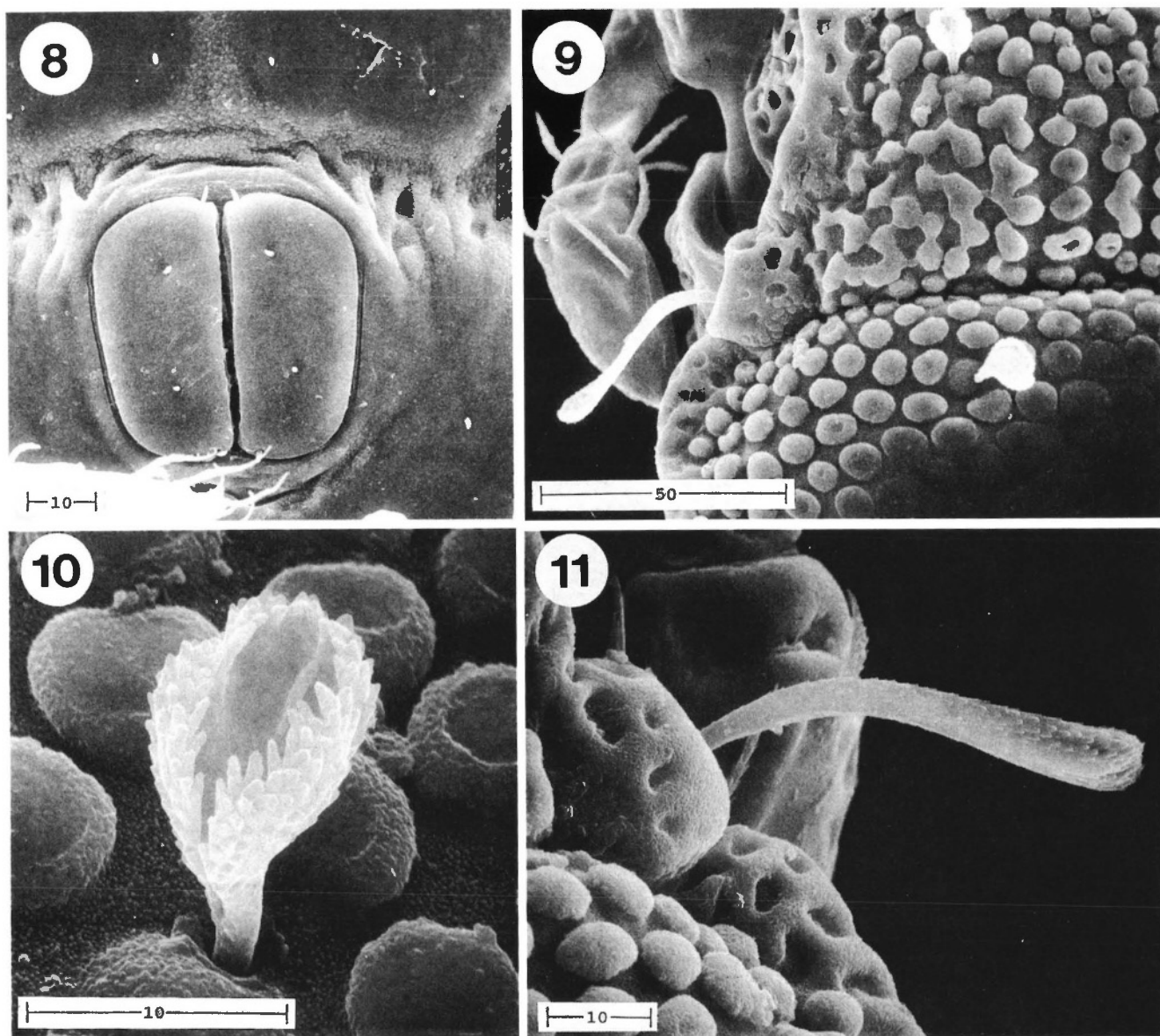


FIG. 8-11: *Klapperiches littoristicus* n. sp., adult.

8. — Genital region. 9. — Left dorsosejugal region. 10. — Notogastral seta *h2*. 11. — Sensillus. Scale bar in micrometers.

Notogaster (Figs. 1, 3, 4, 7). Surface tuberculate, tubercles close, less than tubercle diameter apart, often touching, central area tubercles often obscure. Circumgastric depression absent. Margin of notogaster in humeral region angled in lateral view. Ten pairs of short, clavate, spoon-shaped setae arranged in two rows, four pairs in medial row (*c2*, *1m*, *1p* and *h1*), two pairs in lateral row (*la* and *h2*), and four pairs (*p1*, *p2*, *p3* and *h3*) in posteromarginal position.

Lyrifissure *im* and gland *gla* in typical lateral position.

Gnathosoma. Palp setal formula 0-2-1-3-8 (+ 1 solenidion). Mentum foveate.

Ventral Surface. (Figs. 2, 6, 8) Epimera granulate with foveate margins, ventral plate mostly tuberculate, granulate near genital opening, genital and anal plates granulate. Epimeral setal formula 1-1-3-3, setae very short, simple. Genitoanal region formula



FIG. 12: Collection locations of *Klapperiches littoristicus* n. sp. in Florida, USA.

4-1-2-3, all setae very short, simple. Seta *ad3* inserted lateral to anal plate. Lyrifissure *iad* lateral to, and distant from, anal plate margin.

Lateral. Surfaces mostly granulate, foveate-reticulate on tutorium and pedotectum I.

Legs. Fovea on part of abaxial surfaces of femora I and II and trochanters and femora III and IV (Fig. 4). Femora III and IV with small ventral flange. Setation of legs I-IV (solenidia in parentheses), trochanters 1-1-2-1, femora 4-4-3-2, genua 3(1)-3(1)-1(1)-2, tibiae 4(2)-3(1)-2(1)-2(1), tarsi 15(2)-14(2)-15-12. Setae (*u*) long attenuate.

IMMATURES. Unknown.

Material examined. Holotype. Adult ♀, U.S.A.: Florida: Monroe Co., Long Key St. Rec. Area, 22 May 1990, S. B. PECK, *Sesuvium* beach litter (SBP90-49); 425 long, 210 wide. Paratypes. 5 adults (same

data as holotype); 13 adults, Florida: Collier Co., 8 mi N Naples, Wiggins Pass St. Rec. Area, 28 Dec. 1982, R. M. REEVES, beach litter; 9 adults, Florida: Monroe Co., Big Pine Key, Long Beach, 17 Dec. 1986, S. and J. PECK, washing under beach *Sesuvium*. Collection locations shown in Fig. 12.

Holotype will be deposited in Canadian National Insect Collection, Centre for Land and Biological Resources Research, Ottawa, Ontario, Canada. Paratypes will be deposited in the National Museum of Natural History, Washington, DC; Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts; Canadian National Insect Collection; and the personal collections of R. A. NORTON and the author.

This species has been collected only from beach litter in southern Florida and this habitat has provided the derivation of the specific name, "from beaches."

REMARKS

This new species keys to the monotypic genus *Klapperiches* in MAHUNKA (1986) but differs from the generic diagnosis in this paper by the interlamellar setae inserted more posteriad and the rostral and lamellar setae simple and unlike the interlamellar setae. The epimeral formula given in MAHUNKA's (1986) generic diagnosis indicates only two setae on epimera IV, but his Figure 40 (p. 96) and his key (couplet 9(8), p. 80) indicate three setae are present, as in *K. littoristicus*.

The new species differs from the type species, *K. nigrosetosus*, in that the rostral and lamellar setae are simple and unlike the interlamellar setae, the sensillus is longer and narrower, the notogastral setae are shorter and spoon-shaped, and the adanal setae are shorter and simple.

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