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Four New Arthropods from New England

Arthur Paul Jacot

DIPLOPODA

Professor of Forest Soils Harold J. Lutz of Yale University has for the past three years been studying the habits of a millipede of the genus *Fontaria* which he finds to be fairly abundant in the pine plantations of the Yale Forest at Keene, New Hampshire. As it represents a new species of the *F. coriacea*-*F. trimaculata* group, I take pleasure in naming it after its discoverer:

***Fontaria lutzi* sp. nov.**

Differs from *F. coriacea* and *F. trimaculata* in that the pair of intromittent organs apparently lack the proximal spine; proximal or bulb bristles long and numerous, overlapping across median plane; major spine long and slender, crossing its neighbor twice, proximal third with a row of bristles the length of which exceeds the diameter of the spine at that point (left figure); lateral spine short, usually straight, directed mesad. The proximal spine is actually well developed but on mesal face of shaft of penis so that it is invisible in ventral aspect, being eclipsed in part by the bulb (base of major spine) and by the long bristles of the bulb. If one of the organs be removed and the mesal aspect examined (right hand figure—most bristles omitted) the proximal spine will be seen springing from center of shaft (which, in life, is directed cephalocaudad) directed downward (upward in normal, ambulatory position of animal) and backward, and recurved so as to terminate against base of bulb; ventral face of shaft bearing one bristle (right figure, which shows lateral spine foreshortened).

The color pattern resembles that of *F. trimaculata*, that is posterior half

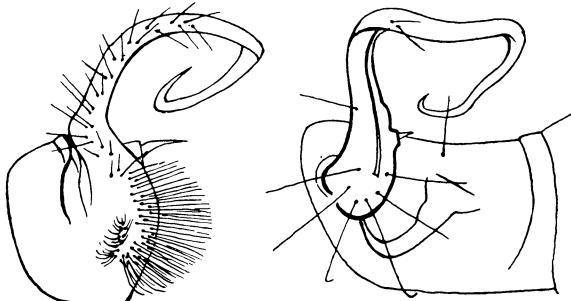


Fig. 1. *Fontaria lutzi* sp. nov., male organ, left figure ventral aspect, right figure mesal aspect when removed (most bristles omitted).

of lateral carinae and a semioval median spot on posterior edge of dorsal scutes yellow to orange or even rose-orange; hour-glass of first scute usually incomplete; anal scute yellow only along posterior two-thirds of median line.

Posterior coxae with prominent angle but no spine.

The figure on the left is as seen in normal ventral aspect when animal is killed in boiling water (which causes these organs to stand out more than when killed in alcohol). The left half of the main body is the caudal end of the shaft, the right half (bearing the long bristles) is the bulb (base of the major spine). Between them are two or three low ridges and their intervening grooves. The figure at the right is mesal aspect as seen when one organ is removed. The prow at right of base of major spine is caudal end of shaft (mesal aspect). The broad rectangular portion to right of the major spine is the shaft (mesal aspect) with the proximal spine on its mesal face. Only enough bristles are figured to give an idea of their length and direction. The two bristles on major spine are the distalmost.

Cotypes: Seven males and several females from white pine plantation of Yale Forst (compartment I), Keene, N. H. To be deposited at Boston Society of Natural History and Peabody Museum, Yale University.

This seems to represent a distinct New England species. The type locality of *F. coriacea* is Virginia, that of *F. trimaculata* is Susquehanna County, Pennsylvania. The penis of *F. coriacea* and *F. trimaculata* has been adequately figured by Wood (Myriapoda of North America) and by Williams and Hefner (The Millipedes and Centipedes of Ohio).

COLLEMBOLA

During the month of March (1937) Jack Whiteside collected an entire colony of *Formica exsectoides* from Branford, Connecticut. Among the commensals were about sixty *Lepidocyrtus violentus rolfsi* Mills 1932. I refer *L. rolfsi* to the rank of subspecies because the only invariable and substantial differential character is the tenent hair which though clean cut, characteristic, and not changeable through subsequent manipulation, does not, alone, warrant regarding the bearer as a distinct species.

There were also two specimens of a species of *Arrhopalites* which is undescribed and may be recognized as follows:

Arrhopalites whitesidei sp. nov.

Dark pigment entirely lacking (white in alcohol); no eyes discernible; dentes with nine short bristles and five spines of three calibers disposed as in the accompanying figure wherein these spines are foreshortened (being more or less erect); mucro with well developed distal cup, and the lateral row of denticles interrupted and forming two distinct series, the proximal bearing the coarser denticles; mesal row continuous but the size of the denticles of two distinct calibers, as in the figure.

Cotypes: Two specimens mounted on one slide in gum arabic medium,

to be deposited at the State Agricultural Experiment Station, New Haven, Connecticut.

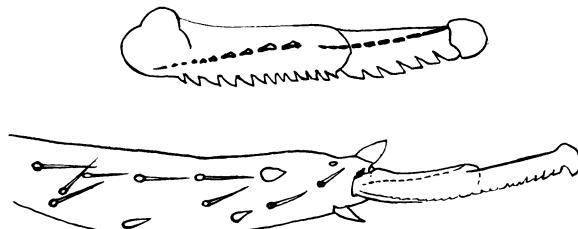


Fig. 2. *Arrhopalites whitesidei* sp. nov., mucro and dens, dorsal aspect, (upper figure, mucro only, slightly from the side).

ACARINA

The following mites from spruce litter samples taken from the Gale River Experimental Forest (between Mount Lafayette and the Ammonoosuc River), Pierce Bridge, N. H. are undescribed.

Coccocchestes gen. nov.

Related to *Speleorchesetes* (Trägårdh 1909) but with a pair of bristles on rostrum and four pairs (including the long pseudostigmatic organs) on cephalothorax; no eyes; abdomen short without distinct transverse folds, with normal number of bristles (32) which are clavate; epimera IV as in *Speleorchesetes*; distal segment of palps tapering-constricted.

Type: *C. humiculus* sp. nov.

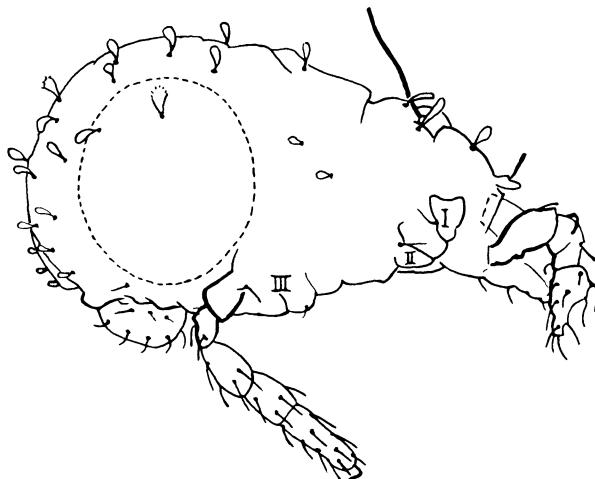


Fig. 3. *Coccocchestes humiculus* gen. nov. sp. nov., lateral aspect, legs I to III omitted; egg indicated by broken line.

Coccorchestes humiculus sp. nov.

Without pigment; rostral bristles slenderly clavate, exopseudostigmatic bristles longer, stouter, postpseudostigmatic bristles still stouter, prepseudostigmatic bristles short and broadly clavate; pseudostigmatic organs filiform, as long as cephaloprothorax; first transverse row of bristles of abdomen with lateral two bristles (each side) widely separated from mesal pair, the lateral longer and more slender than the others (foreshortened in figure); bristles of abdomen arranged in transverse rows from anterior to posterior to the number of 6, 4, 4, 6, 6, 6; paranal bristles smaller; anal bristles shorter, barely clavate (3); genital bristles five, simple; aggenital two; tarsi I with long prone spine; size minute: length (to tip of rostrum) 0.164 mm., breadth 0.74 mm.

Cotypes: Three specimens from bottom of humus (H-) layer of spruce woods, Gale River Exp. Forest, Pierce Bridge, N. H.; taken July 19th, slide 37F1-3Hb-2. To be deposited at the National Museum.

Adoristes ovatus ammonoosuci subsp. nov.

Differs from the species (Koch, fasc. 30:24) in having more approximate lamellae so that sides of cephaloprothorax are visible beyond them (laterad); rim of lamellae sharp (not thickened) forming a sharply pointed cusp; channel at base of lamellae extending some distance anteriad of insertion of lamellar bristles; interlamellar bristles short, stout; flange of shoulder of ventral plate not projecting beyond shoulders of notogaster (posteriad of pseudostigmata).

Cotypes: Eleven specimens from spruce litter, Gale River Exp. Forest, Pierce Bridge, N. H.; taken July 19th, slide 37F1-L-25. To be deposited at the National Museum.

NORTHWESTERN FOREST EXP. STATION,
NEW HAVEN, CONN.