

auteurs subséquents sont rejetés comme pour le moins inutiles; remarquons que RAAGE 1955 avait adopté le même parti en exposant ses savantes recherches sur les nervulations d'Orthoptères. SÉGUY prend à son compte la médiane antérieure de LAMEERE (1922) mais montre que cette branche ou bien un pli correspondant peut avoir subsisté en des ordres supérieurs aux Archyptérygotes.

En traitant des Coléoptères (p. 196) l'auteur dit que les élytres chez la femelle des Malacodermes (en général) sont réduits ou nuls: la généralisation est assurément excessive. En citant les femelles aptères de « certains Elatérides » ne songeait peut être-t-il pas aux Cébrionides? Ils sont aussi, il est vrai, des Elateroidea...

On trouverait d'autres imperfections dans le détail de l'ouvrage; il était presque fatal qu'il en échappe à un auteur publiant, en un temps record, sur des sujets aussi vastes que divers. S'il n'avait pas été intrépidement de l'avant, il est probable que nous eussions attendu encore longtemps la parution d'un ouvrage de ce genre en langue française, un manuel de consultation si aisée en vertu du judicieux découpage du texte et de la clarté des illustrations consacrées aux ailes les plus diverses. Ce qu'on y cherche, on ne tarde pas à le trouver et, si l'on veut aller plus loin, les index bibliographiques sont là renvoyant à une foule d'autres travaux y compris les plus récents.

F. CARPENTIER.

IXODORHYNCHINE MITE ECTOPARASITES OF SNAKES.

I. DESCRIPTIONS OF A NEW GENUS AND THREE NEW SPECIES FROM THE NEARCTIC REGION (ACARINA-MESOSTIGMATA)

by Donald E. JOHNSTON

This paper is a forerunner of a soon to be published monograph of the Ixodorhynchinae by Professor A. FAIN. Notes on biology, geographic variation, and a key to the Nearctic species will be published as part II of this study. In addition to the species treated here I have studied representatives of the genera *Scutanolaelaps* LAVOPIERRE, *Asiatolaelaps* FAIN, *Strandtibbettsia* FAIN, and *Hemilaelaps* EWING.

Explanation of the abbreviations used in the descriptions is as follows: IL=length of idiosoma; DSL=length of dorsal shield; ASL=length of anal shield; ASW=width of anal shield; GVW=width of genito-ventral shield; TarsL=length of tarsus; ST=distance between members of pair of sternal setae. Vt=ventral teleotarsal seta.

Ixodorhynchus EWING, 1923

Type species: *Ixodorhynchus liponyssoides* EWING, 1923.

Gnathosoma. Infracapitulum situated anteriorly; well sclerotized; bearing usual four pairs of ventral setae. Corniculi elongate, reaching to level of palp tibiae; harpoon-shaped, with distal barb ventral. Deuterosternal teeth single. Labrum (« epipharynx » of recent American workers in Laelaptidae) narrow, elongate (reaching to level of palp tarsus); finely spinose. Palps with five free podomeres; palp claw (« specialized seta » of recent British workers in Mesostigmata) single or distally bifurcate. Chelicerae well sclerotized, with fixed digit lacking; movable digit with three distal teeth. Tectum poorly developed; margin weakly serrate.

Idiosoma. Dorsum covered by a single shield (figs. 1, 2) with well developed lateral incisions; hypertrichy (deutonymphal). Tritosternum poorly sclerotized; with two spinose laciniae. Sternum weakly sclerotized. Metasternal setae not borne on shields. Genital shield a large, hyaline flap. Ventral shield drop shaped; well sclerotized; with usual pair of setae. Anal shield with central area unsclerotized; margins well sclerotized; bearing usual three setae. No development of endopodal, parapodal or peritremal shields except for peritremalia embracing coxae IV. Peritremes extending to level of coxae I.

Legs short, stout; each with seven podomeres. Ambulacral complex equally developed on all legs. Some dorsal setae of femora and genua of all legs elongate, spine-like. Posterior seta of coxae I and II short, blunt. Leg setae as follows: Coxae: 2-2-2-1; trochanters; 5-5-5-5; femora: 11-9-5-5; genua: 9-6-5-6; tibiae: 9-7-7-6.

Deutonymph similar to adult except for size and ventral shields.

Protonymph with dorsal shields and chaetotaxy of the laelaptoid type.

***Ixodorhynchus faini* n. sp.**

Female (holotype). IL 702 μ ; DSL 649 μ ; ASL 132 μ ; ASW 115 μ ; GVW 94 μ ; TarsL I 73 μ ; TarsL IV 66 μ ; ST I 52 μ ; ST II 47 μ ; ST III 68 μ ; ST IV 112 μ .

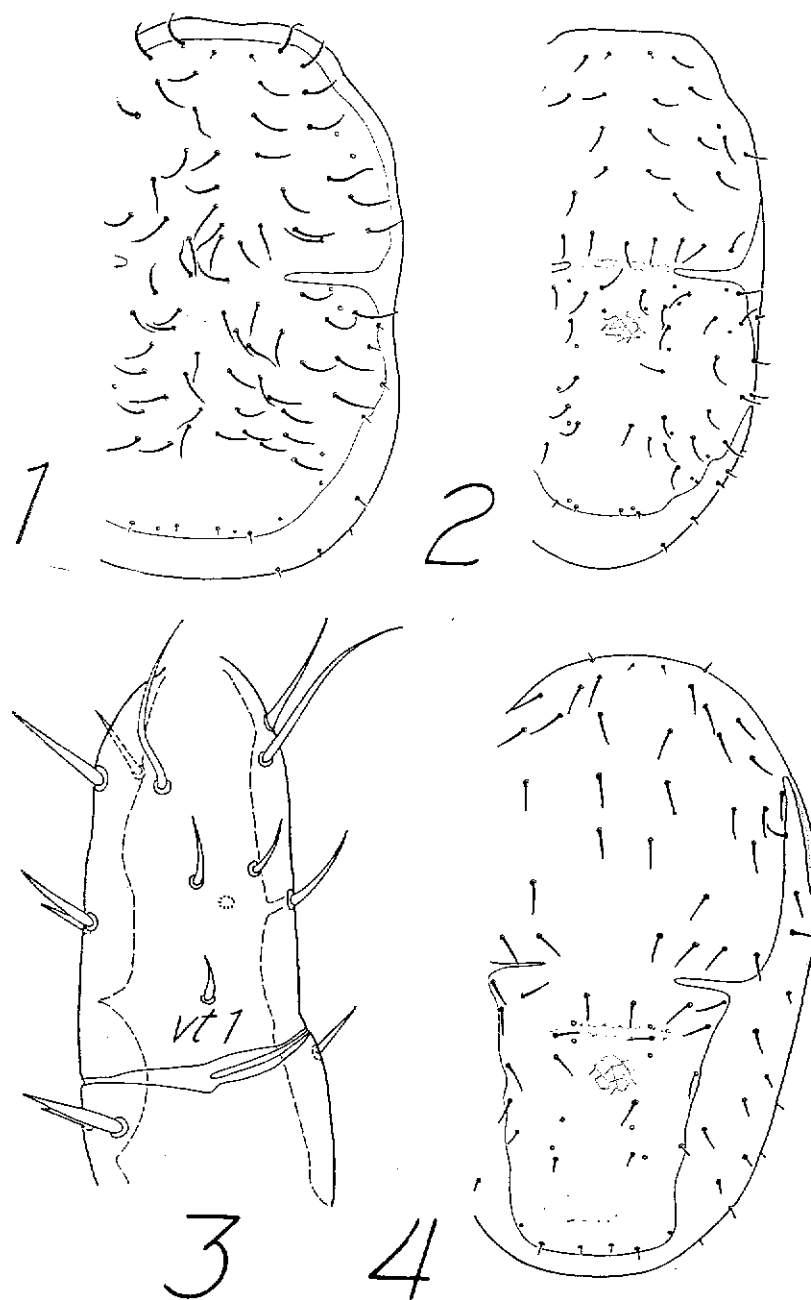
Idiosoma long, narrow. Chaetotaxy of dorsal shield as illustrated in fig. 2. Genito-ventral shield narrow, somewhat pointed (not broadly rounded as in *I. liponyssoides*). Anal shield longer than broad; without prominent lateral expansions. Tarsi II-IV with 14 setae (vt 1 is lacking; comp. fig. 3).

Holotype ex *Thamnophis sirtalis* (L.); East beach of Nature Sanctuary, Point Pelee National Park, Essex Co., Ontario, Canada. 25 June 1953. Collected by author. Deposited in United States National Museum, No. 2812. Paratypes: five additional females, same data as holotype.

This species is named for the distinguished Belgian acarologist, Dr. Alex FAIN.

***Ixodorhynchus neodelphus* n. sp.**

Female (holotype). IL 575 μ ; DSL 544 μ ; ASL 113 μ ; ASW



140 μ ; GVW 125 μ ; TarsL I 65 μ ; TarsL IV 63 μ ; ST I 55 μ ; ST II 58 μ ; ST III 70 μ ; ST IV 105 μ .

Very similar to *I. liponyssoides*. Idiosoma relatively broad. Dorsal shield similar to that of *I. liponyssoides*. Genito-ventral shield very broad (well over two-thirds the width of anal shield). Anal shield wider than long. Tarsi II-IV with vt 1 absent (comp. fig. 3).

Holotype *ex Thamnophis sirtalis* (L.); Wooster, Wayne Co., Ohio, U.S.A. 29 October 1961. Collected by author. Deposited in United States National Museum, No. 2813. Paratypes: eight additional females; data same as holotype.

Ixodorhynchoides nov. gen.

Similar to *Ixodorhynchus* EWING and *Ixobioides* FONSECA. Dorsal shield single; with lateral incisions; notogastral component narrow; truncate posteriorly. No hypertrichy. Femoral and genual dorsal setae of legs III and IV not greatly enlarged. Genual setae: 12-6-6-6. Tibia I with 11 setae. Posterior seta of coxa I larger than posterior seta of coxa II. Corniculi with small distal barb in addition to major barb. Setae of palp trochanter, femur and genu: 2-4-5.

Type species: *Ixodorhynchoides truncatus*, new species, by present designation.

Ixodorhynchoides truncatus n. sp.

Female (holotype). IL 649 μ ; DSL 617 μ ; ASL 125 μ ; ASW 127 μ ; GVW 85 μ ; TarsL I 82 μ ; TarsL IV 75 μ ; ST I 71 μ ; ST II 85 μ ; ST III 101 μ ; ST IV 136 μ .

Notocephale normal; notogaster reduced; chaetotaxy as in fig. 4. Gnathosoma similar to that of *Ixodorhynchus* but differing in presence of two barbs on corniculi and length of corniculi (reaching to distal tips of palps). Leg chaetotaxy as follows: Coxae: 2-2-2-1; trochanters: 5-5-5-5; femora 11-9-5-5; genua: 12-6-6-6; tibiae: 11-7-7-7; seta vt 1 present on tarsi II-IV.

Holotype female *ex Elaphe vulpina* (Baird et Girard); East beach of Nature Sanctuary, Point Pelee National Park, Essex Co., Ontario, Canada. 12 July 1953. Collected by author. Deposited in United States National Museum, No. 2811. Other material seen: two females, same locality and host as holotype; two females

ex Elaphe vulpina, Baraboo, Wisconsin; one female *ex Elaphe obsoleta* (Say), Crossville, Tennessee; one female *ex Elaphe obsoleta*, locality unknown (captive snake).

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