

déprimée se terminant par une petite échancrure circulaire encadrée d'angles aigus.

La pilosité varie chez la femelle, de même que la couleur qui reste cependant plus sombre. Le 6^e tergite est habituellement d'un rouge vif, mais peut rester brunâtre.

Distribution géographique :

Sud et centre de l'Europe : France méridionale (Montpellier), Espagne, Balkans, Hongrie et même Bavière (Bamberg), Nord de l'Afrique, descendant jusqu'au Sud du Maroc (Taroudant, Agadir : récoltes de N.M. Gr. Else et K. Guichard, au B.M.), et jusqu'au Sahara algérien (Berriane, Laghouat, récoltes du Prof. A. Lameere, à l'I.R.Sc.N.B.), Proche-Orient jusqu'au Pakistan (séries récoltées à Deesa et à Quetta, B.M.), Caucase (d'après Friese).

La couleur est plus claire et la pilosité tergale plus dense dans les régions subdésertiques ou désertiques qu'en Europe. En revanche nous n'avons pas pu trouver de corrélation nette entre les variantes morphologiques et la répartition, tout en notant que des séries d'une même localité sont en général identiques, ce qui laisse présumer l'existence de populations à fond génétique commun.

Biologie : M. H. Bytinski-Salz (communication personnelle) a obtenu cette espèce d'élevage de nids de *Megachile rotundata* (auct.) en Israël.

Summary

Revision of the European and near-eastern species belonging to the *afra*-group of the subgenus *Allocoelioxys* TKALCU (*Coelioxys* LATR.). New synonymy of *C. haemorrhoea* FOERSTER : *C. coturnix* PEREZ, *C. taurus* NURSE, *C. acanthopyga* ALFKEN, *C. carinatula* ALFKEN, *C. semicarinatus* ALFKEN. Another species of ALFKEN : *C. elegantula*, of which the ♂ is here described, remains valuable. A new species is described : *C. emarginatella*.

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TWO NEW SPECIES OF THE GENUS
ECHIMYTRICALGES Fain, 1970
 (Acari, Astigmata, Lobalgidae)
 FROM AMERICAN SPINY RATS
 (Echimyidae)

by A. FAIN (1), F.S. LUKOSCHUS (2) and E. MENDEZ (3)

Abstract

Two new species of genus *Echimytricalges* (Acari, Lobalgidae) are described from South American rodents of the family Echimyidae : *E. hoplomy* sp. n. from *Hoplostomus gymnurus* in Panama and *E. mesomys* sp. n. from *Mesomys* sp. probably *M. hispidus*, in Colombia, A key to the species of the genus is presented

Introduction

The family Lobalgidae FAIN, 1965, has been created for the monotypic genus *Lobalgae* FONSECA, 1954, whose unique species (*L. trouessarti*, 1954) parasitizes two genera of Bradypodidae (Edentata), *Bradypus* and *Choloepus*, in South America.

Fain (1970) described a new genus, *Echimytricalges*, represented by two species : *E. brasiliensis* from *Echimy* *brasiliensis* in Brazil, and *E. guyanensis* from *Philander philander* in French Guyana. Owing to some important differences between *Lobalgae* and *Echimytricalges*, a new subfamily, Echimytricalginae, was created for the latter.

Fain and Lukoschus (1970) described a new species *Echimytricalges surinamensis* from *Proechimys g. guyanensis* in Surinam.

- (1) Institute of Tropical Medicine, Antwerpen, Belgium.
 (2) Laboratorium voor Aquatische Oecologie, Katholieke Universiteit Nijmegen, Nederland.
 (3) Gorgas Memorial Laboratory, Apartado 6991, Panama 5, Panama.

In the present paper we describe two new species from Echi-myidae: *E. hoplomyis* from *Hoplomyis gymnurus* in Panama and *E. mesomyis* from *Mesomyis* sp. in Colombia. Included are the first drawings of *E. brasiliensis* and *E. guyanensis* and a key to the known species in the genus.

Another subfamily of Lobalgidae was recently described: Coendalinae FAIN and MENDEZ, 1979, represented by the monotypic genus *Coendalges* FAIN and MENDEZ, 1979 (type species *C. panamensis* FAIN and MENDEZ, 1979), from *Coendu rothschildi* in Panama.

Abbreviations: BM = British Museum (Nat. Hist.); FMNH: Field Museum of Natural History Chicago; IRSNB: Institut royal des Sciences naturelles de Belgique; USNM: U.S. National Museum of Natural History, Washington, D.C.

KEY TO THE GENUS *Echimytricalges*

MALES

1. Sternum fused with epimeres II. Hysteronotal plate very long reaching close to propodonotal plate, the latter without longitudinal median furrow. On *Mesomyis* sp. *mesomyis* sp. n.
Sternum or epimeres I widely separated from epimeres II. Hysteronotal plate shorter, remaining far from propodonotal plate which is either with or without longitudinal median furrow 2
2. Propodonotal plate without longitudinal median furrow, with posterior two thirds slightly convex and not fused with anterolateral plates. Cuticle of dorsal surface (outside of plates) with few irregular striations. On *Echimyis brasiliensis*
 *brasiliensis* FAIN, 1970
Propodonotal plate with longitudinal median furrow and with posterior two thirds incised laterally 3
3. Hysteronotal plate partly striated, with deep lateral incisions in its anterior third, its anterior and posterior borders excavate. On *Hoplomyis gymnurus* *hoplomyis* sp. n.
Lateral, anterior and posterior borders of hysteronotal plate very slightly incised or concave, not striated 4

4. Propodonotal plate extending to lateral surfaces of body, with lateral borders of its posterior third slightly converging backwards. On *Proechimyis guyanensis* *surinamensis* FAIN,
 LUKOSCHUS, 1970

Propodonotal plate not extending to lateral surfaces of body in the strongly sclerotized holotype (and only known specimen), lateral borders of posterior third strongly converging backwards. On *Philander philander* . *guyanensis* FAIN, 1970

FEMALES

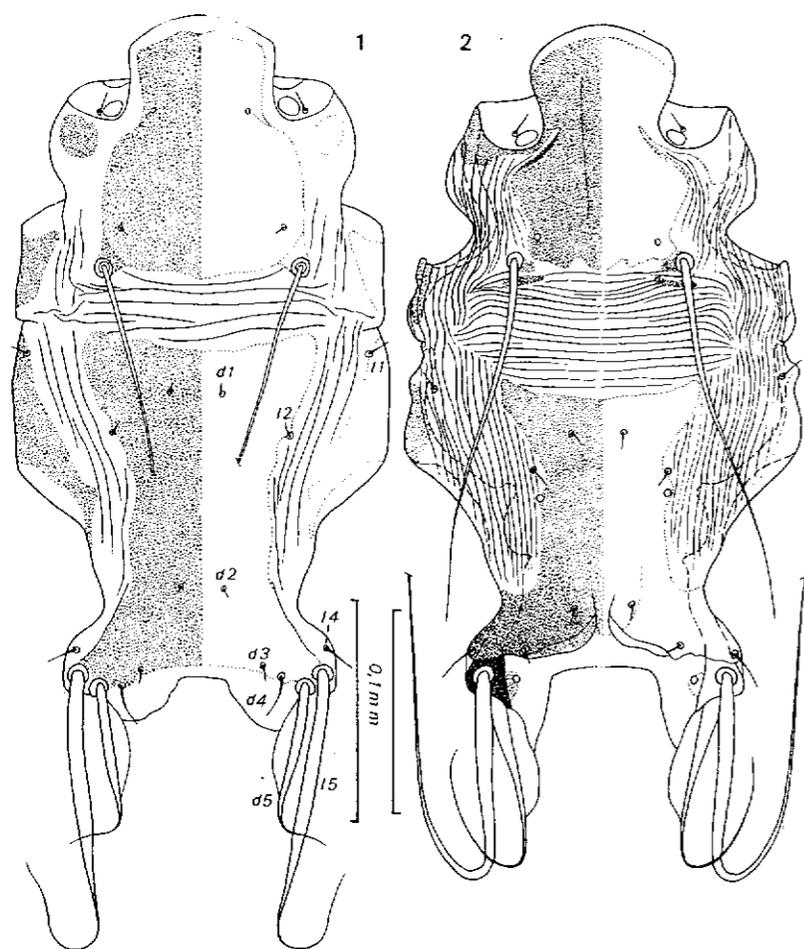
(N.B The female of *E. guyanensis* is unknown.)

1. Sternum fused with epimeres II. Antero-median hysteronotal plate as long as wide *mesomyis* sp. n.
Sternum or epimeres I widely separated from epimeres II. Anteromedian hysteronotal plate approximately three times as wide as long 2
2. Setae *sc e* situated on the propodonotal plate. Cuticular striations poorly developed dorsally and widely spaced
 *brasiliensis* FAIN, 1970
Setae *sc e* placed on small punctate plates, off the propodonotal plate. Cuticular striations on dorsum numerous 3
3. Posterior lobes of body short (18-20 μ), as wide as long, slightly divergent. Hysteronotal plate about 3 times as wide (102 μ) as its maximum length (36 μ)
 *surinamensis* FAIN & LUKOSCHUS, 1970
Posterior lobes of body longer (33 μ) than wide (26 μ), parallel or subparallel. Hysteronotal plate more than 3 times as wide (135 μ) as its maximum length (40 μ) *hoplomyis* sp. n.

1. *Echimytricalges brasiliensis* FAIN, 1970

This species was taken on *Echimyis brasiliensis* at Rio de Janeiro, Brazil. This animal (n° 5.4.16.4-5) is housed in the British Museum. The types are also deposited in this Museum.

In the female the propodonotal plate is not fused with the antero-lateral plates and bears setae *sc e*. The dorsal striations are poorly developed and widely spaced. Hysteronotal plate 45 μ long (maximum length) and 148 μ wide. Opisthonotal plates 150 μ



FIGS. 1-2

FIG. 1. — *Echimytricalges brasiliensis* Fain. Dorsal view of male.

FIG. 2. — *Echimytricalges guyanensis* Fain. Dorsal view of male.

long and 45μ wide (maximum). The ventral surface resembles the figure we have given for *E. surinamensis* (FAIN & LUKOSCHUS, 1970) but the epigynium has a straight anterior border and is longer in midline. Gnathosoma 81μ wide. Male (fig. 1) : dorsum with very few striations. Propodonotal plate without longitudinal median furrow. Hysteronotal plate long (135μ in midline), anterior border slightly concave, 105μ long.

2. *Echimytricalges guyanensis* FAIN, 1970

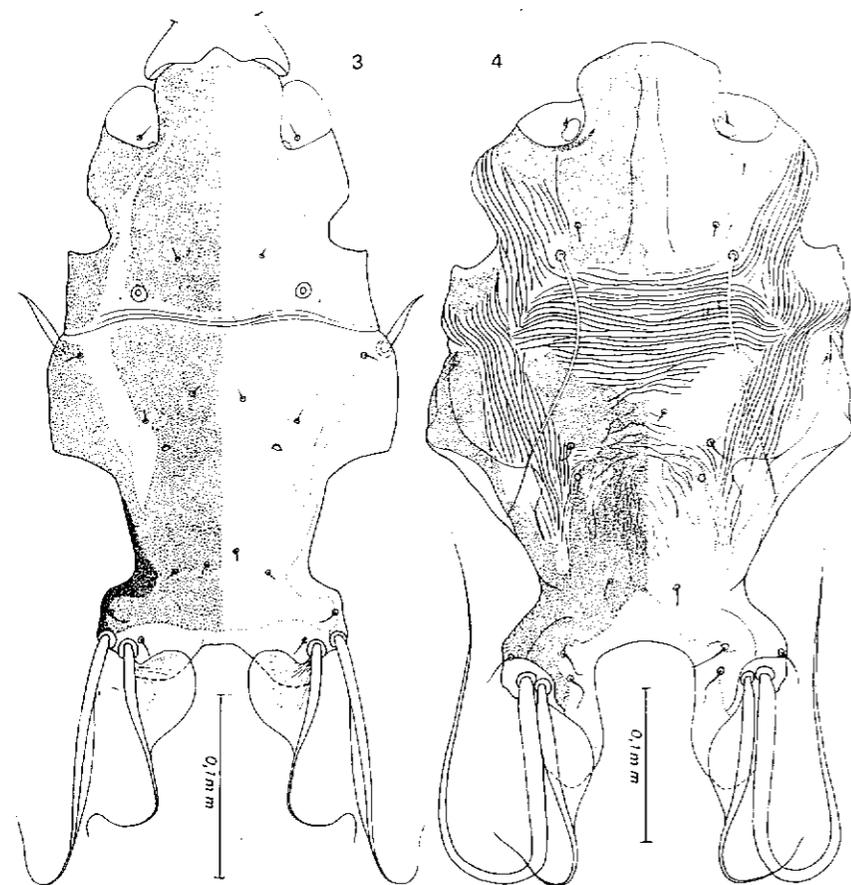
This species is known only from the holotype male. It has been collected from *Philander philander*, French Guyana. Type in IRSNB. The ventral surface resembles closely the figure we have given for the male of *E. surinamensis*. The dorsal surface differs mainly by the shape of the propodonotal plate which is more narrowed posteriorly and is not fused with anterolateral plates. We give here a figure of the dorsal surface of the holotype (fig. 2).

3. *Echimytricalges surinamensis* FAIN & LUKOSCHUS, 1970

This species was found on *Proechimys guyanensis guyanensis*, in Surinam.

4. *Echimytricalges hoplomys* sp. n.

Female : Holotype 645μ long (gnathosoma and posterior lobes included) and 270μ wide (maximum). *Dorsum* : Cuticular striations less numerous than on ventral surface. Propodonotal plate not fused with anterolateral plates and not bearing the *sc e* setae. Hysteronotal plate 135μ wide, 40μ long (maximum). Opisthonotal plates 180μ long and 58μ wide (maximum). Setae *b* very thick (13μ) and 85μ long (including the very thin flagellar apical prolongation). *Venter* : Cuticle finely striated. Posterior lobes parallel or subparallel, 33μ long, 26μ wide. Epimeres I very thick, fused at midline forming a very thick sternum ; posteriorly the epimeres become free and divergent. Epimeres II-IV free. Epigynium very thick, slightly curved, its anterior border straight at midpart.



FIGS. 3-4

FIG. 3. — *Echimytricalges mesomys* sp. n., Dorsal view of male.

FIG. 4. — *Echimytricalges hoplomys* sp. n., Dorsal view of male.

Male (fig. 4): Allotype 400 μ long at midline (gnathosoma included) and 240 μ wide (maximum) and 240 μ wide (maximum). Striations rather numerous and thick. Propodonal plate fused with anterolateral plates and not bearing setae *sc. e.* Hysteronotal plate widely separated from propodonal plate, strongly excavated along anterior, posterior and lateral borders, bearing a number of thick striations; its width along anterior border 120 μ , its length at midline, 110 μ .

Tritonymph: A specimen is 450 μ long (lobes included) and 225 μ wide. Length in 5 paratypes: 360 to 420 μ . There are 2 thick (75 μ wide) and long (60 μ) posterior lobes. Cuticle striated. *Dorsum*: propodonotum as in female but the plate is smaller. Hysterosoma with median triangular plate 88 μ long and with posterior base 81 μ wide. *Venter*: Epimeres I very thick, fused in a thick sternum. Epimeres II short; epimeres III-IV very short.

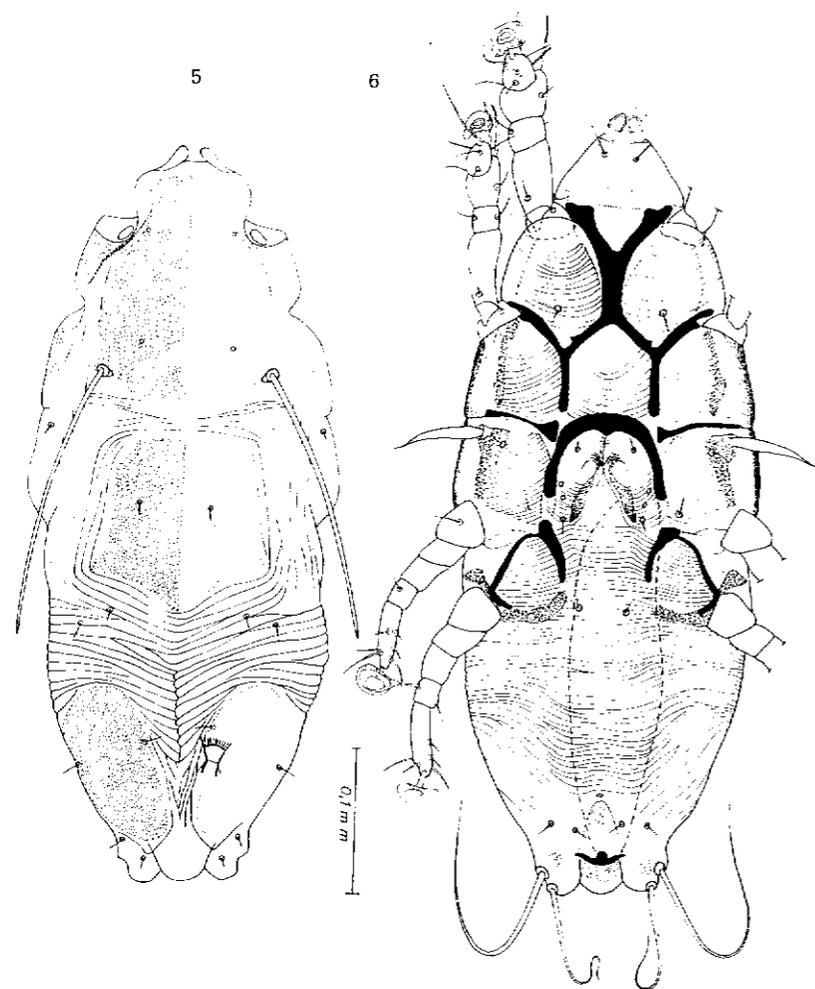
Protonymph: A specimen is 315 μ long at midline and 168 μ wide. Length in 8 paratypes: from 290 to 340 μ . *Dorsum* and *venter* as in tritonymph but with smaller plates and with only one pair of vestigial genital suckers and genital setae (instead of 2 pairs of vestigial genital suckers and 3 pairs of genital setae as in tritonymph). Lobes as in tritonymphs, but smaller.

Larva: A specimen is 270 μ long and 150 μ wide. *Dorsum* as in protonymph except that hysteronotal plate is split into 3 plates (2 anterior very small paramedian and 1 posterior large and median). Posterior border straight, without lobes.

Host and locality: From *Hoplomys gymnurus*, Mojinga Swamp; Colon Province, Panama, 9.VII.1981. Holotype and 3 female paratypes, allotype and 2 male paratypes, 10 tritonymphs, 21 protonymphs, 7 larvae, all paratypes. (Coll. E. Mendez). Types in USNM.

5. *Echimytricalges mesomys* sp. n.

Female (fig. 5-6): Holotype 570 μ long (at midline) and 228 μ wide. *Dorsum*: Cuticle striated between the punctate plates. Propodonal plate very large, not fused with antero-lateral plates and with lateral borders not incised posteriorly. Hysteronotal plate as long as wide (120 μ). Opisthonotal plates 105 μ long and 60 μ wide (maximum). Posterior lobes 25 μ long and 30 μ wide.



FIGS. 5-6

Echimytricalges mesomys sp. n.

FIG. 5. — Dorsal view of female.

FIG. 6. — Ventral view of female.

Between these lobes there is a large rounded lobe, wider (27μ) than long (21μ). *Venter*: Cuticle finely striated. Epimeres I forming a thick compact sternum; in their posterior part they become free and are fused with epimeres II. Epigynium forming a very strongly sclerotized arc. Gnathosoma very wide: maximum width 96μ .

Male (fig. 3): Allotype 370μ long, 180μ wide. *Dorsum*: Propodonal plate as in female. Hysteronotal plate very large and reaching close to propodonal plate. Posteriorly this plate is fused with lateral plates. *Venter*: Epimeres I-II as in female.

Tritonymph: There are two types of tritonymphs, one (male tritonymph) smaller, (318μ long at midline) with long lobes (33μ long), the other (female tritonymph) larger (415μ long at midline) with short lobes (15μ long). We also have tritonymphs containing either a male or a female. The first one has well marked lobes, while the second one has indistinct lobes, the latter have probably disappeared by the distension of the abdomen. In these nymphs the propodonal plate is smaller than in the adults and the hysteronotum bears a large triangular plate. The epimeres are fused in a thick sternum not fused with epimeres II.

Protonymph: There are also two types of protonymphs: one with posterior lobes (male line), the other without lobes (female line). The first is 336μ long (lobes included) and 132μ wide, the second is 370μ long (at midline) and 165μ wide. Morphologically they resemble closely the tritonymphs, except for usual characters (only one pair of genital suckers and setae).

Larva: 280μ long and 108μ wide. External morphology as in protonymph female (absence of posterior lobes) except that they lack the leg IV and that the epimeres I are separate.

Host and locality: From *Mesomys* sp., probably *Mesomys hispidus*, Rio Apaporis, Ino Goje, Colombia, Amazonas, 16.VI.1952. Rat collected by Cabrera and deposited in the Chicago Field Museum of Natural History (FMNH), Chicago, U.S.A. (n° 57242). Holotype and 8 female paratypes allotype and 7 male paratypes 5 tritonymphs, 3 protonymphs, 1 larva, all paratypes. Types in FMNH.

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LES PSOCOPTERES DU GRAND-DUCHE DE LUXEMBOURG

III. Faunistique et écologie des espèces urbaines*

par Nico SCHNEIDER**

1. Introduction

La ville constitue un écosystème caractérisé par des facteurs écologiques spécifiques. Les pierres, le béton, l'asphalte, les murs, les immeubles, les émanations des usines, le chauffage des maisons, les émissions des véhicules influent sur la température, sur les vents, sur l'humidité et sur la composition de l'air. Les conditions de vie que les êtres vivants rencontrent en ville diffèrent donc de celles qu'ils rencontrent dans d'autres écosystèmes. C'est la raison pour laquelle il nous semble intéressant de rechercher les Psocoptères qui vivent dans la ville de Luxembourg.

La ville n'est évidemment pas un espace vital homogène, mais un ensemble de biotopes bien définis groupés en espaces verts (parcs, jardins, cimetières), en espaces bleus (cours d'eau), en bâtiments et en revêtements stériles du sol (WEIDNER H., 1940; DELDIME R., 1976 et KNORR J., 1976). Dans ce travail, nous analysons surtout l'écologie des Psocoptères habitant les espaces verts de notre capitale après avoir fait l'inventaire de toutes les espèces rencontrées en ville. Notons que toutes les grandeurs indiquées (p. ex. le nombre d'individus d'une espèce capturés à un endroit précis) n'ont qu'une valeur indicative.

2. Méthodologie

2.1. Techniques

Nous sommes restés fidèles à la recherche à vue décrite dans nos travaux précédents (Schneider N., 1977 et 1979). A ces

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** Département des Sciences du Centre Universitaire du Luxembourg, Laboratoire de Biologie (Prof. F. SAUBER), Place Auguste Laurent, Luxembourg.