

TWO NEW PARASITIC MITES (ACARI, ASTIGMATA) FROM
THE ALGERIAN HEDGEHOG *AETHECHINUS ALGIRUS*,
IN SPAIN

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SUMMARY

Two new species of parasitic mites (Astigmata) are described from the Algerian Hedgehog *Aethechinus algirus*, from Spain: *Sciuropsis guevarai* sp.n. (Glycyphagidae) represented only by the hypopial stage and *Caparinia algirus* sp.n. (Psoroptidae) represented by adult forms. The systematic position of the genus *Sciuropsis* Fain, 1969 and of other genera based on hypopi is discussed.

RESUMEN

Se describen dos nuevas especies de ácaros parásitos (Astigmata) del erizo argelino *Aethechinus algirus* estudiadas en España: *Sciuropsis guevarai* sp.n. (*Glycyphagidae*) y *Caparinia algirus* sp.n. (*Psoroptidae*). La primera especie se describe en base a las particularidades de sus hipopus, mientras que la segunda está representada por las formas adultas. Asimismo, se hace una discusión de la posición sistemática del género *Sciuropsis* Fain, 1969 y de otros géneros descritos en base a sus estadios hypopiales.

We describe here two new species of parasitic mites found by the junior author on the Algerian Hedgehog *Aethechinus algirus* in Spain. One of the genus *Sciuropsis* Fain, is represen-

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ted by heteromorphic deutonymphs (hypopi) found in the hair-follicles; the other, of the genus *Caparinia* Canestrini, 1894 is represented by adults of both sexes and immatures living on the skin of the host.

The holotypes are deposited in the Institut royal des Sciences naturelles de Belgique, Bruxelles.

RESULTS AND DISCUSSION

FAMILY GLICYPHAGIDAE Berlese, 1887

SUBFAMILY CTENOGLYPHINAE Zachvatkin, 1941

Genus *Sciuroopsis* Fain, 1969

Rodentopus (*Sciuroopsis*) Fain, 1967: 14

Rodentopus (*Sciuroopsis*) Fain, 1969a: 410 (nom. nov. pro
Sciuropus Fain, 1967, nec *Sciuropus* Dejean, 1833
Coleopt.)

Sciuroopsis, Fain and Lukoschus, 1979 n. comb. (in press)

The subgenus *Rodentopus* (*Sciuroopsis*) Fain, 1969 has been created to accomodate *Rodentopus sciuri* Fain, 1965 a species represented by hypopial nymphs living in the hair-follicule of a South-African terrestrial sciurid (*Xerus inauris*).

Up to now about 15 species have been described in this genus, all from the hypopial stage except for one species (see below). The new species that we describe here is distinguished from all these species by the following characters: great length of the claws I and II (about 30 μ), very small length of leg III, presence of two separated paraanal shields and of two paramedian opisthotal shields. In all the other species of the genus the claws I-II are never longer than 24 μ , the leg III is distinctly longer, the anal shields are fused behind the anus and there is one median and perianal shield.

Systematic position of the hypopi of the genus Sciuroopsis Fain, 1969

CHMIELEWSKI (1975) recorded that *Ctenoglyphus plumiger* (Koch, 1835), the type species of *Ctenoglyphus* Berlese (1884), present an hypopial stage corresponding to the genus *Sciuroopsis*

Fain (not *Rodentopus* Fain, as mentioned by the author). CHMIELEWSKI has figured the hypopus but not the adults. In 1978, he modified this identification into *Ctenoglyphus intermedius* Canestrini, 1888, which is actually the type species of the genus *Diamesoglyphus* Zachvatkin, 1941.

This observation would suggest that all the hypopi described in the genus *Sciuroopsis*, (or in the previous subgenus *Rodentopus* (*Sciuroopsis*)), belong in fact to the genus *Diamesoglyphus*.

We think, however, that this is not true. ZACHVATKIN (1941, p. 35 of the English translation) has shown that the classification based on the hypopi does not coincide always with that based on the imagos. Our observations confirm the observations of this author.

In the genus *Dermacarus*, the life cycle was known so far only for the typical species *D. sciurinus* Koch (1841).

Recently adults of two other species could be reared from their hypopial stages, e.g. *D. ondatrae* Rupes & Whitaker (1968) and *D. hypudaei* (Koch, 1841). These two species can hardly be distinguished from their hypopial forms, however their respective adults are strongly different from each other as well as from *D. sciurinus* (see Rupes, Yunker & Wilson, 1971 and Fain & Lukoschus, 1974).

It appears therefore that in the genus *Dermacarus* closely related hypopi may correspond to different genera of adults. As a matter of fact the three species whose the life cycle is known correspond to three different genera. As *Dermacarus* contains about 30 species one may expect that other genera will be recognized among these. It is highly probable that a similar situation exists from all the other groups of pilicolous or follicular hypopi (*Rodentopus*, *Sciuroopsis*, *Apodemopus*, *Tateropus*, *Orycteroxenus*, *Xenoryctes*, *Labidophorus*, etc....). It seems therefore reasonable to maintain provisionally all the species, known only from the hypopus, in the genus in which they were originally described until their corresponding adult forms are known.

Sciuroopsis guevarai spec. nov.

This specie is known only from the hypopial stage. This species is named for Prof. Diego Guevara Pozo, the prominent Spanish parasitologist.

Hypopus (fig. 1-5): Holotype 345 μ long and 210 μ wide. In two paratypes these measurements are 336 $\mu \times$ 216 μ and 330 $\mu \times$ 205 μ . *Dorsum*: The setae *vi* are slightly longer (19-21 μ) than the setae *ve* (12-18 μ). Setae *sci* and *se* are 12-18 μ long. Hysteronotal setae thin, 15-21 μ long; the *d4* and *l4* are small spines situated on a sclerotized triangular area. *Venter*: There are 2 palposomal setae about 10 μ long. Setae *cxI* replaced by small sclerotized circles. Pregenital sclerite forked anteriorly and fused with the coxal fields III. Anus flanked by 2 sclerotized shields not fused behind the anus and remaining separated from the two dorsal shields bearing the setae *d4* and *l4*. *Legs*: Tarsi I-IV 42 μ , 45 μ , 21 μ and 15 μ (apical spine of tarsus III non included). Claws I and II 30 μ long. Leg III with an apical forked spine 15 μ long. Tarsus III with 2 setae, 200 and 120 μ long; tibia with a modified seta with 3 prongs. Tarsus IV ending in a very long seta; the modified seta of tibia IV has 4 prongs. Tarsus I with 6 setae (2 spines, 1 long simple seta, 1 short simple seta, 1 foliate seta and 1 rod like seta).

Host and locality

In the hair follicles of the Algerian hedgehog *Aethechinus algirus* from Pitiusas, Formentera Island, Spain, X. 1975 (Holotype and 2 paratypes).

FAMILY PSOROPTIDAE Canestrini, 1892

Genus *Caparinia* Canestrini, 1894

Caparinia algirus spec. nov.

We have compared this new species with specimens of *Caparinia tripilis* (Michael, 1889) collected from the typical host (*Erinaceus europaeus*) in Nederland and in Spain. Our specimens are distinguished from the species of Michael by the following characters:

In the female:

1. By the situation and the number of anal setae. In this new species the *wi* setae are absent and the *ae* setae are short and situated laterally and very close to the

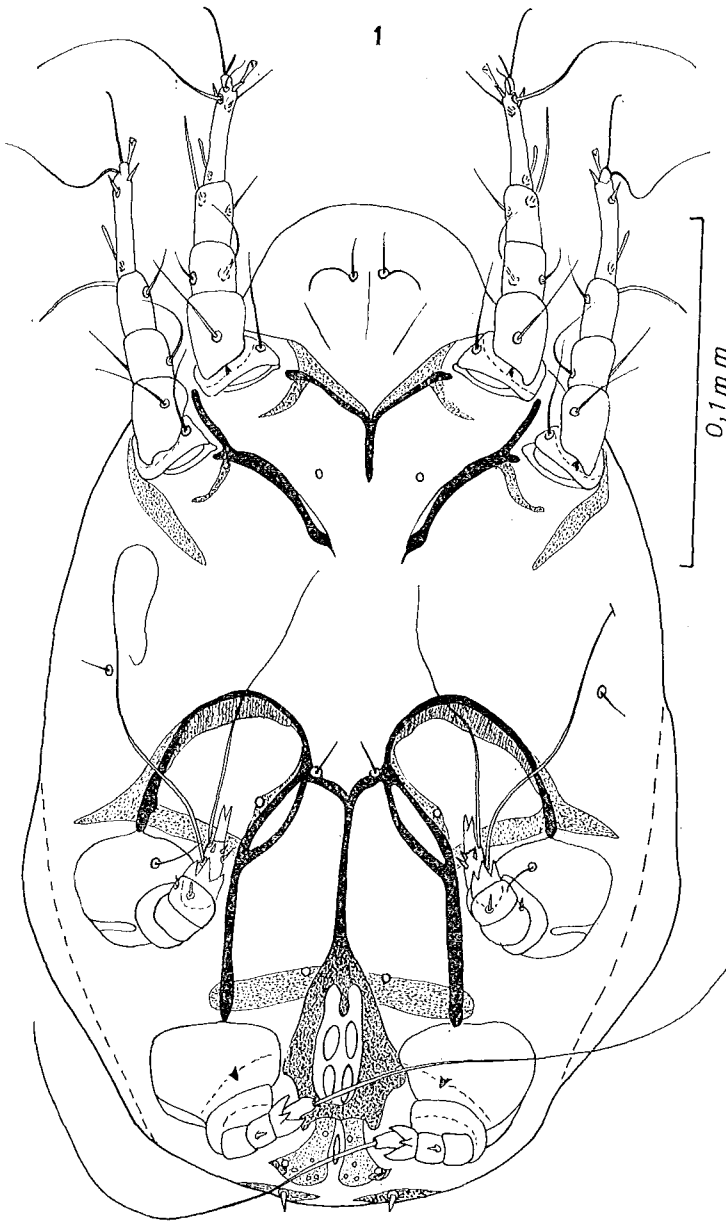


Fig. 1. —*Sciuropsis guevarai* sp. n. Hypopus in ventral view.

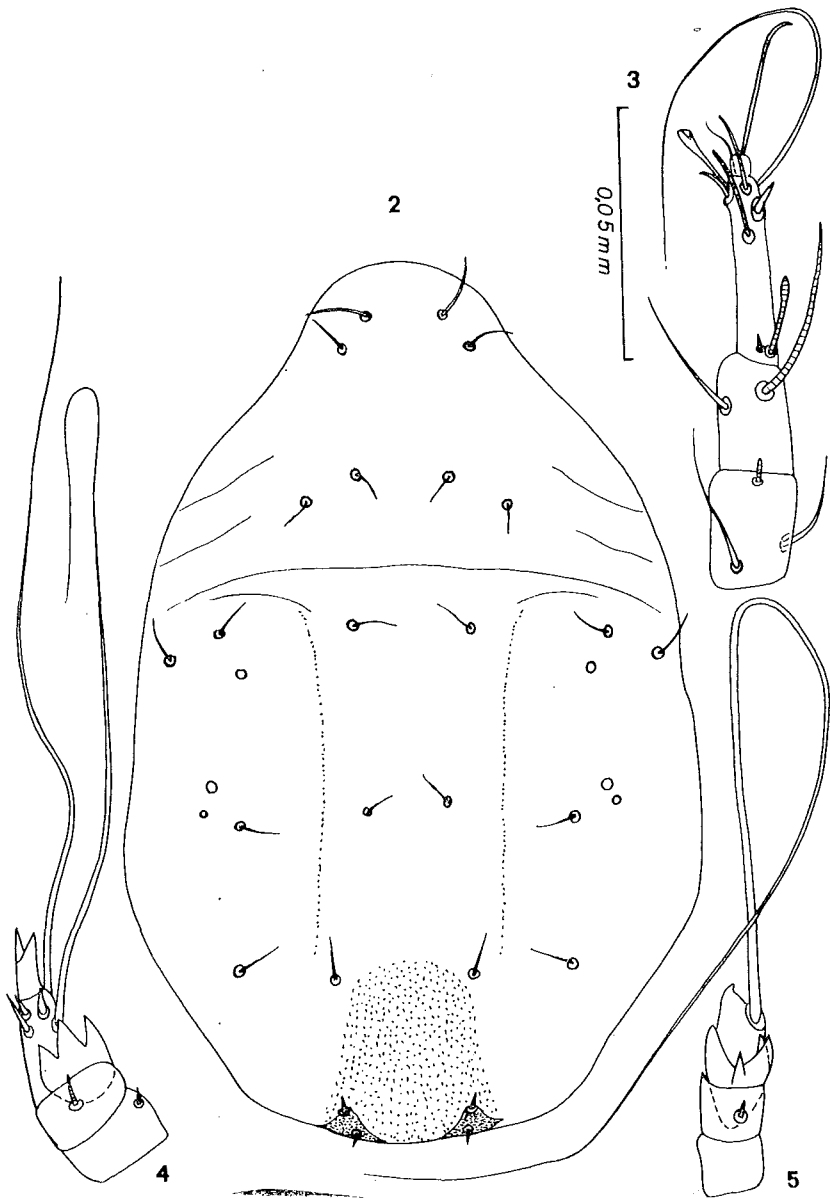


Fig. 2 - 5.—*Sciuroopsis guevarai* sp. n. Hypopus in dorsal view (fig. 2); tarsus tibia and genu of legs I (fig. 3), leg III (fig. 4) and leg IV (fig. 5).

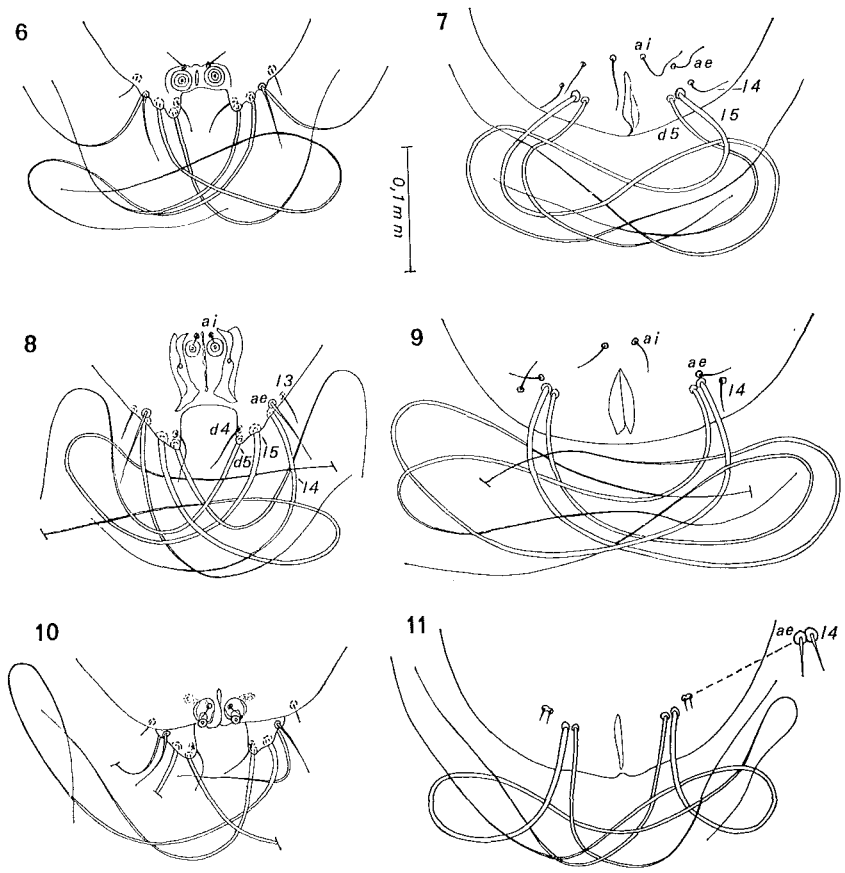


Fig. 6 - 11.—Posterior extremities in ventral view of *Caparinia* spp. Fig. 6, 7: *C. tripilis* (Michael, 1889) male (fig. 6) and female (fig. 7) (specimens from the typical host from Nederland). Fig. 8, 9: *C. setifera* (Megnin, 1880) male (fig. 8) and female (fig. 9) (paratypes); *C. algiurus* sp. n., male (fig. 10) and female (fig. 11) (holotype and paratypes).

l 4 setae, the bases of these two setae being contiguous. In *C. tripilis* (specimens from the typical host from Nederland and Spain) the setae *a i* and *a e* are present and situated in front of the anal slit, and the *l 4* are lateral.

2. By the smaller distance between setae *d 3 - d 3*, these setae are 18 to 39 μ apart (in 5 females); while in females of *C. tripilis* these setae are 55-75 μ apart.
3. The greater length of leg III (4 apical articles) (75-82 μ), instead of 65-70 μ in *C. tripilis*.

In the male:

1. By the greater length of the posterior lobes: 25 to 30 μ instead of 16-19 μ in *C. tripilis*.
2. By the smaller size of the terminal process of tarsus IV.

Female (fig. 11): Holotype 400 μ long and 296 μ wide (idiosoma). In 2 paratypes these measurements are 392 $\mu \times$ 285 μ and 390 $\mu \times$ 291 μ . Dorsal surface as in *C. tripilis*, except that the distance *d 3 - d 3* is smaller (18 to 39 μ). Propodosomal shield 93 μ long and 60 μ wide. Venter as in *C. tripilis* except for the perianal setae. The setae *a i* are absent, the setae *a e* and *l 4* are short (12 μ), lateral and situated close together. Chelicerae 60 μ long. Legs III and IV are 81 and 39 μ long (the four apical segments together). Tarsi I-IV 36-36-19 and 9 μ long.

Male (fig. 10): Idiosoma in the allotype 294 μ long (posterior lobes included) and 250 μ wide. Posterior lobes 30 μ long (25 to 30 μ in 3 paratypes). In *C. tripilis* these lobes are 16-19 μ long. Dorsum and venter as in *C. tripilis*. *Legs*: Legs III-IV 147 and 96 μ long respectively (4 apical articles). Tarsi I-IV 34-34-39 and 19 μ long. Tarsus IV slightly shorter than in *C. tripilis* and with a slightly smaller apical pointed process. Chelicerae 49 μ long. Setae *a e* and *l 4* are 50 and 130 μ long respectively.

Host and locality

On the Algerian hedgehog *Aethechinus algirus*, from Pitiusas, Formentera Island, Spain (n.º 751023/5) (holotype and 3 female paratypes, allotype and 2 male paratypes, nymphs) and from La Garriga, Barcelona, Spain (1 female, 2 males, 3 nymphs, all paratypes).

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