

PYROGLYPHID MITES FROM NESTS OF SPARROWS *PASSER DOMESTICUS* L., 1758, IN BRASIL¹

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In the course of studies of nests of *Passer domesticus* in Piracicaba, State of São Paulo, Brazil, the junior author collected several species of mites belonging to the family Pyroglyphidae. Two new species were found among this material. They are described here.

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1. *Dermatophagoides simplex*, sp.n.

Female (fig. 1-4): Holotype 390 μ long (idiosoma) and 280 μ wide. In 3 paratypes the length and width are 355 x 243 μ , 360 x 240 μ and 375 x 260 μ . *Dorsum*: Propodonal plate 100 μ long and 60 μ wide; in 3 paratypes 104 x 62 μ , 105 x 60 μ and 100 x 61 μ . This plate is abruptly widened in its posterior fifth. The striations of the hysteronotum resemble those of *Dermatophagoides rwandae* Fain, 1967 and *D. aureliani* Fain, 1967: they are transverse between setae *d* 2 and strongly oblique between setae *d* 3. *Venter*: coxae I-III with a well developed plate; coxae IV with a smaller plate. Epigynum strongly curved and long, bearing laterally the *ga* setae. Posterior lip of the vulva soft and triangular in shape; its anterior margins reinforced by 2 sclerotized stripes interrupted on the midline; the anterior angle of this lip appears therefore more or



Figs. 1-3 – *Dermatophagoides simplex* sp.n. – 1, Female in ventral view (from holotype and paratypes); 2 and 3 apical part of tarsus I and tarsus II in dorsal view.

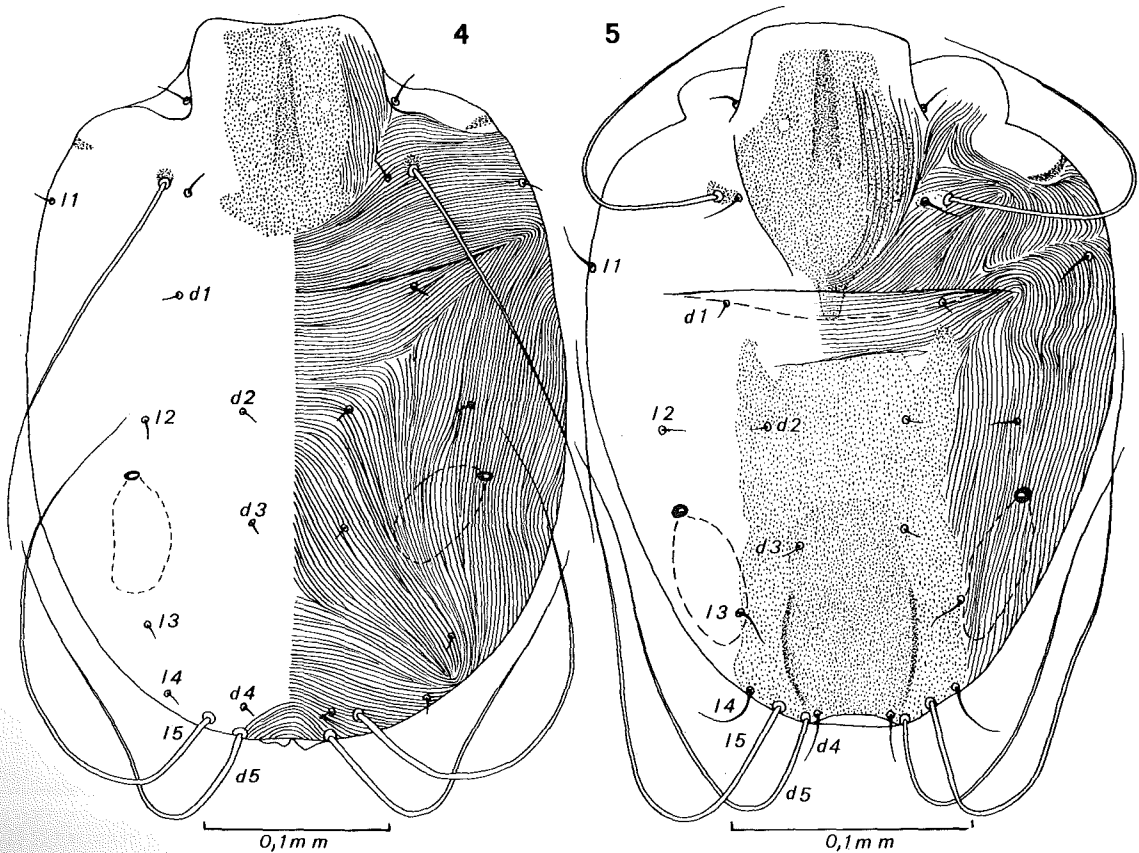
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less bilobate, the two sclerotized lobes being separated by soft cuticle. Setae *g p* about $50\ \mu$ long and much longer than *g m*, only $15\ \mu$ long. The setae *g m* are situated in front of a line joining the *g p* and the *cx III* setae. Anus termino-ventral. The opening of the bursa is situated ventrally, at approximately $15\ \mu$ from the posterior margin of the body and at $20\ \mu$ from the anal slit; this opening is very small and is situated in the middle of a small oval sclerotized plate $8\text{--}9\ \mu$ long and $6\ \mu$ wide. Bursa very narrow and relatively long (70 to $85\ \mu$); its internal extremity rounded and slightly inflated. *Legs*: Length of tarsi I to IV (including the apical process of tarsi I-II) $45\ \mu - 54\ \mu - 69\ \mu - 75\ \mu$. Tarsus I with a well developed apical process $8\ \mu$ long, tarsus II with a shorter apical process ($3\text{--}4\ \mu$ long). *Solenidions*: *phi I* is $100\ \mu$ long; *sigma I* $8\ \mu$ and $60\ \mu$; *phi III* and *IV* 75 and $33\ \mu$; *sigma III* is longer ($34\ \mu$) than genu III ($30\ \mu$). Gnathosoma as in the other species of the genus. *Chaetotaxy of the body* (type and

paratypes): setae *sc e* $170\text{--}190\ \mu$; *h* $100\ \mu$; *d 5* $200\text{--}225\ \mu$; *l 5* $280\text{--}300\ \mu$. Other dorsal setae short or very short. The distance *d 5* - *l 5* is $18\ \mu$.

Male (fig. 5-6): The only known specimen is heteromorphic. Length of idiosoma $270\ \mu$, width $213\ \mu$. *Dorsum*: Propodonal plate well developed. Hysteronotal plate rectangular, maximum width $93\ \mu$. *Venter*: Epimera I loosely fused in a sternum, other epimera free. Genital organ poorly oriented; setae *g p* close to each other. Anus flanked by 2 well developed suckers and surrounded by a sclerotized rim as long as wide. *Legs*: Legs I strongly inflated; the femur bears a strong bifid ventrolateral process; the tarsus ends in 2 triangular processes. Tarsus II without apical process. Legs III longer than legs IV. Length of tarsi I-IV (apical process included): $39\ \mu - 45\ \mu - 47\ \mu - 32\ \mu$.

Habitat: All our specimens were found in several nests of *Passer domesticus* in Piracicaba, State of São Paulo, Brazil 4 August 1979 (Coll. A.E. Rosa)



Figs. 4-5 - *Dermatophagoides simplex* sp.n. - 4, Female; 5, Male, in dorsal view.

(Holotype and paratypes female, allotype male). Holotype and allotype in the Museum of the Dept. of Zoology, ESALQ, University of São Paulo, Piracicaba, São Paulo; paratypes in the collection of the authors.

Remarks: *D. simplex* sp.n. is closest to *D. rwandae* Fain, 1967 and to *D. neotropicalis* Fain & Van Bronswijk, 1973, described from Rwanda (Central Africa) and Surinam, respectively.

It differs from female *D. rwandae*, by the following characteres:

1. Different shape and situation of the bursa copulatrix, which opens ventrally by a very small orifice surrounded by a small sclerotized plate. In *D. rwandae* the opening is terminal and situated in a sclerotized funnel-like depression.
2. Setae *g p* longer and much longer than *g m*, the latter being placed in front of a line joining

g p and *cx III*. In *D. rwandae* *g p* and *g m* are short and subequal and the latter are placed behind a line joining *g p* an *cx III*.

3. Dorsal setae distinctly longer, especially setae *h* (in *D. rwandae* *sc e* and *d 5* are 130-140 μ long; *h* 30 μ long.); distance *d 5*; *d 5* greater.

4. Tarsi III-IV longer (69 and 78 μ , instead of 60 and 65 μ in *D. rwandae*).

5. Propodonotal plate more elongate.

6. Body smaller.

This new species is distinguished from female *D. neotropicalis* by several important characters:

1. Shape and situation of the bursa: In *D. neotropicalis* the external orifice of the bursa is on top of a small raised semiglobular papilla very close to the anal slit.

2. Bursa longer (in *D. neotropicalis* 40-55 μ)

3. In *D. neotropicalis* the setae *g m* are placed behind a line joining setae *g p* and *cx III*.

4. Striations of hysteronotum between setae *d 3* more oblique than in *D. neotropicalis*.

The female is distinguished from that of *D. neotropicalis* by the shape of the hysteronotal plate, more rectangular and wider anteriorly; by the more unequal length of legs III and IV (ratio leg III: leg IV = 1,57, for the 3 segments together tarsus + tibia + genu); by the greater size of the propodonotal plate which extends more posteriorly; by the absence of an apical process on tarsus II.

2. *Onychalges nidicola* sp.n.

This species is close to *O. pachyspathus* Gaud, 1968; however it is distinguished from that species in the female by the much smaller length of some setae, mainly the *l* setae, by the slightly smaller size of the apical curved process of tarsi I and II, by the presence of a second sclerotized process on these tarsi, but smaller, not curved, and placed subapically on the anterior surface, by the more oblique direction of the striations between setae *d 3* and by greater width of the epigynial arc (maximum width 57 μ , for 39 μ in *O. pachyspathus*).

Female: Length 345 μ (idiosoma), width 240 μ . Dorsum: propodonotal plate 75 μ wide. Absence of hysteronotal plate. Cuticular striations thin and very numerous. *Venter:* All epimera free. Epigynium very large; the setae *g a* are situated



Fig. 6 — *Dermatophagoides simplex* sp.n. — Male ventrally.

outside the epigynium. Setae *g m* slightly in front of a line joining setae *g p* and *cx III*. All coxae with well-developed plates. *Idiosomal chaetotaxy*: (length of setae): *sc e* 180 μ ; *d 1* to *d 3* vestigial; *d 4* 15 μ , *d 5* and $\ell 5$ 200 μ ; $\ell 1$ 65 μ ; *e 2* and $\ell 3$ 30 μ ; $\ell 4$ 18 μ ; *sh* 50 μ . In a paratype of *O. pachispathus* the lengths are: *sc e* 180 μ ; *d 1* to *d 3* vestigial; *d 4* 20 μ ; *d 5* 190 μ ; $\ell 1$ 105 μ ; $\ell 2$ 60 μ ; $\ell 3$ 75 μ ; $\ell 4$ 33 μ ; $\ell 5$ 200 μ ; *h* 180 μ ; *sh* 105 μ . *Legs*: Length of tarsi I-IV: 40 μ -42 μ -57 μ -60 μ . In a female of *O. pachyspathus* these measurements are 33 μ -39 μ -50 μ -54 μ . Tarsi I-II ending in a small (4 μ long) curved process.

Male: unknown.

Habitat: In a nest of *Passer domesticus*, Piracicaba, 5 June 1978 (holotype female) and 4 August 1979 (1 paratype female). Holotype in the Museum of the Dept. of Zoology, ESALQ, University of São Paulo, Piracicaba, São Paulo; 1

paratype in the Institut Royal des Sciences naturelles de Belgique.

3. *Pyroglyphus (Hughesiella) africanus* (Hughes, 1954)

One female of this species has been found in a sparrow nest in Piracicaba, 4 August 1979.

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