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

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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: Propodonotal 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. Epigynium strongly curved and long, bearing laterally the g a 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 μ long and much longer than  g  m, only 15 μ 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 μ from the posterior margin of the body and at 20 μ from the anal slit; this opening is very small and is situated in the middle of a small oval sclerotized plate 8-9 μ long and 6 μ wide. Bursa very narrow and relatively long (70 to 85 μ); its internal extremity rounded and slightly inflated. Legs: Length of tarsi I to IV (including the apical process of tarsi I-II) 45 μ - 54 μ - 69 μ - 75 μ. Tarsus I with a well developed apical process 8 μ long, tarsus II with a shorter apical process (3 - 4 μ long). Solenidions:  phi I  is 100 μ long;  sigma I  8 μ and 60 μ;  phi III and IV 75 and 33 μ;  sigma III is longer (34 μ) than genu III (30 μ). Gnathosoma as in the other species of the genus. Chaetotaxy of the body (type and paratypes): setae se 170-190 μ;  h  100μ;  d  5 200-225 μ;  l  5 280-300 μ. Other dorsal setae short or very short. The distance  d  5 - l  5 is 18μ.

Male (fig. 5-6): The only know specimen is heteromorphic. Length of idiosoma 270 μ, width 213 μ. Dorsum: Propodonotal plate well developed. Hysteronotal plate rectangular, maximum width 93 μ. 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 μ - 45 μ - 47 μ - 32 μ.

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.
This species is closest to *O. paehyspathus* Gaud, 1968; however it is distinguished from that species in the female by the much smaller length of some setae, mainly the $Q$ 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 $\mu$, for 39 $\mu$ in *O. paehyspathus*).

2.4. Tarsi III-IV longer (69 and 78 $\mu$, instead of 60 and 65 $\mu$ in *D. rwandae*).

Propodonotal plate more elongate.


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 $\mu$)

3. In *D. neotropicalis* the setae $g_m$ are placed behind a line joining setae $g_p$ and $ex III$.

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 $g$ 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 $\mu$, for 39 $\mu$ in *O. pachyspathus*).

**Female:** Length 345 $\mu$ (idiosoma), width 240 $\mu$. Dorsum: propodonotal plate 75 $\mu$ wide. Absence of hysteronotal plate. Cuticular striations thin and very numerous. **Venter:** All epimera free. Epigynium very large; the setae $g_a$ are situated...
outside the epigynium. Setae $g\, m$ slightly in front of a line joining setae $g\, p$ and $c\, x\, III$. All coxae with well-developed plates. *Idiosomal chaetotaxy*: 

(length of setae): $se\, e\, 180\mu$; $d\, 1$ to $d\, 3$ vestigial; $d\, 4\, 15\mu$, $d\, 5$ and $l\, 5\, 200\mu$; $l\, 1\, 65\mu$; $e\, 2$ and $l\, 3\, 30\mu$; $l\, 4\, 18\mu$; $sh\, 50\mu$. In a paratype of *O. pachispatus* the lengths are: $sc\, e\, 180\mu$; $d\, 1$ to $d\, 3$ vestigial; $d\, 4\, 20\mu$; $d\, 5\, 190\mu$; $l\, 1\, 105\mu$; $l\, 2\, 60\mu$; $l\, 3\, 75\mu$; $l\, 4\, 33\mu$; $l\, 5\, 200\mu$; $h\, 180\mu$; $sh\, 105\mu$. 

*Legs*: Length of tarsi I-IV: $40\mu$-$42\mu$-$57\mu$-$60\mu$. In a female of *O. pachyspathus* these measurements are $33\mu$-$39\mu$-$50\mu$-$54\mu$. Tarsi I-II ending in a small (4 $\mu$ 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.

**REFERENCES**


