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## OBSERVATIONS ON THE PYROGLYPHIDAE (ACARI: ASTIGMATA) WITH DESCRIPTION OF A NEW GENUS AND SPECIES FROM *CYGNUS* *MELANOCORYPHUS* (MOLINA) (AVES: ANATIDAE)

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**ABSTRACT** - *Cygnocoptes prasadi* n. g., n. sp. (Acari: Astigmata: Pyroglyphidae) is described from a South American swan, *Cygnus melanocoryphus* (Aves: Anatidae).

**Key Words** - Mites, Pyroglyphidae, parasites, birds, systematics, Argentina.

### INTRODUCTION

The new mite described here was collected by the senior author from the neck of a swan, *Cygnus melanocoryphus* (Molina), originating from Argentina. This bird had died in the Antwerp Zoo during its quarantine.

This mite belongs to the family Pyroglyphidae, subfamily Dermatophaginae, as indicated by most of the characters except for the location of the solenidion omega 1 of tarsus II. This solenidion is always situated on the basal half of this tarsus in all the previously known Pyroglyphidae while in the new species it is distinctly located in the apical half of the tarsus. This more apical location of omega 1 of tarsus II has so far only been described in a feather mite of the monotypic genus *Ptyssalges* Atyeo and Gaud (Ptyssalgidae) (Aty eo and Gaud, 1979; Gaud and Atyeo, 1996).

The genus *Ptyssalges*, however, differs from our new genus *Cygnocoptes* by numerous important characters e.g. body is globose, vertical setae (*vi*) and a sternum are present in both sexes, absence of median shields on dorsal surface of the body, and absence of some dorsal setae. We think that this unique character of the more apical position of the solenidion omega 1 of tarsus II is not sufficient to exclude this genus from Dermatophagoidinae.

The genus *Cygnocoptes* differs from the genera in the family Psoroptoididae by the same character as for the location of omega 1 of tarsus II (in basal part of this

segment) and also (in the Psoroptoidinae) by the shape of the apicoventral seta *e* of tarsus I, which is short and thin in *Cygnocoptes* while it is dilated and deformed in the Psoroptoidinae.

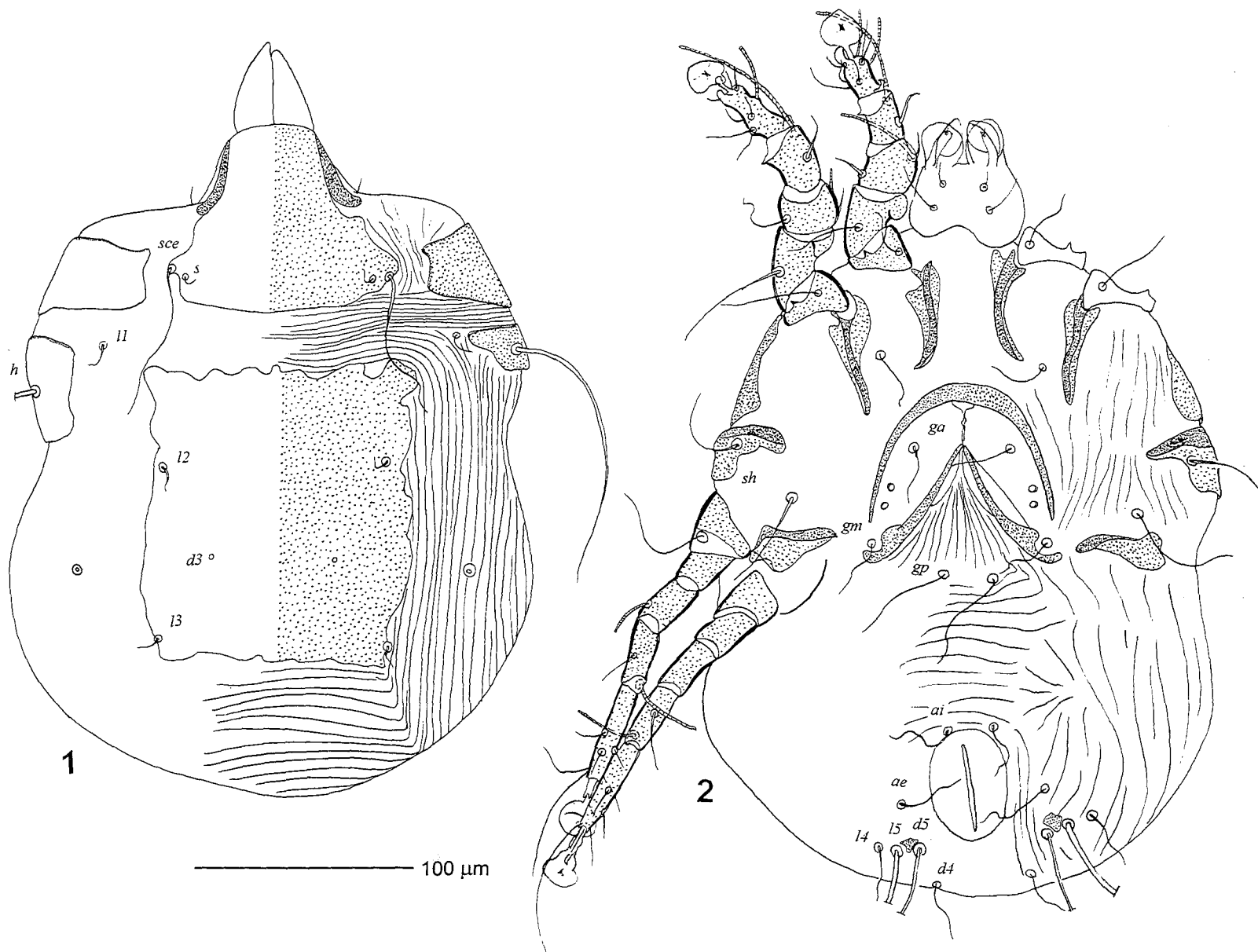
Among the Dermatophagoidinae, the genus *Sturmpagoides* is closest to *Cygnocoptes* because of the presence of a dorsal shield in the female. However, the latter differs from this genus by the character of the more apical position of tarsus II solenidion and by several other characters, e. g. the much larger size of the dorsal shields in both sexes, and the absence of the apicoventral clawlike process on tarsi I and II.

All measurements are given in micrometers ( $\mu\text{m}$ ).

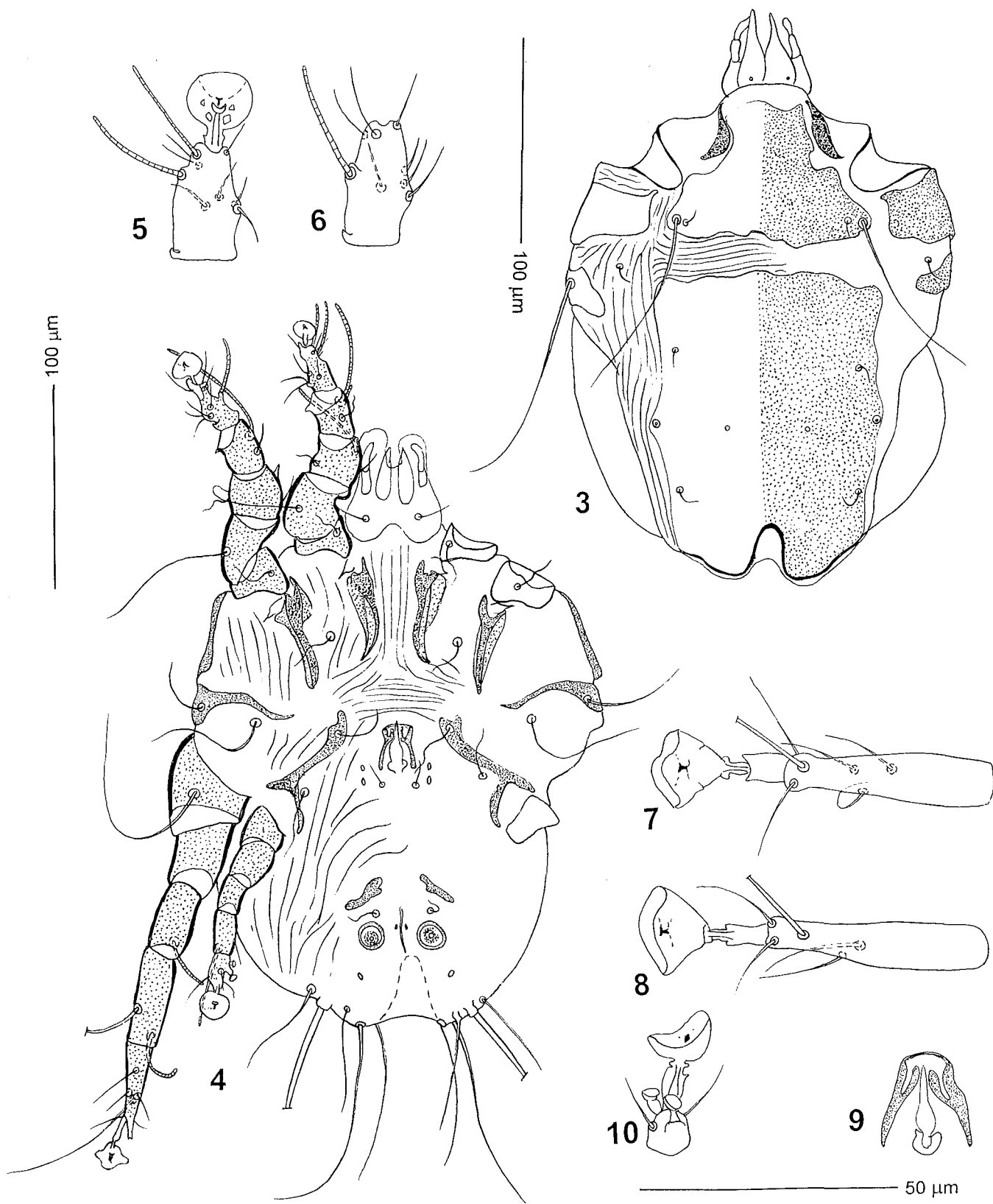
**Family PYROGLYPHIDAE Cunliffe, 1958**  
**Subfamily Dermatophagoidinae Fain, 1963**

**Genus *Cygnocoptes* n. gen.**

**Definition** - Cuticle soft and finely striated, striation, however, less developed and more sparse than in other genera of Dermatophagoidinae. Absence of tegmen; a large median and rectangular hysteronotal shield present which bears 2 pairs of very short and thin setae (*l2* and *l3*) and vestiges of setae *d3*. Setae *sci*, *h*, *d5* and *l5* long to very long. Posterior extremity of body rounded in female and with a very short median excavation in male. Epimera I to IV free, thick and relatively short. Epigynum in female strongly developed, in an inverted-U with arms



Figs. 1-2. *Cygnocoptes prasadi* n. gen., n. sp. (female) - 1. dorsal view, 2. ventral view (Scale line: 100 μm).



Figs. 3-10. *Cygnocoptes prasadi* n. gen., n. sp. ( male) - 3. dorsal view, 4. ventral view (Scale: line 100 μm), 5-8. tarsi I-IV (female) in dorsal view, respectively, 9. aedeagus (male), 10. tarsus IV (male) in dorsal view (Scale line: 50 μm).

slightly divergent posteriorly. Aedeagus in male small, external sclerite more or less trapezoidal and containing a very short penis. Copulatory suckers well developed, preceded by 2 small sclerites. Legs III in male twice as long and as thick as legs IV, tarsus III with a ventroapical, slightly bifid, process. Number of setae on legs as follows -Female: tarsi I to IV 7-7-6-5, tibiae 1-1-1-1, and genua 2-2-0-0. Tarsus IV in male bears 3 simple setae and 2 suckers. Solenidiotaxy: Tarsi 2-1-0-0, tibiae 1-1-1-1, and genua 2-1-1-0. Solenidia omega 1 and omega 3 on tarsus I apical or preapical, solenidion omega 1 on tarsus II situated in apical half of segment (Fig. 6).

**Type species** - *Cygnocoptes prasadi* n. sp.

***Cygnocoptes prasadi* n. sp.**  
(Figs. 1-10)

**FEMALE** (holotype, Figs. 1-2, 5-8) - Length of body, including gnathosoma 330, maximum width 210. Body in broad oval. Sejugal furrow poorly developed. *Dorsum*: Propodonal shield 75 long and 105 wide. Hysteronal shield rectangular 125 long and 120 wide. Orifices of oil glands situated laterally at the level of *d3*. Setae *sce* 75 long, setae *h* 120 long. *Venter*: Epimera I thick, widely separated from each other. Epimera II to IV free, thick and short. Epigynium very large. Vulva in an inverted Y, posterior lip represented by thick lateral sclerites. Anus 36 long. Setae *d5* 120 long, thinner and shorter than *l5* (300 long), *l4*, *d4*, *ai* and *ae* very thin and much shorter, not exceeding 25. Copulatory sclerite small, semicircular (visible only in some specimens). *Gnathosoma*: Each palp surrounded by a large transparent membrane. *Legs*: Length of tarsi I-IV (ambulacrum excluded): 22-24-42-45.

**MALE** (Figs. 3-4, 9-10) - Length of body, including gnathosoma, 295, maximum width 210. Posterior border of opisthosoma very slightly concave in its central part. *Dorsum*: Hysteronal shield with posterior border reinforced by a thick sclerotized and sinuous band with a large loop in its anteromedian section. Propodonal shield 60

long and 90 wide. Dorsal chaetotaxy as in female. *Venter*: Epimera as in female. Other characters as described in definition of the genus.

**Locality** - Female holotype, 5 female and 1 male paratypes from the neck of *Cygnus melanocoryphus* (Molina, 1782). The swan originated in Argentina but died in the Zoo of Antwerp (Belgium) during quarantine, March 1964, Coll. A. Fain. Holotype, 4 female and 1 male paratypes are deposited in the Institut royal des Sciences naturelles de Belgique, Bruxelles, Belgium; 1 female paratype is in the Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia.

**Etymology** - The new species is named for Dr. Vikram Prasad, founder of the International Journal of Acarology which has so remarkably contributed to the development of acarology all over the world, for over 25 years.

#### ACKNOWLEDGEMENTS

We wish to thank Dr. S. Mironov, Zoological Institute, St. Petersburg, Russia for his advice concerning the systematic position of the mite which is described here. The junior author was supported for this study by the INTAS (International Association for the promotion of cooperation with scientists from the New Independent States of the former Soviet Union), grant YSF 2002-0116/F4, which is appreciated.

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