THYREOPHAGUS GALLEGOI A NEW MITE FROM FLOUR AND HOUSE DUST IN SPAIN (ACARIDAE, SARCOPTIFORMES)

BY

M. PORTUS [1] and M. S. GOMEZ [1]

SUMMARY

A new species of the genus *Thyreophagus*, producing normal and heteromorphic males, is described.

RESUMEN

Se describe una nueva especie del género *Thyreophagus* en la que se observan machos normales heteromórficos.

Mites of the genus *Thyreophagus* are known by a single species, *Thyreophagus entomophagus* (Laboulbène) which is world wide in distribution, infesting vetable and animal dried matter.

The material we describe here was found on four flour samples and two house dust samples from Catalunya. The mite population was numerous in only one flour sample. In the other cases the number of mites was always very low.

Although this mite differs from the type species in forming heteromorphic as well as homomorphic males with a very small opisthosomal lobe, we are including it in the genus *Thyreophagus* for the following reasons :

1) The characteristic shape of the dorsal propodosomal shield ;
2) The reduction in number of idiosomal setae ;
3) The leg chaetotaxy.

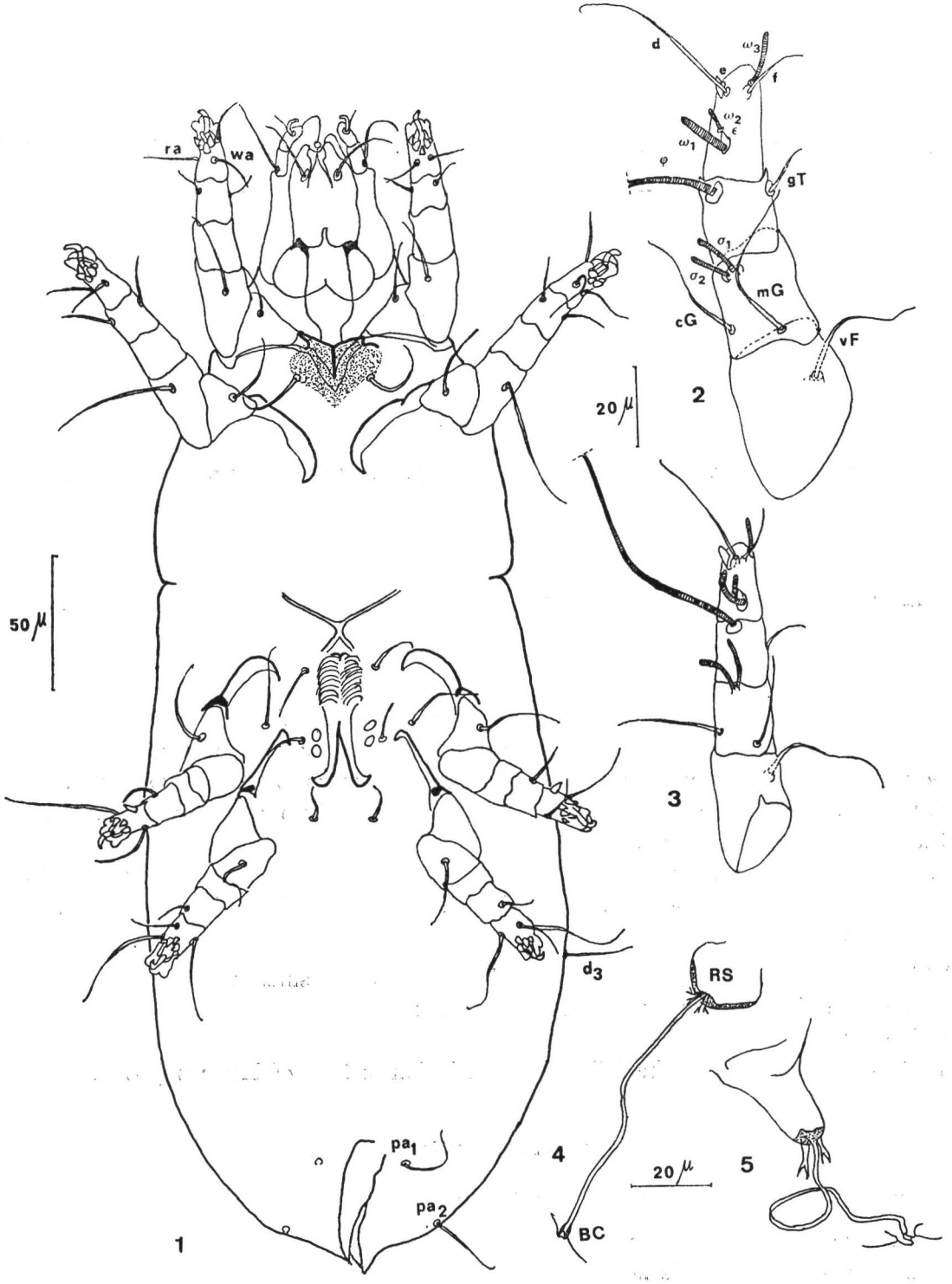
The terminology used in the following description is that of Hughes (1976).

Thyreophagus gallegoi n. sp.

DIAGNOSIS. — It differs from *T. entomophagus* in :

1) The presence of heteromorphic males ;
2) The reduced size of the opisthosomal lobe in the male ;
3) *wa* on tarsus III is transformed into a spine in females and homomorphic males ;
4) Idiosomal setae are shorter in both sexes.
5) The characteristic shape of the bursa copulatrix and the receptaculum seminis in the female.

1. Department of Parasitology, Faculty of Pharmacy, University of Barcelona.



FIGS. 1, 3 and 4. — **Thyreophagus gallegoi** n. sp. Female. 1) Venter ; 3) Dorsal view of left leg I ; 4) Reproductive system. RS : receptaculum seminis ; BC : bursa copulatrix.

FIGS. 2 and 5. — *Thyreophagus entomophagus* (Laboulbène). Female. 2) Dorsal view of left leg I ; 5) Reproductive system.

FEMALE (Holotype and 10 paratypes) (Figs. 1, 3 and 4). — Length of the idiosoma 410 μ (328-450) ; width 156 μ (134-181). Cuticle smooth ; propodosomal dorsal shield incised on its lateral edges as in *T. entomophagus*. Setae smooth and slender. *vi* 28 μ (23-30) ; *sc e* 49 μ (42-56) ; *he* 37 μ (30-37) ; d_3 33 μ (24-33) ; d_5 22 μ (19-28) ; *lp* 42 μ (29-42) ; pa_1 37 μ (32-44) ; pa_2 35 μ (26-35) ; *sa e* 22 μ (20-30). d_3 is displaced to a lateral position.

TABLE 1. — Measurements of the leg segmentation. Maximum-Minimum (Mean). The lengths are given in microns.

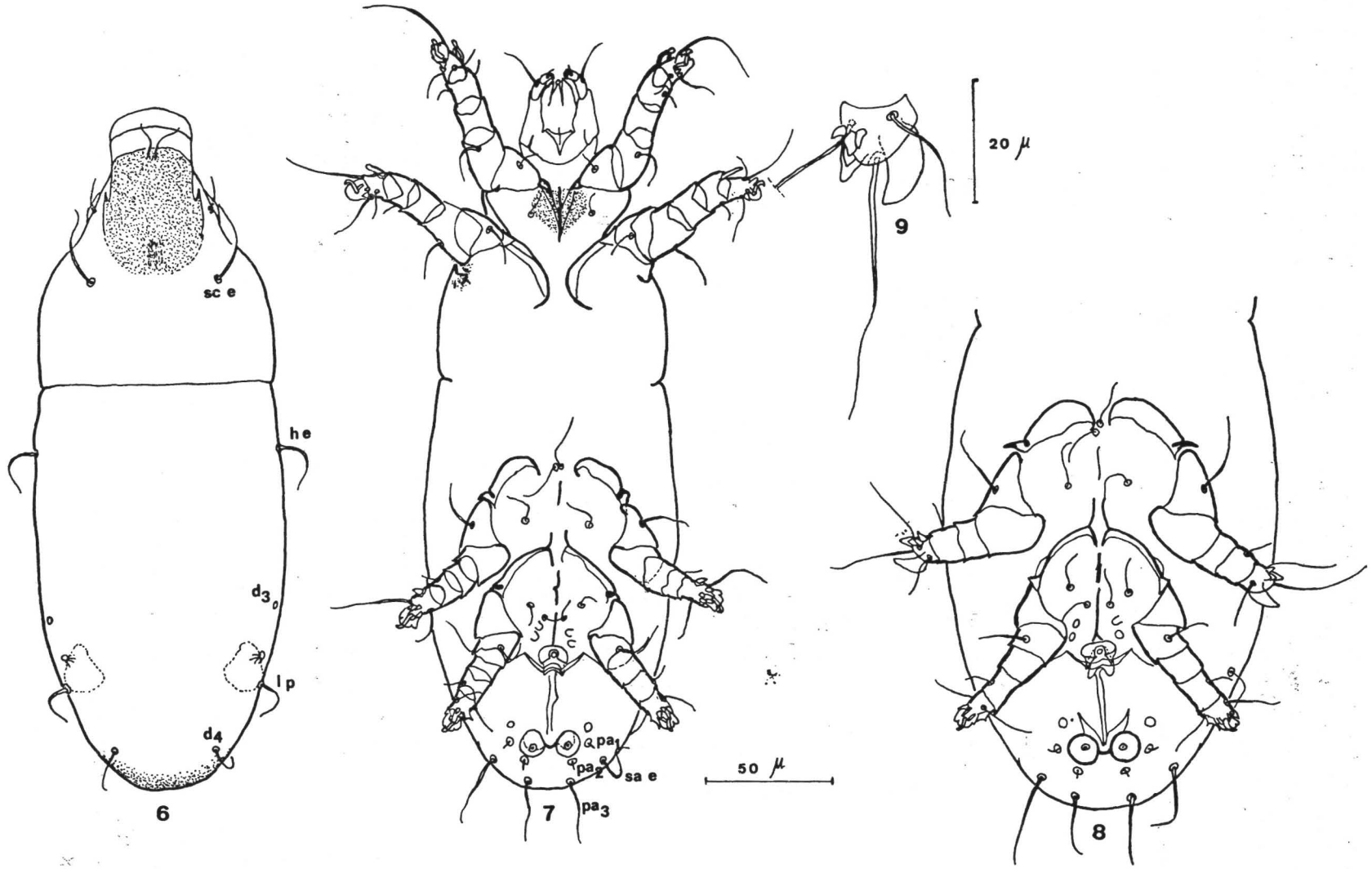
	leg I	leg II	leg III	leg IV
FEMALES (from 10 specimens)				
tarsus	16-19 (18)	17-19 (17)	10-14 (13)	11-16 (13)
tibia	14-18 (16)	13-17 (16)	10-13 (12)	10-12 (11)
genu	17-20 (18)	14-17 (15)	7-10 (8)	7-10 (8)
femur	26-33 (30)	26-31 (28)	19-23 (20)	19-23 (20)
HOMOMORPHIC MALES (from 4 specimens)				
tarsus	10-12 (11)	11-12 (11)	10-11 (10)	9-10 (9)
tibia	12 (12)	10-11 (11)	8- 9 (9)	9-10 (9)
genua	12-13 (12)	10-11 (10)	7-11 (8)	8- 9 (8)
femur	22-23 (22)	19-22 (21)	20-21 (21)	18 (18)
HETEROMORPHIC MALES (from 10 specimens)				
tarsus	16-19 (18)	15-17 (16)	6- 7 (7)	10-14 (12)
tibia	15-17 (16)	13-16 (14)	9-11 (10)	11-12 (12)
genu	14-19 (17)	12-16 (14)	6- 9 (7)	8-11 (9)
femur	24-29 (27)	24-28 (26)	25-30 (27)	18-23 (19)

(The length of the tarsi does not include the claw).

Legs are short (Table I). Chaetotaxy : Tarsi 10-10-10-10 ; tibiae 2-2-1-1 ; genua 2-2-0-0 ; femora 1-1-0-1 ; trochanters 0-1-1-1-0. *e* is transformed into a spine in all the legs, being more developed than in *T. entomophagus*. *wa* on tarsus III is also transformed into a spine. Solenidiotaxy : Tarsi 3-1-0-0 ; tibiae 1-1-1-1 ; genua 2-1-0-0. ω_1 on tarsus I is curved in an angle of almost 90°, and it terminates in a well developed head.

HOMOMORPHIC MALE (Allotype and 3 paratypes) (Figs. 6 and 7). — Length of the idiosoma 252 μ (188-262), width 90 μ (85-109). The idiosoma is oval and elongated as in the female. The opisthosomal lobe is almost inconspicuous, the dorsal opisthosomal shield is very short and its anterior margin does not extend as far forward as d_4. As in the other species of the genus pa_1 and pa_2 are microsetae. The epimeral plates are well developed. Setae : *vi* 18 μ (17-18) ; *sc e* 33 μ (33-44) ; *he* 25 μ (24-25) ; d_4 17 μ (17-21) ; *lp* 22 μ (22-36) ; pa_1 5 μ ; pa_2 4 μ ; pa_3 26 μ (26-27) ; *sa e* 30 μ (30-38).

Leg chaetotaxy and solenidiotaxy as in the femelle. φ on tibia IV is transformed into a spine.



FIGS. 6, 9. — **Thyreophagus gallegoi** n. sp. — 6 and 7 : Homomorphic male ; 6) Dorsum ; 7) Venter. — 8 and 9 : Heteromorphic mâle ; 8) Ventral view of hysterosoma ; 9) Lateral view of left leg III.

HETEROMORPHIC MALE (10 paratypes) (Figs. 8 and 9). — It differs from the homomorphic by its larger size, legs III have a more developed femur (Table I) and its tarsus terminates in a large, thick curved claw. *wa* on tarsus III is a normal setae.

Length of the idiosoma 245-304 μ ; width 92-147 μ ; setae : *vi* (17-22 μ) ; *sc e* (31-49 μ) ; *he* (25-41 μ) ; d_3 (15-24 μ) ; d_4 (16-20 μ) ; *lp* (25-34 μ) ; pa_1 (4-5 μ) ; pa_2 (3-4 μ) ; pa_3 (27-34 μ) ; *sa e* (33-41 μ).

REMARKS. — A large number of females show one to three eggs in their uterus. A prelarva has been observed in almost all of them, both larvigerous and non-larvigerous eggs. The presence of a vestigial prelarva is frequent in several families of parasitic Astigmata and in Pyroglyphidae (Fain, 1977), but we found no record of its presence in Acaridae.

TYPE DATA. — Holotype (female) allotype (male) and paratypes (76 ♀, 11 heteromorphic ♂, 2 homomorphic ♂ and 1 tritonymph) in a wheat flour sample Barcelona, 22-X-74. Also from flour : 6 ♀ and 3 heteromorphic ♂ (paratypes), Barcelona, 20-X-74 ; 9 ♀ and 2 heteromorphic ♂ (paratypes), Barcelona, 4-I-75 ; 13 ♀, 5 heteromorphic ♂, 1 homomorphic ♂ and 3 tritonymphs, Barcelona, 12 IV-74. From house dust : 2 ♀ (paratypes), Puigcerdá (Girona), I-76 ; 1 ♀ (paratype) Barcelona, 9-X-76.

Thyreophagus gallegoi is named after Prof. Dr, J. GÁLLEGO, Director of the Department of Parasitology, Faculty of Pharmacy of Barcelona, who guided our first steps in the field of Parasitology and who gave us the lead to work in Acarology.

Holotype, 1 female paratype, 1 homomorphic male paratype and 1 heteromorphic male paratype deposited in the British Museum (Natural History).

Allotype and paratypes in the author's collection (Department of Parasitology, Faculty of Pharmacy, University of Barcelona).

ACKNOWLEDGEMENTS

We are very grateful to Dr. A. M. HUGHES for reading the manuscript and for her invaluable suggestions.

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Paru en Novembre 1980.