

DERMANYSSUS CARPATHICUS SP. N. (ACARINA: DERMANYSSIDAE), A NEW BIRD PARASITE FROM CZECHOSLOVAKIA

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Abstract. A description is given of the mite *Dermanyssus carpathicus* sp. n. found in nests of *Phoenicurus phoenicurus* and *Parus major* in Central Slovakia (Czechoslovakia).

During investigations of nest fauna of birds in the territory of Czechoslovakia a new mite species of the genus *Dermanyssus* De Geer, 1778, was found and its description is given below. The nomenclature of setae after Evans and Till (1965) was used in the description, all dimensions are given in μm , the number of paratypes measured is indicated in the text as "n".

Dermanyssus carpathicus sp. n.

Female (holotype No PaÚ ČSAV 1806): chelicerae with basal segment 28, second segment about 270 long. The structure of gnathosoma is typical of the genus. Deutosternum with 8–9 files of denticles, with one denticle in each file. Hypostomal setae hyp. 1, hyp. 2, and hyp. 3 are 32, 19 and 45 long respectively. Setae capituli c.s. 23 long. Idiosoma 668 long (paratypes 600–670, n = 34) and 385 wide (paratypes 311–389, n = 34) in unengorged specimens.

Dorsum (Fig. 1 A): Dorsal shield 590 long and 280 wide, its anterior margin round, its maximum width at level of setae s 5, lateral margins almost parallel up to the level of setae Z 1 – Z 2 where the shield is tapering and posterior to setae J 4 creating a rectangle-shaped final part. The shield bears 11 pairs of setae, in some specimens setae J 3 are distributed on both sides on integument, or absent. Humeral pores are located lateral to s 5.

Venter (Fig. 1 B): Sternal shield 32 long (paratypes 23–35, n = 12) and 133 wide (paratypes 114–135, n = 12), bearing two pairs of setae and one pair of pores, the second pair of sternal pores are missing. Distance between st 1 = 64, between st 2 = 80, between pl 86. Genital shield and genital setae level 114 wide (paratypes 102–126, n = 12) and 223 long (paratypes 208–237, n = 12), distance between ge 80. Anal shield 140 long (paratypes 117–141, n = 12) and 125 wide (paratypes 117–126, n = 12). Peritremes 130 long (paratypes 100–138, n = 34) and extending to half of coxa II.

Legs: Using the formulae after Evans et Till (1965) the chaetotaxy is shown in Table 1.

Male (allotype No PaÚ ČSAV 1807): Chelicerae with basal segment 37 long, second segment posterior to the base of movable digit is 42 long, spermadactyl 94 long. Gnathosoma with hypostomal setae hyp. 1 = 18, hyp. 2 = 12, hyp. 3 = 21, c.s. = 10 long. Idiosoma 548 long and 312 wide.

Dorsum (Fig. 2 A): Dorsal shield 509 long, 283 wide, bearing 12 pairs of setae in podosomal region, three pairs of setae in opisthosomal region.

Venter (Fig. 2 B): Holoventral shield 472 long, 105 wide (on level of st 2) and 108 (on level Jv1), with three pairs of sternal setae, one pair of metasternal and one pair of genital setae and single pair of pores; opisthosomal region bears two pairs of ventral setae and three perianal setae (in paratype a third pair of ventral setae Zvl is located on the shield). Distance between stl = 45, between st 2 = 72, between st 3 = 79, between st 4 = 76, between ge = 59, between pl = 59. Peritremes are 176 long and extending to the posterior third of coxa I.

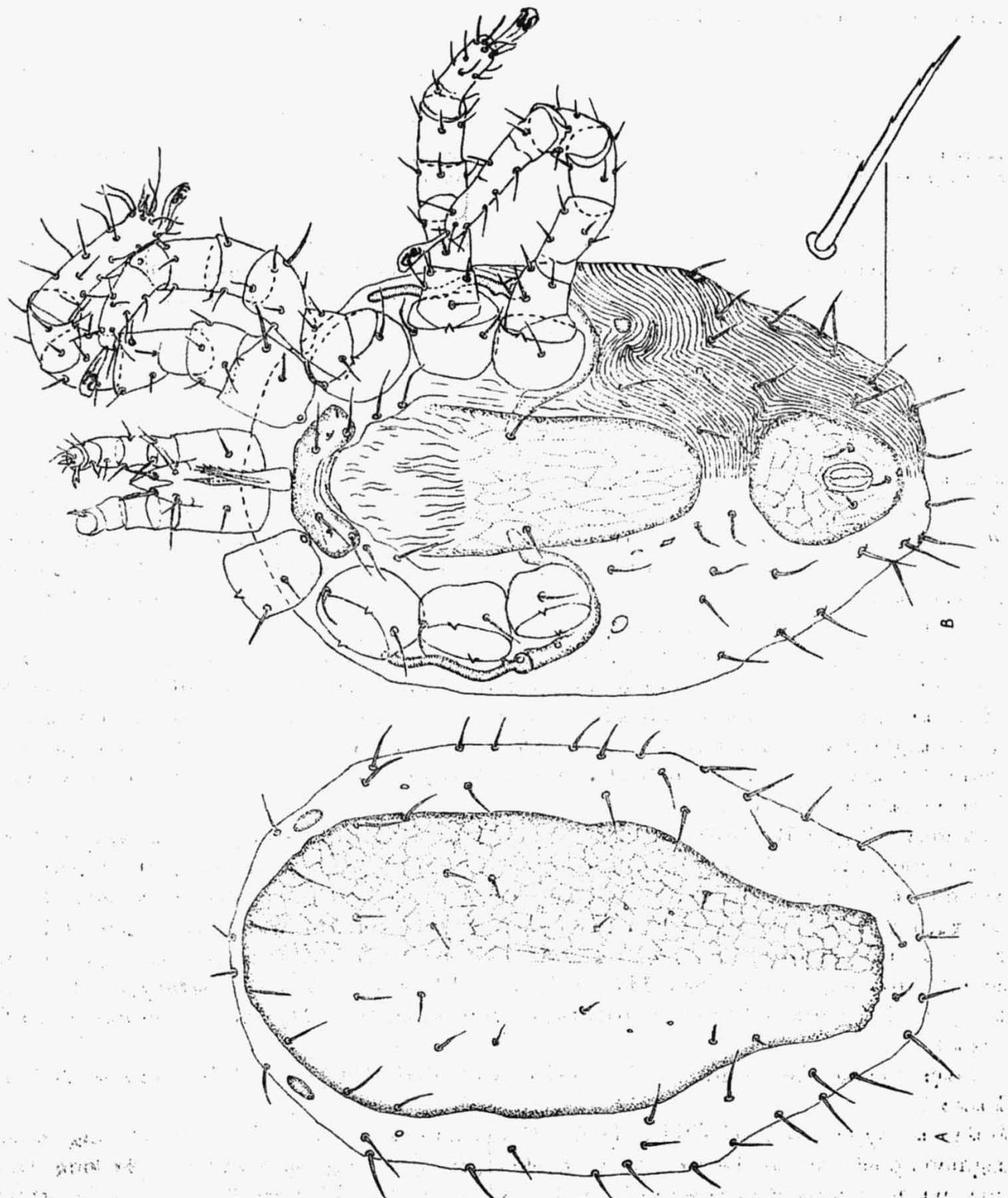


Fig. 1. *Dermanyssus carpathicus* sp.n., female: A — dorsal side, B — ventral side.

Deutonymph (paratype No PaÚ ČSAV 1808): Idiosoma 495 long and 306 wide.

Dorsum (Fig. 3 A): Dorsal shield 442 long and 283 wide, bearing 11 pairs of setae.

Venter (Fig. 3 B): Sternito-genital shield measuring 243×107 , with three pairs of sternal setae, one pair of metasternal and one pair of genital setae and single pair of pores. Distance between st 1 = 58, between st 2 = 98, between st 3 = 97, between st 4 = 85, between ge = 64, between pl = 76. Anal shield 100 long and 91 wide. Peritremes extending to the posterior fourth of coxa II.

Protonymph (paratype No PaÚ ČSAV 1809): Idiosoma 424 long and 247 wide.

Dorsum (Fig. 3 C): Podonotal shield 247 long, 188 wide with eight pairs of setae. Opisthosoma with 4–5 pairs of shields, J 2 missing in the row of setae J.

Venter (Fig. 3 D): Sternal shield 133 long, 97 wide and bearing three pairs of sternal setae and single pair of pores. Distance between st 1 = 52, between st 2 = 89, between

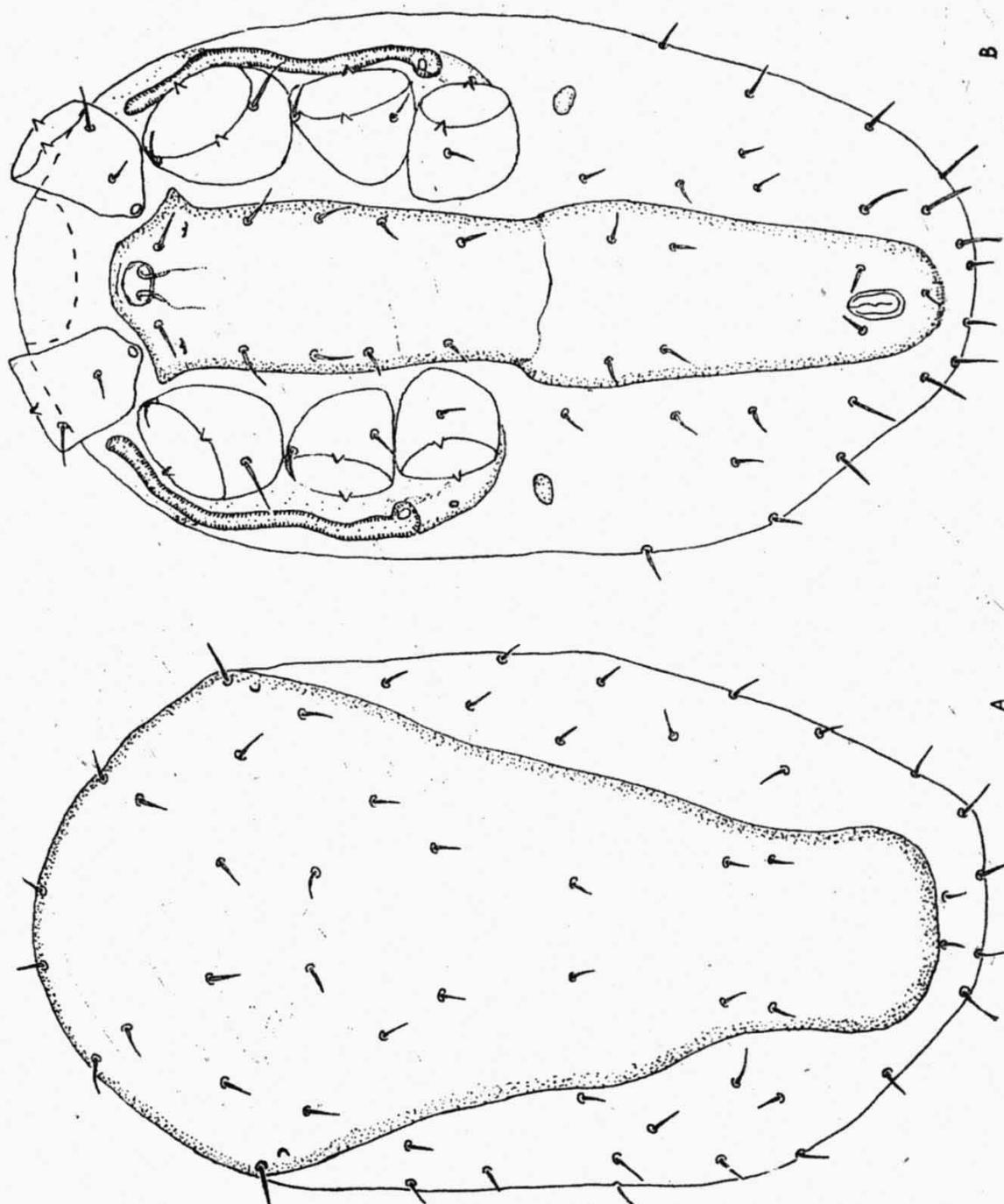


Fig. 2. *Dermanyssus carpathicus* sp.n., male: A — dorsal side, B — ventral side.

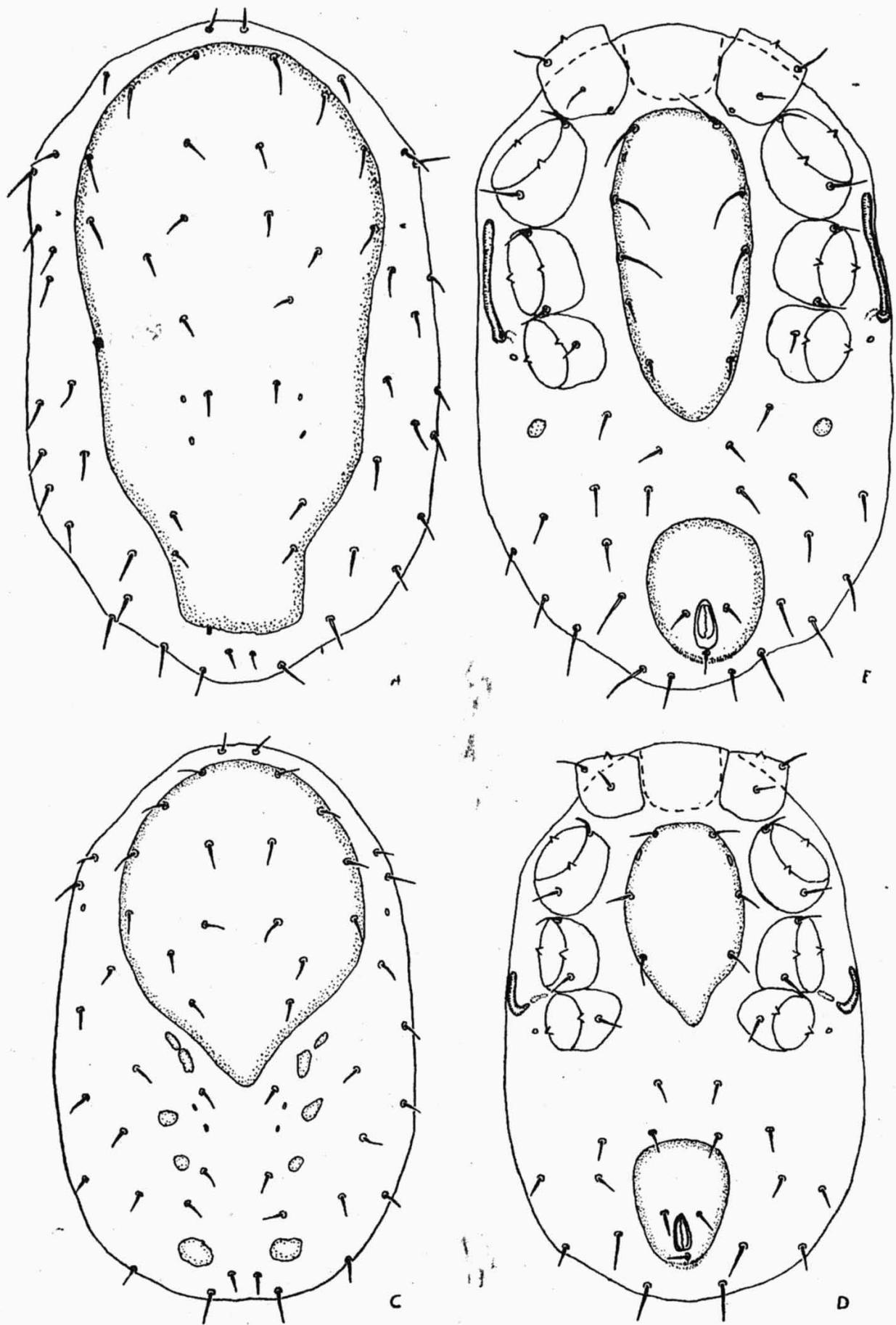


Fig. 3. *Dermanyssus carpathicus* sp.n., A — dorsal side of deutonymph, B — ventral side of deutonymph, C — dorsal side of protonymph, D — ventral side of protonymph.

Table 1. Chaetotaxy of legs in female *Dermanyssus carpathicus* sp. n.

	I	II	III	IV
coxa	2	2	2	1
trochanter	1 $\frac{0}{3}$ 1	1 $\frac{0}{3}$ 1	1 $\frac{1}{3}$ 0	1 $\frac{1}{3}$ 0
femur	2 $\frac{5}{2}$ 2	1 $\frac{5}{3}$ 1	1 $\frac{3}{1}$ 0	0 $\frac{3}{2}$ 1
genu	2 $\frac{2}{1}$ 2	1 $\frac{2/1}{1}$ 2	1 $\frac{2}{1}$ 1	1 $\frac{2}{1}$ 1
tibia	2 $\frac{2}{1}$ 2	1 $\frac{1}{1}$ 1	1 $\frac{1}{1}$ 1	1 $\frac{1}{1}$ 1

st 3 = 80, between pl = 75. Anal shield 91 long and 74 wide. Peritremes extending to posterior third of coxa III.

Typical series: Holotype: female from the nest of *Phoenicurus phoenicurus* (L.), locality: Urpín hill near Banská Bystrica, Central Slovakia (Czechoslovakia), 10 June 1966, lgt. M. Jurík. Allotype: Male with similar data as holotype.

Paratypes: 72 females, 13 males, 56 deutonymphs, 555 protonymphs with similar data as holotype. Other findings: 3 females, 5 protonymphs and 1 female, 1 protonymph originate from two nests of *Parus major* L., locality: Liptovský Ján, district Liptovský Mikuláš, Central Slovakia (Czechoslovakia), 14 June 1966, lgt. M. Jurík.

The type material is deposited in the collection of the Arachnoentomological department, Institute of Parasitology, Czechoslovak Academy of Sciences in Prague, 2 female paratypes are deposited in the collection of Department of Arachnoentomology, Academy of Natural Sciences of Philadelphia, 1 female paratype is deposited in the Gamaleya Institute of Epidemiology and Microbiology, Academy of Medical Sciences of USSR, Moscow.

Diagnosis: *D. carpathicus* sp. n. reveals close relations with *D. hirundinis* (Hermann). This new species differs from *D. hirundinis* mainly in the following characters: tibia I av with one seta, genu I av with one seta, femur I on ventral side with two setae, trochanter I without dorsal seta, femur II al with one seta (al 2 is missing). The second pair of sternal pores is absent. Peritremes extending to middle of coxa II. (Evans and Till 1962, Moss, 1967 1968).

Acknowledgement. I wish to thank Doc. Ing. M. Jurík of the School of Agriculture, Brno, for making available the material and for according information about it. I am grateful to Dr. A. A. Zemskaya of the Gamaleya Institute of Epidemiology and Microbiology, Moscow and to Dr. W. W. Moss of the Academy of Natural Sciences, Philadelphia who confirmed the validity of the new species.

DERMANYSSUS CARPATHICUS SP. N. (ACARINA: DERMANYSSIDAE)
— НОВЫЙ ВИД ПАРАЗИТА ПТИЦ ИЗ ЧЕХОСЛОВАКИИ

И. Земан

Резюме. Дано описание клеща *Dermanyssus carpathicus* sp. n. обнаруженного в гнездах *Phoenicurus phoenicurus* и *Parus major* в средней Словакии (Чехословакия).

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Received 5 September 1978.

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FOLIA PARASITOLOGICA (PRAHA) 26: 178, 1979.

V. S. Gaponova, O. F. Grobov: Kleshchevye bolezni pchel (Mite diseases of bees).
Rosselchozizdat, Moskva 1978, 94 pp., Price 20 kop.

A dangerous spread of varroatosis has attracted attention to mites infesting beehives throughout the world and several works devoted to this topic have appeared lately. Two experienced Soviet authors summarized the present store of knowledge on mites in beehives in a little booklet designed primarily for veterinarians and zootechnicians. This fact marks the scope of each chapter, the coverage of acarapidosis and varroatosis having been allotted the major part of the book. Particularly important is the chapter dealing with the latter disease including all known data on its causative agent, the mite *Varroa jacobsoni*. The subsequent chapter is concerned with pyemotosis indiscriminately supposed to be caused by the species *Pyemotes ventricosus*. Also discussed in the book are several species on which there is

no detailed knowledge so far explaining their role in the beehive. It is *Melittiphis alvearius* and two species recently described from south Asia, *Euvarroa sinhai* and *Tropilaelaps clareae*, which are related to *Varroa* and have a similar occurrence, not excluding the possibility of a similar dissemination. Another chapter is devoted to mites which may be incriminated as pests of bee storages. A list of mites found in beehives in the territory of the USSR is appended at the end of the book. Since 1927 a total of 112 different mites have been found there and this number is quite high although some of them are species typical of vertebrate nests, of the group Oribatei etc. The book is very well organized, contains valuable data and therefore will be widely used far beyond the borders of the USSR.

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