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Studies on Histiostomatid Mites (Acari, Astigmata) Associated with the Burying Beetle, *Nicrophorus concolor* Kraatz (Coleoptera, Silphidae), I

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ABSTRACT

Pelzneria uncinata, a new species of Histiostomatidae (Acari, Astigmata) is described from Japan, South Korea, Russian Far East and Tibet based on deutonymphs phoretic on adult *Nicrophorus concolor* Kraatz (Coleoptera, Silphidae). This species is mostly found on the hind wings and underside of elytra of the host beetles and readily distinguished from the known members of the genus by the following characteristics: 1) prodorsum with anterior margin well sclerotized, 2) among the dorsal hysterosomal setae, d_1, e_1 and h_1 much longer than the others and provided with a few minute barbs distally, 3) seta *w* on tarsus III small, not longer than tarsal width at its insertion.

Key words: Histiostomatidae, phoretic mite, new species, *Pelzneria*, burying beetle, *Nicrophorus concolor*

INTRODUCTION

Histiostomatidae is one of the largest families of the suborder Astigmata (Acari), comprising about 470 described species at present. The feeding stages of histiostomatid mites are generally found in niches which contain wet organic matter such as decomposed vegetables, tree sap, decaying mushrooms, animal dung and carcasses, but their hypopial deutonymphs are phoretic on insects coexisting in, or emerging from these habitats. Concerning such phoretic associates of *Nicrophorus* (Coleoptera, Silphidae) which are known for the habit of burying small dead vertebrates to feed their offspring, three histiostomatid species, *Pelzneria necrophori* (Dujardin), *P. crenulata* (Oudemans) and *Spinanoetus pelznerae* Scheucher, have been frequently reported in Europe (Dujardin, 1849; Mahunka, 1961; Mašán, 1999; Oudemans, 1903, 1909; Scheucher, 1957; Sevastianov, 1970; Turk, 1945). In Japan, Kurosa (2000a) recorded three undetermined species of the genus *Histiostoma* from *Nicrophorus concolor* Kraatz and *N. maculifrons* Kraatz, and also mentioned the occurrence of *Pelzneria* deutonymphs on certain Japanese burying beetles. Recently, through the courtesy of many Japanese entomologists, we had an opportunity to examine many specimens of adult *N. concolor* collected in Japan, South Korea, Russian Far East, mainland China and Taiwan, and could obtain numerous individuals of histiostomatid deutonymphs from them. Moreover,

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one of us (K. T.) was able to capture many live mites of all the developmental stages of a histiostomatid species together with an adult and some larvae of *N. concolor* from a carrion trap set in Tsukuba City, Central Japan. After the careful examination of the above-mentioned material, we have recognized seven distinct species of Histiostomatidae all new to science. The present paper is the first of the series dealing with the descriptions of these new taxa.

MATERIALS AND METHODS

Eighty-one dried specimens of *Nicrophorus concolor* collected in Japan and some other Asian countries were used for study. The numbers of localities and specimens of the examined hosts in each district are as follows: Japan (Honshu—26 & 44; Sado Island—1 & 2; Izu Islands—1 & 1; Shikoku—2 & 3; Kyushu—6 & 18; Tsushima Islands—1 & 1), South Korea (3 & 3), Russian Far East (Primorskii Region—1 & 1), mainland China (Shaanxi—1 & 1; Yunnan—1 & 2; Tibet—1 & 2) and Taiwan (2 & 3).

The dried specimens of *N. concolor* were first warmed in modified Oudemans' fluid (Glycerin 5 parts, 70% Methanol 82 parts and Glacial acetic acid 13 parts) at 50°C for 24 hours for softening both host insects and attached mites. Then, all the exposed portions of the body, underside of elytra, hind wings, meso- and metanota and abdominal dorsum under wings, cervical membrane between head and prothorax, membrane between pro- and mesothorax, coxal cavities, and all the small cavities on underside of host beetles were searched for histiostomatid deutonymphs under a binocular stereomicroscope. The mites discovered were preserved in 75% ethanol or glued on small pieces of (non-sucking) hard Kent paper with the least possible amount of lightly diluted Andre's medium (modified Hoyer's medium). These glued specimens are easily removable by soaking in hot water.

In addition to the above materials, about 40 histiostomatid specimens collected together with *N. concolor* from a carrion trap in Tsukuba, Japan, were used for study.

Specimens for microscopic study were prepared in the following procedure: 1) the mite is transferred into some drops of Keifer's (1935) clearing agent (mixture of Lactic acid 12 ml, Phenol 4 ml, Resorcinol 0.5 g and HCl 16 drops) in a small dish, 2) mildly heated on a hot plate until it becomes transparent, 3) the mite is transferred into some drops of lightly diluted Andre's medium in a small airtight bottle, and preserved for 12 hours or more so that the clearing agent soaked into the mite body may be fully substituted with Andre's medium, 4) the mite is mounted on 24 mm square cover glass with Andre's medium and a 15 mm circle cover glass is added, 5) after heating for several days at 50°C, the mite-containing double-glass is set on an aluminium slide (76×25 mm in size) with a round hole (about 18 mm in diameter) in the center, invented by Cobb (1917). The advantage of this slide is that the specimen can be viewed from both sides.

The nomenclature follows Griffiths et al. (1990) for idiosomal setae and Grandjean (1939) for leg setae. All measurements were taken from six specimens in each stage, unless otherwise stated, and are given in micrometers (μm). To the measurement of leg lengths, we applied the principle laid down by one of us (Kurosa, 2002b). The RLI index (ratio of length (or distance) of any structure to idiosomal length×100) (Kurosa, 1987) is used for the convenience of description.

DESCRIPTION

Family **Histiostomatidae** Berlese, 1897
Genus ***Pelzneria*** Scheucher, 1957
Pelzneria uncinata Kurosa and Tagami sp. nov.
(Figs. 1–11)

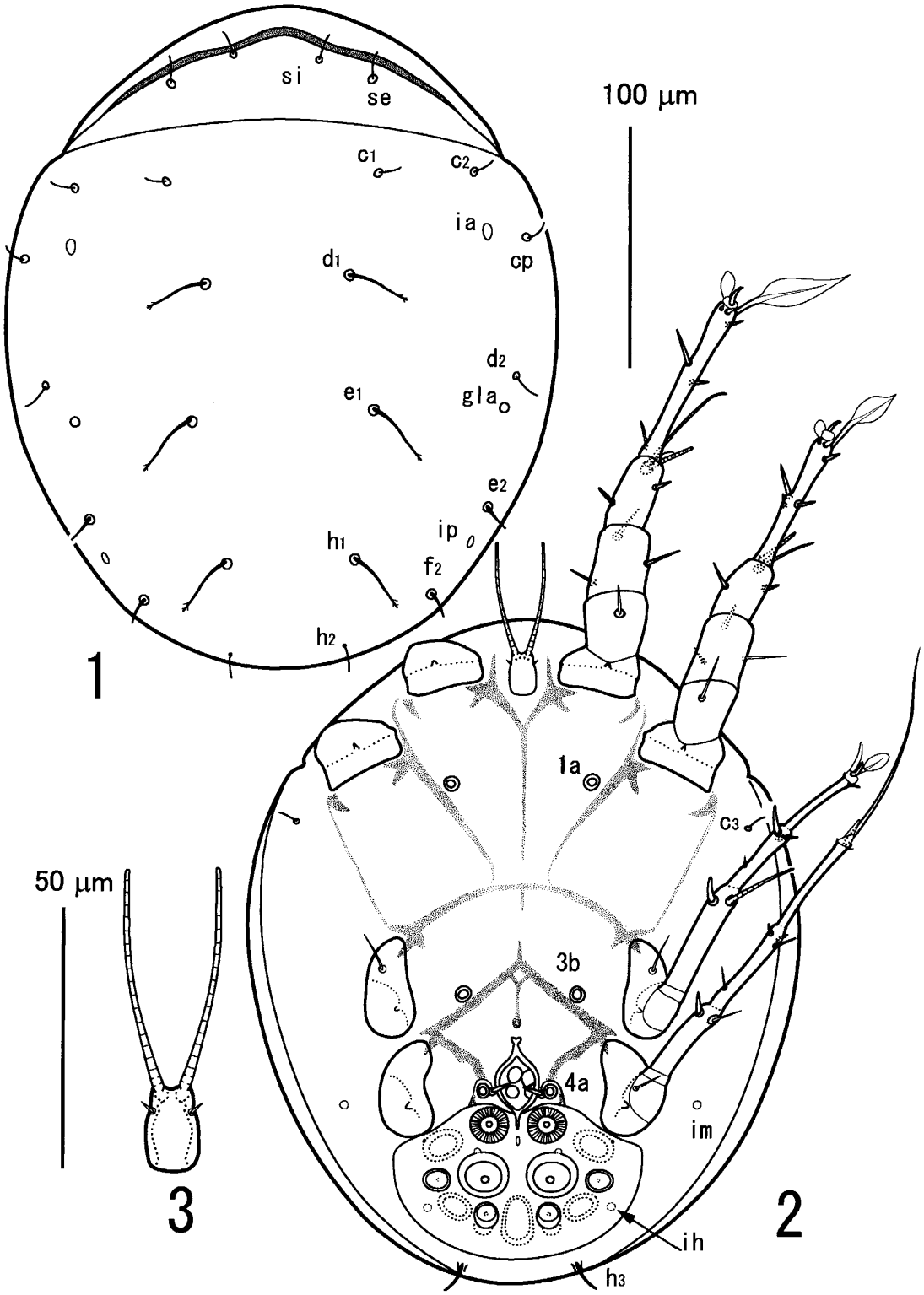
Histiostoma sp. 20: Kurosa, 2000a, p. 924 [Locality: Mt. Odamiyama, Oda-chô, Ehime Pref., Japan]

DEUTONYMPH. Body broadly obovate, about 1.2–1.3 times as long as wide; length 227–285 (n=20), width 183–230 (n=20). For other measurements, see Tables 1 and 2.

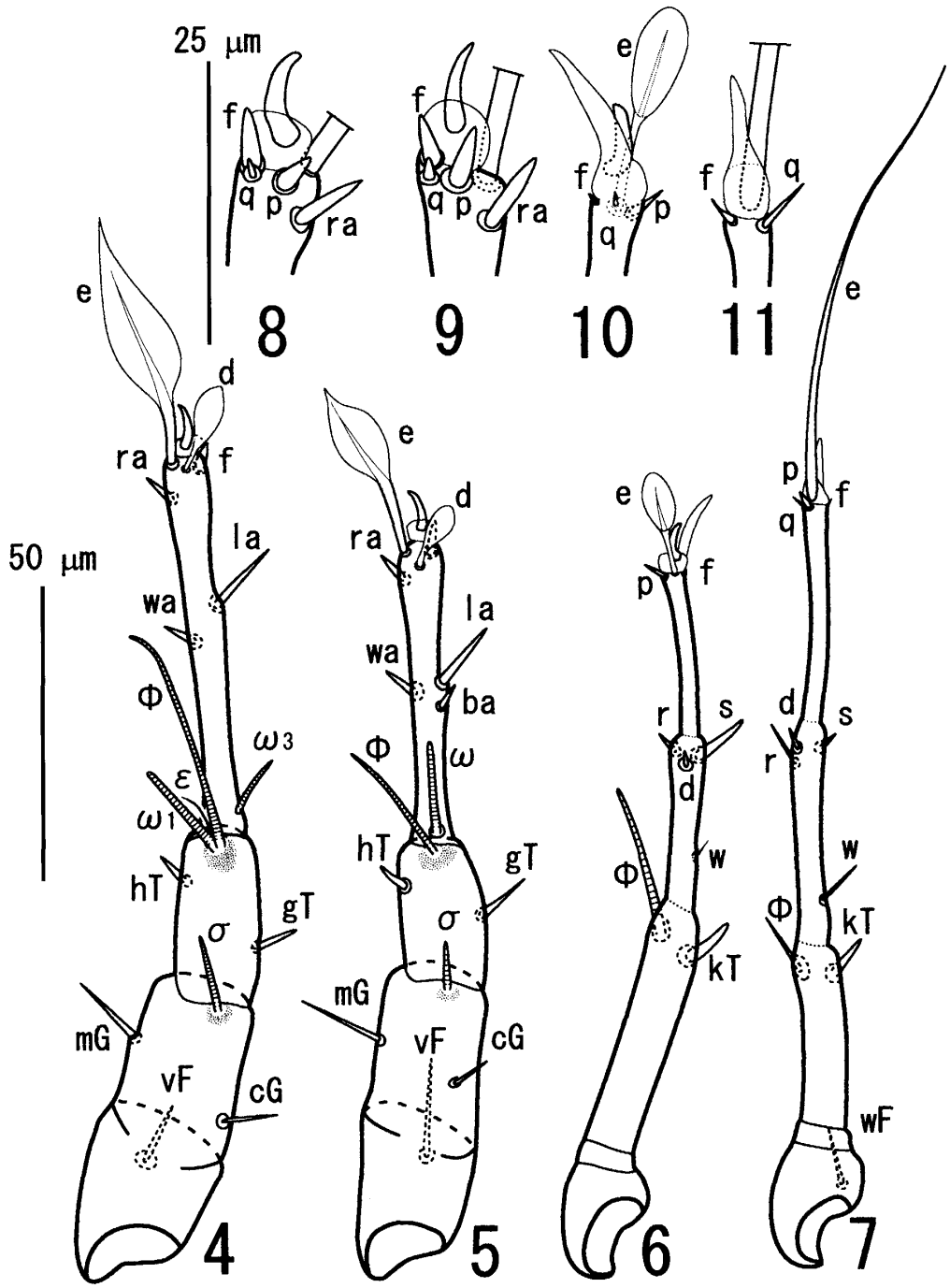
Dorsum (Fig. 1). Idiosomal dorsum very finely and densely pitted. Prodorsum crescent-shaped, moderately long (RLI 20–22), usually with well sclerotized, anterior margin; this sclerotized portion sometimes broadened and less pigmented (probably owing to the pressure on mounted mite body) but nearly always clearly delimited posteriorly; setae *si* and *se* inserted close to anterior margin in most specimens, moderately apart from midline, medium in length. Hysterosoma with anterior margin weakly arcuate, contiguous to, or very narrowly overlapping posterior margin of prodorsum, without crenulation; setae generally short except for much longer d_1, e_1 and h_1, which are each provided with a few minute barbs distally; cupule *ia* mesad of, and nearly on a level with *cp*; *ip* nearly on line connecting e_2 and f_2; opisthonotal gland opening *gla* posterior to, and more or less mesad of d_2.

Venter (Fig. 2). Anterior portion of propodosomal venter more or less extending beyond anterior margin of prodorsum. Gnathosoma (Fig. 3) small, including palpi 18–20 (RLI 6.9–7.5) in length, 1.7–1.8 times as long as wide, weakly rounded laterally, widest in posterior half, slightly constricted at the bases of palpi; palpal solenidion 2.0–2.5 times longer than gnathosoma. Apodemes on propodosomal venter generally weakly developed, anterior median apodeme, posterior apodeme II and posterior portion of anterior apodeme II are especially so. Apodemes III moderately slanted, more or less obscured in medial 1/4–1/2. Apodemes IV moderately slanted, forked near midline, together forming subquadrate blank medially. Posterior median apodeme weak, widely or narrowly interrupted in anterior 1/3. A short apodeme-like thickening running from near posterolateral end of apodeme III in the direction of seta *3b* present; apodeme-like thickening connecting posterolateral end of apodeme IV and coxal seta *4a* well developed. A transverse linear thickening connecting posterolateral ends of apodemes IV absent. Coxal setae *1a*, *3b* and *4a* in the form of normal conoid, medium-sized; *1a* located 33–40 (RLI 12–14) posterior to base of gnathosoma, close to, or adjoining anterior apodeme II; *3b* 17–20 (RLI 6.2–7.4) posterior to anterior corner of trochanter III, close to, or adjoining apodeme IV; *4a* 16–19 (RLI 6.4–7.0) posterior to anterior corner of trochanter IV. Attachment organ medium-sized (RLI of width 35–39); median suckers moderately larger than anterior suckers, well separated from each other. Cupules *im* and *ih* normal in position.

Legs (Figs. 4–11): Moderately long (RLI: I 52–58; II 46–50; III 43–49; IV 46–51); empodial claws medium in length, simple in shape. Leg I (Figs. 4, 8): seta *cG* inserted at about 1/3 from base of genu; *mG* at about mid-level of genu; solenidion σ 0.46–0.51 as long as tibia, tapered; seta *gT* at 1/3–2/5 from base of tibia, shorter than tibial width at its



Figs. 1–3. *Pelzneria uncinata* sp. nov., deutonymph. 1–2, habitus; 1, dorsal view (legs omitted); 2, vental view. 3, gnathosoma, dorsal view.



Figs. 4–11. *Pelzneria uncinata* sp. nov., deutonymph, left legs. 4–7, dorsal view; 4, leg I; 5, leg II; 6, leg III; 7, leg IV. 8–11, apical portions of tarsi, ventral view; 8, leg I; 9, leg II; 10, leg III; 11, leg IV.

insertion; *hT* at 2/3–3/4 from base of tibia; solenidion φ 0.60–0.67 as long as tarsus, reaching tarsal seta *wa*; tarsus 0.41–0.46 as long as total length of the leg; solenidia ω_1 and ω_3 0.33–0.36 and 0.18–0.21 as long as tarsus, respectively; ω_1 poorly tapered; famulus ε short and fine, strongly curved; seta *wa* at about middle of tarsus; *la* more or less distal to *wa*, distinctly longer than tarsal width at its insertion; *d* foliate, but frequently appears to be

Table 1. Measurements (in μm) of selected body structures of *Pelzneria uncinata* sp. nov., deutonymph; ranges and mean values for six specimens.

Structure	Range	Mean	Structure	Range	Mean
Idiosoma, L.	256–285	269.0	Idiosomal setae, distance		
Idiosoma, W.	210–226	218.1	*si–si*	33–38	34.6
Prodorsum, L.	37–43	39.8	*se–se*	74–81	76.8
Gnathosoma, L.	18–20	19.4	c_1–c_1	71–81	77.8
Gnathosoma, W.	10–11	10.9	d_1–d_1	53–58	55.6
Palpal solenidion, L.	41–50	44.4	e_1–e_1	69–77	73.0
Idiosomal setae, L.			h_1–h_1	44–51	47.5
si	9.0–11	9.8			
se	10–12	10.8	Coxal setae, diameter		
c_1	7.0–10	8.7	*1a*	5.2–6.8	5.9
c_2	8.1–10	9.2	*3b*	5.5–5.9	5.8
c_3	5.1–6.7	6.2	*4a*	5.9–6.2	6.1
cp	8.0–10	9.1			
d_1	20–26	23.2			
d_2	12–14	13.4	Attachment organ, L.	64–73	68.7
e_1	24–31	27.7	W.	92–102	97.3
e_2	11–13	12.4	Ant. sucker, diameter	14–17	15.9
f_2	12–15	13.8	Med. sucker, trans. diam.	18–21	20.0
h_1	26–30	27.9	Lat. conoid, diameter	6.9–8.6	7.8
h_2	8.5–12	10.3	Post. conoid, diameter	7.4–8.0	7.7
h_3	11–13	11.5			

falcate or T-shaped; *e* fairly long, foliate with long stalk, but frequently appears to be narrowly ensiform and bent near the middle. Leg II (Figs. 5, 9): seta *cG* located at 1/3–2/5 from base of genu; *mG* at about mid-level of genu; solenidion σ 0.38–0.42 as long as tibia, tapered; seta *gT* at mid-level of tibia; *hT* at 3/5–2/3 from base of tibia; solenidion φ 0.45–0.53 as long as tarsus; tarsus 0.39–0.45 as long as total length of the leg; solenidion ω 0.30–0.36 as long as tarsus, poorly tapered; setae *ba*, *la* and *wa* at about middle of tarsus; *la* longer than tarsal width at its insertion; *d* and *e* shaped as in leg I, but *e* usually shorter than that of leg I. Leg III (Figs. 6, 10): solenidion φ 0.61–0.70 as long as tibia, barely or not reaching tarsal seta *d*; *kT* nearly as long as tibial width at its insertion; tarsus 0.43–0.49 as long as total length of the leg; seta *w* at 1/2–2/5 way from base of tarsus to seta *d*, small, at most as long as tarsal width at its insertion; *d*, *r* and *s* close together near the middle of tarsus, *s* much larger than *r*, about twice as long as tarsal width at its insertion; *e* foliate, sometimes appears to be ensiform; pretarsus markedly elongated distally to form a falcate, point-tipped plate, which is about twice as long as claw. Leg IV (Figs. 7, 11): solenidion φ 0.28–0.36 as long as tibia, a little longer than seta *kT*, which is nearly as long as tibial width at its insertion; tarsus 0.57–0.62 as long as total length of the leg; seta *w* at some distance from base of tarsus, fine, about twice as long as tarsal width at its insertion; *d* and *s* near the middle of tarsus; *r* slightly proximal to them; these three setae small; *e* filiform, extremely long, 0.97–1.27 times as long as tarsus; pretarsus much elongated distally to form a lanceolate plate, which is somewhat shorter than similar structure of leg III; claw lacking.

Table 2. Measurements (in μm) of leg structures of *Pelzneria uncinata* sp. nov., deutonymph; mean values and ranges (in parentheses) for the same six specimens as those used for Table 1.

Structure	Leg I	Leg II	Leg III	Leg IV
Total length	147.6 (141–156)	129.8 (124–137)	124.2 (117–133)	130.1 (122–140)
Seta *sR*	—	—	15.4 (14–16)	—
Seta *vF*	17.0 (15–18)	16.8 (15–18)	—	—
Seta *wF*	—	—	—	10.0 (9.5–11)
Seta *cG*	9.7 (9.0–12)	7.8 (6.9–8.8)	—	—
Seta *mG*	14.6 (13–16)	14.5 (13–16)	—	—
Solenidion σ	14.6 (13–16)	10.3 (10–11)	—	—
Tibia	27.6 (27–32)	26.1 (23–28)	42.5 (40–46)	31.4 (28–35)
Seta *gT*	10.2 (9.3–11)	12.5 (11–13)	—	—
Seta *hT*	7.3 (5.9–7.9)	8.1 (7.0–9.7)	—	—
Seta *kT*	—	—	9.6 (8.9–10)	8.5 (7.9–9.1)
Solenidion φ	40.1 (38–41)	27.0 (25–29)	28.3 (29–31)	9.9 (9.0–10)
Tarsus	63.4 (60–69)	55.1 (52–59)	59.8 (57–64)	77.3 (75–79)
Solenidion ω_1	22 (21–24)	—	—	—
Solenidion ω_3	12.7 (12–13)	—	—	—
Solenidion ω	—	27.0 (25–29)	—	—
Famulus ε	*	—	—	—
Seta *wa*	7.1 (6.2–7.8)	10.1 (8.7–11)	—	—
Seta *w*	—	—	4.7 (4.3–4.9)	8.1 (7.0–8.9)
Seta *la*	11.4 (11–12)	12.6 (12–13)	—	—
Seta *ba*	—	5.9 (5.0–6.9)	—	—
Seta *ra*	6.4 (5.3–6.9)	8.3 (7.9–8.8)	—	—
Seta *r*	—	—	6.7 (5.9–7.2)	7.0 (6.4–7.4)
Seta *s*	—	—	11.9 (11–13)	5.0 (4.9–5.1)
Seta *d*	15.9 (11–19)	15.5 (15–16)	*	6.4 (4.9–7.9)
Seta *e*	41.7 (32–48)	38.1 (34–44)	19.0 (18–21)	89.5 (75–97)
Seta *f*	*	*	*	*
Seta *p*	*	*	*	*
Seta *q*	*	*	*	*
Pretarsus	*	*	14.2 (12–15)	12.2 (11–14)

Structures with asterisk (*) are usually difficult to measure with accuracy because of their small size and/or indistinctness; therefore the values obtained are not shown.

Host: All the specimens were collected from the adult beetles of *Nicrophorus concolor* Kraatz (Coleoptera, Silphidae). Of the 188 specimens examined, 160 were found on the hind wings and underside of elytra, and 16 were on other portions of the host body. The remaining 12 were found in the sediment of the fluid used for softening the dried host beetles; therefore the original attaching sites of them were not specified.

Type material: Holotype (NSMT-Ac 12439): deutonymph (DN), Yoshiki, Chikushino-shi, Fukuoka Pref., Japan, ex *Nicrophorus concolor*, V~X-1985, N. Gyôtoku leg. Paratypes: 1 DN (NSMT-Ac 12440), same data as the holotype; 1 DN (NSMT-Ac 12441), Miyanoura, Sakata-shi, Yamagata Pref., Japan, 10-IX-1979, S. Sakurai leg.; 1 DN (NSMT-Ac 12442), Aosawagoe, Yawata-machi, Yamagata Pref., Japan, 25-VIII-1984, S. Sakurai leg.; 1 DN (NSMT-Ac 12443), Mt. Takashiro, Kisawa-son, Naka-gun, Tokushima Pref., Japan, 3~19-

VII-2004, M. Yoshida leg. All the type specimens are deposited in the National Science Museum (Nat. Hist.), Tokyo (NSMT), Japan.

Other specimens examined: [JAPAN] 3 DNs, Heiwa-machi, Yokote-shi, Akita Pref., 14-VIII-1978, A. Izumi leg.; 8 DNs, Miyanoura, Sakata-shi, Yamagata Pref., 10-IX-1979, S. Sakurai leg.; 12 DNs, Mt. Gassan, Yamagata Pref., 9-VIII-1986, S. Sakurai leg.; 11 DNs, Aosawagoe, Yawata-machi, Yamagata Pref., 25-VIII-1984, S. Sakurai leg.; 21 DNs., Urakawa-machi, Higashi-Kanbara-gun, Niigata Pref., 15-VII-2002, S. Higuma leg.; 4 DNs, Isozawa-rindô, Mikawa-mura, Higashi-Kanbara-gun, Niigata Pref., 26-VII-1962, S. Higuma leg.; 2 DNs, Kettô, Tsunan-machi, Naka-Uonuma-gun, Niigata Pref., 26-VI-1993, H. Koike leg.; 1 DN, Tokorozawa-shi, Saitama Pref., 16-XI-1986, A. Yamagami & M. Nishikawa leg.; 4 DNs, Mt. Takao-zan, Tokyo, 22-VI-1963, S. Kondo leg.; 4 DNs, Kami-ôzawa, Tokyo, Mt. Mitake, Tokyo, 27-VI-1982, M. Nishikawa leg.; 2 DNs, Miyake-jima Is., Izu Islands, 27~29-VI-2006, T. Fukuzawa leg.; 4 DNs, Mt. Koma-yama, Ôiso-machi, Kanagawa Pref., 10-VIII-1983, M. Nishikawa leg.; 2 DNs, Mt. Ôyama, Isehara-shi, Kanagawa Pref., 14~19-IX-1968, T. Okumura leg.; 9 DNs, Sakeishi, Enzan-shi, Yamanashi Pref., 27~29-VII-1987, H. Yamazaki leg.; 5 DNs, Mt. Daibosatsu, Yamanashi Pref., 23-VI-1986, T. Abe & A. Sasai leg.; 1 DN, Suyama, Suntô-gun, Shizuoka Pref., 18-IX-1972, T. Okumura leg.; 1 DN, Mizugatsuka, Mt. Fuji, Shizuoka Pref., 20~25-VIII-2000, M. Nishikawa leg.; 26 DNs, Taga-machi, Inukami-gun, Shiga Pref., 3~6-VIII-2005, M. Hanatsuka leg.; 10 DNs, Akazai-Keikoku, Sasayama-shi, Hyogo Pref., 27-V-1979 & 3-VI-1979, Y. Hayashi leg.; 4 DNs, Mt. Amaishi-yama, Sasayama-shi, Hyogo Pref., 28-VII-2005, Y. Hayashi leg.; 4 DNs, Mt. Takashiro, Kisawa-son, Naka-gun, Tokushima Pref., 3~19-VII-2004, M. Yoshida leg.; 2 DNs, Mt. Odamiyama, Oda-chô, Kami-Ukena-gun, Ehime Pref., 19-VII-1993, L.-Z. Li leg.; 20 DNs, Yoshiki, Chikushino-shi, Fukuoka Pref., V~X-1985, N. Gyôtoku leg.; 4 DNs, Amura, Kami-Amakusa-shi, Kumamoto Pref., 19-VII-1989, I. Ohtsuka leg.; 6 DNs, Mt. Mitake, Tsushima Iss., Nagasaki Pref., 10-I-1969, T. Okumura leg. [SOUTH KOREA] 6 DNs, Yongshil, Mt. Hallasan, Cheju Is., 27-VII-1990, S. Nomura leg. [RUSSIAN FAR EAST] 3 DNs, Barabash-Levada, Hanka Lake, Primorskii Region, 1-VII-2004, A. Gorodinski leg. [CHINA] 4 DNs, Fa-Mu-Dui, Lin Zhi, Tibet, 12~27-VII-2005, native collector.

Distribution: Japan (Honshu, Miyake-jima Is., Shikoku, Kyushu, Tsushima Iss.), South Korea (Cheju Is.), Russian Far East (Primorskii Region) and China (Tibet).

Etymology: The specific name *uncinata*, Latin adjective meaning "barbed," refers to several barbed setae on hysterosomal dorsum characteristic of the new species.

Remarks: Although only the deutonymphal stage is known at present, the conformation of pretarsi and terminal setae of legs I to IV will justify the assignment of the new species to the genus *Pelzneria* Scheucher, 1957. This species is readily distinguished from all the known members of the genus by the following respects: 1) anterior margin of prodorsum usually well sclerotized; 2) among the dorsal hysterosomal setae, d_1, e_1 and h_1 much longer than the others and provided with a few minute barbs distally; 3) seta *w* on tarsus IV small, not longer than tarsal width at its insertion. As far as we know, none of the described species of histiostomatid mites has barbed setae on hysterosomal dorsum in the deutonymphal stage. The generic definition of *Pelzneria* will be fully discussed in the last paper of this series.

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REFERENCES

Cobb, N. A. (1917) Notes on Nemas. *Contributions to a Society of Nematology*, (5): 117–128.

Grandjean, F. (1939) La chaetotaxy des pattes chez les Acaridiae. *Bulletin de la Société zoologique de France* (*Paris*), 64: 50–60.

Griffiths, D. A., W. T. Atyeo, R. A. Norton and C. A. Lynch (1990) The idiosomal chaetotaxy of astigmatid mites. *Journal of Zoology* (*London*), 220: 1–32.

Dujardin, M. (1849) Additions au memoire sur les *Hypopus*. *Annales des Sciences naturelles* (*Paris*), *Zoologie*, 12: 259–265.

Keifer, H. H. (1953) Eriophyid studies XXI. *Bulletin of the California Department of Agriculture*, 42: 73.

Kurosa, K. (1987) Two new *Chaetodactylus* (Acari, Chaetodactylidae) associated with *Osmia* (Hymenoptera, Megachilidae) in Japan. *Kontyû, Tokyo*, 55: 373–381.

Kurosa, K. (2000a) Mites associated with insects and small mammals in Oda-chô, Fhime Prefecture, southwest Japan. In: Nature of Odamiyama. (eds., Odamiyama-no-Shizen-Henshû-Iinkai and E. Yamamoto) (1), pp. 897–946 (In Japanese, with English summary). Oda-chô, Ehime.

Kurosa, K. (2000b) A new species of *Histiostoma* (Acari, Histiostomatidae) associated with *Lathrobium* sp. (Coleoptera, Staphylinidae) in Japan. *Special Bulletin of the Japanese Society of Coleopterology*, (5): 27–35. Tokyo.

Mahunka, S. (1961) Contributions to the tyroglyphid fauna of Hungary (Acari). *Annales universitatis scientiarum Budapestinensis de Rolando Eötvösminatae* (*Sectio Biologica*), 4: 113–117.

Mašán, P. (1999) Mites (Acarina) associated with burying and carrion beetles (Coleoptera, Silphidae) and description of *Poecilochirus mrciaki* sp. n. (Mesostigmata, Gamasina). *Biologia, Bratislava*, 54: 515–524.

Oudemans, A. C. (1903) Notes on Acari VI. *Tijdschrift voor Entomologie*, 46: 20–24.

Oudemans, A. C. (1909) Acarologische Anteekeningen XXIX. *Entomologische Berichten*, 3: 23–24.

Scheucher, R. (1957) Systematik und Ökologie der deutschen Anoetinen. In: Beiträge zur Systematik und Ökologie Mitteleuropäischer Acarina, I (ed., Stammer, H. J.), pp. 233–384. Akademische Verlagsgesellschaft, Leipzig.

Sevastianov, B. D. (1970) Semejstvo Anoetidae Oudemans, 1904. In: Opredelitel Obitashix b Rotsve Kshechej. Sarcoptiformes. (eds., Gyljarov, M. C. and D. A. Krivolutskij), pp. 382–416. Nauka, Moscow.

Turk, F. A. (1945) Studies of Acari—second series: descriptions of new species and notes on established forms of parasitic mites. *Parasitology*, 36: 133–141.

摘要

クロシデムシ（甲虫目，シデムシ科）に便乗するヒゲダニに関する研究，I

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クロシデムシ *Nicrophorus concolor* Kraatz は日本から北部インドやヒマラヤにかけて広く分布する大形の甲虫で，小形の脊椎動物の死体を土中に埋めてそれに産卵し孵化した幼虫の給餌を行うなど興味深い習性をもつことが知られている．我々は日本各地と国外の数ヶ所で採集されたクロシデムシ成虫の多数の個体を調べて体表に付着しているヒゲダニ科の第2若虫を集め，つくば市で腐肉トラップからクロシデムシとともに得られた材料も含めて，分類学的に検討した．その結果，現在までに7種を明瞭に識別することができ，その全てが未記載種であることを確認した．この第1報では日本，韓国，沿海州およびチベットから得られた1種を *Pelzneria uncinata* と命名，記載する．この種は宿主の体上では大多数が鞘翅の裏面と下翅に見出され，形態的には1）前体部背面の前縁が明らかに硬化し濃色であること，2）後体部背面の d_1，e_1，h_1 の3対の毛が他の毛よりもかなり長く，末端部に数本の微棘を持つこと，3）第3脚跗節の毛 w が短小で長さがその挿入点における跗節の幅を超えないことなどで同属の既知種から容易に識別できる．