Podoribates cuspidatus, a new oribatid mite of the
family Mochlozetidae (Acari : Cryptostigmata)

By

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In the course of investigation on the intermediate hosts of anoplocephaline cestodes we found a new species of oribatid mite which is described below. The species seems to be not so abundant and only 2 specimens were collected from the surface layer of pasture soil in Utsunomiya, Central Japan. The first representative of the genus *Podoribates* Berlese, 1908 in Japan was *P. noyorii* Kishida and the present species will be the second member of the genus in our country.

Podoribates cuspidatus

Sakakibara et Aoki, sp. n.

(Figs. 1-7)

Type-locality: Utsunomiya-shi.

Material examined: Holotype (NSM-AC-P 35) — Utsunomiya-shi, Tochigi Prefecture, Central Japan; 17-X-1965; extracted by I. Sakakibara with Tullgren apparatus from the upper layer of pasture soil. Paratype (1 ex.) — the same data as the holotype. The types are deposited in National Science Museum, Tokyo.

Measurement: Length — 560 μ ; width — 445 μ .

Prodorsum: Rostrum rather pointed, without any incision on the anterior margin. Lamellae well developed, broad and widened anteriorly, terminating in marked cusps; the anterior tip of the cusp is nearly triangular, with a distinct inner notch bearing lamellar seta (Fig. 5). Many longitudinal, irregular wrinkles observed on the surface of lamellae; lamellae widely separated from each other and connected by a narrow, ribbon-like translamella which is weakly curved. Rostral setae more densely barbed and more sharply pointed than the lamellar as well as interlamellar setae. Ratio in length of these setae

as follows: 1 : 1.07 : 1.54. Interlamellar setae inserted almost on the dorsosejugal suture. Bothridium mostly covered by the anterior part of notogaster, leaving only its anterior margin exposed; the inner edge of bothridium a little pointed anteriorly in dorsal view. Sensillus roughened on the surface, being provided with a short peduncle exposed and a distinct oval head (Fig. 3).

Notogaster: Nearly as long as broad; the anterior border interrupted on the median part. Pteromorphae well developed, somewhat bending downward and protruding from the outline of hysterosoma in dorsal view. Notogastral setae lacking, only their insertion pores (alveoli) present (at least 6 pairs). Four pairs of marked areolae porosae; they are oval in shape; *Aa* the largest among them; the remainder approximately of the same size. Opening of latero-abdominal gland situated anterior to *Aa*. Notogastral fissure *im* aligned obliquely or transversely, located antero-interior to *gla*.

Pedotecta: *Pd.* 2 elongate and spatulate, being directed anterolaterally. *Pd.* 3 observed as a broadly triangular projection.

Ano-genital region: Anal aperture as long as broad; each anal plate (Fig. 2) has 2 insertion pores for anal setae, of which the posterior one situated closer to the inner edge than the anterior one. Adanal fissure *iad* aligned longitudinally, situated close to the lateral margin of anal aperture and separated from this for a distance equal to the length of fissure, at most. Three pairs of short adanal setae; *ad*₃ located at the level a little anterior to *iad*. The interspace between anal and genital apertures about twice as long as the latter. Genital aperture slightly broader than long, provided with 6 pairs of short setae. A pair of minute aggenital setae present; their mutual distance equal to or a little shorter than the width of anal aperture.

Epimeral region: Three pairs of apodemata present; *apo.* 2 very short and observed as round

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Figs. 1~7. *Podoribates cuspidatus* Sakakibara et Aoki, sp. n.

- 1) Genital plate ; 2) Anal plate ; 3) Sensillus ; 4) Tarsus I (paraxial) ;
5) Lamellar cusp ; 6) Dorsal ; 7) Ventral.

tubercles ; *apo. sj* the longest ; *apo. 3* a little shorter than *apo. sj*. Sternal ridge lacking. The formula for epimeral setae may be : 3-1-3-3. Most of the setae are rather long and barbed.

Gnathosoma : Chelicera of a normal shape ; 2 minute spines observed on the paraxial side ; seta *cha* strong and roughened. Palp 5-segmented ; the setal formula : 0-2-1-3-9. Labio-

genal articulation nearly horizontal. Setae *h* and *m* distinctly barbed ; setae *a* curved and shorter than the above-mentioned. These 3 pairs of setae nearly of the same thickness.

Legs : All the legs tridactyle ; the median claw thicker and more strongly curved than the laterals. Tarsus IV somewhat longer than tarsi I—III which are nearly of the same length.

Table 1. Number of setae on the segments from trochanter to tarsus of each leg.

	Tr	Fe	Ge		Ti		Ta		
	t	t	t	(s)	t	(s)	t	(s)	(f)
I	1	4	4	(1)	6	(2)	22	(2)	(1)
II	1	5	4	(1)	5	(1)	16	(2)	(0)
III	2	3	2	(1)	4	(1)	14	(0)	(0)
IV	1	2	2	(0)	4	(1)	10	(0)	(0)

t: a total number of setae.

s: number of solenidions.

f: number of famuli.

The similar relationship is observed in the case of tibiae. Number of setae on each segment of legs I~IV is summarized in Table 1. Tarsus I: Solenidia terminating in fine tips; ω_2 longer and more sharply pointed than ω_1 . Setae p and u glabrous and pointed. Seta s also glabrous, but rather blunt at tip. Famulus short and rod-like. The remaining setae more or less barded. Seta ft' curved and distinctly shorter than ft'' . Tibia I: the dorsodistal portion strongly projected, bearing 2 long solenidia, of which the posterior one is more than twice as long as the anterior one.

Remarks: The present species differs from the remaining members of the genus *Podoribates* by the conspicuous lemmellar cusps. Furthermore, the extremely reduced anal setae separates *P. cuspidatus* from *P. foveolatus* Hammer, 1958. In Japan, *Podoribates noyorii* Kishida was pre-

viously described from Nagano Prefecture (C. Japan). Unfortunately, however, we could not have chance to examine the type and the original description of the species. From Dr. Kishida's figures published later in 1958 it is almost undoubtful that *P. noyorii* is distinctly different from *P. cuspidatus* in the long peduncles of sensilli.

REFERENCES

- 1) Berlese, A. (1908): Redia, 5: 1-15. — 2) Hammer, M. (1958): Biol. Skr. Dan. Bid. Selsk., 10 (1): 1-129, pls. 1-34. — 3) Kishida, K. (1958): Noyaku Tayori, 5(7): 6-7, figs. 1-2.

摘 要

マルツチダニ科の一新種について

(ダニ目: 隠気門亜目)

筆者の一人である榎原は栃木県宇都宮の放牧地において条虫類の中間宿主となるササラダニ類の調査中であるが、その際に新種とみなすべきササラダニの一種を見出した。本種はマルツチダニ科(新称) Mochlozetidae に属するもので、筆者らはこれを *Podoribates cuspidatus* sp. n. と命名し記載した。本邦産の *Podoribates* 属としては、すでに岸田が *P. noyorii* Kishida を記載しているが、今回見出された種とは胴感毛(sensilli)の形態によつて区別できる。現在のところ本種の体内からは条虫の擬囊尾虫は発見されていない。