A New Species of the Genus *Cosmopirnodus* (Oribatida: Oripodidae) Caught by Water Pan Traps Settled on the Rooftop of Buildings in Kanagawa Prefecture, Central Japan

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ABSTRACT

A description of *Cosmopirnodus angulatus* sp. n. is given. The new species resembles the Vietnamese species, *C. tridactylus* Mahunka, 1988, but distinguishable from the latter by relatively shorter apodemes, more angular body shape, and shorter setae of notogaster, anal plates and adanal region.

Key words: Oribatida, new species, *Cosmopirnodus angulatus*, water pan traps, Central Japan

From the end of August 1995 to the end of October 1996, one of the authors, Ichisawa, carried out a periodical study of the aerial dispersal of oribatid mites and collembolans using water pan traps settled on the rooftop of buildings in Kanagawa Prefecture, Central Japan. In total, 46 species of oribatid mites were collected, including a species of the genus *Cosmopirnodus* described here as new. Aoki and Ohkubo (1974) published a revisional work on the family Oripodidae, but none of the genus *Cosmopirnodus* has been reported from Japan.

Cosmopirnodus angulatus sp. n.

(Figs. 1-10)

Color. Light yellow-brown.

Measurements (in 3 specimens). Body length: 376 - 420 μm ; width: 201 - 237 μm .

Prodosum. Prodosome covered by large polygonal foveolae with rounded corners. Rostrum rounded. Interlamellar, lamellar and rostral setae slightly barbed, pointed at tip. All setae subequal in length. Lamellae narrow, situated marginally. Sensillus clavate, faintly barbed (Fig. 4), completely hidden by pteromorphae in dorsal view (Fig. 1).

Notogaster. Large foveolae-like structure found on notogaster. The structure probably not true foveolae, but shallow, semi-ringed (often interrupted at one or two points) grooves (Fig. 5). Dorsosejugal suture with three convexities, the lateral two relatively strong. Ten pairs of notogastral setae thick and smooth, pointed at apex. Seta *ti* never reaching setal pore of *te*. Three pairs of sacculi, a pair of lateroabdominal gland opening *gla*, and a pair of fissure *im* recognized. Sacculi *Sa* situated in a level anterior to seta *ta*. Fissure *im* situated posterior to gland opening *gla* and lateral to sacculi *S_l*.

Ventral side. Surface of ventral side covered by longitudinal pits of various sizes and shapes. On mentum, epimera, genital plates and central region of ventral plate, these pits

Figs. 1-8. *Cosmopirnodus angulatus* sp. n. 1: Dorsal side. 2: Ventral side. 3: Surface structure of mentum. 4: Right sensillus in dorsal view. 5: Surface structure of notogaster. 6: Surface structure of ventral plate between genital and anal plates. 7: Genital plates. 8: Anal plates. (Fig. 7 is based on holotype: NSMT-Ac 10840, the others are on paratype: NSMT-Ac 10841)

Figs. 9-10. *Cosmopirnodus angulatus* sp. n. 9: Left leg I (antiaxial). 10: Right leg IV (paraxial). (Based on paratype: NSMT-Ac 10841)

small and sparse. In posterolateral region, the pits fused each other, forming foveolae-like structure as on dorsal side (Fig. 6). Epimeral setal formula: 3-0-2-2, all setae thin and smooth. Setae *1c* located very near to the margin of pedotecta I, very hard to see. Apodemes relatively poorly developed, sternal apodeme absent, right and left apodemes II never touching with each other (Fig. 2). Genital plates with 2 pairs of setae (Fig. 7), but in one specimen 2 setae on the right plate and 3 on the left (Fig. 2). All genital setae situated on the anterior part. One pair of aggenital setae present. Genital and aggenital setae thin and smooth. Two pairs of anal setae and 3 pairs of adanal setae rather thick and smooth, never extending beyond the outline of notogaster in ventral view. No adanal fissures *iad* recognized.

Legs. All legs tridactylous. Median claw thick and strong, with a slight serration on its dorsal edge. Lateral claws thinner, bidentate at tip and with a relatively distinct serration on its dorsal edge.

Remarks. In the genus *Cosmopirnodus*, only 2 species have been described. The type species of this genus, *C. pulcherrimus* Balogh, 1970, from New Guinea, is easily distinguished from the other known species and the new species by smaller and thinner body, and concave dorsosejugal suture (in Balogh's description, there are some mistakes; the epimeral setal formula 2-2-2-2 and monodactylity of legs are correctly 3-0-2-2 and tridactylity, respectively; see Mahunka, 1988). *C. angulatus* sp. n. resembles *C. tridactylus*

Mahunka, 1988, from Vietnam, in having three convexities of dososejugal suture, but distinguishable from the latter by (1) the less developed apodemes (right and left apodemes II are never fused), (2) the more prominent humeral projections and lateral angles, (3) the shorter notogastral setae (seta *ti* never reaching setal pore of *te*), and (4) the shorter anal and adanal setae (any adanal seta never reaching any pore of anal setae).

Type series. Holotype (NSMT-Ac 10840): Kashiwagaya, Ebina City, Kanagawa Prefecture, 23-I-1996, K. Ichisawa, caught by water pan trap settled on the rooftop of a building (about 15m at height) located in the residential area at about 65m above sea level. One paratype (NSMT-Ac 10841): Mizuhiki, Atsugi City, Kanagawa Prefecture, 8-I-1996, K. Ichisawa, caught by the same method as holotype, on a building (about 15m at height) located in the residential area at about 20m above sea level. One paratype (NSMT-Ac 10842): Aizawa, Seya-ku, Yokohama City, Kanagawa Prefecture, 29-X-1996, K. Ichisawa, caught by the same method as holotype, on a building (about 12m at height) located in the residential area at about 65m above sea level. The type series is deposited in the collection of National Science Museum, Tokyo.

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摘 要

神奈川県内の建物屋上に設置した水盤トラップによって得られたアラメマブカダニ属の1新種(ササラダニ目: マブカダニ科) 一澤 圭・青木淳一(横浜国立大学・環境科学研究センター)

神奈川県内の建物屋上に水盤トラップを設置し、風で飛ばされてくるササラダニとトビムシを捕獲していたところ、アラメマブカダニ属(新称) *Cosmopirnodus* の1新種が得られ、アラメマブカダニ(新称) *Cosmopirnodus angulatus* sp. n. と命名し記載した。本種は *C. tridactylus* Mahunka, 1988 によく似ているが、第2股条が短く左右のそれが接していないこと、後体部肩部と翼状突起の角がより突出し、全体に角張った体型であること、背毛が短く、*ti* が *te* の毛穴に届かないこと、肛毛、肛側毛が短く、肛側毛が肛毛の毛穴に届かないことなどによって区別される。なお、本属の種の分類学的な報告は本邦初である。