Oribatid Mites of the Family Otocepheidae from Tian-mu Mountain in China (Acari: Oribatida)\(^1\)

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Abstract Dolicheremaeus wangi sp. n. is described from Tian-mu Mountain, Zhejiang Province, China. Dolicheremaeus infrequens hachijoensis Aoki and Trichocepheus erabuensis Aoki, are reported for the first time from China.

As members of the Sino-Japanese cooperative work on soil animals the authors collected three species of oribatids belonging to the family Otocepheidae at Tian-mu Mountain in Zhejiang Province. Of these, two species identified with Dolicheremaeus infrequens hachijoensis Aoki, 1967, and Trichocepheus erabuensis Aoki, 1965, have hitherto been known only from the subtropical regions of Japan, and the remaining one seems to be a new species of the genus Dolicheremaeus.

Dolicheremaeus wangi sp. n. 
(Figs. 1–3)


Prodorsum. Lamellar ridge hardly reaching rostral margin; the posterior part showing double structure, being accompanied by a short inner ridge. Lateral lamelliform expansion well developed. Rostral and lamellar setae strongly curved inward, densely barbed on outside. Interlamellar seta directed upward, weakly and sparsely barbed. Sensillus with a long, slender pedicel curving backward, bearing a weakly swollen spindle-shaped head. Exobothridial seta long. Lateral prodorsal condyle (co. pl) trapezoid with rounded corners. Ventral bothridial plate triangular with rounded tip.

Notogaster. Notogaster rather stout 1.15–1.22 × as long as wide. Lateral notogastral condyle (co. nl) large and triangular, overlapping tip of lateral prodorsal condyle. Ten pairs of notogastral setae thin, long and whip-like: seta ti reaching insertion

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of \( r_3 \); seta \( te \) reaching insertion of \( ms \): seta \( r_3 \) reaching posterior margin of notogaster. A faint, short ridge found lateral to insertion of setae \( ta \) and \( te \). Lyrifissure \( im \) situated closely median or medioanterior to gland opening (\( gla \)). Surface of notogaster showing weak foveolation and fine veiny structure.

**Ventral side.** Epimeral and ventral plates mostly showing veiny pattern of surface structure. Genital plate wrinkled longitudinally, with 4 setae curving toward

Figs. 1-3. *Dolicheremaeus wangi* sp. n.—1. Dorsal side. 2. Lateroposterior part of prodorsum, showing sensillus, bothridium, exobothridial seta and lateral condyles on prodorsum and notogaster. 3. Anal plate.
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posterior direction. Anal plate covered with small granules except on the smooth posterior part (Fig. 3), with 2 long setae. Three pairs of adanal setae long, \( ad_3 \) being situated nearly in the level of anterior margin of anal opening. Adanal fissure short, aligned parallel to lateral margin of anal aperture. Setal formula of epimerata: 3–1–3–3.

**Legs.** All legs monodactyle. Type of ultimate setae: L-S-S-S. Solenidion \( \omega_1 \) on tarsus I not so long to reach tip of claw, but just reaching basal end of claw.


Remarks. The new species is most closely related to *Dolicheremaeus oginoi* (AOKI, 1965) from Thailand, but is distinguishable from the latter by 1) long exobothridial setae, 2) long notogastral setae (RLN of the setae are 25–41, while those are 21–30 in *D. oginoi*), 3) granulate anal plates, and 4) larger body size (the body length of *D. oginoi* ranges 569–675 \( \mu m \)).

In the figure of the original description of *Dolicheremaeus oginoi*, AOKI (1965a) failed to draw lateral lamelliform expansions and exobothridial setae. A re-examination of the type series of the species revealed that *D. oginoi* has narrow lateral lamelliform expansions (spa. l.) and very short exobothrial setae (ex). The expansions and the setae are well developed in the new species.

The name of the new species is dedicated to Mr. Xiao-zu WANG, the former professor in Shanghai Institute of Entomology, who made an initial contribution to the study of oribatid mites in China.

**Dolicheremaeus infrequens hachijoensis** AOKI

(Figs. 4–8)


Measurement. Body length 1,110 \( \mu m \), width 535 \( \mu m \).

Collecting data: 1 ex. Tian-mu Mountain (St. 1), Zhejiang Province, China. 2–IX–1989. J. AOKI, S.-h. Hu and X.-z. WANG.

The species *Dolicheremaeus infrequens* has 4 subspecies: *D. infrequens infrequens* AOKI, 1967 from Central and West Japan, *D. infrequens hachijoensis* AOKI, 1967 from Hachijo Island of Japan, *D. infrequens amamiensis* AOKI, 1982 from Amami-Oshima Island of South Japan and *D. infrequens taiwanus* AOKI, 1991 from Taiwan. In order to examine which subspecies the Chinese specimen belongs to, the authors made “star-graph analysis” as shown in Fig. 4. As the result of the examination the shape and size of the graph of the Chinese specimen is most similar to that of *D. infrequens hachijoensis* and the authors decided the specimens from Tian-mu Mountain should be identified as this subspecies *hachijoensis*. 
Trichotocepheus erabuensis AOKI
(Figs. 9–10)

Trichotocepheus erabuensis AOKI, 1965b, p. 325, figs. 130–135.

Measurement. Body length 1400 µm, width 680 µm.
Collecting data: 1 ex. Tian-mu Mountain (St. 3), Zhejiang Province, China. 2–IX–1989. J. AOKI, S.-h. Hu and X.-z. WANG.

The specimens from Tian-mu Mountain are well in accord with the Japanese species Trichotocepheus erabuensis AOKI in having long, whip-like notogastral setae, strong neotrichy in adanal setae and distinct angulation on the median side of lateral notogastral condyle. The Chinese specimens, however, show some differences in that the notogaster exhibits no neotrichy except for one specimen with one pair of setal pore between setae r₁ and r₂ and femur III bears 3 setae instead of 2. The authors do not consider such differences so important to separate the Chinese form as a new subspecies, because the number of neotrichial setae tends to be much flexible.
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References
