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**ON NORTHWESTERN DISTRIBUTION OF THE FAMILY CADDIDAE  
(OPILIONES) IN ASIA**

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**Summary.** The harvestmen *Caddo agilis* Banks, 1892 (Opiliones: Caddidae) is recorded for the first time from Primorskii Krai (Russia). It is the northwestern boundary of the family Caddidae in Asia.

**Key words:** harvestmen, fauna, new record, Russian Far East.

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**Резюме.** Сенокосец *Caddo agilis* Banks, 1892 (Opiliones: Caddidae) впервые указывается для Приморского края (Россия), что представляет крайнюю северо-западную границу распространения семейства Caddidae в Азии.

**INTRODUCTION**

The Caddidae Banks, 1892 is small opilionid family nowadays included one genus *Caddo* Banks, 1892 and characterized by Amphipacific range.

The new data on distribution, habitat occurrence, and morphological features of *Caddo agilis* are given in present paper. All specimens were collected by hand picking by M.E. Sergeev and deposits in the E.V. Prokopenko personal collection. Photographs were taken with an Olympus SZX16 stereomicroscope and an Olympus DP74 digital camera then stacked using Helicon Focus software. All measurements are in mm.

**NEW RECORD**

**Family Caddidae Banks, 1892**

**Genus *Caddo* Banks, 1892**

NOTES. All known species of *Caddo* are small (up to 3 mm) and inconspicuous, with thin, long legs. Very large eyes and eye tubercle, which occupy most of the carapace, are immediately apparent (Figs 1, 2, 4).

SPECIES INCLUDED. The genus *Caddo* consist of two extant species, *C. agilis* Banks, 1892 and *C. pepperella* Shear, 1975, and one fossil species *C. dentipalpus* (Koch et Berendt, 1854) (Baltic and Bitterfeld amber, Oligocene). Both extant species distributed in U.S.A., Canada and Japan, in addition to that *C. agilis* known from Kuril Islands and *C. pepperella* – from South Korea (Suzuki 1958; Shear, 1975, 1996; Giribet & Kury, 2007; Groh & Giribet, 2015).

***Caddo agilis* Banks, 1892**

Figs 1–7

MATERIAL EXAMINED. **Russia:** Primorskii Krai, Sikhote-Alin Biosphere Reserve, natural landmark Blagodatnoe, upper part of Sukhoy stream, slopes of the Lysaya hill, 44.9987° N, 136.5017° E, 9–10.VII 2020, 5 ♀; natural landmark Abrek, hillside in Skrytaya river valley (45.0982° N, 136.6908° E), 3–5.VII 2020, 11 ♀, coll. M.E. Sergeev.

REMARKS. The morphological features of females from Primorskii Krai (Russia), North America and Japan are the same (Figs 1–7). The specimens collected in North America are slightly larger than Japanese, and our material contains the smallest individuals (Table 1). The length of palp and legs of specimens from Primorskii Krai are given in Table 2.

Table 1. Measurements of female body of *Caddo agilis*

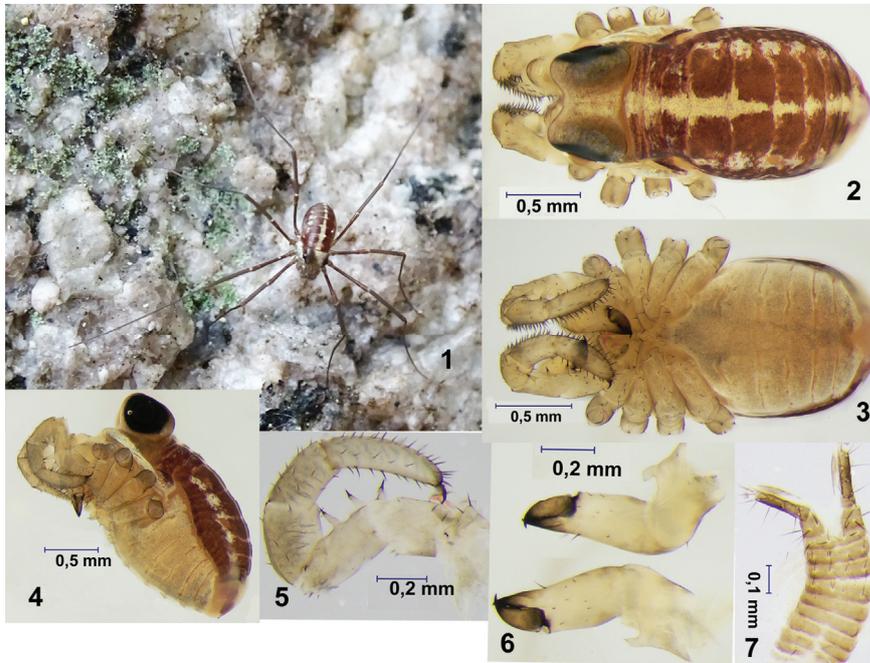
Data source	Russia, Sikhote-Alin Reserve (present paper)	USA, Michigan, Pennsylvania (Gruber, 1974)	USA, Pennsylvania (Shear, 1975)	Japan, Hokkaido (Suzuki & Tsurusaki, 1983)
Body's measurements				
Length of body	2.1–2.4	2.7	3.0	2.3–2.5
Length of cephalothorax	0.8–1.6	–	–	0.8–1.1
Width of cephalothorax	0.83–1.3	1.26	–	1.1–1.3
Width of abdomen	0.9–1.4	1.32	–	1.1–1.3
Length of eye tubercle	0.52–0.8	0.65	–	0.61–0.64
Width of eye tubercle	0.75–1.1	–	1.4	1.0–1.1

Table 2. Length of palp and legs of *Caddo agilis* (females from Sikhote-Alin Reserve) (in mm)

Appendages	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palpus	0.3–0.6	0.3–0.5	0.3–0.7	–	0.6–0.7	1.5–2.5
Leg I	1.5–2.6	0.5–0.7	2.1–3.5	2.8–5.7	4.2–7.6	11.1–20.1
Leg II	1.8–2.4	0.5–0.6	2.3–3.3	3.7–4.7	5.4–7.1	13.8–18.1
Leg III	2.1–3.5	0.5–0.7	2.8–4.3	4.1–6.9	5.6–7.9	15.1–23.3
Leg IV	1.8–3.0	0.5–0.7	2.8–4.3	4.7–8.1	7.1–9.3	16.9–25.4

DISRIBUTION. Russia: Primorkii Krai (first record), Kuril Islands, Sakhalin Island (personal communication of A. Chemeris). – USA, Canada, Japan (Suzuki, 1958; Shear, 1975; Cokendolpher & Lee, 1993; Giribet & Kury, 2007; Groh & Giribet, 2015; Shultz & Regier, 2009; Shultz, 2018).

HABITAT AND BIOLOGY. In the North America, *Caddo agilis* is usually found in very humid, densely shaded areas, such as ravines, and there is usually in mixed and coniferous



Figs 1–7. *Caddo agilis* female. 1 – alive specimen, 2 – body, dorsal view, 3 – same, ventral view, 4 – same, lateral view, 5 – palpus, lateral view, 6 – chelicerae, lateral view, 7 – ovipositor.



Figs 8, 9. Habitats of *Caddo agilis* in Sikhote-Alin Biosphere Reserve. 7 – natural landmark Blagodatnoe, 8 – natural landmark Abrek. (Photo M.E. Sergeev).

forests. Specimens have also been taken from moss, from beneath logs and stones, from the trunks and the outside walls of buildings (Shear, 1975). In Japan, *C. agilis* lives in similar biotopes: in the deciduous broad-leaf forest with Sakhalin fir on tree trunks near the ground (Suzuki & Tsurusaki, 1983). In the Sikhote-Alin Biosphere Reserve this species was found in the shaded stone slopes with rich leaf litter, moss and lichen (Figs. 7, 8). The harvestmen not moved actively over surfaces such as it was observed in Maryland (Shultz, 2018), but hidden under stones. This species is predominately parthenogenetic. Males are rare in most population in the North America (Shear, 1975) and Japan. In Hokkaido, the proportion of males in the population was only 1.3 % (Suzuki & Tsurusaki, 1983). No males were found in the Sikhote-Alin Reserve.

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