



One new species of the genus *Sinocyrtaspis* Liu, 2000 (Orthoptera: Tettigoniidae: Meconematinae) from Hubei, China

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The genus *Sinocyrtaspis* Liu, 2000 is endemic to China and currently includes seven species: *Sinocyrtaspis cardia* Wang, Shi & Chang, 2019, *S. hengshanensis* Wang, Shi & Chang, 2019, *S. huangshanensis* Liu, 2000, *S. lushanensis* Liu, 2000, *S. megalobia* Wang, Xin & Shi, 2020, *S. spina* Shi & Du, 2006 and *S. truncata* Liu, 2000. These species are distributed in Anhui, Zhejiang, Jiangxi, Hunan, Guangxi and Guizhou. The genus can be distinguished from other known genera of Meconematini by: male metazona of pronotum is markedly raised, expanded laterally and prolonged posteriorly; genitalia sclerotized, robust and extending posteriorly, reaching or surpassing posterior margin of subgenital plate.

In this paper, one new species from Hubei, China is described as *Sinocyrtaspis hubeiensis* sp. nov. All type specimens are preserved in the Museum of Hebei University.

The specimens were studied and compared using a Nikon-SMZ-1500 stereomicroscope. Morphological images were taken using Leica M205A digital imaging system. The photos were edited using Adobe Photoshop CC 2019. Measurements of specimens were taken using vernier calipers.

The following conventions were adopted: body length—distance from apex of fastigium verticis to posterior margin of 10th abdominal tergite in the midline; pronotum length—distance from anterior to posterior margins of pronotum in the midline; hind femur length—distance from base of hind femur to apex of genicular lobe.

Genus *Sinocyrtaspis* Liu, 2000

Sinocyrtaspis Liu, 2000, *Zoological Research*, 21(3): 219 [English, 224]; Chang, Bian & Shi, 2012, *Zootaxa*, 3495: 83; Wang, Liu & Li, 2015, *Zootaxa*, 3941(4): 537; Wang, Shi & Chang, 2019, *Zootaxa*, 4609(1): 128; Wang, Xin & Shi, 2020, *Zootaxa*, 4718(4): 584.

Type species: *Sinocyrtaspis lushanensis* Liu, 2000.

Generic diagnosis. Body small, robust. Male pronotum strongly prolonged posteriorly, metazona markedly raised, expanded laterally; posterior area of lateral lobe expanded ventrally. Female pronotum short, not prolonged, posterior margin of lateral lobe gradually narrowing. Fore tibial tympana open on both sides; hind tibia with 1 pair of dorsal apical spurs and 2 pairs of ventral apical spurs. Male tegmina short, completely covered by pronotum; female tegmina reduced; hind wings absent. Male 10th abdominal tergite markedly prolonged posteriorly, medially split or emarginate; genitalia sclerotized, robust and extending posteriorly, reaching or surpassing posterior margin of subgenital plate. Female 9th abdominal tergite arcuately concave at posterior margin, lateral areas extending posteriorly. Ovipositor moderately upcurved, both dorsal and ventral margins smooth.

Sinocyrtaspis hubeiensis sp. nov.

Chinese name 湖北华穹螽

(Fig. 1)

Description. Male. Body small, robust. *Head.* Fastigium verticis conical, apex rounded, with a thin median sulcus. Eyes globular, distinctly protruding forwards (Fig. 1A–B). Apical segment of maxillary palpus slightly longer than subapical one, apex swollen.

Thorax. Pronotum markedly prolonged posteriorly, reaching middle area of 7th abdominal tergite; anterior margin straight, posterior margin obtusely rounded; metazona distinctly raised and expanded outward; lateral lobe longer than high, markedly expanded, humeral sinus absent (Fig. 1A–B).

Tegmina and wings. Tegmina short, completely covered by pronotum, invisible in lateral view; hind wings absent (Fig. 1B).

Legs. All femora without spines on ventral surfaces; apices of genicular lobes obtusely rounded. Fore coxa with one short spine; fore tibial tympana open on both sides; fore tibia with 4 long spines on inner ventral margin and 4 long spines on outer ventral margin. Middle tibia with 3 long spines on inner ventral margin and 5 long spines on outer ventral margin. Hind tibia with 18–21 short spines on inner and outer margins of dorsal surface, bearing 2 pairs of ventral apical spurs and 1 pair of dorsal apical spurs.

Abdomen. Lateral surfaces of 9th abdominal tergite protruding backward (Fig. 1G). Posterior area of 10th abdominal tergite with a pair of broad and depressed lateral lobes, widely separated by a deep V-shaped notch; apices rounded (Fig. 1D–E). Cercus moderately elongate; base stout, then laterally compressed, with a shallow longitudinal sulcus along inner surface; dorsal margin near mid-part bearing a narrow lamellate projection; distal half distinctly incurved, gradually tapering, apex rounded (Fig. 1D–E). Genitalia sclerotized, slightly surpassing posterior margin of subgenital plate; base broad, middle area slightly constricted inward; subapical area bent dorsad; near apex with a pair of conical processes on lateral areas, apices bluntly rounded; apex bluntly rounded (Fig. 1F–G). Subgenital plate rectangular, with a median carina; basal margin straight, basal area slightly broadened; posterior margin with a shallow triangular concavity; styli short, inserted on lateral margins of apical area (Fig. 1C).

Coloration. Body green when alive. Eyes light brown. Prozona of pronotum bears a pair of longitudinal blackish-brown stripes, each with a longitudinal yellow stripe along its outer margin; stripes becoming paler on metazona (Fig. 1A–B). Apices of spines on hind tibiae blackish brown. Apices of all third tarsomeres and claws brown. Genitalia blackish brown near the middle area of proximal part (Fig. 1F).

Female. Unknown.

Material examined. Holotype: ♂, Houhe, Wufeng, Hubei, 18 July, 2023, coll. Yueting Duan. Paratypes: 1♂, Houhe, Wufeng, Hubei, 17 July, 2023, coll. Mengjia Zheng; 1♂, Houhe, Wufeng, Hubei, 18 July, 2023, coll. Mengjia Zheng. Other specimens: 3♂, Houhe, Wufeng, Hubei, 18 July, 2023, coll. Yueting Duan.

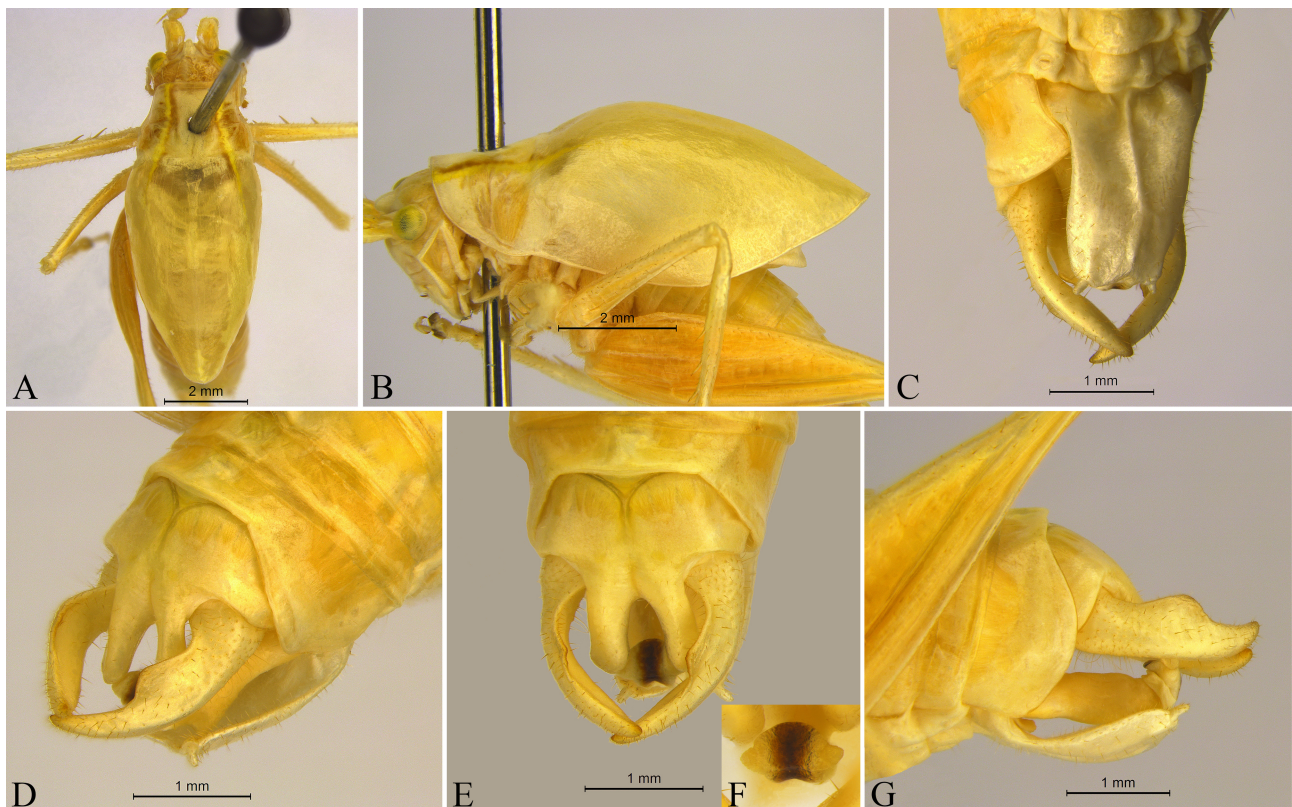


FIGURE 1. *Sinocyrtaspis hubeiensis* sp. nov., male: A–B. head and pronotum: A. dorsal view; B. lateral view; C–G. apex of abdomen: C. ventral view; D. dorso-lateral view; E. dorsal view; F. genitalia in dorsal view; G. lateral view.

Measurements (mm). Body: ♂ 10.2–10.6; pronotum: ♂ 7.1–7.4; hind femur: ♂ 8.4–8.8.

Distribution. China (Hubei).

Discussion. This new species resembles *Sinocyrtaspis megalobia* Wang, Xin & Shi, 2020, but differs from the latter mainly in: male 10th abdominal tergite prolonged posteriorly, forming a pair of broad and depressed lateral lobes, widely separated by a deep V-shaped incision, apices obtusely rounded (Fig. 1E); cerci compressed, surpassing posterior margins of subgenital plate and genitalia, with narrow lamellate processes near middle area on dorsal surface (Fig. 1D–E).

Etymology. The name of the new species refers to Hubei, China, the type locality.

Acknowledgements

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