

A new species of *Thysanarthria* Orchymont from China, with the first record of *T. bifida* (Coleoptera: Hydrophilidae) in Vietnam

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Abstract: A new species, *Thysanarthria rara* sp. nov., is described from China (Hunan, Guangdong). A photo of male genitalia of the new species is provided. This is the third known species in this genus from China. A key to all species known from China is given. *T. bifida* Fikáček, 2019 is recorded for the first time from Vietnam (Tonkin, Hoa-Binh).

Key words: Chaetarthriinae; taxonomy; Oriental Region; key

中国刻纹牙甲属 *Thysanarthria* 一新种及越南新记录 *T. bifida* (鞘翅目: 牙甲科)

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摘要: 记述来自中国湖南和广东的牙甲科 1 新种——罕刻纹牙甲 *Thysanarthria rara* sp. nov., 提供了中国该属已知种的检索表。本新种与中国台湾省的楚氏刻纹牙甲 *T. chui* Fikáček & Liu, 2019 相近, 可以通过以下特征相区别: 鞘翅颜色较浅; 头和前胸背板具明显皮革状纹; 雄性外生殖器基叶在侧叶基部明显加宽, 侧叶基部外缘不强烈向外扩展, 中部 1/3 适度向外扩展 (楚氏刻纹牙甲 *T. chui* 雄性外生殖器见 Fikáček & Liu, 2019: Figs. 8A–E); 新种与分布在云南的查氏刻纹牙甲 *T. championi* (Knisch, 1924) 也可通过雄性外生殖器特征相区别 (查氏刻纹牙甲 *T. championi* 雄性外生殖器基叶不明显宽于侧叶基部, 侧叶外缘几乎均匀弧形, 端部 1/4 略波曲 Fikáček & Liu, 2019: Figs. 7A–E)。文章还首次记录了越南 (Tonkin, Hoa-Binh) 的凹刻纹牙甲 *T. bifida* Fikáček & Liu, 2019。

关键词: 凯牙甲科; 分类; 东洋区; 检索表

Introduction

Thysanarthria Orchymont is a small genus that contains 16 known species in the world (Hansen 1999; Hebauer 2001; Short & Fikáček 2011; Fikáček & Liu 2019), of which 11 species occur in the Oriental Realm, one species in the Oriental and Palearctic, one species in the Palearctic, and three species in the Afrotropical Realm (Fikáček & Liu 2019). This genus was reviewed by Fikáček & Liu (2019) in detail.

In 2018, the senior author collected one male *Thysanarthria* from Guangdong, China. While sorting other beetles in the Biological Museum at Sun Yat-sen University, we found

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another male specimen that was collected in Hunan. There is no doubt that they belong to an undescribed species. It is the seventeenth known species in this genus in the world and the third in China.

Material and methods

Specimens of each species were dissected, and the genitalia placed in a drop of glycerol on glass slides. After photography, the genitalia were transferred to a plastic plate attached to the respective specimen. Photographs of genitalia were taken using an Olympus SZX7 stereomicroscope, and subsequently combined with Auto-Montage software. SEM images were taken by a Phenom Pro, then aligned in Helicon Focus. All images were processed and plates were made in Photoshop CC 2019. Exact label data are cited for the material. Label data in Chinese are translated into English.

This genus was described by Hansen (1991). The diagnosis and photos of the characters of this genus were provided by Fikáček & Liu (2019). As stated by Fikáček & Liu, “*Thysanarthria* species are very similar to each other, with male genitalia being the principal and often the only character distinguishing species” (Fikáček & Liu 2019). For this reason, we did not describe the general characters herein.

Examined specimens are deposited in Chinese Academy of Sciences, Institute of Zoology, Beijing, China (IZCAS) and Entomological collection of Sun Yat-sen University, Guangzhou, China (SYSU).

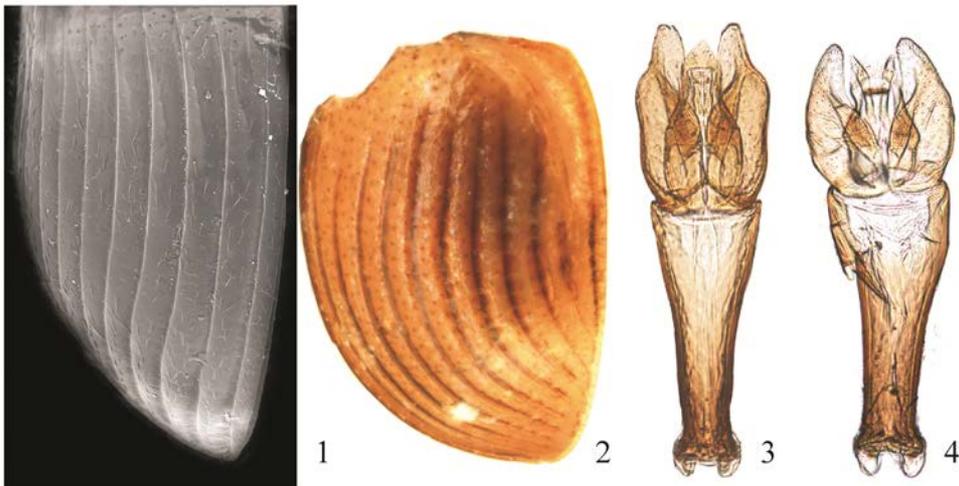
Taxonomy

1. *Thysanarthria rara* sp. nov. (Figs. 1–3)

Description. Body length 1.6 mm, maximum body width 1.0 mm. Head and labrum black; pronotum uniformly yellowish brown in the middle; elytra uniformly yellow brown as pronotum; legs brown. Head with distinct microsculpture on interstices; punctation sparse, each puncture bearing a pointed seta. Eyes separated by 3.5× the width of one eye in dorsal view. Pronotum with sparse setiferous punctation similar to that on head; interstices with microsculpture that is somewhat weaker than on head. Elytra with 10 striae sharply impressed (Fig. 1) except anteromedially (near scutellar shield) where neither striae nor serial punctures are visible (Fig. 2); intervals weakly convex at midlength and near apex; interval punctation sparse, setiferous; interstices without microsculpture. Aedeagus (Fig. 3) 0.48 mm long. Phallobase distinctly wider at base of parameres, clearly constricted more apically. Parameres wide basally, outer face almost straight at basal third, moderately expanded outwards at middle third, but strongly narrowed at apical third, apex projecting into narrow rounded lobe. Median lobe narrow apically, rounded and membranous at apex; gonopore transversely oval, situated in apical fourth.

Holotype. ♂ (SYSU), **China**, Hunan Prov., Qianyang County, Anjiang, 27.314°N, 110.149°E, light trap, 20-VI-1965, Zhenyao CHEN leg. **Paratype.** 1♂ (SYSU), Guangdong Prov., Shaoguan Prefecture, Chebaling Nature Reserve, light trap, 23°14′46″N, 113°33′56″E, 496 m, 28–29-V-2017, Fenglong JIA, Shishuai WANG & Zulong LIANG leg.

Diagnosis. *Thysanarthria rara* appears close to *T. chui* Fikáček & Liu, 2019 from China (Taiwan), but can be easily distinguished from the latter by lighter color of elytra; head and pronotum with distinct shagreen; phallobase distinctly wider at base of parameres, outer face of parameres not so strongly expanded outwards basally, moderately expanded outwards at middle third (aedeagus of *T. chui* Fikáček & Liu see Fikáček & Liu, 2019: Figs. 8A–E). This species can be distinguished from *T. championi* (Knisch, 1924), another species known from China (Yunnan), by the form of aedeagus (*T. championi* with phallobase not much wider at base of parameres than more basally, paramere with outer face nearly continuously arcuate, slightly bisinuate in apical fourth. See Fikáček, 2019: Figs. 7A–E).



Figures 1–4. 1–3: *Thysanarthria rara* sp. nov. 4: *Thysanarthria bifida* Fikáček & Liu, 2019. 1, 2. Elytra (right): 1. SEM image (left); 2. Stereomicroscope image (right); 3, 4. Aedeagus.

Etymology. The species epithet is derived from Latin *rarus*, meaning that this species is rarely collected.

Distribution. So far only known from the type localities in Hunan and northern Guangdong.

Biology. The holotype and paratype were collected at a light near stream; no other information is known.

Key to species of *Thysanarthria* Orchymont in China

1. Head with shagreen, pronotum with or without shagreen; outer face of parameres slightly expanded outwards basally..... 2
- . Head and pronotum without shagreen; outer face of parameres strongly expanded outwards basally (see Fikáček & Liu, 2019: Figs. 8A–E). Taiwan..... *T. chui* Fikáček & Liu
2. Pronotum without shagreen; outer face of parameres nearly continuously arcuate, slightly bisinuate in apical fourth, apex bluntly pointed (see Fikáček & Liu, 2019: Figs. 7A–E). Yunnan..... *T. championi* (Knisch)
- . Pronotum with shagreen; outer face of parameres almost straight at basal third, moderately expanded outwards at middle third, but strongly narrowed at apical third, apex projecting into narrow rounded lobe

(Fig. 3). Hunan; Guangdong..... *T. rara* **sp. nov.**

2. *Thysanarthria bifida* Fikáček & Liu, 2019 (Fig. 4), new record to Vietnam

Specimens examined. 3♂ (IZCAS), Vietnam, TONKIN, Hoa-Binh, leg. A. de Cooman, VIII-1940. (IOZ(E)2002809), (IOZ(E)2002810), (IOZ(E)2002811), 1♀ (IZCAS), same data as other specimens, [IOZ(E)2002809]. Over other 30 specimens (IZCAS) collected from the same locality were examined.

Distribution. Laos (Fikáček & Liu 2019); Vietnam.

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