

# AMPHIZOIDAE:

## Taxonomic notes and new distributional records

### (Coleoptera)

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#### Abstract

*Amphizoa smetanai* ROUGHLEY, XIE & YU, 1998 (Coleoptera: Amphizoidae) is synonymized with *A. davidis* LUCAS, 1882. *Amphizoa sinica* YU & STORK, 1991 is recorded for the first time from North Korea.

**Key words:** Coleoptera, Amphizoidae, *Amphizoa davidis*, *Amphizoa smetanai*, new synonymy, new faunistic records, China, North Korea.

#### Introduction

Amphizoidae or Troutstream Beetles have received more attention than other comparably large water beetle families, especially in North America. Their rather large size, archaic appearance and unusual habitat (fast flowing mountain streams; see e.g., JI & JÄCH 1995) seem to be crucial factors for their popularity. *Amphizoa davidis* LUCAS even was classified as a "living fossil" by YU, ROUGHLEY & XIE (1996) although this is not supported by palaeontological evidence.

Amphizoidae comprise one genus, *Amphizoa* LECONTE, with six species. Three species live in western North America; at least one of these, *A. insolens* LECONTE, is extremely variable morphologically (see KAVANAUGH 1986). The remaining three species have been described from China (*A. davidis* LUCAS, *A. sinica* YU & STORK, and *A. smetanai* ROUGHLEY, XIE & YU); however, examination of type specimens revealed a new synonymy, which is presented herein, together with new distributional records.

#### Acronyms:

CASS Chinese Academy of Sciences, Institute of Applied Ecology, Shenyang  
 MHNG Muséum d'Histoire naturelle, Genève  
 MNHN Muséum national d'Histoire naturelle, Paris  
 NMW Naturhistorisches Museum Wien  
 WMW J.B. Wallis Museum, Winnipeg

#### *Amphizoa davidis* LUCAS, 1882

*Amphizoa davidis* LUCAS 1882: LCVII. - RÉGIMBART 1899. - ZIMMERMAN 1920. - WU 1933. - EDWARDS 1950. - LEECH & CHANDLER 1956. - KAVANAUGH 1980. - KAVANAUGH & ROUGHLEY 1981. - KAVANAUGH 1986. - YU & STORK 1991. - YU, XIE & LIN 1993. - JI & JÄCH 1995. - YU, ROUGHLEY & XIE 1996. - ROUGHLEY, XIE & YU 1998.

*Amphizoa smetanai* ROUGHLEY, XIE & YU 1998: 125.

TYPE LOCALITY: "Mou-pin" [= Baoxing County, north of Ya'an], central Sichuan, China.

TYPE MATERIAL: Lectotype ♂ (MIHP): "Museum Paris, Mou-pin, A. David 1870" \ "398" \ "774 70" \ "Amphizoa davidis, Lucas" (label double-pierced by pin, hence vertical on pin) \ "Type" (red) \ "Museum Paris" \ "Lectotype Amphizoa davidis Lucas designated by D.H. Kavanaugh 1983" (red) (KAVANAUGH 1986).

#### ADDITIONAL MATERIAL EXAMINED:

C H I N A: SICHUAN: BAOXING County: River Qingyi, beside marble mine, 30°30'N 102°30'E, 1900 m a.s.l., 10 km north of Feng Tong Zhai, 16.VIII.1995, leg. R.E. Roughley, W. Xie & P. Yu, 1 ♂ (NMW); same locality, 19.IV.1996, leg. W. Xie, H. He & H. Zhai, 3 exs. (WMW); Mahuang Valley, 2500 – 2700 m a.s.l., 21. – 25.IV.1996, leg. W. Xie, H. He & H. Zhai, 8 exs. (MHNG, NMW, WMW); WENCHUAN County: Wenchuan, 1500 m a.s.l., 18.VI.1996, leg. M. Janata, 1 ♀ (NMW); GANZI TIBET Autonomous Prefecture, KANGDING County: Daxue Shan, 10 km S Kangding, 29°59'N 101°55'E, 3150 m a.s.l., 26.-30.VI.1999, leg. D.W. Wrase, 1 ♀ (CPE).

NOTE: The name of this species was often spelled as "*davidi*"; however, the correct original spelling is "*davidis*".

SYNONYMY: *Amphizoa smetanai* **syn.n.**

TYPE MATERIAL: **Holotype** ♀ (MHNG): "CHINA Sichuan Emei Shan, 3000 m 29°32'N 103°21'E 17.VII.1996 C64" \ "collected by A. Smetana, J. Farkač and P. Kabátek" \ "HOLOTYPE *Amphizoa smetanai*" \ "Amphizoa davidis LUC. det. Jäch 2000". The specimen is partly damaged, since somebody had stepped on the specimen just before it was collected in 1996.

Following examination of 13 specimens of *A. davidis* from two different counties we are convinced that the holotype of *A. smetanai* is conspecific with *A. davidis*.

Obviously, *A. davidis* is a rather variable species, especially with regard to the shape of the lateral lobes of the mentum (more elongate and more narrow in the holotype of *A. smetanai*), shape of the prosternal process, shape of metaventral process (not emarginate anteriorly in the Baoxing and Wenchuan specimens).

Examination of the body size and the coxites of the female genitalia did not reveal significant differences, which would justify specific separation of the single female from Emei Shan.

DISTRIBUTION: Known from four counties in Sichuan: Baoxing, Emei, Kangding, Wenchuan.

### *Amphizoa sinica* YU & STORK, 1991

*Amphizoa sinica* YU & STORK 1991: 254. - YU, XIE & LIN 1993. - Ji & JÄCH 1995. - ROUGHLEY, XIE & YU 1998.

MATERIAL EXAMINED (in addition to specimens examined by Ji & JÄCH 1995).

N O R T H K O R E A: 3 km south of Zhenri Feng, Baitou Shan, River Baishui, 1350 m a.s.l., 11.VIII.2000, leg. L. Ji, 2 exs. (CASS).

VARIABILITY: After having examined numerous specimens, we must conclude that this species is more variable morphologically than presumed originally. The anterior pronotal corners for instance are not always distinctly acute.

DISTRIBUTION: China (Jilin), North Korea. First record for North Korea.

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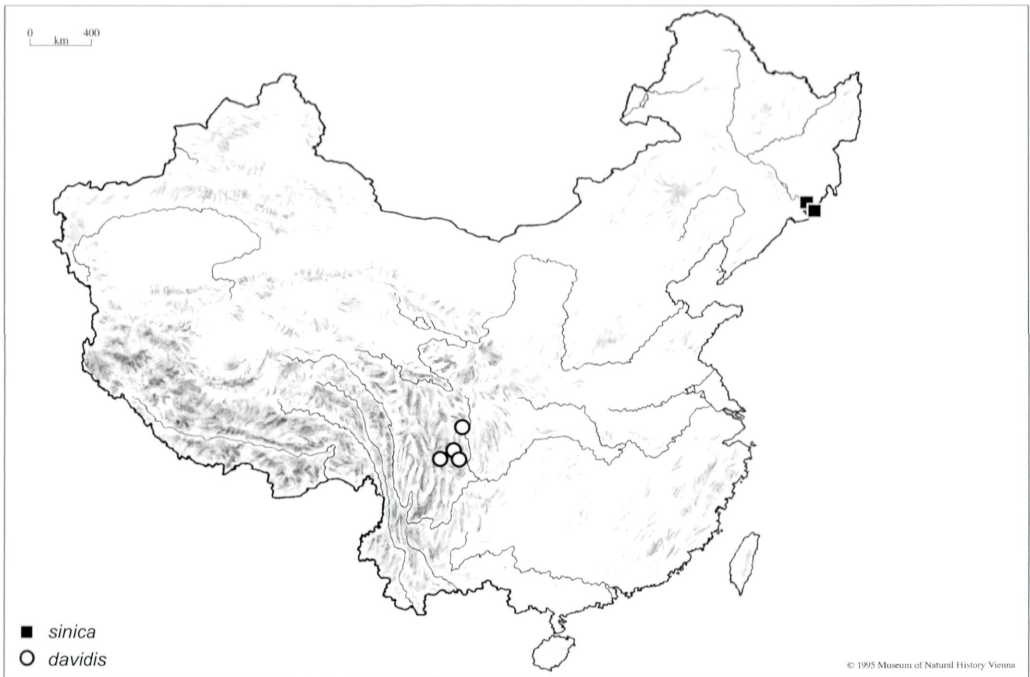


Fig. 1: Geographical distribution of the Asian species of *Amphizoa*.

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