

THE FIRST RECORD OF THE GENUS *DRUNELLA* IN CHINA WITH DESCRIPTION OF A NEW SPECIES (EPHEMEROPTERA : EPHEMERELLIDAE)

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Abstract The present paper deals with the genus *Drunella* Needham (Ephemeroptera, Ephemerellidae), which is recorded for the first time in China, and a new species is described.

Key words Ephemeroptera, Ephemerellidae, *Drunella*, new species.

1 INTRODUCTION

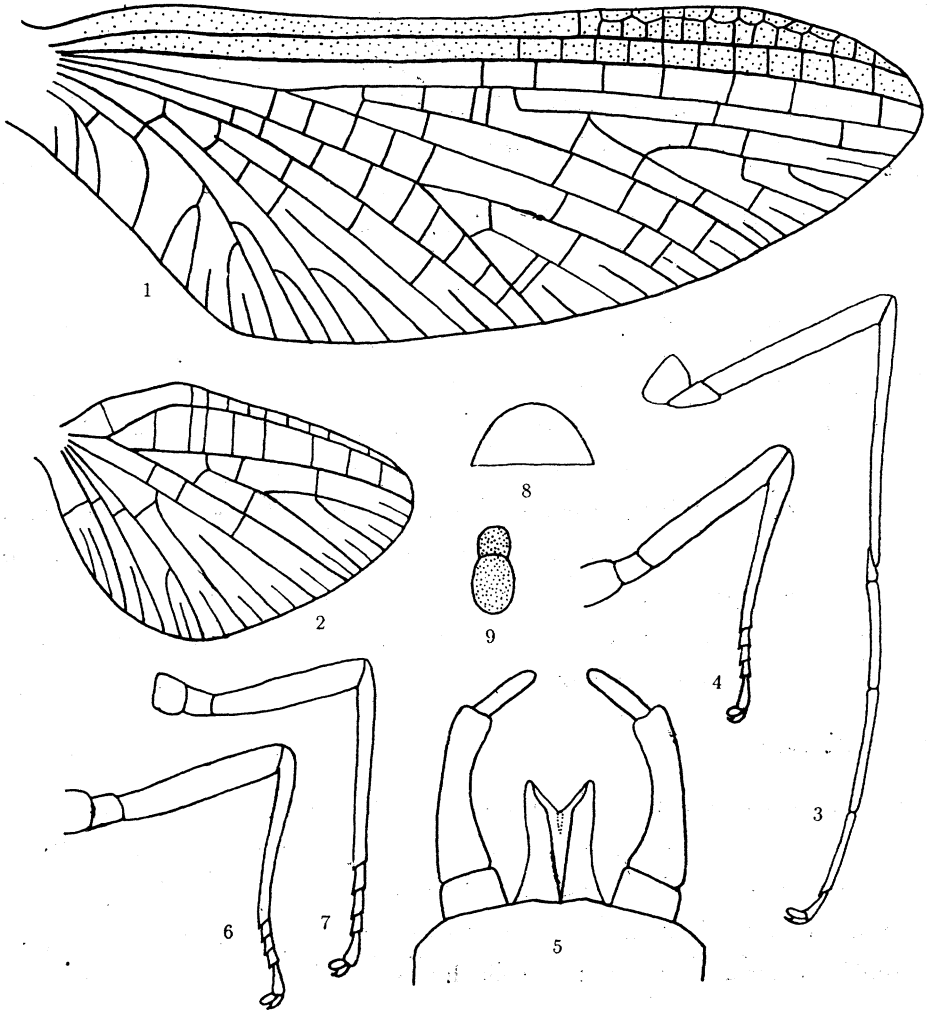
Needham (1905) established the genus *Drunella*. In 1927, he reduced it from generic to subgeneric rank. Other author as McDunnough (1931), Traver (1932, 1935), Spieth (1940), Burks (1953), Edmunds and Traver (1954), Demoulin (1958), Edmunds (1959, 1976) and McCafferty (1977) also reduced it as subgenus. In 1980, *Drunella* was elevated to genus by Allen. It is widely distributed in North America and Asia. There are about forty species in the world, but it is the first discovery in China. A new species from Jilin Province is described as below. The type specimens are deposited in the Department of Biology, Nanjing Normal University.

2 DESCRIPTION

Drunella fusongensis sp. nov. (Figs. 1-9)

Male imago (in alc.): length of body 9-10 mm, forewing 11-12 mm. General color brown with dark brown markings. Compound eyes large and contiguous dorsally; upper portion of which grayish yellow, lower portion gray black. Pronotum brown, mesonotum and metanotum dark brown. Wing hyaline; longitudinal veins brown, cross veins pale, cross veins of stigmatic area with high anastomosis. Fore legs brown, other femora brown, tibiae and tarsi light brown. Length of the fore leg more than that of the body. Ratio of femur: tibia: tarsus = 2.9 : 3.7 : 5.3; tarsal joints in proportion rank 3, 2, 4, 5, 1. Claws

dissimilar on all tarsi. Abdominal tergite 1-6 light brown with a dark brown median and sub-lateral maculae, sterna light brown with a dark brown median round spot, ninth and tenth segments dark brown. Genital forceps three segmented, the second only moderately bowed; the terminal segment is 3.5 times as long as broad and longer than the basal one. Penis is 0.5 mm in length with a broad V-shaped apical median cleft. Cerci and median caudal filament dark brown at base, yellow brown distally.



Figs. 1-9 *Drunella fusongensis* sp. nov. imago

1. ♂ forewing 2. ♂ hindwing 3. ♂ foreleg 4. ♂ hindleg 5. ♂ genitalia, ventral view
6. ♀ foreleg 7. ♀ hindleg 8. ♀ subanal plate 9. ♀ egg

Female imago (in alc.): Length of body 9-10 mm; fore wing 12-14 mm. General color brown. Compared with male: compound eyes smaller, fore legs shorter. The ratio of the

length of femur : tibia : tarsus = 2.9 : 2.9 : 1.5; tarsal joints in proportion rank 4, 1, 2, 3. The posterior portion of subanal plate without emargination. Other characters like the male except for usual sexual difference.

Egg (in alc.): Length 0.27-0.28 mm; width 0.15-0.16 mm. Polar cap large, length 0.11 mm and width 0.12 mm. The color of chorion yellowish green except polar cap dark brown.

Holotype ♂, allotype ♀, paratypes 6 ♂♂, 29 ♀♀, Fusong County (42°20'N, 127°20'E), Jilin Province, July 9-24, 1984. collected by PEN Feng and LI Ye.

3 DISCUSSION

The genus *Drunella* may be characterized in the adult male stage by: (1) terminal segment of genital forceps more than 2 and less than 4 times as long as broad; (2) inner margin of the long second segment distinctly incurved or strongly bowed; (3) the penes being without lateral tubercles, neither dorsal and ventral spines.

This new species is similar to *Ephemerella* (*Drunella*) *coloradensis* Dodds, but differs from the latter in: 1) abdominal segments 9-10 dark brown; 2) subgenital plate between bases of forceps not produced and with only a shallow emargination; 3) lobes of penis not expanded apically.

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弯握蜉属在中国首次发现及一新种记述*

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摘要

本文报道弯握蜉属 *Drunella* 在中国的首次发现,并对该属一新种抚松弯握蜉 *Drunella fusongensis* sp. nov. 作了详细描述。模式标本采自吉林省抚松县,正模♂,配模♀,副模6♂♂,29♀♀,存放在南京师范大学生物系。

弯握蜉属系 Needham 于1905年建立,迄今属中共有40种左右。其雄成虫的主要特征是:(1)生殖器尾缺的端节长度为宽度的2—4倍;(2)尾缺第2节最长,且明显向内弯曲或呈强烈弯曲;(3)阳茎无侧突且背、腹面无刺。本文所描述的新种近似于 *Ephemerella (Drunella) coloradensis* Dodds,但新种成虫腹部第9—10节呈黑褐色;下生殖板在尾缺基部之间仅有很浅的凹缘;阳茎叶顶端不扩大。根据上述特征易与近似种相区别。

致谢 标本由彭峰、李野同志采集,特此致谢。

关键词 蜉蝣目,小蜉科,弯握蜉属,新种。