

# 等蜉属 (*Isonychia*)

## 等蜉亚属 (*Isonychia sensu stricto*)

### 两新种 (蜉蝣目: 等蜉科)<sup>①</sup>

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**摘要** 本文报导等蜉属 (*Isonychia*, Eaton) 等蜉亚属 (*Isonychia* s.s.) 两新种, 贵溪等蜉 (*Isonychia guxiensis* sp. nov.) 和中华等蜉 (*Isonychia sinensis* sp. nov.), 并对新种形态特征作了详细描述。

**关键词** 蜉蝣目, 等蜉科, 等蜉属, 新种。

## 0 引言

埃德蒙兹等 (Edmunds G. F. Jr., et al., 1976) 报导全世界已记载的等蜉属 (*Isonychia*) 有 40 种左右, 其中 27 种分布在新北区, 其余种类则分布在古北区、东方区或新热带区, 而对古北区和东方区的种类所知甚少。我国等蜉属迄今仅报导过 4 种, 即台湾等蜉 (*Isonychia formosana* Ulmer)、日本等蜉 (*Isonychia japonica* Ulmer)、江西等蜉 (*Isonychia Kiangsiensis* Hsu) 和海南等蜉 (*Isonychia hainanensis* Shc & You)。作者在整理采自江西贵溪的蜉蝣标本时, 经鉴定为等蜉属 (*Isonychia*) 等蜉亚属 (*Isonychia* s.s.) 两新种: 贵溪等蜉 (*Isonychia guxiensis* sp. nov.) 和中华等蜉 (*Isonychia sinensis* sp. nov.)。新种模式标本均保存在南京师范大学生物系。

## 1 贵溪等蜉, 新种 *Isonychia guxiensis* sp. nov. (图版 I)

雄成虫 (酒精保存): 体长 13-13.5mm, 淡红褐色。复眼大, 灰黑色, 在头顶背面相接。单眼三个, 突出, 色深。前胸背板褐色。中、后胸背板淡红色, 胸部腹面淡红褐色。翅无色透明, 前翅长 12.5mm, 后翅长 5mm, 翅脉淡黄色, 前翅翅痣区灰白色, MA 脉在翅中央后分叉 (图 1) CuA 脉区有 4 条分支和 2 条不分支的脉伸向翅缘。后翅的 MP 脉在翅缘区分叉 (图 2)。足基节淡红褐色, 前足腿节和胫节褐色, 跗节淡黄色或灰白色, 端部淡黑褐色, 跗节比胫节长, 各跗节长度之比为 2.0: 1.7: 1.5: 1.2: 0.8, 其排列顺序为 1, 2, 3, 4, 5 (图 3), 两爪均为钝状。中、后足灰白色, 后足胫节长, 各跗节长度之比为 0.6: 0.4: 0.3: 0.55, 排列顺序为 1, 4, 2, 3, 两爪均为钩状 (图 4)。腹部背面淡红褐色, 第 2-9 节背板各有 1 对“八”字形条纹, 两侧边缘还有两条对称的直条纹。每一腹节背板后缘暗淡红色, 侧面灰黑色, 腹面淡黄色, 末端深红褐色, 尾丝 2 根, 淡黄褐色, 中尾丝退化或仅残留很短 (图 5)。外生殖器淡褐色, 尾铗 4 节, 第 2 节最长, 第 3

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节较端节长, 两个端节之和比第3节略长; 阳茎叶分离, 小片状, 向内缘略倾斜, 两阳茎叶基部有一小的半圆状突起(图6)。

雌成虫(酒精保存): 体长13mm, 前翅长13.5mm, 后翅长5.5mm。体色比雄虫略淡, 为淡黄褐色, 足的颜色与雄虫相似, 前足胫节比跗节长, 跗节各节之比为1.0: 0.8: 0.7: 0.5: 0.9, 其排列顺序为1, 5, 2, 3, 4。后足跗节之比为0.5: 0.4: 0.35: 0.7, 其排列顺序为4, 1, 2, 3。爪均为钩状(图7-8)。肛下板边缘色较深, 末端凹陷较深(图9)。

模式标本: 正模♂, 配模♀, 江西贵溪1990.VI.4 副模: 10♂♂, 11♀♀, 贵溪, 1990.VI.4-6。

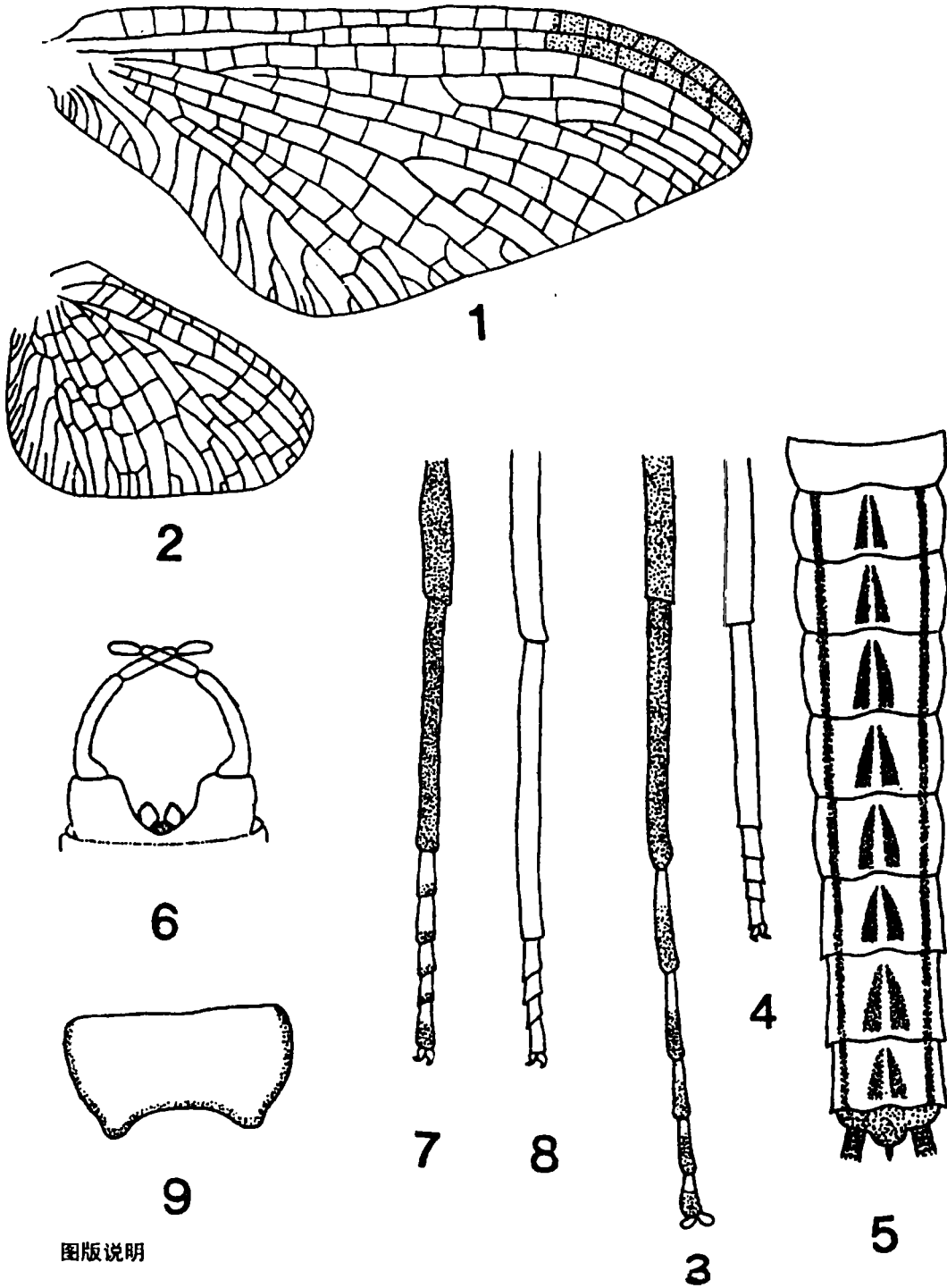
## 2 中华等蜉, 新种 *Isonychia sisensis* sp.nov. (图版II)

雄成虫(酒精保存): 体长14-14.5mm, 淡红褐色。前翅长13mm, 后翅长5.5mm, 复眼大, 淡灰色, 在头顶背面相接, 单眼突出。胸部背板淡红色, 腹面淡红色。翅白色透明, 前翅翅痣区灰白色, MA脉在翅中央以后分叉, CuA脉区有3条分支和4条不分支的脉伸向翅缘(图10)。后翅的MP脉在翅缘分叉, 主脉比叉脉长(图11)。足基节淡红褐色, 前足比身体略短, 腿节和胫节褐色, 跗节淡黄色或灰白色, 每一跗节边缘为淡褐色, 跗节比胫节长, 各跗节长度之比为2.0: 1.8: 1.4: 1.0: 0.7, 其排列顺序为1, 2, 3, 4, 5。爪均为钝状(图12)。中后足灰白色, 后足胫节长, 各跗节长度之比为0.55: 0.4: 0.3: 0.6, 其排列顺序为4, 1, 2, 3。爪均为钩状(图13)。腹部背面淡红褐色, 腹面淡黄色, 第2~9节背板中央有一对较深色的纵条纹, 每一腹节背板后缘淡红色, 侧面灰黑色。尾丝2根, 中尾丝退化或残留极短(图14)。外生殖器淡褐色, 尾铗基节大, 第2节最长, 第3节较端节长, 阳茎叶分离, 顶部平坦, 基部具1对突起(图15)。

雌成虫(酒精保存): 体长13-14mm, 体淡褐色, 前翅15mm, 后翅6.5mm。足的颜色与雄虫相似, 前足胫节比跗节长, 各跗节长度之比为1: 0.8: 0.7: 0.5: 0.9, 其排列顺序为1, 5, 2, 3, 4。后足跗节之比为0.5: 0.4: 0.35: 0.9, 其排列顺序为4, 1, 2, 3。前、后足爪均为钩状(图16-17)。肛下板边缘色较深, 末端有一深的凹陷(图18)。

模式标本: 正模♂, 配模♀, 江西贵溪, 1990.VI.4, 副模: 5♂♂, 12♀♀, 贵溪, 1990.VI.4-6。

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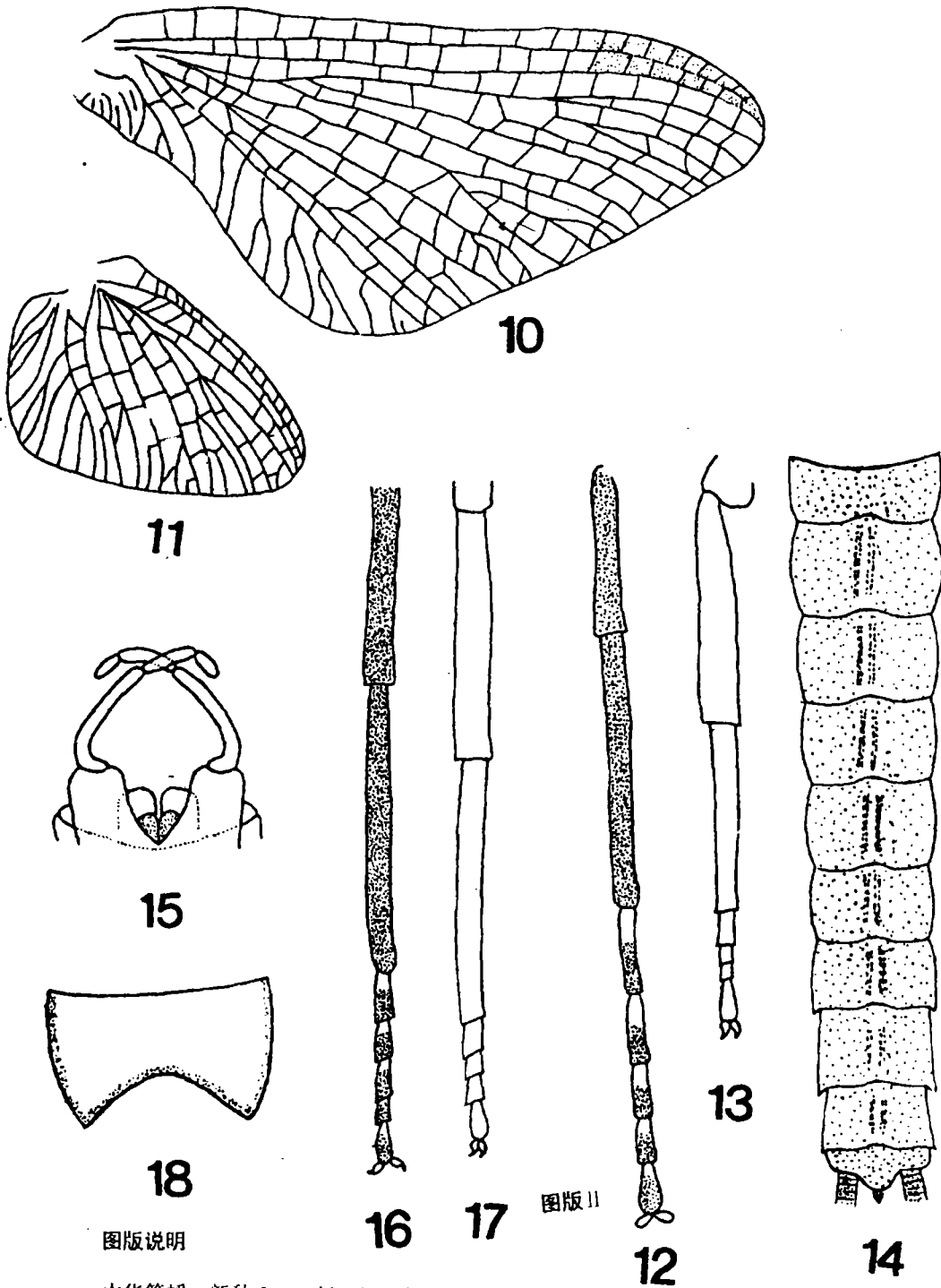


图版说明

贵溪等蜉, 新种 *Isonchia guixiensis* sp. nov.

1-6 雄成虫: 1 前翅; 2 后翅; 3 前足; 4 后足; 5 腹部背面观; 6 外生殖器;

7-9 雌成虫: 7 前足; 8 后足; 9 肛下板



图版 II

图版说明

中华等蜉, 新种 *Isonychia sinensis* sp. nov.

10-15 雄成虫: 10 前翅; 11 后翅; 12 前足; 13 后足; 14 腹部背面观; 15 外生殖器;  
16-18 雌成虫: 16 前足; 17 后足; 18 肛下板

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## Two new species of Genus *Isonychia* subgenus *Isonychia sensu stricto* (Ephemeroptera: Isonychiidae)

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**Abstract** This paper describes two new species of mayflies of genus *Isonychia* subgenus *isonychia* s.s. from Kiangsi province. The type specimens are deposited in the Department of Biology, Nanjing Normal University.

*Isonychia guixiensis* sp. nov. (figs.1-9)

Male imago (in alc.): Body 13-13.5 mm long, general colour reddish brown. Compound eyes large and contiguous dorsally. Fore wing 12.5mm long, almost colorless and hyaline, vein yellowish and stigmatic area dull white. MA forked beyond the middle. CuA 4 branched and two unbranched veins to the margin. Vein MP of hind wing forked near margin. Coxa of legs reddish brown,

fore femora and tibia brown. Tarsi yellowish or pale, distal end dark brownish.

tarsus longer than tibia, tarsal joints rank 1, 2, 3, 4, 5. Middle and hind legs pale. Abdomen reddish brown, terga 2-9 with a pair "八" shaped streaks. Forceps 4 segmented, second segment, longest, third longer than the terminal. Two terminal segments together slight longer than the third segment. penial lobes separate, plate like, apical margin slightly oblique, and with a small projection at the base of penis lobe, Caudal filaments two in number, median one very short and rudimentary.

Female imago (in alc.): Body 13 mm long. General colour lightly than the male. Legs as colored as male. In the fore leg, tibia longer than the tarsus, tarsal joints rank 1, 5, 2, 3, 4. Subanal plate with a slightly deep concavity.

Holotype: ♂, Allotype: ♀, Guixi, 1990.VI.4, Paratypes: 10♂♂, 11♀♀, Guixi, 1990.VI.4-6.

*Isonychia sinensis* sp.nov. (figs.10-18)

Male imago (in alc.): Body 14-14.5mm long, general colour reddish brown. Fore wing 13 mm long, hind wing 5.5mm long. Wings hyaline and stigmatic area dull white. MA forked beyond the middle. CuA 3 branched and four unbranched veins to the margin. Vein MP of hind wing forked near margin. Coxa of legs reddish brown, fore femora and tibia brown, tarsi yellowish or paler, tarsus longer than tibia, tarsal joints rank 1, 2, 3, 4, 5. Abdomen reddish brown. A pair of pale middorsal stripe on terga 2-9. Forceps 4 segmented, second segment the longest, third segment longer than the terminal. Penial lobe separate, apical portion truncate and with a pair projection at the base of penial lobe.

Female imago (in alc.): Body 13-14 mm long, general colour brownish. Fore wing 15 mm. Hind wing 6.5mm. Legs as colored as male. In the fore leg, tarsal joints rank 1, 5, 2, 3, 4. Subanal plate with deep concavity.

Holotype: ♂, Allotype: ♀ Guixi, 1990.VI.4, Paratypes: 5♂♂, 12♀♀, Guixi, 1990.VI.4-6.

**Key Words:** Ephemeroptera, Isonychiidae, Isonychia, new species.