

福建亚非蜉属(*Afronurus*)一新种记述

(蜉蝣目:扁蜉科)

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亚非蜉属仅分布在非洲区和东洋区,已知仅十几种,国内尚未见报道。作者于1981年5月8—9日在福建省三港采到该属雄虫11头,雌虫2头,经鉴定为一新种。现记述于下。正模♂,配模♀,副模10♂♂、1♀♀保存在南京师范学院生物系动物学教研室。

三港亚非蜉 *Afronurus sangangensis* 新种

雄成虫(酒精保存):体长5—6毫米,淡黄色。头部深黄色,复眼大,紫褐色,近圆形,两眼在背面顶端相接触。单眼三个,呈“品”字形排列,两个侧单眼紧靠两复眼的前缘,中单眼小,仅侧单眼之半,基部均围以紫环。触角短,淡黄色,刚毛状(图1)。

前胸宽大于长,后缘中央具一深凹,在深凹的两侧有明显的褐斑。中胸发达,棕黄色,在背中线两侧有一对较宽的棕色条斑,伸达中胸背板的2/3处,该条斑的前1/3段较深,后2/3段较浅。后胸深褐色(图2)。前翅长7.1—8毫米,个别可达9毫米,无色,透明,翅脉相属扁蜉型,翅脉淡黄色但不清晰,翅痣区有10根不分叉的C横脉和8根Sc横脉(图3)。后翅长2.02毫米,宽1.05毫米,顶角尖锐,故呈三角形,C横脉细而短,Sc横脉长,有10根(图4和5)。

前足棕黄色,略比体长,腿节短于胫节,其基部的1/3为黄色,余2/3为棕红色;胫节略长于跗节,其两端均有褐色斑;跗节有鳞片状斑纹,基跗节稍长于第二跗节之半,第1、4两跗节几乎等长,跗节各节之比为07:1.3:1.0:0.8:0.36,排列顺序为2,3,4,1,5(图6)。中、后足均为浅黄色,后足腿节>胫节>跗节,跗节各节之比为1.8:1.3:0.8:0.5:1.9,排列顺序为5,1,2,3,4,(图7和8)。

腹部黄色,自1—8腹节每节背侧后缘有一条深褐色横斑,自1—9节延中线两侧各有一较明显的棕红色条斑,第10腹节的背面均无斑纹(图9和10)。尾须11—12毫米,黄色,分节,基部较粗,越向后越细,其上密生短刚毛。外生殖器淡黄色,尾铗四节,各节长度为2>3>4>1,基节为短锥形,第二节为长圆筒形,末两节之和约为第二节的2/3,第三节为第四节的1.5倍。阳茎叶分两叶,左右分开,但基部相连,每叶近似菱形,内缘有厚褶,顶端平截(图11)。

雌成虫(酒精保存):体长6.3—6.5毫米,淡黄色,两复眼间距离与一只复眼的最大宽度几乎相等(图12)。前翅长8.2毫米,翅脉相与雄虫同。前足约为5.5毫米,略短于体长,腿节:胫节:跗节=1.4:1.23:1,跗节各节之比为8:8.15:7.5:5:7,排列顺序为2,1,3,5,4,(图13和14)。后足为4.9毫米,略短于前足,腿节:胫节:跗节=2.7:2:1,跗节各节之比为4:3:2:1.2:4.2,排列顺序为5,1,2,3,4(图15和16)。腹部中线两侧的棕红色条斑较

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浅淡，肛下板末端中央具浅凹（图17），

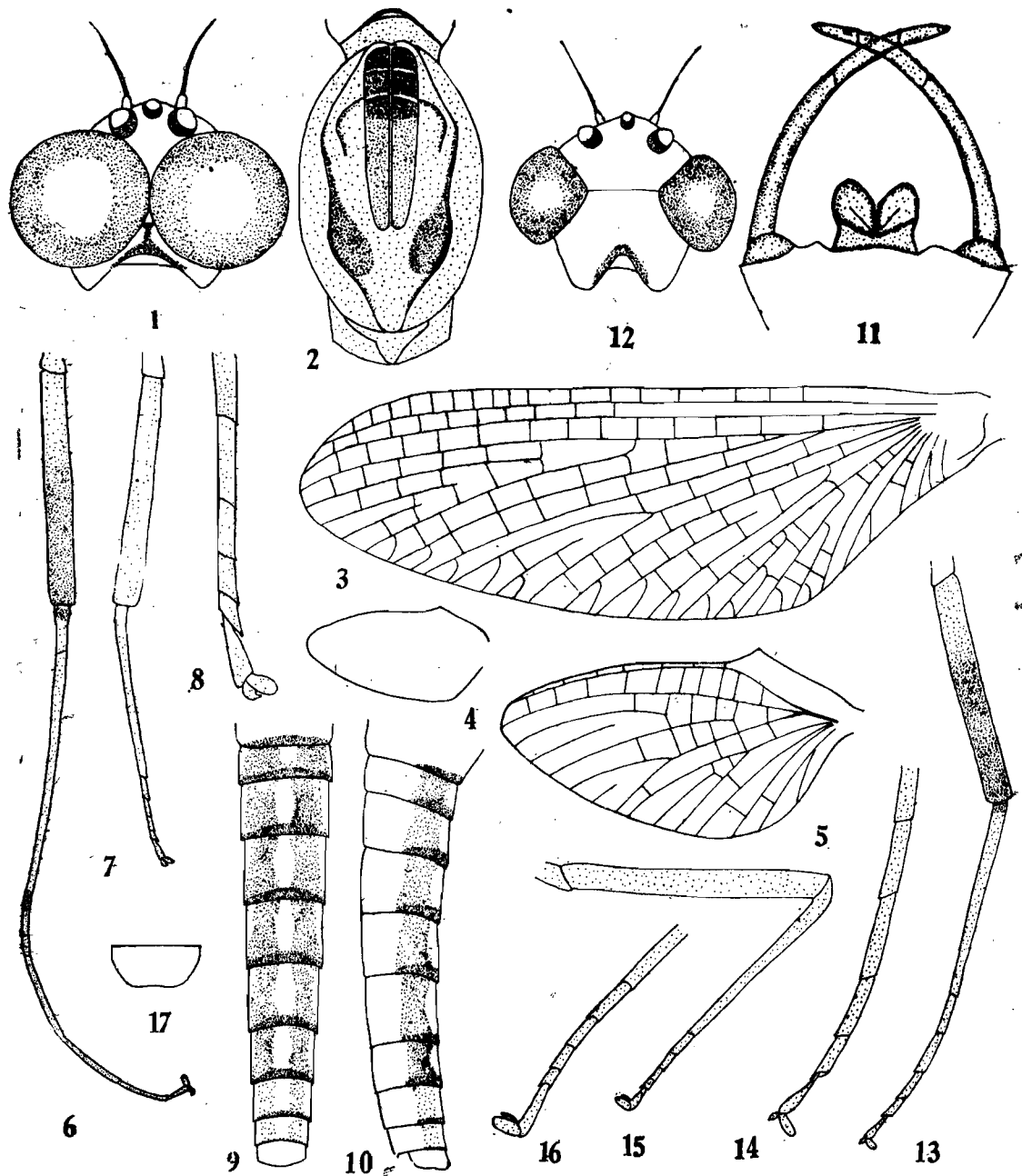


图1—17 三港亚非蜉，新种 *Afronurus sangangensis*, sp. nov.

1—11 雄成虫：1. 头部背面观 2. 中胸背面观 3. 前翅 4. 后翅 5. 后翅放大 6. 前足
7. 后足 8. 后足跗节放大 9. 腹部背面观 10. 腹部侧面观 11. 外生殖器
12—17 雌成虫：12. 头部背面观 13. 前足 14. 前足跗节放大 15. 后足 16. 后足跗节
放大 17. 肛下板

本新种与亚非蜉属的其他种类如 *A. Peringueyi*, *A. harrisoni*, *A. ugandanus*, *A. collarti*, *A. kugleri*, *A. javanicus*, *A. solangensis* 较接近。现将它们的体长, 翅长、外生殖器, 分布等特征列表比较如下:

种名特征	<i>A. sangarensis</i> 新种	<i>A. peringueyi</i> (Peterson)	<i>A. harrisoni</i> Barnard	<i>A. ugandanus</i> Kimmins	<i>A. collarti</i> (Navas)	<i>A. kugleri</i> Demoulin	<i>A. javanicus</i> Ulmer	<i>A. solangensis</i> Dubey
体长 ♂ (毫米) ♀	5.6 6.4	8.5 9.8	9.1 9.8	— —	5.5 6	8.5—9 9—10	8 —	— 18
前翅长 ♂ (毫米) ♀	7.1—8 8.2	8.5 10.5	10.5 11.3	8—9 11—12	7 8	10 11	9 —	— 16
外生殖器	尾铗末两节之和为第二节的 $\frac{2}{3}$; 阳茎分两叶, 每叶近似菱形, 顶端平截, 内有厚褶。	阳茎分两叶, 每叶又分两小叶, 内小叶呈指状, 外小叶粗短, 形似三角形。	阳茎分两叶, 顶端平截, 内缘中央接触, 基部较狭, 内缘厚褶的厚度几乎相等但不达顶端。	尾铗末两节之和稍长于第二节的 $\frac{1}{2}$, 第四节长方形, 末端平截稍凹; 阳茎叶每叶分两小叶, 内小叶长于外小叶且向上向外弯曲, 外小叶呈三角形, 内小叶顶端和外小叶外缘均具一小细刻点区。	尾铗末两节之和稍短于第二节的 $\frac{1}{2}$; 阳茎叶每叶又分两小叶, 内小叶呈指状, 其长度超过外小叶且向后平行延伸, 外小叶粗短, 末端钝圆。	尾铗末两节之和约等于第二节的 $\frac{1}{2}$; 阳茎分叶, 顶端渐尖, 每叶外缘的顶端部分凹陷。	尾铗末两节之和为第二节的 $\frac{2}{3}$, 阳茎顶端中央平坦, 两侧有半球状突起。	雄虫未发现
分布	中国福建省	南 非	南 非	东 非	中 非	南 非	爪 哇	喜马拉雅山西北部

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ABSTRACT

A New Species of the genus *Afronurus* from Fujian Province

(Ephemeroptera: Heptageniidae)

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Afronurus sangangensis sp. nov. (Figs. 1—17)

Male imago (In alc): Length of body 5—6 mm. General color light yellow. Compound eyes large, ovoid. brownish purple, being contiguous apically. The middle of posterior margin of prothorax deeply emarginate, flanked with deep brown markings. Mesonotum highly developed with one long brown band on either side of the mid-dorsal line, the anterior one third of which tinged with deep brown. Fore wing 7.1—8 mm. long, almost colorless and hyaline, veins not clear, the stigmatic area with ten

costal cross veins and eight subcostal cross veins. Hind wing pointed at apical angle, thus being triangular in appearance, costal cross veins short and slender, ten Sc cross veins long and distinct. Fore leg longer than body, the basal $\frac{1}{3}$ of fore femur tinged with yellow, the other $\frac{2}{3}$ with brownish red. Middle and hind legs all light yellowish. Fore femur shorter than tibia, being longer than tarsus, fore basal tarsal joint longer than half of second joint, 1st joint almost equal to the 4th. Relative lengths of anterior tarsal joints = 0.7:1.3:1:0.8:0.36, of posterior tarsus = 1.8:1.3:0.8:0.5:1.9, with tarsal joints rank 2, 3, 4, 1, 5 and 5, 1, 2, 3, 4, respectively. All claws dissimilar. Abdomen yellowish with a transverse deep brownish marking at the posterior margin of 1-8 abdominal segments and a distinct brownish red stripe marking on each side of mid-dorsal line of 1-9 abdominal segments. Genitalia with forceps 4 segmented, 1st short and cone shaped, 2nd the longest, 3rd and 4th combined about $\frac{2}{3}$ of 2nd. Penis brown, bilobed, excised apically, each penial lobe more or less rhombic in shape, diverging distally with a thick fold near the middle.

Female imago (In alc): Length of body 6.3-6.5 mm. The distance of two compound eyes almost equal to the longest diameter of one compound eye. Fore wing 8.2 mm long, Fore leg shorter than body, hind leg shorter than fore leg. Relative lengths of anterior tarsal joints = 8:8.15:7.5:5:7, of posterior tarsus = 4:3:2:1.2:4.2, with tarsal joints rank 2, 1, 3, 5, 4 and 5, 1, 2, 3, 4 respectively. Brownish red markings on dorsal abdominal segments lighter, subanal plate with a shallow concavity.

Holotype ♂, **allotype** ♀, **paratype** 10 ♂ ♂, 1 ♀, collected from Sangang, Fujian province on May 8-9, 1981. All types deposited in the Department of Biology, Nanjing Teacher's College, Nanjing, China.