

REDESCRIPTION OF A LITTLE KNOWN SPECIES OF BITING
MIDGE ; *ATRICHOPOGON FLAVELLUS* KIEFFER (CERATO-
POGONIDAE, DIPTERA) FROM INDIA

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There are twelve described species of the genus *Atrichopogon* Kieffer from India, some of them may be correlated with respect to their generic status which we propose to undertake shortly in course of our comprehensive revisionary studies. The type specimens of the species are reported to be damaged or untraced in the collections of insects of Zoological Survey of India, Calcutta. A few years back the authors were given by Mr. K. S. Pradhan, the then Superintendent Zoologist at Zoological Survey of India, Calcutta, about 289 specimens preserved in rectified spirit for identification and revisionary studies. The specimens were collected by Drs. F. H. Gravely and N. Annandale during the years 1908-1910, from different places of India. The genus was identified to be *Atrichopogon* Kieffer by Dr. F. W. Edwards. Besides, the authors came across a few specimens of the above species along with various dipteran insects for their studies. The specimens were mounted on the microslides in the usual process (Das Gupta and Wirth, 1968). Incidentally, this is the only species of this genus from India whose representatives were collected and preserved in the Zoological Survey of India, Calcutta.

Terminologies and mode of specific descriptions are mainly based on Das Gupta and Wirth (1968) and Debenham (1973),

Specimens are now kept in the collections of insects at the Entomology Laboratory, Burdwan University and will be deposited with the Zoological Survey of India, Calcutta and other institutions in due course.

***Atrichopogon flavellus* Kieffer**

(Text-fig. 1, A-I)

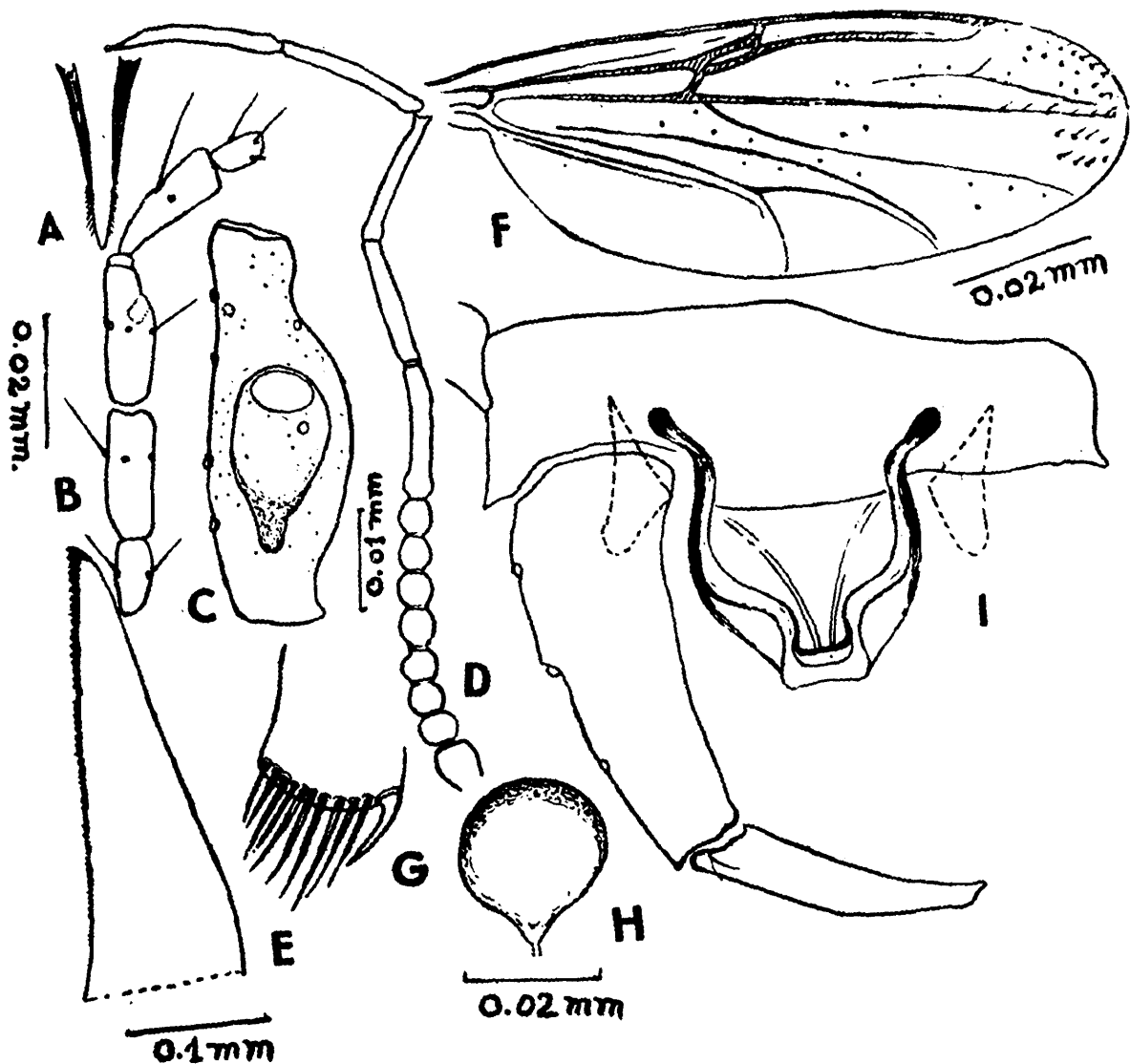
1913. *Atrichopogon flavellus* Kieffer, *Rec. Indian Mus.*, 9 : 119.
1921. *Atrichopogon flavellus* Kieffer, *Philip. J. Sci.*, 18 : 557-593.
1932. *Atrichopogon flavellus* Edwards, *Rec. Indian Mus.* 34 : 178.
1940. *Atrichopogon flavellus* Tokunaga, *Philip. J. Sci.*, 71 : 211.

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Female : Length of body 2.5 mm.

Length of wing 1.90 (1.71-1.95, n=10) mm, breadth 0.76 (0.68-0.79, n=10) mm.

Head : Extremely dark brown. Frons and proboscis pale. Vertex yellow with 7-8 hairs, apex of labrum as in Text-fig. 1A. Eyes bare, narrowly separated. Maxillary palp (Text-fig. 1B) pale brown, palpomere I and III pale, IV-V brown, palpomere III (Text-fig. 1C) swollen at the middle with a preapical pit bearing 3 sensilla, palpomere V with an



Text-fig. 1.—Different structural parts of *Atrichopogon flavellus* Kieffer; A—apex of labrum, B—maxillary palp, C—III palpomere, D—antenna, E—mandible, F—wing, G—hind tibial comb, H—spermatheca and I—male genitalia; A—H are drawn on the basis of female specimens.

apical bristle, palpomeres II, IV with 3 bristles, length ratio of palpomeres from I to V as : 8-7-12-9-6, L/W ratio 2.0. Antenna (Text-fig. 1D) yellowish, proximal flagellomeres III—X globular distal ones, X—XV cylindrical, flagellomere XV being drawn to a bluntly pointed apex, flagellomeres III-X as broad as long, length ratio of the flagellomeres

from III to XV as : 11-10-10-10-10-10-9-9-28-30-28-28-36 ; AR 11.07. Mandible (Text-fig. 1E) with 48-50 teeth, proximal teeth very small.

Thorax : Yellow, scutum with 2 longitudinal brown bands and spines in several scattered rows ; humeral pit dark brown ; scutellum pale with a few small and large spines, postscutellum yellow, margin dark brown.

Wing : (Text-fig. 1F) Pale to whitish in colour. Veins light yellow except R which is slightly dark, bases of veins M, Cu and fork of M and A obscure, M_2 pale ; macrotrichia present at the apices of cells R_5 and M_1 , macrotrichia on cell M_1 a few and arranged in two rows ; C extended upto two-thirds of wing length, vein R_{4+5} joins C at the middle ; IIRC larger about four times of IRC. Anal lobe obsolete. CR 0.70. Haltere with stem pale and knob yellow.

Legs : conspicuously yellow and hairy, hairs at the apices of femora more numerous and of tibia scattered, tarsomere I of hind leg with spines arranged in irregular rows ; hind tibial comb (Text-fig. 1G) of 10 subequal spines, 0.036mm to 0.040 mm long ; claws sickle shaped and pointed ; empodium length 0.03 mm.

Proportions and ratios of leg-segments

	F ₀	Ti	ta ₁	ta ₂	ta ₃	ta ₄	ta ₅	LR	TR
P ₁	20	21	10	4	4	3	4	0.48	—
P ₂	23	26	13	4	4	3	4	0.50	
P ₃	22	24	12	5	4	2	4	0.50	2.4

Abdomen : Yellow, terga dark brown. pleural membrane pale ; hairs on terga scattered and numerous along the margin. Spermatheca (Text-fig. 1H) single, spherical moderately sclerotized with short neck measuring 0.088 mm by 0.080 mm.

Male : Length of the body 2.1 mm.

Length of wing 1.82(1.78-1.86, n=6) mm, breadth 0.72 (0.68-0.72, n=6) mm.

Similar to female with usual sex differences. Maxillary palp and flagellomeres paler than those of female. Wing without macrotrichia ; Costa extended about two-thirds of wing length ; CR 0.69. Legs pale than those of female : TR of hind leg 1.25. *Genitalia* (Text-fig. 1.I) : light yellow. Tergum IX wider and lateral margin with short caudal prominence. Basistyle with 3-4 long lateral bristles, broad proximad and slightly bent inward, its distal part slimming apically ; dististyle shorter than basistyle, base broader and apex narrow and tip pointed ; aedeagus with lateral arms slender, bent, sclerotized, mid portion wider, incurved, distal portion joined together with a cap like apex, basal apodemes roughly triangular. Hypopygium ratio 1.3,

Specimens examined : 31 ♂♂, 30 ♀♀, India ; Karnataka, Bangalore, 14. x. 1910 (*Dr. N. Annandale* Coll.) ; 34 ♂♂, 40 ♀♀, India, Kerala, Maddathoray, 19-22, viii. 1908 (*Drs. N. Annandale* and *F. H. Gravely*) Coll.) ; 61 ♂♂, 78 ♀♀, India, Orissa, Barkuda Is. 29. viii. 1908 (*Dr. F. H. Gavely* Coll.) ; 5 ♂♂, 6 ♀♀, India, Hooghly, Chinsura, 22-26, ix. 1968 (*Dr. S. K. Das Gupta*, Coll) ; 2 ♂♂, 2 ♀♀, India, Burdwan, 11. ix. 1973 (*Dr. P. K. Chaudhuri* Coll).

Remarks : This species was described from India, Burma and Philippines by Kieffer (1913, 1921), Edwards (1932) and Tokunaga (1940) from Micronesian Islands. The Indian specimens, described now, differ from those of Micronesian Islands in i) conspicuously yellow colour, ii) IIRC about four times longer than IRC and iii) structure of genitalia.

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SUMMARY

This paper deals with the descriptions of *Atrichopogon flavellus* Kieffer from the collections of Zoological Survey of India, Calcutta.

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