

*DROSOPHILA DOMINICI*, SP. NOV. FROM  
DARJEELING DISTRICT, INDIA  
(DIPTERA : DROSOPHILIDAE)

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(1982)

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**ABSTRACT.** *Drosophila dominici*, sp. nov., a member of the *histrion* group of sub-genus *Drosophila* collected from Ramam (Darjeeling District), is described. The taxonomic position and its affinities are discussed.

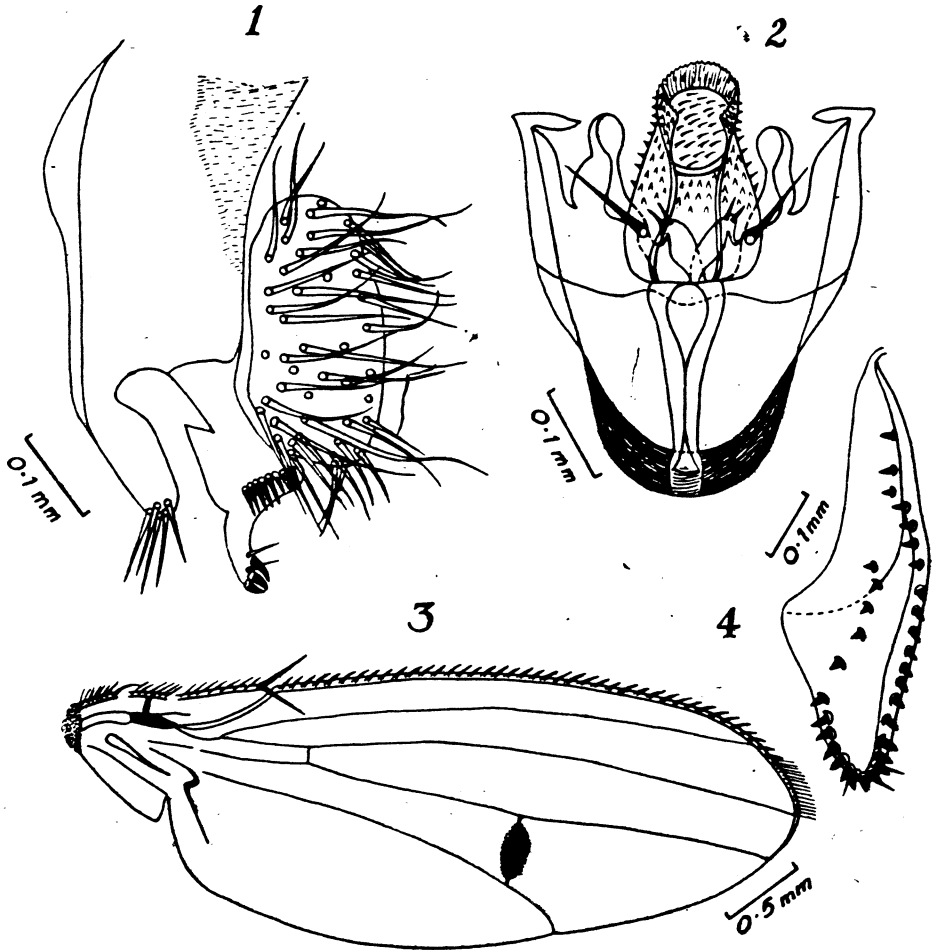
INTRODUCTION

Altogether 21 drosophilid species have so far been described from various localities in Darjeeling District, West Bengal (Gupta and Dwivedi, 1980; Gupta and Singh, 1981; Singh and Gupta, 1980, 1981 a, b). This paper describes an additional new species, *Drosophila dominici*, collected during a survey made at and around Ramam in Darjeeling District, at an elevation of about 2520 m above sea level.

*Drosophila (Drosophila) dominici*, sp. nov. (Figs. 1-4)

**Head** (♂, ♀) : Arista with 4 dorsal and 2 ventral branches, in addition to terminal fork. Antennae with second segment dark brown; third segment yellowish-brown. Frons including ocellar triangle yellowish-brown. Orbital setae in the ratio of 9 : 3 : 12. Second oral seta equal to vibrissa. Palpi yellow, with one prominent apical and few ventral setae. Carina orange, high and broadened below. Face and cheek yellowish-brown, greatest width of cheek 0.13 greatest diameter of eye. Clypeus brown. Eyes dark red. **Thorax** (♂, ♀) : Acrostichal hairs regular, in 8 rows. Anterior scutellar setae parallel; posterior scutellars crossing each other. Anterior dorsocentral seta 0.67 the length of posterior dorsocentral; distance from anterior dorsocentral to posterior dorsocentral 0.4 that between two anterior dorsocentrals. Mesonotum brown, scutellum yellowish-brown. Thoracic pleura brown. Sternal-index 0.7. **Wings** (♂, ♀) (Fig. 3) : Transparent, posterior cross vein fuscous. Indices : C-index, 6.0; 4V-index, 1.2; 4C-index, 0.4; 5X-index, 1.0. Two equal bristles at apex of first costal section; heavy bristles on basal 0.3 of third costal section. Halteres yellow. Wing lengths : 4.3 mm (male); 4.7 mm (female). **Legs** : Greyish-yellow, pre-apical bristles on all tibiae; apicals on first and second tibiae.

**Abdomen** (♂, ♀) : Tergites yellow, with medially interrupted V-shaped black



Figs. 1-4. *Drosophila dominici*, sp. nov. : 1,Periphallic Organs; 2, Phallic Organs; 3, Male Wing; 4, Egg guide.

apical bands. *Periphallic organs* (Fig. 1) : Epandrium (genital arch) yellowish-brown, broad, pubescent, narrowing ventrally and projected in a tubular process with 5 bristles. Surstylus (clasper) large, triangular with 11 black teeth arranged in two widely spaced sets; upper with 8 and lower with 3 relatively short, stout teeth, and a few fine short setae. Cerci (anal plate) yellowish-brown, large, with about 34 larger and 9-11 smaller bristles ventrally. *Phallic organs* (Fig. 2) : Aedeagus yellowish-brown, straight, apically rounded, medially swollen, with numerous fine serrations, basal apodeme of aedeagus nearly equal. Anterior gonopophyses (anterior parameres) small, conical, articulated to aedeagus, each with 2 minute apical sensilla. Posterior gonopophyses (posterior parameres) obscure. Hypandrial plate broad at middle, narrowing apically. Caudal margin of novasternum with a pair of submedian spines. Ventral phragma broadly rounded distally. *Egg-guides* (Fig. 4) : Lobe yellowish, narrowing apically, with 25-27 marginal and 5 discal teeth. Basal isthmus short and narrow.

*Body Length* : ♂, 3.8 mm; ♀, 4.2 mm.

*Holotype* ♂, INDIA : WEST BENGAL : Darjeeling dist., Ramam, 10.v.1977, Coll. Y.N. Dwivedi. Deposited in the Department of Zoology, B.H.U., Varanasi. *Paratypes* : 3 ♂♂, 3 ♀♀, same data as holotype. Deposited in the Department of Zoology, B.H.U., Varanasi, and Tokyo Metropolitan University, Tokyo, Japan.

*Distribution* : India : West Bengal, Darjeeling.

*Taxonomic status* : This species is included in the *histrio* group because of the following characters : Anterior reclinate frontal seta minute; second oral-seta nearly as long as vibrissa; palpus with a few prominent ventral setae; posterior parameres apparently absent.

*Relationships and Remarks* : This species resembles *D. ramamensis* Dwivedi in many characters but distinctly differs in having light colouration of abdominal tergite, aedeagus apically swollen with numerous fine serrations (aedeagus with lateral hook-like processes in *D. ramamensis*), surstylus with a tubular process bearing 3 short, stout teeth (no tubular process in *D. ramamensis*), and hypandrial plate without tubercles (hypandrial plate with tubercles in *D. ramamensis*). It differs from the other known species of the *histrio* group in possessing unique periphallic and phallic organs. Hence it deserves the status of a new species.

This species is named in honour of Professor C.J. Dominic of Zoology Department, Banaras Hindu University, Varanasi.

**ACKNOWLEDGMENTS.** The author is highly grateful to Dr. J.P. Gupta, Department of Zoology, Banaras Hindu University, Varanasi, for providing necessary facilities and guidance; to Professor T. Okada, Tokyo, Japan, for his help in confirming the identification and to Professor M.K. Jain, Principal, Sahu Jain Post-graduate College, Najibabad for encouragement.

## REFERENCES

- DWIVEDI, Y.N. 1979. Description of two new species of subgenus *Drosophila* (Drosophilidae : Diptera) from Darjeeling, India. *Proc. Indian Acad. Sci.* 88 B(4) : 299-304.
- GUPTA, J.P. & DWIVEDI, Y.N. 1980. Further addition to *Drosophila* fauna of Darjeeling, India. *Entomon* 5 (2) : 129-134.
- GUPTA, J.P. & SINGH, O.P. 1981. Two new and two known species of *Drosophila* from Rimbick, West Bengal, India. *Entomon* 6 (1) : 33-39.
- SINGH, O.P. & GUPTA, J.P. 1980. Description of three new species of *Drosophila* (Drosophilidae) from Northeast India. *Oriental Ins.* 14 (4) : 503-509.
- SINGH, O.P. & GUPTA, J.P. 1981a. Studies on the Indian fauna of Drosophilidae. *Proc. Indian Acad. Sci.* 90B (2) : 195-202.
- SINGH, O.P. & GUPTA, J.P. 1981b. New records and new species of *Drosophila* (Drosophilidae : Diptera) from India. *Oriental Ins.* 15 (2) : 207-214.