

Systematic Study of Drosophilidae in Poona and Neighbouring Areas—IV

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Thirteen species belonging to genera *Drosophila*, *Leucophenga* and *Zaprionus* of family Drosophilidae have been previously reported from Poona and neighbouring areas^{1,2,3}. Six more species belonging to genera *Drosophila*, *Leucophenga*, *Stegana*, *Chymomyza* and *Microdrosophila* are here added to the record of the family from this area. Out of these, *Leucophenga* (*Leucophenga*) *neoangusta* and *Stegana* (*Steganina*) *subexcavata* are new species reported by the authors^{4,5}, while the remaining four species, *Drosophila* (*Drosophila*) *daruma*, *Leucophenga* (*Leucophenga*) *subpolinosa*, *Chymomyza* *pararufithorax* and *Microdrosophila* (*Microdrosophila*) *purpurata* are reported from the Indian subcontinent for the first time.

Genus *Drosophila* Fallén 1823

Subgenus *Drosophila* Fallén 1823

XIV. *Drosophila* (*Drosophila*) *daruma* Okada 1956

Drosophila (*Drosophila*) *daruma* : Okada, T. 1956.

Systematic study of Drosophilidae and allied families of Japan, 155, Gihodo Co. Ltd. Tokyo.

Description of female imago :

General features and head : Body about 2.8 mm in length, dark brown. Abdomen darker. Eyes red with short pile. Antenna yellowish, second segment with two prominent bristles in addition to smaller bristles, third segment darker. Arista with about six dorsal and three ventral rays including terminal fork. Face dark brown. Carina prominent becoming narrow above (not sulcate or flattened). Palpus yellow. Second oral almost as long as first. Second orbital about $\frac{1}{2}$ the first and $\frac{3}{4}$ the third. Ocellar triangle darker. Postverticals large.

Thorax : Scutum and scutellum tan (dark brown.). Humeral two. One presutural, two notopleurals, two supraalars and two postalars. Acrostichals in eight rows. Dorsocentrals in three pairs. Cross distance between dorsocentrals about twice the length distance. No prescutellars. Anterior scutellars slightly convergent. Posterior scutellars crossing each other. Sterno-index about 0.71.

Legs : Yellowish. Preapicals on all three tibiae and apicals on first and second.

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Wings : Wings about two mm in length and with a brownish tinge. Costal index about 1.81. 4th vein index about 2.2. 4C-index about 1.4. 5X-index about 1.46. C1 bristles two. C3 bristles on basal 4/5.

Abdomen : Tan (Dark Brown).

Egg guide : Lobes yellowish, basally broad, apically with few setae.

Genus *Leucophenga* Mik 1886

Subgenus *Leucophenga* Mik 1886

XV. *Leucophenga (Leucophenga) subpollinosa* de Meijere 1914

Leucophenga subpollinosa : de Meijere 1914. *Tijd. Ent.* 57:263; Sturtevant, A. H. 1921. *Carn. Inst. Publ.*, 301 : 132; Duda, O. 1924 *Arch. Naturg.*, 90A (3) : 186; Duda, O. 1939. *Annal. Mus. Nat. Hung.*, 32 : 27; Okada, T. 1956. *Systematic study of Drosophilidae and allied families of Japan*, 30, Gihodo Co. Ltd. Tokyo.

Description of male imago :

General features and head : Body pale yellow, about 1.9 mm in length. Head dorsally silvery white. Eyes red, bare. Antenna pale yellow. Arista with about seven dorsal and three ventral rays including terminal fork. Palpus yellowish with few prominent setae. First oral prominent, about twice the length of the second. Carina not prominent. Second orbital (reclinate) almost as long as third orbital (proclinate). Postverticals small. Ocellar triangle dark.

Thorax : Silvery white, shining. Humerals two, lower longer. Acrostichal hairs in six rows. Dorsocentrals two. Posterior dorsocentrals very long, about $2\frac{1}{2}$ times the anterior. Cross distance between the dorsocentrals about four times the length distance. Prescutellars present, about $1\frac{1}{2}$ times the anterior dorsocentrals. Anterior scutellars divergent. Posterior scutellars crossing each other. Sterno-index about 0.86. Thoracic pleura yellowish with a broad black longitudinal stripe.

Legs : Yellowish. Preapicals on all three tibiae and apicals on the second. Tarsus of second leg with two longitudinal rows of small cuneiform bristles enclosing two rows of strong bristles.

Wings : About 1.8 mm long. Clear, with a basal black patch. Costal index about 1.5. 4th vein index about 2.6. 4C-index about 1.6. 5X-index about 1.8. C 1 bristles two, equal. C 3 bristles on about basal 9/10. Halteres pale yellow with black knobs.

Abdomen : 1 T, 2 T and 3 T silvery white and shining. Remaining tergites totally black. 2 T with a median longitudinal dark patch, lateral borders also black. 3 T with a median longitudinal dark patch and lateral and posterior borders black.

Periphalli organs : Dark brown. Genital arch pubescent, broad, truncate below. Posterior margin with three bristles. Clasper oval, basally pubescent, with about sixteen bristles. Anal plate separate from genital arch, oval, pubescent and with about 15 evenly distributed bristles.

Phallic organs : Aedeagus yellowish, pointed apically. Anterior paramere oblong, slightly darker than aedeagus and with four marginal sensillae. Posterior paramere slender, bifid. Ventral fragma darker than aedeagus, pointed. Novasternum apically bifid.

Genus *Leucophenga* Mik 1886

Subgenus *Leucophenga* Mik 1886

♂ XVI. *Leucophenga (Leucophenga) neoangusta* Godbole and Vaidya

Leucophenga (Leucophenga) neoangusta : Godbole, N. N. and Vaidya, V. G., *DIS* (In Press).

Description of male imago :

General features and head : Body about 2.7 mm in length. Eyes red, bare. Antenna brown, third segment darker. Arista with about eight dorsal and four ventral rays including terminal fork. Palpas dark brown with few prominent bristles. Second oral about 1/3 the first. Second orbital minute. First orbital slightly shorter than the third. Postvertical small. Occiput black.

Thorax : Mesonotum orange, with a dark brown squarish area behind dorsocentrals. Thin dark brown lines along the dorsocentral lines. Scutellum dark brown. Humeral two, lower longer. Acrostichal hairs in ten irregular rows. Cross distance between dorsocentrals about four times the length distance. Pre-scutellars well developed, slightly longer than anterior dorsocentrals. Anterior scutellars divergent. Posterior scutellars crossing each other. Sterno-index about 0.7.

Legs : Yellowish. Middle and hind knees black. Preapicals on all three tibiae and apicals on second. Two longitudinal rows of canaliciform bristles enclosing two rows of stout bristles on second tarsus.

Wings : About 2.3 mm. in length. Anterior part of wing fuscous. Third costal section with about eight thornlike warts. Costal index about 2.0. 4th vein index about 2.4. 4C-index about 1.5. 5X-index about 1.2. C 1 bristles two. C 3 bristles on basal 2/3.

Abdomen : 1 T yellow, remaining tergites mostly black. 2 T medially yellow. 3 T paler, with median black spot.

Periphallic organs : Genital arch dark brown, broad, pubescent and truncate below. Heel prominent with three long bristles. Clasper oval, pubescent and with few setae on the lower half. Anal plate elongate, separate from genital arch, with about ten long bristles and numerous small evenly distributed bristles. Decasternum roughly rectangular.

Phallic organs : Aedeagus yellow, apically pointed, pubescent. Anterior paramere oblong. Posterior paramere slender. Ventral fragma narrow and pointed proximally. Novasternum slender, apically bifid.

Genus *Stegana* Meigen 1830

Subgenus *Steganina*

♂ XVII. *Stegana (Steganina) subexcavata*, Vaidya and Godbole

Stegana (Steganina) subexcavata : Vaidya, V. G. and Godbole, N. N., *DIS* (In Press).

A. Description of male imago :

General features and head : Body black, about 2.6 mm in length. Head dorsally flat. Eyes dark reddish brown. Antenna dark brown, third segment black and pubescent. Arista with about nine branches above and four below including the terminal fork. Basal 1/3 of arista yellow. Palpus yellowish, pubescent and with few prominent setae. Second oral about 1/2 the first. Front shining black, periorbits yellowish brown. Carina narrow, black below, yellow above. Check white, about 3/5 the greatest diameter of eye. Second orbital about 1/3 the first and about 1/5 the third. Post-verticals small. Occiput black.

Thorax : Scutum brown with a broad dark median longitudinal band throughout its length and narrower longitudinal stripes on its lateral sides. Scutellum dark brown. Thoracic pleura yellowish with a black broad longitudinal band. Humerals two, lower and longer. Acrostichal hairs in eight rows. Dorsocentrals in two pairs. Cross distance between dorsocentrals about four times the length distance. Prescutellars well developed. Anterior scutellars divergent. Posterior scutellars crossing each other. Sterno-index about 1.0.

Legs : White, black at knee joints. Preapicals on all three tibiae and apicals on second. Forefemur with a row of three especially long bristles. Middle and hind tarsi with two rows of minute cuneiform bristles enclosing two rows of stout black bristles.

Wings : Wings held obliquely over the abdomen and slanting sideways. Wings grey, anterior half darker. Veins R 4 + 5 and M apically strongly convergent. Third costal section with about eight to ten thornlike warts. Costal index about 2.2. 4th vein index about 1.9. 4C-index about 1.1. 5X-index about 1.7. C1 bristles two, equal. C3 bristles on about basal 4/5. Halteres pale yellow.

Abdomen : Shining black.

Periphallial organs : Genital arch dark brown, broad below. Anterior margin convex. Feel narrow, blunt, lower than toe. Genital arch with about twentyone bristles including six on posterior margin and four on under margin. Clasper dark brown, roughly triangular. Lower half of clasper

with many small conical warts, and with about twentyfive bristles. A strongly developed black tooth on the ventral border. Anal plate oval, separate from genital arch and with about twentythree long bristles.

Phallic organs : Phallic organs brown. Aedeagus with many slender processes apically. Anterior paramere nearly as long as aedeagus and with two sensillae. Apodeme of aedeagus darker, slender, rodlike. Ventral fragma longer than broad, rounded proximally. Novasternum with a pair of submedian processes and articulated with ventral fragma. PI about 1.

B. Description of female imago :

Similar to male.

Egg guide : Lobes dark brown, entirely fused to each other. Each lobe with several setae, two of which are especially long.

Genus *Chymomyza* Czerny 1903

♂ XVIII. *Chymomyza pararufithorax* Vaidya and Godbole, 1973

Chymomyza pararufithorax : Vaidya V. G. and Godbole N. N., *DIS*, 50: 71, 1973.

A. Description of male imago :

General features and head : Body about 2.2 mm in length. Eyes dark red with pile. Antenna yellowish brown, third segment pubescent. Arista with about four branches above and three below including terminal fork. Palpus with a few prominent setae. First oral prominent, about twice the length of second. Carina broad below and narrow above. Second orbital about $1/2$ the third and about $2/5$ the first. Postverticals small.

Thorax : Thorax dark brown, shining. Humerals two, upper longer. Acrostichal hairs in eight somewhat irregular rows. Dorsocentrals two, long. Cross distance between dorsocentrals about two times the length distance. Prescutellars absent. Anterior scutellars slightly divergent. Posterior scutellars crossing each other. Sterno-index about 1.1.

Legs : Yellowish. Forefemur, tibia and proximal tarsus dark. Preapicals on all three tibiae and apicals on first and second. Forefemur swollen, with a row of few prominent bristles.

Wings : Wings with a white patch apically. Costa and cell R 1 black. Costal index about 0.9. 4th vein index about 1.8. 4C-index about 1.5. 5X-index about 1.7. C 1 bristles two. C 3 bristles on basal $3/4$.

Abdomen : 1 T yellowish. Remaining tergites totally black and shining.

Periphallic organs : Dark brown. Genital arch broader below with about four setae on its dorsal half and about eleven setae on its ventral half. Heel absent. Toe rounded. Primary clasper roughly triangular with a sinuous row of eleven teeth and with about three marginal bristles. Anal plate roughly oval, separate from genital arch and with about fifteen long setae.

Phallic organs : Aedeagus simple, long and curved. Apodeme of aedeagus short. Novasternum with two long submedian lobes. Anterior paramere elongate, apically hairy. Posterior paramere absent. PI about 0.8.

B. Description of female imago :

Similar to male.

Egg guide : Lobes pale yellow, swollen in the middle, broadly rounded at the tip, with about fifteen marginal teeth. Five discal teeth arranged in a row. One subterminal hair. Basal isthmus short and narrow.

Genus *Microdrosophila*, Malloch, 1921

Subgenus *Microdrosophila*, Malloch, 1921

✓ XIX. *Microdrosophila (Microdrosophila) purpurata* Okada 1956

Microdrosophila (Microdrosophila) purpurata : Okada, T. 1956. *Systematic study of Drosophilidae and allied families of Japan*, 40, Gihodo Co., Ltd., Tokyo.

Male and female as described and sketched by Okada (1956)⁶.

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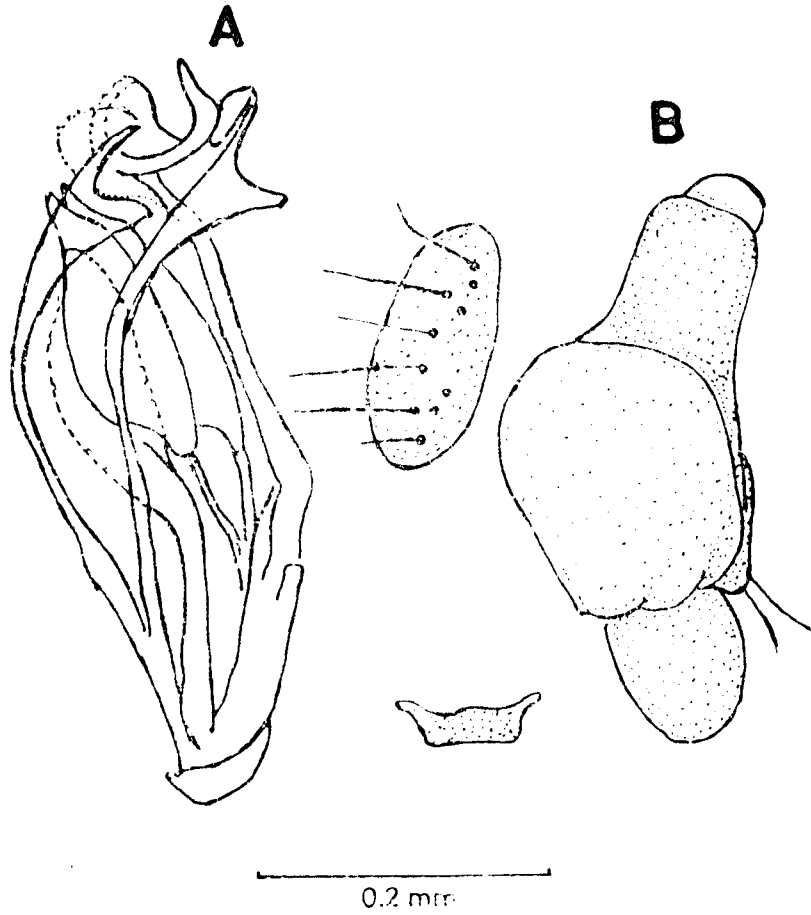


Fig. 1 : *Leucophenga neoangusta*. A. Phallic organs B. Periphallallic organs

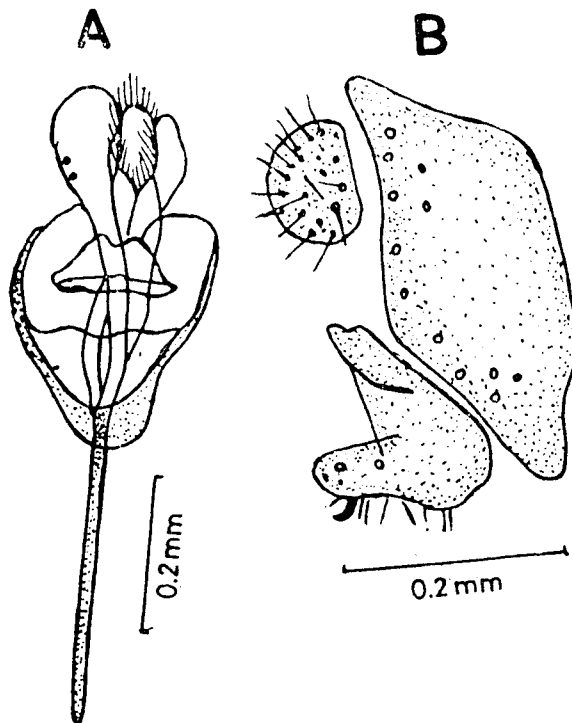


Fig. 2 : *Stegana subexcavata*. A. Phallic organs B. Periphallallic organs.

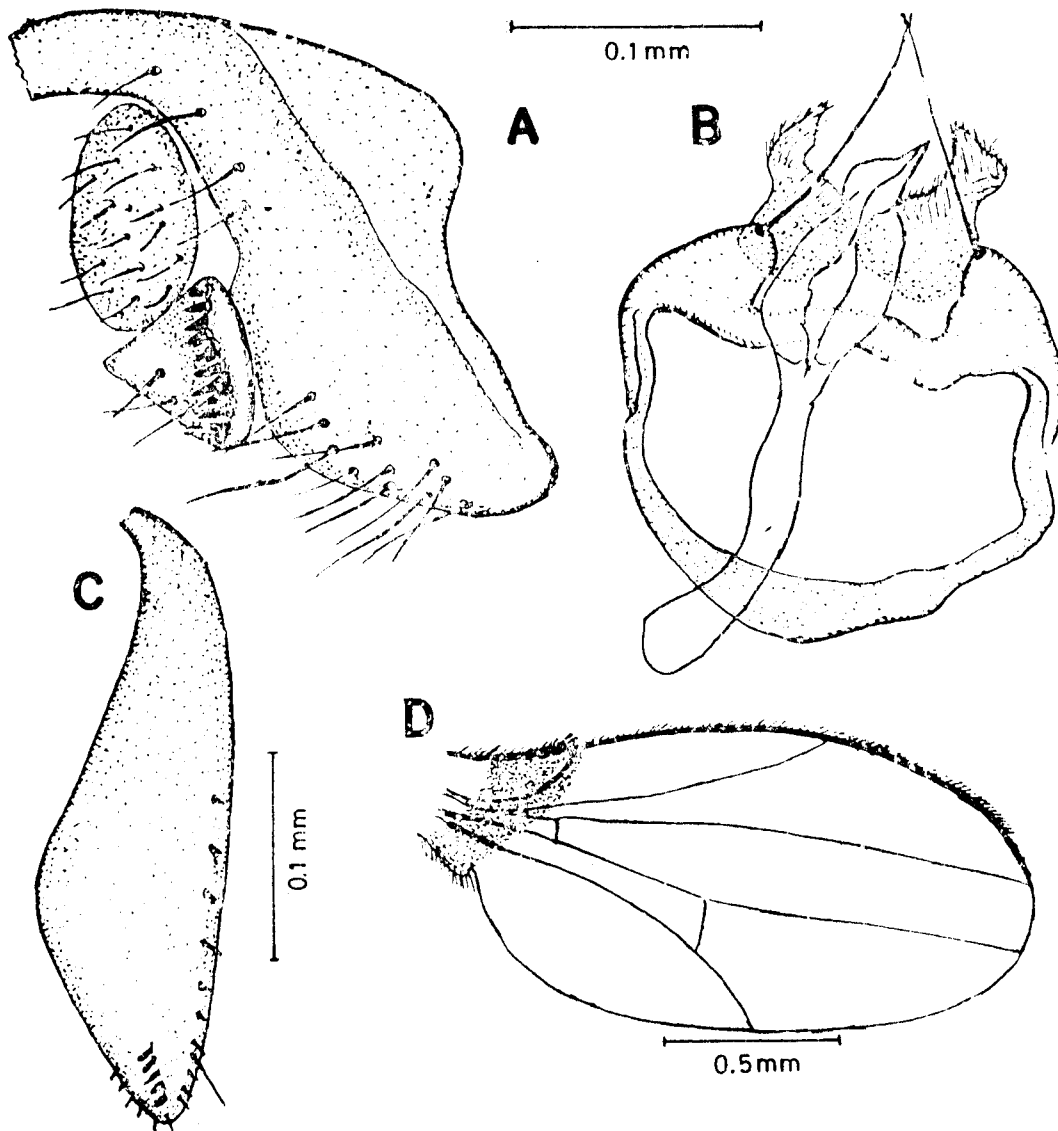


Fig. 3 : *Chymomyza pararafithorax*

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| A. Periphallic organs | B. Phallic organs |
| C. Egg guide | D. Wing |