

Collected from soil nest, also from dead wood and even carcasses, from plains to foothills, and is widely distributed.

25. *Plagiolepis* sp. Mayr 1861

Only collected from Keylong (3,300 m), Himachal Pradesh; earlier reported from northwestern, southern and eastern India.

26. *Polyrhachis jerdoni* Forel 1892

Collected from Dunera (700 m), Himachal Pradesh; Pathankot (620 m), Punjab.

Additional locality: Assam; represents first record from India.

27. *Polyrhachis rupicapra* Roger 1862

Collected from Malakpur near Pathankot (400 m), Punjab and also represents first record from India.

28. *Prenolepis naorojii* Forel 1902

Collected from Dunera (700 m), Himachal Pradesh.

Additional locality: Assam.

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32. ON THE DIPTERA OF NAYACHAR ISLAND, WEST BENGAL

(With one text-figure)

The study of island fauna, whether oceanic or riverine, is always interesting. Nothing was known of the Diptera fauna of the Nayachar Island until the project "Faunal succession in relation to vegetation of the newly emerged Nayachar Island" on the River Hooghly, near Haldia was started in 1992. The present investigation is part of a long-term study on the succession and the diversity of Dipteran fauna on a newly emerged island. The main objective here is to give a comprehensive account of the Diptera of the island.

Brief description of sites: Nayachar Island is situated on the River Hooghly, near the mouth of River Haldi, Midnapore district, West Bengal (Fig. 1). Nayachar is a spindle-shaped, silt deposited island with an area of about 29.36 sq. km, formed due to continuous riverine

action at the mouths of the Hooghly and Haldi. The distance between this island and the nearest landmass Haldia of Midnapore is only 3 km. The topography of the island is flat and the average height from water level is about 0.90-3 m (Hazra *et al.* 1996). The vegetation comprises mainly natural grasslands and mangrove plants.

SYSTEMATIC ACCOUNT

Suborder: Brachycera

Family: Stratiomyidae

Subfamily: Stratiomyinae

1. *Microchrysa flaviventris* (Wiedemann)

1824. *Sargus flaviventris* Wiedemann,
Analecta Ent. 31.

Material examined: 1 ♂, Nayachar,
28.x.1998, coll. B. Mitra.

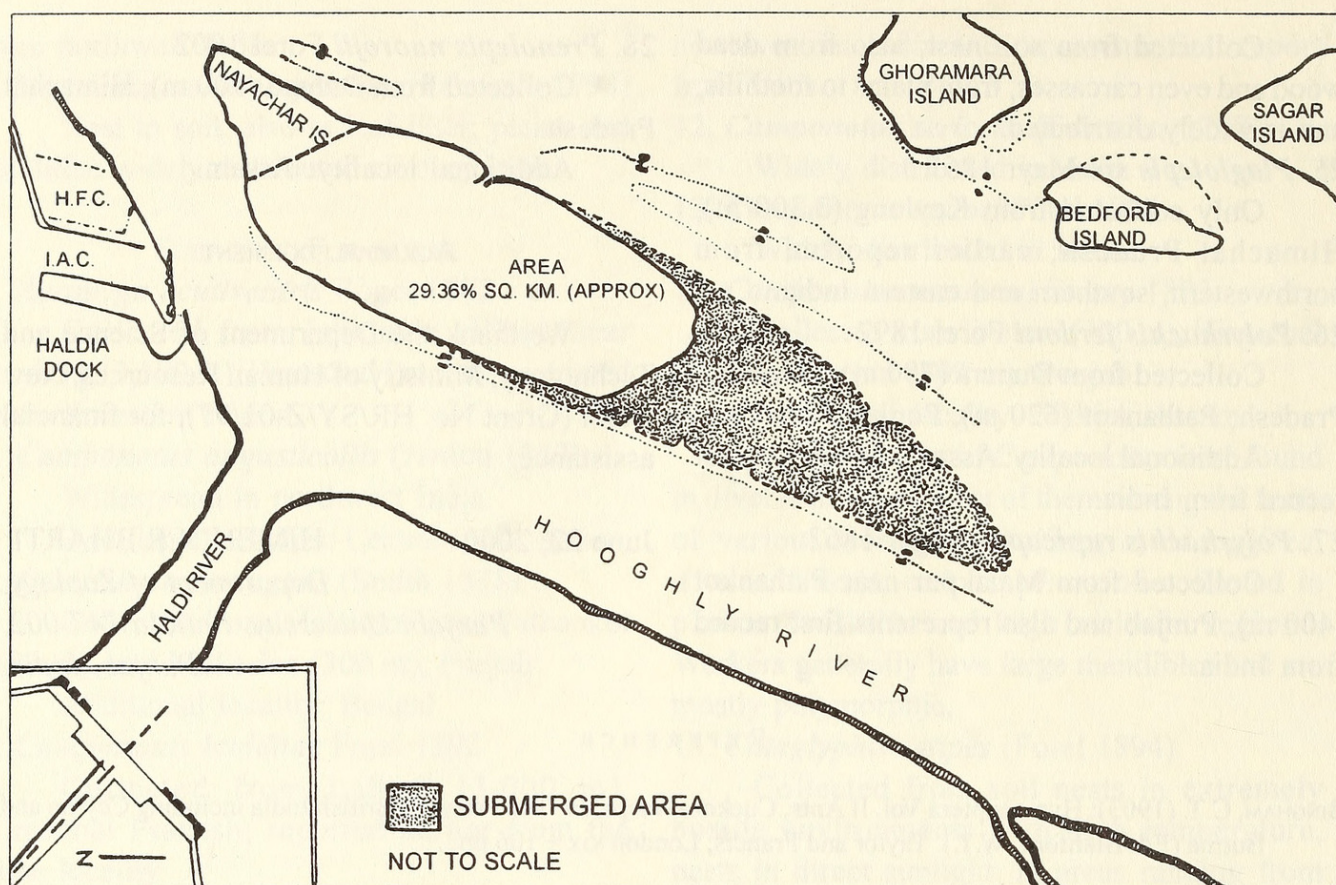


Fig. 1: Map of Nayachar Island

Diagnosis: Vertex black, shining, ocelli red, in male upper facets of eye brown, much longer than lower black ones; antenna pale yellow; thorax shining metallic green with scattered pale-yellow pubescence; scutellum concolourous with thorax; legs pale brown, hind femur with broad median brown band, hind tibia with paler apical band; abdomen brownish-yellow with pale yellow microscopic pubescence.

Distribution: West Bengal, widespread.

Family: Tabanidae

Subfamily: Tabaninae

2. *Tabanus (Tabanus) striatus* Fabricius

1787. *Tabanus striatus* Fabricius, *Mantissa Insecta*, 2: 356.

Material examined: 2 ♀, Rest house site, 28.ix.1996, coll. A.K. Hazra; 2 ♀, Kulpi side khal, 29.x.1998, coll. A.K. Hazra & A.K. Sanyal; 1 ♀, Hut side, 25.ii.1999, coll. A.K. Hazra & A.K. Sanyal.

Diagnosis: Antennae rusty yellow; callus square; thorax with 4 broad whitish stripes and with a line in the middle; wing hyaline; femora rusty brown, tibiae paler, tarsi blackish; abdomen with 5 stripes.

Distribution: West Bengal, India.

Family: Asilidae

Subfamily: Asilinae

3. *Philodicus femoralis* Ricardo

1921. *Philodicus femoralis* Ricardo, *Ann. Mag. nat. Hist.* (9)8: 190.

Material examined: 1 ♀, Rest house site, 26.xi.1999, coll. A.K. Hazra and A.K. Sanyal.

Diagnosis: Mystax pale yellow with a few black bristles on lower side; thorax dark brown with mediolongitudinal dark brown stripe extending the entire length; legs dark brown, femora comparatively light coloured, mid and hind femora bear more than one row of bristles; wing medially hyaline and rest brownish;

abdomen dark brown with hind border of tergites grey.

Distribution: West Bengal (South), Arunachal Pradesh, Bihar, Goa, Kerala, Meghalaya and Orissa.

Suborder: Cyclorrhapha

Family: Lonchopteridae

4. *Lonchoptera guptai* Joseph and Parui 1981. *Lonchoptera guptai* Joseph and Parui, *Bull. Zool. Surv. India*, 4(3): 255-256.

Material examined: 1 ♂, Rest house site, 19.viii.1992, coll. A.K. Hazra and party.

Diagnosis: Head and thorax black to dark brown, the latter with anterior border and posterolateral sides lighter; legs pale yellow, hind femur apically brown; wing light yellow; haltere light yellowish; abdomen dark brown to black, ventrally lighter.

Distribution: West Bengal and Uttar Pradesh.

Family: Syrphidae

Subfamily: Syrphinae

5. *Ischiodon scutellaris* (Fabricius) 1805. *Scaeva scutellaris* Fabricius, *Syst. Antliat.*: 252.

Material examined: 1 ♂, Rest house site, 28.xi.1999, coll. A.K. Hazra and A.K. Sanyal.

Diagnosis: Eyes bare; metasternum bare; antennal segment 3, subacute apically; wing with vein R_{4+5} ; upcurved apically and ending appreciably before wing apex; upper margin of sternopleuron with distinct yellow spot; a few short hairs anteriorly below upper patch of sternopleural hairs; surstylus elongate, directed posteriorly, broadened beyond base, not lobed.

Distribution: West Bengal (South), common in India.

Subfamily: Milesinae

6. *Eristalinus (Eristalinus) arvorum* (Fabricius) 1787. *Syrphus arvorum* Fabricius, *Mantissa Insecta*, 2: 335

Material examined: 1 ♀, Nayachar, 16.xii.1992, coll. A.K. Hazra.

Diagnosis: Antenna bright orange, tip of third antennal segment darker; scutum with 4 black stripes; scutellar disc bears dense yellow pubescence except at centre which has black pubescence; legs brownish-yellow or orange except a portion of all tibiae which is blackish; abdomen black, first tergite pale yellow; second with two oblong yellow spots, third with a pair of oval spots, fourth with a curved yellow spot.

Distribution: Southern West Bengal, Arunachal Pradesh, Delhi, Jammu and Kashmir, Meghalaya, Orissa, Sikkim and Tripura.

Family: Sepsidae

Subfamily: Sepsinae

7. *Australosepsis frontalis* (Walker) 1860. *Sepsis frontalis* Walker, *J. Proc. Linn. Soc. Lond. Zool.*, 4: 163.

Material examined: 4 ♂, Kulpi side khal, 29.x.1998, coll. A.K. Hazra and A.K. Sanyal.

Diagnosis: Wing without a diffused dark spot at end of vein R_{2+3} .

Distribution: West Bengal, Andhra Pradesh, Bihar, Kerala, Maharashtra and Punjab.

8. *Dicranosepis bicolor* (Wiedemann) 1830. *Sepsis bicolor* Wiedemann, *Aussereurop. zweifl. Insekt.*, 2: 468.

Material examined: 2 ♂, Rest house site; MIC, 11.xii.1997, coll. A.K. Hazra and A.K. Sanyal; 5 ♂, 2 ♀, Rest house site, 12.xii.1997, coll. A.K. Hazra and party.

Diagnosis: Wing unspotted; in male fore femur without posteroventral setae sub-basally, hind metatarsus without a row of long anterior setae, middle metatarsus with no strong bristles.

Distribution: West Bengal; widespread in India.

9. *Sepsis indica* Wiedemann 1824. *Sepsis indica* Wiedemann, *Analecta Ent.*: 57.

Material examined: 1 ♂, 1 ♀, Rest house site, 11.xii.1997, coll. A.K. Hazra and A.K. Sanyal.

Diagnosis: Head reddish-yellow to black; thorax reddish-yellow with a broad blackish dorsal stripe which sometimes occupies the whole of thorax, sides of thorax with a broad greyish white shimmering band across the stenopleur, dorsocentral 4; scutellum and metanotum reddish-yellow; legs reddish-yellow, hind tibiae dark brown; all tarsi black towards tip; wing clear; abdomen reddish-yellow with irregular black mark.

Distribution: West Bengal, Assam, Kerala, Maharashtra, Mizoram, and Manipur.

Family: Ephydriidae

Subfamily: Parydrinae

10. *Ochthera brevitibialis* de Meijere

1908. *Ochthera brevitibialis* de Meijere, *Tijdschr. Ent.*, 51:167.

Material examined: 3 ♂, Hut side, 12.xii.1997, coll. A.K. Hazra and A. K. Sanyal.

Diagnosis: Face golden yellow pruinose, frons shining green; thorax bluish-black with a pair of brown longitudinal stripes, chaetotaxy not distinguishable, scutellum unicolorous with thorax, with 4 bristles; fore femur black, length twice its greatest thickness.

Distribution: West Bengal, Assam and Tamil Nadu.

Family: Muscidae

Subfamily: Muscinae

11. *Musca (Musca) domestica* Linnaeus

1758. *Musca domestica* Linnaeus, *Syst. Nat.* Ed. 10, 1: 596.

Material examined: 1 ♂, Hut side, 12.xii.1997, coll. A.K. Hazra and A.K. Sanyal.

Diagnosis: Four black vittae on thorax, inner pair terminating at posterior end; propleural depression with fine setulose hairs; suprasquamal ridge without black setulae, all post dc strong; mid tibia without av and ad setae.

Distribution: West Bengal, cosmopolitan.

12. *Orthellia indica* (Robineau-Desvoidy)

1830. *Lucilia indica* Robineau-Desvoidy, *Mem. Pres. Div. Sav. Acad. Sci. Inst.*, Fr. 2: 453.

Material examined: 6 ♂, 5 ♀, Hut side, 19.viii.1992, coll. A.K. Hazra and party; 7 ♀, Hut side, 12.xii.1997, coll. A.K. Hazra and A.K. Sanyal.

Diagnosis: Bronze-green to bluish-green in colour; presutural acrostichal absent, postalar 3, anterior mesopleural present, sternoplural 1+3; discal cell with a stripe at base, vein M_{1+2} with a distinct deep bend behind; legs without metallic reflections, mid tibia with an ad seta beyond apical fourth.

Distribution: West Bengal, Andaman Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Madhya Pradesh, Maharashtra, Sikkim, Tamil Nadu, Tripura, and Uttar Pradesh.

Family: Calliphoridae

Subfamily: Chrysomyinae

13. *Chrysomya megacephala* (Fabricius)

1794. *Musca megacephala* Fabricius, *Syst. Ent.* 4: 317.

Material examined: 5 ♂, 2 ♀, Rest house site, 19.viii.1992, coll. A.K. Hazra and party.

Diagnosis: Eyes in male with markedly enlarged facets on upper two-thirds, lower one-third with small facets; parafacialia and genae yellowish-orange, both covered with yellowish-white hairs; antennal segment 3 entirely orange; thorax and abdomen greenish-blue with purple lustre; wing hyaline, dark at base, subcostal sclerite covered with brown pubescence and a few short erect hairs, upper squama white, dark margined.

Distribution: West Bengal, also common in other parts of India.

Subfamily: Rhyniinae

14. *Stomorhina discolor* (Fabricius)

1794. *Musca discolor* Fabricius, *Ent. Syst.*, 4: 320

Material examined: 1 ♀, Rest house site, 26.ii.1999, coll. A.K. Hazra and A.K. Sanyal.

Diagnosis: Antenna and palpus brown; cell R5 narrowly open; abdomen yellowish with black bands posteriorly on terga 1 and 2, and with a median longitudinal black stripe.

Distribution: Southern West Bengal, Assam, Arunachal Pradesh, Bihar, Kerala, Manipur and Uttar Pradesh.

Family: Tachinidae

Subfamily: Tachininae

15. *Thelaira macropus* (Wiedemann)

1830. *Dexia macropus* Wiedemann, *Aussereur. Zweiflugel. Ins.*, 2: 375.

Material examined: 1 ♂, Rest house site, 28.vii.1998, coll. B. Mitra.

Diagnosis: Medium size (body 11.5-15.0 mm, wing 9.0-16.5 mm). Black subdorsum and sides of abdomen from near base to middle T_4 yellow. Face wider than frons; epistome not raised; vibrissae bifurcated at epistomal margin; facial ridge with a few hairs close to vibrissae; arista plumose; orbitals not differentiated; scutellum with a pair of discal and three pairs of marginal setae, of which the apicals are raised, cruciate and slightly shorter than subapicals; 3+3

Ac , 3+3 dc and 1+3 ia setae; R more than half way to apex and R_{4+5} upto r-m setulose. Abdomen with T_{1+2} excavate nearly to its hind margin; segments T_{1+2} and T_3 each with a pair of median marginal setae, segments T_3 and T_4 each with a pair of median discal setae.

Distribution: West Bengal, Assam, Himachal Pradesh and Kashmir.

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33. NEW LARVAL FOOD PLANT OF THE BLUE TIGER BUTTERFLY

TIRUMALA LIMNIACE (CRAMER), LEPIDOPTERA: DANAIDAE

While studying butterflies near the Botanical Garden of the Government College campus, Madappally, Vatakara, Kerala from October to November 1999, I came across a plant on which I observed a large number of small eggs and larvae of a butterfly. Rearing the larvae to maturity, I identified the butterfly as *Tirumala limniace* (Cramer). The plant was later identified as *Cosmostigma racemosa* (Asclepiadaceae). According to Wynter-Blyth (1957), the food plants of *T. limniace* are *Dregea volubilis*, *Calotropis gigantea*, *Marsdenia tenacissima*, *Hoya carnosia*, *Tylophora indica* and *Asclepias*

curassavica (all Asclepiadaceae). Thus, *Cosmostigma racemosa* is a new larval food plant for *Tirumala limniace*.

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