



Rec. zool. Surv. India : 109(Part-4) : 35-51, 2009

ON A COLLECTION OF DRAGONFLIES (ODONATA : ANISOPTERA) FROM ANDAMAN AND NICOBAR ISLANDS

SUPRIYA NANDY AND BABU, R.

Zoological Survey of India, M-Block, New Alipore, Kolkata-700 053

INTRODUCTION

The study of Odonata fauna of Andaman and Nicobar Islands dates back to nineteenth century, with the description of a new species of damselfly *Libellago lineata blanda* by Selys (1853), from Great Nicobar Island. Afterwards many species have been recorded by Selys (1863, 1871, 1877). Fraser (1924) provided the first Odonata list of Andaman and Nicobar Islands and added 9 species to the fauna of this region, which were included in *Fauna of British India* (1933, 1934, 1936). Lahiri (1975) reported 31 species of Odonates from South Andaman with 15 Zygoptera and 16 Anisoptera but no species list was provided in that paper.

Chhotani *et al.* (1983) provided the consolidated list of 34 species from Andaman and Nicobar Islands with 19 species of Anisoptera which included two new species, viz. *Gomphidia ganeshi* and *Oligoaeschna andamani*. Their work was based on the collections from various surveys during 1928 to 1969 made by Col. R.B.S. Sewell, B.S. Lamba, A. Daniel & H.K. Bhowmik and T.D. Soota, covering different areas of Andaman and Nicobar Islands. Later Lahiri and Mitra (1993) added 8 species to this Island fauna, which includes 6 species of Anisoptera. Mitra (1995) recorded 3 species of Zygoptera and 8 species of Anisoptera new to Great Nicobar Island, of which 4 species of Anisoptera were also new record to Andaman and Nicobar Islands. Lahiri (1998) reported eleven Odonate species as new record from Little Andaman Island of which 7 species are Anisoptera. Previously all these species were reported from South Andaman only.

Hämäläinen *et al.* (1999) recorded 9 species newly from Andaman and Nicobar Islands which includes 7 species of Anisoptera. Among these, *Neurothemis ramburii ramburii* (Brauer) and *Zyxomma obtusum* Albarda were recorded as new to India.

Ram *et al.* (2000) studied Odonate fauna of Andaman and Nicobar Islands based on the surveys conducted by the scientists of Andaman and Nicobar Regional Station, ZSI, Port Blair. They reported 7 species of Anisoptera as new to fauna of Andaman and Nicobar Islands. Ram *et al.* (2000) reported *Cratilla metallica* (Brauer) as first record from India, but it was previously recorded by Fraser (1936) from Hasimara, Duars, Bengal, which is distinctly within Indian Territory. Yeh and

Veenakumari (2000) described new species, *Gynacantha andamanae* from South Andaman Island. Mitra (2002a) discussed on the zoogeography of Odonates of Nicobar Islands and provided the list of known Odonates from that Nicobar Island group.

The present study is based on the collection of Odonata specimens made by the scientists of Zoological Survey of India from Andaman and Nicobar Islands during 1970-1988 and 2000 present in the National Zoological Collections, ZSI, Kolkata. The nomenclature followed here is after Fraser (1934 & 1936), Prasad & Varshney (1995) and Mitra (2002b). From this study, *Neurothemis intermedia atlanta* Ris and *Tramea basilaris burmeisteri* Kirby are reported for the first time from Andaman and Nicobar Islands. The consolidated list of 44 species/ subspecies of suborder Anisoptera along with their distribution within Andaman and Nicobar Islands is given in the Table-1.

SYSTEMATIC ACCOUNT

Suborder ANISOPTERA

Superfamily LIBELLULOIDEA

Family LIBELLULIDAE

Genus *Agrionoptera* Brauer

Agrionoptera insignis insignis (Rambur)

- 1842. *Libellula insignis* Rambur, *Hist. nat. Ins. Neuropteres* : 123.
- 1865. *Agrionoptera nicobarica* Brauer, *Verh. zool.-bot. Ges. Wien.*, **15** : 978.
- 1936. *Agrionoptera insignis insignis*, Fraser, *Fauna Brit. India, Odonata*, **3** : 274-276.
- 1995. *Agrionoptera insignis*, Prasad & Varshney, *Oriental insects*, **29** : 408.

Diagnostic character : Male : Frons creamy yellow at sides, brilliant metallic blue above and over greater part of anterior surface. Prothorax black, anterior lobe and borders of posterior lobe yellow. Thorax bronzed or metallic black, marked with greenish yellow. Legs black. Wings hyaline, with amber yellow streaks in the subcostal and cubital spaces not extending as far as the first antenodal nervure. Abdomen black marked with blood red. Anal appendages black.

Material examined : 1G, Champa Bay, Great Nicobar, 31.xii.1975, Coll. P.K. Maiti.

Distribution : India : Andaman and Nicobar Islands (Nicobar), Assam, West Bengal.

Elsewhere : Indonesia, Japan, Malaysia, Myanmar, Thailand.

Genus *Crocothemis* Brauer

Crocothemis servilia servilia (Drury)

- 1770. *Libellula servilia* Drury, III. *Exotic Ins.*, **1** : 112-113.
- 1868. *Crocothemis servilia*, Brauer, *Verh. zool.-bot. Ges. Wien.*, **18** : 737.
- 1936. *Crocothemis servilia servilia*, Fraser, *Fauna Brit. India, Odonata*, **3** : 345-347.
- 1983. *Crocothemis servilia servilia*, Chhotani et al., *Rec. zool. Surv. India*, **80** : 488.
- 2000. *Crocothemis servilia servilia*, Ram et al., *Rec. zool. Surv. India*, **98(3)** : 49.

Diagnostic character : Male : Most parts of head, often dorsum of thorax, abdomen and anal appendages blood-red. Middle lobe of prothorax ridged transversely, beset with stiff red hairs. Wings hyaline, bases of all marked with rich amber-yellow, apices of wings lined narrowly with pale brown. Pterostigma dark ochreous between blackish nervures. Female : Labium pale yellow; Labrum, frons, face and vesicle olivaceous yellow ; Prothorax and thorax olivaceous brown, legs ochreous. Wings similar to male but basal markings paler in tint and the neuration in this part bright yellow instead of bright orange.

Material examined : 1G, Southside of the road from Guest House to MES Camp, Hadoo, Port Blair, March-May, 1971, Coll. B.K. Tikader; 1G, Horticulture-cum-Zoological Garden, Hadoo, Port Blair, South Andaman, 19.iv.1971, Coll. B.K. Tikader; 1G, Delanipur, Port Blair, 22.v.1971, Coll. B.K. Tikader; 1G, Chatham, Port Blair, 31.x.1972, Coll. P.T. Cherian; 1G, Janglighat, Port Blair, 14.xii.1972, Coll. K.S. Pradhan; 1G, Panchwati, Middle Andaman, 06.i.1973, Coll. K.S. Pradhan; 1G, Monglutan, 4 kms, S.W. of Port Blair, 18.xii.1975, Coll. P.K. Maiti; 1G, Wright Myo, Kalatang, South Andaman, 30.i.2000, Coll. G.K. Srivastava.

Distribution : India : Andaman and Nicobar Islands (Middle Andaman, South Andaman and Little Andaman), Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Africa, America, Australia, Bangladesh, China, Iraq, Indonesia, Japan, Korea, Malaysia, Myanmar, Nepal, Philippines, Singapore, Sri Lanka, Taiwan, Thailand and Turkey.

Remark : This species is recorded for the first time from Middle Andaman.

Genus *Diplacodes* Kirby

Diplacodes trivialis (Rambur)

- 1842. *Libellula trivialis* Rambur, *Ins. Neurop.*, : 115.
- 1891. *Diplacodes trivialis*, Karsch, *Ent. Nachr.*, **17** : 246.
- 1936. *Diplacodes trivialis*, Fraser, *Fauna Brit. India, Odonata*, **3** : 336-338.
- 1983. *Diplacodes trivialis*, Chhotani et al., *Rec. zool. Surv. India*, **80** : 488-489.
- 1995. *Diplacodes trivialis*, Mitra, *Opusc. zool. Flumin.*, **129** : 4.
- 2000. *Diplacodes trivialis*, Ram et al., *Rec. zool. Surv. India*, **98(3)** : 49.

Diagnostic character : Male : Labium, labrum and bases of mandible creamy yellow; face, frons and vesicle palest azure blue. Prothorax pale brown to black, a mid dorsal stripe on dorsum. Thorax greenish yellow/olivaceous, sutures finely black; whole thorax pruinosed in old adults. Wings hyaline, apices clear. Abdomen segments 1 to 3 greenish yellow, sutures finely black, prominent middorsal and subdorsal stripes, segments 4 to 7 with subdorsal yellow stripes, segments 8 to 10 black, marking obscured due to pruinescence in adults. Anal appendages bright yellow.

Female : Resembles subadult male in colour; abdominal markings broader and continued on to segments 8 to 10, the latter entirely yellow as well as anal appendages. Vulvar scale broad but short 'scoop' shaped.

Material examined : 1G1E, 1 km. south of Circuit House, Malacca village, Car Nicobar, 04.iii.1970, Coll. B.K. Tikader; 2E, Horticulture Garden, HQ, Car Nicobar, 08.iii.1970, Coll. B.K. Tikader; 2G1E, Horticulture Garden, HQ, Car Nicobar, 11.iii.1970, Coll. B.K. Tikader; 1G1E, Kamorta Island, Nicobar, 17.iii.1970, Coll. B.K. Tikader; 4G1E, Kamorta Island, Nicobar, 19.iii.1970, Coll. B.K. Tikader; 1G1E, Kamorta Island, Nicobar, 21.iii.1970, Coll. B.K. Tikader; 1G1E, Kamorta Island, Nicobar, 22.iii.1970, Coll. B.K. Tikader; 1E, Guest House, Kamorta Island, Nicobar, 23.iii.1970, Coll. B.K. Tikader; 1G, 2 km. northeast of Guest House, Kamorta Island, Nicobar, 24.iii.1970, Coll. B.K. Tikader; 1E, Horticulture Garden, Kamorta Island, Car Nicobar, 25.iii.1970, Coll. B.K. Tikader; 2G, In front of Marine Fisheries cold storage, Aberdeen, Port Blair, 28.iii.1970, Coll. B.K. Tikader; 1E, 1 km. northeast of Guest House, Kamorta Island, Nicobar, 30.iii.1970, Coll. B.K. Tikader; 1E, Camp No. 1, Havelock Island, 17.iv.1970, Coll. B.K. Tikader; 1G, Southside of the road from Guest House to MES Camp, Hadoo, Port Blair, 18.iv.1970, Coll. B.K. Tikader; 1d, Camp No. 1, Tugapur, Mayabunder, North Andamans, 11.v.1971, Coll. B.K. Tikader; 1G, Pahelgaon, Tugapur, Mayabunder, North Andamans, 12.v.1971, Coll. B.K. Tikader; 1G, 1d, Forest adjoining to Rest House, Tugapur, Mayabunder, North Andamans, 13.v.1971, Coll. B.K. Tikader; 1G, Near Chiria Tapu village, South Andaman, 29.v.1971, Coll. B.K. Tikader; 1G, Wimberlygunj, South Andaman, 01.xi.1972, Coll. P.T. Cherian; 2G, Kamorta : Chola, 04.xii.1972, Coll. P.T. Cherian; 3G2E, Kassor, near Govt. Hospital, 11.xii.1972, Coll. P.T. Cherian; 2G1E, Aberdeen Bay, Port Blair, 13.xii.1972, Coll. K.S. Pradhan; 1E, Marine Hill, Port Blair, South Andaman, 15.xii.1972, Coll. K.S. Pradhan; 1E, South Andaman, near Cadlegunj paddy field, 16.xii.1972, Coll. K.S. Pradhan; 2G, Humphreygunj, South Andaman, 17.xii.1972, Coll. K.S. Pradhan; 1G1E, Chiria Tapu, South Andaman, 20.xii.1972, Coll. K.S. Pradhan; 1G, Bedanabad, South Andaman, 21.xii.1972, Coll. K.S. Pradhan; 1G, Sawai, Car Nicobar, 24.xii.1972, Coll. K.S. Pradhan; 1E, Kemos, Car Nicobar, 27.xii.1972, Coll. K.S. Pradhan; 4G4E, Arong, Car Nicobar, 27.xii.1972, Coll. K.S. Pradhan; 1G2E, Arong, 27.xii.1972, Coll. K.S. Pradhan; 2G1E, Biglapathi, Car Nicobar, 28.xii.1972, Coll. K.S. Pradhan; 1E, Panighat, South Andaman, 03.i.1973, Coll. K.S. Pradhan; 2E, Yereta, 08.i.1973, Coll. K.S. Pradhan; 2E, Aniket, 16.i.1973, Coll. K.S. Pradhan; 1E, Ferrargunj, South Andaman, 17.i.1973, Coll. K.S. Pradhan; 1E, Manpur, South Andaman, 18.i.1973, Coll. K.S. Pradhan; 1G, Ramnagar, Magarnalla, 14.i.1975, Coll. S.K. Bhattacharya; 1G, Corbys Cove, South Andaman, Port Blair, 01.iii.1975, Coll. G.K. Srivastava; 1G, Chiria Tapu, South Andaman, 19.iii.1975, Coll. G.K. Srivastava; 1G, Monglutan, 20 kms, S.W. of Port Blair, 18.xii.1975, Coll. P.K. Maiti; 1d, Chotta Inaka, Kamorta, 14.xi.1978, Coll. B. Nandi; 1G, Jungle Ghat, Port Blair, 18.xii.1978, Coll. B. Nandi; 1E, Chouldari, 12.i.1988, Coll. A.N.T. Joseph; 1E, Corbys Cove Beach, South Andaman, Port Blair, 13.i.1988, Coll. A.N.T. Joseph; 2G1E, Chiria Tapu, Port Blair, South Andaman, 15.i.1988, Coll. A.N.T. Joseph; 3E1G, Netaji Nagar, Little

Andaman, 17.i.1988, Coll. A.N.T. Joseph; 3G, Ramkrishnapur, Little Andaman, 19.i.1988, Coll. A.N.T. Joseph; 1E, 4 km. from Hut Bay, Little Andaman, 21.i.1988, Coll. A.N.T. Joseph; 1E, 3 km. from Hut Bay, Little Andaman, 22.i.1988, Coll. A.N.T. Joseph; 2G, Hut Bay Govt. School, Little Andaman, 23.i.1988, Coll. A.N.T. Joseph; 1G, South Point, Little Andaman, 24.i.1988, Coll. A.N.T. Joseph; 1G, Netaji Nagar, Little Andaman, 25.i.1988, Coll. A.N.T. Joseph; 1E, Vivekananda Puram, Little Andaman, 29.i.1988, Coll. A.N.T. Joseph; 3E1G, New Wandoor, 31.i.1988, Coll. A.N.T. Joseph; 2E, Rut Land Bay, 03.ii.1988, Coll. A.N.T. Joseph; 1E, Jolly Buoy Is., South Andaman, 22.i.2000, Coll. G.K. Srivastava; 1E, Wright Myo, Kalatang, South Andaman, 30.i.2000, Coll. G.K. Srivastava; 1G, Chiria Tapu, South Andaman, 19.ii.2000, Coll. R.N. Tiwari.

Distribution : India : Andaman and Nicobar Islands (North Andaman, Middle Andaman, South Andaman, Little Andaman and Nicobar), Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Australia, Bangladesh, China, Indonesia, Iraq, Japan, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Taiwan and Thailand.

Remark : This species is recorded for the first time from Middle Andaman and Little Andaman.

Genus *Lathrecista* Kirby

Lathrecista asiatica asiatica (Fabricius)

- 1798. *Libellula asiatica* Fabricius, Ent. Syst. Suppl., : 283.
- 1890. *Lathrecista asiatica*, Karsch, Berlin Ent. Zeit., 33 : 369.
- 1909. *Lathrecista asiatica asiatica*, Ris, Cat. Coll. Selys, fasc. 9 : 129-132.
- 1936. *Lathrecista asiatica asiatica*, Fraser, Fauna Brit. India, Odonata, 3 : 281-284.
- 1983. *Lathrecista asiatica asiatica*, Chhotani et al. Rec. zool. Surv. India, 80 : 486.
- 2000. *Lathrecista asiatica asiatica*, Ram et al., Rec. zool. Surv. India, 98(3) : 45.

Diagnostic character : Male : Prothorax blackish-brown, thorax dark coppery brown on dorsum, bright yellow laterally; Abdomen segments 1 and 2 with a broad lateral stripe and a fine middorsal, all sutures on these two segments finely black; segments 3-8 bright crimson red with sutures black; segments 9 and 10 black. Legs dark reddish brown to black. Wings hyaline with apices usually enfumed, sometimes dark reddish brown to proximal end of pterostigma. Female : Resembles the male closely but colour of abdomen is rich olivaceous-brown. Apices of wings tipped with brown to distal end of pterostigma only. Vulvar scale and ninth ventral plate projecting beyond end of abdomen and coated with golden hairs.

Material examined : 1d, 1 km. east of Rangat Jetty, Middle Andaman, 1970, Coll. B.K. Tikader; 1G, Durgapur, 2 km south of Aerual Bay Jetty, Diglipur, North Andamans, 26.iv.1971, Coll. B.K. Tikader; 2G1E, Pahelgaon, 2 km south of Rest House, Tugapur, Mayabunder, North Andaman,

12.v.1971, Coll. B.K. Tikader; 1G, Forest adjoining to Rest House, Tugapur, Mayabunder, North Andaman, 13.v.1971, Coll. B.K. Tikader; 1G, Near Chiria Tapu village, South Andaman, 29.v.1971, Coll. B.K. Tikader; 1G, Government Agricultural Farm, Sipighat, Port Blair, 04.vi.1971, Coll. B.K. Tikader; 1G, Chiria Tapu, Munda Pahar, South Andaman, 27.x.1972, Coll. P.T. Cherian; 1G, Panighat, South Andaman, 03.i.1973, Coll. K.S. Pradhan; 1E, Ferrarganj, South Andaman, 17.i.1973, Coll. K.S. Pradhan; 1G 1E, Little Andaman, 3 km. away from Hut Bay, 22.i.1988, Coll. A.N.T. Joseph; 1G, Little Andaman, Hut Bay, 27.i.1988, Coll. A.N.T. Joseph.

Distribution : India : Andaman and Nicobar Islands (North Andaman, Middle Andaman, South Andaman, Little Andaman and Nicobar), Arunachal Pradesh, Assam, Bihar, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Orissa, South India and West Bengal.

Elsewhere : China, Fiji, Indonesia, Japan, Malaysia, Myanmar, Philippines, Papua New Guinea, Samoa, Singapore, Sri Lanka, Taiwan and Thailand.

Remark : This species is recorded for the first time from Middle Andaman.

Genus ***Neurothemis*** Brauer

Neurothemis fulvia (Drury)

- 1773. *Libellula fulvia* Drury, III. Exot. Ins., 2 : 84-85.
- 1867. *Neurothemis fulvia*, Kirby, Trans. Zool. Soc. Lond., 12 : 271.
- 1936. *Neurothemis fulvia*, Fraser, Fauna Brit. India, Odonata, 3 : 353-354.
- 2000. *Neurothemis fulvia*, Ram et al., Rec. zool. Surv. India, 98(3) : 51.

Diagnostic character : Male : Prothorax, thorax and abdomen reddish-brown, sutures and borders of latter finely black. Legs and anal appendages dark ferruginous. Wings opaque, dark reddish brown from base to about middle of pterostigma, apex of wings also opaque brown enclosing a clear window in each wing at apex. Female : Many forms of females are found, varying from complete isochrome (having tips of fore wings completely clear and that of hind wings bordered with amber yellow but not opaque brown) to several types of heterochromes : having the ground colour of head, thorax and body generally much paler or ochreous. Wings clear amber-yellow, with a dark ray in subcostal and costal areas near the node and form a nodal spot.

Material examined : 3G, Trinkate Island, Nicobar, 20.iii.1970, Coll. B.K. Tikader; 3G, Kamorta Island, Nicobar, 22.iii.1970, Coll. B.K. Tikader; 1G, 2 km. northeast of Guest House, Kamorta Island, Nicobar, 24.iii.1970, Coll. B.K. Tikader; 1E, Magarnalla Agriculture Farm, 15.i.1975, Coll. S.K. Bhattacharya; 1G, Bada Inaka, Kamorta, 15.xi.1978, Coll. B. Nandi; 1G, Little Andaman, Hut Bay Govt. School, 23.i.1986, Coll. A.N.T. Joseph.

Distribution : India : Andaman and Nicobar Islands (South Andaman, Little Andaman and Nicobar), Arunachal Pradesh, Assam, Bihar, Jharkhand, Chhattisgarh, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Tamil Nadu, Tripura, Uttarakhand and West Bengal.

Elsewhere : Australia, Bangladesh, China, Hong Kong, Indonesia, Iraq, Japan, Malaysia, Myanmar, Nepal, Philippines, Seychelles, Sri Lanka, Taiwan and Thailand.

Remark : This species is recorded for the first time from Little Andaman.

***Neurothemis intermedia atlanta* Ris**

1916. *Neurothemis intermedia atlanta* Ris, Cat. Coll. Selys, fasc. 16 : 1168.
 1924. *Neurothemis intermedia atlanta*, Fraser, Ind. Mus., 26 : 438
 1936. *Neurothemis intermedia atlanta*, Fraser, Fauna Brit. India, Odonata, 3 : 358-359.

Diagnostic character : Male : Labrum, frons and whole of face brightly tinted with crimson; dorsum of thorax uniform olivaceous to dark reddish-brown without humeral stripe. Abdomen with broad ventro lateral stripe, continuous along whole length of abdomen, segment 8 and 9 with middorsal carina blackish and 9 entirely black except ventral border. Wings hyaline with intense golden amber basal marking to as far distal as outer border of discoidal cell, costal border of wing not tinted with yellow. Anal appendages reddish.

Material examined : 1G, Manas Ghat, South Andaman, 26.iii.1964, Coll. B.S. Lamba.

Distribution : India : Assam, Kerala, Meghalaya, Orissa, Sikkim, Tamil Nadu and Tripura.

Elsewhere : Kampuchea, Myanmar, Nepal and Thailand.

Remark : This species is recorded for the first time from Andaman & Nicobar Islands in the present study.

***Neurothemis intermedia intermedia* (Rambur)**

1842. *Libellula intermedia* Rambur, Ins. Neurop., p. 91.
 1889. *Neurothemis intermedia*, Selys, Ann. Mus. Civ. Genova, 27 : 454.
 1911. *Neurothemis intermedia intermedia*, Ris, Cat. Coll. Selys, fasc. 13 : 551, 563-564.
 1936. *Neurothemis intermedia intermedia*, Fraser, Fauna Brit. India, Odonata, 3 : 357-358.
 1983. *Neurothemis intermedia intermedia*, Chhotani et al., Rec. zool. Surv. India, 80 : 493.
 2000. *Neurothemis intermedia intermedia*, Ram et al., Rec. zool. Surv. India, 98(3) : 51.

Diagnostic character : Female : Prothorax reddish brown, thorax pale greenish yellow, dorsum tinged with ferruginous and with a distinct humeral reddish-brown stripe. Wings uniformly tinted with pale yellow, this diffusely deepened along costal area. Abdomen bright reddish-brown/ochreous with sharply defined ventro-lateral brownish stripe interrupted at apical end of segments 3 to 8, some small dark points at base of segment 10. Anal appendages reddish.

Material examined : 3E, Kamorta Island, Nicobar, 22.iii.1970, Coll. B.K. Tikader; 1E, 2 km northeast of Guest House, Kamorta Island, Nicobar, 24.iii.1970, Coll. B.K. Tikader; 2E, Rut Island, 04.ii.1970, Coll. A.N.T. Joseph.

Distribution : India : Andaman and Nicobar Islands (North Andaman and Nicobar), Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Karnataka, Kerala, Madhya Pradesh,

Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Bangladesh, China, Myanmar, Malaysia, Nepal, Sri Lanka and Thailand.

Genus ***Orthetrum*** Newman

Orthetrum chrysis (Selys)

- 1891. *Libella testacea* race *chrysis* Selys, Ann. Mus. Civ. Genova, **30** : 462.
- 1900. *Orthetrum chrysis*, Ris, Archiv. fur Natur. Bd., : 186.
- 1936. *Orthetrum chrysis*, Fraser, Fauna Brit. India, Odonata, **3** : 310-311.
- 1983. *Orthetrum chrysis*, Chhotani et al., Rec. zool. Surv. India, **80** : 487.
- 2000. *Orthetrum chrysis*, Ram et al., Rec. zool. Surv. India, **98(3)** : 47.

Diagnostic character : Male : Labium, labrum and face yellowish or pale brown; Frons bright scarlet; Thorax dark ferruginous and abdomen bright blood-red. Wings with the basal marking only extending to the first antenodal nervure and not beyond the border of the membrane; pterostigma dark reddish brown.

Material examined : 1G, Pahelgaon, 2 km south of Rest House, Tugapur, Mayabunder, North Andaman, 12.v.1971, Coll. B.K. Tikader.

Distribution : India : Andaman and Nicobar Islands (North Andaman and South Andaman), Assam, Himachal Pradesh, Maharashtra, Orissa, Western Ghats and West Bengal.

Elsewhere : Australia, China, Hong Kong, Indonesia, Japan, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan and Thailand.

Orthetrum pruinosum neglectum (Rambur)

- 1842. *Libellula neglecta* Rambur, Ins. Neurop., : 86.
- 1886. *Orthetrum pruinosum*, Kirby, Proc. Zool. Soc. Lond., : 327.
- 1909. *Orthetrum pruinosum neglectum*, Ris, Cat. Coll. Selys, fasc. **9** : 181, 239-240.
- 1936. *Orthetrum pruinosum neglectum*, Fraser, Fauna Brit. India, Odonata, **3** : 311-313.
- 2000. *Orthetrum pruinosum neglectum*, Ram et al., Rec. zool. Surv. India, **98(3)** : 47.

Diagnostic character : Male : Labium, labrum and face ochreous to pale reddish brown; frons dark brown to blue-black anteriorly. Prothorax and thorax reddish brown to dull purple according to the amount of pruinescence present. Wings hyaline, enframed pale brown towards apices with a reddish brown basal marking extending distalwards in hind wing; pterostigma reddish brown to black, covering 2 cells. 2 rows of cells between IR_{iii} and R_{spl} . Abdomen vermillion red to purplish-red due to pruinescence. Anal appendages red.

Material examined : 1G, Pahelgaon, Tugapur, Mayabunder, North Andaman, 12.v.1971, Coll. B.K. Tikader; 2d, Chiria Tapu near Guest House, 22.x.1972, Coll. P.T. Cherian; 2d, Chiria Tapu village, 23.x.1972, Coll. P.T. Cherian; 1G, Humphreygunj, South Andaman, 17.xii.1972, Coll. K.S. Pradhan; 1G, Manpur, South Andaman, 18.i.1973, Coll. K.S. Pradhan; 1G, Herbertabad, South Andaman, 18.i.1973, Coll. K.S. Pradhan.

Distribution : India : Andaman and Nicobar Islands (North Andaman, South Andaman and Nicobar) Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Himachal Pradesh, Jammu-Kashmir, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Rajasthan, Sikkim, South India, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Afghanistan, Bangladesh, China, Hong Kong, Indonesia, Japan, Laos, Malaysia, Myanmar, Nepal, Philippines, Singapore, Sri Lanka, Taiwan, Thailand and Vietnam.

Remark : This species is recorded for the first time from Andaman Islands (North and South Andaman) in this study. Previously it was recorded from Nicobar Islands only.

***Orthetrum sabina sabina* (Drury)**

- 1770. *Libellula sabina* Drury, III, Exot. Ins., 1 : 114-115.
- 1889. *Orthetrum sabina*, Kirby, Trans. Zool. Soc. Lond., 12 : 302.
- 1936. *Orthetrum sabina*, Fraser, Fauna Brit. India, Odonata, 3 : 300-302.
- 1983. *Orthetrum sabina sabina*, Chhotani et al., Rec. zool. Surv. India, 80 : 488.
- 1991. *Orthetrum sabina sabina*, Tsuda, A distributional list of world Odonata : 172.
- 1995. *Orthetrum sabina sabina*, Mitra, Opusc. zool. Flumin., 129 : 4.
- 2000. *Orthetrum sabina sabina*, Ram et al., Rec. zool. Surv. India, 98(3) : 47.

Diagnostic character : Male : Labium yellow, middle lobe brownish to black; labrum, face and frons yellowish. Frons very deeply notched forming two triangular facets in front. Prothorax bright yellow marked with black, its anterior and middle lobe blackish brown posteriorly. Thorax greenish yellow, sutures of thorax finely black. Abdomen greenish yellow marked with black; segment 1 to 3 enormously swollen dorso ventrally and laterally, segments 4 to 6 very narrow, cylindrical; segments 7 to 9 all dilated but compressed laterally; segment 10 very small. Anal appendages creamy white with a row of very small black spines below superiors. Female : Exactly similar to the male both in colour and shape of abdomen. Anal appendages pale yellow, shortly conical.

Material examined : 1G, In front of marine fisheries cold storage, Aberdeen, P.B., 28.ii.1970, Coll. B.K. Tikader; 3E, Kamorta Island, Nicobar, 18.iii.1970, Coll. B.K. Tikader; 1G, Kamorta Island, Nicobar, 22.iii.1970, Coll. B.K. Tikader; 1G, 1 km. NE of Guest House, Kamorta Island, Nicobar, 30.iii.1970, Coll. B.K. Tikader; 1E, locality not known, 1970, Coll. B.K. Tikader; 1G, South side of the road from Guest House to MES camp, Haddoo, Port Blair, 18.iv.1971, Coll. B.K. Tikader; 1G, Tugapur, Mayabunder, N. Andaman, 11.v.1971, Coll. B.K. Tikader; 1G, Pahengaon, Tugapur, Mayabunder, N. Andaman, 12.v.1971, Coll. B.K. Tikader; 1G 1E, Near Chiria Tapu village, South Andaman, 29.v.1971, Coll. B.K. Tikader; 1E, Government Agricultural Farm, Sipighat, Port Blair, 04.vi.1971, Coll. B.K. Tikader; 1G, Rangat, M. Andaman, 30.i.1972, Coll. Saha; 2G1E, 12.xii.1972, Coll. K.S. Pradhan; 1G 2E, Aberdeen Bay, 13.xii.1972, Coll. K.S. Pradhan; 1G, Janglighat, Port Blair, 14.xii.1972, Coll. K.S. Pradhan; 2G 3E, Marine Hill, Port Blair, 15.xii.1972, Coll. K.S. Pradhan; 2G, Cadlegunj, 16.xii.1972, Coll. K.S. Pradhan; 2G, Humphreygunj, South Andaman, 17.xii.1972, Coll. K.S. Pradhan; 1G 1E, Manglutan, W. of

Humphreygunj, 17.xii.1972, Coll. K.S. Pradhan; 2G, Chiria Tapu, South Andaman, 20.xii.1972, Coll. K.S. Pradhan; 1E, Bedanabad, South Andaman, 21.xii.1972, Coll. K.S. Pradhan; 1G 1E, Sawai, Car Nicobar, 24.xii.1972, Coll. K.S. Pradhan; 1E, R.G. Temple, Port Blair, 01.i.1973, Coll. K.S. Pradhan; 3G, S. Point, Port Blair, South Andaman, 02.i.1973, Coll. K.S. Pradhan; 1G, Shantipur, Middle Andaman, 05.i.1973, Coll. K.S. Pradhan; 5G, Panchwati, M. Andaman, 06.i.1973, Coll. K.S. Pradhan; 2G, Yereta, 08.i.1973, Coll. K.S. Pradhan; 5G, Mayabunder, N. Andaman, 10.i.1973, Coll. K.S. Pradhan; 3G, Aniket, South Andaman, 16.i.1973, Coll. K.S. Pradhan; 1G, Ferrarganj, South Andaman, 17.i.1973, Coll. K.S. Pradhan; 2G, Manpur, S. Andaman, 18.i.1973, Coll. K.S. Pradhan; 1E, Gopalpur, Chouldari, South Andaman, 01.i.1975, Coll. S.K. Bhattacharya; 1G, Podarek Plantation, Forest Check post, Magarnalla, 12.i.1975, Coll. S.K. Bhattacharya; 1G 2E, South Point, Port Blair, 17.xii.1975, P.K. Maiti; 1E, Rajendra Nagar, Gt. Nicobar, 30.xii.1975, Coll. P.K. Maiti; 1E, Wrightmyo, Kalatang Forest, Base of Mt. Harriet, South Andaman, 28.ii.1975, Coll. G.K. Srivastava; 1E, Corbys Cove, Port Blair, South Andaman, 01.iii.1975, Coll. G.K. Srivastava; 1G 1E, Bamboo Flat, South Andaman, 02.iii.1975, Coll. G.K. Srivastava; 1G, Humphreygunj within 2 km. radius, 13.iii.1975, Coll. G.K. Srivastava; 1G, Monglutan, 4 kms, S.W. of Humphreygunj, South Andaman, 14.iii.1975, Coll. G.K. Srivastava; 1G, Forest Rest House compound, Chiria Tapu, South Andaman, 07.i.1976, Coll. P.K. Maiti; 2G, Jungli Ghat, Port Blair, 18.xii.1978, Coll. B. Nandi; 1G, Near Airport, Port Blair, 20.xii.1978, Coll. B. Nandi; 1G 1E, Port Blair, 12.i.1988, Coll. A.N.T. Joseph; 1G 1E, Corbys Cove Beach, Port Blair, 13.i.1988, Coll. A.N.T. Joseph; 1G 1E, Chiria Tapu, Port Blair, South Andaman, 15.i.1988, Coll. A.N.T. Joseph; 1G, Vivekananda Puram, Little Andaman, 18.i.1988, Coll. A.N.T. Joseph; 1d, 4 km. from Hut Bay, Little Andaman, 21.i.1988, Coll. A.N.T. Joseph; 2G, Ross Is., South Andaman, 24.i.2000, Coll. G.K. Srivastava; 1E, Sippighat, South Andaman, 27.i.2000, Coll. G.K. Srivastava; 1G, Chiria Tapu, South Andaman, 02.ii.2000, Coll. G.K. Srivastava.

Distribution : India : Andaman & Nicobar Islands (North Andaman, Middle Andaman, South Andaman, Little Andaman and Nicobar), Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Goa, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Asia Minor, Australia, Bangladesh, China, Cyprus, Indonesia, Iran, Myanmar, Nepal, Philippines, Singapore, Somaliland, Sri Lanka, Syria and Thailand.

Remarks : This species is recorded for the first time from Middle Andaman and Little Andaman.

Genus **Pantala** Hagen

Pantala flavescens (Fabricius)

- 1798. *Libellula flavescens* Fabricius, Ent. Syst. Suppl., : 285.
- 1861. *Pantala flavescens*, Hagen, Syn. Neur. N. Amer., : 142.
- 1936. *Pantala flavescens*, Fraser, Fauna Brit. India, Odonata, 3 : 414-416.
- 2000. *Pantala flavescens*, Ram et al., Rec. zool. Surv. India, 98(3) : 54.

Diagnostic character : Male : Large species; Eyes reddish brown above. Prothorax rich ochreous with transverse belt of dark reddish brown between anterior and middle lobes. Thorax olivaceous or ferruginous coated thickly with yellowish downy hair. Wings hyaline, with base of hind-wing pale golden yellow up to anal loop and with a narrow apical brown spot limited to posterior border of wing; pterostigma bright ochreous; membrane white. Abdomen bright ochreous, dorsum tinted with bright brick red, sides of segments 1 to 4 pale yellow. Anal appendages ochreous. Female : Very similar to male except eyes olivaceous brown, wings evenly and deeply enfumed and always without apical brown spot, abdomen not constricted at segment 3, stouter and more robust.

Material examined : 1G, Chiria Tapu, South Andaman, 17.i.1972, Coll. M.S.D; 2E, Chiria Tapu near Guest House, 22.x.1972, Coll. P.T. Cherian; 1E, Chiria Tapu near Guest House, 23.x.1972, Coll. P.T. Cherian; 3E 1G, 11.xii.1972, Coll. K.S. Pradhan; 1G, Car Nicobar, Agricultural garden, Malaca, 26.xii.1972, Coll. K.S. Pradhan; 1G, South Point, Port Blair, 02.i.1973, Coll. K.S. Pradhan; 1G, Bakul Tala, Middle Andaman, 07.i.1973, Coll. K.S. Pradhan; 1G, Aniket, South Andaman, 16.i.1973, Coll. K.S. Pradhan; 1E, Horticulture-cum-Zoological Garden, South Andaman, 27.xii.1974, Coll. S.K. Bhattacharya; 1G, Magarnalla, Campbell Bay, 07.i.1975, Coll. S.K. Bhattacharya; 1E1G, Rajendra Nagar, Gt. Nicobar, 30.xii.1975, Coll. P.K. Maiti; 1E, Marine Hill, Port Blair, 6.xi.1978, Coll. B. Nandi; 1E, Chotto Inaka, Kamorta, 14.xi.1978, Coll. B. Nandi; 1G, Dilthawan Tank, Port Blair, 20.xi.1978, Coll. B. Nandi.

Distribution : India : Andaman and Nicobar Islands (North Andaman, Middle Andaman, South Andaman, Little Andamans and Nicobar), Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Goa, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : America, Africa, Argentina, Bangladesh, China, Cuba, Ethiopia, Florida, Malaysia, Myanmar, Nepal, Singapore, Somaliland, Sri Lanka, Uruguay, Venezuela, Yunnan.

Genus *Potamarcha* Karsch

Potamarcha congener (Rambur)

- 1842. *Libellula obscura* Rambur, *Ins. Neurop.*, : 64.
- 1842. *Libellula congener*, Rambur, *Ins. Neurop.*, : 70.
- 1890. *Potamarcha obscura*, Karsch, *Berlin Ent. Zeit.*, **33** : 371.
- 1891. *Potamarcha congener*, Selys, *An. Soc. Espan.*, **20** : 221.
- 1936. *Potamarcha obscura*, Fraser, *Fauna Brit. India, Odonata*, **3** : 289-291.
- 1983. *Potamarcha congener*, Chhotani et al., *Rec. zool. Surv. India*, **80** : 487.
- 1995. *Potamarcha congener*, Prasad and Varshney, *Oriental Insects*, **29** : 410.
- 2000. *Potamarcha congener*, Ram et al., *Rec. zool. Surv. India*, **98(3)** : 48.

Diagnostic character : Male : Face and frons olivaceous yellow. Prothorax dark brown, thorax black and pruinosed in adult. Wings hyaline, tipped with brown at extreme apices. Two rows of

cells between IR_{iii} and R_{sp1} ; arc lying between second and third antenodal nervures; only 1 cubital nervure. Pterostigma dark reddish brown, covering 2 to 4 cells. Anal appendages black.

Material examined : 3G, 2 km of Wrightmyo, South Andaman, 27.ii.1970, Coll. B.K. Tikader; 1G, Camp no. 1, Tugapur, Mayabunder, North Andamans, 11.v.1971, Coll. B.K. Tikader.

Distribution : India : Andaman and Nicobar Islands (North Andaman, Middle Andaman, South Andaman and Little Andaman), Andhra Pradesh, Arunachal Pradesh, Assam, Goa, Himachal Pradesh, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Sikkim, South India, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Australia, Bangladesh, China, Hong Kong, Indonesia, Kampuchea, Laos, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Taiwan, Thailand and Vietnam.

Remark : This species is recorded for the first time from North Andaman.

Genus *Tholymis* Hagen

Tholymis tillarga (Fabricius)

- 1798. *Libellula tillarga* Fabricius, Ent. Syst. Suppl., : 285.
- 1867. *Tholymis tillarga*, Hagen, Stett. Ent. Zeit., **28** : 220.
- 1936. *Tholymis tillarga*, Fraser, Fauna Brit. India, Odonata, **3** : 411-413.
- 1983. *Tholymis tillarga*, Chhotani et al., Rec. zool. Surv. India, **80** : 489.
- 2000. *Tholymis tillarga*, Ram et al., Rec. zool. Surv. India, **98**(3) : 55.

Diagnostic character : Female : Abdomen olivaceous brown, broad at base then tapering gradually to the end. Wings hyaline, hind wing with very pale golden brown fascia. Borders of anal loop running on the posterior border of hind wing apex of loop open.

Material examined : 1E, Ramkrishnapur, Hut Bay, Little Andaman, 21.xi.1978, Coll. B. Nandi; 1d, Little Andaman, 3 km away from Hut Bay, 22.i.1988, Coll. A.N.T. Joseph.

Distribution : India : Andaman and Nicobar Islands (North Andaman, Middle Andaman, South Andaman, Little Andaman and Nicobar), Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Goa, Himachal Pradesh, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, South India, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : America, Australia, Bangladesh, Cameroon, China, Ethiopia, Indonesia, Japan, Kampuchea, Laos, Madagascar, Malaysia, Malawi, Micronesia, Mozambique, Myanmar, Nepal, Philippines, Somali, Sri Lanka, Taiwan, Tanzania, Thailand and Vietnam.

Remark : This species is recorded for the first time from Little Andaman.

Genus *Tramea* Hagen

Tramea basilaris burmeisteri Kirby

- 1839. *Libellula chinensis* Burmeister, Handb. Ent., **2** : 852.
- 1889. *Tramea burmeisteri*, Kirby, Trans. Zool. Soc. Lond., **12** : 316.
- 1936. *Tramea basilaris burmeisteri*, Fraser, Fauna Brit. India, Odonata, **3** : 432-434.

Diagnostic character : Female : Face and frons bright chrome yellow; labrum reddish brown, less broadly black. Prothorax yellowish; thorax olivaceous, bluish-green laterally with black markings, humeral suture finely black, lateral stripes expanded in their upper parts to form elongate spots. Abdomen olivaceous green with black markings-apical annules or rings on segments 4-7; segment 8 black with triangular yellow basal spot on each side; 9 and 10 black with medial lateral spot. Anal appendages as long as last three segments of abdomen. Wings tinted with yellow, deepening in tint to nearly as far as level of pterostigma; two large black spots within golden yellow areola at baso-anal area of hind wing, two portions of the black area are separated.

Material examined : 1E, Marine Hills, Port Blair, South Andaman 15.xii.1972, Coll. K.S. Pradhan.

Distribution : India : Andaman and Nicobar Islands (South Andaman), Andhra Pradesh, Bihar, Himachal Pradesh, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Rajasthan, South India, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Japan, Malaysia, Myanmar, Nepal, Thailand, Tibet and Vietnam.

Remark : This species is recorded for the first time from Andaman & Nicobar Islands in the present study.

Genus *Trithemis* Brauer

Trithemis aurora (Burmeister)

- 1839. *Libellula aurora* Burmeister, Handb. Ent., 2 : 859.
- 1868. *Trithemis aurora*, Brauer, Verh. zool.-bot. Ges. Wein., 18 : 177, 735.
- 1936. *Trithemis aurora*, Fraser, Fauna Brit. India, Odonata, 3 : 383-385.
- 1983. *Trithemis aurora*, Chhotani et al., Rec. zool. Surv. India, 80: 491.
- 2000. *Trithemis aurora*, Ram et al., Rec. zool. Surv. India, 98(3) : 52.

Diagnostic character : Male : Face and front of frons ochreous, changing to reddish above, vesicle and dorsum of frons metallic violaceous. Prothorax reddish-brown, thorax dull purple due to pruinescence. Abdomen swollen dorsoventrally at base, then slightly constricted at segment 3 and again dilated fusiformly, depressed and broad. Wings hyaline with crimson reticulation, broad amber yellow fascia at base of wing, dark brown rays in sub-costal and cubital space. Anal appendages red. Female : Thorax pale olivaceous on sides, darker on dorsum. Abdomen subcylindrical, sides parall, ochreous with black markings. Wings hyaline with bright yellow to brown reticulation, basal marking pale and without ray in sub-costal and cubital space. Anal appendages black.

Material examined : 2E, Kamorta Island, Nicobar, 22.iii.1970, Coll. B.K. Tikader; 1E, 2 km. northeast of Guest House, Kamorta Island, Nicobar, 24.iii.1970, Coll. B.K. Tikader; 1G, Near Chiria Tapu village, South Andaman, 29.v.1971, Coll. B.K. Tikader; 1E, Tugapur, North Andamans, 10.i.1973, Coll. K.S. Pradhan; 1G, Little Andaman, 4 km. from Hut Bay, 21.i.1988, Coll. A.N.T. Joseph ; 1G, Wright Myo, Kalatang, South Andaman, 30.i.2000, Coll. G.K. Srivastava.

Distribution : India : Andaman and Nicobar Islands (North Andaman, Middle Andaman, South Andaman, Little Andaman and Nicobar), Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : China, Indonesia, Japan, Kampuchea, Laos, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand and Vietnam.

Remark : This species is recorded for the first time from Nicobar Islands in this present study, previously its distribution was from Andaman Islands only.

SUMMARY

The paper deals with some collection of 15 species of Anisoptera from Andaman and Nicobar Islands. In this present study, *Neurothemis intermedia atlanta* Ris and *Tramea basilaris burmeisteri* Kirby have been recorded for the first time from Andaman & Nicobar Islands (South Andaman). Also *Orthetrum pruinosum neglectum* (Rambur) is recorded newly from Andaman Islands (North and South Andaman) and *Trithemis aurora* (Burmeister) is recorded newly from Nicobar Islands. Distributions of *Potamarcha congener* (Rambur) from North Andaman, four species [*Crocothemis servilia servilia* (Drury), *Diplacodes trivialis* (Rambur), *Lathrecista asiatica asiatica* (Fabricius) and *Orthetrum sabina sabina* (Drury)] from Middle Andaman and four species [*Diplacodes trivialis* (Rambur), *Orthetrum sabina sabina* (Drury), *Neurothemis fulvia* (Drury) and *Tholymis tillarga* (Fabricius)] from Little Andaman are newly recorded. A consolidated list of 44 species of Anisoptera, so far recorded from these Islands is provided along with distribution within Andaman & Nicobar Islands.

ACKNOWLEDGEMENTS

The authors express sincere gratitude to Dr. Ramakrishna, Director, Zoological Survey of India for providing all necessary facilities to carry out the work. Authors also grateful to Dr. T. K. Pal, Scientist-F, Dr. A. Bal, Scientist-E, Entomology Div. ZSI and senior scientists and colleagues for their encouragement and kind cooperation.

REFERENCES

- Chhotani, G., Lahiri, A.R. and Mitra, T.R. 1983. Contribution to the Odonate (Insecta) fauna of Andaman and Nicobar Islands with description of two new species. *Rec. zool. Surv. India*, **80** : 467-494.
- Fraser, F.C. 1924. Report on a collection of dragonflies from the Andaman Islands. *Rec. Indian Mus.*, **26** : 409-414.
- Fraser, F.C. 1933. *Fauna of British India including Ceylon and Burma. Odonata*. Vol. I, Taylor & Francis. London.
- Fraser, F.C. 1934. *Fauna of British India including Ceylon and Burma. Odonata*. Vol. II. Taylor & Francis. London.

- Fraser, F.C. 1936. *Fauna of British India including Ceylon and Burma. Odonata.* Vol. III. Taylor & Francis. London.
- Hämäläinen, M., Prasanth-Mohanraj and Veena Kumari, K. 1999. Additions to the Odonate fauna of the Andaman and Nicobar Islands, Indian Ocean. *Notul. Odonatol.*, **5** : 27-29.
- Lahiri, A.R. 1975. Report on the faunistic survey (Odonata) of the South Andaman Islands. *Rec. zool. Surv. India*, **68** : 365-366.
- Lahiri, A.R. 1998. New records of Odonata (Insecta) from Little Andaman Island. *Fraseria* (N.S.), **5** : 57-59.
- Lahiri, A.R. and Mitra, B. 1993. New records of dragonflies (Insecta:Odonata) from Bay Islands. *J. Andaman Sci. Assoc.*, **9**(1&2) : 96-99.
- Mitra, T.R. 1995. Additions to the Odonate fauna of Great Nicobar Islands, Indian Ocean. *Opusc. zool. flumin.*, **129** : 1-6.
- Mitra, T.R. 2002a. Note on zoogeography of Odonata (Insecta) of Nicobar Islands, Indian Ocean. *Rec. zool. Surv. India*, **100**(3-4) : 183-188.
- Mitra, T.R. 2002b. Geographical distribution of Odonata (Insecta) of Eastern India. *Memoirs zool. Surv. India*, **19** (1) : 1-208.
- Prasad, M. and Varshney, R.K. 1995. A check-list of the Odonata of India, including data on larval studies. *Oriental Insects*, **29** : 385-428.
- Ram, R., Chandra, K. and Yadav, K. 2000. Studies on the Odonate fauna of Andaman and Nicobar Islands. *Rec. zool. Surv. India*, **98**(3) : 25-60.
- Selys Longchamps, E. de. 1853. Synopsis des calopterygines. *Bull. Acad. r. Belg.* (I) **20** (Annexe) : 1-73.
- Selys Longchamps, E. de. 1863. Synopsis des agrionines. Quatrième légion: Platycnemis. *Bull. Acad. r. Belg.* (II) **16** : 147-176.
- Selys Longchamps, E. de. 1871. Synopsis des cordulines. *Bull. Acad. Belgique, Sci.* (II) **31** : 519-565.
- Selys Longchamps, E. de. 1877. Synopsis des agrionines, 5me légion: Agrion (suite et fin) : les trois grands genres Telebasis, Agriocnemis et Hemiphlebia. *Bull. Acad. r. Belg.* (II) **43** : 97-195.
- Yeh, W.C. and Veenakumari, K. 2000. Description of *Gynacantha andamanae* Spec. Nov. from South Andaman Island, Indian Ocean (Anisoptera : Aeshnidae). *Int. J. Odonatology*, **3**(2) : 163-167.

Table-1. Consolidated list of species of Anisoptera with distribution within Andaman and Nicobar Islands

SPECIES	DISTRIBUTION (Within A & N Islands)				
	NA	MA	SA	LA	N
Superfamily AESHNOIDEA					
Family GOMPHIDAE					
<i>Gomphidia ganeshi</i> Chhotani, Lahiri & Mitra	-	-	+	-	-
<i>Gomphidia t-nigrum</i> Selys	+	-	-	+	-
Family AESHNIDAE					
<i>Anaciaeschna jaspidea</i> (Burmeister)	-	-	-	-	+
<i>Anax guttatus</i> (Burmeister)	-	-	+	-	-
<i>Gynacantha andamanae</i> Yeh & Veenakumari	-	-	+	-	-
<i>Gynacantha bayadera</i> Selys	-	-	+	-	+
<i>Gynacantha dravida</i> Lieftinck	-	-	-	+	+
<i>Gynacantha subinterrupta</i> Rambur	-	-	-	-	+
<i>Oligoaeschna andamani</i> Chhotani, Lahiri & Mitra	-	-	+	-	-
Superfamily LIBELLULOIDEA					
Family CORDULIIDAE					
<i>Epophthalmia vittata vittata</i> Burmeister	-	-	+	-	-
Family LIBELLULIDAE					
<i>Agrioptera insignis insignis</i> (Rambur)	-	-	-	-	+
<i>Acisoma panorpoides panorpoides</i> Rambur	-	-	-	-	+
<i>Brachydiplax chalybea chalybea</i> Brauer	+	-	+	-	+
<i>Brachythemis contaminata</i> (Fabricius)	+	-	-	-	+
<i>Camacinia gigantea</i> (Brauer)	-	-	-	-	+
<i>Cratilla lineata</i> (Brauer)	-	+	+	-	-
<i>Cratilla metallica</i> (Brauer)	+	-	-	-	-
<i>Crocothemis servilia servilia</i> (Drury)	-	+	+	+	-

SPECIES	DISTRIBUTION (Within A & N Islands)				
	NA	MA	SA	LA	N
<i>Diplacodes trivialis</i> (Rambur)	+	+	+	+	+
<i>Indothemis carnatica</i> (Fabricius)	+	-	-	-	-
<i>Lathrecista asiatica asiatica</i> (Fabricius)	+	+	+	+	+
<i>Lyriothemis cleis</i> Brauer	+	-	-	-	-
<i>Nesoxenia lineata</i> (Selys)	+	-	+	-	+
<i>Neurothemis fluctuans</i> (Fabricius)	+	-	+	+	+
<i>Neurothemis fulvia</i> (Drury)	-	-	+	+	+
<i>Neurothemis intermedia atlanta</i> Ris	-	-	+	-	-
<i>Neurothemis intermedia intermedia</i> (Rambur)	+	-	-	-	+
<i>Neurothemis ramburii ramburii</i> (Brauer)	-	-	+	-	-
<i>Orthetrum chrysis</i> (Selys)	+	-	+	-	-
<i>Orthetrum pruinosum neglectum</i> (Rambur)	+	-	+	-	+
<i>Orthetrum sabina sabina</i> (Drury)	+	+	+	+	+
<i>Pantala flavescens</i> (Fabricius)	+	+	+	+	+
<i>Potamarcha congener</i> (Rambur)	+	+	+	+	-
<i>Rhyothemis phyllis phyllis</i> (Sulzer)	-	-	-	-	+
<i>Rhyothemis variegata variegata</i> (Linnaeus)	-	-	-	+	+
<i>Tholymis tillarga</i> (Fabricius)	+	+	+	+	+
<i>Tramea basilaris burmeisteri</i> Kirby	-	-	+	-	-
<i>Tramea limbata similata</i> (Rambur)	-	-	+	-	+
<i>Tramea virginia</i> (Rambur)	+	-	+	-	+
<i>Trithemis aurora</i> (Burmeister)	+	+	+	+	+
<i>Trithemis festiva</i> (Rambur)	+	-	+	+	-
<i>Trithemis pallidinervis</i> (Kirby)	-	-	+	-	-
<i>Zyxomma obtusum</i> Albarda	-	-	-	-	+
<i>Zyxomma petiolatum</i> Rambur	-	+	+	-	-

NA – North Andaman, MA – Middle Andaman, SA – South Andaman, LA – Little Andaman,
N – Nicobar