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ODONATA (INSECTA) OF THE UNION TERRITORY OF PONDICHERRY, INDIA

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INTRODUCTION

The Union Territory of Pondicherry, India comprises of four coastal regions, viz. Yanam, Pondicherry, Karaikal and Mahe. While Yanam, Pondicherry, and Karaikal are situated along the Coromandel Coast on the eastern side of India, Mahe lies along the Malabar Coast on the Western side of the country. Put together, the Union territory of Pondicherry covers an area of 492 sq.km.

There has been no reference to the Odonate fauna pertaining to the union territory of Pondicherry in scientific literature (Fraser, 1931, 1933, 1934, 1936; Prasad & Varshney, 1995). The present study is based on the collections made by the Scientists of Zoological Survey of India, Southern Regional Station, Chennai during 1991, 1992 and 1994. In this paper 15 species of Odonata (Insecta) are reported for the first time from the Union territory of Pondicherry. The materials studied are deposited in the faunal depository of the Zoological Survey of India, Southern Regional Station, Chennai.

SYSTEMATIC LIST

Order ODONATA

Suborder ZYGOPTERA

Family COENAGRIONIDAE

1. *Agriocnemis pygmaea* (Rambur)
2. *Ceriagrion cerinorubellum* (Brauer)
3. *Ceriagrion coromandelianum* (Fabricius)
4. *Ischnura aurora aurora* (Brauer)
5. *Ischnura senegalensis* (Rambur)

Family PLATYCNEMIDIDAE

6. *Copera marginipes* (Rambur)

Family CALOPTERYGIDAE

7. *Vestalis apicalis apicalis* Selys
8. *Vestalis gracilis gracilis* (Rambur)

Suborder ANISOPTERA

Family LIBELLULIDAE

9. *Brachydiplax chalybea chalybea* Brauer
10. *Brachythemis contaminata* (Fabricius)
11. *Diplacodes trivialis* (Rambur)
12. *Neurothemis tullia tullia* (Drury)
13. *Orthetrum pruinosum neglectum* (Rambur)
14. *Orthetrum sabina* (Drury)
15. *Rhyothemis variegata variegata* (Linnaeus)

SYSTEMATIC ACCOUNT

1. *Agrionemis pygmaea* (Rambur)

1842. *Agrion pygmaeum* Rambur, *Ins. Nevrop.*, : 272.

Material examined : 2 males, Thirunallar (Karaikal), 5.iii.1991; 1 female, Kakayanthopu (Pondicherry), 8.iii.1991; 3 males, 1 female, Mullaiyar river bank (Karaikal), 5.iii.1991, Coll. K.V. Lakshminarayana; 2 males, near Kollidam (Karaikal), 24.iii.1992; 1 male, 1 female, Vedapurinatham farm (Pondicherry), 26.iii.1992; 1 male, 1 female, Uttayanpet (Karaikal), 25.iii.1992; 4 males, 3 females, Thirunallar (Karaikal), 22.iii.1992; 6 exs., Vellaikulam (Karaikal), 23.iii.1992, Coll. K.R. Rao.

Diagnosis : In male, labrum metallic blue, pterostigma pale yellow in forewings, black in hindwings; anal appendages brick red colour; female robust than male, labrum non-metallic; pterostigma pale yellow in both wings.

Distribution : Throughout India.

2. *Ceriagrion cerinorubellum* (Brauer)

1865. *Pyrrhosoma cerinorubellum* Brauer, *Verh. zool.-bot. Ges. Wien*, **15** : 511.

Material examined : 2 males, Edannoor (Mahe), 2.ix.1994, Coll. P.T. Cherian.

Diagnosis : In male, abdomen bright red at base and anal ends, black on dorsum in between; in female, abdomen similar to the male, but the end segments usually a duller brownish red.

Distribution : Throughout India; always-found near ponds, streams and water bodies.

3. *Ceriagrion coromandelianum* (Fabricius)

1798. *Agrion coromandelianum* Fabr., *Ent. Syst. Suppl.*, : 287.

Material examined : 2 males, Kakayanthoppu (Pondicherry), 8.iii.1991, Coll. K.V. Lakshminarayana; 1 male, Kakayanthoppu (Pondicherry), 19.iii.1992, Coll. K.R. Rao; 1 female, Botanical garden (Pondicherry), 20.iii.1992, Coll. K.R. Rao.

Diagnosis : In male, abdomen bright citron-yellow, without markings; in female, abdomen uniformly olivaceous, with an ochreous or golden brown tint on dorsum.

Distribution : Throughout India; breeds in weedy ponds and tanks.

4. *Ischnura aurora aurora* (Brauer)

1858. *Agrion delicatum* Hagen, *Verh. zool.-bot. Ges. Wien*, Vol. viii, : 479.

Material examined : 1 male, Sedarpet (Pondicherry), 9.iii.1991, Coll. K.V. Lakshminarayana; 1 male, 1 female, Thirunallar (Karaikal), 22.iii.1992, Coll. K.R. Rao.

Diagnosis : Wings with pterostigma kite-shaped, rose-red for its proximal half, hyaline for the distal in forewing, in hind-wing, much smaller than forewing, uniform pale grey, almost colourless, segments 1 to 6 of abdomen, citron-yellow, extreme base of segment 7 and 8 to 10 entirely azure blue on dorsum, segment 10 with a broad black spot and a bifid dorsal apical tubercle.

Distribution : Throughout India.

5. *Ischnura senegalensis* (Rambur)

1842. *Agrion senegalensis* Ramb., *Ins. Nevrop.*, p. 276; 1850. Selys, *Rev. Odon.*, : 186.

Material examined : 1 male, Kakayanthoppu (Pondicherry), 19.iii.1992, Coll. K.R. Rao.

Diagnosis : Wings with pterostigma in fore-wing, oblique, diamond shaped, black, outer angle and costal border white, tinted with blue on upper surface of wings, pterostigma of hind-wings smaller than that of fore-wings, uniform pale brown framed in heavy black nervures, second abdominal segment metallic blue on dorsum, segments 3 to 7 citron-yellow at the sides, black on the dorsum, segment 8 azure blue, narrow black at base, 9 and 10 black on dorsum.

Distribution : Throughout India.

6. *Copera marginipes* (Rambur)

1842. *Platycnemis marginipes* Ramb., *Ins. Nevrop.* : 240.

Material examined : 1 female, Edannoor (Mahe), 2.ix.1994, Coll. P.T. Cherian.

Diagnosis : In male, legs bright orange, the posterior two pairs of tibiae moderately broadly dilated; superior anal appendages one-fourth the length of inferiors; in female, legs brownish white or carneous, tibiae not dilated; posterior lobe of prothorax without spines.

Distribution : Throughout India.

7. *Vestalis apicalis apicalis* Selys

1873. *Vestalis apicalis* Selys, *Bull. Acad-Belg.* (2) vol. xxxvi, 612.

Material examined : 1 male, 3 Kms. from Mahe on Thalassery road (Mahe), 3.ix.1994, Coll. P.T. Cherian.

Diagnosis : Thorax and abdomen brilliant metallic green coloured, labrum yellow, marked with black; tips of wings black; pterostigma absent in all wings.

Distribution : Throughout India.

8. *Vestalis gracilis gracilis* (Rambur)

1842. *Calopteryx gracilis* Rambur, *Ins. Nevrop.* : 224.

Material examined : 1 female, Edannoor (Mahe), 2.ix.1994, Coll. P.T. Cherian.

Diagnosis : Wings hyaline, two rows of cells between Cuii and IA veins. Other characters are same as in *V. apicalis*.

Distribution : Throughout India.

9. *Brachydiplax chalybea chalybea* Brauer

1868. *Brachydiplax chalybea* Brauer, *Verh. Zool.-bot. Ges. Wien*, vol. xviii, : 173, 725.

Material examined : 1 male, 3 Kms. from Mahe on Thalassery road (Mahe), 3.ix.1994, Coll. P.T. Cherian.

Diagnosis : Frons above and vesicle metallic blue; occiput black with a germinate yellow spot behind; thorax heavily pruinosed white on dorsum; wings hyaline, bases of all wings with golden brown spots at the level of second antenodal and extending nearly to tornus in hind-wing.

Distribution : Assam, West Bengal and Kerala.

10. *Brachythemis contaminata* (Fabricius)

1793. *Libellula contaminata* Fabricius, *Ent. Syst.*, vol. ii, : 382.

Material examined : 2 males, fish seed farm at Kanniyakoil (Pondicherry), 26.iii.1992, Coll. K.R. Rao.

Diagnosis : Wings with reddish nervures and bright orange fascia extending from base to near pterostigma in forewing and hind-wing in male; in female, the bright orange fascia seen in the male absent, hind wing very palely tinted with yellow at extreme base.

Distribution : Throughout India.

11. *Diplacodes trivialis* (Rambur)

1842. *Libellula trivialis* Rambur, *Ins. Nevrop.* : 115.

Material examined : 1 male, Karasur (Pondicherry), 9.iv.1991, Coll. K.V. Lakshminarayana.

Diagnosis : Adults black marked with yellow or pruinosed blue, legs black in males, in subadults, thorax and legs, greenish yellow with black markings, wings hyaline, cuii in hind-wing widely separated from posterior angle of discoidal cell; female similar with sub adult male; anal appendages creamy white.

Distribution : Throughout India.

12. *Neurothemis tullia tullia* (Drury)

1773. *Libellula tullia* Drury, III. *Exot. Ins.* vol. ii, pl. xlvi, fig. 3, : 85.

Material examined : 2 males, Edannoor (Mahe), 2.ix.1994, 2 females, Pandakkal (Mahe), 2.ix.1994, 2 males, 2 females, 3 Kms. From Mahe on Thalassery road (Mahe), 3.ix.1994, Coll. P.T. Cherian.

Diagnosis : Bases of wings in male broadly black and the black basal area edged outwardly with an opalescent white band; base of wings in female as far as two or three cells distal to node bright amber-yellow and sub basal space from base of wing to node blackish brown broadening at node into a very large blackish brown spot which traverses wings nearly to posterior border.

Distribution : Throughout India.

13. *Orthetrum pruinatum neglectum* (Rambur)

1842. *Libellula neglecta* Rambur, *Ins. Nevrop.* : 86.

Material examined : 1 male, 3 kms. from Mahe on Thalassery Road (Mahe), 3.ix.1994, Coll. P.T. Cherian.

Diagnosis : Frons brown or blue black anteriorly; thorax reddish brown; wings hyaline, with a reddish brown basal marking at base of hind-wing; abdomen purple red in adults, vermilion red in sub adults; in female, frons yellowish brown; thorax reddish brown; abdomen, dull ochreous.

Distribution : Throughout India.

14. *Orthetrum sabina sabina* (Drury)

1770. *Libellula sabina* Drury, III. *Exot. Ins.* vol. i, pl. xlvi, fig. 4, pp. 114, 115.

Material examined : 1 male, Edannoor (Mahe), 2.ix.1994, Coll. P.T. Cherian.

Diagnosis : Abdomen enormously swollen dorsoventrally as well as laterally from segment 1 to 3; thorax and abdomen greenish-yellow with black markings.

Distribution : Throughout India.

15. *Rhyothemis variegata variegata* (Linnaeus)

1763. *Libellula variegata* Linnaeus, *Amoenitates Acad.* vol. vi, p. 412.

Material examined : 2 females, fish seed farm at Kanniyakoil (Pondicherry), 26.iii.1992, Coll. K.R. Rao.

Diagnosis : In male, the whole of wings tinted yellow, fore-wings with spots at node, discoidal cell, apex and at middle of Riii; hind-wing with similar dark spots and two broad longitudinal basal bands; in female, fore-wing hyaline from node to apex, basal half with broad black markings, hind-wing with broad irregular markings to as far distal as pterostigma, apex hyaline.

Distribution : Throughout India.

SUMMARY

The present paper deals with 15 species and subspecies of Odonata recorded for the first time from the Union Territory of Pondicherry, India.

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