

**STUDIES ON THE ODONATA FAUNA OF BASTAR,  
MADHYA PRADESH, INDIA**

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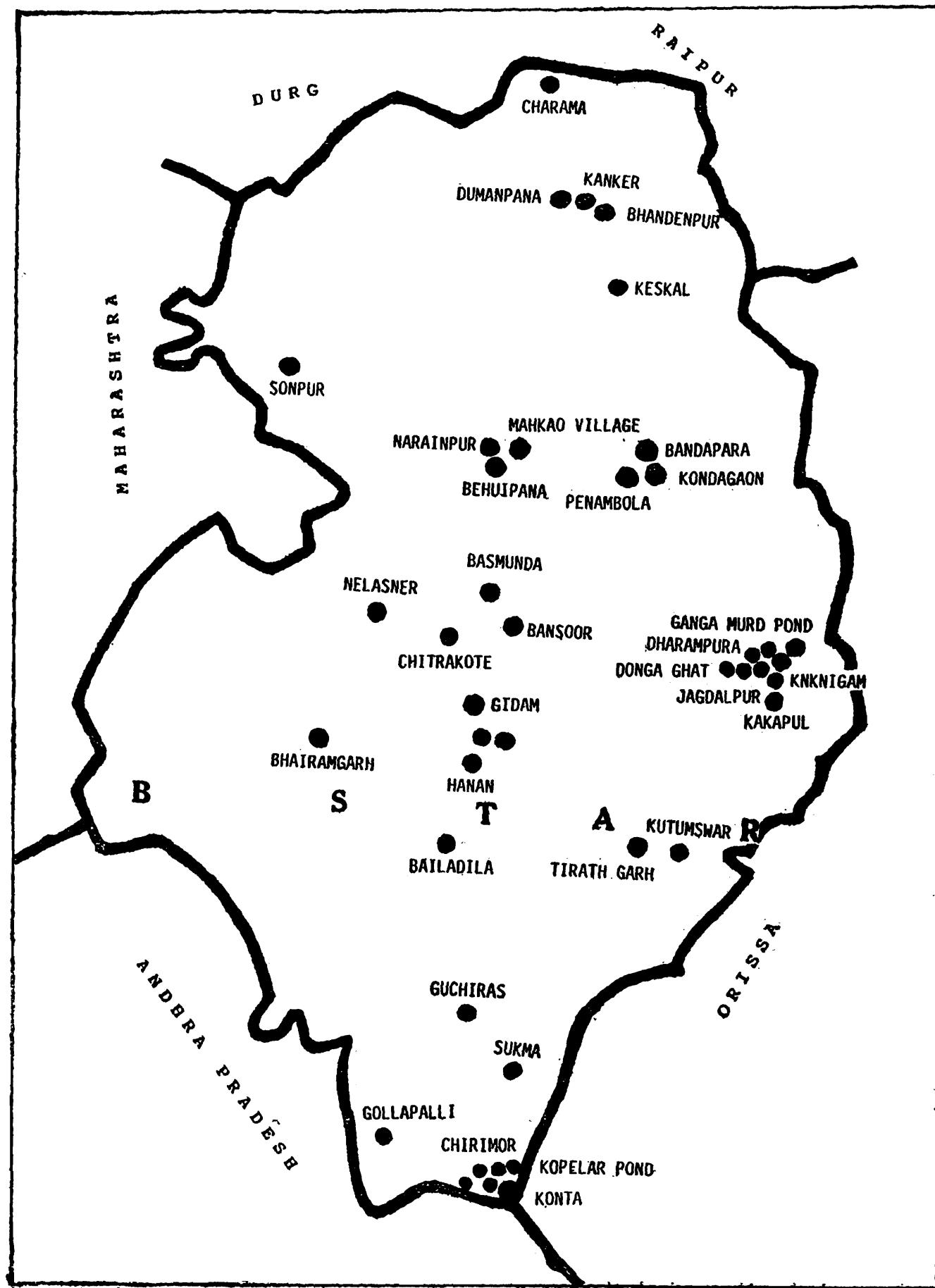
*Zoological Survey of India, Calcutta*

**INTRODUCTION**

Bastar is one of the biggest district of Madhya Pradesh, India, situated at the south-east boundary of the State. It lies between  $80^{\circ}15'$  to  $82^{\circ}15'$  East longitudes and  $17^{\circ}46'$  to  $20^{\circ}34'$  North latitudes. Bastar district is bordered by Maharashtra in the west, Andhra Pradesh in the south and Orissa in the east (see Map). It covers an area of 39,060 sq. kms. and its Administrative Centre is Jagdalpur. Approximately one-third of the district is covered by thick-forests, with hilly tract. It ranges from 49 to 1276 metres in height. Monsoon starts from June and extends up to October. The average annual rain fall amounts to 1,521 mm, and temperature varies in between  $19^{\circ}\text{C}$  to  $31^{\circ}\text{C}$ . The varied ecological conditions provide excellent habitats including rivers, hill-streams and permanent/temporary water-bodies for the breeding of Odonata.

No comprehensive work is available dealing with the Odonata of Madhya Pradesh and Bastar district in particular. Fraser (1933, 1934 and 1936) in the *Fauna of British India, Odonata*, has described 19 species of Odonata from Madhya Pradesh. Bhasin (1953), after a gap of 17 years, has reported 9 species from Madhya Pradesh. Baijal and Agarwal (1955) have also reported 14 species of Odonata from the State. Recently Srivastava and Suribabu (1984, 1985 and 1992), Srivastava *et al.* (1992), Suri Babu (1983) and Suri Babu and Srivastava (1988) and Suri Babu *et al.* (1992) have described the reproductive behaviour and larvae of 13 species of Odonata from Madhya Pradesh State. Mitra (1986 and 1995), while reporting Odonata from Central India, has reported 39 species of Odonata from Madhya Pradesh and in (1995) he has also reported 22 species from the Indravati Tiger Reserve of this district.

To prepare a comprehensive account on the Odonata fauna of Bastar district, the author has made a detailed study of the specimens present in the National Zoological Collections of the Zoological Survey of India, Calcutta. Besides, the author himself conducted a survey trip in Bastar during November, 1988 and collected several



Map of Bastar district, Madhya Pradesh showing the collection-sites.

species. This study reveals the occurrence of 66 species and subspecies under 38 genera and 10 families from there. Of these 43 species and subspecies are common with the Western Himalaya (Kumar and Prasad, 1981), and 44 species and subspecies with Bihar (Prasad and Varshney, 1988), which are adjacent to Madhya Pradesh. In the present paper the classification of Davies and Tobin (1984 and 1985) and Tsuda (1991) has been followed, and the nomenclature is in accordance with the Check-list of the Odonata of India (Prasad and Varshney, 1995).

### LIST OF SPECIES OF ODONATA FROM BASTAR DISTRICT

**I. Family : PLATYCNECIDAE**

1. *Copera marginipes* (Rambur)

**II. Family : COENAGRIONIDAE**

2. *Pseudagrion decorum* (Rambur)
3. *P. rubriceps rubriceps* Selys
4. *P. australasiae* Laidlaw
5. *P. hypermelas* Selys
6. *Ceriagrion coromandelianum* (Fabricius)
7. *C. olivaceum* Laidlaw
8. *Aciagrion pallidum* Selys
9. *A. hisopa hisopa* Selys
10. *A. occidentale* Laidlaw
11. *Ischnura senegalensis* (Rambur)
12. *I. aurora aurora* (Brauer)
13. *I. rufostigma rufostigma* Selys
14. *Rhodischnura nursei* (Morton)
15. *Enallagma parvum* Selys
16. *Agriocnemis lacteola* Selys
17. *A. debrei* Fraser
18. *A. splendidissima* Laidlaw
19. *A. pygmaea* (Rambur)
20. *A. pieris* Laidlaw
21. *Onychargia atrocyana* (Selys)

## III. Family : LESTIDAE

- 22. *Lestes viridulus* Rambur
- 23. *L. thoracicus* Laidlaw
- 24. *L. umbrinus* Selys
- 25. *L. elatus* Hagen

## IV. Family : PROTONEURIDAE

- 26. *Disparoneura quadrimaculata* (Rambur)

## V. Family : CHLOROCYPHIDAE

- 27. *Rhinocypha (Aristocypha) trifasciata* (Selys)
- 28. *Libellago lineata lineata* (Burmeister)

## VI. Family : CALOPTERYGIDAE

- 29. *Vestalis gracilis gracilis* (Rambur)
- 30. *V. smaragdina* Selys

## VII. Family : GOMPHIDAE

- 31. *Paragomphus lineatus* (Selys)
- 32. *Ictinogomphus rapax* (Rambur)

## VIII. Family : AESHNIDAE

- 33. *Anax guttatus* (Burmeister)
- 34. *Gynacantha bayadera* Selys

## IX. Family : CORDULIIDAE

- 35. *Macromia cingulata* Rambur

## X. Family : LIBELLULIDAE

- 36. *Potamarcha congener* (Rambur)
- 37. *Orthetrum taeniolatum* (Schneider)
- 38. *O. sabina sabina* (Drury)
- 39. *O. glaucum* (Brauer)
- 40. *O. luzonicum* (Brauer)
- 41. *O. pruinatum neglectum* (Rambur)
- 42. *Palpopleura sexmaculata sexmaculata* (Fabr.)
- 43. *Acisoma panorpoides panorpoides* Rambur

44. *Diplacodes nebulosa* (Fabr.)
45. *D. trivialis* (Rambur)
46. *D. lefebvrei* (Rambur)
47. *Indothemis limbata sita* Campion
48. *Lathrecista asiatica asiatica* (Fabr.)
49. *Crocorthemis servilia servilia* (Drury)
50. *Brachythemis contaminata* (Fabr.)
51. *Bradinopyga geminata* (Rambur)
52. *Neurothemis fulvia* (Drury)
53. *N. intermedia intermedia* (Rambur)
54. *N. tullia tullia* (Drury)
55. *Brachydiplex sobrina* (Rambur)
56. *Trithemis aurora* (Burm.)
57. *T. festiva* (Rambur)
58. *T. pallidinervis* (Kirby)
59. *T. kirbyi kirbyi* Selys
60. *Tholymis tillarga* (Fabr.)
61. *Zyxomma petiolatum* Rambur
62. *Pantala flavescens* (Fabricius)
63. *Rhyothemis variegata variegata* (Linnaeus)
64. *Tramea basilaris burmeisteri* Kirby
65. *T. virginia* (Rambur)
66. *Urothemis signata signata* (Rambur)

**KEY TO SPECIES AND SUBSPECIES OF ODONATA IN  
BASTAR DISTRICT, MADHYA PRADESH**  
(Based on adult specimens)

- |   |     |     |    |
|---|-----|-----|----|
| Eyes well separated ; forewing and hindwing more or less similar in shape and breadth ; wings petiolated  | ... | ... | 2  |
| Eyes not well separated, meeting only at a point or broadly confluent ; forewing and hindwing not similar in shape and breadth ; wings never petiolated ... |     |     | 31 |

2. More than 5 antenodal nervures ; arc nearer to the base of the wing than the node ; anal vein separated from posterior border of wing ... 28
- Only 2 (rarely 3) antenodal nervures ; arc midway between base of wing and node or nearer to node than the base ; anal vein fused at the base with the posterior border of wing ... ... 3
3. Veins IR<sub>iii</sub>+V arising nearer to the node than the arculus ... 4
- Veins IR<sub>iii</sub>+V arising nearer to the arculus than the node ... 25
4. The anal vein and CU<sub>ii</sub> of normal length ... ... 5
- The anal vein absent or greatly reduced ; CU<sub>ii</sub> varying from a vein to normal length and may be only one cell or so long ... *D. quadrimaculata*
5. Discoidal cell short ; anal vein separating from wing border either proximal to Ac or distal to Ac; MA and IR<sub>ii</sub> zigzagged for greater part of their length 6
- Discoidal cell elongate ; anal vein separating from wing border proximal to Ac ; MA and IR<sub>ii</sub> mostly straight only zigzagged apically or not at all; legs bright orange to dull reddish in colour ... *C. marginipes* (Ramb.)
6. Arc situated at the level of the distal antenodal nervure ... 7
- Arc situated distal to the level of the distal antenodal nervure... *Agriocnemis* Selys 21
7. Vein ab arising from the hind border of the wing at the point where ac meets it ... ... ... 8
- Vein ab arising from the hind border of the wing more or less proximal to the point where ac meets it ... ... ... 16
8. A prominent ridge on the frons present ; no postocular coloured spot on the head ; head and thorax uniform colour ... *Ceriagrion* Selys 9
- No ridge on the frons ; postocular coloured spots always present ; head and thorax not of uniform colour ... ... ... 10
9. Abdomen uniform dull olivaceous in colour ... *C. olivaceum* Laid.
- Abdomen bright citron-yellow in colour ... *C. coromandelianum* (Fabricius)
10. Pterostigma in forewing and hindwing of the same size ; abdomen not unduly long and slender ... *Pseudagrion* Selys 11
- Pterostigma in forewing longer than in the hindwing ; abdomen usually very long and slender ... ... ... 14
11. Face and vertex reddish orange ... *P. rubriceps* *rnb riceps* Selys

- Face and vertex not reddish orange ... ... 12
- 12. Face, frons and vertex black *P. hypermelas* Selys
- Face, frons and vertex may be blue or green and marked with black ... 13
- 13. Thorax pale-blue on dorsal side, with three fine black lines on mid-dorsal carinal ridge and a thicker black humeral stripe ... *P. decorum* (Rambur)
- Thorax azure blue on dorsal side, with broad black on mid-dorsum and a narrow black humeral stripe ... *P. australasiae* Laidlaw
- 14. Ground-colour pale brown, without black markings on head and thorax ... ... *A. pallidum* Selys
- Ground-colour blue, with black markings on head, thorax and abdomen... 15
- 15. Abdominal segment 8th with a black elongate dorsal triangular marking ... ... *A. occidentale* Laidlaw
- Abdominal segment 8th with a short narrow black stripe on each side ... ... *A. hisopa hisopa* (Selys)
- 16. Pterostigma of the same colour and shape in forewing and hindwing of male ; dorsal apical tubercle on segment 10 of male absent ... 20
- Pterostigma differing in shape and size in forewing and hindwing of male ; dorsal apical tubercle on segment 10 of male present ... 17
- 17. Postocular coloured spot always present in adult stage ; tubercles on apical border of segment 10 closely opposed ... ... *Ischnura* Charp. 18
- Postocular coloured spot absent in the adult stage ; tubercles on apical border of segment 10 widely separated by a shallow notch ... *R. nursei* (Morton)
- 18. Body colour of male bright orange-red ; abdominal segments 8-10 only black ... ... *I. rufostigma rufostigma* Selys
- Body colour of male and Isochrome female blue or pale grass-green 19
- 19. Abdominal segments 3-6 lemon-colour on dorsal side ; segment 2 not steely metallic blue on dorsal side ... ... *I. aurora aurora* (Brauer)
- Abdominal segments 3-6 black on dorsal side ; segment 2 steely metallic blue on dorsal side ... ... *I. senegalensis* (Rambur)
- 20. Female with a robust ventral apical spine on segment 8 ... *E. parvum* Selys
- Female without a ventral apical spine on segment 8th ; postocular coloured spots absent ... ... *O. atrocyana* (Selys)

21.	Segment 2 of abdomen with blue eye ...	...	<i>A. dabreui</i> Fraser
—	Segment 2 of abdomen without blue eye spots	...	22
22.	Labrum non-metallic	...	23
—	Labrum metallic blue	...	<i>A. pygmaea</i> (Rambur)
23.	Abdomen white in colour	...	<i>A. lacteola</i> Selys
—	Abdomen blue with black markings	...	24
24.	Abdomen with restricted black markings	...	<i>A. pieris</i> Laidlaw
—	Abdomen with heavy black markings	...	<i>A. splendidissima</i> Laidlaw
25.	Thorax without metallic markings	...	26
—	Thorax with green metallic antehumeral stripe	...	27
26.	Vertex of head pale brown	...	<i>L. umbrinus</i> Selys
—	Vertex of head mat-black	...	<i>L. thoracicus</i> Laidlaw
27.	Thorax with a uniform narrow antehumeral stripe on each side ; vertex pale-brown	...	<i>L. viridulus</i> Rambur
—	Thorax with narrow antehumeral stripes expanded outwardly at the upper ends ; vertex black	...	<i>L. elatus</i> Hagen
28.	Sectors of arc arising from a common point	...	29
—	Sectors of arc separated at origin ; Hindwings of male with apical, medial and nodal opaque bands separated	...	<i>R. (Aristocypha) trifasciata</i> (Selys)
29.	Pterostigma absent in both the sexes	...	30
—	Pterostigma absent in forewings of male only	...	<i>L. lineata</i> lineata (Burm.)
30.	Wings tinted uniformly with golden yellow	...	<i>V. smaragdina</i> Selys
—	Wings untinted or partially tinted	...	<i>V. gracilis</i> gracilis (Rambur)
31.	Discoidal cell approximately of the same size and shape in forewing and situated equal distance from the arc ; Costal and subcostal antenodal nervures not coinciding with the two robust primary antenodals ; middle lobe of the labium large and fissured	...	32
—	Discoidal cell differing in size and shape in forewing and hindwing that of forewing situated for distal of the arc ; middle lobe of labium very small, not fissured broadly overlapped by the lateral lobes ; Costal and subcostal antenodal nervure coinciding the robust primary antenodals absent	...	35

<b>32.</b>	<b>Eye separated</b>	...	...	...	33
—	<b>Eye broadly confluent above</b>	...	...	...	34
<b>33.</b>	<b>Discoidal cell, hypertrigone and subtrigone of forewing traversed and reticulated</b>	...	...	<i>I. rapax</i> (Rambur)	
—	<b>Discoidal cell, hapertrigone and subtrigone of forewing always entire ; anal appendages yellow</b>	...	...	<i>P. lineatus</i> (Selys)	
<b>34.</b>	<b>Base of hindwing without a notch, tornus of hindwing rounded in both the sexes, anal triangle absent, abdomen with orange colour markings</b>	...		<i>A. guttatus</i> (Burm.)	
—	<b>Base of hindwing more or less deeply notched, tornus of hindwing angulated in male, anal triangle always present, abdomen without black or other bright sharply defined markings, 3rd abdominal segment markedly constricted...</b>			<i>G. bayadera</i> Selys	
<b>35.</b>	<b>Tibae of males without keels ; base of hindwing rounded in both sexes ; oreilletts absent ; body rarely metallic</b>	...	...	...	36
—	<b>Tibae of males with an elongate lamina-shaped keel on the flexor surface ; base of hindwing in the male more or less angulated or notched (save in genera <i>Hemicordulia</i> and <i>Procordulia</i>) ; oreilletts present ; body usually coloured metallic ; abdominal segments 4 to 8 ringed with yellow</b>	...		<i>M. cingulata</i> Rambur	
<b>36.</b>	<b>Sectors of arc fused at their origin ; primary antenodal nervure absent</b>		...	...	37
—	<b>Sectors of arc separated from origin ; feebly developed primary antenodal nervure present ; subtrigone in forewing 3 celled</b>	...		<i>U. signata signata</i> (Rambur)	
<b>37.</b>	<b>Apex of loop in the wings open</b>	...	...	...	38
—	<b>Apex of loop in the wings closed</b>	...	...	...	39
<b>38.</b>	<b>Abdomen broad at base then tapering gradually to the end ; an opalescent white spot in the centre of hindwing present</b>	...	...	<i>T. tillarga</i> (Fabricius)	
—	<b>Abdomen tumid at base, then abruptly narrowed and very slim and cylindrical to the end ; an opalescent white spot on the centre of hindwing absent</b>	...	...	<i>Z. petiolatum</i> Rambur	
<b>39.</b>	<b>Distal antenodal nervure in forewing complete</b>	...	...	...	40
—	<b>Distal antenodal nervure in forewing incomplete</b>	...		...	46
<b>40.</b>	<b>Frons metallic above</b>	...	...	<i>B. sobrina</i> (Rambur)	
—	<b>Frons not metallic above</b>	...	...	...	41

41. Small size specimens ; only 6 antenodal nervures in forewing  
... *A. panorpoides panorpoides* Rambur
- Medium size specimens, not less than 12 antenodal nervures in forewing  
... ... *Orthetrum Newman* 42
42. Males coloured brown or black with yellow markings ; often pruinosed ... 43
- Males coloured some shade of red, or violaceous red due to a thin overlying pruinescens ; frons blue black anteriorly... *O. pruinatum neglectum* (Rambur)
43. Abdomen variable but never very slim nor compressed laterally ; mostly with pruinosed abdomen and thorax ... ... ... 44
- Abdomen enormously swollen at base and then abruptly slimmed and compressed laterally to the end ; black marked with greenish yellow ; never pruinosed  
... ... *O. sabina sabina* (Drury)
44. CuII in hindwing arising from the posterior angle of discoidal cell ... 45
- CuII in hindwing arising from the distal side of discoidal cell, well away from its posterior angle ... ... *O. luzonicum* (Brauer)
45. Moderately large species with face black or frons blackish anteriorly ; membrane black ... ... *O. glaucum* (Brauer)
- Smallest species with face and frons greyish green or bluish ; membrane dark brown bordered with black ... ... *O. taeniolum* (Schn.)
46. Lobes of prothorax with long hairs ... ... ... 47
- Lobes of prothorax without long hairs ... ... ... 50
47. Eyes contiguous for a short space ; discoidal cell in hindwing entire ; costal border of forewing straight ; frons non-metallic above ; discoidal field in forewing beginning with 2 to 3 rows of cells ... ... *Diplacodes Kirby* 48
- Eyes more broadly contiguous ; discoidal cell in hindwing traversed ; costal border of forewing sinuous near base ; frons metallic above ; discoidal field in forewing beginning with 3 rows of cells ... *P. sexmaculata sexmaculata* (Fabricius)
48. Apices of wings tipped with black ... ... *D. nebulosa* (Fabricius)
- Apices of wings hyaline ... ... ... 49
49. Adults entirely black, with markings ; wings palely enfumed with brown towards apices ; anal appendages black ... ... *D. lefebvrei* (Rambur)
- Adult black marked with yellow or pruinosed dark blue throughout ; wings uncoloured except at base ; anal appendages yellow ... *D. trivialis* (Rambur)

- 50.** Sectors of arc in forewing separated and divergent at the origin ; black and golden yellow markings present on the wings ... ... *R. variegata variegata* (Linn.)
- Sectors of arc in forewing arising from common long stalk ; black and golden yellow markings on the wings absent ... ... ... 51
- 51.** Discoidal field converging at wing border ... ... ... 52
- Discoidal field parallel or divergent at wing border ... ... ... 56
- 52.** Nervure IR<sub>iii</sub> present in between R<sub>ii</sub> & R<sub>iii</sub> ... ... *P. flavesens* (Fabr.)
- Nervure IR<sub>iii</sub> absent in between R<sub>ii</sub> and R<sub>iii</sub> ... ... *Trithemis Brauer* 53
- 53.** Legs very long and spidery ; pterostigma bicolorous ; body yellow marked with black ... ... *T. pallidinervis* (Kirby)
- Legs of ordinary length ; pterostigma unicolorous ; body colour variable ... 54
- 54.** Thorax and abdomen bright vermillion red ... ... *T. kirbyi kirbyi* Selys
- Thorax and abdomen may be violaceous black or violaceous crimson ... 55
- 55.** Base of hindwing with a small drak brown spot ; neuration black ... ... *T. festiva* (Rambur)
- Base of hindwing with small reddish brown spot ; neuration crimson ... ... *T. aurora* (Burm.)
- 56.** Discoidal field in forewing adjacent to discoidal cell, only 2 cells wide, apices of wings clear ... ... *I. limbata sita* Campion
- Discoidal field in forewing adjacent to discoidal cell, 3 or more cells wide ... 57
- 57.** Pterostigma equal in size in forewing and hindwing ... ... 59
- Pterostigma unequal in forewing and hindwing ; large blackish brown spot present at the base of wings. ... ... *Tramea Hagen* 58
- 58.** Hamule with slightly overlapping lobe ; two large black spots at the hindwing surrounded by a golden yellow areola, one in cubital space, the other lying obliquely in anal area of wing ; the two narrowly confluent near base of discoidal cell in the male ... ... *T. basilaris burmeisteri* Kirby
- Hamule much longer and with greatly overlapping lobe ; only a single black spot of variable size at the base of hindwing ; spot in hindwing reddish brown, very large, extending distally to distal end of discoidal cell and involving nearly whole of anal loop ... ... *T. virginia* (Rambur)
- 59.** Pterostigma uncoloured ... ... ... 60

— Pterostigma bicoloured (black with white end) ...	<i>B. geminata</i> (Rambur)
60. More than one cubital nervure present in all wings ...	<i>Neurothemis</i> Brauer 61
— Only one cubital nervure present in all wings ...	... 63
61. An opalescent white band in the wings present ; base of wings broadly black ...	... <i>N. tullia tullia</i> (Drury)
— An opalescent white band in the wings absent ...	... 62
62. Wings dark reddish brown from base to about middle of pterostigma ; apex of wings also narrowly opaque brown to partly enclose a clear winds in each wing at apex ; neuration close ...	... <i>N. fulvia</i> (Drury)
— Wings pale yellow, area at the base not very sharply defined : costal border of wings pale yellow up to as far as pterostigma ; reticulation open ...	... <i>N. intermedia intermedia</i> (Rambur)
63. Red or yellow specimens ; basal or medial yellow marking present on wing ...	... 64
— Variable coloured specimens ; base of wings rarely marked with pale yellow ...	65
64. Broad reddish yellow medial marking present on the wings <i>B. contaminata</i> (Fabricius)	
— Small basal yellow marking present at the base of wings ... <i>C. servilia servilia</i> (Drury)	
65. Arc situated between the second and 3rd antenodal nervures, only one row of cells between IRiii & RSpl ...	... <i>L. asiatica asiatica</i> (Fabr.)
— Arc situated between the first and 2nd antenodal nervures 2 rows of cells between IRiii & RSpl ...	... <i>P. congener</i> (Rambur)

#### SYSTEMATIC ACCOUNT

Order	: ODONATA
Suborder	: ZYGOPTERA
Superfamily	: COENAGRIONOIDEA
Family	: PLATYCNEMIDIDAE
Genus	: Copera Kirby

### 1. *Copera marginipes* (Rambur)

1842. *Platycnemis marginipes* Rambur, *Ins. Neurop.*, : 240.  
 1933. *Copera marginipes*, Fraser, *Fauna Brit. India Odon.*, 1 : 192-197.

*Material examined* : 2 ♂♂, 2 ♀♀, Konta Basti, 22. 11. 1988, coll. M. Prasad and 1 ♂, Old konta Basti, 24. 11. 1988, coll. M. Prasad.

*Measurements :*

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i>	31.00 mm	19.00 mm	18.00 mm
<i>Female</i>	26.50 mm	17.50 mm	17.00 mm

*Distribution* : India (Assam, Bihar, Himachal Pradesh, Karnataka, Maharashtra, Uttar Pradesh and West Bengal), Indonesia (Sumatra, Java, Sunda Island and Sumba), Malaysia, Myanmar, Nepal, Sri Lanka and Thailand.

*Remarks* : It is a common species of the genus *Copera* Kirby. Its adults are found near the larval habitats during June to December. Labrum in male is marked with black, but in one specimen it is brownish yellow. Pterostigma covers one cell. Nervure *Ac* nearer to 1st antenodal nervure. 11 postnodal nervures present in forewings and 9 in hind, while in female 12 postnodal in forewings and 10 in hindwings. 9th and 10th abdominal segments in male marked with creamy white. Anal appendages in male are cream-yellow with tips black. Ventral portion of superior anal appendages broadly black.

**Family : COENAGRIONIDAE**

**Genus : *Pseudagrion* Selys**

### 2. *Pseudagrion decorum* (Rambur)

1842. *Agrion decorum* Rambur, *Ins. Newrop.*, : 258.  
 1933. *Pseudagrion decorum*, Fraser, *Fauna Brit. India Odon.*, 1 : 268-269.

*Material examined* : 1 ♀, Basmunda Bandh, Dhauroi, 30. 11. 1988, coll. Y. N. Gupta ; 1 ♂, 1 ♀, Chitrakote, 27. 11. 1988, coll. M. Prasad ; 2 ♂♂, Dharampura, Jagdalpur, 30. 11. 1979, coll. S. Ahmed ; 1 ♂, Kakapul, Jagdalpur, 1. 11. 1979, coll. S. Ahmed and 1 ♂, Near Ganga Murd pond, Jagdalpur, 28.11.1988, coll. M. Prasad.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i>	: 28·00 mm-28·50 mm	19·50 mm-20·50 mm	19·00 mm-19·50 mm
<i>Female</i>	: 28·50 mm	20·00 mm-20·50 mm	19·50 mm-20·00 mm

*Distribution :* India (Himachal Pradesh, Karnataka, Maharashtra, Tamil Nadu, Uttar Pradesh and West Bengal), Myanmar (Burma), Nepal and Sri Lanka.

*Remarks :* Nervure *Ac* in females just in the middle of 1st and 2nd antenodal nervures. Pterostigma covers less than a cell. In male there are 10 postnodals in forewings and 8-9 in hindwings, while in females 10 postnodals in forewings and 8 in hindwings.

**3. *Pseudagrion rubriceps rubriceps* Selys**

1876. *Pseudagrion rubriceps* Selys, Bull. Acad. Belg., (2) 42 : 510.  
 1933. *Pseudagrion rubriceps*, Fraser, Fauna Brit. India Odon., 1: 296-299.  
 1991. *Pseudagrion rubriceps rubriceps*, Tsuda, A Distributional list of world Odonata : 46.

*Material examined :* 2 ♂♂, Chitrakote, Jagdalpur, 2. 11. 1979. coll. S. Ahmed and 1 ♂, Naibasti Konta, 20. 11. 1988, coll. M. Prasad.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	32·00 mm	20·50 mm	20·00 mm

*Distribution :* Widely distributed throughout continental India, Indonesia, Malaysia, Myanmar (Burma), Nepal and Taiwan.

*Remarks :* It is one of the most common damselfly of India which occurs throughout the year, Nervure *Ac* present slightly distal to 1st antenodal nervures and pterostigma cover 1 cell 10-11 postnodal nervures present in forewings and 9 in hindwings.

**4. *Pseudagrion australasiae* Laidlaw**

1876. *Pseudagrion microcephalum* Race ? *australiae* Selys, Bull. Acad. Belg. Sci., (2) 42 : 506 (pars).  
 1916. *Pseudagrion australasiae*, Laidlaw, Rec. Indian Mus., 12 : 21.  
 1954. *Pseudagrion australasiae*, Lieftinck, Treubia (Suppl.), 22 : 56.

*Material examined :* 2 ♂♂, Naibasti Konta, 25. 11. 1988, coll. M. Prasad.

***Measurements :***

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male :</i>	31·50 mm	23·00 mm	22·50 mm

***Distribution :*** India (Assam, Manipur, Meghalaya and West Bengal), Australia, Indonesia, Malaysia, Myanmar (Burma) and Thailand.

**5. *Pseudagrion hypermelas* Selys**

1876. *Pseudagrion hypermelas* Selys, *Bull. Acad. Belg.*, (2) 42 : 519.

1933. *Pseudagrion hypermelas*, Fraser, *Fauna Brit. India Odon.*, 1 : 289-292.

***Distribution :*** India (Bihar, Gujarat, Madhya Pradesh (Bastar), Maharashtra, Punjab, West Bengal and Western Ghats).

**Genus : *Ceriagrion* Selys****6. *Ceriagrion coromandelianum* (Fabricius)**  
(Figs. 1 & 2)

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

1933. *Ceriagrion coromandelianum*, Fraser, *Fauna Brit. India Odon.*, 1 : 315-316.

***Material examined :*** 3♂♂, Bhandenpur, 18. 10. 1979, coll. S. Ahmed ; 1♂, 1♀, Chitrakote, Jagdalpur, 27. 11. 1988, coll. M. Prasad ; 5♂♂, 2♀♀, Naibasti Konta, 25. 11. 1988, coll. M. Prasad ; 4♂♂, 1♀. Near Ganga Murd pond, Jagdalpur, 28. 11. 1988, coll. M. Prasad and 5♂♂, 2♀♀, Oldbasti Konta, 24. 11. 1988, coll. M. Prasad.

***Measurements :***

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male :</i>	30·00 mm-31·00 mm	20·00 mm-21·50 mm	19·50 mm-20·50 mm
<i>Female :</i>	29·00 mm-30·00 mm	21·00 mm-22·50 mm	20·00 mm-21·50 mm

***Distribution :*** India (Bihar, Eastern Himalayas, Himachal Pradesh, Uttar Pradesh and West Bengal). China, Malaysia, Myanmar (Burma), Nepal and Sri Lanka.

***Remarks :*** It is most common species of the genus and found almost throughout the year. Anal appendages and male genitalia as shown in figures 1 and 2.

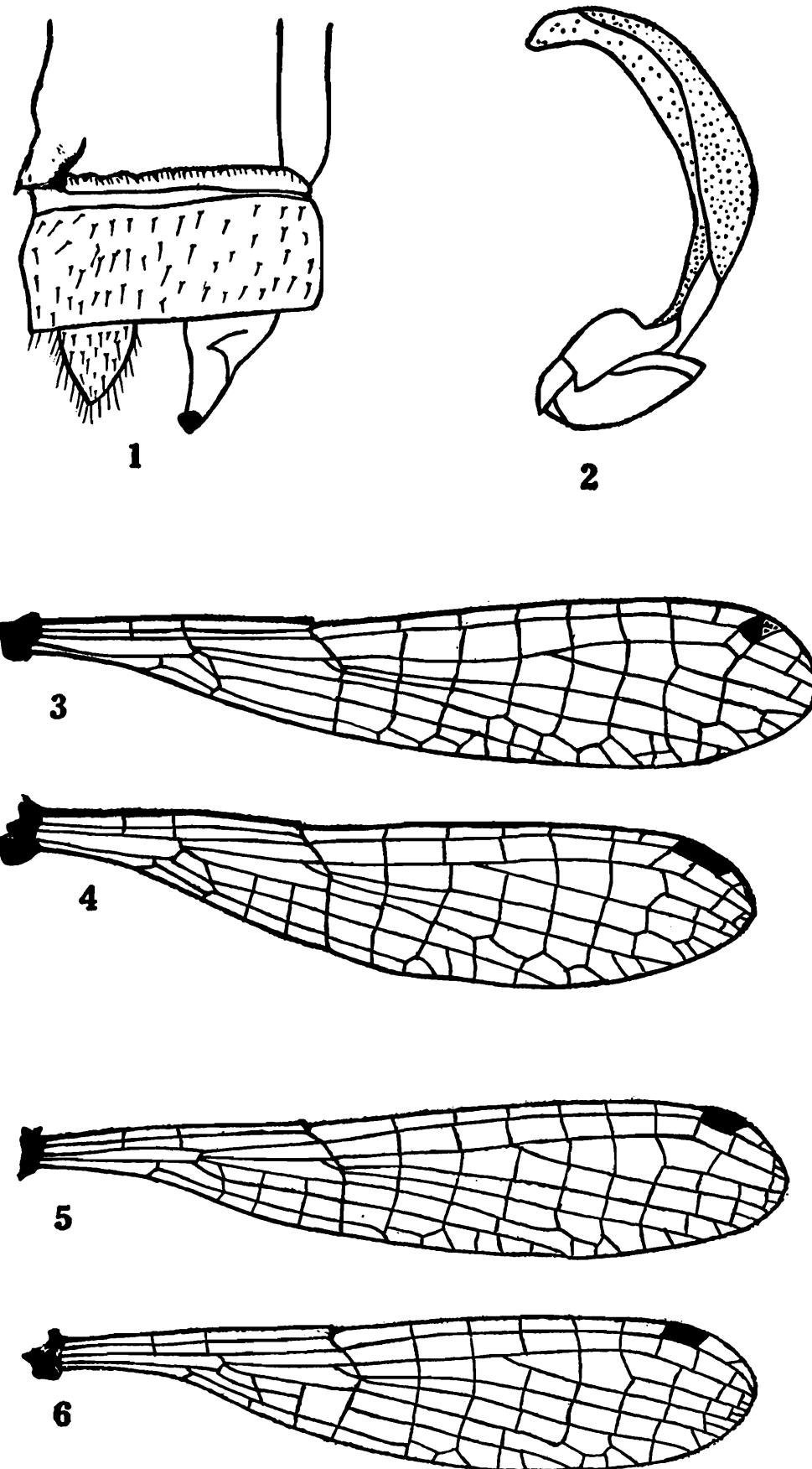


Fig. 1 : Lateral view of anal appendages of *Ceriagrion coromandelianum* (Fabr.)

Fig. 2 : Male genitalia (Prophallus) of *Ceriagrion Coromandelianum* (Fabr.)

Figs. 3 & 4 : *Ischnura aurora aurora* (Brauer)

3. Forewing, 4. Hindwing

Figs. 5 & 6 : *Agriocnemis pygmaea* (Rambur)

5. Forewing, 6. Hindwing

### 7. *Ceriagrion olivaceum* Laidlaw

1914. *Ceriagrion olivaceum* Laidlaw, Rec. Indian Mus., 8 : 345-346.

1933. *Ceriagrion olivaceum*, Fraser, Fauna Brit. India Odon., 1 : 324.

*Material examined* : 1 ♀, Kutumswar, 17. 12. 1980, coll. M. S. Shishodia and 1 ♀, Nelasner, 29. 12. 1980, coll. M. S. Shishodia.

#### Measurements :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Female</i> :	32.50 mm	22.00 mm	21.00 mm

*Distribution* : India (Assam, Kerala, Maharashtra, Manipur, Meghalaya, Uttar Pradesh and West Bengal), Cambodia, Laos, Malaysia, Myanmar (Burma), Thailand and Vietnam.

### Genus : *Aciagrion* Selys

#### 8. *Aciagrion pallidum* Selys

1891. *Aciagrion pallidum* Selys, Ann. Mus. Civ. Genova, (2) 10 : 512-513.

1933. *Aciagrion pallidum*, Fraser, Fauna Brtt, India Odon., 1 : 344-345.

*Material examined* : 8 ♂♂, 3 ♀♀, Bennu, 27. 12. 1978, coll. M. S. Shishodia ; 1 ♂, Dharampura, Jagdalpur, 10. 12. 1978, coll. M. S. Shishodia ; 3 ♀♀, East of Gidam 20. 12. 1978, coll. M. S. Shishodia ; 1 ♀, Hanan, Gidam, 22. 12. 1978, coll. M. S. Shishodia ; 1 ♂, 2 ♀♀, Naibasti Konta, 25.11.88, coll. M. Prasad ; 2 ♂♂, North of Gidam, 29. 12. 1978, coll. M. S. Shishodia ; 1 ♀, Oldbasti Konta, 24. 11. 1988, coll. M. Prasad ; 1 ♀, Saberi beds, Konta, 15. 12. 1978, coll. M. S. Shishodia ; 1 ♂, Sonpur, 1. 1. 1981, coll. M. S. Shishodia ; and 3 ♂♂, Tirathgarh, 17. 12. 1980, coll. M. S. Shishodia.

#### Measurements :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	30.00 mm-31.00 mm	19.00 mm-20.00 mm	18.00 mm-18.50 mm
<i>Female</i> :	29.50 mm-31.50 mm	18.00 mm-20.00 mm	18.00 mm-18.50 mm

*Distribution* : India [Assam : (dry zone), Bihar, East Himalaya, Karnataka, Maharashtra, Uttar Pradesh and West Bengal], Myanmar and Nepal.

*Remarks* : In male specimens there are 12 postnodals in forewings and 11 in

hindwings. In female it varies from 8 to 10 in forewings and 7 to 9 in hindwings. Pterostigma covers approximately one cell.

### 9. *Aciagrion hisopa hisopa* (Selys)

1876. *Pseudagrion hisopa* Selys, Bull. Acad. Belg., (2) 42 : 509.

1991. *Aciagrion hisopa hisopa*, Tsuda, A distributional list of Odonata : 18.

*Distribution* : India [Karnataka, Kerala, Madhya Pradesh (Bastar), Maharashtra and West Bengal], Bangladesh, Malayasia, Myanmar, Nepal, Pakistan, Singapore, Sri Lanka, Thailand and Vietnam.

### 10. *Aciagrion occidentale* Laidlaw

1919. *Aciagrion hisopa* (Selys) ? race *occidentalis* Laidlaw, Rec. Indian Mus., 15 : 186.

1933. *Aciagrion occidentale*, Fraser, Fauna Brit. India Odon., 1 : 335-337.

*Material examined* : 1 ♂, Naibasti Konta, 28. 11. 1988, coll. M. Prasad.

#### Measurements :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	23·50 mm	16·50 mm	15·50 mm

*Distribution* : India (Throughout South India) and Sri Lanka.

*Remarks* : This specimen agrees fairly well with the published description except having Labium and Labrum brown in colour, Legs blackish brown, Pterostigma covers one cell. 11 postnodal nervures in forewings and 10 in hindwings.

### Genus : *Ischnura* Charpentier

### 11. *Ischnura senegalensis* (Rambur)

1842. *Agrion senegalensis* Rambur, Ins. Neurop., : 276.

1933. *Ischnura senegalensis*, Fraser, Fauna Brit. India Odon., 1 : 348-351.

*Material examined* : 1 ♂, Bandapana, Kondagaon, 30. 12. 1978, coll. M. S. Shishodia.

#### Measurements :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	22·00 mm	12·50 mm	13·00 mm

**Distribution :** India (Bihar, Eastern Himalays, Himachal Pradesh, Uttar Pradesh and West Bengal), Africa, France, Indonesia, Japan, Myanmar (Burma), Philippines and Sri Lanka.

### 12. *Ischnura aurora aurora* (Brauer)

(Figs. 3 & 4)

- 1858. *Agrion delicatum* Hagen, Verh. zool.-bot. Ges. Wien., 8 : 479.
- 1865. *Agrion aurora*, Brauer, Verh. zool-bot. Ges. Wien., 15 : 510.
- 1933. *Ischnura delicata*, Fraser, Fauna Brit. India Odon., 1 : 360-362.
- 1954. *Ischnura aurora*, Lieftinck, Treubia, 22 : 74.
- 1991. *Ischnura aurora aurora*, Tsuda, A Distributional list of world odonata, : 34.

**Material examined :** 1 ♂, Bandapara, Kontagaon, 30.12.1978, coll. M. S. Shishodia ; 2 ♂♂, 1 ♀, Basmunda, Bandh Dhuria, 30.11.1988, coll. Y N. Gupta ; 12 ♂♂, 4 ♀♀, Chirimor, Konta, 26.11.1988, coll. M. Prasad ; 1 ♂, 1 ♀, Chhotedongu, 1.12.1988, coll. Y. N. Gupta ; 2 ♂♂, Chitrakote, 27.11.1988, coll. M. Prasad ; 1 ♂, 1 ♀, Narainpur, 3.12.1988, coll. Y.N. Gupta ; 4 ♂♂, 1 ♀, Naibasti Konta, 25.11.1988, coll. M. Prasad ; 2 ♂♂, 6 ♀♀, Near Ganga Murd pond, Jagdalpur, 28.11.1988, coll. M. Prasad ; 1 ♂ Near Kopelar pond, Konda Gaon, 5.12.1988, coll. Y N. Gupta and 4 ♂♂, Oldbasti Konta, 24.11.1988, coll. M. Prasad.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male :</i>	19.00 mm-20.00 mm	11.00 mm-11.50 mm	10.00 mm-11.00 mm
<i>Female :</i>	19.00 mm-19.50 mm	15.50 mm-16.50 mm	14.50 mm-16.00 mm

**Distribution :** India (Bihar, Eastern Himalays, Himachal Pradesh, Uttar Pradesh and West Bengal), Australia, Indonesia, Malaysia, Myanmar (Burma), Philippines, Sondaic Archipelago and Sri Lanka.

**Remarks :** It is most common species of genus *Ischnura* and occurring throughout the year.

### 13. *Ischnura rufostigma rufostigma* Selys

- 1876. *Ischnura rufostigma* Selys, Bull. Acad. Belg., (2) 41 : 283.
- 1933. *Ischnura rufostigma*, Fraser, Fauna Brit. India Odon., 1 : 362-364.
- 1991. *Ischnura ru,ostigma rufostigma*, Tsuda, A Distributional list of world Odonata, : 36.

**Material examined :** 1 ♂, Mahkao village, Narainpur, 26.10.1979, coll. S. Ahmed.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male :</i>	22.00 mm	15.00 mm	14.50 mm

**Distribution :** India (Assam, Bihar, Himachal Pradesh, Madhya Pradesh, Uttar Pradesh and West Bengal).

**Genus : Rhodischnura Laidlaw****14. Rhodischnura nursei (Morton)**

1907. *Ischnura nursei* Morton, *Trans. Ent. Soc. Lond.*, : 306-307.

1933. *Rhodischnura nursei*, Fraser, *Fauna Brit. India Odon.*, 1 : 369-371.

**Material examined :** 1 ♂, Mahkao, village, Narainpur, 26. 10. 1979, coll. S. Ahmed.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male :</i>	15.50 mm	9.50 mm	9.00 mm

**Distribution :** India (Bihar, Gujarat, Madhya Pradesh, Uttar Pradesh and West Bengal) and Pakistan.

**Genus : Enallagma Charpentier****15. Enallagma parvum Selys**

1876. *Enallagma parvum* Selys, *Bull. Acad. Belg.*, (2) 41 : 537.

1933. *Enallagma parvum*, Fraser, *Fauna Brit. India Odon.*, 1 : 376-378.

**Material examined :** 1 ♀, Bansoor, 26. 12. 1980, coll. M. S. Shishodia ; 2 ♂♂, Chhotadangu, 1. 12. 1988, coll. Y. N. Gupta ; 1 ♀, Gidam, 27. 12. 1988, coll. M. S. Shishodia and 2 ♂♂, Near Ganga Murd pond, Jagdalpur, 28. 11. 1988, coll. M. Prasad.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male :</i>	17.00 mm-18.00 mm	11.00 mm-11.50 mm	10.00 mm-11.50 mm
<i>Female :</i>	16.50 mm-17.00 mm	11.00 mm	10.00 mm

**Distribution :** Throughout India, Myanmar (Burma), Nepal and Sri Lanka.

**Remarks :** Seven postnodal nervures present in forewings and 6 in hindwings.

**Genus : Agriocnemis**

**16. Agriocnemis lacteola Selys**

1877. *Agriocnemis lacteola* Selys, Bull. Acad. Belg., (2) 43 : 144.

1933. *Agriocnemis lacteola*, Fraser, Fauna Brit. India Odon., 1 : 381-383.

**Material examined :** 1 ♂, Gidam, 7. 11. 1979, coll. S. Ahmed.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	16.50 mm	10.00 mm	9.50 mm

**Distribution :** India (Assam, Bihar, Meghalaya, Sikkim, Tripura and West Bengal).

**17. Agriocnemis dabruei Fraser**

1919. *Agriocnemis dabruei*, Fraser, Rec. Indian Mus., 16 : 454.

1933. *Agriocnemis dabruei*, Fraser, Fauna Brit. India Odon., 1 : 396-398.

**Distribution :** India [ Assam and Madhya Pradesh (Bastar, Balaghat], Malaysia, Myanmar, Thailand and Vietnam.

**18. Agriocnemis splendidissima Laidlaw**

1919. *Agriocnemis splendidissima* Laidlaw, Rec. Indian Mus., 16 : 180-182.

1933. *Agriocnemis splendidissima*, Fraser, Fauna Brit. India Odon., 1 : 392-394.

**Material examined :** 1 ♀, Bandapara, Konta gaon, 30. 12. 1978, coll. M. S. Shishodia and 2 ♂♂, East of Gidam, 30. 12. 1978, coll. M. S. Shishodia.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	17.00 mm	11.00 mm	10.00 mm
<i>Female</i> :	17.00 mm	11.00 mm	10.50 mm

**Distribution :** India (Bihar, Madhya Pradesh and Western Ghats).

*Remarks* : Seven postnodal nervures present in forewings and 6 in hindwings. Pterostigma brownish in colour and cover approximately a cell.

**19. Agriocnemis pygmaea (Rambur)**  
(Figs. 5 & 6)

1842. *Agrion pygmaeum* Rambur, *Ins. Neurop.*, 278.

1933. *Agriocnemis pygmaea*, Fraser, *Fauna Brit. India Odon.*, 1 : 398-401.

*Material examined* : 1 ♂, Barsoor, 26. 12. 1978, coll. M. S. Shishodia ; 12 ♂♂, 3 ♀♀, Bansmunda Bandh, Dhamai, 30. 11. 1988, coll. Y. N. Gupta ; 6 ♂♂, 1 ♀, Chhotadongu, 1. 12. 1988, coll. Y. N. Gupta ; 2 ♂♂, Chirimor, Konta, 26. 11. 1988, coll. M. Prasad ; 7 ♂♂, 1 ♀, Chitrakote, 27. 11. 1988, coll. M. Prasad ; 1 ♂, Dharampura, 10. 12. 1978, coll. M. S. Shishodia ; 12 ♂♂, 2 ♀♀, Naibasti, Konta, 25. 11. 1988, coll. M. Prasad ; 11 ♂♂, 3 ♀♀, Near Ganga murd pond, Jagdalpur, 28. 11. 1988. coll. M. Prasad and 3 ♂♂, 1 ♀, Oldbasti Konta, 24. 11. 1988, coll. M. Prasad.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i>	16·50 mm-17·50 mm	9·50 mm-11·00 mm	9·00 mm-10·00 mm
<i>Female</i>	17·00 mm-18·50 mm	11·00 mm-12·50 mm	11·00 mm-12·00 mm

*Distribution* : Throughout India, Australia, China, Indonesia, Myanmar (Burma), Nepal, papua (New Guinea), Philippines, Seycheles (Indian Ocean), Singapore, Sri Lanka and Taiwan.

*Remarks* : It is most common species of the genus and found throughout the year.

**20. Agriocnemis pieris Laidlaw**

1919. *Agriocnemis pieris* Laidlaw, *Rec. Indian Mus.*, 16 : 179.

1933. *Agriocnemis pieris*, Fraser, *Fauna Brit. India Odon.*, 1 : 384-385.

*Distribution* : India [Karnataka, Kerala, Madhya Pradesh (Bastar), Maharashtra and West Bengal].

**Genus : Onychargia Selys**

**21. Onychargia atrocyana (Selys)**

1865. *Onychargia atrocyana* Selys, *Bull. Acad. Belg.*, (2) 20 : 416.

1933. *Onychargia atrocyana*, Fraser, *Fauna Brit. India Odon.*, 1 : 417-418.

**Material examined :** 1 ♀, Dharampura, Jagdalpur, 30. 10. 1979, coll. S. Ahmed.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<b>Male</b> :	22.00 mm	17.00 mm	16.50 mm

**Distribution :** India (Assam, Anaimalai Hills, Bihar, Karnataka and West Bengal), Myanmar (Burma) and Sri Lanka.

**Remarks :** Nervure *Ac* situated nearer to proximal antenodal nervure. Nervure *Ab* complete, 11-12 postnodal nervures in forewings and 10 in hindwings.

Superfamily : LESTINOIDEA

Family : LESTIDAE

Genus : *Lestes* Leach

## 22. *Lestes viridulus* Rambur

1842. *Lestes viridula* Rambur, *Hist. Nat. Ins. Neurop.*, : 252-253.

1933. *Lestes viridula*, Fraser, *Fauna Brit. India Odon.*, 1 : 45-46.

1991. *Lestes viridulus*, Tsuda, *A Distributional list of world Odonata*, : 64.

**Material examined :** 3♂♂, 4♀♀, Atagaon 3 kms from Jagdalpur, 31. 10. 1979, coll. S. Ahmed ; 1♂, 3♀♀, Bhairamgarh, 21. 12. 1978, coll. M. S. Shishodia ; 1♀ Bhanpuri, 16. 12. 1980, coll. M. S. Shishodia : 2♂♂, 2♀♀, Chhotedongu, 1. 12. 1988, coll. Y. N. Gupta ; 2♀♀, Chitrakote, 20. 11. 1979, coll. S. Ahmed ; 2♂♂, Donga ghat, 30. 12. 1978, coll. M. S. Shishodia ; 3♀♀, East to Gidam, 20. 12. 7978, coll. M. S. Shishodia ; 1♂, 2♀♀, Gidam, 7. 11. 1979, coll. S. Ahmed ; 3♂♂, 2♀♀, Kakapul, 2 kms from Jagdalpur, 2. 11. 1979. coll. S. Ahmed ; 1♂ Konda gaon, 30. 12. 1978, coll. M. S. Shishodia ; 1♂, Kumari, Dhaurai, 2. 12. 1988, coll. Y. N. Gupta ; 2♀♀, Kutomswar, 17. 12. 1980, coll. M. S. Shishodia ; 1♀, Narainpur, 27. 10. 1979, coll. S. Ahmed ; 3♂♂, 4♀♀, Narainpur, 3. 12. 1988, coll. Y. N. Gupta ; 2♀♀, Naibasti Konta, 25.11. 1988, coll. M. Prasad ; 1♂. North of Gidam, 5. 11. 1979, coll. S. Ahmed ; 5♂♂, Sonpur, 1. 1. 1981, coll. M. S. Shishodia and 1♂, Tirathgarh, 17. 12. 1980. coll. M. S. Shishodia.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<b>Male</b> :	31.00 mm—32.50 mm	22.00 mm—23.50 mm	21.50 mm—22.00 mm
<b>Female</b> :	30.00 mm—33.00 mm	21.50 mm—23.00 mm	21.00 mm—23.00 mm

*Distribution* : India (Bihar, Himachal Pradesh, Karnataka, Maharashtra, Uttar Pradesh and Western India).

*Remarks* : A common species occurring within dense dry grasses near water body or away from water body. Sometimes found with the dry grasses in deep forest.

### 23. *Lestes thoracicus* Laidlaw

1920. *Lestes thoracica* Laidlaw, Rec. Indian Mus., 19 : 152-153.

1933. *Lestes thoracica*, Fraser, Fauna Brit. India Odon., 1 : 56-57.

1991. *Lestes thoracicus*, Tsuda, A Distributional list of world Odonata., : 63.

*Material examined* : 1♂, Naibasti, Konta, 25. 11. 1988, coll. M. Prasad.

#### Measurements :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
Male :	31·00 mm	21·00 mm	20·00 mm

*Distribution* : India (Bihar, Gujarat, Orissa, Uttar Pradesh and West Bengal).

*Remarks* : Prothorax, thorax and 1st abdominal segments are deeply pruinosed. Apical rings present on 3rd to 7th abdominal segments pale-blue. Inferior anal appendages totally black. 12 post nodal in forewings and 10 in hindwings.

### 24. *Lestes umbrinus* Selys

1891. *Lestes umbrina* Selys, Ann. Mus. Civ. Genova, (2) 10 : 497-498.

1933. *Lestes umbrina*, Fraser, Fauna Brit. India Odon., 1 : 53-55.

1991. *Lestes umbrinus*, Tsuda, A Distributional list of world Odonata., : 63.

*Material examined* : 1♂, 1♀, Gidam, 25. 12. 1980, coll. M. S. Shishodia.

#### Measurements :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
Male :	31·00 mm	20·50 mm	20·00 mm
Female :	30·00 mm	21·00 mm	21·00 mm

*Distribution* : India (Bihar, Gujarat, Maharashtra, Uttar Pradesh and West Bengal), China and Myanmar.

### 25. *Lestes eletus* Hagen

1858. *Lestes elata*, Hagen, Verh. Zool.-bot. Ges. Wien., 8 : 478.  
 1929. *Lestes elata elata*, Fraser, J. Bombay nat. Hist. Soc., 33 : 845-847.  
 1991. *Lestes elatus*, Tsuda, A Distributional list of world Odonata, : 61.

*Material examined* : 1 ♀, Bennu, 27. 12. 1978, coll. M. S. Shishodia ; 1 ♂, East to Gidam, 20. 12. 1978, coll. M. S. Shishodia ; 1 ♀, Kutumswar, 17. 12. 1980, coll. M. S. Shishodia and 1 ♀, Nelasner, 29. 12. 1980, coll. M. S. Shishodia.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	34·50 mm	24·00 mm	23·50 mm
<i>Female</i> :	34·00 mm—34·50 mm	24·00 mm	23·00 mm—24·00 mm

*Distribution* : India (Peninsular India) and Sri Lanka.

Family : PROTONEURIDAE

Genus : *Disparoneura* Selys

### 26. *Disparoneura quadrimaculata* (Rambur)

1842. *Agria quadrimaculata* Rambur, Ins. Neurop., : 255.  
 1860. *Disparoneura quadrimaculata*, Selys, Bull. Acad. Belg., (2) 10 : 446.  
 1991. *Disparoneura quadrimaculata*, Tsuda, A Distributional list of world Odonata, : 9.

*Material examined* : 1 ♂, Narainpur, 3. 12. 1988, coll. Y N. Gupta.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	31·00 mm	23·50 mm	23·00 mm

*Distribution* : India (Karnataka, Madhya Pradesh and Maharashtra).

*Remarks* : Brown markings on the forewings present in between 1st to 8th postnodal nervures and in hindwings in between 4th to 13th postnodal nervures. Pterostigma covers more than a cell. 18 postnodals in forewings and 14 in hindwings.

Superfamily : AGROIDEA  
 Family : CHLOROCYPHIDAE  
 Genus : Rhinocypha Rambur  
 Subgenus : Aristocypha Laidlaw

### 27. *Rhinocypha (Aristocypha) trifasciata* (Selys)

1853. *Rhinocypha trifasciata* Selys, *Syn. Cat.*, : 61.

1934. *Rhinocypha trifasciata*, Fraser, *Fauna Brit. India Odon.*, 2 : 31-33.

1991. *Rhinocypha (Aristocypha) trifasciata*, Tsuda, *A Distributional list of world Odonata*, : 77.

*Material examined* : 1 ♂, Chitrakote, 14.12.1980, coll. M. S. Shishodia.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	23.00 mm	27.00 mm	26.50 mm

*Distribution* : India (Assam, Eastern Himalaya, Himachal Pradesh, Uttar Pradesh and West Bengal) and Nepal.

Genus : *Libellago* Selys

### 28. *Libellago lineata* lineata (Burmeister)

1839. *Calopteryx lineata* Burmeister, *Handb. Ent.*, 2 : 826.

1934. *Libellago lineata lineata*, Fraser, *Fauna Brit. India Odon.*, 2 : 60-63.

*Material examined* : 2 ♀ ♀, Chitrakote, 2.11.1979, coll. S. Ahmed and 1 ♂, Chitrakote, 27.11.1988, coll. M. Prasad.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	15.00 mm	16.50 mm	16.50 mm
<i>Female</i> :	14.50 mm—15.00 mm	16.00 mm	15.50 mm—16.00 mm

*Distribution* : India (Assam, Himachal Pradesh, Kerala, Maharashtra, Meghalaya, Tamil Nadu, Uttar Pradesh and West Bengal), Indonesia, Myanmar, Thailand, throughout Sundaic Archipelago and West Malaysia (Penang).

*Remarks* : Light yellow markings present at the base of both the wings, expanded

up to node in male specimen. Pterostigma in forewings absent in male but present in hindwings.

**Family : CALOPTERYGIDAE**

**Genus : Vestalis Selys**

**29. *Vestalis gracilis gracilis* (Rambur)**

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

1934. *Vestalis gracilis gracilis*, Fraser, *Fauna Brit. India Odon.*, 2 : 126-128.

**Material examined :** 2♂♂, East to Gidam, 20.12.1978, coll. M. S. Shishodia.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	51.00 mm	36.00 mm	35.50 mm—36.00 mm

**Distribution :** India (Assam, Bihar, South India and West Bengal), Myanmar, Thailand and Vietnam (Annam and Tonkin).

**30. *Vestalis smaragdina* Selys**

1879. *Vestalis smaragdina* Selys, *Bull. Acad. Belag.*, (2) 47 : 362.

1934. *Vestalis smaragdina*, Fraser, *Fauna Brit. India Odon.*, 2 : 133-134.

**Distribution :** India [Madhya Pradesh (Bastar and Meghalaya)], Bangladesh, China, Kampuchea, Laos, Malayasia, Myanmar, Nepal, Thailand and Vietnam.

**Suborder : ANISOPTERA**

**Superfamily : AESHNOIDEA**

**Family : GOMPHIDAE**

**Genus : Paragomphus Cowley**

**31. *Paragomphus lineatus* (Selys)**

1850. *Gomphus lineatus* Selys, *Rev. Odon.*, : 386.

1934. *Mesogomphus lineatus*, *Fauna Brit. India odon.*, 2 : 230-234.

1991. *Paragomphus lineatus*, Tsuda *A Distributional list of world Odonata* : 107.

**Material examined :** 1♂, Bandapana, Kondagaon, 30.12.1978, coll. M. S. Shishodia.

*Measurements :*

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	35.00 mm	26.50 mm	26.00 mm

*Distribution :* India (Himachal Pradesh, Karnataka, Maharashtra, Tamil Nadu, Uttar Pradesh and West Bengal), Myanmar and Nepal.

*Remarks :* Anal triangle 4 celled, Membrane white, only one cubital nervure present. Discoidal cell entire, but in right side of wing, discoidal cell divided into two cells. Pterostigma brownish yellow and covers 5 cells. Nodal index  $\frac{7-13/13-8}{8-10/10-8}$ .

Genus : **Ictinogomphus** Rambur32. **Ictinogomphus rapax** (Rambur)

1842. *Diastatoma rapax* Rambur, *Ins. Neurop.*, : 169.

1934. *Ictinus rapax*, Fraser, *Fauna Brit. India Odon.*, 2 : 373-376.

1976. *Ictinogomphus rapax*, Kumar & Juneja, *Newsl. zool. Surv. India*, 2 (2) : 95.

*Distribution :* India (Bihar, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Sikkim, Tamil Nadu, Uttar Pradesh and West Bengal), Malaysia, Myanmar, Nepal and Sri Lanka.

*Remarks :* Male of this species was observed by the author at Ganga Murd pond, Jagdalpur in November, 1988, but could not be collected.

Family : **AESHNIDAE**Genus : **Anax** Leach33. **Anax guttatus** (Burmeister)

1839. *Aeschna guttata* Burmeister, *Handb. Ent.*, 2: 840.

1936. *Anax guttatus*, Fraser, *Fauna Brit. India Odon.*, 3 : 140-142.

*Material examined :* 1 ♂, Chitrakote, 14.12.1980, coll. M. S. Shishodia.

*Measurements :*

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	57.00 mm	52.00 mm	51.00 mm

**Distribution :** India (Andhra Pradesh, Bihar, Eastern Himalaya, Himachal Pradesh, Karnataka, Kerala, Punjab, Tamil Nadu and Uttar Pradesh), Indonesia, Malaysia, Micronesia, Myanmar, Nepal, North Australia, Samoa Island, Seychelles, Taiwan and Sri Lanka.

**Remarks :** Bases of both wings marked with yellow, membrane, white anteriorly and black at the posterior end. Discoidal cells 5 celled in forewings and 4 in hindwings, Hypertrigone 4 celled in forewings and 3 celled in hindwings, 4 cubital nervures in forewings and 5 celled in hindwings. Pterostigma brownish in colour and covers  $2\frac{1}{2}$  cells. Nodal index  $\frac{9-17}{11-14} \mid \frac{18-9}{13-9}$

### 34. *Gynacantha bayadera* Selys

1891. *Gynacantha bayadera* Selys, Ann. Mus. Civ. Genova, 30 : 47.

199 *Gynacantha bayadera*, Tsuda, A distributional list of world Odonata, 1991 : 223.

**Distribution :** India [Madhya Pradesh (Bastar), Maharashtra, Meghalaya, Sikkim and West Bengal], Bangladesh, Indonesia, Malaysia, Myanmar, Nepal, Philippines, Papua, New Guinea, Singapore, Thailand and Taiwan.

Superfamily : LIBELLULOIDEA  
 Family : CORDULIIDAE  
 Genus : *Macromia* Rambur

### 35. *Macromia cingulata* Rambur

1842. *Macromia cingulata* Rambur, Ins. Neurop., : 137.

1936. *Macromia cingulata*, Fraser, Fauna Brit. India, Odon., 3 : 179-182.

**Material examined :** 1 ♂, Chitrakote, 27.11.1988, coll. M. Prasad.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	42.00 mm	35.00 mm	34.50 mm

**Distribution :** India (Assam, Karnataka, Maharashtra, North India, Tamil Nadu and West Bengal).

**Remarks :** T-shaped black markings on the frons, replaced by two small rounded

yellow spot. Anal triangle 2 celled, membrane long and white in colour. 5 cubital nervures in forewings and 4 in hindwings, Hypertrigone traversed 3 times in forewings and only one in hindwings. Discoidal field begins with 2 rows of cells in left forewing while in right forewing with only one row of cells. Pterostigma small, thick and black in colour and covers  $1\frac{1}{2}$  cells. Nodal index  $\frac{6-11}{8-8} \mid \frac{13-6}{8-9}$ .

Family : LILELLULIDAE

Genus : Potamarcha Karsch

### 36. Potamarcha congener (Rambur)

- 1842. *Libellula obscura* Rambur, Ins. Neurop., : 64.
- 1890. *Potamarcha obscura*, Karsch, Berlin Ent. Zeit., 33 : 971.
- 1891. *Potamarcha congener*, Selys, Ann. Soc. Espan., 20 : 221.
- 1842. *Libellula congener*, Rambur, Ins. Neurop., : 70.
- 1991. *Potamarcha congener*, Tsuda, A Distributional list of world Odonata, : 175.

*Material examined* : 1 ♀, Knknigam,  $4\frac{1}{2}$  kms. South east of Jagdalpur, 29.10.1979  
coll. S. Ahmed and 1 ♀, Naibasti Konta, 25.11.1988, Coll. M. Prasad.

#### Measurements :

<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
Female : 29.00 mm	34.50 mm	34.00 mm

*Distribution* : India (Andhra Pradesh, Bihar, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal), Indonesia, Malaya Archipelago, Myanmar, Nepal, North Australia, Papua (New Guinea), Philippines, Sri Lanka and Taiwan.

*Remarks* : It is a common Indian species found near temporary and permanent ponds. Nodal index  $\frac{8-14}{11-11} \mid \frac{14-10}{11-11}$ .

Genus : Orthetrum Newman

### 37. Orthetrum taeniolatum (Schneider)

- 1845. *Libellula taeniolata* Schneider, Stett. Ent. Zeit., 6 : 111.
- 1936. *Orthetrum taeniolatum*, Fraser, Fauna Brit. India Odon., 3 : 296-298.

*Material examined* : 1 ♀, Peuambola, Kondagaon, 28.12.1978, coll. M. S. Shishodia.

**Measurements :**

<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Female</i> : 20.00 mm	26.00 mm	25.00 mm

**Distribution :** India (Bihar, Himachal Pradesh, Madhya Pradesh, Sikkim and West Bengal), Countries bordering Mediterranean and Nepal.

**38. *Orthetrum sabina sabina* (Drury)**

1770. *Libellula sabina* Drury, *Ill. Exot. Ins.*, 1 : 114.

1936. *Orthetrum sabina*, Fraser, *Fauna Brit. India Odon.*, 3 : 300-302.

1991. *Orthetrum sabina sabina*, Tsuda, *A Distributional list of world Odonata*, : 172.

**Material examined :** 1 ♂, Barkoor, 26.12.1980, coll. M. S. Shishodia, 1 ♀, Chitrakote, 2.11.1979, coll. S. Ahmed ; 1 ♀, Guchiras, 22.12.1980, coll. M. S. Shishodia ; 1 ♂, Near Ganga Murd pond, Jagdalpur, 28.11.1988, coll. M. Prasad ; 1 ♂, Near Kopelar pond, Kondagaon, 5.12.1988, coll. Y. N. Gupta ; and 1 ♀, Oldbasti Konta, 24.11.1988, coll. M. Prasad.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> : 33.00 mm-34.50 mm	32.00 mm-33.00 mm	30.50 mm-32.00 mm	
<i>Female</i> : 32.50 mm-33.50 mm	31.00 mm-34.00 mm	30.00 mm-35.50 mm	

**Distribution :** India (Bihar, Eastern Himalaya, Himachal Pradesh, Uttar Pradesh and West Bengal), Angola, Australia, Egypt, Indonesia, Iraq, Iran, Micronesia, most of the African continent, Myanmar, Nepal, Sri Lanka and Thailand.

**Remarks :** It is one of the most common dragonfly of India and found throughout the year.

**39. *Orthetrum glaucum* (Brauer)**

1865, *Libellula glauca* Brauer, *Verh. zool.-bot. Ges. wien.*, 15 : 1012.

1936. *Orthetrum glaucum*, Fraser, *Fauna Brit. India Odon.*, 3 : 307-309.

**Material examined :** 1 ♂, 1 ♀, Dharampura, 10.12.1978, coll. M. S. Shishodia.

**Measurements :**

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> : 33.50 mm	37.00 mm	36.00 mm	
<i>Female</i> : 30.00 mm	36.00 mm	35.50 mm	

*Distribution* : Throughout India (except in plains and above altitudes 1200'), Indonesia, Malaya Archipelago, Nepal, Philippines, South China and Sri Lanka.

#### 40. *Orthetrum luzonicum* (Brauer)

1868. *Libella luzonica* Brauer, Verh. zool.-bot. Ges. Wien., 18 : 169.

1890. *Orthetrum luzonicum*, Kirby, Cat. Odon. : 380

1991. *Orthetrum luzonicum*, Tsuda, A Distributional list of world Odonata. : 171.

*Material examined* : 1 ♂, Chitrakote, 27.11.1988, coll. M. Prasad.

##### Measurements :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	27.00 mm	28.50 mm	27.50 mm

*Distribution* : India (Andhra Pradesh, Assam, Himachal Pradesh, Tamil Nadu, Uttar Pradesh, West Bengal and West coast of India), Indonesia, Myanmar, Nepal, Philippines and Sri Lanka.

*Remarks* : Only one cubital nervure present in both pairs of wings, 2 rows of cells in between 1Riii & Rspl. Pterostigma brownish yellow and covers 2 cells Membrane brownish-white. Nodal index  $\frac{8-12 \mid 11-9}{10-9 \mid 9-9}$ .

#### 41. *Orthetrum pruinosum neglectum* (Rambur)

1842. *Libellula neglecta* Rambur, Ins. Neurop., 86.

1936. *Orthetrum pruinosum neglectum*, Fraser, Fauna Brit. India Odon., 3 : 311-313.

*Material examined* : 1 ♂, Chitrakote, 14.12.1980, coll. M. S. Shishodia, 1 ♂, Chhotedongu, 1.12.1988, coll Y. N. Gupta ; 1 ♂, Kanker, 3 kms. East of Rest house, 20.10.1979, coll. S. Ahmed and 1 ♂, Naibasti, Konta, 25.11.1988, coll. M. Prasad.

##### Measurements :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	28.50 mm—30.00 mm	34.50 mm—36.00 mm	34.00 mm—35.50 mm

*Distribution* : India (Bihar, Eastern Himalaya, Himachal Pradesh, Uttar Pradesh and West Bengal), Hong Kong, Malaya, Myanmar, Nepal, Sri Lanka and Thailand.

*Remarks* : Pterostigma covers more than 2 cells, only one cubital nervure in both

the wings, Discoidal field begins with 3 rows of cells in forewings. Nodal index varies from  $\frac{8-16 | 15-10}{10-11 | 10-10}$  to  $\frac{10-15 | 14-11}{10-12 | 11-10}$

Genus : **Palpopleura** Rambur

**42. *Palpopleura sexmaculata sexmaculata* (Fabricius)**

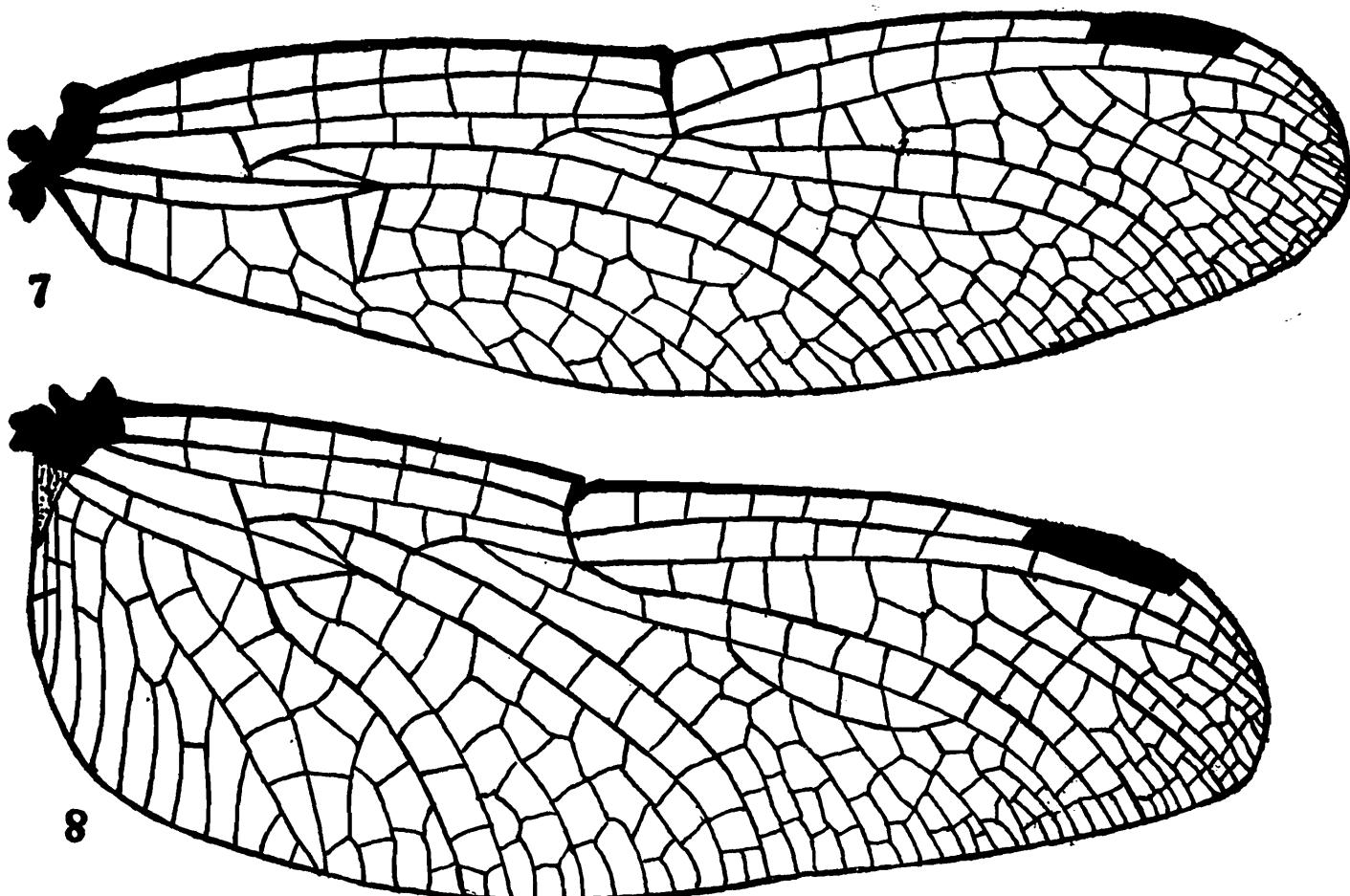
1787. *Libellula sexmaculata* Fabricius, Mant. Ins., 1 : 338.

1936. *Palpopleura sexmaculata sexmaculata*, Fraser, Fauna Brit. India Odon., 3 : 318-320.

*Material examined* : 1 ♀, Dharampura, 10.12.1978, coll. M. S. Shishodia.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Female</i> :	14.00 mm	18.50 mm	18.00 mm



Figs. 7 & 8 : *Acisoma panorpoides panorpoides* Rambur  
7. Forewing, 8. Hindwing

*Distribution* : India (Andhra Pradesh, Assam, Bihar, Eastern Himalaya, Himachal Pradesh, Karnataka, Maharashtra, Meghalaya, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal), China, Malaysia, Myanmar and Nepal.

Genus : *Acisoma* Rambur

43. *Acisoma panorpoides panorpoides* Rambur  
(Figs. 7 & 8)

1842. *Acisoma panorpoides* Rambur, *Ins. Neurop.*, : 28.

1936. *Acisoma panorpoides panorpoides*, Fraser, *Fauna Brit. India Odon.*, 3 : 330-331.

*Material examined* : 1 ♀, Oldbasti Konta, 24.11.1988, coll. M. Prasad.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Female</i> :	18·00 mm	20·50 mm	20·00 mm

*Distribution* : India (Assam, Bihar, Eastern Himalaya, Himachal Pradesh, Madhya Pradesh, Sikkim, Uttar Pradesh and West Bengal), China, Indonesia, Japan, Malayan Archipelago, Nepal, Philippines, Singapore, Sri Lanka and Thailand.

*Remarks* : Nodal index  $\frac{7-7 \mid 7-6}{6-7 \mid 6-6}$ .

Genus : *Diplacodes* Kirby

44. *Diplacodes nebulosa* (Fabricius)

1793. *Libellula nebulosa* Fabricius, *Ent. Syst.*, 2 : 379.

1936. *Diplacodes nebulosa*, Fraser, *Fauna Brit. India Odon.*, 3 : 335-336.

*Material examined* : 3 ♂♂, 2 ♀♀, Near Ganga Murd pond, Jagdalpur, 28.11.1988, coll. M. Prasad.

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	16·00 mm	20·00 mm	19·00 mm
<i>Female</i> :	12·00 mm	16·00 mm	15·00 mm

*Distribution* : India (Bihar, Eastern Himalaya, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra and Uttar Pradesh), Indonesia, Malacca, Malaya (West), Myanmar, Nepal, Sri Lanka and Thailand.

**Remarks :** Only one cubital nervure present in both the wings, one row of cells inbetween 1R<sub>iii</sub> & R<sub>sp</sub>, discoidal cell entire, discoidal field begins with two rows of cells, pterostigma covers more than a cell. Nodal index varies from  

$$\frac{5-7\frac{1}{2} | 7\frac{1}{2}-5}{5-6 | 6-6}$$
 to 
$$\frac{5-7\frac{1}{2} | 7\frac{1}{2}-5}{5-5 | 5-5}$$

#### 45. *Diplacodes trivialis* (Rambur)

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

1936. *Diplacodes trivialis*, Fraser, Fauna Brit. India Odon., 3 : 336-338.

**Material examined :** 1 ♀, Bennu, 27.12.1978, coll. M. S. Shishodia ; 3 ♂♂, 1 ♀, Bandapura, 18.10.1979, coll. S. Ahmed ; 2 ♂♂, 2 ♀♀, Behuipana, Narainpur, 26.10.1979, coll. S. Ahmed ; 1 ♀, Donga Ghat, Jagdalpur, 12.12.1978, coll. M. S. Shishodia ; 1 ♂, Dumanpana, Kanker, 3.1.1979, coll. M. S. Shishodia ; 1 ♀, East to Gidam, 20.12.1978. coll. M. S. Shishodia ; 3 ♀♀, Gidam, 7.11.1979, coll. S. Ahmed ; 1 ♂, Golla palli, 20.12.1980 ; coll. M. S. Shishodia ; 1 ♀, Kachauri village, Jagdalpur, 11.12.1978, coll. M. S. Shishodia ; 1 ♂, 2 ♀♀, Kanker, 20.10.1979, coll. S. Ahmed ; 1 ♀, kanker (near Rest House), 19.10.1979, coll. S. Ahmed ; 2 ♂♂, 1 ♀, Kopelar pond, Kondagaon, 5.12.1988, coll. Y N. Gupta ; 1 ♀, Kumchi village, Dhamai, 2.12.1988, coll. Y N. Gupta ; 1 ♀, Mahkao village, Narainpur, 26.10.1979, coll. S. Ahmed ; 1 ♀, Narainpur, 31.12.1980, coll. M. S. Shishodia ; 1 ♀, Narainpur, 3.12.1988, coll. Y. N. Gupta ; 3 ♀♀, Naibasti, Konta, 25.11.1988, coll. M. Prasad ; 1 ♂, 1 ♀ Near Ganga Murd pond, Jagdalpur, 28.11.1988, coll. M. Prasad ; 2 ♂♂, Oldbasti, Konta, 24.11.1988, coll. M. Prasad ; 2 ♀♀, Penambola, Kondagaon, 28.12.1978, coll. M. S. Shishodia ; 1 ♂, Sonpur, 1.1.1981, coll. M. S. Shishodia 1 ♀, Sukma, 19.12.1980, coll. M. S. Shishodia and 2 ♂♂, Way to Gollabatto, Konta, 16.12.1978, coll. M. S. Shishodia.

#### Measurements :

<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> : 19.00 mm-20.50 mm	23.00 mm-24.50 mm	21.00 mm-22.00 mm
<i>Female</i> : 18.00 mm-19.50 mm	23.00 mm-24.00 mm	20.50 mm-21.00 mm

**Distribution :** Throughout India, Indonesia, Myanmar, Nepal, Sri Lanka, Thailand and West Malaysia.

**Remarks :** It is most common species found throughout the year near the temporary and permanent water bodies, sometime noticed far away from the water bodies.

#### 46. *Diplacodes lefebvrei* (Rambur)

1842. *Libellula lefebvrei* Rambur, *Ins. Neurop.*, : 112.  
 1936. *Diplacodes lefebvrei*, Fraser *Fauna Brit. India Odon.*, 3 : 333-335.

*Material examined* : 1 ♂, Naibasti Konta, 25.11.1988, coll. M. Prasad.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> : Damaged		22.00 mm	21.00 mm

*Distribution* : India (Gujarat and West coast of India), Africa and Mesopotamia.

*Remarks* : Small triangular brownish marking present at the base of hind wings. Only one cubital nervure in both the wings, pterostigma yellowish brown and covers  $1\frac{1}{2}$  cells, one row of cells in between IRiii & Rspl. Subtrigone in forewings one celled, membrane brown in colour. Discoidal field begins with two cells in forewings.

Nodal index 
$$\begin{array}{c|c} 6-7\frac{1}{2} & 7\frac{1}{2}-6 \\ \hline 5-6 & 6-6 \end{array}$$
.

#### 47. *Indothemis limbata sita* Campion

1923. *Indothemis limbata sita* Campion, *Ann. Mag. Nat. Hist.*, (9) : 28.  
 1936. *Indothemis limbata sita*, Fraser, *Fauna Brit. India Odon.*, 3 : 342-343.

*Distribution* : India [Karnataka and Madhya Pradesh (Bastar)] and Sri Lanka.

#### 48. *Lathrecista asiatica asiatica* (Fabr.)

1798. *Libellula asiatica* Fabricius, *Ent. Syst.*, : 283.  
 1936. *Lathrecista asiatica asiatica*, Fraser, *Fauna Brit. India Odon.*, 3 : 281-284

*Distribution* : India [ Assam Kerala, Madhya Pradesh (Bastar), Maharashtra, Orissa and West Bengal ], China, Fiji, Indonesia, Japan, Malaysia, Myanmar, Philippines, Papua New Guinea, Singapore, Thailand, Thaiwan, Samoa and Sri Lanka.

Genus : **Crocothemis Brauer****49. Crocothemis servilia servilia (Drury)**1770. *Libellula servilia* Drury, Ill. Ex. Ins., 1 : 6.1936. *Crocothemis servilia servilia*, Fraser, Fauna Brit. India Odon., 3 : 345-347.

*Material examined* : 1♂, Chitrakote, 14. 12. 1980, coll. M. S. Shishodia ; 1♂, Chitrakote, 27.11.1988, coll. M. Prasad ; 1♂, 1♀, Dharampura, 10. 12. 1978, coll. M. S. Shishodia ; 3♂♂, Dharampura, 30.10.1979, coll. S. Ahmed ; 1♂, 1♀, Dongaghat, Jagdalpur, 12.12.1978, coll. M. S. Shishodia ; 1♂, Kachuri village, 11.12.1978, coll. M. S. Shishodia ; 1♂, Near Ganga Murd pond, Jagdalpur, 28.11.1988, coll. M. Prasad ; 1♂, on way to Gollapalli, Konta, 16.12.1978, coll. M. S. Shishodia ; 1♀, Oldbasti, Konta, 24.11.1988, coll. M. Prasad and 1♂, Sangipal forest, Jagdalpur, 13.12.1978, coll. M. S. Shishodia.

*Measurements* :

<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
Male : 21.00 mm-22.00 mm	26.00 mm-27.00 mm	25.00-26.00 mm
Female : 21.00 mm-22.00 mm	26.50 mm-27.50 mm	25.00-25.50 mm

*Distribution* : Throughout India, Australia, Indonesia, Iraq, Japan, Myanmar, Nepal, Philippines, Sundaic Archipelago and Sri Lanka.

*Remarks* : It is one of the most common Indian dragonfly and found almost throughout the year. Only one row of cells in between IRiii and Rspl.

Genus : **Brachythemis Brauer****50. Brachythemis contaminata (Fabricius)**1793. *Libellula contaminata* Fabricius, Ent. Syst., 2 : 382.1936. *Brachythemis contaminata*, Fraser, Fauna Brit. India Odon., 3 : 365-366.

*Material examined* : 2♀♀, Naibasti Konta, 25.11.1988, coll. M. Prasad.

*Measurements* :

<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
Female : 16.00 mm	25.00 mm	24.50 mm

*Distribution* : India (Assam, Bihar, Eastern Himalaya, Himachal Pradesh, Madhya Pradesh, Meghalaya, Orissa, Uttar Pradesh and West Bengal), China, Indonesia, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Taiwan and Thailand.

Genus : **Bradinopyga** Kirby

51. **Bradinopyga geminata** (Rambur)

1842. *Libellula geminata* Rambur, *Ins. Neurop.*, : 90.

1936. *Bradinopyga geminata*, Fraser, *Fauna Brit. India Odon.*, 3 : 349-350.

*Material examined* : 1 ♂, Oldbasti Konta, 24.11.1988, coll. M. Prasad.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	29.50 mm	33.00 mm	32.00 mm

*Distribution* : India (Bihar, Delhi, Eastern Himalaya, Madhya Pradesh, Peninsular India, Uttar Pradesh and West Bengal) and Sri Lanka.

*Remarks* : Only one cubital nervure in both the wings. Discoidal field begins with 3 rows of cells. 2 rows of cells in between IRiii & R<sub>5</sub>. Pterostigma covers 2 cells. Nodal index  $\frac{9-12\frac{1}{2}}{9-9} \mid \frac{12\frac{1}{2}-9}{9-11}$ .

Genus : **Neurothemis** Brauer

52. **Neurothemis fulvia** (Drury)

1773. *Libellula fulvia* Drury, *III. Exot. Ins.*, 2 : 84.

1936. *Neurothemis fulvia*, Fraser, *Fauna Brit. India Odon.*, 3 : 353-354.

*Material examined* : 1 ♂, Chhotedongu, 1.12.1988, coll. Y. N. Gupta and 1 ♂, 1 ♀, East of Gidam, 20.10.1978, coll. M. S. Shishodia.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	24.50 mm	31.00 mm	30.00 mm
<i>Female</i> :	24.00 mm	30.50 mm	30.00 mm

**Distribution :** Throughout India, Australia, Indonesia, Iraq, Japan, Micronesia, Myanmar, Nepal, Philippines, Seychelles, Sri Lanka, Taiwan and Thailand.

### 53. *Neurothemis intermedia intermedia* (Rambur)

1842. *Libellula intermedia* Rambur, *Ins. Neurop.*, : 91.

1936. *Neurothemis intermedia intermedia*, Fraser *Fauna Brit. India Odon.*, 3 : 357-358.

**Material examined :** 1 ♀, Bennu, 27.12.1978, coll. M. S. Shishodia ; 1 ♂, Dharampura, 10.12.1978, coll. M. S. Shishodia ; 2♂♂, 2 ♀ ♀, Hanam, Gidam, 22.12.1978, coll. M. S. Shishodia ; 1♂, Mahkao, Village, Narainpur, 26.10.1979, coll. S. Ahmed ; 1♂, Near Ganga Murd pond, Jagdalpur, 28.11.1988, coll. M. Prasad ; 3♂♂, 5 ♀ ♀, North of Gidam, 24.12.1978, coll. M. S. Shishodia and 2 ♀ ♀, Sonpur, 1.1.1981, coll. M. S. Shishodia.

#### Measurements :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<b>Male :</b>	23.00 mm-24.00 mm	25.00 mm-27.50 mm	24.50 mm-27.00 mm
<b>Female :</b>	22.00 mm-24.00 mm	25.00 mm-28.00 mm	24.00 mm-27.50 mm

**Distribution :** India (Bihar, Eastern Himalaya, Himachal Pradesh, Maharashtra, Tamil Nadu, Uttar Pradesh and West Bengal), China, Myanmar, Nepal, Sri Lanka and West Malaysia.

**Remarks :** 5 cubital nervures in Forewings and 4 in hindwings. 2 rows of cells in between IRiii & Rspl. Nodal index  $\frac{9-10\frac{1}{2}}{9-9} | \frac{11\frac{1}{2}-11}{9-9}$ .

### 54. *Neurothemis tullia tullia* (Drury)

1773. *Libellula tullia* Drury *III. Exot. Ins.*, 2 : 85.

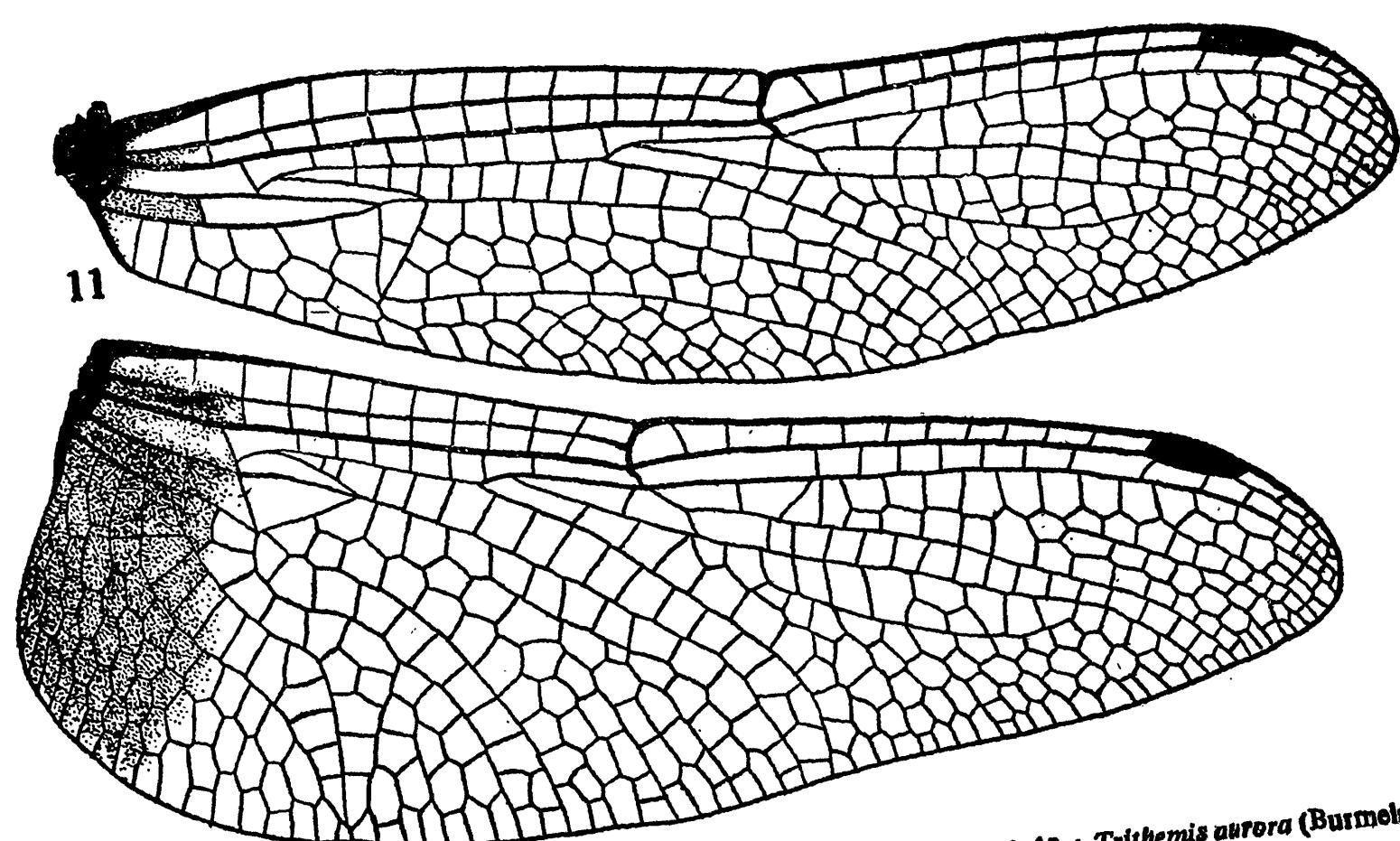
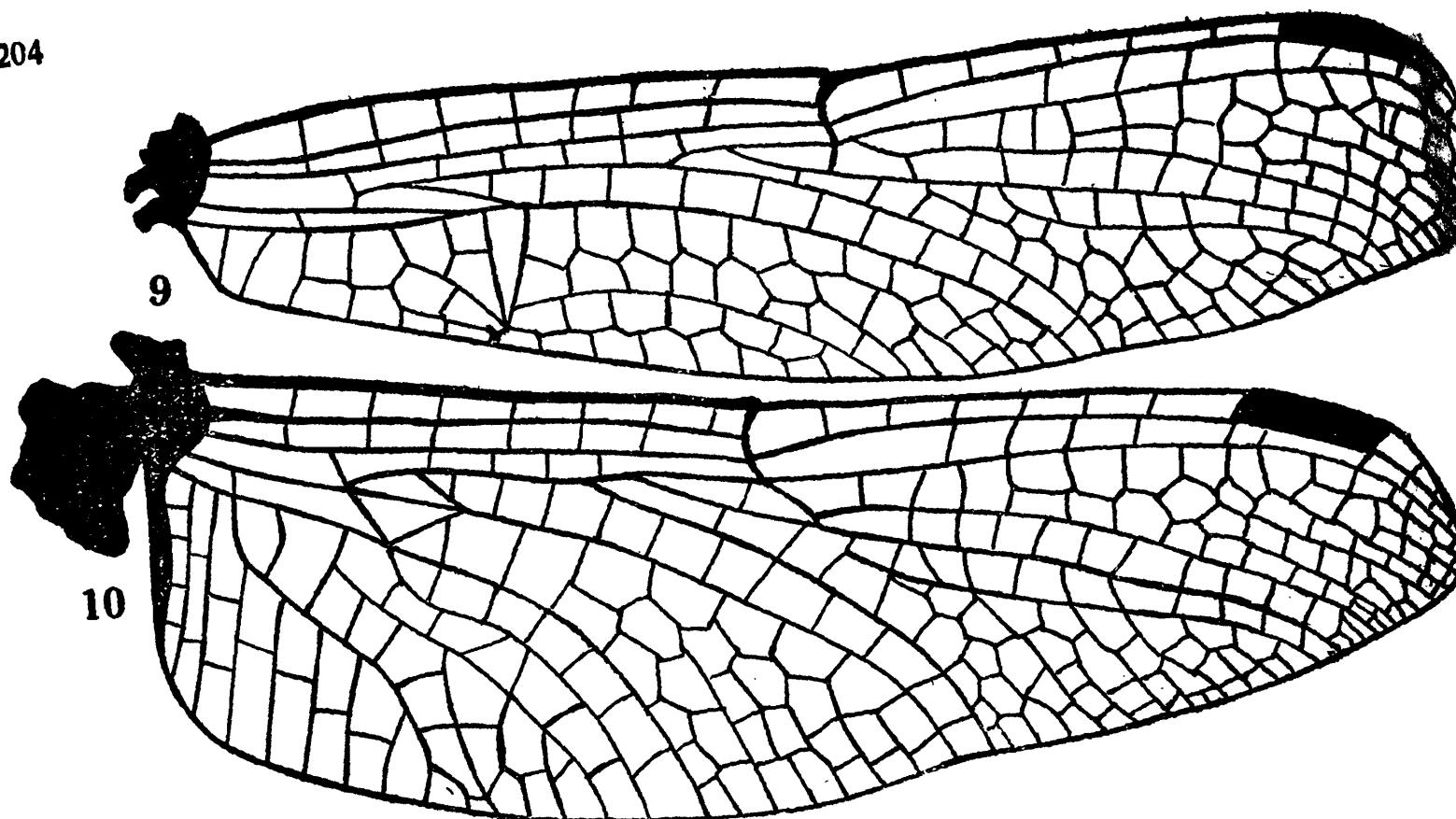
1936. *Neurothemis tullia tullia*, Fraser, *Fauna Brit. India Odon.*, 3 : 360-362.

**Material examined :** 1 ♂, Naibasti Konta, 25.11.1988, coll. M. Prasad.

#### Measurements :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<b>Male :</b>	19.50 mm	24.00 mm	23.00 mm

**Distribution :** India (Bihar, Eastern Himalaya, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal and West Coast), China, Thailand and West Malaysia.



Figs. 9 & 10 : *Brachydiplax sobrina* (Rambur)  
9. Forewing, 10. Hindwing

Figs. 11 & 12 : *Trithemis aurora* (Burmeister)  
11. Forewing, 12. Hindwing.

Genus : **Brachydiplax** Brauer**55. Brachydiplax sobrina** (Rambur)

(Figs. 9 &amp; 10)

1842. *Libellula sobrina* Rambur, *Ins. Neurop.*, : 114.1936. *Brachydiplax sobrina*, Fraser, *Fauna Brit. India Odon.*, 3 : 325-327.

*Material examined* : 1♂, Near Ganga Murd pond, Jagdalpur, 28.11.1988, coll. M. Prasad.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	19.50 mm	26.00 mm	25.00 mm

*Distribution* : India (Assam, Bihar, Himachal Pradesh, Karnataka, Tamil Nadu, Uttar Pradesh and West Bengal), Myanmar and Sri Lanka.

*Remarks* : Membrane brownish white, Pterostigma covers  $1\frac{1}{2}$  cells. Only one cubital nervure in both the wings, one row of cells in between IRiii & Rspl. Nodal index  

$$\begin{array}{c|cc} 6-7 & 7-6 \\ \hline 6-7 & 6-6 \end{array}.$$

Genus : **Trithemis** Brauer**56. Trithemis aurora** (Burmeister)

(Figs. 11 &amp; 12)

1839. *Libellula aurora* Burmeister, *Handb. Ent.*, 2 : 859.1936. *Trithemis aurora*, Fraser, *Fauna Brit. India Odon.*, 3 : 383-385.

*Material examined* : 1♀, Chirimor, Konta, 26.11.1988, coll. M. Prasad ; 1♀, Chitrakote, 14.12.1980, coll. M. S. Shishodia ; 1♀, Chitrakote, 27.11.1988, coll. M. Prasad ; 1♂, Dharmpura, 18.12.1978, coll. M. S. Shishodia ; 1♂, Dongaghat, Jagdalpur 12.12.1978, coll. M. S. Shishodia ; 1♂, 1♀, Gidam, 7.11.1979, coll. S. Ahmed ; 2♂♂, 2♀♀, Naibasti Konta, 25.11.1980, coll. M. Prasad ; 1♂, Narainpur, 3.12.1988, coll. Y. N. Gupta and 1♂, Nelasner, 29.12.1980, coll. M. S. Shishodia.

*Measurements :*

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i>	: 23·00 mm-24·00 mm	24·00 mm-25·50 mm	24·00 mm
<i>Female</i>	: 23·00 mm-26·00 mm	24·00 mm-27·00 mm	24·00 mm-26·50 mm

*Distribution* : India (Bihar, Eastern Himalaya, Gujarat, Himachal Pradesh, Karnataka, Maharashtra, Tamil Nadu, Uttar Pradesh and West Bengal), Indonesia, Myanmar, Nepal, Philippines, Sri Lanka and West Malaysia.

57. *Trithemis festiva* (Rambur)

1842. *Libellula festiva*, Rambur, *Ins. Nurop.*, : 92.

1936. *Trithemis festiva*, Fraser, *Fauna Brit. India Odon.*, 3 : 387-389.

*Material examined* : 1♂, Chitrakote, 14.12.1980, coll. M. S. Shishodia and 2♀♀, Chitrakote, 27.11.1988, coll. M. Prasad.

*Measurements :*

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i>	: 24·50 mm	28·00 mm	28·00 mm
<i>Female</i>	: 22·00 mm	27·00 mm	26·00 mm

*Distribution* : India (Assam, Bihar, Eastern Himalaya, Gujarat, Himachal Pradesh, Maharashtra, Meghalaya, Uttar Pradesh and West Bengal), Indonesia, Myanmar, Nepal, Papua, Philippines, Singapore, Sri Lanka, Taiwan and West Malaysia.

58. *Trithemis pallidinervis* (Kirby)

1889. *Sympetrum pallidinervis* Kirby, *Trans. Zool. Soc. Lond.*, : 327.

1936. *Trithemis pallidinervis*, Fraser, *Fauna Brit. India Odon.*, 3 : 389-391.

*Material examined* : 1♂, 1♀, Chirimor, Konta, 26.11.1988, coll. M. Prasad ; 16♂♂, 2♀♀, Dharmputra, 10.12.1978, coll. M. S. Shishodia ; 1♂, Naibasti, Konta, 25.11.1988, coll. M. Prasad ; 1♂, 2♀♀, Oldbasti Konta, 24.11.1988, coll. M. Prasad and 1♀, Sangi forest, Jagdalpur, 13.12.1978, coll. M. S. Shishodia.

*Measurements :*

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i>	: 27·00 mm-32·50 mm	30·00 mm-35·00 mm	30·00 mm-34·50 mm
<i>Female</i>	: 26·00 mm-29·00 mm	30·00 mm-34·00 mm	30·00 mm-34·00 mm

*Distribution* : Throughout India, Malaysia, Myanmar, Nepal, Philippines, Singapore, Sri Lanka, Thailand and Taiwan.

### 59. *Trithemis kirbyi kirbyi* Selys

1891. *Trithemis kirbyi* Selys, Ann. Mus. Civ. Genova, 30 : 465.

1936. *Trithemis kirbyi kirbyi*, Fraser, Fauna Brit. India Odon., 3 : 385-387.

*Material examined* : 1♂, Oldbasti Konta, 24.11.1988, coll. M. Prasad.

#### *Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	24.00 mm	27.50 mm	27.00 mm

*Distribution* : India (Himachal Pradesh, Karnataka, Maharashtra, Tamil Nadu and Uttar Pradesh) and Sri Lanka.

*Remarks* : Only one cubital nervure present in both the wings. Membrane dirty white, pterostigma covers  $1\frac{1}{2}$  cells. 2 rows of cells present in between IRiii and Rspl.

*Nodal index*  $\frac{8-11\frac{1}{2} | 9\frac{1}{2}-8}{12-7 | 7-10}$ .

### Genus : *Tholymis* Hagen

#### 60. *Tholymis tillarga* (Fabricius)

1798. *Libellula tillarga* Fabricius, Ent. Syst. Suppl., : 285.

1936. *Tholymis tillarga*, Fraser, Fauna Brit. India Odon., 3 : 411-413.

*Material examined* : 1♂, Narainpur, 31.12.1980, coll. M. S. Shishodia.

#### *Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	30.00 mm	34.50 mm	34.00 mm

*Distribution* : Throughout India, Australia, Indonesia, Malaysia (West), Micronesia, Myanmar, Sri Lanka, Thailand and Tropical Africa.

Genus : **Zyxomma** Rambur

**61. Zyxomma petiolatum** Rambur

1842. *Zyxomma petiolatum* Rambur, *Ins. Neurop.*, : 30.  
 1936. *Zyxomma petiolatum*, Fraser, *Fauna Brit. India Odon.*, 3 : 409-410.

*Distrilbution* : Occurs throughout India, Myanmar and Sri Lanka.

*Remarks* : It is a common species and was observed in evening nearby Oldkonta village during November, 1988, but could not be collected.

Genus : **Pantala** Hagen

**62. Pantala flavescens** (Fabricius)

1898. *Libellula flavescens* Fabricius, *Ent. Syst. Suppl.*, : 285.  
 1936. *Pantala flavescens*, Fraser, *Fauna Brit. India Odon.*, 3 : 414-416.

*Material examined* : 1♀, Keskal, 29.12.1978, coll. M. S. Shishodia and 1♂, Oldbasti, Konta, 24.11.1988, coll. M. Prasad.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	32·50 mm	42·00 mm	41·50 mm
<i>Female</i> :	32·00 mm	42·00 mm	41·00 mm

*Distribution* : Circumtropical and Subtropical in distribution.

Genus : **Rhyothemis** Hagen

**63. Rhyothemis variegata** variegata (Linnaeus)

1768. *Libellula variegata* Linnaeus, *Amoenitates Acad.*, 6 : 412.  
 1936. *Rhyothemis variegata variegata*, Fraser, *Fauna Brit. India Odon.*, 3 : 423-424.

*Material examined* : 1♂, Naibasti, Konta, 25.11.1988, coll. M. Prasad.

*Measurements* :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	24·50 mm	52·00 mm	32·00 mm

*Distribution* : India (Bihar, Himachal Pradesh, Karnataka, Orissa, Uttar Pradesh and West Bengal), Malaysia, Myanmar, Nepal and Sri Lanka.

*Remarks* : Membrane white, 2 rows of cells in between IRiii & Rspl. Nodal index  $\frac{11-9\frac{1}{2}}{12-7} | \frac{9\frac{1}{2}-13}{7\frac{1}{2}-13}$ .

### Genus : *Tramea* Hagen

#### 64. *Tramea basilaris burmeisteri* Kirby

1839. *Libellula chinensis* Burmeister, Hanb. Ent., 2 : 852.

1889. *Tramea burmeisteri*, Kirby, Trans. Zool. Soc. Lond., : 316.

1936. *Tramea basilaris burmeisteri*, Fraser, Fauna Brit. India Odon., 3 : 432-434.

*Material examined* : 2 ♂♂, 3 kms east of Kanker, 20.10.79, coll. S. Ahmed ; 1 ♂, Kanker, 20.10.1979, coll. S. Ahmed and 1 ♂, Oldbasti Konta, 24.11.1988, coll. M. Prasad.

#### Measurements :

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	32.00 mm-33.00 mm	42.00 mm-43.00 mm	41.00 mm-42.00 mm

*Distribution* : India (Bihar, Himachal Pradesh, Karnataka, Madhya Pradesh, Tamil Nadu, Uttar Pradesh and West Bengal) and Malaysia.

*Remarks* : Only one cubital nervure in both the wings. Brown markings present at the base of hindwings and extended up to whole of cubital space, 9th cells of Anal loop and 1st antenodal of subcosta, 2 rows of cells in between IRiii & Rspl. Nodal index

$\frac{8-12\frac{1}{2}}{12-7} | \frac{12\frac{1}{2}-9}{7-12}$ .

#### 65. *Tramea virginia* (Rambur)

1773. *Libellula chinensis* De Geer, Mem. Ins., 3 : 556.

1842. *Libellula virginia*, Rambur, Ins. Neurop., 33.

1936. *Tramea virginia*, Fraser, Fauna Brit. India Odon., 3 : 435-436.

*Material examined* : 2 ♂♂, Oldbasti Konta, 24.11.1988, coll. M. Prasad.

*Measurements :*

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	34.00 mm	43.00 mm	42.50 mm

*Distribution :* India (Bihar, Himachal Pradesh, Uttar Pradesh and West Bengal), China, Indonesia, Micronesia (Corolina), Myanmar, Taiwan, Thailand and South China.

*Remarks :* Dark brown marking present in the base of hindwings up to 1st antenodal nervure, half of cubital space, up to outer margin of discoidal cell ; Membrane brownish white, pterostigma brown and covers  $1\frac{1}{2}$  cell. Reticulation of the wings black, only one cubital nervure in both the wings. Discoidal cell divided twice in both pairs of wings. 2 rows of cells in between IRiii & Rspl. Nodal index  $\frac{10-12\frac{1}{2}}{14-7} \mid \frac{12\frac{1}{2}-11}{7-12}$ .

Genus : *Urothemis* Brauer66. *Urothemis signata signata* (Rambur)

1839. *Libellula sanguinea* Burmeister, Handb., Ent., 2 : 856.  
 1842. *Libellula signata*, Rambur, Ins. Neurop., : 117.  
 1936. *Urothemis signata signata*, Fraser, Fauna Brit. India, Odon., 3 : 442-444.

*Material examined :* 1♂, Dharampura, 10. 12. 1978, coll. M. S. Shishodia and 1♂, Oldbasti Konta, 24. 11. 1988, coll. M. Prasad.

*Measurements :*

	<i>Abdomen</i>	<i>Forewing</i>	<i>Hindwing</i>
<i>Male</i> :	29.00 mm	39.50 mm	39.00 mm

*Distribution :* India (Bihar, Karnataka, Maharashtra, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal), China, Malaysia, Myanmar and Sri Lanka.

*Remarks :* Only one cubital nervure in both the wings. Only one row of cells in between IRiii & Rspl. Pterostigma covers more than a cell.

## SUMMARY

Sixty six species and subspecies of Odonata under 38 genera and 10 families are reported from Bastar district, Madhya Pradesh, India. Fifty four species and subspecies

are recorded for the first time from Bastar. Some field notes and variations observed are given. Key to genera, species and subspecies have been provided. Distribution in India, as well as the entire geographical range of occurrence of all species are shown.

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