

CONTRIBUTION TO THE ODONATE (INSECTA) FAUNA
OF THE ANDAMAN AND NICOBAR ISLANDS WITH
DESCRIPTION OF TWO NEW SPECIES

By

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(With 7 Text-figures)

INTRODUCTION

The first mention of an odonate species from the Andaman and Nicobar islands can be traced back in literature to Selys (1853) where the author described the damselfly *Libellago lineata blanda* from the Nicobar islands. Two more species, e. g. *Copera vittata serapica* Hagen and *Epophthalmia vittata* (Burmeister) were subsequently reported from these islands, by Selys in 1863 and 1875. In recent times, Fraser (1924) reported another 11 dragon- and damselflies from these islands including some new to science. These were later reported by Fraser in his Fauna of British India publication (1933-1936).

This study is based on odonate collections obtained during several surveys conducted by the Zoological Survey of India over a number of years.

Lahiri (1975) in his brief analysis of the odonate faunal composition of the South Andaman islands, referred to a detailed account of the same to the present contribution, as it was then, in the Mss. stage. Upon further critical analysis of the available material, a little change of the findings have been incorporated now.

In the present paper 21 new records of odonate species and subspecies, including two new to science have been reported which brings it to a total of 34 odonate species and subspecies known till date from this area. *Libellago andamanensis* (Fraser) has been considered here as a subspecies of *L. lineata* (Burmeister). Hitherto unknown females of two subspecies, e. g. *Libellago lineata andamanensis* (Fraser) and *Prodasineura verticalis andamanensis* (Fraser) have been described by comparing with the males. Measurements, Nodal index, necessary collection data, and a running key for all the species studied have been provided in the text along with taxonomic notes for some of them.

The types have been deposited in the National Zoological Collection.

*List of odonate species and subspecies known from the Andaman and Nicobar islands. (*indicates that the species or subspecies is present in the collections studied)¹*

Family : CHLOROCYPHIDAE

- *1. *Libellago lineata andamanensis* (Fraser)
- 2. *L. l. blanda* (Selys)

Family : CALOPTERYGIDAE

- *3. *Vestalis gracilis gracilis* (Rambur)

Family : LESTIDAE

- *4. *Lestes malabarica* Fraser
- 5. *L. praemorsa praemorsa* Selys

Family : PLATYSTICTIDAE

- *6. *Drepanosticta annandalei* Fraser

Family : PROTONEURIDAE

- *7. *Prodasineura verticalis andamanensis* (Fraser)

Family : PLATYCNEMIDIDAE

- *8. *Copera marginipes* (Rambur)
- 9. *Copera vittata serapica* Hagen

Family : COENAGRIONIDAE

- *10. *Pseudagrion andamanicum* Fraser
- *11. *Ceriagrion olivaceum auranticum* Fraser
- *12. *C. cerinorubellum* (Brauer)
- *13. *Ischnura senegalensis* (Rambur)
- *14. *Agriocnemis femina oryzae* Lieftinck
- *15. *Agriocnemis pygmaea* (Rambur)

Family : GOMPHIDAE

- *16. *Gomphidia ganeshi* sp. nov.

*1. Fraser (1924) also mentioned about some specimens from the Andaman islands belonging to the genus *Libellago* Selys in British Museum collection, determined as *Micromerus lineatus* Burmeister variety by R. Martin. These are excluded from the list below on account of their uncertain subspecific status.

Family : AESHNIDAE

- *17. *Oligoaeschna andamani* sp. nov.

Family : LIBELLULIDAE

18. *Epophthalmia vittata vittata* Burmeister
 19. *Agrionoptera insignis insignis* (Rambur)
 *20. *Lathrecista asiatica asiatica* (Fabricius)
 *21. *Nesoxenia lineata* (Selys)
 *22. *Potamarcha congener* (Rambur)
 *23. *Orthetrum chrysis* (Selys)
 24. *O. pruinatum neglectum* (Rambur)
 *25. *O. s. sabina* (Drury)
 *26. *Crocothemis servilia servilia* (Drury)
 *27. *Diplacodes trivialis* (Rambur)
 *28. *Tholymis tillarga* (Fabricius)
 (Spellius should be = Trithemis)
 *29. *Trithemis aurora* (Burmeister)
 *30. *T. festiva* (Rambur)
 31. *T. pallidinervis* (Kirby)
 32. *Neurothemis fluctuans* (Fabricius)
 33. *Neurothemis intermedia intermedia* (Rambur)
 34. *Pantala flavescens* Fabricius

Collections studied and the collecting localities

(Table 1)

Four collections present in the Zoological Survey of India were studied, as follows :

1. A small collection by Col. R. B. S. Sewell, July—September, 1928 from South Andamans.
2. A large collection by Dr. B. S. Lamba, February — April, 1964 from the South Andamans.
3. A small collection by Dr. A Daniel and Dr. H. K. Bhowmik, March, 1966 from Great Nicobar.
4. A small collection by Dr. T. D. Soota, March — May 1969, from North and South Andamans and Car Nicobar.

Collecting localities

Collections were made from 26 different localities in the Andamans & Nicobars (Table 1) and are summarized below :

North Andamans	— 4
South Andamans	— 21
Car Nicobar	— 1
Great Nicobar	— 4

SYSTEMATIC ACCOUNT

KEY TO THE FAMILIES OF THE ORDER ODONATA

1. Eyes separated by a space wider than their own diameter ; males with paired inferior anal appendages ; wings identical in shape and never dilated at base. ... (Suborder ZYGOPTERA) 2
- Eyes contiguous, or separated by a space not wider than their own diameter ; males with single inferior anal appendage ; fore- and hind wings differing in shape, the latter generally dilated at base. ... (Suborder ANISOPTERA) 8
2. 5 or more antenodal cross veins present ; arc situated nearer base of wing than node. ... (Superfamily CALOPTERYGOIDEA) 3
- Only 2 antenodal cross veins present ; arc situated midway between base of wing and node. ... 4
3. Epistome normal, not projecting ; wings non-petiolated or petiolation extending far proximal to the level of arc. ... CALOPTERYGIDAE [*Vestalis gracilis gracilis* (Rambur)]
- Epistome tumid and markedly projecting ; wings petiolated, petiolation extending opposite to, or slightly proximal to the level of arc. ... CHLOROCYPHIDAE [*Libellago lineata andamanensis* (Fraser)]
4. Male genital hamules elongated ; a variable number of intercalated sectors present at apical end of wing. ... (Superfamily LESTIDOIDEA)
Family LESTIDAE (*Lestes ? malabarica* Fraser)
- Male genital hamules quadrate ; intercalated sectors absent at apical end of wing. ... (Superfamily COENAGRIONOIDEA) 5
5. IA absent ; Cu₂ markedly reduced. ... PLATYSTICTIDAE (*Drepanosticta ? annandalei* Fraser)
- IA present ; Cu₂ variable. ... 6

6. Discoidal cell in hindwing with costal margin less than three fourths as long as the inner margin. ... COENAGRIONIDAE
- Discoidal cell in hindwing with costal margin more than three fourths as long as the inner margin. ... 7
7. Discoidal cell with costal margin one fifth shorter than the inner margin. ... PLATYCNEMIDIDAE [(*Copera marginipes* (Rambur)]
- Discoidal cell with costal margin subequal to the inner margin. ... PROTONEURIDAE [*Prodasineura verticalis andamanensis* (Fraser)]
8. Costal and subcostal antenodal cross veins coinciding ; primary antenodals not distinguishable. ... (Superfamily LIBELLULOIDEA)
LIBELLULIDAE
- Costal and subcostal antenodal cross veins not coinciding. ... (Superfamily Aeshnoidea) 9
9. Eyes separated on vertex ; discoidal cell of hindwing more transversely elongated than that of forewing. ... GOMPHIDAE (*Gomphidia ganeshi* sp. nov.)
- Eyes confluent on vertex ; discoidal cell of hindwing transversely as long as that of forewing. ... AESHNIDAE (*Oligoaeschna andamani* sp. nov.)

Family CHLOROCYPHIDAE

Genus *Libellago* Selys

1. *Libellago lineata andamanensis* (Fraser)

1924. *Micromerus andamanensis* Fraser, (F. C.) *Rec. Indian Mus.*, 26 : 410.

1934. *Libellago andamanensis* Fraser, F. C., *Fauna British India, Odonata*, 2 : 66.

Material : 12 exs coll. B. S. Lamba 26 iii. '64 to 18. iv. '64 as follows : Mannar Ghat, Wright Myo (6 ♂♂, 2 ♀♀), Shoal Bay (1 ♂) ; Wrafters Creek (1 ♂), Cowriaghat (1 ♀) ; Burma nulla (1 ♀).

Description : Female : Differs from male as follows : bases of mandibles greenish yellow and a linear stripe of same colour running obliquely across cheeks and genae to frons ; labrum marked with oval greenish yellow spot on either side ; epistome on lateral edges of anterior surface bordered greenish yellow and marked with two spots of same colour on either side, *viz.* an upper large oval and a lower small triangular one ; bases of antennae, a triangular elongated spot against each eye at the level of antennae followed by two pairs of spots of which the anterior pair are small and rounded and the hinder pair transversely oval and a bit larger, are present in addition to those in male, all

greenish yellow ; spots against lateral ocelli pear shaped. Prothorax with following yellowish markings : a linear crown shaped spot on anterior lobe ; a small mid-dorsal and two large lateral pear shaped spots on posterior lobe. Legs with flexor surfaces of all femora mostly creamy white. Wings enfumed with pale brown which is more pronounced in distal half ; pterostigma medially yellowish in hindwing. Abdomen with following greenish yellow markings : segment 1 with a large triangular spot on dorsum at apex ; segments 2 to 5 with basal and apical triangular spots with a narrow stripe (sometimes absent) in between ; segment 7 with a lateral stripe which is pointed at apex ; segments 8 and 9 with subapical lateral spots ; mid-dorsal carina finely yellow throughout but variably obscured in adults.

Measurements (in mm) : ♂ (8 exs) and ♀ (4 exs) respectively ; length of abdomen 14.5-15.5, 13.0-14.0 ; length of forewing 19.0-20.5, 20.5-21.0 ; length of hindwing 18.5-20.0, 20.0-21.0 ; number of antenodal veins : forewing 5-7, 6 ; hindwing 5-7, 5-6 ; number of postnodal veins : forewing 11-13 (♀) ; hindwing 12-15, 11-13.

Remarks : The males under study vary from the description of *L. andamanensis* provided by Fraser (1934) in the following points : labium broadly marked with yellow in tenerals ; in adults, epistome black, unmarked ; prothorax with following yellow markings : a linear mid-dorsal spot on anterior lobe, two sub-dorsal oval ones on middle lobe, a mid-dorsal droplet shaped and two lateral oval ones on posterior lobe ; an upper humeral and a few scattered spots beneath synthorax present, besides those mentioned by the author ; legs with flexor surfaces of all tibiae and those of anterior femora pruinose pulverulent white ; basal golden tinge on wings more pronounced in costal areas and extending nearly up to nodus in forewing ; apical opaque area obliquely receded posteriorly being *ca* 3.25 mm in extent medially ; abdomen greenish yellow on proximal segments ; segment 1 completely black on dorsum ; on segment 2, dorsal and lower lateral stripes confluent at base and apex.

The female, unknown so far, has been described above showing its difference from the male.

While abdominal markings leave no doubt on their identity, the specimens under study exhibit a closer similarity with *Libellago lineata* (Burmeister) than *andamanensis* in respect of markings on frons and fore femora, while a complete range between the two forms are noticed in respect of wing markings, number of antenodal cross-veins and length of abdomen. It seems most reasonable therefore that *andamanensis* Fraser is nothing but a distinct form of *lineata*

(Burmeister) characterised by having a larger size (specially hindwing) and dark abdominal markings. So, *andamanensis* has been treated here as a subspecies of *L. lineata* (Burmeister).

Distribution : South Andamans (present and past record).

Family CALOPTERYGIDAE

Genus *Vestalis* Selys

2. *Vestalis gracilis gracilis* (Rambur)

1842. *Calopteryx gracilis* Rambur, M. P., *Hist. Nat. Ins., Névropteres*, : 224.

1934. *Vestalis gracilis gracilis*, Fraser, F. C., *Fauna Brit. India, Odonata* 2 : 126.

Material : 26 exs coll. B. S. Lamba, 5. iii. '64 to 29. iv. '64 as follows : Mannar Ghat, Wright Myo (9 ♂♂, 7 ♀♀) ; cowriaghat (1 ♂, 3 ♀♀) ; Shoal Bay (1 ♂) ; Jaarva Gusk (1 ♂) ; Wrafters Creek (1 ♀) ; Mamyo Chhelder (1 ♀) ; Humphrygunj (2 ♀♀) ; 1 ex (♂) coll. T. D. Soota, S. Kalighat, 28. iii. '64.

Measurements (in mm.) : ♂ (7 exs) and ♀ (12 exs) respectively; length of abdomen 47.0-52.0, 45.0-47.0 ; length of forewing 37.0-39.5, 37.0-40.0 ; length of hindwing 35.0-37.0, 36.0-39.0 ; number of antenodal veins : forewing 23-32, 24-28 ; hindwing 25-28, 22-26; number of postnodal veins : forewing 69-78, 56-69 ; hindwing 59-67, 52-60.

Remarks : This is the first record of this species from the Andamans. The male specimens have a few more postnodal veins as compared to the number given by Fraser (1934).

Distribution : South Andamans (present record) Earlier known from various parts of INDIA, BURMA, VIETNAM and MALAYSIA.

Family LESTIDAE

Genus *Lestes* Leach

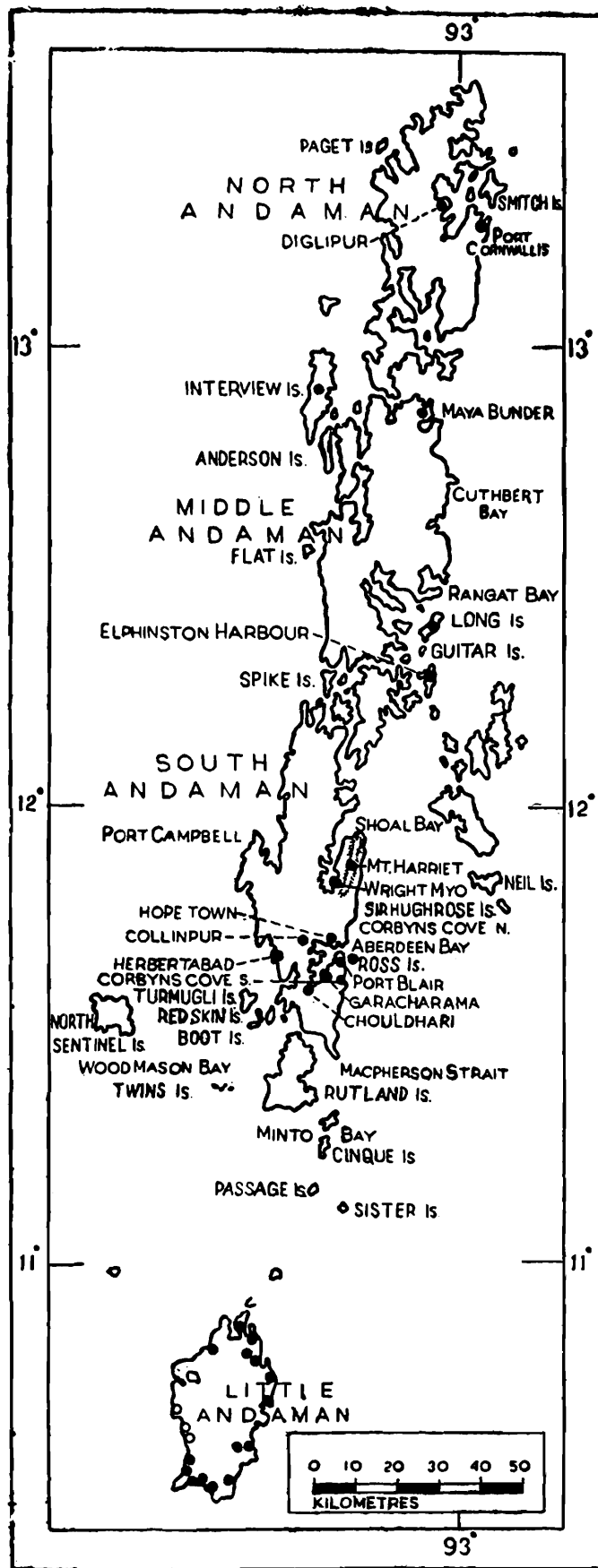
3. *Lestes ? malabarica* Fraser

1929. *Lestes malabarica* Fraser, F. C., *J. Bombay nat Hist. Soc.*, 33 : 848.

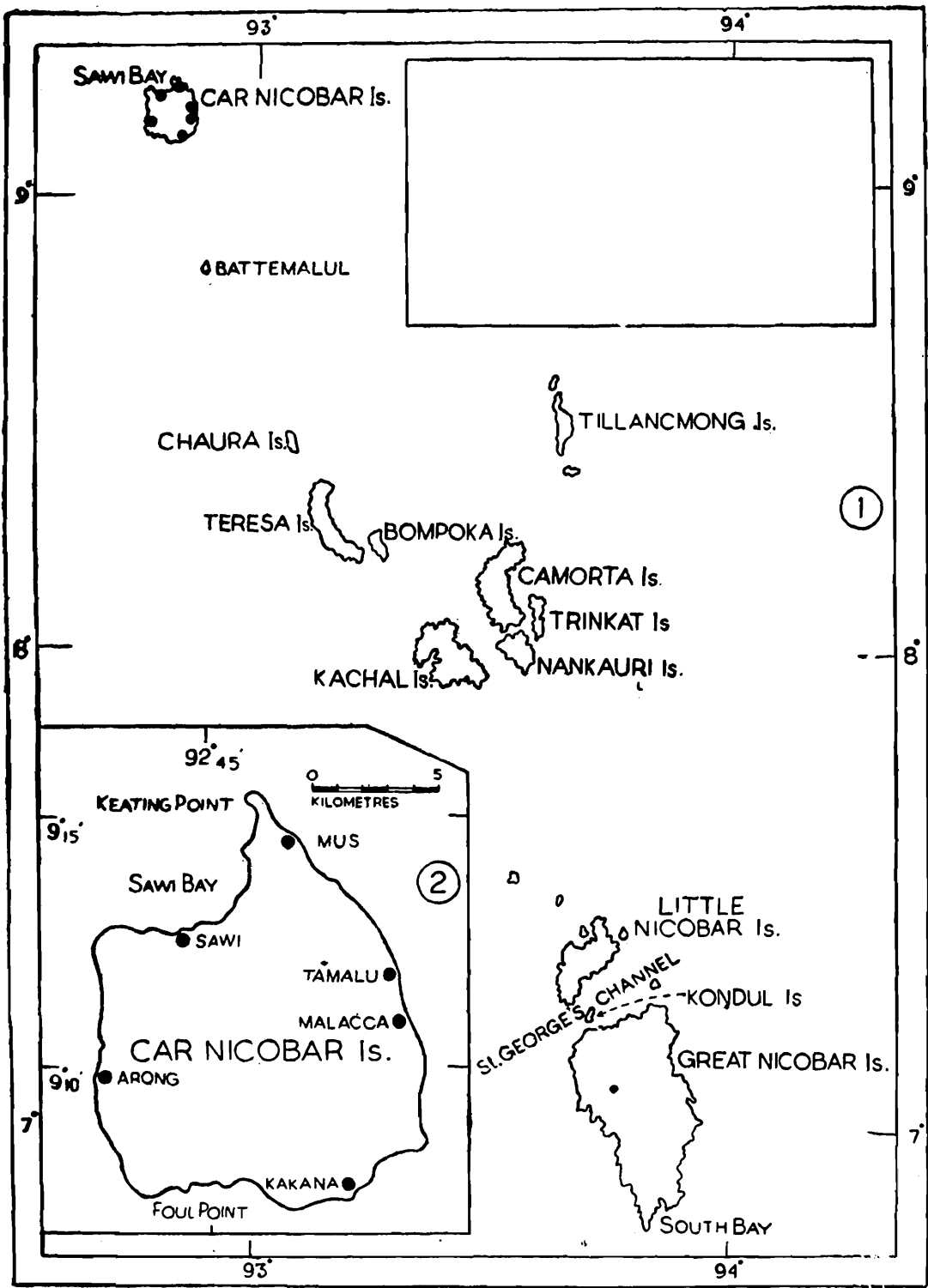
Material : 1 ex (♂), Viper Island, Coll. R. B. S. Sewell, 28. viii. '28.

Measurements (in mm) : ♂ (1 ex) ; length of forewing 21.0 ; length of hindwing 20.0 number of postnodal veins : forewing 11-12 ; hindwing 12.

Remarks : The single specimen available for study is damaged but from the markings of the body parts present, wing venation and measurements, it seems most likely to be *malabarica* Fraser. So, it has been doubtfully identified as such.



Map of Andaman Islands



Map of Nicobar Islands

Distribution : South Andamans (present record). It is also known from Cochin and South Malabar, and peninsular India.

Family PLATYSTICTIDAE

Genus *Drepanosticta* Laidlaw

4. *Drepanosticta* ? *annandalei* Fraser

(Text-figs. 1 & 2)

1924. *Drepanosticta annandalei* Fraser, F. C., *Rec. Indian Mus.*, 26 : 412.

Material : 2 exs as follows : 1 ♀, Hope town, Poni Ghat, coll. R. B. S. Sewell, 27. viii. '28 ; 1 ♀, Mannar Ghat Wright Myo, coll. B. S. Lamba, 26. iii. '64.

Measurements (in mm) : ♀ (2 exs) ; length of abdomen 33.0-35.0 ; length of forewing 24.0 ; length of hindwing 23.0-23.5 ; number of postnodal veins : forewing 15-17, hindwing 14-17.

Remarks : These specimens have been identified as *D. annandalei* Fraser with a little hesitation, since there were no associated males and for two other factors, namely (i) much longer abdomen than stated for *annandalei* (25 mm) by Fraser (1933) and (ii) Ab arising from posterior wing margin at the point where Ac meets it in one of the specimens under study or from a short common stalk in the other specimen, while Fraser stated that in *annandalei* Ab arises from posterior wing border a little distal to Ac. However, considering the fact that Fraser (1924) described *annandalei* from two males and a single teneral female, the difference in abdominal length could perhaps be treated as a normal variation and on that basis these may be treated as topotypes.

Distribution : South Andamans only (previous and present record).

Family PROTONEURIDAE

Genus *Prodasineura* Cowley

5. *Prodasineura verticalis andamanensis* (Fraser)

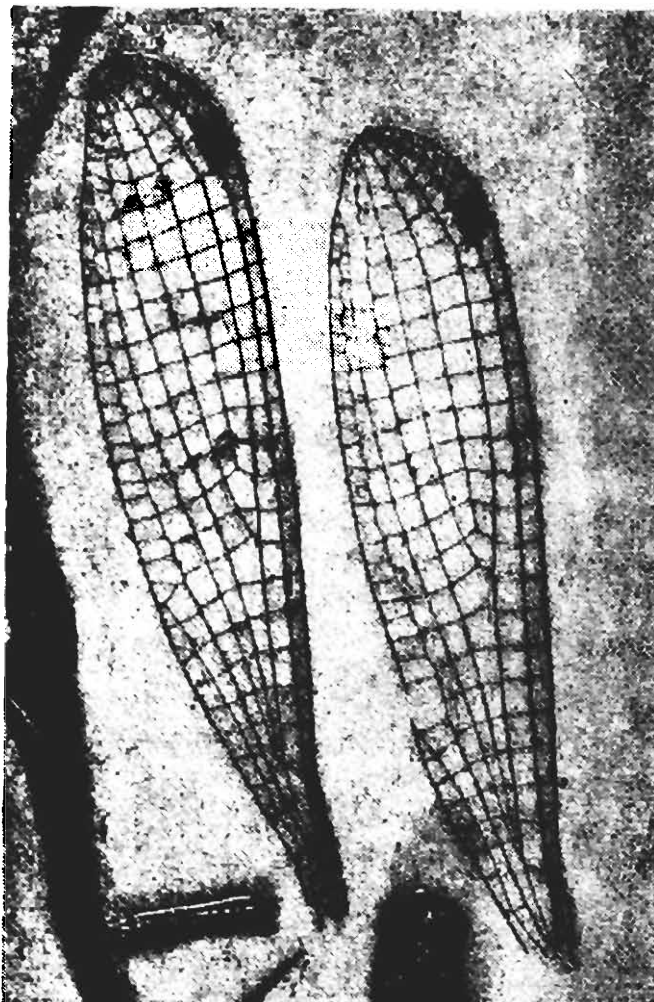
1924. *Caconeura verticalis* Fraser, F. C., *Rec. Indian Mus.*, 26 : 412.

1933. *Caconeura verticalis andamanensis* Fraser, F. C., *Fauna Brit. India, Odonata*, 1 : 218.

Material : 3 exs (2 ♂♂, 1 ♀), Mannar Ghat, Wright Myo, coll. B. S. Lamba, 26. iii. '64.

Measurements (in mm) : ♂ (2 exs) and ♀ (1 ex) respectively ; length of abdomen 29.0, 33.0 ; length of forewing 21.0-21.5, 22.0 ; length of hindwing 19.5-20.0, 20.5 ; number of postnodal veins : forewing 15-17, 16-17 ; hindwing 13-14, 15-16.

Remarks : Fraser (1924) described this subspecies from South Andamans from males only, citing differences from the nominate species. The males under study exhibit the following differences from *C. v. verticalis* Selys, besides those mentioned by Fraser (1924, 1933) : the



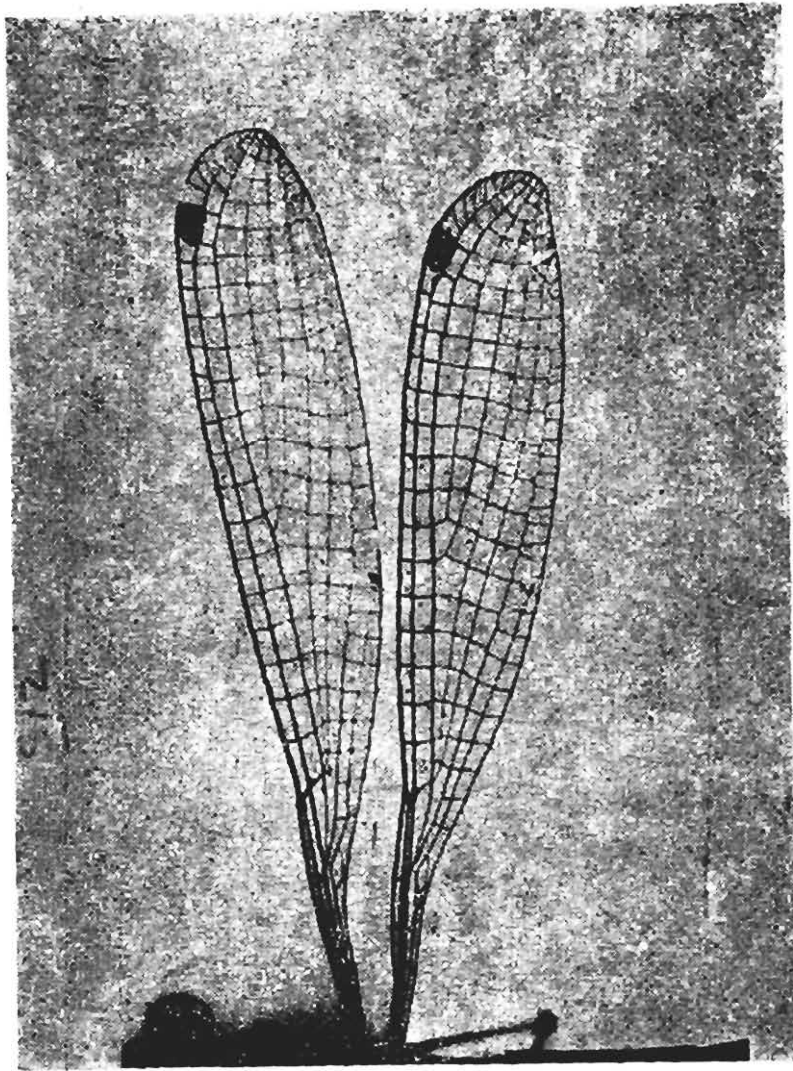
Text-fig. 1. *Drepanosticta? annandalei* Fraser, forewings (♂).

antehumeral stripes on synthorax fall well short of antearlar sinus above. Dorsum of segment 2 as well as entire abdomen beyond this segment without markings. Pterostigma margined with yellow, a little more broadened distally and covering about $1\frac{1}{2}$ cells. Cu_2 covering $3\frac{1}{2}$ –4 and $5\frac{1}{2}$ cells in fore- and hindwing respectively.

The hitherto unknown female of this subspecies is reported here for the first time. The single specimen available for study differs from the female of the nominate species as described by Fraser (1933) in the markings of abdomen and that of thorax on ventral surface, as follows :

Thorax black beneath with a moderately large yellow spot at centre. Abdomen black beneath but marked with pale green as follows : segments 1-5 with broad ventrolateral stripe ; segments 2-6 finely marked

along mid-dorsal carina ; segments 3-6 with baso-lateral suboval spots. Ovipositor robust extending to end of abdomen. Cu_2 covering $3\frac{1}{2}$ -4



Text-fig. 2, *Drepanosticta? annandalei* Fraser, hindwings (δ).

and 5 cells in fore- and hindwings respectively ; pterostigma as described for male above.

Distribution : South Andamans only (present and past record).

Family PLATYCNEMIDIDAE

Genus *Copera* Kirby

6. *Copera marginipes* (Rambur)

1842. *Platycnemis marginipes* Rambur, M. P., *Hist. Nat. Ins. Ne'vroptères*, : 240.

1933. *Copera marginipes*, Fraser, F. C., *Fauna Brit. India, Odonata*, 1 : 192.

Material : 50 exs, coll B. S. Lamba, March — April '64 as follows : Cowriaghat (7 $\delta\delta$, 5 ♀♀) ; Katan, Baratang (5 $\delta\delta$) ; Mannar Ghat, Wright Myo (2 $\delta\delta$, 1 ♀) ; Rajat Gar (3 $\delta\delta$, 1 ♀) ; Shoal Bay (2 $\delta\delta$) ; Wrafters Creek (20 $\delta\delta$, 4 ♀♀).

Measurements (in mm.) ♂ (30 exs) and ♀ (7 exs) respectively; length of abdomen 30.0-32.0, 26.0-30.0 ; length of forewing 17.0-19.0, 20.0-21.5 ; length of hindwing 16.5-18.5, 19.0-20.0 ; number of postnodal veins : forewing 11-14, 12-14 ; hindwing 9-10, 9-11.

Remarks : This is the first record of this species from South Andamans. The specimens under study agree with the Indian West Coast forms described by Fraser (1933). However, the male superior anal appendages look obtusely triangular when viewed from dorsum, while the apex of the organ strongly bent inwards is visible only at a dorsolateral angle.

Distribution : South Andamans (present record). It is a well distributed species ranging from SRI LANKA and INDIA to MALAYSIA in the east.

Family COENAGRIONIDAE

KEY TO THE GENERA OF THE FAMILY COENAGRIONIDAE

- | | |
|--|---|
| 1. Arc situated distal to the level of the distal antenodal nervure. ... | Agriocnemis Selys |
| — Arc situated at the level of the distal antenodal nervure. ... | ... 2 |
| 2. Ab arising from a point well proximal to Ac. ... | Ischnura Charpentier. [<i>I. senegalensis</i> (Rambur)] |
| — Ab arising from a point at, or slightly proximal to Ac. ... | ... 3 |
| 3. Frons with a prominent ridge. ... | Ceriagrion Selys |
| — Frons without a ridge as above. ... | Pseudagrion Selys (<i>P. ? andamanicum</i> Fraser) |

Genus **Pseudagrion** Selys

7. **Pseudagrion ? andamanicum** Fraser

1924. *Pseudagrion andamanicum* Fraser, F. C. Rec. Indian Mus., 26 : 411.

Material : 2 exs (1 ♂, 1 ♀), Viper island, coll. R. B. S. Sewell, 28. viii. '28.

Measurements (in mm) : ♂ (1 ex) and ♀ (1 ex) respectively ; length of forewing 18.0, 20.0 ; length of hindwing 17.0, 19.0, number of postnodal veins : forewing 11 and hindwing 9 (either sex).

Remarks : Both specimens available for study have the terminal abdominal segments missing, but from the markings on the remaining body parts, wing venation and measurements, they seem most likely to be *andamanicum* Fraser.

Distribution : South Andamans only.

Genus **Ceriagrion** SelysKEY TO THE SPECIES OF THE GENUS **Ceriagrion** Selys

1. Abdomen bright red at base and anal ends,
black on dorsum in between. ... *cerinorubellum* Brauer
- Abdomen uniformly reddish brown on dorsum.
... *olivaceum auranticum* Fraser

8. **Ceriagrion cerinorubellum** (Brauer)

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

1933. *Ceriagrion cerinorubellum*, Fraser, F. C., *Fauna Brit. India, Odonata*, **1** : 326.

Material : 1 ♂, Viper island, coll. R. B. S. Sewell, 28. viii. '28.

Measurements (in mm) : ♂ (1 ex) ; length of abdomen 32.5 ; length of forewing 20.5 ; length of hindwing 19.5 ; number of postnodal veins : Forewing 12, hindwing 10.

Remarks : This is the first record of this species from the Andamans. It is evidently on account of postmortem changes that the male specimen under study has its thorax mostly brownish instead of green, the colour stated in the description of the species provided by Fraser (1933).

Distribution : South Andamans (present record) this species is also known from various parts of the Indian subcontinent, SRI LANKA, BURMA and MALAYSIA.

9. **Ceriagrion olivaceum auranticum** Fraser

1923. *Ceriagrion auranticum* Fraser, F. C., *J. Bombay nat. Hist. Soc.*, **29** : 748.

1967. *Ceriagrion olivaceum auranticum*, Asahina, S., *Jap. J. Zool.* **15** (3) : 307.

Material : 1 ex (♀), Car Nicobar, Tutop, coll. T. D. Soota, 12. v. '69.

Measurements (in mm) : ♀ (1ex) ; length of abdomen 32.0 ; length of forewing 23.0 ; length of hindwing 22.0 ; number of postnodal veins : forewing 11-13 ; hindwing 10.

Remarks : This is the first record of this species from South Andamans.

Distribution : South Andamans (present record). This subspecies is also known from Nilgiri Wynaad and Western Ghats, Southern India.

Genus *Ischnura* Charpentier

10. *Ischnura senegalensis* (Rambur)

1850. *Agrion senegalensis* Rambur, M. P., *Hist. Nat. Ins. Neuropteres*, : 276.

1983. *Ischnura senegalensis*, Fraser, F. C., *Fauna Brit. India, Odonata*, 1 : 348.

Material : 1 ♂, Port Blair, coll. T. D. Soota, 28. iii. 1969.

Measurements (in mm) ♂ (1 ex) : length of abdomen 25.0 ; length of forewing 15.5 ; length of hindwing 15.0 ; number of postnodal veins ; forewing 7-8 ; hindwing 6.

Remark : This is the first record of this species from the South Andamans.

Distribution : South Andamans (present record). It is a widely distributed species throughout the tropics of the Old-World except Australia.

Genus *Agriocnemis* Selys

KEY TO THE SPECIES OF THE GENUS *Agriocnemis* Selys (Males)

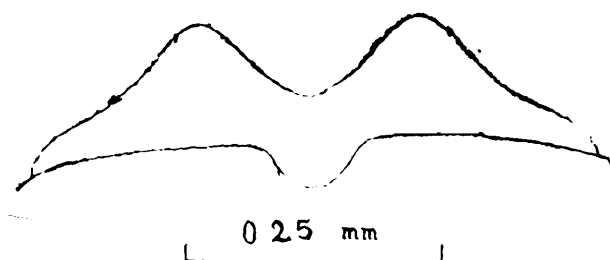
- 1. Inferior anal appendage longer than superior. ... *femina* group
- Inferior anal appendage shorter than superior. ... *pygmaea* (Rambur)

11. *Agriocnemis femina oryzae* Lieftinck

(Text-fig. 3)

1962. *Agriocnemis femina oryzae* Lieftinck, M. A., *Insects of Micronesia*, 5 (1) : 44.

Material : 36 exs ; 2 exs, coll. R. B. S. Sewell as follows ; 1 ♂, Hope town, Poni Ghat, 27. viii. '28 ; 1 ♂, Denni point 3. ix. '28 ; 1 ex (♂),



Text-fig. 3. *Agriocnemis femina oryzae* Lieftinck, Posterior lobe of prothorax (♀).

Mannar Ghat, Wright Myo, coll. B. S. Lamba, 25. iii. '64 ; 33 exs (21 ♂♂, 12 ♀♀), Bibliaganj, Port Blair and Wright Myo, coll. T. D. Soota, March-April '69.

Measurements (in mm) ♂ (23 exs) and ♀ (12 exs) respectively : length of abdomen 17.0-17.5, 17.5-20.0 ; length of forewing 9.5-11.0, 11.0-11.5 ; length of hindwing 9.0-10.5, 10.5-11.5, number of postnodal veins : forewing 6-7, 7-8 ; hindwing 4-5, 5-7.

Remarks : This is the first record of this species from South Andamans. The specimens under study agree with *A. f. oryzae* Lieftinck in general and specially in respect of the structure of male anal appendages, but vary a little in size and rather markedly so in respect of the shape of female prothorax.

Distribution : South Andamans (present record). It is also known from Ryukyu Is., Borodino Is., CHINA and TAIWAN.

12. *Agriocnemis pygmaea* (Rambur)

1842. *Agrion pygmaeum* Rambur, M. P., *Hist. nat. Ins. Ne'vrop'te' res.*, : 278.

1933. *Agriocnemis pygmaea*, Fraser, F. C., *Fauna British India., Odonata*, 1 : 398.

Material : 6 ♂♂, Great Nicobar, coll. A. Daniel and H. K. Bhowmik as follows : 1 ex., Campbell Bay, 13. iii. '66, 5 exs., Phulbaha, 26. iii. '66.

Measurements (in mm) : ♂ (6 exs) ; length of abdomen 17.0 ; length of forewing 11.0 ; length of hindwing 10.0 ; number of postnodal veins : forewing 6-7, hindwing 5-6.

Remark : This is the first record of this species from Great Nicobar.

Distribution : Great Nicobar (present record) ; it is a well distributed species ranging from Seychelles across entire oriental region to Australia and the Pacific islands in the east.

Family GOMPHIDAE

Genus *Gomphidia* Selys

13. *Gomphidia ganeshi* sp. nov.*

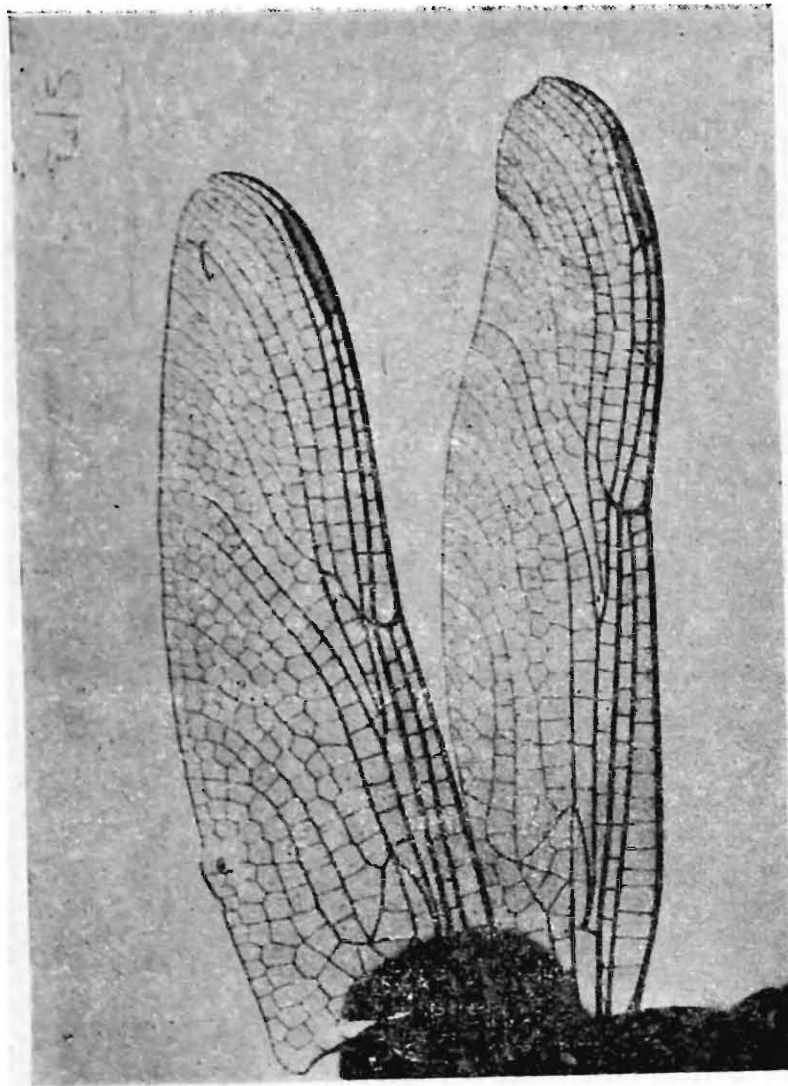
(Text-fig. 4)

Material : *Holotype* ♂, Rajatgarh, B. S. Lamba, 22. iii. '64. Reg. No. 5149/H8.

Description : Male (adult) Head blackish brown marked as follows : a faint yellowish rounded spot on either side of labrum ; anteclypeus and two large oval spots on frons yellow, these latter covering the crest but for its middle, reaching almost the base of sulcus and the

*The species has been named after the name of Lord Ganesh of Hindu Mythology.

lateral margins on either side of frons. The lateral ocelli guarded behind by a prominent ridge raised on either end into a pyramidal eminence and thickly beset with long fine hairs. Occiput trapezoidal, hind margin declined sharply downwards.



Text-fig. 4. *Gomphidia ganeshi* sp. nov., fore- and hindwings (holotype ♂).

Thorax blackish brown marked with yellow as follows :—a moderately broad mesothoracic collar slightly interrupted in middle ; oblong oval antehumeral stripes, reaching antealar sinus above, but falling far short of mesothoracic collar below ; two lateral stripes, of which the first running just above the spiracle but falling short of the ventral margin and the other covering most part of the metepimeron but for its ventral margin ; an obscure upper rounded spot in between the lateral stripes. Legs blackish brown, the femora yellow on inner surfaces.

Abdomen blackish brown marked with yellow as follows : Segment 1 with a broad mid-dorsal stripe falling short of the apex of the segment ;

segment 2 with a triangular mid-dorsal spot at base ; segment 7 yellow upto the jugal suture except at ventral margin ; segment 8 with an incomplete narrow ring at base ; segments 4 to 6 beset with closely set small spicules in dorsal halves ; lateral margins of segment 8 slightly dilated.

Anal appendages blackish brown ; superiors widely separated and cylindrical at base, broken shortly thereafter ; the base suggests the organs to have initially been much longer than segment 10 of abdomen and of the shape as for genus ; inferior much shorter than segment 10 and deeply bifid, the branches rapidly narrowing to pointed apex directed upwards.

Genitalia : Lamina arched ; anterior hamules narrow, posterior hamules broadly triangular and directed backwards, lobe scoop shaped.

Wings hyaline ; anal triangle 4 to 5 celled ; primary antenodals the 1st and 7th in forewing, the 1st and 5th or 6th in hindwing ; hypertrigones traversed twice in forewing, once in hindwing ; discoidal cells 3 celled in forewing, 2 celled in hindwing ; that of forewing with costal and outer margins subequal and little longer than the basal ; 5-8 cross veins between arc and the point of bifurcation of Rs in forewing, 5 in hindwing ; pterostigma long and narrow, braced, covering 5 cells and more than half the distance between node and proximal end of pterostigma in forewing, and 6 cells and a little less than half the said distance in hindwing ; anal loop 6-8 celled.

Measurements (in mm) : Holotype, ♂ : length of abdomen (without anal appendages) 44.5 ; length of forewing 37.0 ; length of hindwing 35.0, number of antenodal veins : forewing 17-19, hindwing 12-13, number of postnodal veins : forewing 17-19, hindwing 12-13.

Comparison : *G. ganeshi* comes closer to *G. kirschi* Laidlaw, but differs from the same in being smaller in size with lower nodal (specially postnodal) index and markings of the synthorax.

Distribution : South Andamans only.

Family AESHNIDAE

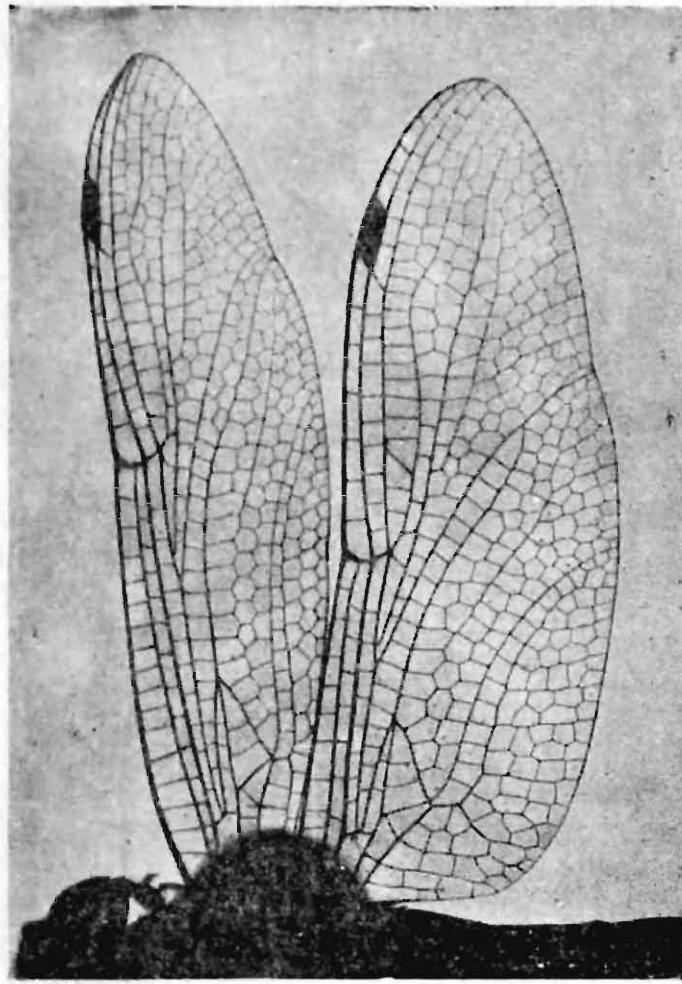
Genus *Oligoaeschna* Selys

14. *Oligoaeschna andamani* sp. nov.

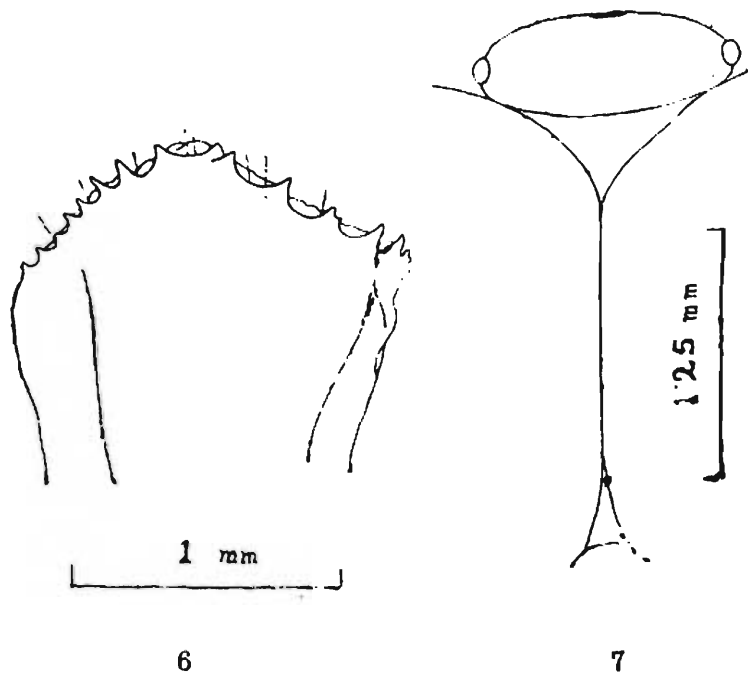
(Text-figs. 5, 6 and 7)

Material : Holotype ♀, Cowriaghat, coll. B. S. Lamba, 11. iv. '64. Reg. no. 8275/48.

Description : Female (adult) — Labium, face, eyes and head ventrally blackish brown, frons, vertex and occiput black, marked with



Text-fig. 5. *Oligoaeschna andamani* sp. nov. (holotype ♀);
fore- and hindwings.



Text-figs. 6-7. *Oligoaeschna andamani* S P. nov.,
Fig. 6: apical portion of the dentigerous plate,
Fig. 7: interorbital suture and occiput.

greenish yellow as follows : a longitudinally elongated spot just across bases of mandibles, a narrow line on postclypeus at base, enlarged into a large lateral spot on either side after a short interruption ; a moderately broad stripe running across the frons between crest and base of sulcus, interrupted broadly in the middle ; frons and vertex covered with thick black hairs ; inter-orbital suture about thrice as long as occipital triangle ; diameter of head across eyes slightly less than twice width of frons.

Thorax reddish brown changing to black on dorsum marked with a pair of greenish yellow lateral stripes on either side, viz. one posthumeral and one covering most of metepimeron. Legs black but proximal half of all femora reddish brown. Wings palely tinted with brown from base, to a line running obliquely inwards from inner end of pterostigma and meeting in inner wing border at a point, where Cu_2 terminates ; deeper tint at base upto arculus continued into subcostal ray upto node and a larger subcostal postnodal spot ; primary antenodals are first and 5th ; discoidal cell traversed twice ; hypertriangle entire in left forewing but traversed thrice in right forewing and twice in hindwing ; anal loop 4-5 celled ; pterostigma rather short (2.25 mm), narrow, dark brown and braced ; two rows of cells between M_4 , M_{spl} and 2 cells between anal loop and inner wing border. Abdomen reddish brown, darker on dorsum and gradually changing to black apically, being mostly black on segments 7-10 and marked with yellow as follows : a large subrounded spot on segment 1 on either side ; a complete ventrolateral stripe and 5 spots on segment 2 as follows : a median narrow triangular spot extending shortly from base and one pair each of postjugular and apical subtriangular spots ; ventrolateral borders of segments 8 and 9 ; segment 2 expanded at base narrowed thereafter, but again slightly expanded at apex, the narrowest part being about two-thirds as wide as broadest part ; abdomen narrowing apically but segments 8 and 9 broader and laterally compressed. Anal appendages dark brown, broken shortly after base. Apical margin of dentigerous plate suboval and armed with 15 teeth.

Measurements (in mm) : Holotype ♀ ; length of abdomen 43.0 ; length of forewing 41.0 ; length of hindwing 38.0 ; number of antenodal veins : forewing 16-17 ; hindwing 10 ; number of postnodal veins : forewing 6-7, hindwing 6-8.

Comparison : *O. andamani* comes closer to *O. modiglianii* Selys on account of long interorbital suture, general build and some details of markings and venation. However, it differs from the same in having

the thorax unmarked on dorsum, shorter hindwing, lower nodal index, larger anal loop and more cells in cubital space proximal to anal loop.

Distribution : South Andamans only.

Family LIBELLULIDAE

KEY TO THE GENERA OF THE FAMILY LIBELLULIDAE

- | | | |
|--|--|---|
| 1. Borders of anal loop running on to meet posterior border of wing, the apex of the loop remaining open thereby. ... | Tholymis Hagen [<i>Tholymis tillarga</i> (Fabricius)] | |
| — Borders of anal loop converging to meet before posterior border of wing, the apex of the loop becoming closed thereby. ... | | 2 |
| 2. Distal antenodal nervure in forewing complete. ... | | 3 |
| — Distal antenodal nervure in forewing incomplete. ... | | 4 |
| 3. Posterior lobe of prothorax enlarged, erected as a collar and provided with long hairs. ... | Orthetrum Newman | |
| — Posterior lobe of prothorax not as above. ... | Nesoxenia Kirby [<i>Nesoxemia lineata</i> (Selys)] | |
| 4. Posterior lobe of prothorax enlarged, erected as a collar and provided with long hairs. ... | Diplacodes Kirby [<i>Diplacodes trivialis</i> (Rambur)] | |
| — Posterior lobe of prothorax not as above. ... | | 5 |
| 5. Discoidal field with borders converging strongly at wing margin. ... | Trithemis Brauer | |
| — Discoidal field with borders parallel or divergent at wing margin. ... | | 6 |
| 6. More than 1 cubital nervure in all wings. ... | Neurothemis Brauer | |
| — Only 1 cubital nervure in all wings. ... | | 7 |
| 7. Wings marked with amber-yellow at base. ... | Crocothemis Brauer [<i>Crocothemis servilia servilia</i> (Drury)] | |
| — Wings unmarked at base. ... | | 8 |
| 8. Discoidal cell of hindwing traversed by a cross vein. ... | Potamarcha Karsch [<i>Potamarcha congener</i> (Rambur)] | |
| — Discoidal cell of hindwing entire. ... | Lathrecista Kirby [<i>Lathrecista asiatica asiatica</i> (Fabricius)] | |

Genus *Lathrecista* Kirby15. *Lathrecista asiatica asiatica* (Fabricius)

1798. *Libellula asiatica* Fabricius, J. C. *Ent. Syst. (suppl.)*, : 283.

1936. *Lathrecista asiatica asiatica*, Fraser, F. C., *Fauna Brit. India, Odonata*, 3 : 281.

Material : 14 exs as follows : 5 ♂♂, Macpherson strait, south side, coll. R. B. S. Sewell, 28. viii. '28 ; 9 ♂♂, Bamboo flat Road, Burma null, Cowriaghat, Humphrygunj and Shoal Bay, coll. B. S. Lamba, 6 iii.—16. iv. '64.

Measurements (in mm) : ♂ (14 exs) ; length of abdomen 32.5-33.5 ; length of forewing 34.0-36.0 ; length of hindwing 30.0-35.0 ; number of antenodal veins : forewing $15\frac{1}{2}$ - $18\frac{1}{2}$, hindwing 12-14 ; number of postnodal veins : forewing 11-14, hindwing 10-14.

Remarks : This is the first record of this species from South Andamans. The specimens under study vary from the description of the species provided by Fraser (1936) in having metallic blue black vesicle unmarked with yellow and brown thorax.

Distribution : South Andamans (present record) ; it is a well distributed species in the Oriental region.

Genus *Nesoxenia* Kirby16. *Nesoxenia lineata* (Selys)

1879. *Agrionoptera lineata* Selys, E. L., *Ann. Mus. Civ. Genova*, 14 : 302.

1936. *Nesoxenia lineata*, Fraser, F. C., *Fauna Brit. India, Odonata*, 3 : 279.

Material : 5 exs as follows : 1 ex ♀, Wrafters Creek, coll. B. S. Lamba, 16. iii. '64 ; 2 ♂♂, 2 ♀♀ Great Nicobar, Casurina Bay and Campbell Bay, coll. A. Daniel and H. K. Bhowmik, 2-3. iv. '66.

Measurements (In mm.) ♂ (2 exs) and ♀, (3 exs.) respectively : length of abdomen 30.0, 26.0-31.0 ; length of forewing 32.0, 32.0-34.0 ; length of hindwing 32.0, 30.5-32.0 ; number of antenodal veins : forewing 15-16, 14-16, hindwing 13-14, 12-14 ; number of postnodal veins : forewing 13-15, 13-16, hindwing 13, 12-15.

Remarks : This is first record of this species from South Andamans. The specimens studied varies from the description of the species provided by Fraser (1936), in having metepimeron and 1st 3 abdominal segments not pruinosed.

Distribution : South Andamans (present record) ; this species is also known from Darjeeling district, eastern INDIA and MALAYSIA.

Genus *Potamarcha* Karsch

17. *Potamarcha congener* (Rambur)

1842. *Libellula congener* Rambur, M. P., *Hist. nat. Ins. Ne'vropte`res*, : 70.

1971. *Potamarcha congener*, Lieftinck, M. A., *Ent. Scand. Suppl.* 1 : 202.

Material : 2 exs (♂♂), Katan, Baratang and Rajatgarh, coll. B. S. Lamba, 21-22, iii. '64.

Measurements (in mm) ♂ (2 exs); length of abdomen 31.0-31.5; length of forewing 34.0-36.0; length of hindwing 32.0-32.5; number of antenodal veins : forewing $13\frac{1}{2}$ - $14\frac{1}{2}$, hindwing 10, number of postnodal veins : forewing 10; hindwing 11.

Remark : This is the first record of this species from South Andamans.

Distribution : South Andamans (present record); it is a well distributed species in the Oriental region and parts of INDONESIA.

Genus *Orthetrum* Newman

KEY TO THE SPECIES OF THE GENUS *Orthetrum* NEWMAN

- | | |
|---|------------------------|
| 1. Abdomen enormously swollen at base and then abruptly slimmed and compressed to the end.... | <i>sabina</i> (Drury) |
| 2. Abdomen not as above, more or less of even width. ... | <i>chrysis</i> (Selys) |

18. *Orthetrum chrysis* (Selys)

1891. *Libellula testacea* race? *chrysis* Selys, E. L., *Ann. Mus. civ. Genova*, 30 : 462.

1936. *Orthetrum chrysis*, Fraser, F. C., *Fauna Brit. India, Odonata* 3 : 310.

Material : 3 exs (♂♂), Cowriaghat, Katan, Baratang and Wright Myo, coll. B. S. Lamba, 16-21, iii. '64.

Measurements (in mm) : ♂ (3 exs); length of abdomen 29.0-30.0; length of forewing 35.0-36.0; length of hindwing 33.0-34.0; number of antenodal veins : forewing 17, hindwing 11-14; number of postnodal veins : forewing 11-12, hindwing 12.

Remark : This the first record of this species from South Andamans.

Distribution : South Andamans (present record); it is a sparingly but widely distributed species in the Oriental region.

19. *Orthetrum sabina sabina* (Drury)

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

1942. *Orthetrum sabina sabina*, Lieftinck, M. A., *Treubia*, 18 : 477.

Material : 42 exs as follows : 4 ♂♂, 6 ♀♀ Denni point, North Bay and Hope Town, Poni Ghat, coll. R. B. S. Sewell, 27. vii.-3. ix. '28 ; 26 ♂♂, 6 ♀♀, Burma nulla, Humphrygunj, Mannar Ghat, Wright Myo, Port Blair, Dairy Farm and Shoal Bay, coll. B. S. Lamba, 29. ii.-15. iv. '64.

Measurements (in mm) : ♂ (30 exs) and ♀ (14 exs) respectively ; length of abdomen 31.0-34.0, 33.0-36.0 ; length of forewing 33.0-36.0 ; 31.0-36.5 ; length of hindwing 31.0-36.0, 35.0-36.0, number of antenodal veins : forewing 12-13, 12-15 ; hindwing 9-10, 9-11 ; number of postnodal veins : forewing 9-11 (either sex) ; hindwing 10-12, 10-13.

Remark : This is the first record of the nominate species from South Andamans.

Distribution : South Andamans (present record) ; it has a wide range of distribution from Egypt, through Asia to north Australia, Oceania and Ryukyus.

Genus *Crocothemis* Brauer20. *Crocothemis servilia servilia* (Drury)

1770. *Libellula servilia* Drury, D., *Ill. Exot. Ins.*, 1 : 112.

1936. *Crocothemis servilia servilia*, F.C., Fraser, *Fauna Brit. India, Odonata*, 3 : 345.

Material : 1 ex (♂), Port Blair, Dairy Farm, coll. B. S. Lamba, 29. ii. '64.

Measurements (in mm) : ♂ (1 ex) ; length of abdomen 27.0 ; length of forewing 32.0 ; length of hindwing 31.0 ; number of antenodal veins : forewing $10\frac{1}{2}$, hindwing 8 ; number of postnodal veins : forewing 9, hindwing 10-11.

Remark : This is the first record of this species from South Andamans.

Distribution : South Andamans (present record) ; it is a well distributed species all over southeast Asia and is also known from Japan and Australia.

Genus *Diplacodes* Kirby21. *Diplacodes trivialis* (Rambur)

1842. *Libellula trivialis* Rambur, M. P., *Hist. nat. Ins. Neuropteres*, : 115.

1936. *Diplacodes trivialis*, Fraser, F. C., *Fauna Brit. India, Odonata*, 3 : 336.

Material : 19 exs as follows : 3 ♂♂, 5 ♀♀, Aberdeen, Denni point, North Bay and Viper island, coll. R. B. S. Sewell 28. viii-3. ix. '28 ;

4 ♂♂, 7 ♀♀, Chiriatapu, Cowriaghat, Mannar Ghat, Port Blair, Dairy Farm and Rogod Chang, Baratang, coll. *B. S. Lamba*, 1. iii.-9. iv. '64.

Measurements (in mm): ♂ (7 exs) and ♀ (12 exs) respectively; length of abdomen 21.0-23.0, 22.0-22.5; length of forewing 23.0-24.0; 23.0-25.0; length of hindwing 19.0-20.0, 21.0-21.5; number of antenodal veins: forewing $7\frac{1}{2}$ - $8\frac{1}{2}$, 7- $7\frac{1}{2}$; number of postnodal veins: 6-7, 5-6 (either wing).

Remarks: The specimens under study are comparatively more melanotic and vary from the description of the species provided by Fraser (1936) in the following points:

Male: Prothorax without a mid-dorsal stripe.

Female: with (i) frons yellow; (ii) synthorax blackish brown laterally; (iii) segment 10 of abdomen black marked with lateral brown stripes.

Distribution: South Andamans (present and past record); it is a widely distributed species ranging from Seychelles across tropical Asia to Australia to the Western Pacific Islands.

Genus *Tholymis* Hagen

22. *Tholymis tillarga* (Fabricius)

1798. *Libellula tillarga* Fabricius, J. C., *Ent. syst. (suppl.)*: 285.

1936. *Tholymis tillarga*, Fraser, F. C., *Fauna Brit. India, Odonata*, 3: 411.

Material: 2 exs as follows: 1 ♂, Maya Bunder, Burmadera, coll. *T. D. Soota*, 27. iii. '64; 1 ♀, Great Nicobar, Alexander river, coll. *A. Daniel* and *H. K. Bhowmik*, 13. iv. '66.

Measurements (in mm): ♂ (1 ex) and ♀ (1 ex) respectively; length of abdomen 29.0, 28.0; length of forewing 34.0, 33.0; length of hindwing 33.0 (both sexes) number of antenodal veins (both sexes): forewing $9\frac{1}{2}$, hindwing 7; number of postnodal veins (both sexes) forewing 7-8; hindwing 9.

Remarks: This is the first record of this species from South Andamans and Great Nicobar.

Distribution: South Andamans and Great Nicobar (present record); it is a well distributed species ranging from Africa and Madagascar across south-east Asia to Australia and Oceania.

TABLE. 1. List of Odonata collecting localities in Andamans and Car Nicobar.

Abbreviations : A. D. : Dr. A. Daniel ; H. K. B. : Dr. H. K. Bhowmik ;
 B. S. L. ; Dr. B. S. Lamba ; R. B. B. S. Col.
 R. B. B. Sewell ; T. D. S. : T. D. Soota.

Locality	Latitude (approx)	Longitude (approx)	Collector and date of Collection
1	2	3	4
A. North Andamans			
Bibliagunj (Near Diglipur)	—	—	T. D. S. 1. iv. 1969
Diglipur	13°17'N	92°59'E	T. D. S. 27. iii. 1969
Maya Bunder :			
Burmadera	12°52'E	92°57'E	T. D. S. 27. iii. 1969
South Kalighat (Near Diglipur)	—	—	T. D. S. 28. iii. 1969
B South Andamans			
Aberdeen	11°38'— 11°42'N	92°39'— 92°46'E	R. B. B. S. 30. viii. 1928.
Bamboo Flat Road	11°34'N		B. S. L. 8. iii. 1964.
Burma Nulla	11°31'N	92°45'E	B. S. L. 8, 9 and 16. iv. 1964.
Chiriatapur	11°29'N	92°43'E	B. S. L. 9. iv. 1964
Cowriaghat	11°29'N	92°44'E	B. S. L. 8, 9, 11 and 16. iv. 1964.
Denni point	—	—	R. B. B. S. 3. ix. 1928
Hope town (Poni Ghat)	11°48'N	92°44'E	R. B. B. S. 27. vii. 1928
Humphrygunj	11°34'N	90°41'E	B. S. L. 6 and 7. iii. 1964.
Jaarva Gusk	12°11'N	92°41'E	B. S. L. 13. iii. 1964
Katan : Baratang	12°09'N	92°48'E	B. S. L. 12 and 21. iii. 1964.
Macpherson strait (South side)	11°04'— 11°08'N	92°37'— 92°04'E	R. B. B. S. 20. iii. 1928.
Mamyo : Chhelder	11°35'N	92°38'E	B. S. L. 5. iii.'64
Mannar Ghat :			
Wright Myo	11°44'N	92°44'E	B. S. L. 24, 25, 26, 28, and 30. iii ; 1, 2 and 3. iv. 1964.
North Bay (Near Port-Blair)	—	—	R. B. B. S. 29. iii. 1928
Port Blair ; Premnagar and Dairy Farm	11°37'N	92°43'E	B. S. L. 29. ii. and 1, iii.'64 ; T. D. S. ; 5 and 13. iii.—, 1. iv. 1969.
Rajat Gar	12°10'N	49°49'E	B. S. L. 22. iii. 64.
Rogod Chang (Baratang)	12°12'N	92°52'E	B. S. L. 20. iii. 1964.
Shoal Bay	11°48'N	92°46'E	B. S. L. 12, 16, 17 and 18. iii, '64
Wrafters Creek	12°09'N	92°47'E	B. S. L. 12, 16, 17, and 18. iii. 64

TABLE 1. (concluded)

Locality	Latitude (approx)	Longitude (approx)	Collector and date of Collection
1	2	3	4
Wright Myo	11°45'N	92°44'E	B. S. L. 2 and 3 1964 ; T. D. S., 19. iii, 3 and 4. iv. 1969.
Viper Island (Near Port-Blair)	—	—	R. B. B. S. 28. iii. 1928.
C. Nicobars			
Carnicobar : Tutop (Between Kakana and Mus village)	09°08'N	92°48'E	T. D. S. 14. iii. and 12. v. 1964.
D. Great Nicobar			
Alexander river	—	—	A. D. & H. K. B. 13. v. 1966
Campbell bay	—	—	A. D. & H. K. B. 3 and 13. iii. 1966, 3. iv. 1966
Casuarina bay	—	—	A. D. & H. K. B. 2, 3 and 4. iv. 1966.
Phulbaha	—	—	A. D. & H. K. B. 26. iii. 1966.

Genus *Trithemis* Brauer

KEY TO THE SPECIES OF THE GENUS *Trithemis* BRAUER

- 1. Legs very long ; pterostigma black with its end white. ... *pallidinervis* (Kirby)
- Legs of normal length ; pterostigma unicolorous. 2
- 2. Wings marked with amber yellow at base. ... *aurora* (Burmeister)
- Wings marked with blackish brown at base. ... *festiva* (Rambur)

23. *Trithemis aurora* (Burmeister)

1839. *Libellula aurora* Burmeister, H., *Handb. Ent.*, 2 : 859.

1936. *Trithemis aurora*, Fraser, F. C., *Fauna Brit. India, Odonata*, 3 : 383.

Material : 2 exs (♂♂), Shoal Bay, coll. B. S. Lamba, 29. iii. '64.

Measurements (in mm) : ♂ (2 exs), length of abdomen 21.0-22.0, length of forewing 26.0-27.0 ; length of hindwing 22.0-25.0 ; number of antenodal veins : forewing 13½-14½, hindwing 10 ; number of post-nodal veins : forewing 10, hindwing 11.

Remark : This is the first record of this species from South Andamans.

Distribution : South Andamans (present record) ; it is a well distributed species ranging from Ceylon and India to Philippines, Malaysia and Indonesia in the east.

24. *Trithemis festiva* (Rambur)

1842. *Libellula festiva* Rambur, M. P., *Hist. nat. Ins. Neuropteres*, : 92.

1936. *Trithemis festiva*, Fraser, F. C., *Fauna Brit. India, Odonata*, 3 : 387.

Material : 1 ex (♂), Mannar Ghat, Wright Myo, coll. B. S. Lamba, 1. iv.'64.

Measurements (in mm) : ♂ (1 ex) ; length of abdomen 18.0 ; length of forewing 29.0 ; length of hindwing 28.0 ; number of antenodal veins : forewing $10\frac{1}{2}$ - $11\frac{1}{2}$, hindwing 7-8 ; number of postnodal veins : 7-8 (either wing).

Remarks : This is the first record of this species from South Andamans.

Distribution : South Andamans (present record) ; it is a well distributed species ranging from West Pakistan across India and Ceylon to New Guinea in the east.

25. *Trithemis pallidinervis* (Kirby)

1889. *Sympetrum pallidinervis* Kirby, W. F., *Trans. zool. Soc. Lond.*, 12 : 327.

1936. *Trithemis pallidinervis*, Fraser, F. C., *Fauna Brit India, Odonata*, 3 : 389.

Material : 1 ex (♀), Port Blair, Dairy Farm, coll. B. S. Lamba, 29. ii. '64.

Measurements (in mm) : ♀ (1 ex) ; length of abdomen 25.0 ; length of forewing 33.0 ; length of hindwing 32.0 ; number of antenodal veins : forewing $8\frac{1}{2}$; hindwing 6 ; number of postnodal veins : forewing 8-9 ; hindwing 10.

Remarks : This is the first record of this species from South Andamans.

Distribution : South Andamans (present record) ; it is a well distributed species ranging from India to Taiwan, Philippines and Malaya in the east.

Genus *Neurothemis* BrauerKEY TO THE SPECIES OF THE GENUS *Neurothemis* BRAUER

- | | |
|---|------------------------------|
| 1. Wings marked reddish brown from base nearly upto apex. ... | <i>fluctuans</i> (Fabricius) |
| — Wings marked golden yellow only near base. ... | <i>intermedia</i> group |

26. *Neurothemis fluctuans* (Fabricius)

1798. *Libellula fluctuans* Fabricius, J. C., *Ent. Syst.*, 2 : 379.

1936. *Neurothemis fluctuans*, Fraser, F. C., *Fauna Brit. India, Odonata*, 3 : 355.

Material : 9 exs as follows : 4 ♂♂, 1 ♀, Katan, Baratang, Wrafters Creek and Humphrygunj, coll. B. S. Lamba, 7-21. iii. '64 ; 2 ♂♂, 2 ♀♀, Great Nicobar, Casuarina Bay, coll. A. Daniel and H. K. Bhowmik, 3-4. iv. '66.

Measurements (in mm) : ♂ (6 exs) and ♀ (3 exs) respectively ; length of abdomen 22.0-27.0, 20.0-23.0 ; length of forewing 27.0-32.0, 26.0-31.0 ; length of hindwing 26.0-31.0, 25.0-30.0 ; number of antenodal veins : forewing $14\frac{1}{2}$ - $19\frac{1}{2}$, $14\frac{1}{2}$ - $20\frac{1}{2}$; hindwing 11-15, 11-14 ; number of postnodal veins : forewing 12-17, 11-13 ; hindwing 12-13, 11-12.

Remarks : This is the first record of this species from South Andamans. The female specimen studied varies from the description of the species provided by Fraser (1936) in having discoidal cell with 6 and 2-3 cells and cubital space with 4 and 1 cross veins in fore- and hindwings respectively.

Distribution : South Andamans (present record) ; it has been reported from various parts of the mainland, Ceylon, Burma, Malacca and Malaysia.

27. *Neurothemis intermedia intermedia* (Rambur)

1842. *Libellula iniermedia* Rambur, M. P., *Hi:t. nat. Ins. Ne'vroxte'res*, : 91.

1936. *Neurothemis intermedia intermedia*, Fraser, F. C., *Fauna Brit. India, Odonata*, 3 : 357.

Material : 1 ex (♀), Great Nicobar, Phalbaha, coll. A. Daniel and H. K. Bhowmik, 26 iii. '66.

Measurements (in mm) : ♀ (1 ex) : length of abdomen 16.00 ; length of forewing 25.0 ; length of hindwing 24.0 ; number of antenodal veins : forewing $11\frac{1}{2}$, hindwing 10 ; number of postnodal veins : forewing 10, hindwing 9-10.

Remarks : This is the first record of this species from Great Nicobar.

Distribution : Great Nicobar (present record) ; this subspecies is also known from eastern and southern India, Ceylon, Nepal and Burma.

SUMMARY

Two new dragonfly species, e. g. *Gomphidia ganeshi* (family Gomphidae) and *Oligoaeschna andamani* (family Aeshnidae) and females of two damselfly species, e. g. *Libellago andamanensis* (Fraser) [consi-

dered here as a subspecies of *L. lineata* (Burmeister)] (Family Chlorocyphidae) and *Prodasineura verticalis andamanensis* (Fraser) (family Protoneuridae) have been described and 17 other dragon- and damselfly species belonging to the families Calopterygidae, Lestidae, Platycnemididae, Coenagrionidae and Libellulidae have been newly recorded from Andaman islands together with a brief review of an up-to-date knowledge of odonate Fauna of Andaman and Nicobar islands.

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