

ON THE STATUS OF RARE INDIAN ODONATE SPECIES

A. R. LAHIRI

Zoological Survey of India, New Alipur,
Calcutta — 700 053, India

A list of odonate species that have not been reported from India since their description before 1948 is presented. Most of the 78 species or subspecies listed were described from North Bengal or Sikkim, Khasi Hills, and Western Ghats and Nilgiris. Conservation measures on the type localities of the rare dragonflies in these areas are urged.

INTRODUCTION

The odonate fauna of India has been explored time and again by individual collectors, specialists on the group and various survey parties. FRASER (1933-36) summarized the earlier works. Since then a number of survey reports have followed, adding new taxa or extending the knowledge of the range of the known ones. A careful consultation of literature reveals that a good majority of the known species are rare and seldom reported. Very little attempt has, however, been made so far to demarcate the rare Indian odonate species and envisage effective planning for their conservation, except for the relict dragonfly *Epiophlebia laidlawi* Tillyard, which has been declared a protected species by the Wildlife Board, Government of India.

LIST OF SPECIES NOT REPORTED FROM INDIA SINCE 1948

In order to promote general awareness about the recurrence of rareness in Indian odonate species, a list of 78 species that demand special consideration from the conservation point is presented here. It refers to all taxa that have not been reported in India for a variable period exceeding 40 years, ever since they were first described prior 1948. Most of them are known only from the scanty type material, but some have later been recorded from neighbouring countries. The list includes also taxa of a rather questionable taxonomic status.

The list is annotated with the type localities. For Fraser's species the relevant information was taken from FRASER (1933-1936), FRASER (1953) and especially from KIMMINS (1966), and for other species from : FRASER (1933-1936), ANDER (1944), KENNEDY (1936), LIEFTINCK (1942), NAVAS (1929-1933) and ST. QUENTIN (1937).

Chlorocyphidae (3)

Libellago lineata blanda Selys, 1853. Nicobar Islands.

Rhinocypha biforata abbreviata Fraser, 1828. Meghalaya, Khasi Hills, Shillong.

R. perforata beatifica Fraser, 1927. Nagaland : Naga Hills, Nungba.

Euphaeidae (2)

Anisopleura vallei St Quentin, 1937. Meghalaya : Khasi Hills, Cherrapunji.

Bayadera longicauda Fraser, 1928. Sikkim : Gangtok.

Calopterygidae (1)

Echo m. margarita Selys, 1853. Meghalaya : Khasi Hills, Cherrapunji.

Synlestidae (1)

Megalestes irma Fraser, 1926. Sikkim : Gangtok.

Lestidae (6)

Indolestes assamicus Fraser, 1930. Meghalaya : Khasi Hills, Shillong.

Lestes nigriceps Fraser, 1924. Bihar : Pusa.

L. patricia Fraser, 1924. W. Ghats : Coorg, Virajpet.

L. praemorsus sikkima Fraser, 1929. Darjeeling distr. : Kurseong.

Orolestes selysi McLachlan, 1895. Darjeeling distr.

Sympetma paedisca kashmirensis Ander, 1944. Kashmir : Srinagar.

Platystictidae (3)

Drepanosticta polychromatica Fraser, 1931. Darjeeling distr. : Gopaldhara.

Protosticta antelopoides Fraser, 1931. W. Ghats : Travancore, Munnar.

P. fraseri Kennedy, 1936. "Assam".

Protoneuridae (4)

Caconeura obscura Fraser, 1933). E. Ghats : Koropur Ghat, Jaipur.

C. risi (Fraser, 1931). W. Ghats : S. Malabar, Tamaracherri.

C. t-coerulea (Fraser, 1933). Nilgiris : Mattupaliyam Ghat.

Prodasieneura odoneli (Fraser, 1924). N. Bengal : Duars, Hasimara.

Platynemididae (3)

Coeliccia bimaculata Laidlaw, 1914. Meghalaya : Garo Hills, Tura.

C. vacca Laidlaw, 1932. Meghalaya : Garo Hills, Tura.

Copera superplatypes Fraser, 1927. N. Bengal : Duars, Hasimara.

Coenagrionidae (3)

Enallagma insulae Fraser, 1920. Orissa : Chilka Lake.

Himalagrion exclamationis Fraser, 1919. Darjeeling distr. : Sitong.

Mortonagrion gautama (Fraser, 1922). Assam : Sadiya.

Gomphidae (24)

Asiagomphus odoneli (Fraser, 1922). N. Bengali : Duars : Hasimara.

Burnagomphus cauvericus Fraser, 1926. W. Ghats : Coorg, Bhagmandala Rd.

- B. basimarius* Fraser, 1926. N. Bengal : Duars, Hasimara.
Davidioides martini Fraser, 1924. W. Ghats : N. Malabar, Kunnoth.
Davidius aberrans senchalensis Fraser, 1926. Darjeeling distr. : Senchal.
D. davidi assamensis Laidlaw, 1916. Darjeeling distr. : Gopaldhara.
D. kumaonensis Fraser, 1926 : Kumaon hills.
D. malloryi Fraser, 1926. Meghalaya : Khasi Hills, Laitlyngkot.
D. z. zallorensis Selys, 1878. ??? : Zalore.
D. zallorensis delineatus Fraser, 1926. Sikkim : Gangtok.
Dubitogomphus bidentatus (Fraser, 1930). Meghalaya : Khasi Hills, Shillong.
Gomphidia fletcheri Fraser, 1923. W. Ghats : Coorg, Hallery, Mercara.
G. platyceps Fraser, 1953. W. Ghats : Coorg, Bhagamandala.
G. williamsoni Fraser, 1923. N. Bengal : Duars, Hasimara.
Heliogomphus kalarensis Fraser, 1934. Nilgiri Hills : Kalar.
Megalogomphus bicornutus (Fraser, 1922). Meghalaya : Khasi Hills, Shillong.
M. flavicolor (Fraser, 1923). N. Bengal : Duars.
Microgomphus verticalis (Selys, 1873). "India".
Onychogomphus cacharicus (Fraser, 1924). Assam : Cachar, Dilkhoosh.
O. echinoccipitalis Fraser, 1922. Meghalaya : Khasi Hills, Gauhati-Shillong.
O. malabarensis (Fraser, 1924). W. Ghats : Malabar, Palghat.
O. risi (Fraser, 1922). Darjeeling distr. : Mungpoo, Riyang R.
O. striatus Fraser, 1924. Nilgiri Hills : Kalar.
Paragomphus lindgreni (Fraser, 1923). Darjeeling distr. : Turzum.

Aeshnidae (9)

- Anax indicus* Lieftinck, 1942. Orissa, Chilka Lake, Barkuda Is.
Cephalaeschna acutifrons (Martin, 1909) (= *Indophlebia asiatica* Fraser, 1935). Sikkim : Tonglu.
C. biguttata Fraser, 1935. Meghalaya : Khasi Hills, Shillong.
Gynacantha biharica Fraser, 1927. Bihar : Pusa.
G. rotundata Navás, 1930. Bombay.
G. odoneli Fraser, 1922. N. Bengal : Duars, Hasimara.
Periaeschna lebasi Navás, 1930. Darjeeling distr. : Kurseong.
P. nocturnalis Fraser, 1927. Meghalaya : Khasi Hills, Shillong.
Petaliaeschna fletcheri Fraser, 1927. Meghalaya : Khasi Hills, Shillong.

Cordulegastridae (6)

- Chlorogomphus brittoi* Navás, 1934. ??? : Madura.
C. mortoni Fraser, 1936. Sikkim.
C. olympicus Fraser, 1933. Himachal Pradesh : Simla, Kufri.
C. selysi Fraser : 1929. Darjeeling distr. : Mungpoo.
Cordulegaster brevistigma folia Fraser, 1929. Uttar Pradesh : Kumaon, Nainital.
Neallogaster hermionae (Fraser, 1927). Darjeeling distr. : Senchal, near Mungpoo.

Corduliidae (10)

- Idionyx imbricata* Fraser, 1926. Meghalaya : Khasi Hills, Shillong.
I. intricata Fraser, 1926. Meghalaya : Khasi Hills, Cherrapunji.
I. minima Fraser, 1931. W. Ghats : Travancore, Munnar Ghat.
I. nadganiensis Fraser, 1924. Nilgiris : Nadgani Ghat.
I. periyashola Fraser, 1939. W. Ghats : Travancore, Manar.
I. Rhinoceroideis Fraser, 1934. W. Ghats : S. Malabar, Mannar Ghat, Dhoni.
Idiophya nilgiriensis (Fraser, 1918). Nilgiri Hills : Burliyar River.
Macromia bellicosa Fraser, 1924. W. Ghats : Coorg, Channonore Ghat.

M. flavovittata Fraser, 1935. Darjeeling distr. : Mungpoo.

M. pallida Fraser, 1924. N. Bengal : Duars, Hasimara.

Libellulidae (3)

Agrionoptera insignis dorothea Fraser, 1927. N. Bengal : Duars, Hasimara.

Pseudotramea prateri Fraser, 1920. Darjeeling distr. : Turzum.

Sympetrum himalayanum Navás, 1934. Darjeeling distr. : Kurseong.

DISCUSSION

It is noteworthy that the rare species listed here represent over 15% of the known Indian odonate fauna. They appear to be vulnerable to any change of their natural habitat because of their incompatibility to adapt to varied habitats. To safeguard their chance of survival, the type localities of these rare species should be protected from random change of biota resulting from human activities (deforestation and urbanisation).

It is noticed that most of the type localities of these species concentrate in, and around three areas : North Bengal and Sikkim (28 sp.), Western Ghats and the Nilgiris (17 sp.) and Khasi Hills (13 sp.). On account of their diversified topographic, vegetational and climatic features, these potential areas also sustain majority of the known Indian species. Type localities of most of the species endemic to India are also located in these areas. Protecting such areas from human encroachment thus would be most effective in preserving the wealth of Indian odonate fauna including the rare ones. To achieve this, maximum possible localities of such areas requires to be brought under the perview of National Parks and Sanctuaries in the country. A general consensus among the nature lovers is greatly solicited in this regard in drawing attention of the authorities concerned to implement this.

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