#### SHORT COMMUNICATION

# A NOTE ON THE ODONATE COLLECTION IN THE ENTOMOLOGY DIVISION OF THE DEPARTMENT OF AGRICULTURE, NEPAL

#### K.C. SHARMA

Entomology Division, Department of Agriculture, Kumaltar, Lalitpur, Nepal

Received and Accepted February 19, 1975

A brief outline is given of the aims of the Nepalese Museum of Entomology, Lalitpur, with an annotated list of 11 odonate species harboured in its collections. Among these, *Nannophya pygmaea* Ramb. is new to the Nepalese fauna, while *Rhinocypha bifasciata* Sel. had been recorded only once previously from the Nepalese territory. A bibliography of papers on the Nepalese odonate fauna, published after World War II, is added.

## INTRODUCTION

In view of the ever increasing interest of odonatologists in the fauna of Nepal and the Himalayan region, we have gladly accepted the invitation by the Editor of Odonatologica to prepare a brief note on the odonate collection harboured in our institution. The author sincerely hopes that the below lines will induce the odonatologists visiting Nepal to pay a visit also to our Museum. He is sure that contacts established in this way will be greatly profitable for the advancement of Nepalese entomology.

For the sake of convenience we have considered useful to append a bibliography of papers on Nepalese Odonata that have appeared after World War II.

## THE INSECT MUSEUM OF THE ENTOMOLOGY DIVISION

Ever since the inception of the Entomology Division in 1955, in the framework of the Department of Agriculture of H.M.G. of Nepal, reference collections of insects are being steadily brought together. However, the Insect Museum got its special identity within the Division only in 1963, with the attachment of a taxonomist to its staff. Due to the latter's active participation in collecting, preserving and sending specimens abroad for identification, a sizable reference museum of insects has taken shape. At present the Museum harbours some 2000 identified species, referable to all major orders.

The main aims of the Museum are: (1) the organization of a reference collection of insects associated with Nepalese agriculture, to be used for rapid identification in the service of crop protection; (2) the preparation of annotated lists of species known as major pests of the Nepalese crops; (3) the preparation of lists of natural enemies of the former, and (4) the preparation of lists of insects of major economic importance in Nepal.

The emphasis of the Entomology Division is on crop pests, therefore most of the insects in the Museum belong to this particular category. However, next to species of some aesthetic value, it is attempted to include as many as possible of other taxa as well.

Dragonflies are important predators on pests both in their immature stages in the rice fields and as adults. For this reason the order is well represented in the Museum. It is unfortunate that no more than 11 species have been identified by specialists. In view of the scanty information on the odonate distribution in Nepal, a list of these is given in Table I.

## THE LIST OF SPECIES

The taxa listed in Table I were identified by Mr. D.E. Kimmins of the British Museum (Nat. Hist.). All specimens are pinned adults. A considerable number of unidentified species present in the collections had to be omitted from the list.

Although short, the list includes two species of particular interest:

(1) Rhinocypha bifasciata Sel., from Gokarna and Godavari in the Kathmandu Valley, is here reported from Nepal for the second time only. It has been recorded previously from a stream near Birganj in the Terai (ASAHINA, 1965a). This is an eastern Himalayan species, known from Assam and Darjeeling (cf. FRASER, 1934. Fauna Brit. India 2: 29-31); the Kathmandu Valley thus representing its westernmost locality so far known.

(2) Nannophya pygmaea Ramb. is new to the Nepalese fauna. This is a wide-spread southeast Asiatic species, ranging from Celebes, Borneo and Sumatra, through Malaysia and Indochina into southern China (cf. FRASER, 1936. Fauna Brit. India 3: 322-323; LIEFTINCK, 1954. Treubia 22, suppl., p. 140; NEEDHAM, 1930. Zool. Sin. 11/1: 119). The Nepalese record thus extends the known range of the species considerably.

Table I

The hitherto identified Odonata of the Museum

Family Species	Locality	Date	Collector
Synlestidae			
Megalestes major Selys, 1862	Kakani	VII, 1962	P.N. Rana
Chlorocyphidae			
Rhinocypha bifasciata Selys, 1879	Gokarna	VII, 1961	D.R. Sharma
	Godavari	X, 1966	K.C. Sharma
Calopterygidae			
Neurobasis chinensis (Linnaeus,	Jyamire (Mak-	II, 1964	N. Kumar
1758)	wanpur)		
Cordulegasteridae			
Anotogaster nipalensis Selys,	Godavari	VIII, 1968	N. Kumar
1850			
Libellulidae			
Crocothemis servilia (Drury,	Kathmandu, Meen	X, 1961	G.H. Shrestha
1773)	Bhavan		
Orthetrum triangulare trian-	Surya Vinayak,	VII, 1963	N. Kumar
gulare (Selys, 1878)	Bhaktapur		
Nannophya pygmaea Rambur,	Gokarna	VII, 1961	D.R. Sharma
1842	Kathmandu	VII, 1961	D.R. Sharma
Neurothemis fulvia (Drury, 1773)		V, 1965	K.N. Sharma
N. intermedia intermedia	Kathmandu	VII, 1962	anonymous
(Rambur, 1842)			
Palpopleura sexmaculata	Kathmandu		
(Fabricius, 1787)			
Pantala flavescens (Fabricius, 1798)	Sarlahi	VII, 1961	D.R. Sharma

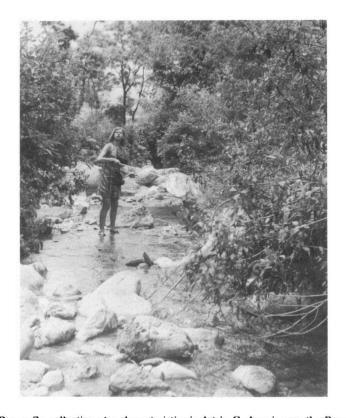


Fig. 1. Dragonfly collecting at a characteristic rivulet in Godavari, near the Royal Botanic Gardens. Among the species breeding in it are Rhinocypha quadrimaculata Sel., R. unimaculata Sel., Bayadera indica (Sel.), Neurobasis chinensis (L.), Onychogomphus bistrigatus (Hag.), Temnogomphus bivittatus (Sel.), Macromia moorei Sel., and Anotogaster nipalensis Sel. The Godavari area is one of the classical dragonfly localities in the Kathmandu Valley, being very rich in various types of running and stagnant water. It is the type locality of the platycnemidide Coeliccia dierli ST. QUENTIN, 1970. The list of species recorded from this area includes, among others, also Calicnemia nipalica (Kimmins), C. pulverulans (Sel.), Coeliccia renifera (Sel.), Ceriagrion azureum (Sel.), C. cerinomelas Lieft., Enallagma parvum Sel., Ischnura aurora (Brau.), I. forcipata Mort., I. mildredae Fraser, I. rufostigma annandalei Laid., Megalestes major Sel., Lestes dorothea Fraser, Anisopleura comes Sel., A. lestoides Sel., Anisogomphus occipitalis (Sel.), Onychogomphus schmidti Fraser, Chlorogomphus olympicus Fraser, C. selysii Fraser, Anax nigrofasciatus nigrolineatus Fraser, Gynacantha incisura Fraser, Acisoma panorpoides Ramb., Crocothemis servilia (Drury), Diplacodes trivialis (Ramb.), Neurothemis fulvia (Drury), N. intermedia intermedia (Ramb.), Orthetrum devium Needh., O. glaucum (Brau.), O. japonicum internum MacL., O. luzonicum Brau., O. pruinosum neglectum (Ramb.), O. sabina (Drury), O. triangulare triangulare (Sel.), Palpopleura sexmaculata (Fabr.), Pantala flavescens (Fabr.), Trithemis aurora (Burm.) and T. festiva (Ramb.). - (Photo: B. Kiauta).

#### BIBLIOGRAPHY ON THE NEPALESE ODONATE FAUNA

(up to February, 1975)

- ASAHINA, S., 1955. Dragonflies. In: H. Kihara (Ed.), Fauna and flora of Nepal Himalaya 1: 291-300. Kyoto Univ.
- ASAHINA, S., 1960. Notes on the relationship between Himalayan and Japanese insect fauna. J. Bengal Nat. Hist. Soc. 31: 69-75.
- ASAHINA, S., 1963. Nepalese and Indian Odonata taken by Mr. Yamada in 1961. Akitu 11: 7-8.
- ASAHINA, S., 1964a. The Odonata taken by Dr. T. Yasuda in north-eastern Nepal in 1962. Akitu 12: 9.
- ASAHINA, S., 1964b. Odonata taken by the Chiba University Rolwaling Himal Expedition, 1963. Akitu 12: 10.
- ASAHINA, S., 1964c. Nepalese Odonata taken by the Botanical Expedition of Tokyo University in 1963. Akitu 12: 11-12.
- ASAHINA, S., 1965a. Nepalese Odonata taken by Dr. R. Kono in 1964. Akitu 13: 5-7.
- ASAHINA, S., 1965b. The dragonflies taken by the Rikkyo University Himalayan Expedition. 1964. Akitu 12: 33-34.
- ASAHINA, S., 1965c. The dragonflies taken by the Chiba University Rolwaling Himal Expedition, 1963. J. Coll. Arts Sci. Chiba Univ., Nat. Sci., 4 (3): 311.
- ATKINSON, E.T., 1974. Fauna of the Himalayas. Containing species of Kumaon, Garhwal, Nepal and Tibet. Cosmo Publications, Delhi. VI+ 266. (Reprint. First published as Chapters I and II under the title "The Himalayan districts of the North Western Provinces of India", Allahabad, 1882).
- DUMONT, H.J. Ischnura intermedia spec. nov. from Turkey and its relations to I. forcipata Morton, 1907 and I. pumilio (Charpentier, 1825) (Zygoptera: Coenagrionidae). Odonatologica 3 (3): 153-165. – (Includes notes on I. forcipata from Nepal).
- JACKSON, J.A., 1955. More than mountains. Harrap, London. (Appendix: Insects collected, pp. 208-210).
- KIAUTA, B., 1972. Scientific results of the Yugoslav 1969 Himalaya Expedition. Odonata. Biol. Vest. 20: 109-119.
- KIAUTA, B., 1973. A note on the dragonfly folk names in Nepal. *Odonatologica* 2 (1): 29-32.
- KIAUTA, B., 1974. Introduction to insect cytotaxonomy. Lectures delivered at the Tribhuvan University, Kathmandu. Vol. 1. Nepal Research Center, Kathmandu. XII+ 82 pp.
- KIAUTA, B., 1975. Cytotaxonomy of dragonflies, with special reference to the Nepalese fauna. Lectures delivered at the Tribhuvan University, Kathmandu. Vol. II. Nepal Research Center, Kathmandu. XIV+ 78 pp.
- KIMMINS, D.E., 1958. New species and subspecies of Odonata. Bull. Brit. Mus. (Nat. Hist), Ent. 7 (7): 349-358.
- LAMBECK, H.J.P. & B. KIAUTA, 1973. On a small collection of syrphid flies (Diptera: Syrphidae) from the Kathmandu Valley and the Khumbu Himal (Nepal). *Ent. Ber., Amsterdam* 33 (4): 70-78. (Includes a note on prey of Orthetrum sabina).
- SHARMA, K.C., 1974. Numbers of species of insects in the Entomological Museum, determined, confirmed and authoritatively identified. Division of Entomology. Ministry of Agriculture, Lalitpur. (Stencil), 4 pp. (Cf. also Abstract No. 809 in Odonatologica 3 [1974]: 290).
- ST. QUENTIN, D., 1970. Odonata aus Nepal. Khumbu Himal 3 (3): 389-411.