TEN SPECIES ADDED TO THE LIST OF PENINSULAR MALAYSIAN ODONATA

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Abstract - Amphicnemis ecornuta, A. gracilis, Amphicnemis sp., Lestes praecellens, Podolestes buwaldai, Oligoaeschna foliacea, Burmagomphus arthuri, Orchithemis pruinans, Tyriobabta kuekenthali and Zyxomma obtusum are recorded from Peninsular Malaysia for the first time.

Introduction

ledge of the dragonfly fauna of Peninsular Malaysia has increased considerably, and novelties to the local fauna have been presented in several papers. Many of those published before 1995 were summarized by NORMA-RASHID & VAN TOL (1995), who also listed many new additions to the

Since LIEFTINCK's (1954) handlist, the know-

fauna, based mainly on the collections made by Dr M.A. Lieftinck in 1963.

Thereafter, at least two species have been added; see HÄMÄLÄINEN et al. (1996) and LEMPERT (1999). Two important papers listing regional fauna have been issued lately. KITAGAWA (1997) lists 54 species known from Penang. MURPHY (1997) provides an account of the dragonfly biodiversity in Singapore's nature reserves. A total of 79 species have been found within the reserves, many of which are new records to Singapore. Most interesting of them is the libellulid *Risiophlebia dohrni* (Krüger, 1902), which has not yet been found in Peninsular Malaysia. MURPHY (1997) states that more than 100 spp. have been found in

the whole Singapore area at all times, but some of them are already extinct in the island.

Here, I present records of ten new additions to the fauna, based on my own collections and on material received for study from Associate Professor (retired) D.H. M u r p h y from National University of Singapore and from Associate Professor Mohd. S o f i a n A z i r u n from University of Malaya, Kuala Lumpur. Most of the species have been found in forest swamps. Including these new additions, my "working list" of dragonflies known from Peninsular Malaysia and Singapore now includes over 230 species.

Species new to Peninsular Malaysia COENAGRIONIDAE

Amphicnemis ecornuta Selys, 1889
 1 δ, Pahang, Krau Wildlife Reserve, Kuala Lompat, lowland (40 m) forest, 28-XI-1998,
 M. Hämäläinen leg. [placed in RMNH, Leiden].

Earlier known only from Sumatra.

- Amphicnemis gracilis Krüger, 1898
 5 ♂, 9 ♀, Pahang, Krau Wildlife Reserve, Kuala Lompat, Pandanus-swamp in lowland forest, 22/27-XI-1996, M.Hämäläinen & H. Olsvik leg.; 1 ♂, same site as above, 28/30-XI-1998, M. Hämäläinen leg. [RMNH, ZRC (Singapore) and Coll. Olsvik (Norway)]. MURPHY (1997) already listed this sp. from Singapore. Earlier known only from Sumatra.
- Amphicnemis sp.
 1 \(\frac{9}{2} \), Pahang, Krau Wildlife Reserve, Kuala Lompat, Pandanus-swamp in lowland forest, 27-XI-1996, M.Hämäläinen leg. [RMNH]. Without male, it has not yet been possible to identify it to species level.

LESTIDAE

Lestes praecellens Lieftinck, 1937

2 δ, 2 ♀, Pahang, Krau Wildlife Reserve, Kuala Lompat, shallow seasonal pool in lowland forest, 22/27-XI-1996, M. Hämäläinen & H. Olsvik leg. [RMNH and Coll. Olsvik].

Earlier this species, which superficially resembles *L. praemorsa* Hagen in Selys, 1862, was known only from South-West Java.

MEGAPODAGRIONIDAE

- Podolestes buwaldai Lieftinck, 1940 1 ♂, 1 ♀, [North] Selangor, Bernam swamp forest, black-water stream, 2-IX-1992, D.H. Murphy leg. [ZRC].

In literature, only known by the holotype male from South-East Sumatra. However, at RMNH exists an incomplete male specimen of *P. buwaldai* (Lieftinck det.), labelled "Malaya, Selangor, Ulu Bernam, 27-III-1961, O. Milton"; i.e. it comes from the same locality as Murphy's specimens.

GOMPHIDAE

Burmagomphus arthuri Lieftinck, 1953
 Three records from Pahang, Krau Wildlife Reserve, Bukit Rengit, all M. Hämäläinen leg.: 1 teneral ♀ at Sungai Rengit, 22-IV-1995; −1 ♀ landed on lighted wall of bungalow at 9.40 PM, 23-IV-1995; −1 teneral ♂ at Sungai Rengit, 24-I-1996. [RMNH].

Earlier, only female sex was known of this species, recorded from East Borneo and South Thailand.

AESHNIDAE

leg. [ZRC].

Oligoaeschna foliacea Lieftinck, 1968
 1 δ, Johor, forest near Sungei Emas, [E 103°
 27.5'; N 2°23.4'], 11-XI-1974, D.H. Murphy

As far as I know there are only two published records of Oligoaeschna species from Malay Peninsula. KARSCH (1889) described Jagoria peciloptera on a female specimen from Luzon and a male specimen from Singapore, both collected by Dr Jagor. Later these have proved to represent two distinct species, and in his review of the genus Oligoaeschna, LIEFTINCK (1968) selected the Philippine female as lectotype and linked the male from Singapore to O. amata (Förster, 1903). RIS (1911) recorded a female specimen from Perak (leg. Künstler, coll. Hamburg) as Jagoria modiglianii. This record was referred in LIEFTINCK (1954). Later, LIEFTINCK (1968) pointed out that the real O. modiglianii Selys, 1889 is confined to Nias Island, and the other published "O. modiglianii" records refer mainly to O. elacatura (Needham, 1907) and O. foliacea Lieftinck, 1968.

However, the status of the Perak specimen remained open. LIEFTINCK (1968, p. 171) only wrote: "Further specimens were dealt with by RIS (1911), who had a male from West Borneo undoubtedly belonging to *foliacea*,

but here again the females described by him do not belong and are possibly *O. elacatura* (Needham) or yet another species." Thus, it seems that at least three *Oligoaeschna* species occur in the area.

LIBELLULIDAE

- Orchithemis pruinans (Selys, 1878)
 1 ♂, Pahang, Tasek Bera, Jelawat, 17-IX-1997;
 1 ♀, Pahang, Tasek Bera, Tasek Dampar, 18-IX-1997. Both: Mohd. Sofian Azirun leg. [Coll. Sofian, University of Malaya].
 Earlier known from Borneo, Bangka and Belitung.
- Tyriobapta kuekenthali (Karsch, 1900)
 1 ♂, [North] Selangor, Bernam swamp forest,
 2-IX-1992, D.H. Murphy leg. [ZRC].
 According to LIEFTINCK (1954), known from forest swamps of alluvial plains in Sumatra and Borneo.
- Zyxomma obtusum Albarda, 1881 1 \$\mathbb{Q}\$, Pahang, Krau Wildlife Reserve, Bukit Rengit, entered inside house at 7.15 PM, 24-I-1996, M. Hämäläinen leg.; -1 \$\mathbb{Q}\$, Pahang, Krau Wildlife Reserve, Pos Perlok, around concrete garden pool at 6 PM., 28-XI-1996, M. Hämäläinen leg. [RMNH and ZRC]. This crepuscular species is widely distributed in the western and northern parts of the Malay Archipelago. Recently, it was found also from

Great Nicobar Island (HÄMÄLÄINEN et al., 1999).

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References — HÄMÄLÄINEN, M., Y. NORMA-RASHID & M. ZAKARIA-ISMAIL, 1996, Opusc. zool. flumin. 146: 1-11; — HÄMÄ-LÄINEN, M., PRASHANTH-MOHANRAJ & K. VEENAKUMARI, 1999, Notul. odonatol. 5(3): 27-29; — KARSCH, F., 1889, Ent. Nachr. 15: 236-239; — KITAKAWA, K., 1997, Aeschna 32: 11-18; — LEMPERT, J., 1999, Int. J. Odonatol. 2(1): 17-21; — LIEFTINCK, M.A., 1954, Treubia 22(Suppl.), xiii+202 pp.; — LIEFTINCK, M.A., 1968, Tijdschr. Ent. 111(5): 137-184; — MURPHY, D.H., 1997, Garden's Bull., Singapore 49: 333-352; — NORMA-RASHID, Y. & J. VAN TOL, 1995, Notul. odonatol. 4(6): 101-103; — RIS, F., 1911, Annls Soc. ent. Belg. 8: 231-255.

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