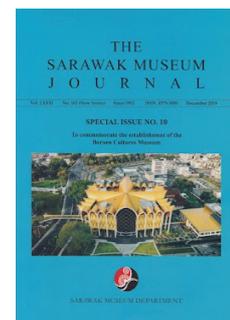




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THE OLD ODONATA (INSECTA) COLLECTION OF THE SARAWAK MUSEUM

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ABSTRACT

The old Odonata (dragonflies and damselflies) collection of the Sarawak Museum has been examined and re-identified. An annotated list of the species and specimens present in the collection is given, along with remarks about the locations where they were collected. A total of 378 specimens are present in the

collection, 356 of which are from or assumed to be from Sarawak, the remaining 22 specimens are from Sabah (all from Mount Kinabalu). In total, at least 89 species are represented in the collection, however the

condition (or sex in some cases) of approximately 15% of the specimens precludes definite identification to species. The collection includes the holotype of *Orchithemis xanthosoma* Laidlaw, 1911, one of the syntypes of *Pseudagrionoptera diotima* Ris, 1912 and paratypes of *Podolestes harrissoni* Lieftinck, 1953 and

Ictinogomphus acutus (Laidlaw, 1914). Other significant material includes the only specimen of *Euphaea ameeke* van Tol & Norma-Rashid, 1995 known from Limbang Division, the only specimen of *Gynacantha bayadera* Selys, 1891 from Sarawak and a series of *Chlorogomphus* specimens.

Keywords:



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The old Odonata (dragonflies and damselflies) collection of the Sarawak Museum has been examined and re-identified. An annotated list of the species and specimens present in the collection is given, along with remarks about the locations where they were collected. A total of 378 specimens are present in the collection, 356 of which are from or assumed to be from Sarawak, the remaining 22 specimens are from Sabah (all from Mount Kinabalu). In total, at least 89 species are represented in the collection, however the condition (or sex in some cases) of approximately 15% of the specimens precludes definite identification to species. The collection includes the holotype of *Orchithemis xanthosoma* Laidlaw, 1911, one of the syntypes of *Pseudagrionoptera diotima* Ris, 1912 and paratypes of *Podolestes harrissoni* Lieftinck, 1953 and *Ictinogomphus acutus* (Laidlaw, 1914). Other significant material includes the only specimen of *Euphaea ameeke* van Tol & Norma-Rashid, 1995 known from Limbang Division, the only specimen of *Gynacantha bayadera* Selys, 1891 from Sarawak and a series of *Chlorogomphus* specimens.

INTRODUCTION

The Sarawak Museum Odonata (dragonflies and damselflies) collection is old, mostly collected before the Second World War. The collection is pinned and housed in 11 drawers. Ten of the drawers are ordered taxonomically, while the other drawer contains previously unidentified material. Altogether 378 specimens have survived to the present day, but one of these is composite (composed of parts of different species that have been glued together). The last taxonomic scrutiny of the collection was under the curatorship of Tom Harrisson, when the Dutch Odonatologist M.A. Lieftinck visited the museum in 1950. Lieftinck named a species, *Podolestes harrissoni* Lieftinck, 1953, paratypes of which are in the museum, after Harrisson. It appears that, after Harrisson's time, the condition of the collection deteriorated. Fortunately, under the direction of Dr. Charles Leh Moi Ung the condition of

the collection was stabilised, but much damage was already done and many of the specimens are in an extremely poor condition. There are apparently some more recently collected specimens, kept separately from the old collection, but it has not yet been possible to examine these and they will be dealt with elsewhere.

We have examined all specimens in the main collection and transcribed the labels, placing all the information into a database. Many changes to identification have been made, both because of misidentifications in the past and because of taxonomic changes (e.g. species that have been described since the last time the collection was examined). In this paper we give an annotated list of the specimens in the collection, with up-to-date identifications. At least 89 species, from 15 families, are represented in the collection, but the condition, and in some cases sex, of approximately 15% of the specimens prevents definite identification to species. Most of the specimens are from Sarawak, but there are some from Sabah – 22 specimens of six species, all collected at Mount Kinabalu. A number of other specimens lack any indication of where they were collected, but in the absence of evidence to the contrary we have assumed that they were collected in Sarawak. Where locations are given, they are often potentially vague, e.g. Kuching, Limbang, etc. Again, in the absence of evidence to the contrary, we have assumed that in such cases the specimen was collected at or in the immediate vicinity of the location stated, although it is likely that in at least some of these cases the name of the nearest town has been specified rather than the actual location where the specimen was collected. Other locations are difficult or impossible to read, or we have been unable to match them with any place that we know of in Sarawak, or are otherwise problematic (see below). However we have been able to resolve a number of problems by comparison of the dates of collection with those of known expeditions and collecting trips organised by the Museum.

Some of the specimens in the collection were sent to England for identification in the past and later returned (at least in part). Collections were sent to F.F. Laidlaw by J.C. Moulton and later to W.D. Hincks by E. Banks. It is not clear, however, exactly which material was sent back to Sarawak, which makes for some difficulties. For instance Laidlaw (1920: 311) states “examination of the large amount of material sent me by Major J.C. Moulton whilst Curator of the Sarawak Museum. ... and Major Moulton’s type specimens are, unless otherwise noted, deposited in the British Museum.

Where possible, paratypes have been sent to the Sarawak Museum”. It is not clear whether other (non-type) material from these two collections was sent to the Sarawak Museum, but some specimens in the collection now have data that matches specimens listed in Laidlaw’s and Hincks’s publications.

At the time that Moulton sent him specimens, Laidlaw was the foremost authority on Southeast Asian Odonata; specimens from Sarawak feature in a number of his publications: Laidlaw (1911a, 1911b, 1912a, 1912b, 1913, 1914, 1915b, 1918, 1920, 1922, 1931, 1932, 1934). Hincks, on the other hand, only wrote one paper on the material sent to him from Sarawak (Hincks 1930), and is better known for his later work on other insect orders (see Miles 2015). Hincks had help in identification from the odonatologist K.J. Morton, and Morton’s name is present on some of the labels with the Museum specimens.

Some material associated with the Sarawak Museum also found its way into the collection of J. Cowley (this material is now in the Natural History Museum, London), possibly via Laidlaw. For instance Cowley (1937) lists a specimen of *Rhinocypha cucullata* (Selys 1873) from his collection, collected by H.W. Smith at Ulu Madalam (see under locations below).

Additionally, some duplicates from the 1932 Oxford University Expedition to Mount Dulit were sent to the Museum after identification by D.E. Kimmins, then curator of Odonata at what is now the Natural History Museum, London. The odonatological results of this expedition were published by Kimmins (1936) with sufficient detail of locations and dates that it has been possible to match these specimens with those in the publication. We have also attempted to match the rest of the specimens with any mention of them in the odonatological literature.

Locations in Sarawak for the Odonata in the Museum Collection

Specimens from Sarawak with readable geographic information on their labels come from 35 distinct locations or clusters of locations (see Fig. 1). Here we briefly discuss these locations and attempt to match them with recorded information on expeditions and collecting trips made by the museum. References to the *Sarawak Gazette* are made in the text in the format (Gazette, date: page number).