

# An annotated catalogue of the Odonata collection of Guido Lanfranco at the National Museum of Natural History in Malta

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**ABSTRACT.** An annotated list of the Odonata collection of Guido Lanfranco, is provided. The specimens were captured between 1952 and 1971, and may be the oldest surviving specimens caught and still available in local collections from Malta. Almost all locally occurring species are represented, with some specimens collected in sites and habitats that have since been destroyed by urban development. A portion of the specimens bear no data labels and do not contribute to the knowledge of the distribution of the species. During the cataloguing process, specimens in poor condition were restored.

**KEY WORDS.** Odonata collection, Guido Lanfranco, National Museum of Natural History, Malta.

## INTRODUCTION

The Odonata collection of Guido Lanfranco, now housed at the National Museum of Natural History at Mdina, illustrate the diversity of Odonata present on the Maltese Islands at the time the collection was assembled. This is consistent with the scant documentation of Odonata by contemporary entomologists. COWLEY (1940) mentioned *Ischnura genei* (Rambur, 1842), *Sympetrum striolatum* (Charpentier, 1840), and *Crocothemis erythraea* (Brullé, 1832) as being common species present on the Maltese Islands, whereas VALLETTA (1949, 1957) recorded ten species of anisopterans, nine of which are represented in the Lanfranco collection, namely: *Anax ephippiger* (Burmeister 1839), *A. imperator* (Selys, 1839), *A. parthenope* (Selys, 1839), *Orthetrum brunneum* (Fonscolombe, 1837), *O. cancellatum* (Linnaeus, 1758), *O. coerulescens anceps* (= *O. ramburi*) (Selys, 1841), *S. fonscolombii* (Selys, 1840), *S. striolatum* (Charpentier, 1840), and *C. erythraea* (Brullé, 1832). VALLETTA (1947, 1952) reported *A. ephippiger* (Burmeister, 1839) as a species that migrates to the Maltese Islands in rather large numbers from time to time. He also describes *Selysiothemis nigra* (Van Der Linden, 1825) as being a rare migrant. No other records of this species exist since the time of the assembly of the Lanfranco collection. CILIA (1972) mentioned the same species as recorded by Valletta. It is to be noted that some of the localities from where specimens were captured have been subjected to urban development and the natural habitat occurring in these locations was destroyed. One such location includes Wied Mejxu in Swieqi.

During this study the Odonata in the Lanfranco collection and the private collection of Dr Cassar were studied. The latter collection was studied since the Lanfranco collection was originally donated to Dr Cassar.

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## THE COLLECTION

The collection contains representatives of all the indigenous and migratory Odonata, with the exception of *Selysiothemis nigra*. The only locally occurring species of coenagrionid, together with all aeshnids and most libellulids are represented. In all, the collection contains 40 specimens represented by nine species, while a specimen representing a tenth species, *Orthetrum corulescens anceps* (Selys, 1841), is found amongst the specimens that were retained by Dr Cassar.

The original entomological collection of Guido Lanfranco was housed in 19 wooden boxes of different sizes, with specimens pinned on both sides of the boxes on polystyrene sheets. The collection was allocated a separate cabinet at the National Museum of Natural History. The Odonata had been moved prior to the current cataloguing by the author into two drawers, one housing all anisopteran species while the other drawer containing the specimens of *Ischnura genei*, together with some Dichtyoptera (mantids) and Neuroptera (lacewings and antlions).

Most of the material in this collection was assembled between 1952 and 1971 with the oldest record being a male specimen of *Sympetrum striolatum* from Buskett dated 14.6.1952, while the most recent is a female specimen of *Anax parthenope* from Salina dated 29.9.1971. The records show that some specimens, particularly the ones collected during the 1950's, may be the oldest surviving Odonata collected from the Maltese Islands.

Of the 40 specimens in the collection housed in the National Museum of Natural History, 14 specimens (35 %) bear no data label. Three of the seven other specimens currently found in the collection of Dr Cassar, also bear no data label. Unfortunately, one of the unlabelled specimens happens to be a specimen of *Orthetrum brunneum*, a species which has always been considered to be rare and localized on the Maltese Islands, with records being mostly confined only to the Rabat, Mtahleb and Bahrija areas. This species was taken by the author at Bahrija Valley in 2001 and other records pertain to a freshwater spring in Rabat (DEGABRIELE, 1992). Another two specimens of this species, also without data labels, originally belonging to the Lanfranco collection, are found in the private collection of Dr Cassar.

Another 12 specimens in the collection only bear a catalogue number as their data label. These numbers corresponded to an entry in a notebook compiled by Mr Lanfranco, which, to date has not been traced. The total number of Odonata specimens without scientific data therefore amounts to 26, or around 65%. However, Lanfranco (*pers. comm.*) confirmed that most of the material in question is of local origin.

Only three specimens have a species name on their data label. In most cases, the species name was included in the box as a separate label with a number of specimens assembled in rows behind or in front of this label. Since the author did not have access to the collection before the specimens were relocated to their current cabinet, it was not possible to confirm that the specimens were placed in the original sequence. It has nonetheless been confirmed that the relocation was done in such a way as to keep the specimens in the original order (Borg, J., *pers. comm.*). The author has rearranged a few of the specimens, particularly those in the drawer containing anisopteran specimens in the order as they appear in the records inventory present in this paper.

Of the determined specimens, only one specimen of *Anax parthenope* had been incorrectly determined as *Anax imperator*.

The locality name appears on many of the labels followed by the date with the year abbreviated to the last two of the four digit figure. The name of the collector however, does not appear on any of the data labels. The country name (Malta) is intended, but not written on any of the labels.

A variety of media was used to write the data labels. All data labels attached to the specimens are handwritten by Mr Lanfranco himself. They were written in black or blue fountain pen ink, black or blue ball pen ink and in graphite pencil. Ordinary paper was used for labels and often the label was not trimmed and squared. The labels where the catalogue numbers were written are of a slightly thicker, better quality paper. These are circular in shape and were cut out by means of a puncher. In some cases, the location and date of capture was also written on this label, while in a few others, a separate untrimmed label bore the data for the specimen.

Most of the specimens were mounted using ordinary, non-entomological pins and for some of the larger specimens, even small nails were used.

During the original setting of some of the specimens, the abdomen was opened ventrally in order to remove the internal organs. While this practice tends to preserve the body colour, which would otherwise turn black as the internal organs decomposed, it can unfortunately destroy the secondary genitalia in males of some species. This can make species identification more difficult, particularly in some teneral male libellulids. However, this was not a serious problem in the specimens in question. In other specimens, a toothpick was inserted inside the abdomen to keep it in place. This eventually caused some damage to the specimens.

It was decided that none of the original pins would be replaced, as they showed no signs of tarnishing or corrosion, which would have resulted in the deterioration of the specimens. Since the pins used in many cases were large and thick, clipping the pins and replacing them could have damaged the specimens. The decision to retain the original pins was also taken in view of the importance of the specimens, with some records being more than fifty years old.

Many specimens were in a poor state of preservation. Some specimens might also have been damaged during the relocation process. However, in almost all cases, the broken pieces from the specimens could be found in the respective drawers. These were reassembled by the author using small quantities of a clear, fast drying, acetone based adhesive. During this intervention none of the specimens were damaged or lost. No resetting was attempted, as this would not have enhanced the value of the collection in any way.

### ANNOTATED INVENTORY

The classification of Odonata follows DIJKSTRA & LEWINGTON (2006). All identifications were carried out by the author. After each species entry, any details on the data label are included. Text in square brackets '['']' does not appear on the original data labels. Where a question mark is included, this denotes an illegible writing on the original label. Collection dates are transcribed as on the original labels. In cases where neither a data label nor a number is present with the specimen, this is specifically noted as '[no data label]'. The semicolon ';' denotes a new entry of a specimen or series of specimens having the same data. In cases where two labels are present on the same insect (or series of insects pinned together) this is denoted by the slash symbol '/'. In case where material is housed in another collection, this information is included in brackets '( )'.

**ZYGOPTERA**  
**COENAGRIONIDAE**

*Ischnura genei* (Rambur, 1842) [MALTA], Salina, 29.9.71, 1 ♂; 1 ♂, 1 ex. [No.] 71; 1 ♂ [no data label]; 1 ♂ [no data label], [laterally mounted]; 1 ♀ [?] 9.71; 1 ♀ [No.] 68; 1 ♀ [No.] 260; 1 ♀ [no data label].

**Remarks:** Specimen numbered 71 has a very prominent black/bicoloured pterostigma. The female specimen dated 9.71 could have possibly been caught with the other male specimen bearing the same date and could also have been collected from Salina. Specimen numbered 260 and one female specimen with no data are rather battered and both are missing their abdomen. One male specimen with no data carries a determination label reading “*I. genei*”.

**ANISOPTERA**  
**AESHNIDAE**

*Anax* sp. Exuviae [no data label].

*Anax imperator* (Leach, 1815) [MALTA], Salina, 29.9.63, 1 ♂; 2.7.52, 1 ♂; 3 ♂♂ [no data label]; 2 ♀♀ [no data label].

*Anax parthenope* (Sèlys, 1839) [MALTA], Salina, 29.9.71, 1 ♀; 1 ♀ [no data label].

**Remarks:** The female specimen recorded from Salina carries an incorrect determination label reading “*A. imperator*”.

*Anax ephippiger* (Burmeister 1839) [MALTA], 1 ♂ [No.] 393; Attard, Wied Ençita, 21.3.53, 1 ♀; Sliema, Summer, 1953, 1 ♀ (L. Cassar coll.).

**Remarks:** The specimen labelled “Wied Ençita” is missing half its abdomen.

**LIBELLULIDAE**

*Orthetrum cancellatum* (Linnè, 1758) [MALTA], 1 ♀ [No.] 70; 1 ♀, [No.] 257.

**Remarks:** The specimen numbered 70 is missing its abdomen.

*Orthetrum brunneum* (Fonscolombe, 1837) [MALTA], 1 ♂ [no data label]; 2 ♂♂ [no data label] (L. Cassar coll.).

*Orthetrum coerulescens anceps* (Selys, 1841) 1 ♂ [no data label] (L. Cassar coll.).

*Sympetrum fonscolombii* (Selys, 1840) [MALTA], 1 ♂ [No.] 18; Buskett, 17.8.52, 1 ♀; 1 ♂ [No.] 77; 29.8.64, 1 ♂; 1 ♂ [no data label]; Swieqi, Wied Mejxu, 8.8.52, 1 ♀ / [No.] 258; 1 ♀ [No.] 78; 1 ex. [no data label]; 1 ♀ [No.] 254 (L. Cassar coll.).

**Remarks:** The male specimen numbered 77 bears a label reading “*Sympetrum fonscolombii*”. The male specimen dated 29.8.64 is annotated as “Red Dragonfly” and has an illegible annotation which could allude to its location of capture. The specimen with no data is very battered and with a missing head and abdomen. The female specimen numbered as 254 in the Cassar collection is also in poor condition.

*Sympetrum striolatum* (Charpentier, 1840) [MALTA], Buskett, 14.6.52, 1 ♂; 29.8.64, 1 ♀; Buskett, 14.6.52, 1 ♀; 1 ♀ [no data label]; Buskett, 17.viii.1952, 1 ♀ (L. Cassar coll.); Swieqi, Wied id-Dis, 09.vi.1952, 1 ♀ (L. Cassar coll.).

**Remarks:** The specimen with no data is in poor condition and is missing the head and forewings.

***Crocothemis erythraea* (Brullé, 1832)** [MALTA], Swieqi, Wied Mejxu, 27.9.52, 1 ♂; Mellieha, Ghadira, 23.09.65, 1 ♂; 1 ♂ [No.] 209; 1 ♂ [No.] 209a; 1 ♂ [no data label]; 1 ♀ [No.] 74.

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