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Catalogue of type material in the Odonata collection of the Natural History Museum Basel

by René Hoess

Abstract. A list of all types, apart from topotypes, present in the Odonata collection of the Natural History Museum, Basel is provided, whether they are indicated in the literature or not. The respective original descriptions are also listed. The type status, method of conservation, state of preservation, and the content of labels is given for each of the 111 specimens, belonging to 57 taxa, as well as additional information e.g. on other types of the respective taxon. The collection holds types of about 1% of the extant species of Odonata, thus being one of the more important Odonata collections worldwide; 37 taxa are represented by their primary types, and seven genera by type material of the respective type species. Most specimens have been collected on expeditions made by non-specialist odonatologists.

Key words. Odonata – type material – Basel – type status – method of conservation – state of preservation

Introduction

The Odonata collection of the Natural History Museum Basel (NHMB), with over 8,500 specimens, is a relatively small collection. This is because no collection belonging to a specialist odonatologist has ever been bequeathed to the museum. Many specimens have been purchased, exchanged or acquired as a by-product from other collections. Many have been collected by various entomological expeditions, some of which were organized by the NHMB itself but which were not explicitly focused on Odonata. Thanks to these expeditions, the collection is very rich and includes over 700 species, and the higher taxa are well represented too. The special importance of the Odonata collection of the NHMB, however, lies in the great quantity of primary types and other type material which were mostly collected during these expeditions. The largest expedition was that of A. Bühler and E. Sutter to the Indonesian island of Sumba where, among other animals and artefacts, about 7,000 dragonflies belonging to 68 species were collected, including 10 species new to science. Other important expeditions were those of F. Keiser to Sri Lanka (2 new species) and Madagascar (7 new species), of F. Sarasin and J. Roux to New Caledonia (4 new species), of A. Monard to Angola and Guinea-Bissau (3 new species), and of E. Handschin to Timor and northern Australia (5 new species). In total, type material of 57 taxa is represented in the collection of the NHMB, which is about 1% of all extant species. The NHMB is thus in possession of one of the taxonomically more important Odonata collections in the world.

Furthermore, the Odonata collection of the NHMB is of special importance for certain genera. It contains the type material of *Caledargiolestes uniseries* (Ris, 1915), *Caledopteryx sarasini* (Ris, 1915) and *Oreaeschna dictatrix* Lieftinck, 1937 which are the type species of their respective genera, each of which contains only two species. The genera *Arabineura* Schneider & Dumont, 1995, *Austroallagma* Lieftinck, 1953, *Millotagrimon* Fraser, 1953 and *Trineuragrimon* Ris, 1915 are monotypic. *Rhodothemis* Ris, 1909, containing four species, has the primary types of two of its species in the NHMB.

The genus *Nesolestes* Selys, 1891 is almost entirely confined to Madagascar, and three out of 17 species have their primary types in the NHMB.

Apart from the data contained in the original descriptions, there are hardly any publications on the holdings of Odonata types in Swiss museums. In addition to the catalogues of LIEFTINCK (1971b) and BRIDGES (1991), in which primary types are treated and which are good sources of taxonomic information for many species, there is only SARTORI (1991) who lists the Odonata types preserved in a Swiss institution (Musée de Zoologie, Lausanne). On account of the importance of the Odonata collection of the NHMB, a catalogue of the type material is presented here.

Material

The present paper lists all the specimens labelled as any kind of type in the Odonata collection of the NHMB or designated as such in a scientific paper and mentioned as deposited in the NHMB. Topotypes, however, are not considered here: those labelled as such do not belong to the type series. Allotypes are listed here whether they were part of an original type series or were subsequently designated, although the latter action is not a valid designation and in the former situation the allotype is *de facto* a paratype. The holotype and allotype (in copula) of *Gynacantha arthuri* Lieftinck, 1953 are in Leiden (RMNH) although they were collected on the Sumba expedition. The holotype of *Davidius baronii* Lieftinck, 1977 is in Basel although BRIDGES (1991) lists it as being in Leiden – see below. The holotype and the six topotypic paratypes of *Sonjagaster helladica helladica* Lohmann, 1993 were said to be deposited in the NHMB (LOHMANN 1993a) but have been destroyed by dermestids (H. Lohmann, *pers. comm.*); further paratypes are in Bonn (MAKB) and Vienna (NHMV). A *Lestes*-series from Iran was initially named as a new species and a type series was labelled up by H. Lohmann who, however, later regarded it as being conspecific with *L. pallidus* Rambur, 1842 (see LOHMANN 1993b). But as there is obviously no description, this series is not reported here in order to avoid creating a nomen nudum.

Methods

The taxa are arranged alphabetically within their respective family; the families, however, are arranged systematically. The name given in the heading is the valid name that is in present use, and any synonymy (if the types are of a different nominal taxon) is outlined under “Further information”. Each type specimen is treated separately, its type status being underlined, and comments are given on the method of conservation and its state of preservation. If there are two or more para(lecto)types present, then they are numbered using the sequence in the collection. The information on each label is given in quotation marks and different lines are separated by commas (which are underlined if there are commas in the original text). If both sides of a label contain data, then the sides are separated by a slash (which is underlined if there is a slash in the original text). Labels are usually in various shades of white, but if not then this is stated under “Further information”. Under the latter heading, additional information is given that has been

compiled from various sources such as an old card file in the NHMB, literature data, geographic and other information about the content of the labels, the whereabouts of other specimens of the type series, etc. The species name is followed by the catalogue number of the species in the collection of the NHMB, given in brackets and as quoted in some original descriptions e.g. by Lieftinck; the Roman numeral stands for the order, the letter for the suborder, and the Arabic numeral for the species within the suborder. However, this numbering is no longer used for new additions.

Annotated list of type specimens

Family Chlorocyphidae

Chlorocypha croceus Longfield, 1947

(XII. B. 173)

Paratype (1): immature male, pinned with spread wings, body slightly depressed laterally, left hind leg absent; **labels:** “Bimbi, oct. 1932”; “Para-, type”; “PARATYPUS”; “Angola, Miss. sc. Suisse, ~~1928-29~~”; “Chlorocypha, crocea Longfield, ♂ PARATYPUS, det.H.Lohmann 1981”.

Paratype (2): immature male, pinned with spread wings, body strongly depressed laterally, head absent, about 90% of right fore wing absent, abdomen broken and glued several times, right hind leg absent; **labels:** “Bimbi, oct. 1932”; “Para-, type”; “Angola, Miss. sc. Suisse, ~~1928-29~~”.

Further information. The locality and expedition labels are typical for the expedition in question (the latter framed) while the type labels on both specimens are circular and white with a yellow edge (these are the paratype labels used in the British Museum (Natural History) in London, BMNH). These type labels seem to be the only indication of the describer C. Longfield. The other type label – red and printed in capitals – is typical for type material in the NHMB. Lohmann’s label is mostly hand-written while all the others are printed. A. Monard made the two expeditions to Angola (1928–29, 1932–33) and should, therefore, be regarded as the collector. In the light of this, the use of old expedition labels and the deletion of the date makes sense. The holotype, the allotype with the same data, and probably one female paratype each from Bimbi and Sangévé, respectively, are deposited in the BMNH, and all the remaining 26 paratypes from several localities are in the Musée d’histoire naturelle in La Chaux-de-Fonds (MHNC).

Chlorocypha dispar (Palisot de Beauvois, 1805)

(XII. B. 126)

Paralectotype (1) of *Libellago dispar fraseri*: male, pinned laterally, left side up, compound eyes collapsed, left hind leg absent, abdomen filled with a thin stick that is visible at the ventral side of segments 7 to 8; **labels:** “Boé, III 38”; “3.4, Libellago dispar Fraseri, n. subsp., Typus, III -1938 2♂”; “Chlorocypha dispar₂ (Palisot de Beauvois, 1805)₂ det. R. Hoess 2006”; “PARALECTOTYPE, labelled by R. Hoess 2007”.

Paralectotype (2) of *Libellago dispar fraseri*: male, pinned laterally, left side up, compound eyes collapsed, abdomen filled with a thin stick projecting out of the ventral side of segments 8 to 9; **labels:** “Boé, III 38”; “Portugiesisch, Boé, Guinea, A. Monard”; “Chlorocypha dispar₂ (Palisot de Beauvois, 1805)₂ det. R. Hoess 2006”; “PARALECTOTYPE, labelled by R. Hoess 2007”.

Paralectotype (3) of *Libellago dispar fraseri*: immature female, pinned laterally, left side up, abdomen slightly collapsed although filled with a thin stick, compound eyes collapsed, head glued with the mouthparts to the

prothorax, all wing tips broken off obliquely; **labels**: “Boé, III 38”; “*Libellago dispar* Fraseri, n. subsp., Typus, III.1938 1♀”; “Portugiesisch, Guinea. Boé, A. Monard”; “*Chlorocypha dispar* (Palisot de Beauvois, 1805), det. R. Hoess 2006”; “PARALECTOTYPE, labelled by R. Hoess 2007”.

Further information. Although paralectotype no.2 is not type labelled it has to be regarded as a member of the type series of *fraseri*. This is because all specimens used for the original description have to be treated of the same rank and subsequent labelling does not alter this. The taxon *fraseri* was described by SCHMIDT (1951) and discussed by DIJKSTRA (2003) in his revision of West African *Chlorocypha*. According to DIJKSTRA (2003) the type series of *fraseri* contains specimens of *C. dispar* as well as of *C. pyriformosa*. He therefore designated a lectotype – represented by a figure in the original description, as the type series has been supposedly destroyed – and put *fraseri* into synonymy of *pyriformosa*. Consequently, the Basel specimens become paralectotypes. Unlike the lectotype, the three specimens present in the NHMB resemble *C. dispar* with which they are considered to be conspecific, however, with slight differences in the colour patterns of the males. Further study at the type locality is recommended in order to see if these differences are constant and of subspecific value. The old labels are mostly hand-written, except “Typus” which was typed on red paper glued on to the label. The larger labels are folded and were certainly part of the collecting envelopes. The present status is printed on the typical red card that is used in the NHMB, glued on to the white paper of the rest of the labels. The meaning of “3.4” is unknown. The second male indicated on the label of paralectotype no.1 is paralectotype no.2. All the other 32 syntypes are said to be in the MHNC but have been destroyed by pests. The present indication has been given in order to clarify the status of the specimens as being part of a series with a designated lectotype. Portuguese Guinea is now Guinea-Bissau, and Boé is actually Madina do Boe.

Libellago naias Lieftinck, 1932

(XII. B. 110)

Paratype (1): male, mounted laterally on a pinned card, right side up, abdomen broken between segments 4 and 5 and between segments 6 and 7, both parts glued on to the same card, right fore leg lacking distal half; **labels**: “a”; “paratype ♂, *Libellago naias* Lieft., det M. A. Lieftinck 1935”; “Wai Radjang W Flores, 18 XI 29 leg deJong” (broken in two parts).

Paratype (2): male (apical spots of fore wings light brown), mounted laterally on a pinned card, right side up, abdominal segments 7 to 10 absent, right fore leg absent; **labels**: “a”; “paratype ♂, *Libellago naias* Lieft., det M. A. Lieftinck 1935”; “Wai Radjang W Flores, 18 XI 29 leg deJong”.

Further information. The labels are mostly hand-written, which is why the third label could only be read by consulting the original description – deJong = J. K. de Jong. The “a” refers to the list of localities on the card for this species in the NHMB card file. The island Flores belongs to Indonesia. According to LIEFTINCK (1971b), the holotype and allotype from the same locality are deposited in the Museum Naturalis in Leiden (RMNH) and not in the Museum in Bogor, Indonesia, as stated in the original description.

***Rhinocypha pagenstecheri timorana* Lieftinck, 1936**

(XII. B. 108)

Lectotype: male, mounted laterally on a pinned card, left side up, head and right fore leg and prothorax with left fore leg broken off and glued on to the same card; **labels:** “Koepang, Timor, Coll. Handschin”; “Holotype! ♂, *Rhinocypha, pagenstecheri, timorana* Lieft, det. M.A. Lieftinck 1935”; “LECTOTYPE, designated by Lieftinck (1971: 131), labelled by R. Hoess 2007”.

Paralectotype (allotype): female, mounted laterally on a pinned card, right side up, head broken off and glued on to the same card, left hind leg and prothorax including fore legs absent; **labels:** “Koepang, Timor, Coll. Handschin”; “Allotype! ♀, *Rhinocypha, pagenstecheri, timorana* Lieft, det. M.A. Lieftinck 1935”; “*pagenstecheri, timorana, allotype*”; “PARALECTOTYPE, labelled by R. Hoess 2007”.

Further information. The labels are mostly hand-written. The word “allotype” on the folded third label of the allotype is framed. The present status is printed on the typical red card that is used in the NHMB and is glued on to the white paper of the rest of the labels. According to LIEFTINCK (1971b), both specimens were collected from xii.1931–i.1932 by E. Handschin. There was no holotype designated in the original description, therefore, later LIEFTINCK (1971b) selected a lectotype. In the same paper he listed the allotype as first described ♀, although paralectotype would be the correct designation. The present indication has been given in order to clarify the status of the specimens. Koepang is now written Kupang and lies in the southwestern part of Timor, which belongs to Indonesia.

Family Lestidae***Indolestes bellax* (Lieftinck, 1953)**

(XII. B. 37)

Holotype: male, pinned laterally, left side up, abdomen broken between segments 7 and 8, with a bristle projecting out of segment 7, segments 8 to 10 (right side) and left side of segment 10 mounted on a glue board on the same pin; **labels:** “HOLOTYPE”; “O SUMBA, Rendewai, VI. 1949, Expedition, Bühler-Sutter”; “*Lestes bellax* Lieft., Det. M. A. Lieftinck 19.., 11 JUN. 1949”; “*Lestes bellax* Lieft., Det. M. A. Lieftinck 1951”.

Paratype (allotype): female, pinned laterally, left side up, left middle leg absent, abdomen broken between segments 6 and 7 but still connected together; **labels:** “ALLOTYPE”; “O SUMBA, Rendewai, VI. 1949, Expedition, Bühler-Sutter”;

Further information. The type labels are hand-written on red paper which is glued on to white paper. The folded determination labels are fragments of the collecting envelopes and are stamped with black ink, while the collecting date is stamped in violet ink. The date of determination is not usually inserted by Lieftinck, and normally only one determination stamp is on one envelope – probably the allotype’s label is pinned below the holotype. The envelope fragment with the allotype collecting date is not preserved, but dragonflies were collected at Rende Wai from 11.–15.vi. Normally no collector is mentioned on the collecting envelopes, but A.M.R. Wegner, his mantri (= Indonesian assistant) Amsari and E. Sutter certainly collected most of the Odonata material at that locality. LIEFTINCK (1971b) lists the paratype as first described ♀, although it was designated as allotype in the original description. Rende Wai is situated in the district of Rende-Mangili at an altitude of 100 m in the eastern part of the Indonesian island of Sumba.

Indolestes sutteri (Lieftinck, 1953)

(XII. B. 38)

Holotype: male, pinned laterally, left side up, abdomen broken between segments 6 and 7 but glued together with a pin inside, left hind leg glued to that fracture point, glue present on the front of the thorax; **labels:** “HOLOTYPE”; “C SUMBA, Langgaliru, X.1949, Expedition, Bühler-Sutter”; “Lestes sp. nov ♂ TYP, LESTES SUTTERI, sp.n., det. Lieftinck 1951”; “Indolestes, sutteri (Lieftinck), ♂ HOLOTYPUS, det.H.Lohmann 1989”.

Paratype (allotype): female, the abdomen is broken between segments 3 and 4 and between segments 6 and 7 but glued together on a bristle; **labels:** “ALLOTYPE”; “C SUMBA, Langgaliru, X.1949, Expedition, Bühler-Sutter”; “LESTES, SUTTERI, sp.n., det Lieftinck 1951”; “Indolestes sutteri, (Lieftinck) ♀, PARATYPUS, det.H.Lohmann 1989”.

Further information. Most parts of the labels are hand-written, especially the type labels, as with *I. bellax*. The third labels are folded and “Lestes sp. nov ♂” and “TYP” are framed. The envelope fragments with the collecting date are not preserved, but dragonflies were collected at Langgaliru from 2.–13.x. For the collector(s), see under *I. bellax*. LIEFTINCK (1971b) lists the paratype as first described ♀, although it was designated as allotype in the original description. Langgaliru is situated in the district of Umbu Ratu Nggai at an elevation of 400–600 m in the central part of the Indonesian island of Sumba.

Family Megapodagrionidae

Argiolestes ochraceus (Montrouzier, 1865)

(XII. B. 50)

Syntype (1) of *Argiolestes rouxi*: female, pinned with spread wings, right fore leg teratological (shortened after loss in the larval stage), distal half of left hind leg absent, much glue around the wing bases and connection of thorax and abdomen; **labels:** “TYPUS”; “Drs.F.Sarasin&J.Roux, Neukaledonien, Oubatche”; “Argiolestes, Rouxi Ris, Det. Dr. F. Ris, Type ♀”; “a”; “74”; “SYNTYPUS, labelled by R. Hoess 2007”.

Syntype (2) of *Argiolestes rouxi*: male, pinned with wings not spread, glue on thorax, wings slightly damaged; **labels:** “c”; “Drs.F.Sarasin&J.Roux, Neukaledonien, Bondé”; “TYPUS”; “Argiolestes-, Rouxi Ris, Det. Dr. F. Ris”; “SYNTYPUS, labelled by R. Hoess 2007”.

Syntype (3) of *Argiolestes rouxi*: male, pinned with spread wings, glue on thorax and left wing bases, all wings more or less damaged; **labels:** “b”; “Drs.F.Sarasin&J.Roux, Neukaledonien, Panie Wald”; “Argiolestes-, Rouxi Ris, Det. Dr. F. Ris”; “SYNTYPUS, labelled by R. Hoess 2007”.

Syntype (4) of *Argiolestes rouxi*: male, pinned with spread wings, compound eyes and thorax slightly collapsed, glue on the ventral side of thorax, wings slightly damaged, middle legs and left fore leg absent; **labels:** “a”; “Drs.F.Sarasin&J.Roux, Neukaledonien, Oubatche”; “Argiolestes, Rouxi Ris, Det. Dr. F. Ris”; “SYNTYPUS, labelled by R. Hoess 2007”.

Syntype (5) of *Argiolestes rouxi*: male, pinned with spread wings, head broken off but glued the other way round to the thorax, middle legs and left fore leg absent, right hind wings slightly damaged, abdomen broken between segments 6 and 7 but glued; **labels:** “a”; “Drs.F.Sarasin&J.Roux, Neukaledonien, Oubatche”; “Argiolestes-, Rouxi Ris, Det. Dr. F. Ris”; “SYNTYPUS, labelled by R. Hoess 2007”.

Syntype (6) of *Argiolestes rouxi*: male, pinned with spread wings, glue on thorax, abdomen broken between segments 1 and 2 but still connected, abdominal segments 7 to 10 absent; **labels:** “a”; “Drs.F.Sarasin&J.Roux, Neukaledonien, Oubatche”; “Argiolestes-, Rouxi Ris, Det. Dr. F. Ris”; “SYNTYPUS, labelled by R. Hoess 2007”.

Further information. The taxon *rouxi* was described by RIS (1915). CAMPION (1921), however, considered it to be synonymous with *ochraceus*, and subsequent authors have followed that opinion. All above specimens belong to the type series of *rouxi* and have

to be treated of the same rank. There was no type indicated in the original description, and subsequent labelling does not alter this. The locality labels are lilac, as is typical for this expedition. The type label of the holotype is rose-coloured and is glued on to white card. The determination labels are framed except for "Type ♀". The present status is given on the typical pink adhesive label that is used in the NHMB, and is glued on to the white paper of the rest of the labels. Most parts of the labels are printed except for the species name, "Bondé", the "a", "b" and "c" and "Type ♀". The "a", "b" and "c" refer to the list of localities on the species card in the card file of the NHMB. The meaning of "74" (on green paper) is unknown. According to Ris (1915), the collections at Bondé were made on 2.vii.1911, those at Panié on 27.vi.1911 and those at Oubatche on 4.ii.1911. Bondé may also be written without accent. The present indication has been given in order to clarify the status of the specimens as being part of a series of syntypes. The whereabouts of the other 8 male and 2 female specimens of the original series is unknown.

***Caledargiolestes uniseries* (Ris, 1915)**

(XII. B. 51)

Holotype: immature male, pinned with wings not spread, left wings stuck together, fore wing broken, right wings absent, right middle leg and left hind leg absent, compound eyes and abdomen slightly collapsed, abdomen broken between segments 6 and 7 and glued together the other way round, much glue on thorax; **labels:** "a"; "Drs.F.Sarasin&J Roux, Neukaledonien, Kanala"; "TYPUS"; "Argiolestes, uniseries Ris, Det. Dr. F. Ris, Type"; "HOLOTYPE, labelled by R. Hoess 2007".

Further information. The locality label is lilac as is typical for this expedition. The type label is rose-coloured and is glued on to a white card. The determination label is framed except for "Type". The status is printed on the typical red card that is used in the NHMB, and is glued on to the white paper of the rest of the label. Most parts of the labels are printed except for the species name, the "a" and "Type". The "a" refers to the list of localities on the species card in the card file of the NHMB. Ris (1915) gives 3.xi.1911 as the collecting date. Kanala is now written as Canala. The present indication has been given in order to clarify the status of this specimen as being the only one used for description. The right wings were used for illustrations in the original description and are lost.

***Caledopteryx sarasini* (Ris, 1915)**

(XII. B. 49)

Syntype (1): female, pinned with spread wings, left hind leg and abdominal segments 5 to 10 absent, much glue on the wing bases; **labels:** "a"; "TYPUS"; "Drs.F.Sarasin&J Roux, Neukaledonien, Kanala"; "Argiolestes, Sarasini Ris, Det. Dr. F. Ris"; "SYNTYPUS, labelled by R. Hoess 2007".

Syntype (2): immature female, pinned with spread wings, whole body slightly collapsed, some glue on thorax, tip of left hind wing absent; **labels:** "Drs.F.Sarasin&J Roux, Neukaledonien, Kanala"; "Argiolestes-, Sarasini Ris, Det. Dr. F. Ris"; "SYNTYPUS, labelled by R. Hoess 2007".

Syntype (3): immature male, pinned with spread wings, some glue on thorax, left middle leg absent, right fore and left hind wing with some damage, abdomen slightly collapsed, abdomen broken in segment 4 and between segments 6 and 7 but glued; **labels:** "Drs.F.Sarasin&J Roux, Neukaledonien, Kanala"; "Argiolestes-, Sarasini Ris, Det. Dr. F. Ris"; "SYNTYPUS, labelled by R. Hoess 2007".

Syntype (4): male, pinned with spread wings, some glue on top of the thorax, tip of right hind wing absent, abdomen broken between segments 6 and 7 but glued; **labels:** "TYPUS"; "Drs.F.Sarasin&J Roux,

Neukaledonien, Kanala”; “Argiolestes-, Sarasini Ris, Det. Dr. F. Ris, Type ♂”; “a”; “73”; “SYNTYPUS, labelled by R. Hoess 2007”.

Further information. All above specimens belong to the type series and have to be treated of the same rank. There was no type indicated in the original description, and subsequent labelling does not alter this. The locality labels are lilac as is typical for this expedition. The type labels are rose-coloured and are glued on to white card. The determination labels are framed except for “Type ♂”. The present status is given on the typical pink adhesive label that is used in the NHMB, and is glued on to the white paper of the rest of the labels. Most parts of the labels are printed except for the species name, the “a” and “Type ♂”. The “a” refers to the list of localities on the species card in the card file of the NHMB. The meaning of “73” (on green paper) is unknown. According to RIS (1915), the females were collected on 3.xi.1911, and the males on the same day or in xii.1911. Kanala is now written as Canala. The present indication has been given in order to clarify the status of the specimens as being part of a series with no holo- or lectotype. The original illustration of the wings was made from one of the three original males not present in the NHMB, the whereabouts of them is unknown.

Nesolestes elisabethae Lieftinck, 1965

(XII. B. 190)

Holotype: male, in cellophane envelope, left side up, right fore leg broken off but present, abdomen broken between segments 5 and 6 but present; **labels:** “Holotype ♂, Holotype, *Nesolestes, elisabethae*, sp. n. Lieft., dt. Lieftinck ‘65”; “MADAGASCAR.D.-S., Mtge. d’Ambre, 24.V.58 F. KEISER/Mtgne.d’Ambre, 24.V.58”.

Further information. The first “Holotype” is printed on brick-red paper and is glued on to the label, the rest of which is hand-written. The first half of the second label is pink and printed, as is typical for this expedition, and is glued on to the back side of the rest of the folded hand-written label, which is a fragment of the beige collecting envelope. The cellophane envelope is inserted in a modern polypropylene Odonata envelope with a card that repeats the label information and is headed “SAMMLUNG MUSEUM BASEL”. According to LIEFTINCK (1971b), the collector is given as “F. Keiser *et al.*”, but it is not certain whether Keiser’s wife Elisabeth helped with the collecting. Montagne d’Ambre lies in the Province of Antsiranana (former Diégo-Suarez).

Nesolestes pulverulans Lieftinck, 1965

(XII. B. 191)

Lectotype: male, in cellophane envelope, left side up, distal part of left fore leg and abdominal segments 8 to 10 in an inserted cellophane capsule, abdominal segments 5 to 7 broken off but present; **labels:** “Holotype Holotype, ♂, *Nesolestes, pulverulans*, Lieft., dt. Lieftinck ‘65”; “MADAGASCAR. Fia., Ranomafana, 22.I.58 F. KEISER/Ranomafana, 22.I.58”; “LECTOTYPE, designated by Lieftinck (1971: 129), labelled by R. Hoess 2007”.

Paralectotype (allotype): female, in cellophane envelope, left side up, abdomen broken three times but present, right hind leg broken off but present; **labels:** “Allotype Allotype, ♀, *Nesolestes, pulverulans*, Lieft., dt. Lieftinck ‘65”; “MADAGASCAR. Fia., Ranomafana, 22.I.58 F. KEISER/Ranomafana, 22.I.58”; “PARALECTOTYPE, labelled by R. Hoess 2007”.

Further information. The first “Holotype” and the first “Allotype” are printed on brick-red paper and are glued on to the relevant label, the rest of which is hand-written.

The first halves of the second labels are pink and printed, as is typical for this expedition, and are glued on to the back side of the rest of the folded hand-written labels, which are fragments of the beige collecting envelopes. The status is printed on the typical red card that is used in the NHMB and is glued on to the white paper of the rest of the labels. The cellophane envelopes are inserted in modern polypropylene Odonata envelopes with a card that repeats the label information and is headed "SAMMLUNG MUSEUM BASEL". Ranomafana lies in the Province of Fianarantsoa. According to LIEFTINCK (1971b), the collector is given as "F. Keiser *et al.*", but it is not certain whether Keiser's wife helped with the collecting. The holotype and allotype were not designated in the original description, and so LIEFTINCK (1971b) later designated them as lectotype and first described ♀, respectively, although paralectotype would be the correct designation for the latter. The present indication has been given in order to clarify the status of the specimens.

Nesolestes radama Lieftinck, 1965

(XII. B. 189)

Holotype: male, in cellophane envelope, left side up, head and abdominal segments 7 to 10 broken off but present, segment 7 split; **labels:** "Holotype, Holotype, Nesolestes, radama, sp. n., ♂ Lieft., dt. Lieftinck '65"; "MADAGASCAR Tam., Moramanga, 9.X.58 F. KEISER/Moramanga, 9.X.58".

Further information. The second "Holotype" is printed on brick-red paper and is glued on to the label, the rest of which is hand-written. The first half of the second label is pink and printed, as is typical for this expedition, and is glued on to the back side of the rest of the folded hand-written label, which is a fragment of the beige collecting envelope. The cellophane envelope is inserted in a modern polypropylene Odonata envelope with card that repeats the label information and is headed "SAMMLUNG MUSEUM BASEL". Moramanga lies in the Province of Toamasina (former Tamatave). According to LIEFTINCK (1971b), the collector is given as "F. Keiser *et al.*", but it is not certain whether Keiser's wife helped with the collecting. The first described ♀, as given in LIEFTINCK (1971b), is not labelled as a type. It is in the Odonata collection of the NHMB, preserved in a similar way to the holotype (same province, Perinet (now Andasibe), 7.x.1958).

Trineuragrion percostale Ris, 1915

(XII. B. 52)

Syntype (1): male, pinned with spread wings; **labels:** "Drs.F.Sarasin&J.Roux, Neukaledonien, Kanala"; "Trineuragrion, percostale Ris, Det. Dr. F. Ris"; "75"; "SYNTYPUS, labelled by R. Hoess 2007".

Syntype (2): male, pinned with wings not spread, right fore leg teratological (shortened, after loss in the larval stage), some glue on top of the thorax; **labels:** "TYPUS"; "Drs.F.Sarasin&J.Roux, Neukaledonien, Oubatche"; "Trineuragrion, percostale Ris, Det. Dr. F. Ris, Type"; "SYNTYPUS, labelled by R. Hoess 2007".

Syntype (3): male, pinned with spread wings, right wings absent, some glue on top of the thorax, abdomen broken between segments 3 and 4 but glued, abdominal segments 7 to 10 absent; **labels:** "Drs.F.Sarasin&J.Roux, Neukaledonien, Kanala"; "Trineuragrion, percostale, Ris, Det. Dr. F. Ris"; "SYNTYPUS, labelled by R. Hoess 2007".

Further information. All above specimens belong to the type series and have to be treated of the same rank. There was no type indicated in the original description, and subsequent labelling does not alter this. The type label is rose-coloured and is glued on

to a white card. The locality labels are lilac, as is typical for this expedition. The determination labels are framed except for "Type". The status is given on the typical pink adhesive label that is used in the NHMB, and is glued on to the white paper of the rest of the label. Most parts of the labels are printed except the species name and "Type" which are hand-written. The meaning of "75" (on green paper) is unknown. The wings illustrated in the original description must be the missing right wings of syntype no3. According to RIs (1915), Kanala was collected on 3.xi.1911 and Oubatche on iv.1911. Kanala is now written as Canala. The present indication has been given in order to clarify the status of the specimens.

Family Coenagrionidae

Agriocnemis angolensis Longfield, 1947

(XII. B. 148)

Paratype (1): male, pinned with spread wings, right middle leg absent; **labels:** "Para-, type"; "Kuandu, oct."; "Angola, Miss. sc.suisse, 1932–1933".

Paratype (2): male, pinned with spread wings, abdominal segments 4 to 10 absent; **labels:** "Para-, type"; "Kuandu, oct."; "Angola, Miss. sc.suisse, 1932–1933"; "Agriocnemis, angolense Longf., Paratype".

Further information. The labels are printed except for the locality labels and the folded determination label, which are hand-written. The framed expedition labels are typical for this expedition. The type labels are circular and white with a yellow edge (the paratype labels that are used in the BMNH). A. Monard made the two expeditions to Angola (1928–29, 1932–33) and should therefore be regarded as the collector. LONGFIELD (1947) states that collections were made in Kuandu in 1932. The holotype and the allotype from Sangévé, February 1933, are in the BMNH, and the remaining 35 paratypes from several localities are in the MHNC (some differences in labelling and sex determination!).

Agriocnemis merina Lieftinck, 1965

(XII. B. 209)

Holotype: male, in cellophane envelope, right side up, head and abdominal tip (segments 7 to 10) broken off but present in a cellophane capsule in the envelope; **labels:** "Holotype ♂, Holotype, Agriocnemis, merina, Unikum! Lieft., dt. Lieftinck '65"; "MADAGASCAR.Tam., Fampanambo, 19.XI.57 F. KEISER/Fampanambo, 19.XI.57".

Further information. The first "Holotype" is printed on brick-red paper and is glued on to the label, the rest of which is hand-written. The first half of the second label is pink and printed, as is typical for this expedition, and is glued on to the back side of the rest of the folded hand-written label, which is a fragment of the beige collecting envelope. The cellophane envelope is inserted in a modern polypropylene Odonata envelope with a card that repeats the label information and is headed "SAMMLUNG MUSEUM BASEL". According to LIEFTINCK (1971b), the collector is given as "F. Keiser *et al.*", but it is not certain whether Keiser's wife helped with the collecting. Fampanambo lies in the Province of Toamasina (former Tamatave).

***Austroallagma sagittiferum* (Lieftinck, 1949)**

(XII. B. 39)

First described ♀ (allotype): female, pinned laterally, left side up, left middle leg absent; **labels:** “O. SUMBA, Rende wai, VI.1949, Expedition, Bühler-Sutter”; “*Austroallagma, sagittiferum*, 14 (Lieft.)”; “entspricht aufgrund der Etiketten, dem “Allotype ♀” in Lieftinck (1953), R. Hoess 2006”.

Further information. The locality label is typical for pinned material from this expedition and is mainly printed with hand-written region, locality and date (only the month). The second label is a folded fragment of the beige collecting envelope, hand-written with the stamped date. The date (vertical to the rest of the label text) is in violet ink but the month and year are not preserved. The third label is printed. Normally no collector is mentioned on the collecting envelopes, but A.M.R. Wegner, his mantri Amsari and E. Sutter have certainly collected most of the Odonata material at this locality. The year of determination is said to be 1950. The lectotype from Timorlaut, Indonesia, is in the RMNH. LIEFTINCK (1953) stated that the allotype ♀ from Rende Wai is deposited in the NHMB. However, there was no label showing this designation. The present labelling was made because the above-mentioned specimen was the only female of five from Rende Wai with the correct date (14.vi.) – in the other four females, the stamp of the collecting date is not preserved. Figure 10 in LIEFTINCK (1953) does not show any of the present five females and must have been made from one of the six other females mentioned as being in Bogor or Leiden. Rende Wai is situated in the district of Rende-Mangili at an altitude of 100 m in the eastern part of the Indonesian island of Sumba.

***Millotagrion inaequistigma* Fraser, 1953**

(XII. B. 204)

First described ♀ (allotype): female, in cellophane envelope, left side up, right fore leg absent, head broken off but present, abdomen broken between segments 3 and 4 and between 6 and 7 but present, the latter part in a cellophane capsule in the envelope; **labels:** “(Allotype), ♀ Unikum, *Millotagrion, inaequistigma*, Fraser, dt. Lieftinck ‘65”; “MADAGASCAR.Tam., Moramanga 9 km S, 22.XII.57 F. KEISER/Moramanga 9 km südl., 22.XII.57”.

Further information. The first label is hand-written but the “♀” is glued on. The first half of the second label is pink and printed, as is typical for this expedition, and is glued on to the back side of the rest of the folded hand-written label, which is a fragment of the beige collecting envelope. The cellophane envelope is inserted in a modern polypropylene Odonata envelope with a card that repeats the label information and is headed “SAMMLUNG MUSEUM BASEL”. The specimen was described in LIEFTINCK (1965) but was not designated as allotype. According to LIEFTINCK (1971b), the collector is given as “F. Keiser *et al.*”, but it is not certain whether Keiser’s wife helped with the collecting. The type(s) from Madagascar is(are) deposited in the Museum of Natural History in Paris (MNHN). Moramanga lies in the Province of Toamasina (former Tamatave).

Pseudagrion approximatum Schmidt, 1951

(XII. B. 221)

First described ♀ (**allotype**): female, in cellophane envelope, left side up; **labels**: “Allotype ♀, *Pseudagrion*, *approximatum*, Schmidt, Pinhey 1964”; “MADAGASCAR. Fia., Ranomafana, 22.I.58 F. KEISER/Ranomafana, 22.I.58.”.

Further information. The first label is hand-written on pink card. The first half of the second label is pink and printed, as is typical for this expedition, and is glued on to the back side of the rest of the folded hand-written label, which is a fragment of the beige collecting envelope. The cellophane envelope is inserted in a modern polypropylene Odonata envelope with a card that repeats the label information and is headed “SAMMLUNG MUSEUM BASEL”. This specimen was designated as allotype in PINHEY (1964). A further female with the same specification is deposited as a paratype (incorrect designation!) in the National Museum in Bulawayo, Zimbabwe. The type series is deposited in the Natural History Museum in Vienna (NHMV). Ranomafana lies in the Province of Fianarantsoa.

Pseudagrion calosomum Lieftinck, 1936

(XII. B. 165)

First described ♀ (**allotype**): female, pinned laterally, left side up, abdominal segments 7 to 10 absent; **labels**: “♀, ALLOTYPE !”; “O. SUMBA, Wai Paliling, Baing, Expedition, Bühler-Sutter, VI. 49”; “E. Sumba, 26 JUN. 1949, *Pseud. calosomum* Lft., Det. M. A. Lieftinck 19...., In copula”.

Further information. The first label is hand-written on dark red paper that is glued on to beige paper. The second label is similar to that described under *Austroallagma sagittiferum*. The folded third label is a fragment of the beige collecting envelope with the region and date stamped in violet ink, the determination stamped in black ink, and the rest hand-written with pencil. The male of the pair *in copula* seems to be the second male of the series since this specimen does not have a fragment of the collecting envelope. The specimen was designated as allotype in LIEFTINCK (1953). The information given in LIEFTINCK (1971b), namely E. Sumba, Baing, 100–200 m, 21.vi.–3.vii.1949, is inexact. Normally no collector is mentioned on the collecting envelopes, but A.M.R. Wegner, his mantri Amsari and E. Sutter have certainly collected most of the Odonata material at this locality. The year of determination is stated to be 1950. The lectotype from Kananggar on Sumba Island is deposited in the RMNH. Baing, Wai Paliling is situated in the district of Waidjelo at an altitude of 10–200 m in the eastern part of the Indonesian island of Sumba.

Pseudagrion pilidorsum deflexum Lieftinck, 1936

(XII. B. 106)

Paralectotype: male, mounted laterally on a pinned card, right side up, abdominal segments 7 to 10 broken off but glued on to the same card; **labels**: “a”; “Type!, *Pseudagrion*, *pilidorsum* ♂, *deflexum* Lft., det. M.A.Lieftinck 1935”; “2♂ *Pseudagrion*, *pilidorsum*, Koepang”; “PARALECTOTYPE, labelled by R. Hoess 2007”.

Further information. Most parts of the labels are hand-written. The folded third label is a fragment of the beige collecting envelope. The status is printed on the typical red

card that is used in the NHMB and is glued on to the white paper of the rest of the label. The “a” refers to the list of localities on the species card in the card file of the NHMB. The other male mentioned on the envelope fragment seems to be the adjacent specimen that is without labels. Koepang is now written Kupang and lies in the southwestern part of Timor, belonging to Indonesia. E. Handschin is said to have collected the specimen in 1931. This specimen cannot be the holotype because LIEFTINCK (1971b) states that the lectotype, from Amarasi in the same region, is in the RMNH. The present indication has been given in order to clarify the status of the specimen.

***Pseudagrion schmidtianum* Lieftinck, 1936**

(XII. B. 107)

Paralectotype: male, mounted laterally on a pinned card, right side up; **labels:** “a”; “paratype, *Pseudagrion* ♂, *schmidtianum*, Lieft., det. M.A.Lieftinck 1935”; “Timor Amarassi, XII.1931–I.1932 Ed.Handschin”; “PARALECTOTYPE, labelled by R. Hoess 2007”.

Further information. Most parts of the labels are hand-written. The status is printed on the typical red card that is used in the NHMB and is glued on to the white paper of the rest of the label. The “a” refers to the list of localities on the species card in the card file of the NHMB. According to LIEFTINCK (1971b), the lectotype with the same collecting data is in the RMNH. The specimen above is therefore a paralectotype, and this is now pointed out in order to clarify its status.

Family Isostictidae

***Isosticta robustior* Ris, 1915**

(XII. B. 54)

Syntype (1): male, pinned with wings not spread, right wings, right middle leg, hind legs and abdominal segments 6 to 10 absent; **labels:** “TYPUS”; “Drs.F.Sarasin&J.Roux, Insel Lifou, Képenée”; “*Isosticta*, *robustior* Ris, Det. Dr. F. Ris, Type”; “SYNTYPUS, labelled by R. Hoess 2007”.

Syntype (2): male, pinned with wings not spread, wings slightly damaged, abdominal segments 5 to 10 absent; **labels:** “Drs.F.Sarasin&J.Roux, Neukaledonien, Oubatche”; “*Isosticta*, *robustior*, Ris, Det. Dr. F. Ris”; “SYNTYPUS, labelled by R. Hoess 2007”.

Further information. The type series consists of the two specimens above, and they have to be treated of the same rank. There was no type indicated in the original description, and subsequent labelling does not alter this. The locality labels are lilac as is typical for this expedition. The determination labels are framed except for “Type”. The status is given on the typical pink adhesive label that is used in the NHMB and is glued on to the white paper of the rest of the label. Most parts of the labels are printed except for the species name and “Type”. According to RIS (1915), syntype no.1 was collected on 8.v.1912 and syntype no.2 in iv.1911. The wings shown in the original description must be the right wings of syntype no.1 which are missing. The present indication has been given in order to clarify the status of the specimens. Képenée is now written as Chepenehe and is situated on Lifou Island, belonging to New Caledonia.

Rhadinosticta handschini (Lieftinck, 1933)

(XII. B. 74)

Lectotype: male, mounted laterally on a pinned card, left side up; **labels:** “Para-, typ”; “Burnside b, N.Australien, Coll.Handschin”; “Isosticta ♂, handschini Lft., Paratype, det. M.A.Lieftinck 1932”; “LECTOTYPE, designated by Lieftinck (1971: 125), labelled by R. Hoess 2007”.

Paralectotype (1) (allotype): immature female, mounted laterally on a pinned card, left side up, distal half of left hind leg absent, abdomen collapsed laterally and broken between segments 3 and 4 but still connected; **labels:** “Isosticta ♀, handschini Lft., Allotype, det. M.A.Lieftinck 1932”; “Allotyp”; “c, Kadarri”; “PARALECTOTYPE, labelled by R. Hoess 2007”.

Paralectotype (2): male, mounted laterally on a pinned card, right side up, head and abdominal segments 7 to 10 broken off but glued on to the same card, left middle and left hind leg absent; **labels:** “Isosticta ♂, handschini Lft., Holotype, det. M.A.Lieftinck 1932”; “a, Shoebridge”; “PARALECTOTYPE, labelled by R. Hoess 2007”.

Further information. The allotype and paratype labels are of pink paper and are hand-written. The single letters on the locality label are hand-written in red ink and refer to the list of localities on the species card in the card file of the NHMB. The status is printed on the typical red card that is used in the NHMB and is glued on to the white paper of the rest of the labels. Most of the other labels are hand-written. The “Kadarri”-label is framed. There was no holotype designated in the original description, therefore Lieftinck (1971b) designated a lectotype which was collected on 21.iv.1932 at Burnside, while the first described ♀ (paralectotype would be the correct indication) was collected on 20.iv.1931 at Kadarri. Paralectotype no.2 was collected on 18.iv.1931. The third and last paralectotype with the same data as the lectotype must be in the ANIC (Canberra). It is not known why LIEFTINCK (1971b) designated the male labelled “Paratyp” as lectotype and not the one labelled “Holotype”, but this does affect the lectotype designation. The present indication has been given in order to clarify the status of these specimens. All the localities are situated in the Northern Territory of Australia and E. Handschin was the collector of all specimens.

Family Platycnemididae

Platycnemis aurantipes Lieftinck, 1965

(XII. B. 200)

Holotype: male, in cellophane envelope, left side up, head broken off put present, abdomen broken between segments 6 and 7 and between segments 7 and 8 but present, these fragments and the head in a cellophane capsule in the envelope; **labels:** “Holotype Platycnemis, ♂ aurantipes, Lieftinck, dt. M A Lieftinck ‘64”; “MADAGASCAR Tam., Perinet, 25.IX.58 F. KEISER/Périnet, 25.IX.57”; “Holotype, P. aurantipes”.

Paratype (allotype): female, in cellophane envelope, left side up, segments 7 to 10 broken off but present; **labels:** “Allotype Platycnemis, ♀ aurantipes, Lieftinck, dt. M A Lieftinck ‘64”; “MADAGASCAR Tam., Perinet, 25.IX.58 F. KEISER/Périnet, 25.IX.57”; “P. aurantipes, Allotype”.

Further information. The first labels are hand-written, but the sex symbol is glued on as are the printed “Holotype” and hand-written “Allotype” on brick-red paper. The first halves of the second labels are pink and printed, as is typical for this expedition, and are glued on to the back side of the rest of the folded hand-written labels, which are fragments of the beige collecting envelopes. The hand-written third labels are similar

fragments. The cellophane envelopes are inserted in modern polypropylene Odonata envelopes, each one with a card that repeats the label information and is headed "SAMMLUNG MUSEUM BASEL". According to LIEFTINCK (1971b), the collector is given as "F. Keiser *et al.*" and the paratype is treated as the first described ♀ although designated as allotype in the original description. However, it is not certain that Keiser's wife helped with the collecting. The card file of the NHMB lists two more males and two more females as paratypes, with the same data as the above specimens. These three, however, are not designated as such in the original description nor are there labels in their envelopes indicating this status. The remaining 3 males and 2 females from the same locality that are listed in the original description, including all the specimens from 26.ix., should be in the RMNH, but in fact there are only 2 males from 25.ix. Perinet is now called Andasibe and lies in the Province of Toamasina (former Tamatave).

Family Platystictidae

Drepanosticta fraseri Lieftinck, 1955

(XII. B. 40)

Holotype: male, pinned laterally, left side up, left fore leg absent, abdomen broken at segment 5 and between segments 6 and 7, both fragments glued on to a card between the first and second label; **labels:** "TYPUS"; "Drepanosticta, (Ceylonosticta), fraseri Lieft., Det. M.A.Lieftinck 19, HOLOTYPE !"; "CEYLON C.P., Kandy, 2.XI. 53, Deiyannawela, F. Keiser"; "HOLOTYPE, fraseri, KANDY Drepanosticta, nov., ~~hilaris~~".

Further information. The first label is red and printed. The second label is mostly hand-written while the third is printed in the manner typical for this expedition. The folded fourth label, which is a fragment of the beige collecting envelope, is hand-written except for "KANDY" which is stamped with dark blue ink. LIEFTINCK (1971b) unnecessarily designated a lectotype. He gives "F. Keiser *et al.*" as collector, but it is not certain whether Keiser's wife helped with the collecting. The other male mentioned in the original description from the same locality but from 17.x.1953 is in the RMNH and is labelled as paratype.

Family Protoneuridae

Arabineura khalidi (Schneider, 1988)

Holotype: male, in ethanol, abdomen broken between segments 6 and 7 but present; **labels:** "Elatoneura khalidi SCHNEIDER, 1988, ♂ Holotypus; OMAN : Wadi Bani, Khalid, N of Muqal, 22°40'N 59°05'E; 13.–14.IV. 1987, leg. F. KRUPP., J. Oman Stud. Spec. Rep. No. 3, 1988"; "Elatoneura khalidi, n.sp., Holotypus, 3 1987 Oman".

Further information. Both labels are hand-written. The "3" on the second label is circled, the meaning of which is unknown.

Nososticta diadesma (Lieftinck, 1936)

(XII. B. 141)

First described ♀ (**allotype**): female, pinned laterally, left side up, left fore leg absent; **labels**: “ALLOTYPE”; “O SUMBA, Lai Tiara, Mau Marru, Expedition VII, Bühler-Sutter”; “Notoneura diadesma Lft., Det. M. A. Lieftinck 19....”

Further information. The first label is red and hand-written. The second label is partly printed, partly hand-written as is typical for the pinned material from this expedition. The folded third label is a fragment of the beige collecting envelope. As 18.vii.1949 is the only date on which dragonflies in the NHMB were collected from this locality, this should be regarded as the collecting date although the envelope fragment with the date stamp is missing. The specimen was designated as allotype in LIEFTINCK (1953). The holotype from Kananggar on Sumba is in the RMNH as well as several other specimens from Mau Marru. Normally no collector is mentioned on the collecting envelopes, but A.M.R. Wegner, his mantri Amsari and E. Sutter have certainly collected most of the Odonata material at this locality. Mau Marru, Lai Tiara is situated in the district of Massu-Karera at an altitude of 500 m in the eastern part of the Indonesian island of Sumba.

Nososticta fraterna (Lieftinck, 1933)

(XII. B. 72)

Lectotype: male, mounted laterally on a pinned card, right side up, head and segments 6 to 10 broken off but glued on to the same card, prothorax with its legs absent; **labels**: “Notoneura ♂, fraterna Lft., Holotype, det. M. A. Lieftinck 1932”; “z-Lagoon, H a”; “LECTOTYPE, designated by Lieftinck (1971: 125), labelled by R. Hoess 2007”.

Paralectotype (2): male, mounted laterally on a pinned card, right side up, abdomen broken between segments 4 and 5 and between segments 6 and 8, segment 7 absent, the other fragments glued on to the same card; **labels**: “Notoneura ♀, fraterna Lft., Allotype, det. M. A. Lieftinck 1932”; “z-Lagoon, H a”; “PARALECTOTYPE, labelled by R. Hoess 2007”.

Paralectotype (1): male, mounted laterally on a pinned card, right side up, right hind leg broken off but present, abdominal segments 5 to 10 broken off but glued on to the same card; **labels**: “♂ Notoneura, fraterna Lft., paratype, det. M. A. Lieftinck 1932”; “a, z-Lagoon, Handschin”; “PARALECTOTYPE, labelled by R. Hoess 2007”.

Paralectotype (3) (allotype): female, mounted laterally on a pinned card, right side up, fore legs and left hind leg absent; **labels**: “Notoneura ♀, fraterna Lft., paratype, det. M. A. Lieftinck 1932”; “Z-Lagoon, H a”; “PARALECTOTYPUS, labelled by R. Hoess 2006”.

Further information. Most parts of the labels are hand-written. The locality labels are framed. The status is printed on the typical red card that is used in the NHMB and is glued on to the white paper of the rest of the labels. The “a” in red ink refers to the list of localities on the species card in the card file of the NHMB. “H” means E. Handschin, the collector. It is unknown why the allotype label has been placed on a male. Because there was no holotype fixed in the original description LIEFTINCK (1971b) later designated a lectotype. According to him, the lectotype and the first described ♀ (which is paralectotype no.3) as well as the other two paralectotypes from the same locality were collected on 19.iv.1931. Since it is unclear which of the three males was designated as lectotype, the one labelled “Holotype” is here considered to be the lectotype. The whereabouts of the three original specimens that are not present in the NHMB is unknown. The Z-Lagoon lies in the Northern Territory of Australia.

Family Aeshnidae

Anax pugnax Lieftinck, 1942

(XII. C. 209)

Paratype: female, pinned with spread wings, right hind leg absent, abdomen broken several times but glued together on a bristle; **labels:** "Araucaria, camp., N.Guinea, Coll., Lieftinck, 1951"; "parallotype"; "Anax, ♀, pugnax, Lieft".

Further information. The labels are hand-written, and the first one is typical for material labelled later in the NHMB. "Lieftinck, 1951" refers to the donation of the specimen rather than to its collecting. According to LIEFTINCK (1971b), the holotype and the first described ♀ are in the RMNH. They were collected in the Indonesian part of central New Guinea (Irian Jaya), Sahuweri River basin, Araucaria Camp at an altitude of 800 m on 21.+24.iii.1939, respectively, by L. J. Toxopeus on the American 3rd Archbold Expedition. Since two of the four paratypes in the RMNH are from the same month and from the same locality, it is likely that the above paratype was also collected on one of these dates.

Cephalaeschna triadica Lieftinck, 1977

Holotype: male, pinned with spread wings, dermestid damage on meso- and metathorax and abdominal segments 1 to 2; **labels:** "Gidaphu 2300 m, 2.6.1972"; "Nat.-Hist.Museum, Basel – Bhutan, Expedition 1972"; "Holotype"; "Peri, triadica Lft., det.MA Lieftinck 1975".

Further information. The damage occurred after the description since the abdominal segments 1 to 3 were figured there intact. Most parts of the labels are printed except for the species name and "75". The locality and expedition labels are each glued on to a piece of paper. The type label is a brick-red card. The collector is unknown, but C. Baroni and W. Wittmer will certainly have collected most of the entomological material on this expedition.

Oreaeschna dictatrix Lieftinck, 1937

(XII. C. 222)

Paratype: female, pinned with spread wings, cerci broken off but glued on to segment 10; **labels:** "Parallotype"; "N.N. Guinea 19, Hollandia, Humboldt Baai, W. Stüber leg."; "M. A. Lieftinck, leg. 1951"; "Cycloop Mts., 1000 m, 11.VIII–10.IX.1932"; "Oreaeschna ♀, dictatrix".

Further information. Labels 2 and 3 are printed while the others are hand-written. Labels 4 and 5 are folded and seem to be fragments of the beige collecting envelope. Labels 2 and 3 are standard labels and 3 refers to the donation rather than to the collecting. The holotype and the first described ♀, also collected by W. Stüber at the same locality and on 2.ix.1933 and 2.ix.1935 respectively, are in the RMNH. The (Southern) Cycloop Mountains lie in the Indonesian part of New Guinea (Irian Jaya) near Jayapura (former Hollandia).

Family Gomphidae

Davidius baronii Lieftinck, 1977

Holotype: male, in polypropylene envelope, right side up; **labels:** “Borneo, ... 0–30m”; “♂ *Davidius, baronii*, sp.nov, 12.14.14.13/12.11.10.11 (6th strengthened); Bpc 0.0/1.0”; “Holotype”; “*Davidius, baronii* Lieft., det.MA Lieftinck 1976, HOLOTYPE”; “Changra 18 km S, Tongsa 1900m/21./23.6.”; “Nat.-Hist.Museum, Basel – Bhutan, Expedition 1972”.

Further information. The rudimentary label 1 is not valid because the collecting envelope on which it was glued seems to have been used again later for the Bhutan Expedition. Labels 2, 3 and most of 4 are hand-written, while labels 5 and 6 are printed in the manner typical for this expedition. Label 2 is a fragment of the beige collecting envelope, and labels 3 to 6 are glued on to a similar fragment with the hand-written “Holotype” on the back side of label 4. The type label is of brick-red card while labels 5 and 6 have a pin hole each. The first formula gives the nodal index and the second the basal crossveins in the postcostal space. The first and sixth antenodals (the seventh in the left hind wing!) are the primary ones. The collector is unknown, but C. Baroni and W. Wittmer will certainly have collected most of the entomological material on this expedition. The card inserted in the polypropylene envelope repeats the main contents of the labels and is headed “SAMMLUNG MUSEUM BASEL”.

Macrogomphus keiseri Lieftinck, 1955

(XII. C. 375)

Holotype: male, pinned laterally, left side up, abdomen broken between segments 6 and 7 but glued together on a bristle; **labels:** “TYPUS”; “CEYLON E.P., Weragamtota, 14.IX. 53, F. Keiser”; “a. Licht”; “HOLOTYPE !, *Macrogomphus, annulatus* (Sel.), *keiseri* Lieft., Det. M.A. Lieftinck 1954”; “*Macrogomphus* ♂ ssp.n., 52 annulatus, 38 keiseri”.

Further information. The type label is red and the “at light” label is brick-red. The last label is a folded fragment of the beige collecting envelope. The first three labels are printed and the last two are mostly hand-written. “52” and “38” probably refer to the length of abdomen and hind wing in mm, respectively. According to LIEFTINCK (1971b), the holotype was collected by “F. Keiser *et al.*”, but it is not certain whether his wife helped with the collecting. Weragamtota lies in the Eastern Province of Sri Lanka (former Ceylon).

Paragomphus tachyerges (Lieftinck, 1934)

(XII. C. 115)

First described ♀ (**allotype**): female, pinned with spread wings; **labels:** “Allo-TYPUS”; “W SUMBA, Wai, Kalibbo, Expedition, Bühler-Sutter”; “Wai Kalibbo, ALLOTYPE”.

Further information. The type label is pink on a white card and is the typical adhesive label that is used in the NHMB. The second label is half hand-written and half printed as is typical for this expedition. The folded third label is a fragment of the collecting envelope, hand-written with pencil and blue ink. The identification and date that are usually indicated on the collecting envelope are not preserved. However, the date of collecting is 19.viii.1949, as stated in LIEFTINCK (1953) where this sex is described for

the first time. Wai Kalibbo is situated in the Province of Waimangura at an altitude of 440 m in the western part of the Indonesian island of Sumba. The locality was collected by A.M.R. Wegner and his mantri Amsari.

Family Cordulegastridae

Cordulegaster vanbrinkae Lohmann, 1993

Holotype: male, pinned with spread wings, left wings and right fore wing with slight damage, tips of the cerci broken off; **labels:** "HOLOTYPUS"; "Cordulegaster, vanbrinkae n.sp., ♂ HOLOTYPUS, det.H.Lohmann 1993"; "Iran, Elbursgebirge, Weyser (nahe Chalus), 1200 m NN, 36°40'N 51°25'E, 23-VII-1971, H.F. Paulus leg.".

Further information. The first label is printed and is on the typical red card used in the NHMB. The second label is mostly hand-written, "HOLOTYPUS" in red ink. The printed third label was added after donation of the specimen, using the information in the original description.

Sonjagaster helladica buchholzi Lohmann, 1993

Holotype: male, in polypropylene envelope, left side up, head and left fore leg broken off but present, right fore leg absent, right middle leg teratological, abdomen broken before and after segment 3 but present, head, thorax and abdomen with strong dermestid damage; **labels:** "Typus"; "Sonjagaster helladica buchholzi ♂"; "G 21"; "Abd. 58,3 Hfl 43,9"; "SONJAGASTER HELLADICA BUCHHOLZI Lohmann, 1993 ♂, det. H. Lohmann 1993, Griechenland, Kykladen, Andros, Vourkoti, Fluss Ahlas am südl. Ortseingang, 27.VI.1992, H. Lohmann, K. Sternberg & M. Schorr leg., Erste S.I.O./I.U.C.N.-Expedition, nach Süditalien und Griechenland".

Further information. Label 1 is printed on a red background on beige card. The hand-written labels 2 to 4 are fragments of the grease-proof collecting envelope. The last label is printed on a card inserted in the polypropylene envelope headed "SAMMLUNG MUSEUM BASEL" and repeats the information from the original description. The meaning of "G 21" is not known but may be a collecting code. All the paratypes except the three in the MAKB have been destroyed by dermestids (H. Lohmann pers. comm.).

Sonjagaster helladica kastalia Lohmann, 1993

Holotype: male, in polypropylene envelope, left side up, eight legs present (!), left hind leg is the only one broken off, tip of left cercus broken off, dermestid damage on body and wings; **labels:** "Typus"; "Sonjagaster helladica ssp. ♂, ssp. kastalia, G 23"; "Abd. 60,8 Hfl 43,7"; "SONJAGASTER HELLADICA KASTALIA Lohmann, 1993 ♂, det. H. Lohmann 1993, Griechenland, Parnassus-Gebirge, antikes Delphi, Kastalische Quellen, 29.VI.1992, H. Lohmann, K. Sternberg & M. Schorr leg., Erste S.I.O./I.U.C.N.-Expedition, nach Süditalien und Griechenland".

Paratype (1): male, in polypropylene envelope, left side up, body only represented by debris due to heavy dermestid damage, parts of all tagmata present, appendages mostly present; **labels:** "Paratypus"; "Sonjagaster helladica ssp. ♂, ssp. kastalia, G 23"; "Abd. 60,7 Hfl 44,6"; "SONJAGASTER HELLADICA KASTALIA Lohmann, 1993 ♂, det. H. Lohmann 1993, Griechenland, Parnassus-Gebirge, antikes Delphi, Kastalische Quellen, 29.VI.1992, H. Lohmann, K. Sternberg & M. Schorr leg., Erste S.I.O./I.U.C.N.-Expedition, nach Süditalien und Griechenland".

Paratype (2): male, in polypropylene envelope, left side up, head and right hind leg broken off but present, segment 10 including appendages absent, head, thorax and abdomen with strong dermestid damage; **labels:** “Paratypus”; “Sonjagaster helladica ssp. ♂, ssp. kastalia, G 23”; “Abd. 58,8 Hfl 43,4”; “SONJAGASTER HELLADICA KASTALIA Lohmann, 1993 ♂, det. H. Lohmann 1993, Griechenland, Parnassus-Gebirge, antikes Delphi, Kastalische Quellen, 29.VI.1992, H. Lohmann, K. Sternberg & M. Schorr leg., Erste S.I.O./I.U.C.N.-Expedition, nach Südtalien und Griechenland”.

Paratype (3): male, in polypropylene envelope, left side up, right fore and left middle leg broken off but present, head, thorax and abdomen with strong dermestid damage; **labels:** “Paratypus”; “Sonjagaster helladica ssp. ♂, ssp. kastalia, Thorax-Zeichnung, G 23”; “Abd. 58,4 Hfl 42,5”; “SONJAGASTER HELLADICA KASTALIA Lohmann, 1993 ♂, det. H. Lohmann 1993, Griechenland, Parnassus-Gebirge, antikes Delphi, Kastalische Quellen, 29.VI.1992, H. Lohmann, K. Sternberg & M. Schorr leg., Erste S.I.O./I.U.C.N.-Expedition, nach Südtalien und Griechenland”.

Further information. The origin of the surplus legs in the holotype envelope is unknown. The first labels are printed on a red background on beige card. The hand-written second and third labels are fragments of the grease-proof collecting envelopes. An “e” after “kastalia” in the second labels is always tippexed. “Thorax-Zeichnung” in paratype no.3 is written in pencil and hardly visible. The last labels are printed on a card inserted in the polypropylene envelopes headed “SAMMLUNG MUSEUM BASEL” and repeat the information from the original description. The meaning of “G 23” is not known but may be a collecting code. All the other paratypes except the one from M. Niehuis, which is in coll. Lohmann and not in coll. Niehuis, have been destroyed by dermestids (H. Lohmann pers. comm.).

Family Corduliidae

Hemicordulia chrysochlora Lieftinck, 1953

(XII. C. 230)

Holotype: male, pinned with spread wings, right fore and left hind leg mostly absent; **labels:** “Holo-, TYPUS”; “C SUMBA, Langoeiru, 13. X. 49, Expedition, Bühler-Sutter”; “HIOLOTYPE, Hemicordulia sp. n. ♂, Hemicordulia chrysochlora Lieft., 1952”.

Paratype (allotype): female, pinned with spread wings, prothorax with fore legs and left middle leg absent, head glued on to the pterothorax, much glue on head and thorax, abdomen broken between segments 4 and 5 and between segments 6 and 7 but glued together (on a bristle?); **labels:** “Allo-, TYPUS”; “W.SUMBA, Waimang-, ura 15.8, Expedition, Bühler-Sutter”; “Hemicordulia chrysochlora Lieft., Det. M. A. Leiftinck 19.... ♀”.

Further information. The type labels are pink on a white card and are the typical adhesive labels that are used in the NHMB. The locality labels are half hand-written and half printed, as is typical for this expedition. The “HOLOTYPE” on the determination label is hand-written on dark red paper that is glued on to the label, which is a folded fragment of the beige collecting envelope; the rest is hand-written in pencil and dark brown ink. The determination of the paratype is stamped with dark brown ink. Langgaliru is situated in the District of Umbu Ratu Nggai at an altitude of 400 to 600 m in the central part of the Indonesian island of Sumba. No collector is mentioned on the collecting envelopes but A.M.R. Wegner, his mantri Amsari and E. Sutter have certainly collected most of the Odonata material at this locality. Waimangura is situated in the Province of Waidjewa at an altitude of 440 m in the western part of the same island. This

locality was collected by A.M.R. Wegner and his mantri Amsari. Although the exact collecting dates are given on the labels, they are not mentioned in the original description nor in LIEFTINCK (1971b).

***Hemicordulia eduardi* Lieftinck, 1953**

(XII. C. 229)

Holotype: male, pinned with spread wings, right hind leg mostly absent; **labels:** “Holo, TYPUS”; “W.SUMBA, Waidjena, 7.8.49, Expedition, Bühler-Sutter”; “♂, Wai Tombo, HOLOTYPE ! Hemicordulia, eduardi Lieft. ♂ spec. nov. XX, HOLOTYPE”; “gevangen op droog bescha_, duwd terrein, vliengende, op 2 mtr. hoogte bij Kp., Korokangali om, 10h. v m. (Dish., Rara, Waidjewa)”.

Further information. The type label is pink on a white card and is the typical adhesive label that is used in the NHMB. The second label is half hand-written and half printed, as is typical for this expedition. The first “♂” on the determination label is upside-down. The first “HOLOTYPE” on the same label is hand-written on dark red paper glued on to the folded fragment of the collecting envelope. The meaning of “XX” is unknown. The last label is also a folded fragment of the beige collecting envelope and is probably hand-written by A.M.R. Wegner. Its content is: “collected on dry shaded terrain, flying at 2 m high near Kampung Korokangali at 10 h a.m. (Dish. Rara, Waidjewa)”. Kampung means village, but the meaning of “Dish.” is unknown. Wai Tombo is situated in the District of Waidjewa at an altitude of 430 m in the western part of the Indonesian island of Sumba. This locality was collected by A.M.R. Wegner and his mantri Amsari.

***Hemicordulia intermedia* Selys, 1871**

(XII. C. 120)

First described ♀ (allotype): female, mounted laterally on a pinned card, right side up, abdomen broken before and after segment 5 but all parts glued on to the same card; **labels:** “Burn-, side a”; “Hemicordulia, intermedia, Allotype! Selys, det. M.A.Lieftinck 1932”.

Further information. Both labels are framed and mostly hand-written. The “a” on the locality label is hand-written in red ink and refers to the list of localities on the species card in the card file of the NHMB. This specimen was described in LIEFTINCK (1933a). According to LIEFTINCK (1971b), it was collected by E. Handschin on 3.v.1932. The holotype from Queensland, Australia, is deposited in the Selys Collection, Royal Museum of Natural History, Brussels (RMNB). Burnside is situated in the Northern Territory of Australia.

***Idionyx orchestra* Lieftinck, 1953**

(XII. C. 241)

Holotype: male, pinned with spread wings, left hind leg absent, right middle and hind leg broken but present, holes in lateral sutures of thorax, abdomen broken between segments 5 and 6 but glued; **labels:** “Holo, TYPUS”; “W SUMBA, Wai-, Kalibbo, Expedition, Bühler-Sutter”; “Idionyx sp.n. HOLOTYPE, T apps, gemh”; “W.SUMBA 19AUG.1949, ♂ Idionyx orchestra Lieft., Det. M. A. Lieftinck 19....”.

Paratype (allotype): female, pinned with spread wings, right fore leg mostly absent, holes in mesepisterna, left hind wing with larger damage on basal part of hind edge, abdomen broken between segments 1 and 2 but glued together on a bristle; **labels:** “Allo, TYPUS”; “ALLOTYPE ♀, Idionyx orchestra Lieft. ♀, Det. M. A. Lieftinck 19....”; “W.SUMBA, Wai-, Kalibbo, Expedition, Bühler-Sutter”.

Further information. The type labels are pink on white card and are the typical adhesive labels that are used in the NHMB. The locality labels are half hand-written and half printed, as is typical for this expedition. The determinations are stamped with black ink. "ALLOTYPE" and "HOLOTYPE" are hand-written on dark red paper and glued on to the relevant label, each a folded fragment of the collecting envelope. The date and region on the last label of the holotype are stamped in violet ink. According to the card file of the NHMB, the paratype was collected on 24.viii.1949, and the year of determination was 1951 for both specimens. Both specimen have clearly first been pinned laterally. "T apps, gemh" is circled; "T apps" means that the appendages of this specimen were drawn for the publication. Wai Kalibbo is situated in the Province of Waimangura at an altitude of 440 m in the western part of the Indonesian island of Sumba. The locality was collected by A.M.R. Wegner and his mantri Amsari.

***Macromidia genialis erratica* Lieftinck, 1948**

(XII. C. 239)

Paratype: male, pinned with spread wings, left hind leg broken but present, much glue on ventral side of thorax; **labels:** "M. A. Lieftinck, leg. 1951"; "Para, TYPUS"; "S.Sumatra m, Mt. Tanggamoos, 19–31. iii. 1940, M. A. Lieftinck"; "Macromidia, ♂ erratica, Lieft".

Further information. The new status as a subspecies of *genialis* was given by LIEFTINCK (1971a). The first label is a standardised printed label and refers to the donation rather than to the collecting. The type label is pink on a white card and is the typical adhesive label which is used in the NHMB. The locality label is printed while the determination label is hand-written. The meaning of "m" on the former is not known. The latter is a folded fragment of the grease-proof collecting envelope. Wai Teboe is given as an addition to the locality in the card file of the NHMB. According to LIEFTINCK (1971b), the holotype and the first described ♀ (although called allotype in the original description) were collected by him in Lampong distr., Giesting near Talangpadang, Wai Tebu, ca. 500 m, from 19.–31.iii.1940 and are deposited in the RMNH. Sumatra belongs to Indonesia.

Family Libellulidae

***Aethriamanta nymphaeae* Lieftinck, 1949**

(XII. C. 353)

Paratype (1): male, pinned laterally, left side up, abdomen broken between segments 4 and 5, segments 5 to 10 glued on to a card on the same pin; **labels:** "M. A. Lieftinck, leg. 1951"; "N.N. Guinea 19, Hollandia, Humboldt Baai, W. Stüber leg."; "Aethriamanta nymphaeae"; "Paratype, labelled by R. Hoess 2007".

Paratype (2): male, pinned laterally, left side up; **labels:** "M. A. Lieftinck, leg. 1951"; "N.N. Guinea 19, Hollandia, Humboldt Baai, W. Stüber leg."; "Paratype, labelled by R. Hoess 2007".

Further information. "M. A. Lieftinck, leg. 1951" is printed and refers to the donation of the specimens to the NHMB rather than to the collecting. The locality labels are the standard printed labels of the collector, but the year of collecting is not given; they are glued on to fragments of the beige collecting envelopes. The determination label of paratype no.1 is a folded fragment of the beige collecting envelope. "PARATYPE" is the

typical red card that is used in the NHMB, and is glued on to the white paper of the rest of the label. The term “Paratypus” was only present on the name label in the cabinet drawer and on the species card in the card file, but there was no such designation on the labels. The present indication has therefore been given since it seems evident that these two specimens belong to the series used for the description. The holotype and allotype were collected by W. Stüber at Lake Sentani, west of Hollandia, on 13. and 18.i.1933, respectively, and are in the RMNH. The latter is called the first described ♀ by LIEFTINCK (1971b) although it was designated as allotype in the original description. The two Basel specimens may originate from the same locality and month as the holotype and allotype, as do all but one of the additional specimens listed in the original description. There is, however, no specimen labelled “Paratype” in the RMNH. Hollandia (now Jayapura), Humboldt Bay, lies in the Indonesian part of New Guinea (Irian Jaya).

Agrionoptera insignis nereis Lieftinck, 1948

(XII. C. 278)

Paratype (1): male, pinned with spread wings, distal part of the left hind leg absent, abdominal segments 5 to 6 absent, segments 7 to 10 fixed to a bristle at some distance from segment 4; **labels:** “Para, TYPUS”; “M. A. Lieftinck, leg. 1951”; “Engano, Coll”; “♂♀, Agrionoptera, insignis, nereis, Lieft., paratypes”.

Paratype (2): female, pinned with spread wings, abdomen broken between segments 3 and 4 but glued; **labels:** “Para, TYPUS”; “Engano”; “M. A. Lieftinck, leg. 1951”.

Paratype (3): male, pinned laterally, right side up, with wings bent downwards, abdomen broken between segments 4 and 5 but glued together on a bristle; **labels:** “M. A. Lieftinck, leg. 1951”; “Para, TYPUS”; “Engano”.

Paratype (4): female, pinned laterally, left side up, abdominal segment 4 absent and segments 5 to 10 fixed to a bristle at some distance from segment 3; **labels:** “M. A. Lieftinck, leg. 1951”; “Para, TYPUS”; “Engano”; “paratypes”; “Agrionoptera, insignis ♀, nereis”.

Paratype (5): female, pinned laterally, left side up, abdomen broken before and after segment 4 but all parts glued on to a bristle; **labels:** “M. A. Lieftinck, leg. 1951”; “Para, TYPUS”; “Engano”.

Paratype (6): male, pinned laterally, left side up, right fore wing partly broken, a nematoceran fly suspended between the legs; **labels:** “M. A. Lieftinck, leg. 1951”; “Para, TYPUS”; “Engano”; “Agrionoptera, insignis ♂♀, nereis Lieft.”.

Paratype (7): female, pinned laterally, left side up, tip of left fore wing absent; **labels:** “M. A. Lieftinck, leg. 1951”; “Para, TYPUS”; “Engano”.

Paratype (8): male, pinned laterally, left side up, left fore leg mostly absent, left wings and right hind wing partly broken in basal half, abdomen broken between segments 5 and 6 and between segments 7 and 8 but glued together on a bristle; **labels:** “M. A. Lieftinck, leg. 1951”; “Para, TYPUS”; “Engano”; “paratypes”; “Agrionoptera, insignis ♂, nereis”.

Further information. The type labels are pink and are the typical adhesive labels which are used in the NHMB. “M. A. Lieftinck, leg. 1951” is printed and refers to the donation of the specimens rather than to the collecting. In paratype no.2 the type label is fixed on to the locality label that can be read against the light. The folded hand-written determination labels are fragments of the beige collecting envelopes, so it seems possible that all the specimens were collected in copula or in tandem as every two adjacent specimens seem to correspond. J. K. de Jong should be regarded as the collector; he was on Engano from 21.v.–12.vii.1936. The holotype and allotype (treated as first described ♀ in Lieftinck, 1971b) were collected by J. K. de Jong at Meok on Engano on 24.v.1936 and are deposited in the RMNH, where there are no paratypes. Engano is an island in western Indonesia.

***Bironides teuchestes* Lieftinck, 1933 (XII. C. 157)**

Paratype (1): male, pinned with spread wings, left fore leg mostly absent, tip of right hind wing absent, abdomen broken off after segment 4; **labels:** “Para, TYPUS”; “N., N.Guinea”; “M. A. Lieftinck, leg. 1951”; “Bironides, ~~superstes~~, ~~Foerst.~~, teuchestes, Lft.”; “paratyp”.

Paratype (2): male, pinned with spread wings, hind edge of base of right hind wing dirty, abdomen broken off after segment 4; **labels:** “Para, TYPUS”; “N.N. Guinea 1930, Hollandia, IX. W. Stüber leg.”; “M. A. Lieftinck, leg. 1951”; “Bironides, ~~superstes~~, teuchestes, paratype”.

Further information. The type labels are the typical pink adhesive labels that are used in the NHMB, and are fixed on to white card. “M. A. Lieftinck, leg. 1951” is printed and refers to the donation of the specimen rather than to the collecting. The folded hand-written determination labels are fragments of the beige collecting envelopes. The second type label of the first paratype is similar. Both abdomens are present, one with segments 5 to 10 on a bristle and one with segments 6 to 10 on a bristle, but both are lying on the bottom of the box and cannot be associated with either of the specimens with certainty. The holotype (separated as “type” from the “paratypes” in the original description) and the allotype are from the Humboldt Bay area, collected from iv.–vi.1931 and ix.1930, respectively, both by W. Stüber, and are deposited in the RMNH where there are no paratypes. LIEFTINCK (1971b) unnecessarily designated them as lectotype and the first described ♀, respectively. For this reason, the above two specimens do not become paralectotypes. Jayapura (the former Hollandia) lies in the Indonesian part of New Guinea (Irian Jaya).

***Crocothemis striata* Lohmann, 1982**

Holotype: male, pinned laterally, left side up; **labels:** “♂”; “HOLOTYPUS”; “MADAGASCAR. Fia., Ranohira, 7.III.58 F. KEISER”; “Ranohira, 7.III.58.”; “♂ Croco, sang”; “Crocothemis, striata m. 1981, ♂ Holotypus, det.H.Lohmann 1980”.

Paratype: male, pinned laterally, left side up, right fore and right middle leg absent; **labels:** “MADAGASCAR. Fia., Ranohira, 5.III.58 F. KEISER”; “♂”; “PARATYPUS”; “Croco, sang, ♂”; “Crocothemis, striata m. 1981, ♂ Paratypus, det.H.Lohmann 1980”.

Further information. The printed type labels are red card. The first locality labels are pink and printed, as is typical for this expedition. The second locality label of the holotype and the first determination labels are folded fragments of the beige collecting envelopes. “m.” stands for “mihi” which means the determinator himself. Most parts of the determination labels are hand-written. The second paratype, from the same locality, is in the RMNH. Ranohira lies in the Province of Fianarantsoa.

***Neurothemis ramburii oceanis* Lieftinck, 1948**

(XII. C. 317)

Paratype (1): male, pinned laterally, left side up, abdomen glued on to the thorax in a twisted position; **labels:** “M. A. Lieftinck, leg. 1951”; “ENGGANO I., ult. V.–VII. 1936, Dr. J.K. de Jong”.

Paratype (2): male, pinned laterally, right side up, wings bent downwards, little damage on hind edges of all wings; **labels:** “M. A. Lieftinck, leg. 1951”; “ENGGANO I., ult. V.–VII. 1936, Dr. J.K. de Jong”; “Neurothemis, ramburi, ~~oceanis~~ oceanis, paratypes”.

Further information. The first two labels of each specimen are printed. The determination label is hand-written on a folded fragment of the beige collecting envelope

and certainly applies to both specimens; “paratypes” is framed. “ult.” may stand for the end of the respective month. *Agrionoptera insignis nereis* was described in the same publication, and so “~~nereis~~” should be regarded as a lapsus. “M. A. Lieftinck, leg. 1951” refers to the donation of the specimen rather than to the collecting. The holotype and allotype (as the first described ♀ in LIEFTINCK 1971b) were from Buahbuah on Engano Island, collected by J. K. de Jong on 6.vi.1936, and are in the RMNH where there are no paratypes. Engano (normally written this way) is an island in western Indonesia.

***Orthetrum austrosundanum* Lieftinck, 1953 (XII. C. 302)**

Holotype: male, pinned with spread wings, abdomen broken between segments 4 and 5 but glued, much glue on abdomen and ventral side of thorax; **labels:** “HOLOTYPE !”; “12.–25.8.1949 W.Sumba, Waimangura, Bühler.Sutter.Wegner”; “W. SUMBA, 18 AUG.1949”; “austrosund, *Orthetrum micromalayanum* Lieft., Det. M. A. Lieftinck 19....”.

Paratype (allotype): female, pinned laterally, left side up; **labels:** “ALLOTYPE”; “W SUMBA, Wulu, Mano, Expedition, Bühler-Sutter”; “*Orthetrum*, ♀ *austrosundanum* Lieft, ieft.”.

Further information. “HOLOTYPE !” is hand-written on dark red paper. “ALLOTYPE” is hand-written on red paper glued on to white paper. The locality label of the holotype is printed. On the holotype, the data label and the determination label are folded fragments of the beige collecting envelope and are stamped in violet and black ink, respectively. Only the locality label of the allotype, which is half hand-written and half printed, is typical for this expedition. The similar determination label of the allotype is hand-written, with “♀” upside-down and “ieft.” the remains of the stamp. The hand-written “austrosund” stands exactly over “~~micromalay~~”. *Micromalayanum* is an unpublished name and was clearly changed into *austrosundanum* before publication. The holotype was collected at Waimangura, Wai Kamburu, which is the only locality at which Odonata were collected on that day, not at Waimangura, Wulu Mano, as stated in LIEFTINCK (1953, 1971b). The collecting date of the allotype (called allotype in LIEFTINCK 1953, and the first described ♀ in LIEFTINCK 1971b) is given as 20.viii.1949 (ibidem), which may be correct although the fragment of the collecting envelope with the date is not preserved. The collectors of both specimens are A.M.R. Wegner and his mantri Amsari according the expedition report by BÜHLER & SUTTER (1951). Waimangura, Wai Kamburu, and Waimangura, Wulu Mano, are situated in the district of Waidjewa at an altitude of 440 m and 436 m, respectively, in the western part of the island of Sumba, which belongs to Indonesia.

***Orthetrum microstigma* Ris, 1911 (XII. C. 291)**

Syntype of *Orthetrum microstigma imitans*: male, pinned laterally, left side up; **labels:** “Typus”; “Pitche, II 38”; “Portugiesisch, Pitche, Guinea, A. Monard”; “~~microstigma~~ 14, *Orthetrum capense*, imitans n. sp. bsp., II-1938 1♂”; “SYNTYPUS, labelled by R. Hoess 2007”.

Further information. The type label is red paper glued on to white paper. The second label is white paper with red crosslines. The last two labels are folded fragments of the white collecting envelope. Labels 1 and 3 are typed except for “Pitche”, while labels 2 and 4 are mostly hand-written except “-193” which is stamped in violet ink. The present

status is given on the typical pink adhesive label which is used in the NHMB and is glued on to the white paper of the rest of the label. The meaning of “14” is unknown. The rank was first hand-written as “n. subsp.” and later corrected in the same writing to “n. sp.”. This specimen and one more male and one female are classified as *O. microstigma imitans* in the collection and in the card file of the NHMB, as described by SCHMIDT (1951), but in his revision of the African *Orthetrum* Pinhey (1970) states that *imitans* is nothing more than a form of *microstigma*. The locality is sometimes also written “Pitché”. The remaining 17 syntypes (including one female) are said to be in the MHNC but have been destroyed by pests. The present indication has been given in order to clarify the status of the specimen as part of a series with no holo- or lectotype. Portuguese Guinea is now Guinea-Bissau.

***Orthetrum monardi* Schmidt, 1951**

(XII. C. 292)

Syntype: male, pinned with spread wings; **labels:** “Corubal, II 1938”; “Typus”; “Monardi, *Orthetrum ~~capense~~* n. sp. ♂”; “Portugiesisch, Corubal, Guinea, A. Monard, klein”; “SYNTYPUS, labelled by R. Hoess 2007”.

Further information. The type label is typed on brick-red paper. The first label is white paper with red crosslines. The last two labels are folded fragments of the white collecting envelope. Labels 1 and 3 are hand-written, while labels 2 and 4 are mostly typed. The present status is given on the typical pink adhesive label which is used in the NHMB and is glued on to the white paper of the rest of the label. The rest of the type series (4 males) with the same data is said to be in the MHNC but has been destroyed by pests. The present indication has been given in order to clarify the status of the specimen as part of a series with no holo- or lectotype. Portuguese Guinea is now Guinea-Bissau.

***Rhodothemis mauritsi* Lohmann, 1984**

Holotype: male, pinned laterally, left side up; **labels:** “HOLOTYPUS”; “N.N. Guinea 1930, Hollandia, XI–XII., W. Stüber leg.”; “*Rhodothemis, rufa* ♂”; “*Rhodothemis, mauritsi* Lohm., ♂ HOLOTYPUS, det.H.Lohmann 1983”.

Paratype (1): female, pinned laterally, left side up, right middle leg absent; **labels:** “M. A. Lieftinck, leg. 1951”; “PARATYPUS”; “N.N. Guinea 1930, Hollandia, XI–XII., W. Stüber leg.”; “♀, *Rhodothemis, rufa*”; “*Rhodothemis, mauritsi* Lohm., ♀ Paratypus, det.H.Lohmann 1983”.

Paratype (2): male, pinned laterally, left side up; **labels:** “PARATYPUS”; “M. A. Lieftinck, leg. 1951”; “N.N. Guinea 1930, Hollandia, XI–XII., W. Stüber leg.”; “♂, *Rhodothemis, rufa*”; “*Rhodothemis, mauritsi* Lohm., ♂ Paratypus, det.H.Lohmann 1983”.

Paratype (3): female, pinned laterally, left side up, left middle leg absent; **labels:** “PARATYPUS”; “M. A. Lieftinck, leg. 1951”; “♀, *Rhodothemis, rufa*”; “*Rhodothemis, mauritsi* Lohm., ♀ Paratypus, det.H.Lohmann 1983”.

Paratype (4): male, pinned laterally, left side up; **labels:** “PARATYPUS”; “M. A. Lieftinck, leg. 1951”; “N.N. Guinea 1930, Hollandia, XI–XII., W. Stüber leg.”; “*Rhodothemis, mauritsi* Lohm., ♂ Paratypus, det.H.Lohmann 1983”; “♂, *Rhodothemis, rufa*”.

Paratype (5): male, pinned laterally, left side up, abdomen broken between segments 4 and 5 but glued together; **labels:** “PARATYPUS”; “M. A. Lieftinck, leg. 1951”; “N.N. Guinea 1931, Hollandia, I–II., W. Stüber leg.”; “♀, *Rhodothemis, rufa*”; “*Rhodothemis, mauritsi* Lohm., ♂ Paratypus, det.H.Lohmann 1983”.

Further information. The type labels are printed on red paper. The mostly printed locality labels are on whitish paper (glued on to a fragment of the beige collecting envelope in the holotype and paratypes nos.2 and 4) and are typical for the collector. The

“rufa” labels are folded fragments of the beige collecting envelopes and are hand-written (probably by M. A. Liefstinck). The red framed designation labels are mostly written in black on white paper, except for the type status which is in red. “M. A. Liefstinck, leg. 1951” is printed and refers to the donation of the specimen rather than to the collecting. It is not known why the sex on the envelope fragment of paratype no.5 is wrong. Jayapura (the former Hollandia) lies in the Indonesian part of New Guinea (Irian Jaya).

***Rhodothemis nigripes* Lohmann, 1984**

Holotype: male, pinned laterally, left side up, right hind leg absent, vesica spermalis glued in the ring of label 5; **labels:** “HOLOTYPUS”; “W SUMBA, BondoKodi, Expedition, Bühler-Sutter”; “*Rhodothemis, nigripes* Lohm., ♂ HOLOTYPUS, det.H.Lohmann, 1981”; “*Rhodothemis* Einziges, rufa (Rb.) ♂ Expl, det.M.A.L. 1951, *Rhodothemis rufa* (Rb.), Einziges Ex”; “CAUTION, Vesica, spermalis, (Prophallus), O ->, VORSICHT”.

Further information. The type label is printed on red paper. The locality label, which is half hand-written and half printed, is typical for this expedition. The blue framed designation label is mostly hand-written, and “HOLOTYPUS” is hand-written black and red. Label 4 is a folded fragment of the beige collecting envelope and is hand-written. Label 5 is hand-written on white card, “CAUTION” and “VORSICHT” and the arrow and the ring in red, these all arranged vertically. The envelope fragment with the date stamp has not been preserved but the locality was collected from 31.vii.–12.viii.1949. The determination as *R. rufa* was made by M. A. Liefstinck and this is the specimen listed in his paper of 1953. Normally no collector is mentioned on the collecting envelopes, but A.M.R. Wegner, his mantri Amsari and E. Sutter have certainly collected most of the Odonata material at this locality. Bondo Kodi is situated in the district of Kodi at an altitude of 10 m in the western part of the island Sumba, which belongs to Indonesia.

***Rhyothemis phyllis ixias* Liefstinck, 1953**

(XII. C. 342)

Holotype: male, pinned with spread wings, right middle leg absent, left middle leg broken off but present, abdomen broken between segments 4 and 5 but glued; **labels:** “O SUMBA, Melolo, Expedition, Bühler-Sutter”; “HOLOTYPUS, Rh. phyllis subspl., ixias, det. M. A. Liefstinck 1952”.

Paratype (allotype): female, pinned with spread wings, abdomen broken between segments 6 and 7 but still connected; **labels:** “O SUMBA, Melolo, Expedition, Bühler-Sutter”; “ALLOTYPE”; “R. phyllis”.

Further information. The locality labels, which are half hand-written and half printed, are typical for this expedition. The type labels or the parts in question are hand-written on dark red paper which is glued on to a fragment of the beige collecting envelope. The hand-written determination labels are folded fragments of the beige collecting envelopes. LIEFTINCK (1971b) lists the paratype as the first described ♀, although in the original description he called it allotype. The envelope fragments with the date stamps have not been preserved but the locality was collected from 24.v.–8.vi.1949. Normally no collector is mentioned on the collecting envelopes, but A.M.R. Wegner, his mantri Amsari and E. Sutter have certainly collected most of the Odonata material at this locality. Melolo is situated in the district of Melolo at an altitude of 10 m in the eastern part of the island Sumba, which belongs to Indonesia.

Rhyothemis regia thisbe Lieftinck, 1953 (XII. C. 346)

Holotype: male, pinned with spread wings, abdomen broken between segments 4 and 5 but glued together twisted around the axis, lateral holes in thorax from earlier lateral pinning; **labels:** "HOLOTYPE"; "O SUMBA, Rendeh-, wai, Expedition, Bühler-Sutter"; "Rhyothemis regia Br. ssp. thisbe, Lieft., Det. M. A. Lieftinck 1952".

Paratype (allotype): female, pinned with spread wings, hind edges of hind wings with some damage, lateral holes in thorax from earlier lateral pinning; **labels:** "ALLOT"; "O SUMBA, Rendeh-, wai, Expedition, Bühler-Sutter"; "ssp. thisbe Lft., Rhyothemis regia Br., Det. M. A. Lieftinck 1952".

Further information. The type labels are hand-written on dark red paper, and that of the allotype is glued on to a fragment of the beige collecting envelope. The locality labels, which are half printed and half hand-written, are the typical standard labels for this expedition. The determination labels are stamped and hand-written, and are folded fragments of the beige collecting envelopes. The envelope fragments with the date stamps have not been preserved, but the locality was collected from 11.–15.vi.1949. Normally no collector is mentioned on the collecting envelopes, but A.M.R. Wegner, his mantri Amsari and E. Sutter have certainly collected most of the Odonata material at this locality. LIEFTINCK (1971b) lists the paratype as the first described ♀ although it was designated as allotype in the original description. Rende Wai is situated in the district of Rende-Mangili at an altitude of 100 m in the eastern part of the island of Sumba, which belongs to Indonesia.

Rhyothemis severini Ris, 1913 (XII. C. 68)

Holotype: male, pinned with spread wings, abdomen broken before and after segment 3 but glued, head of pin absent; **labels:** "a, Indochina"; "Rhyothemis, nova spec., Det. Dr. F. Ris"; "TYPUS"; "HOLOTYPE, labelled by R. Hoess 2007".

Further information. The first two labels are hand-written and framed in black, and the other two are printed. The "TYPUS" label is rose-coloured and glued on to a white card. "HOLOTYPUS" is the typical red card used in the NHMB and is glued on to the white paper of the rest of the label. The "a" refers to the list of localities on the species card in the card file of the NHMB. In the original description the right wings are figured although oriented the other way round. The description also gives 1899 as the year of collection. The present indication has been given in order to clarify the status of this specimen as being the only one used for description.

Tramea aquila Lieftinck, 1942 (XII. C. 336)

Paratype (1): male, pinned laterally, left side up, some old mould on the ventral side; **labels:** "M. A. Lieftinck, leg. 1951"; "Bewani-, hills, Pauwasi, Coll. river"; "Tramea, aquila, Lft., ♂, paratype".

Paratype (2): female, pinned laterally, left side up, abdomen broken between segments 4 and 5 and between segments 6 and 7 but glued together with a pin inside, segments 7 to 10 twisted around their axes; **labels:** "M. A. Lieftinck, leg. 1951"; "Bewani, Pauwasi, river, Coll."; "Tramea, ♀ aquila, Lft."; "PARATYPE, labelled by R. Hoess 2007".

Further information. "M. A. Lieftinck, leg. 1951" is printed and refers to the donation of the specimen rather than to the collecting. The locality labels are hand-written on

standard collecting labels. The determination labels are hand-written on fragments of the white collecting envelopes. "PARALLOTYPE" is the typical red card that is used in the NHMB, and is glued on to the white paper of the rest of the label. According to LIEFTINCK (1971b), the holotype and allotype are from Southern Bewani Hills, upper course of Tami River (5 days' walk S. of Hollandia (now Jayapura)), Ampas district, 200–300 m, Pauwasi River, from 7.–9.vi.1939, collected by W. Stüber, and are in the RMNH, where there are no paratypes. This information should also apply to the above paratypes. The Pauwasi River lies in the Indonesian part of New Guinea (Irian Jaya). Paratype no.2 was listed as "Parallotypus" only on the card file of the NHMB and nothing was hand-written on the labels, but as it seems clear that it is part of the type series and is the only specimen of this sex in the collection of the NHMB, the present indication has been made.

Zygonyx elisabethae Lieftinck, 1963 (XII. C. 435)

Holotype: male, pinned laterally, left side up, abdomen broken between segments 4 and 5 and between segments 6 and 7 but glued together on a pin inside, tarsi of right fore leg and left middle leg (one glued on to a small piece of card) in a cellophane capsule on a separate pin next to the specimen; **labels:** "♂"; "Z. elisabethae, sp.n., Holotype, det. MA. Lieftinck, '62"; "MADAGASCAR.D.-S., Mtge. d'Ambre, 23.V.58 F. KEISER"; "Mtge. d'Ambre, 23.V.58, Zygonyx elisabethae, sp.n., HOLOTYPE".

Paratype (1) (allotype): female, pinned laterally, left side up; **labels:** "♀"; "ALLO-, TYPUS"; "MADAGASCAR.D.-S., Mtge. d'Ambre, 21.V.58 F. KEISER"; "♀ Zygonyx, elisabethae sp.n., ALLOTYPE"; "Mtge. d'Ambre, 21.V.58".

Paratype (2): male, pinned laterally, left side up; **labels:** "♂"; "PARA-, TYPUS"; "MADAGASCAR.D.-S., Joffreville, 8.V.58 F. KEISER"; "Joffreville 8.V.58., PARA, ~~HOLOTYPE~~, Zygonyx elisabethae, sp.n."; "Zygonyx ♂".

Paratype (3): male, pinned laterally, left side up, abdomen broken between segments 4 and 5 but glued together with a pin inside; **labels:** "♂"; "PARA-, TYPUS"; "MADAGASCAR.D.-S., Joffreville, 22.V.58 F. KEISER"; "Joffreville, 22.V.58., paratype"; "Zygonyx, elisabethae sp.n.".

Further information. The sex and the first locality labels are printed, the latter on pink paper as is typical for this expedition. The first holotype label is hand-written on brick-red card except for the status which is printed. The allotype label is printed on yellow paper. The paratype labels are printed on white card. The other labels are folded fragments of the beige collecting envelopes and are hand-written. One more male paratype from the Province of Antananarivo, Ampefy, Chûte de la Lily, 26.iii.1958, is in the RMNH. LIEFTINCK (1971b) gives the collector as "F. Keiser *et al.*", but it is not certain whether Keiser's wife Elisabeth helped with the collecting, although this was stated in the original description (she is there called "Lili"). The day of collection of the holotype and allotype are mixed up in LIEFTINCK (1963, 1971b). Montagne d'Ambre and Joffreville lie in the Province of Antsiranana (former Diégo-Suarez).

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