

# Type specimens of Phasmida in the Nationaal Natuurhistorisch Museum, Leiden (Insecta: Phasmida)

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Type specimens of 75 taxa of Phasmida have been identified in the Nationaal Natuurhistorisch Museum, Leiden. The taxa are listed alphabetically by species, with the number of specimens, sex and locality data. The material includes species described by Bragg, Bragg & Chan, Günther, de Haan, Kirby, Lichtenstein, Olivier, and Stoll. The type of pin used was found to be particularly useful as an aid to identification of older material. There are a number of omissions and discrepancies in the published data, these are clarified. Some background information on the original publications and the described material is included.

## Introduction

The Nationaal Natuurhistorisch Museum at Leiden (RMNH) contains type specimens of 73 species, and two subspecies, of Phasmida. These include all the type specimens of de Haan (1842), some of Stoll's (1788) specimens which were purchased by the museum, and a number of species which have been described by Günther (1934, 1943, 1944), or by myself (1993, 1994, 1995). In addition there are three species described by de Haan, under names previously published by other authors, which were subsequently given replacement names by Kirby (1904); as Kirby also indicated that there were specimens in the British Museum (BMNH), the BMNH and RMNH specimens must be treated as syntypes. The species described by Stoll and de Haan are a significant proportion of the phasmids described prior to 1850 so the RMNH material is an important historical collection. In addition, a large proportion of the type material is from Borneo, Sumatra, or Java, making the collection important for anyone studying South East Asian phasmids.

Until 1993 the type specimens in the collection were housed with the main collection and few of de Haan's or Stoll's specimens were marked; many did not have any label on the pins, only old, handwritten cabinet labels above the specimens. In some cases specimens have old circular handwritten locality labels, and some have printed data labels which may have been added at a later date. In older publications it was rare to state how many specimens were used for the description, so the number of type specimens is generally unknown. Type material has been identified and is now housed in 15 drawers, separate from the main collection.

## Methods

All of Stoll's species, and many of de Haan's were illustrated by the authors. In many cases the illustrated individuals were easily identified, in other cases only sing-

le specimens were present in the collection. Once illustrated and labelled specimens had been identified, others of the same species were examined. The pins proved to be of particular value in identification of the old specimens, they have a characteristic narrowing below the head (fig. 1) which is not seen in more modern pins (figs 2-5).

Emphasis was on establishing material which was definitely type material, specimens of a suitable age but showing significant variation from the published description have generally not been treated as types. Unless there is evidence to the contrary, specimens of the same species, which conform to the description, and have the same type of pin as one known to be a type, have been treated as syntypes. There is the possibility that some syntypes may have been overlooked because the variation was not mentioned in the original publication. There may also be types of species described by other early authors which were subsequently purchased by the museum.

With the exception of *Phasma (Bacteria) cubaense* de Haan, specimens of all the species described by de Haan have been located. This species was described, very briefly, in a footnote (de Haan, 1842: 101), there are no specimens labelled with this name and the description was of no help in the location of the specimens. At least one specimen of another species, a nymph of *Phasma (Pachymorpha) coronatum* de Haan, is known to be missing although the adult type specimens are present in the collection.

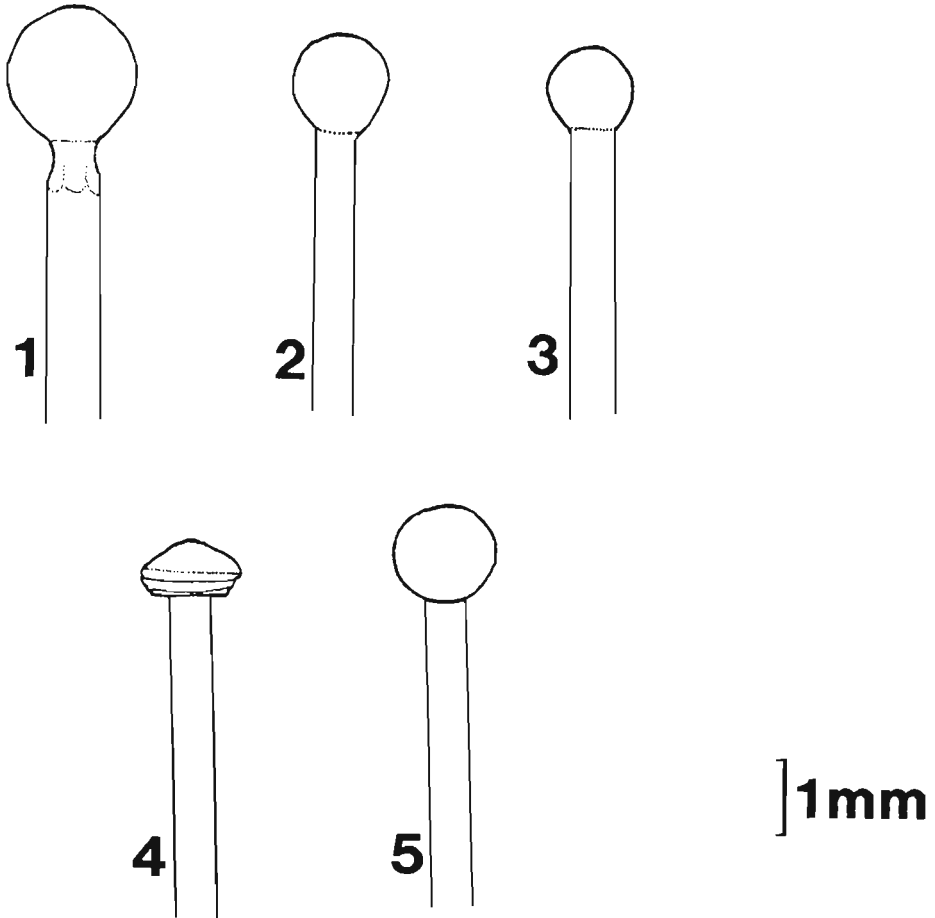
Stoll's material presented particular problems: the number and identity of the species purchased by RMNH was not known. Examination of auction catalogues confirmed that some specimens had been purchased but gave no indication of which species or the number of specimens of phasmids. Fortunately in many cases the positioning of the legs in illustrations and of the specimens are in agreement; Stoll seems to have illustrated the specimens in their actual position, without changing the arrangement of the legs. However there are species described by Stoll which are present in the collection but are clearly not the illustrated specimens; it is possible that these may be type specimens but because there is no clear evidence that they came from Stoll's collection, they have not been treated as types. Types of five species described by Stoll have been found in the collection.

The selection of lectotypes was considered, however this is felt to be inappropriate without redescription of the material.

### Background information and discrepancies

Stoll's work on phasmids was published in two parts; the first part (pages 1-56 and plates 1-18) was published in 1788, the second part was published posthumously in 1813. Binomial names were not used until the index which appeared in the second part; although the second part of the work was edited by Houttuyn, the specific names are generally attributed to Stoll. Many of the species described by Stoll were named by other authors before the publication of the index so many of Stoll's names for species described in 1788 are junior objective synonyms (Bragg, 1995c). Three of Stoll's species in the RMNH collection were named by Olivier (1792) and one of these was also named by Lichtenstein (1796).

Although for the previous 20 years most authors had been treating Phasmidae as a distinct family containing several genera, de Haan described all his species under the generic *Phasma*. However, with the exception of five species, he also assigned each to a subgenus; so in effect he was using *Phasma* as a family name.



Figs 1-5, entomological pins: 1. From one of de Haan's specimens, showing the distinctive narrowing just below the head; 2. From a specimen collected by Nieuwenhuis, 1894; 3. From a specimen collected by Shelford, 1900; 4. Modern (metal head), manufactured in England; 5. Modern (nylon head), manufactured in Austria.

There is some confusion with the illustrations and names in de Haan's work, the names used in the text and on the illustrations do not always agree. The caption to plate XIII figure 1 states female *Phasma crawangense* while the name used in the text is *Phasma (Bacteria) nematodes (crawangense)*; this is clearly a different species to the males which were described as *Phasma (Bacteria) nematodes*, in fact the female belongs in a different family to the males. A similar situation exists with plate XIII, figure 6, *Phasma sumatranum*, the name used in the text is *Phasma (Bacteria) nodosum (sumatranum)*, although in this case both species are in the same family. It seems likely that de Haan was unsure about the status of these species, they are the only examples of de Haan describing subspecies; most subsequent authors have treated them as distinct species. There is conflicting information in the captions and text references to some of the figures on plate XV; in the descriptions *P. (Necroschia) spiniceps* and *P. (Xerode-*

rus) *diacis* both refer to figure 2, while *P. (Necrosia) diacanthos* refers to figure 4. Comparison of the text, specimens and illustrations shows: figure 2 is correctly labelled as *P. (Xeroderus) diacis*; figure 4 shows *P. (Necrosia) spiniceps* although it is labelled *P. diacantha*; and *P. (Necrosia) diacanthos* is not illustrated. The confusion is presumably a result of the similarity in the names *diacis* and *diacanthos*, combined with the text of *spiniceps* being immediately before that of *diacanthos*.

Some specimens described by de Haan have labels which differ from the published locality, for example Batang Singalang is given as a locality for several species but the specimens are labelled Padang; this apparent discrepancy is explained by the fact that Batang Singalang is in the Padang district of Sumatra.

Most of the species described by Günther are based on material collected by Dr Nieuwenhuis' expeditions to Kalimantan in 1894-1898. Although there were several separate expeditions, all specimens have the same type of printed labels which read "Borneo exped. Dr Nieuwenhuis 1894", in some cases the year has been changed by hand and in most cases a handwritten locality has been added. Some specimens with unaltered "1894" labels are marked with localities not visited by Dr Nieuwenhuis until several years later so it is clear that in many cases when specimens were collected after 1894 the year was not changed. One locality deserves a specific mention because of the number of different spellings used for the river and village (S 1° 17' E 114° 27'), on Nieuwenhuis' data labels and maps Bloe Oe, Bloe-oe, Bloeoe and Bloeöe are used; modern maps appear to use Blu or Bluu.

There have been a number of errors in Günther's publications. Amongst the species described by Günther there is one with no published locality or data, one with a misspelt locality and one with the wrong number of specimens recorded; the correct data is included in the following list.

The RMNH collection contains a number of specimens of Aschiphasmatinae which were named and labelled as type specimens of new species by Herbert Klante in 1965, however none of the names appear to have been published so they are not regarded as type material. I am currently preparing descriptions of these, and other phasmids from the RMNH collection.

### List of type specimens

The following is a complete list of type material of Phasmida known to be in the RMNH collection (up to October 1995). Names are listed alphabetically by species; the names are as originally published, "ü" has not been changed to "ue" and hyphens have been retained. The two subspecies described by Günther are listed alphabetically by species, not by subspecies. Illustrations are indicated in an abbreviated format, e.g. plate XXVI, figure 1 is shown as pl. 26.1. The data given in the list is an amalgamation of the data from the original description and data on the specimens; in a number of cases the collector is named on the label but was not mentioned in the original publication. Locality data has been updated to include the name of the country and modern place name; where the name is significantly different the original names have been included in square brackets.

Objective synonyms published by Stoll and Lichtenstein are included. Where applicable, the presence of additional type material in other collections is indicated

using the standard codens of Arnett, Samuelson and Nishida (1993): BMKB, Brunei Museum, Kota Batu, Brunei; BMNH, Natural History Museum, London, UK; FRCS, Forest Research Centre, Sepilok, Sabah, Malaysia; NHMN, Nottingham Natural History Museum, Nottingham, UK; NHMW, Naturhistorisches Museum, Wien, Austria; NMSC, National University of Singapore, Singapore; OXUM, Oxford University Museum, Oxford, UK; RMNH, Nationaal Natuurhistorische Museum, Leiden, Netherlands; SMTD, Staatliches Museum für Tierkunde, Dresden, Germany; in addition DCMD is used to refer to Derby City Museum, Derby, UK.

The current valid name is given for each species; these are based on published literature and some are undoubtedly wrongly assigned. For the older (pre-1900) species the valid genus is generally that to which they were assigned by Brunner von Wattenwyl (1907) and Redtenbacher (1906 & 1908); few of the species have been mentioned in the literature since that time. The names have been corrected to take account of generic names which are no longer valid.

*Phasma (Necroschia) acanthocephalum* de Haan, 1842: 118. Holotype: ♂, Kalimantan, Pontianak. Valid name.— *Paradiacantha acanthocephala* (de Haan).

*Phasma (Ascephasma) affine* de Haan, 1842: 115. Syntypes: ♂, ♀, Java. Valid name.— *Presbistus affinis* (de Haan).

*Phasma ambiguam* Stoll 1813: 74, pl. 25.98 (♂). Holotype: ♂. Locality unknown. This species is now known to be from South America. Valid name.— *Prexaspes ambiguus* (Stoll).

*Phasma arumatia* - see *Mantis baculis*.

*Mantis baculis* Olivier, 1792: 638. Described by Stoll, 1788: 41, pl. 13.51 (♀). [*Phasma arumatia* Stoll, 1813: 76. Objective synonym]. Holotype: ♀, Suriname. Valid name.— *Bacteria baculis* (Olivier).

*Phasma bicornis* - see *Mantis keratoskeleton*.

*Phasma (Haplopus) bicuspidatum* de Haan, 1842: 128. Holotype: ♀, Locality unknown. This species is probably from the West Indies or continental South America. Valid name.— *Aplopus bicuspidatus* (de Haan).

*Phasma (Acanthoderus) bifoliatum* de Haan, 1842: 136, pl. 14.2 (♀). Holotype: ♀, Sumatra, Batang Singalang, Müller. Valid name.— *Prisomera bifoliata* (de Haan).

*Phasma bioculata* Stoll 1813: 61, pl. 20.76 (♀). Syntypes: 2 ♀♀, ♂ (unlabelled), ♂ Suriname, ♂ Brazil. Stoll's description states "Ambon" which is in Indonesia, however the illustrated species is clearly South American. The confusion with the localities means it is possible that not all of these five specimens are types; all are clearly from the appropriate period. Valid name.— *Pseudophasma phthisicum* (Linnaeus), synonymised by Kirby, 1904: 412.

*Phasma (Haplopus) bituberculatum* de Haan, 1842: 128. Holotype: ♀, Locality unknown. This species is probably from West Indies or continental South America. Valid name.— *Aplopus bituberculatus* (de Haan).

*Phasma bojei* de Haan, 1842: 125, pl. 13.3 (♀). Holotype: ♀, Sulawesi, Ujung Pandang [Macassar]. Müller. Valid name.— *Graeffea bojei* (de Haan).

*Lopaphus borneensis* Bragg, 1995b: 106, figs 1 (♂, ♀), 2 (egg). Holotype ♀, Central East Borneo [Midden O-Borneo], 12.x.1925, H.C. Siebers. Paratypes: 1♂, Sabah, 24 km on road Keningau-Kimanis (N. side), 1350 m, 116°03'E 5°27'N, 19.xi.1987,

- J. Huisman & R. de Jong; 4 ♀♀, Central East Borneo, 28.ix.1925, 28.ix.1925, 02.x.1925, 02-11.x.1925, H.C. Siebers; 7 ♂♂, Central East Borneo, 07.ix.1925, 28.ix.1925, 30.ix.1925, 02.x.1925, 02.x.1925, 02-11.x.1925, 11.x.1925, H.C. Siebers. There are other paratypes in the collections of P.E. Bragg and C.L. Chan. Valid name.— *Lopaphus borneensis* Bragg.
- Phasma brachypterum* de Haan, 1842: 125, pl. 13.2 (♀). Holotype: ♀, Sumatra, Batang Singalang, Müller. Valid name.— *Lopaphus brachypterus* (de Haan).
- Kalocorinnis calopteryx* Günther, 1944: 78, fig 5 (♀). Holotype ♀, North Borneo; Paratype: ♂, Peninsular Malaysia, Selangor, Bukit Kutu, 1100 m. 13.iii.1931, H.M. Pendlebury. Günther states there is another ♀ paratype in SMTD. Valid name.— *Kalocorinnis pulchella* (de Haan). Synonymised by Bragg, 1995: 46.
- Phasma (Bacteria) canna* de Haan, 1842: 101. Syntypes: ♂, ♀, South Africa, Cape of Good Hope [Promont. Bonae Spei]. Valid name.— *Prisomera canna* (de Haan).
- Phasma (Phyllium) celebicum* de Haan, 1842: 111. Holotype: ♀, Sulawesi [Celebes], Tondano, Forsten. Valid name.— *Phyllium celebicum* (de Haan).
- Orthonecrosia coeruleomaculata* Günther, 1943: 166. Holotype ♀, Kalimantan, Sungai Dingas, 30.ix.1894. Valid name.— *Orthonecrosia coeruleomaculata* Günther.
- Phasma conocephalum* de Haan, 1842: 124, pl. 12.3 (♀). Holotype: ♀ Sumatra, Batang Singalang, Müller. Valid name.— *Loxopsis conocephala* (de Haan).
- Phasma cornutum* - see *Mantis keratoskeleton*.
- Phasma (Pachymorpha) coronatum* de Haan, 1842: 137, pl. 14.4 (♂), 14.5 (♀). Syntypes: ♀, Amboina; ♂, Java. A male nymph mentioned by de Haan has not been located. Valid name.— *Pylaemenes coronatus* (de Haan).
- Phasma crawangense* de Haan, 1842: 132, pl. 13.1 (♀). Holotype ♀, Java, Bogor [Buitenzorg]. "Obtained through Kuhl & van Hasselt". Described as *Phasma (Bacteria) nematodes (crawangense)* in the text but referred to as *P. crawangense* in the caption to plate 13. This is distinct from the males which were described as *Phasma (Bacteria) nematodes*. Valid name.— *Crausius crawangense* (de Haan).
- Paradiacantha (?) croceomaculata* Günther, 1943: 160. Syntypes: ♀, ♀ nymph, Kalimantan, Mahakam, 1894. Valid name.— *Paradiacantha croceomaculata* Günther.
- Phasma (Bacteria) cubaense* de Haan, 1842: 101. Locality not stated - presumably Cuba. No specimens have been located although both male and female syntypes should be present. Valid name.— *Pseudobacteria cubaense* (de Haan).
- Lonchodes dajak* Günther, 1943: 153. Syntypes: 2 ♀♀ West Borneo, Sambas, Dr Bosch, 1891. Günther's description gives the locality as "Jambas". This is either a printing error or Günther mis-read the handwritten label. Valid name.— *Lonchodes dajak* Günther.
- Phasma (Necrosia) diacanthos* de Haan, 1842: 119. Holotype: ♀, Kalimantan, Pontianak. This species was not illustrated; the reference in the text and the caption to pl. 15.4 are in error. Valid name.— *Diacanthoidea diacanthos* (de Haan).
- Phasma (Xeroderus) diacis* de Haan, 1842: 117, pl. 15.2 (♂). Holotype: ♂, Sumatra, Batang Singalang. Valid name.— *Neoclides diacis* (de Haan).
- Phasma (Cladoxerus) diardi* de Haan, 1842: 131, pl. 12.6 (♂). Holotype: ♂, Kalimantan, Pontianak, C. Diard. Valid name.— *Diardia diardi* (de Haan).
- Phasma (Ascephasma) flavicorne* de Haan, 1842: 114. Syntypes: ♀, ♂, Kalimantan, Pontianak. Measurements are only given for the female; only the male is labelled "Pontianak". Valid name.— *Presbistus flavicornis* (de Haan).

- Necrosia flavogranulosa* Günther, 1943: 164. Holotype: ♀, Kalimantan, Mahakam, Bloe Oe, ii.1894. Valid name.— *Necrosia flavogranulosa* Günther.
- Nearchus foliatus* Bragg, 1995e: 274, figs. 1-5 (♀). Holotype ♀, Kalimantan [Midden O-Borneo], H.C. Siebers, 21.viii.1925. Valid name.— *Nearchus foliatus* Bragg.
- Phasma (Ascephasma) forstenii* de Haan, 1842: 114. Syntypes: 2 ♂♂, ♀, Sulawesi [Celebes], Tondano, Forsten. Valid name.— *Orthomeria forstenii* (de Haan). The female is a different species; it is badly faded but may be a small specimen of *Orthomeria catadromus* (Westwood).
- Phasma (Necrosia) fusco-annulatum* de Haan, 1842: 119. Syntypes: 2 ♂♂, Borneo, Kalimantan, Barito River [Doeson]. Valid name.— *Necrosia fuscoannulata* (de Haan).
- Phasma galacpterum* de Haan, 1842: 127, pl. 13.4 (♀), 13.5 (♂). Syntypes: 2 ♂♂, ♀, Sumatra, Batang Singalang. Valid name.— *Galactea galacptera* (de Haan).
- Phasma (Necrosia) gulare* de Haan, 1842: 122. Syntypes: 2 ♀♀, Java, Krawang. Valid name.— *Sipylodea gularis* (de Haan).
- Necrosia haanii* Kirby 1904: 376. Syntype: ♀, Kalimantan, Pontianak, Diard. This name was published as a replacement for *Phasma (Necrosia) punctatum* var. a. de Haan, 1842: 121 (not Gray, 1835). Kirby refers to material in BMNH. Valid name.— *Necrosia haanii* Kirby.
- Lonchodes harmani* Bragg & Chan, 1993: 176. Paratype: ♀, Sabah, Kinabalu Park, 1600m. 30.vii.1990 P.E. Bragg (PEB-558); eggs, same data (PEB-553). Holotype BMNH, other paratypes: FRCS, BMKB, NHMN, NHMW, NMSC, OXUM, DCMD, Mt Kinabalu Park, collections of P.E. Bragg, C.L. Chan, and A.J.E. Harman. Valid name.— *Lonchodes harmani* Bragg & Chan.
- Necrosia horsfieldii* Kirby 1904: 376. Syntype: ♂, Java. This name was published as a replacement for *Phasma (Necrosia) punctatum* var. c. de Haan, 1842: 122 (not Gray, 1835). Kirby refers to material in BMNH. Valid name.— *Necrosia horsfieldii* Kirby.
- Phasma (Prisopus) horstokkii* de Haan, 1842: 113, pl. 12.1 (♀). Holotype: ♀, South Africa, Cape of Good Hope [Promont. Bonae Spei]. Horstok. The locality recorded for this specimen is clearly wrong, the genus is limited to Central and South America, and this species has been recorded from Guyana and French Guiana (Redtenbacher, 1906: 155). Valid name.— *Prisopus horstokkii* (de Haan).
- Leprocaulus insularis talaudiensis* Günther, 1934: 82. Syntypes: 5 ♀♀, ♂, Tauland, Lüaeng Silababae, v.1926, Erie. This was described as a new subspecies of *Dixipus insularis* Kirby, 1896: 460. Valid name.— *Leprocaulinus insularis talaudiensis* (Günther).
- Phasma (Ascephasma) iridescens* de Haan, 1842: 116. Holotype: ♂, Sumatra, Padang. Valid name.— *Presbistus iridescens* (de Haan).
- Haaniella jacobsoni* Günther, 1944: 73, figs 3 (♂) & 4 (♀). Holotype: ♂, Sumatra, Simalur, Sinabang, iii.1913, E. Jacobson; Paratype: ♀, Sumatra, Simalur, Sinabang, 28.iv.1916, S.A.J. Voorthuys. There is another ♂ paratype in SMTD. Valid name.— *Haaniella jacobsoni* Günther.
- Phasma (Acanthoderus) japonicum* de Haan, 1842: 135, pl. 12.4 (♀). Syntypes: 2 ♀♀. Japan, Decima. "From Bürger". One specimen is labelled: "Japan, v. Siebold", if the label is correct, this specimen may not be a type specimen; the other speci-

- men is unlabelled. Both are clearly the same species and of a similar age. Valid name.— *Neohirasea japonica* (de Haan).
- Phasma (Bacillus) javanum* de Haan, 1842: 138, pl. 15.8 (♀). Holotype: ♀, Java, Krakwang. Müller. Valid name.— *Gratidia javanica* (de Haan) is the name used by Brunner (1907: 227) but the genus is best known from Africa so it is likely that either the locality is wrong, or Brunner was wrong to assign this to *Gratidia*.
- Mantis keratosqueleton* Olivier, 1792: 639. Described by Stoll, 1788: 46, pl. 15.57 (♀). [*Phasma cornutum* Lichtenstein, 1796: 78. Objective synonym]; [*Phasma bicornis* Stoll, 1813: 76. Objective synonym]. Syntypes: 2 ♀♀, ♀ nymph, Suriname. Valid name.— *Bacteria keratosqueleton* (Olivier).
- Phasma (Xeroderus) laceratum* de Haan, 1842: 116, pl. 15.1 (♂). Syntypes: 2 ♂♂, Sumatra, Batang Singalang. Valid name.— *Neoclides laceratus* (de Haan).
- Phasma (Bacillus) longiscaphum* de Haan, 1842: 101. Syntypes: 2 ♀♀, South Africa, Cape of Good Hope [Promont. Bonae Spei], Horstok. One specimen is labelled "Pr. b. Sp. Horstok". Valid name.— *Phalces longiscaphus* (de Haan).
- Phasma macklottii* de Haan, 1842: 126, pl. 11.1 (♀), 11.2 (♂). Syntypes: 2 ♀♀, ♂, Java, Bogor [Buitenzorg], C. Reinwardt. Valid name.— *Orxines macklottii* (de Haan).
- Phasma (Heteropteryx) mülleri* de Haan, 1842: 108, pl. 11.4 (♂), 11.5 (♀). Syntypes: ♀, 2 ♂♂, ♂ nymph, ♀ nymph, 1 nymph of undetermined sex; variation b: 2 ♀♀; Sumatra, Batang Singalang. Valid name.— In his revision of the genus *Haaniella* Kirby, Günther (1944: 72) lists these as *Haaniella muelleri muelleri* (de Haan) and *Haaniella muelleri* var. b.
- Haaniella mülleri simplex* Günther, 1944: 72, figure 1 (♀). Holotype: ♀, Sumatra, Tebing-Tinggi, F.J. Weynman. This was described as a subspecies of *Phasma (Heteropteryx) mülleri* de Haan. Valid name.— *Haaniella muelleri simplex* Günther.
- Apora neglecta* Günther, 1943: 152. Holotype: ♂, Kalimantan, Mahakam, Long Bloe Oe, 1899. Paratypes: ♀, Kalimantan, Mahakam, Long Bloe Oe, 1899; ♀ Nanga Raven (?), v.1894, Büttikofer. Valid name.— *Echinoclonia neglecta* (Günther).
- Phasma (Bacteria) nematodes* de Haan, 1842: 132, pl. 11.6 (♂). Syntypes: 3 ♂♂, Java, Bogor [Buitenzorg], "Obtained through Kuhl & van Hasselt". Syntypes: 3 ♂♂ small variety, same data. Valid name.— *Baculum nematodes* (de Haan). The two "varieties" appear to be two distinct species, the larger variety is the one generally treated as *Baculum nematodes* (de Haan).
- Phasma (Bacteria) nematodes (crawangense)* - see *Phasma crawangense*.
- Orthonecroschia nieuwenhuisi* Günther, 1943: 167. Syntypes: ♀, Kalimantan, Mahakam, 1894; ♀ Bloe Oe, 21.ix.1894. Valid name.— *Orthonecroschia nieuwenhuisi* Günther.
- Phenacephorus nieuwenhuisi* Bragg, 1994: 237, figs 2, 11, 12, 19 (♀); figs 3, 16, 22 (♂) figs 6 & 7 (egg). Holotype: ♀, Kalimantan, Mahakam, 1894, Borneo expedition of Dr Nieuwenhuis. Paratypes: 2 ♂♂, data as holotype; ♀, Kalimantan, Long Bloe-oe, xi.1898, Borneo expedition of Dr Nieuwenhuis. Valid name.— *Phenacephorus nieuwenhuisi* Bragg.
- Phasma (Necroschia) nigro-annulatum* de Haan, 1842: 119. Holotype: ♂. Kalimantan, Pontianak, Diard. Valid name.— *Sipyloidea nigroannulatum* (de Haan).
- Calvisia nigroaxillaris* Günther, 1943: 169. 2 ♀♀, Kalimantan, Mahakam, 1894; 4 ♀♀



Kalimantan, Long Bloe Oe, xi.1898; ♀ Borneo, 3.iv.1903, M.C. Piepers; ♀ Kalimantan, Kapoeas 1894. A ninth ♀ is labelled "*Calvisia axillaris* n.sp., det. K. Günther, Borneo Expedition Dr Niewenhuis, Mahakam, Long Bloe Oe, 1899". This was intended to be *C. nigroaxillaris*, and is a labelling error by Günther; although the original description only mentions eight specimens, the Kapoeas specimen, which bears the correct name, is not listed. All nine specimens must therefore be regarded as type specimens of *C. nigroaxillaris*. Valid name.— *Calvisia nigroaxillaris* Günther.

*Phasma (Necrosia) nigrofasciatum* de Haan, 1842: 122. Holotype: ♂, Sumatra, Batang Singalang, Müller. Valid name.— *Nescicroa nigrofasciata* (de Haan).

*Phasma (Bacteria) niponense* de Haan, 1842: 134. Syntypes: 3 ♀ ♀, 2 nymphs, ♂, Japan, Decima, von Siebold. Valid name.— *Phraortes elongatus* (Thunberg), synonymised by Stål, 1875: 64.

*Phasma (Bacteria) nodosum* de Haan, 1842: 133, pl. 11.3 (♂). Syntypes: ♂, Sumatra, Batang Singalang, Müller; ♂ (unlabelled); variation b: ♂, Java; ♂, Timor; ♂ (unlabelled). Of the two unlabelled specimens one clearly agrees with the Sumatran specimen, the other with the Javan specimen. Valid name.— *Carausius nodosus* (de Haan).

*Phasma (Bacteria) nodosum (sumatranum)* - see *Phasma sumatranum*.

*Phasma (Acanthoderus) noli-me-tangere* de Haan, 1842: 135, pl. 14.6 (♂), 14.7 (♀). Syntypes: ♂, ♀, Kalimantan, Pontianak, Diard. Valid name.— *Epidares nolimetangere* (de Haan).

*Phenacephorus parahaematomus* Bragg, 1995d: 204, figs. 4-5 (♂). Holotype: ♂, Kalimantan [Midden O-Borneo], H.C. Siebers, 15.ix.1925; Paratype: ♂, Kalimantan [Midden O-Borneo], H.C. Siebers, 30.ix.1925. Valid name.— *Phenacephorus parahaematomus* Bragg.

*Phasma (Acanthoderus) phyllopus* de Haan, 1842: 135, pl. 12.5 (♀). Syntypes: 3 ♀ ♀, Java, Krawang. Valid name.— *Prisomera phyllopus* (de Haan).

*Phasma (Ascephasma) pilosipes* de Haan, 1842: 115. Syntypes: ♂, Kalimantan: Barito River [Doeson]; ♂ Kalimantan, Pontianak, Diard. Valid name.— *Presbistus pilosipes* (de Haan).

*Phasma (Necrosia) pulchellum* de Haan, 1842: 120, pl. 15.5 (♂). Holotype: ♂, Sumatra, Batang Singalang, Müller. Valid name.— *Kalocorinnis pulchella* (de Haan).

*Phasma (Cyphocrania) reinwardtii* de Haan, 1842: 130, pl. 10.1 (♀). Holotype: ♀, New Guinea, Müller. Valid name.— *Phasma reinwardtii* de Haan.

*Presbistus ridleyi* Kirby, 1904: 419. Syntypes: 2 ♂ ♂, ♀ Kalimantan, Pontianak; ♂ Java, Bogor [Buitenzorg]; ♂(?) Sumatra; ♂ Sumatra, Martapoera. This name was published as a replacement for *Phasma (Ascephasma) peleus* de Haan, 1842: 115. (not Gray, 1835). The abdomen of the specimen marked "Sumatra" is missing so the sex is uncertain. Although Kirby omitted to list Pontianak in his list of localities for the species this was clearly not intentional, otherwise he would also have mentioned some of de Haan's material under the name *Presbistus peleus* (Gray). Kirby indicated that there was material in the BMNH, but although there are several specimens of an appropriate age grouped under the cabinet heading *P. ridleyi*, none of the individual specimens are labelled with the name. Several of the BMNH specimens were collected by Ridley in Singapore, and some from Sabah, neither locality was listed by Kirby. Valid name.— *Presbistus ridleyi* Kirby.

- Phasma (Necroscia) rubicundum* de Haan, 1842: 120, pl. 12.2 (♀). Holotype: ♀, Kalimantan, Pontianak. Valid name.— *Syringodes rubicundus* (de Haan) or *Trigonophasma rubicunda* (de Haan); Kirby (1904: 372) placed this species in *Trigonophasma*, Redtenbacher (1908: 492) placed this species in *Syringodes*.
- Phenacephorus sepilokensis* Bragg, 1994: 235, figs 1, 10 & 20 (♀); figs 4 & 5 (egg). Paratypes: ♀, Kalimantan [Midden O-Borneo]. 25.ix.1925, coll. H.C. Siebers; 2 ♀♀ nymphs, same locality and collector, 15.ix.1925 and 20.ix.1925; 2 eggs laid by the holotype, Sabah, Sepilok Forest Reserve, 22.viii.1992, P.E. Bragg. Holotype in BMNH, other paratype material in FRCS, DCMD, NHMN, NHMW, and in the collection of P.E. Bragg. Valid name.— *Phenacephorus sepilokensis* Bragg.
- Phasma simplex* - see *Mantis squeleton*.
- Phasma (Necroscia) sordidum* de Haan, 1842: 120. Holotype: ♀, Sumatra, Batang Singalang. Valid name.— *Sipyloidea sordida* (de Haan).
- Orthonecroscia speciosa* Günther, 1943: 168. Holotype: ♂, Kalimantan, Long Bloe Oe, xii.1898. Valid name.— *Orthonecroscia speciosa* Günther.
- Neocles (?) spiniger* Günther, 1943: 158, fig. 1 (♀). Holotype: ♀, Borneo, Sintang, Goedhuis Borneo Expedition, ix.1891. Although no data is given in the original publication there is no reason to believe that any other specimens exist. Valid name.— *Neocles spiniger* (Günther).
- Phasma (Necroscia) spiniceps* de Haan, 1842: 119, pl. 15.4 (♂). Holotype: ♂, Kalimantan, Pontianak. The text wrongly refers to plate 15.2 and the caption for figure 15.4 is wrong. Valid name.— *Paradiacantha spiniceps* (de Haan).
- Mantis squeleton* Olivier, 1792: 639. Described by Stoll, 1788: 45, pl. 14.55 (♀). [*Phasma simplex* Stoll, 1813: 76. Objective synonym]. Syntypes: 2 ♀♀, China. One specimen bears a label which reads "*Phasma femoratum*, Amboina", however this is clearly a case of the label being mixed up. The only specimen of *P. femoratum* Stoll in the collection is not the specimen illustrated by Stoll and is not regarded as a type specimen. Valid name.— *Carausius squeleton* (Olivier).
- Phasma sumatranum* de Haan, 1842: 133, pl. 13.6 (♀). Holotype: ♀, Sumatra, Batang Singalang. Described as *Phasma (Bacteria) nodosum (sumatranum)* in the text but referred to as *P. sumatranum* in the caption to plate 13. Valid name.— *Lonchodes brevipes* Gray, synonymised by Günther, 1932: 382.
- Phasma (Bacillus) tripolitanum* de Haan, 1842: 101, pl. 15.3 (♀). Holotype: ♀, Libya, Tripoli, Cliff. Valid name.— *Bacillus tripolitanus* de Haan.
- Phasma (Anisomorpha) unicolor* de Haan, 1842: 102 (footnote). Holotype: ♀, Colombia, Bogota, van Lansberge. Valid name.— *Autolyca unicolor* (de Haan).
- Phasma (Acanthoderus) verrucosum* de Haan, 1842: 136, pl. 14.1 (♀). Holotype: ♀, Sumatra, Batang Singalang, Müller. Valid name.— *Phenacephorus verrucosus* (de Haan).
- Syringodes viridimaculatus* Günther, 1943: 156. Syntypes: ♂, Kalimantan, Long Dugay, 2.x.1894; ♀, Kalimantan, Mahakam, 1894. Valid name.— *Syringodes viridimaculatus* Günther.
- Phasma (Ascephasma) viridimarginatum* de Haan, 1842: 115. Syntypes: ♀, ♂, Java. Valid name.— *Presbistus viridimarginatus* (de Haan).
- Kalocorinnis wegneri* Bragg, 1995a: 47, figs. 5 (♀), 7-9 (egg). Holotype: ♀, East Borneo, 125m Tabang, Bengen River, 3.ix.1956, A.M.R. Wegner. There is also a ♀ paratype in the collection of C.L. Chan. Valid name.— *Kalocorinnis wegneri* Bragg.

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