Volume 15

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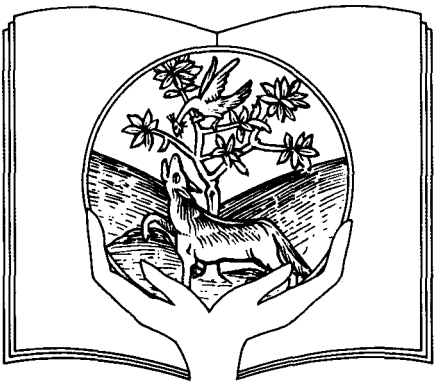

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The *Descriptiones Animalium* (1784) prepared by C.F. Hornstedt on a journey to the East Indies

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INTRODUCTION

Clas Fredrik Hornstedt (1758–1809) was trained as a medical doctor in Sweden. He had the opportunity to visit the East Indies between 1782 and 1785 where he observed and collected both animals and plants on the island of Java, and en route at the Cape of Good Hope. As mentioned by Brinck (1955: 24–25), two manuscripts pertaining to this journey are preserved in the Archives of the Svenska Litteratursällskapet in Helsinki, Finland. The first of these "Anteckningar under en resa till Ostindien åren 1782–1786" is a kind of diary covering the whole voyage. It was published in the original Swedish in 1888 edited by Lagerblad. The second manuscript "*Descriptiones animalium*" has never been described in print. The purpose of this note is to document Hornstedt's contribution to zoology in the 1780s.

HORNSTEDT'S LIFE

The best outline of the life and work of C.F. Hornstedt (Figure 1) was given by van Steenis (1949, 1950: 242) who emphasized the botanical aspects. Shorter notices are found in Brinck (1955: 24), Norlindh (1969: 229), Winquist (1978: 51), and Gunn and Codd (1981: 193). This information is summarized here. Hornstedt was born in Linköping in 1758 and studied at the University of Uppsala, where Carl Peter Thunberg (1743–1828) was one of his teachers. He graduated with a dissertation *Nova genera plantarum* presented to Thunberg on 24 November 1781.

Following the recommendation of Thunberg, Hornstedt was chosen to make a journey to the East Indies (Java). During his voyages he visited the Cape of Good Hope twice, from 26 May 1783 for two weeks, and again from 22 October to 22 December 1784. He arrived at Batavia (Jakarta, Java) on 30 July 1783 and left about a year later, on 22 July 1784. Using the capital as his base, Hornstedt visited several islands north of the mainland, and he made one more extensive collecting trip in the western part of Java.

After his return to Europe, Hornstedt finished his medical studies at the University of Greifswald, receiving his degree on 8 December 1786 with a dissertation on *Fructus Javae esculenti* presented to C.E. Weigel. In 1787–1788 he curated the Museum of the Kunglika Vetenskaps Academien in Stockholm as a temporary replacement for Anders Sparrman (1748–1820) who was visiting Senegal. He served in the Swedish navy as a medical officer from 1788 to 1790, after which he taught at the Gymnasium at Linköping. In 1797 he went back to military service and in 1808 was taken prisoner of war by the Russians. He had to accept their appointment as chief physician in

Figure 1 C.F. Hornstedt: miniature (48 × 48 mm) by unknown artist. National Museum of Finland, Helsinki, no. 31047.

the Russian hospital at Thölö, near Helsinki. He died there in May 1809. His contribution to botany was commemorated in the name of the genus *Hornstedtia* A.J. Retzius.

Hornstedt is the author of seven publications, i.e. the two botanical dissertations mentioned above, one letter about the journey written to Thunberg, and four short zoological papers with descriptions of new species. These are listed among the References at the end of this paper.

ZOOLOGICAL COLLECTIONS

Hornstedt donated the plants collected on the journey to Peter Jonas Bergius and about 200 specimens are still preserved in his herbarium now in the Bergianska Trädgården, Stockholm as listed by van Steenis (1949). The fate of his zoological

specimens has not been recorded. Brinck (1955) stated that Hornstedt "presented his collections to King Gustaf III." This can only be partly correct. It would have been unlikely if he had forgotten the help received from Thunberg, who had been in charge of the natural history museum in Uppsala since July 1785. In fact, Thunberg has recorded his indebtedness for some zoological specimens to Hornstedt. Thunberg catalogued the collection in Uppsala published as the *Museum Naturalium Academiae Upsaliensis* in sixty-one parts between 1787 and 1821. These rare booklets are neither easy to use nor particularly historically informative due to the way in which the material is presented. The text consisted of a long list of scientific names, only in a few cases supplemented by a diagnosis or locality. In the second part of the *Museum . . .*, Thunberg (1787: 25, 31) mentioned several animals stated to have been collected by Hornstedt, like *Simia satyrus, Mustela lutra, Moscus pygmaeus, Lacerta amboinensis* and *Trigla rubicunda.* A few other species listed by name only could be added after comparison of Thunberg's catalogue with the manuscript described below, e.g. *Tringa hypoleucos, Sterna stolida, Procellaria capensis, Certhia chalybaea, Lacerta gecko* and *Acrochordus javanicus.*

Hornstedt probably presented some birds to Johann Gustav von Carlsson. This may be inferred from the *Museum Carlsonianum* edited by Sparrman (1786–1789) in which 100 birds from the collection are described and illustrated. This included seven species collected in Java by Hornstedt, i.e. *Columba bantamensis* (67), *Loxia hypoxantha* (71), *Loxia prasina* male and female (72, 73), *Muscicapa javanica* (75), *Loxia cinerea* (88), *Motacilla flammea* (98) and *Hirundo javanica* (100).

THE *DESCRIPTIONES ANIMALIUM*

The manuscript is here briefly described following a complete photocopy kindly provided by the Svenska Litteratursällskapet in Helsinki. The title page reads as follows:

Descriptiones
Animalium Praestantiorum;
confectae
in
itinere Orientali,
imprimis
per Jawam, Sumatram
et Caput Bonae Spei
seu
Pars Secunda

It is signed in the lower left corner:

Claudius Fr. Hornstedt 1784, Batavia
Societ. Scient. Batav. Ind. Profectus.

The "pars secunda" mentioned here probably means that it was supposed to supplement the travel journal as the first part. The date 1784 shows that the manuscript was prepared while Hornstedt was in Java, but it will become clear that at least some descriptions or annotations could only have been added later.

The folios are numbered, at a more recent date, in the upper right corner from 132 (title page) to 334, but folios 203–211 and 285–315 are absent or blank. The leaves are numbered on their rectos, although in many cases both recto and verso are used. The manuscript can be divided in two parts. The first part, folios 132–202, has the text on 130 pages and includes one sketch. The second part, folios 212–334, has ninety-one plates or drawings and just five pages of text.

The text consists of descriptions of 122 animal species. These are written in Latin, but sometimes one or two lines are added in Swedish. As all the writing in the main text is in the same hand, it may be assumed that it was all written by Hornstedt. Most descriptions occupy one page, a few are shorter, while some fill both sides of a folio. They are headed by a scientific name (none in vernacular) according to the binominal system of nomenclature introduced by Linnaeus. The name is usually followed by a reference to a plate or figure in the second part. The descriptions have, within a class of animals, a somewhat uniform character. They are grouped according to the classes, i.e. mammals, birds, reptiles (which then included amphibians), fishes and insects. On some pages there are short annotations in another handwriting, often referring to Hornstedt's published papers or to Sparrman's *Museum Carlsonianum*. These must have been added at a later date in Sweden, after 1790, but it cannot be ascertained at present who was responsible for this minor editing.

The plates cannot be described in general terms. The subject matter is very diverse. Most plates show different kinds of animals, but there are also five plants, eight human figures, two maps and twelve topographical illustrations mainly with outlines of islands or land seen from the sea. The majority of plates appear to be drawings or sketches. In general, they are not of high artistic quality, but some are quite competent. All the drawings may be attributed to Hornstedt although only a few are signed. A few plates are engravings. It does not appear to be very helpful at present to describe the peculiarities of each plate in detail. In the list of species or subjects in the Appendix, a plate should be supposed to be an original drawing or sketch unless it is otherwise stated.

One of the maps (p 213) is an interesting original document. It traces the route taken by Hornstedt on his collecting trip in the western part of Java. He travelled southwards from Tanggerang along the CiSidane river to reach the area west of Bogor (Figure 2).

With very few exceptions, the plates not only bear the recent stamped number, but also a contemporary one in handwriting. Hornstedt referred to these last numbers in his text. The old numbering runs quite differently from the present one. It only shows that the plates were bound in a different order than might have been intended at first. I have collated the available original numbers and found that there are no plates with the same number, except for the eight drawings exhibiting people which run in a consecutive series. The original numbers were between 1 and 101 but 37 of those are now missing (pls. 8, 29, 35, 37, 47, 48, 50, 57, 59, 61, 62, 65, 66, 68, 70, 73, 77–89, 91, 92, 94–99).

To gain an idea of Hornstedt's interests and activities, I compiled a list of the animals described in the manuscript. They are identified by the name used by Hornstedt. This list is given in the Appendix. It must be remembered that most of

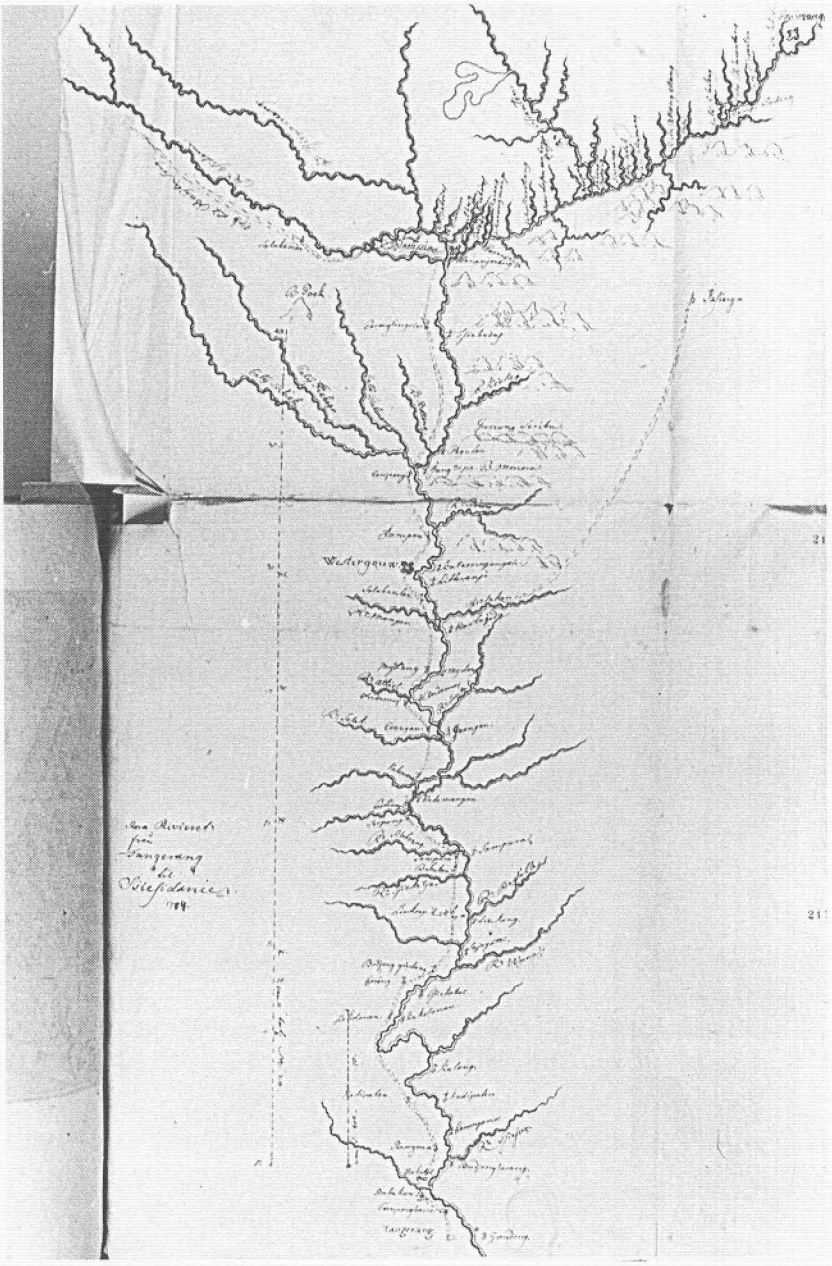

Figure 2 Map of Hornstedt's journey in eastern Java. (*Descriptiones*, p 213.)

the names are manuscript names, although a few were taken from older publications, while some were published by Hornstedt in his short papers. There are several groups of animals:

Mammals	2 species	Coleoptera	48 species
Birds	39 species	Hemiptera	9 species
Reptiles	7 species	Orthoptera	2 species
Amphibians	1 species	Hymenoptera	2 species
Fishes	10 species	Others	7 species

It is also interesting to look at the distribution of the animals as mentioned in Hornstedt's text. Some species were recorded from more than one locality.

Java	97	Japan	3
Sumatra	21	Cape of Good Hope	13
Malacca	3	East Indies	3
Bali	2	Ocean waters	5
Ambon	2		

There is no evidence that Hornstedt went to Sumatra, Malaya, Bali, Ambon, or Japan. The species mentioned from those places must have been based on specimens collected by others. In the case of the Japanese insects, he stated that they were included in a collection brought to Batavia in 1783, but he did not name the person who was responsible. Not all species illustrated are mentioned in the descriptions. In many cases, these figures also lack an explanation or legend, and they cannot now be identified.

It would appear from the organisation of the manuscript that Hornstedt had intended to publish it. This never happened. Only a very small number of species were selected to be published in separate papers. One can only speculate why it was never published, but among the reasons may have been a perceived lack of interest and the high cost of printing.

ACKNOWLEDGEMENTS

Sincere thanks are due to Dr P.J.H. van Bree and Dr P. Smit for reading an earlier version of this paper. The Svenska Litteratursällskapet and the National Museum, both in Helsinki, provided the illustrations and were helpful in completing this paper.

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THUNBERG, C.P., 1791 *Museum naturalium Academiae Upsaliensis.* Appendix I. Upsaliae, J. Edman. Pp i–ii, 111–121.

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APPENDIX

The contents of the *Descriptiones Animalium* by C.F. Hornstedt are here summarized. The subject matter of the text and plates is catalogued in four groups: animals, plants, people, and landscapes. The animals are further divided in taxonomic units arranged according to the localities mentioned in the text. The scientific names used by Hornstedt are put in alphabetical order within each group. There is a reference to the page (folio number followed by *recto* (r) or *verso* (v) where appropriate) on which the text of the description or the plate is found. All plates are drawings unless otherwise stated.

A. Animals

1. Mammals

Only two mammals are described and illustrated, while there is an incomplete sketch of a tame horse (p 225, "Tab. 63"). Thunberg (1787: 25) mentioned to have received from Hornstedt a *Mustela lutra, Moscus pygmaeus* and a *Simia satyrus*. The last specimen, an orang utan, was brought back alive by Hornstedt to Sweden (Rookmaaker, in press).

1.1 *Java*

Cervus guineensis (p 242), plate only with a short description underneath (Figure 3). This could be the same as the *Moscus pygmaeus* mentioned by Thunberg.

Sus afer (p 133r), description and incomplete sketch of the head on the same page.

2. Birds

There are descriptions of thirty-five bird species, while four others are only depicted on the plates. The latter are not given a locality and can be mentioned first.

Unnamed bird (p 249)—it is a cormorant—shares a plate "Tab. 12 fig. 1" with an insect.

Unnamed bird (p 252) labelled "T.2".

Unnamed bird (p 267) resembling the painted snipe, as "T.38".

Unnamed bird (p 277), a finished drawing of a crested cockatoo (Figure 4). The plate was numbered 76, but this was deleted and changed to "40". In the lower left corner there is written "Hornstedt. D.".

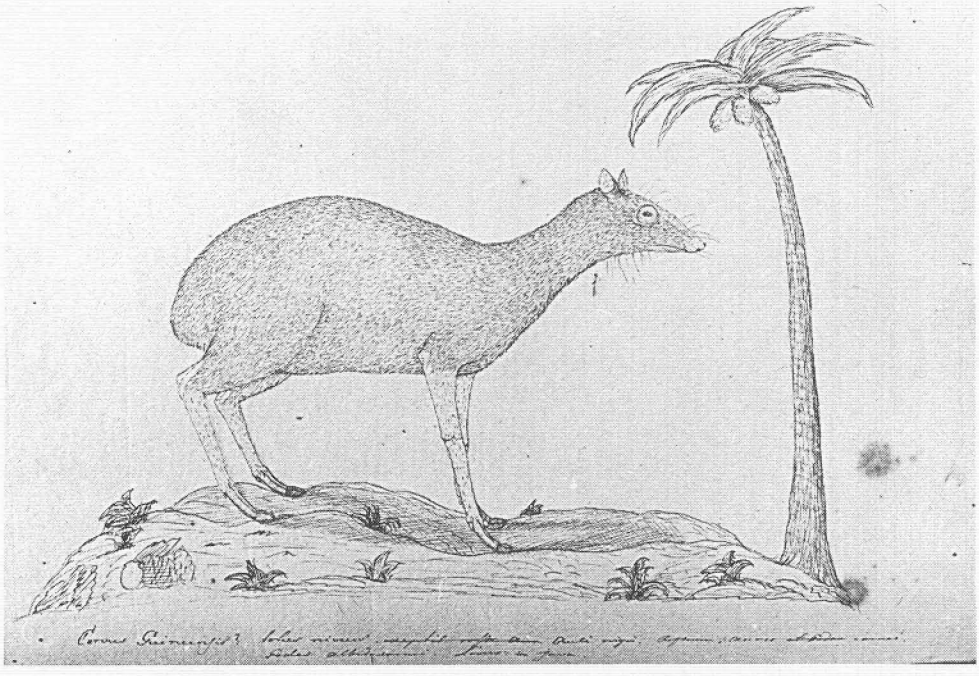

Figure 3 Cervus guineensis (*Descriptiones*, p 242).

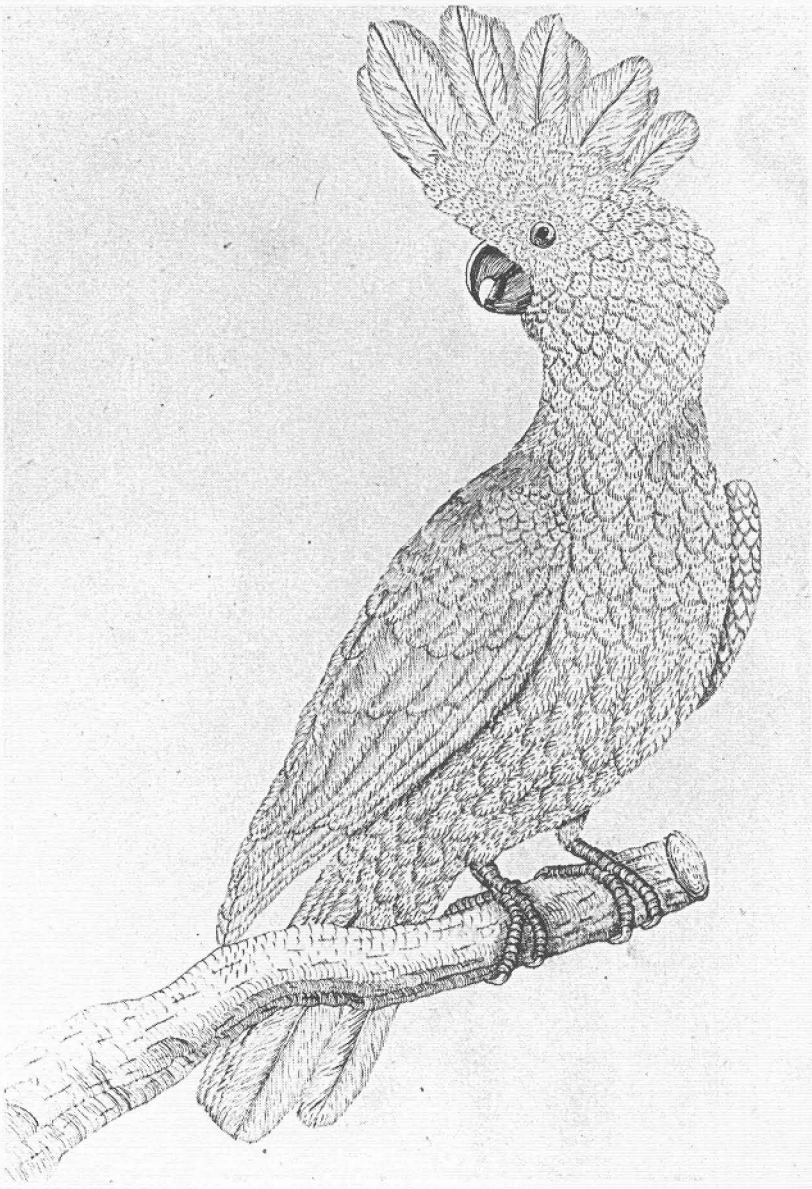

Figure 4 Cockatoo (*Descriptiones*, p 277).

2.1 *Java only*

Ardea nivea (p 141r), with 2 plates "T.20 Ardea nivea" (p 257) and "T.21" (without legend, p 258). (Figure 5.)

Caprimulgus asiaticus (p 146r) shown on "Tab. 10 Caprimulgi—Caprimulgus asiaticus. Hab. in Java" (p 251). On the top of the drawing is also handwritten: "Icones Avium Javan. a Cl.F. Hornstedt".

Certhia flammea (p 134v) of "tab. 23 Certhia flammea" (p 261).

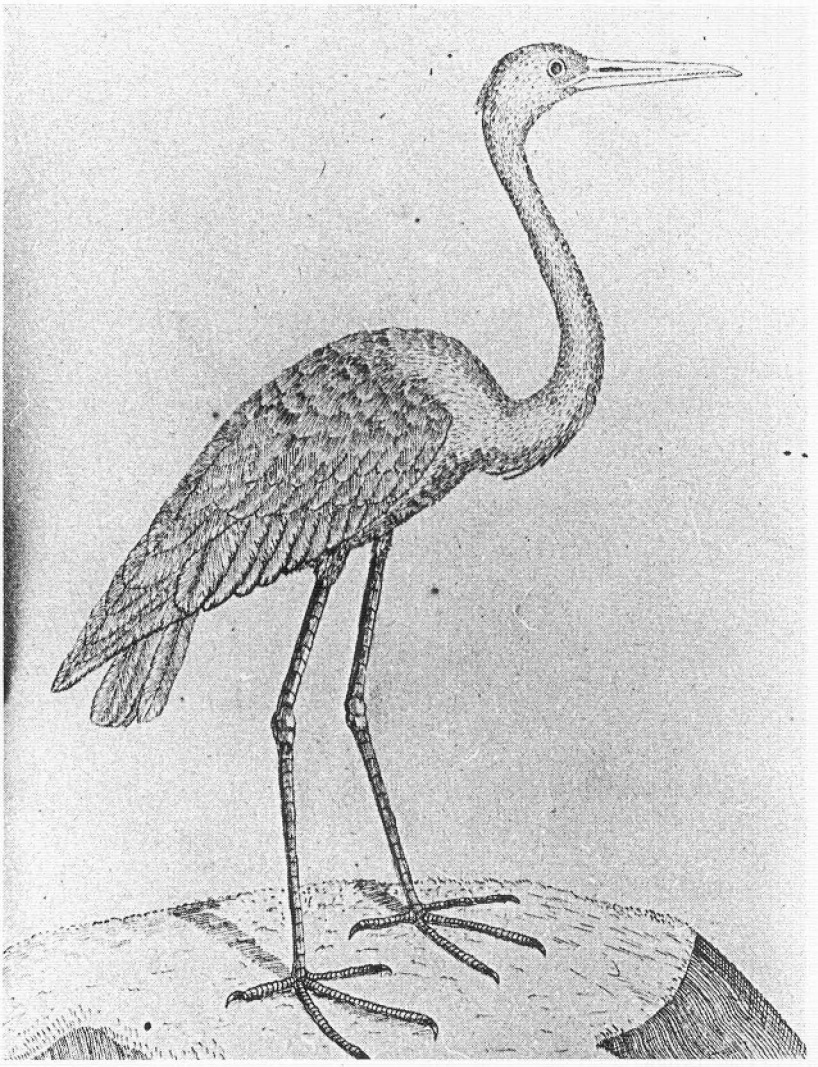

Figure 5 Ardea nivea, Java (*Descriptiones*, p 258).

Certhia javensis (p 134r) of "tab. 32 Certhia currucaria? Linnei" (p 276).

Columba bantamensis (p 136r) from Bantam, Java. The plate is not included, but there is a reference to the *Museum Carlsonianum* 1788, no. 67.

Columba fusca (p 143v) found near Batavia, shown on "T.22 Columba fusca, an leucopletira? Linnei" (p 269).

Columba jav[an]ensis (p 143r) without plate.

Corvus caudatus (p 145v) found around Batavia, shown on "T.9 Corvus" (and deleted: javensis) and also "Corvus macrourus" (p 250).

Corvus javensis (p 145r) of "T.33 Corvus" (p 240).

Cuculus jav[an]ensis (p 144r) of "T.14 Cuculus javensis" (p 247).

[Haematopus] jav[an]ensis (p 144v), genus name erased, referring to "T.2 Haematopus" (p 254).

Hirundo javanica (p 148v) without plate, but reference to *Museum Carlsonianum,* 1789, no. 100.

Lanius javensis (p 141v), abundant near Cheribon, shown on "T.18 Lanius javensis" (p 259).

Loxia prasina (138r + v), two descriptions of male and female respectively, and two plates: "Tab. 75 Loxia prasina,mas" and "Tab. 76 Loxia prasina, femina". These plates are engravings with a written number but a printed legend, like the *Museum Carlsonianum,* 1788, nos. 72 and 73. The type of *Loxia prasina* Sparrman, 1788 is preserved in the Swedish Museum of Natural History, Stockholm, no. 220 (juv. male, Coll. Mus. Paykull, C.F. Hornstedt leg.) (Gyldenstolpe, 1927).

Motacilla flammea (p 149v) referring to "T.23" which was mentioned under *Certhia flammea* (p 134v) above. This name is found in the *Museum Carlsonianum,* 1789, no. 98.

Muscicapa javanica (p 148r) referring to "T.24" like the following species (q.v.), but the descriptions differ. This name is found in the *Museum Carlsonianum,* 1788, no. 75.

Muscicapa surinama? [or] *M. javanensis* (p 135r) commonly found around Batavia, shown on "Tab. 24 Muscicapa surinama? (Linnei)" (p 262).

Picus javensis (p 137v) without plate.

Sturnus javensis (p 137r) found commonly around Batavia, shown on "Tab. 27 Sturnus javensis" (p 245r).

2.2 *Java and Sumatra*

Alcedo javensis (p 147r) without plate.

Alcedo buaja (p 147v) without plate.

Charadrius apricanus? Linn. (p 139v) without plate.

Fulica javensis (p 142v) with reference to "T.35 f.1" which is absent.

Larus ater (p 142r) of "T.17 Larus ater" (p 246).

Loxia citelnella (p 150v) of "T.16 Loxia (?)" (p 266).

Muscicapa carolinensis? Linn. (p 135v) of "Tab. 28 Muscicapa carolinensis? (Linnei)" (p 255).

2.3 *Sumatra only*

Loxia hypoxantha (p 151r) of "T.74 Loxia hypoxantha" with written number and printed legend. The engraving is taken from *Museum Carlsonianum,* 1788, no. 71. On p 150v there is a handwritten note with this reference: "Loxia hypoxantha, Museum Carlsonianum, Fasc. III, pag. LXXI Tab. 71.".

2.4 *Java, Sumatra, Malacca*

Loxia cinerea—Ampelis? (p 151v) without plate, but reference to *Museum Carlsonianum,* 1789, no. 88.

Loxia javensis (p 150r) of "T.34 Loxia punctulata? (Linnei)" and below it is written "javensis".

Tringa hypoleucos (p 139r) of "Tab. 19 Tringa hypoleucos (Linnei)" (p 256) (Figure 6). The species is mentioned by Thunberg (1787: 27).

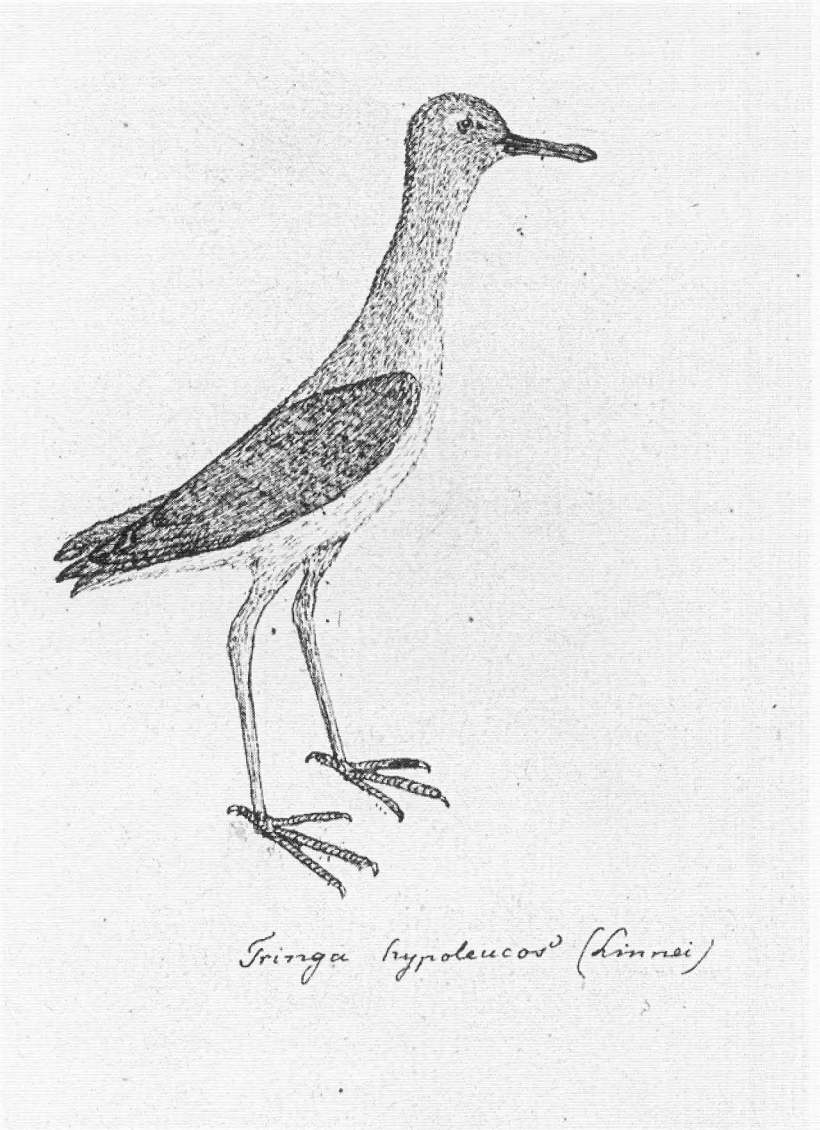

Figure 6 Tringa hypoleucos (*Descriptiones*, p 256).

2.5 *Ocean waters*

Procellaria capensis (p 140v) in the African ocean near the Cape of Good Hope; without plate. It is mentioned by Thunberg (1787:27).

Sterna stolida (p 140r) near Trinidad, without reference, but maybe shown on the unlabelled plate with a seagull (p 327). It is mentioned by Thunberg (1787:27).

2.6 *Cape of Good Hope*

Caprimulgus africanus (p 146v) referring to "T.10" which shows *C.asiaticus*. The bird was shot on the farm Weltevreeden belonging to Charles von Cahman.

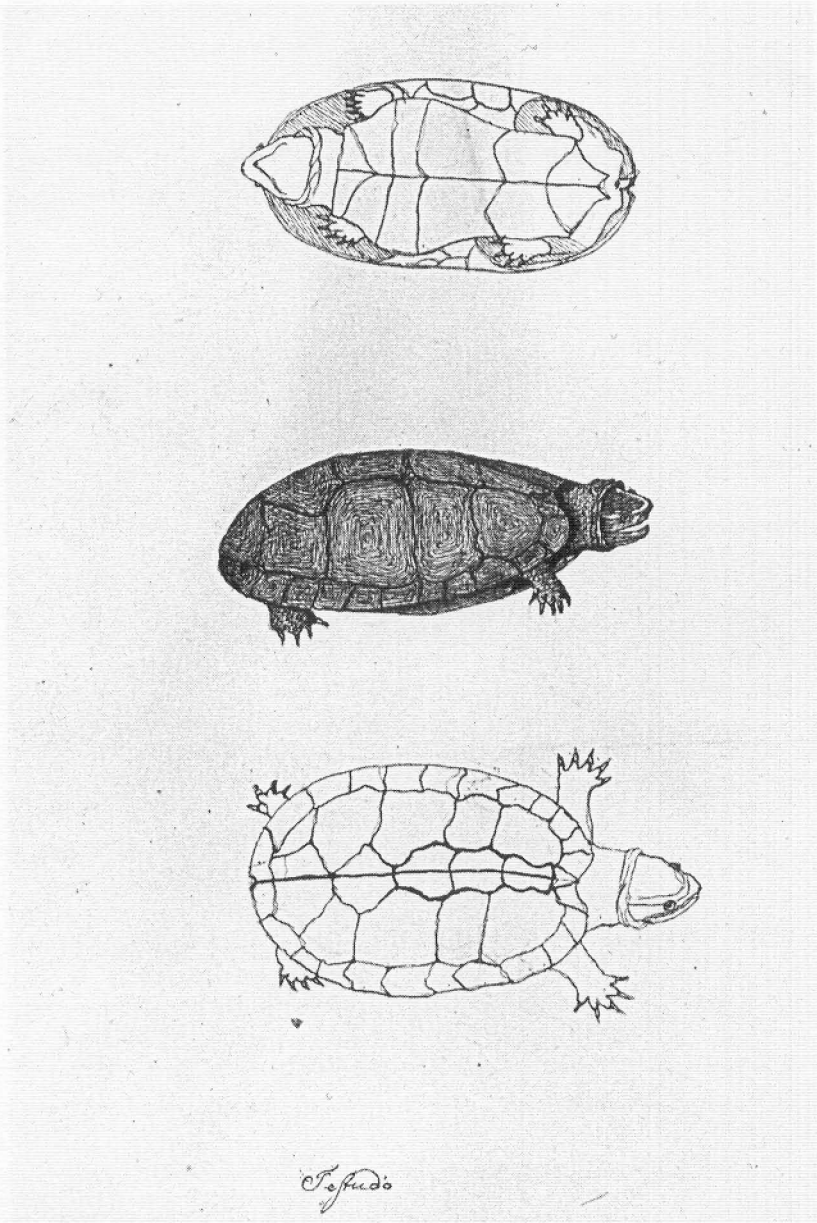

Figure 7 Testudo graeca, Java (*Descriptiones*, p 268).

Certhia chalybaea (p 149r) without plate, but referring to *Museum Carlsonianum,* where it is mentioned (1788, no. 58) as *Certhia scarlatina* Sparrman, the type of which is preserved in the Swedish Museum of Natural History, Stockholm, donated by Hornstedt to Carlsson (Gyldenstolpe 1927). Another specimen was mentioned by Thunberg (1787:27) as *Certhia chalybea*.

Loxia africana (p 275v) with a plate on p 273 without legend.

3. *Reptiles and Amphibians*

There are descriptions of seven reptiles and one amphibian. Added to this there is a plate (p 244) without legend with number "T.30".

3.1 *Java only*

Acrochordus javanicus (p 156r) with a plate on p 320 which is an engraving without legend. It was taken from the published description of this snake by Hornstedt (1787). The species is listed by Thunberg (1791:112) as "*Acrochordus javanicus:* pullus".

Anguis ecaudatus (p 155r) of "T.25 Anguis ecaudatus" (p 264).

Coluber piscator (p 154r) shown on the upper figure of "T.3 Coluber piscator" (p 234).

Lacerta mauritanica? Linn. (p 153r) known in the vernacular as "gekkho". No plate. Possibly this is *Lacerta gecko* var. listed by Thunberg (1787:29).

Rana jav[an]ensis (p 155v) of "T.31 Rana tympana" (p 241).

Testudo graeca (p 152r + v) shown on "T.26 Testudo" (p 268) where the animal is shown in three different positions (Figure 7).

3.2 *Java and Sumatra*

Coluber aldnev (p 154v) of "T.3 Coluber aldnev" (p 234 lower figure).

3.3 *East Indies*

Lacerta orientalis (p 153v) from "India Orientali" shown as "Lacerta orientalis" (p 260). This is probably the same species described by Hornstedt (1785b) as *Lacerta amboinensis*. The latter name is listed by Thunberg (1787:30) adding the reference to Hornstedt's paper.

4. *Fishes*

There are ten descriptions of fish species. In addition the species figured on six plates are not described; these are given first.

p 238—"T.39" with three figures labelled "F.1" to "F.3" without names.

p 239—"Tab.43" (first: 111, deleted) showing three figures: Figure 1 *Exocoetus evolans;* a middle figure known as "*Gadus*—Capsk Fisk" and Figure 3 without legend.

p 243—"Tab.54" with three unnumbered figures showing (upper) "Sten Abborr. Cap.B.Sp."; (middle) "Hottentots Fisk, Cap.B.Sp." and (lower) "*Blennius superciliosus*".

p 272—"Tab.90" with indecipherable legend.

p 276—"Tab.55" showing two figures, of "Biasare, Cap.B.Sp.": (above) "*Lophius*" and (below) "Figure 2 *Zeus*".

p 278—"*Cottus*" [a serranid] with a short description (Figure 8).

4.1 *Java only*

Chaetodon javanicus (p 157r + v) without plate.

Labrus mormynis (p 160r + v) without plate.

Perca orientalis (p 159r + v) of "Tab. 100 Perca orientalis" (p 270).

Pleuronectes javanicus (p 164r) without plate. The locality is inferred from the species name.

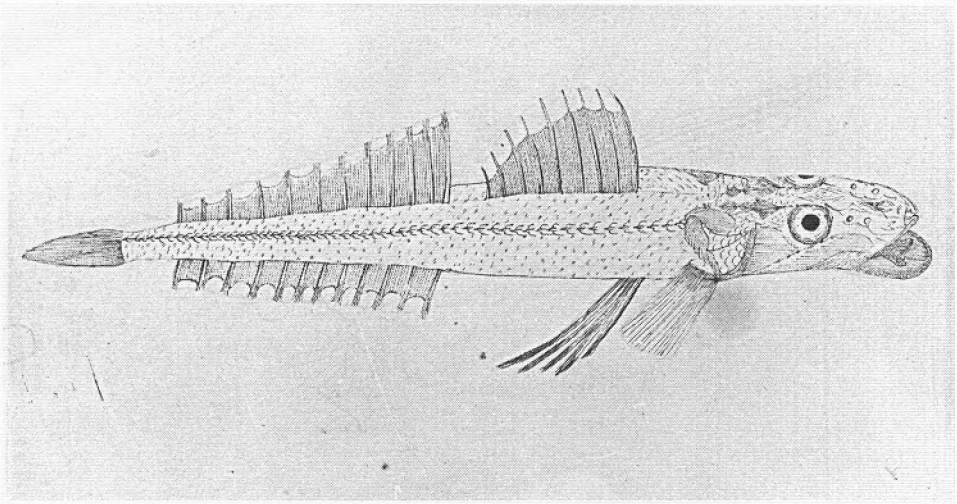

Figure 8 Amia nuda (*Descriptiones*, p 271).

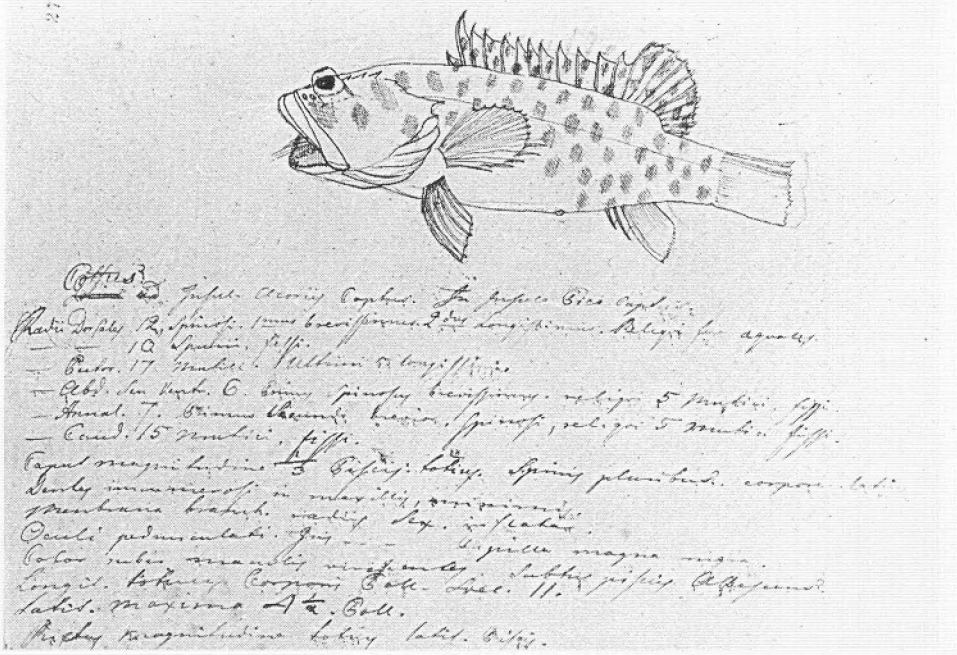

Figure 9 Cottus sp. with sample of Hornstedt's handwriting (*Descriptiones*, p 278).

4.2 *Java and Sumatra*

Chaetodon albicaudatus (p 158r + v) of "(T.102) Chaetodon albicaudatus" (p 273).

4.3 *Java, Sumatra and Bali*

Chaetodon fasciatus (p 161r + v) without plate.

4.4 *Ambon*

Trigla nantoides (p 162r + v), the same species as described as *Trigla rubicunda* by Hornstedt (1788a). One specimen is listed by Thunberg (1787:31) with diagnosis in a footnote: "*Trigla rubicunda:* digitis geminis, rostro obtuso, spiraculis lateralibus solitariis. E Java Dr. Hornstedt.".

4.5 *Ocean waters*

Amia nuda (p 163r + v) from "Mare Indico" shown on "Tab.101 Amia nuda" (p 271) (Figure 9). [This is a flathead, family Platycephalidae.]

Argentina sphyraena (p 166r + v) "locus in Oceano Atlantico prope lineam aequinoxialem"—"Januarii 1785", without plate.

Esox serratus (p 165r + v) with the same locality and date as the last species, without plate.

5. *Coleoptera*

There are descriptions of forty-eight species of Coleoptera. There are three plates with species which probably were not mentioned in the text.

p 230—"Tab.13 Staphylini" with two figures, no legends.

p 248—"Tab.11 Icones Insect. Javan. a Claud. Fr. Hornstedt, Tesiculae" with two figures, no further legend.

p 249—An insect labelled as "fig. 2" without name, next to a bird.

5.1 *Java* (Figure 10)

Cantharis javensis (p 184v) of "Tab. 4 Icones insect. Javan." figure 9 (p 231).

Cantharis stellans (p 186r) without plate.

Carabus flavipes (p 167v) without plate.

Carabus flavus (p 167r) without plate.

Carabus guttatus (p 190r) without plate.

Cerambyx juvencus (p 186v) of "Tab.4 Icones insect. Javan." figure 6 (p 231).

Chrysomela alni (p 182v) without plate.

Chrysomela bifasciatus (p 182r) without plate. The species was described and figured by Hornstedt (1788b, no. 3, figure 6).

Chrysomela coffeae (p 180v) of "Tab.15 Coccionellae, Icones Insect. Javan." figure 9 (p 235). Also described and figured by Hornstedt (1788b: no. 5, figure 7).

Chrysomela nivosa (p 182v) without plate.

Cicindela bimaculata (p 184r) of "Tab.4 Icones insect. Javan." figure 4 (p 231).

Cicindela javensis (p 174r) of "Tab.42" figure 1 (p 237).

Coccinella batavensis (p 170r) seen near Batavia, shown on "Tab.15 Coccionellae, Icones Insect. Javan." figure 19 (p 235).

Coccinella bilineata (p 193r) without plate. The description does not mention a locality.

Coccinella comma (p 193v) without plate. The same name was used by Thunberg (1781:20, 1787:34) to which the manuscript refers.

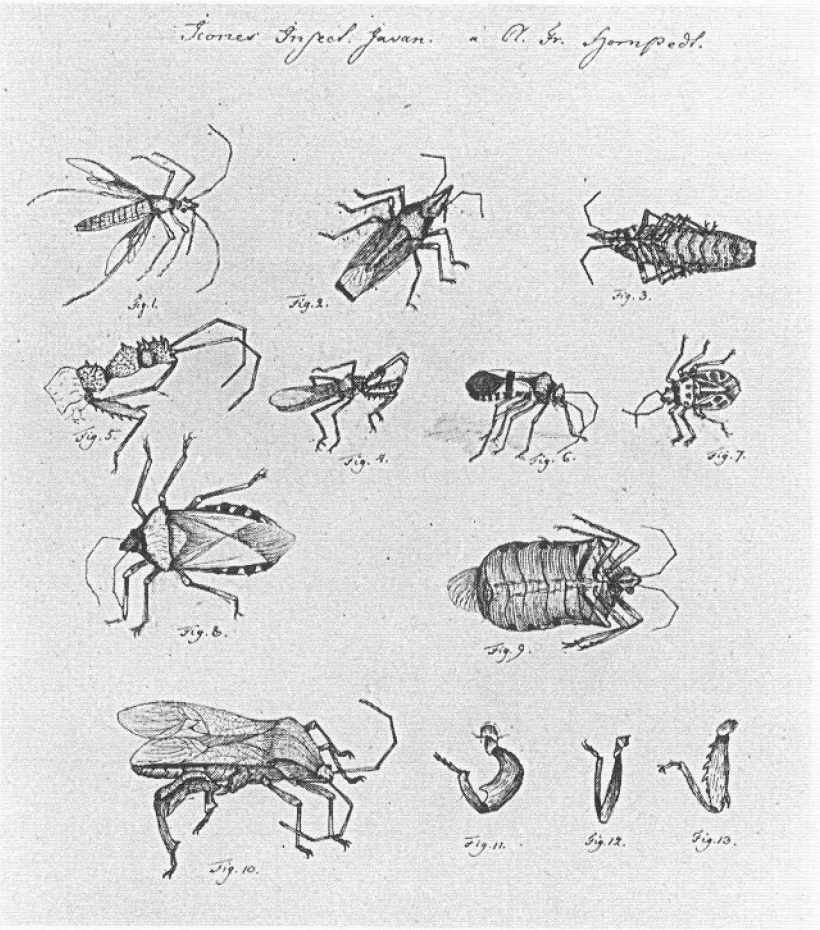

Figure 10 Various insects from Java (*Descriptiones*, p 232).

Coccinella duodecimpunctata (p 188v) of "Tab.15 figure 8"' (p 235).

Coccinella flavicollis (p 189v) without plate.

Coccinella haemorrhoidalis (p 178r) found in "regiis Jaccatra" shown on "Tab.15 Coccionellae, Icones Insect. Javan." figures 10, 11 (p 235).

Coccinella javensis (p 170v) found in "Jacatra, Bantam, Djodjocatra", without plate.

Coccinella lineata (p 193r) of "Tab.15 Coccionellae, Icones insect. Javan." figure 1 (p 235).

Coccinella obscura (p 187r) without plate.

Coccinella quatuorfasciata (p 189r) with species name given as "4-fasciata", shown on "Tab.15 Coccionellae, Icones insect.Javan." figure 4 (p 235).

Coccinella trilineata (p 187v) referring to "figure 6, 7" without plate number.

Coccinella undulata (p 188r) of "Tab.15 Coccionellae, Icones insect. Javan." figure 5 (p 235).

Dermestes ater (p 185v) without plate.

Dermestes unifasciatus (p 185r) found in books "in libris vidi", shown on "Tab.4 Icones insect.Javan." figure 8 (p 231).

Dermestes violaceus (p 279), a plate with short description on the same page of "Larva dermestid. violac." from Java.

Dytiscus caraboides (p 194v) of "Tab.4 Icones insect. Javan." figure 5 (p 231).

Dytiscus olivaceus (p 194r) of "Tab.4 Icones insect. Javan." figure 7 (p 231).

Silpha javensis (p 191v) of "Tab.15 Coccionellae, Icones insect. Javan." figure 7 (p 235).

Silpha subterranea (p 173r) without plate.

Tenebrio fossor (p 168r) without plate.

Tenebrio fuscus (p 168r) without plate.

5.2 *Java and Sumatra*

Chrysomela bimaculata (p 181v) of "Tab.15 Coccionellae, Icones insect. Javan." figure 14 (p 235). Also described and figured by Hornstedt (1788b:no.4, figure 4).

Chrysomela ferruginea (p 179r) found in Sumatra and Bantam, without plate. Also described and figured by Hornstedt (1788b:no.2 figure 9).

Chrysomela orientalis (p 181r) of "Tab.15 Coccionellae, Icones insect. Javan." figure 13 (p 235).

5.3 *Ambon*

Cicindela tarandi (p 174r) of "Tab.42" figure 3 (p 237).

5.4 *Japan*

Chrysomela japonica (p 180r) of "Tab.15 Coccionellae, Icones insect. Javan." figure 6 (p 235). The animal was "inventa in collectione insectorum ex Japan Bataviam delata, anno 1783." Also described and figured by Hornstedt (1788b:no.1, figure 1).

Cicindela japensis (p 175r + v) of "Tab.42" figure 2 (p 237).

Silpha japensis (p 191r) first named "*4-maculata*" which was deleted; found in the collection brought to Batavia in 1783; shown on "Tab.42" figure 4 (p 237).

5.5 *South Asia*

Cassida testacea (p 176r) from "Asia australi", shown on "Tab.42" figures 5, 6 (p 237).

5.6 *Cape of Good Hope*

Cantharis capensis (p 171r) of "Tab.1 Icones insect. Cap. B. Spei" figure 3 (p 229).

Chrysomela 4-guttata (p 171v) of "Tab.1 Icones insect. Cap. B. Spei" figure 4 (p 229).

Coccinella bicruciata (p 192v) found in the "Horto gubernatoris", shown on "Tab.1 Icones insect. Cap B. Spei" figure 6 (p 229).

Coccinella flavipes (p 192r) of "Tab.1 Icones insect. Cap. B. Spei" figure 5 (p 229). Also mentioned by Thunberg (1781:21).

Coccinella nivosa (p 195r) of "Tab.1 Icones insect. Cap. B. Spei" figure 7 (p 229) with reference to a dissertation by Thunberg, but I have not found the animal under this name.

Dermestes rufipes (p 169v) of "Tab.1 Icones insect. Cap. B. Spei" figure 2 (p 229).

Meloe 12-maculatus (p 169r) of "Tab.1 Icones insect. Cap. B. Spei" figure 1 (p 229).

6. Hemiptera

There are descriptions of nine species.

6.1 *Java only*

Cimex linearis (p 200r) of "Tab.5 Cimices, Icones insect. Javan. a Cl. Fr.Hornstedt" figure 1 (p 232).

Cimex marginatus (p 201v) found in Bantam, shown on "Tab.5 Cimices [etc.]" figures 2, 3 (p 232).

Cimex nobilis (p 200r) of "Tab.4 Icones insect. Javan." figures 1, 2 (p 231).

Cimex pedunculatus (p 183v) found in Tangarang, shown on "Tab.5 Cimices [etc.]" figure 4 (p 232).

Cimex tsidani (p 201r) found on the Tsidani river, shown on "Tab.5 Cimices [etc.]" figure 10 (p 232).

6.2 *Java and Sumatra*

Cimex cruciatus (p 199r) of "Tab.5 Cimices [etc.]" figure 6 (p 232).

Cimex javensis (p 199v) found near Cheribon and on Sumatra, shown on "Tab.5 Cimices [etc.]" figures 8, 9 (p 232).

Cimex sexmaculatus (p 183r) of "Tab.5 Cimices (etc.)" figure 7 (p 232).

6.3 *Cape of Good Hope*

Nepa capensis (p 177r) of "Tab.1 Icones insect. Cap. b. Spei" figure 14 (p 229).

7. Orthoptera

7.1 *Cape of Good Hope*

Gryllus hottentottus (p 195v); without plate.

Gryllus nasutus cornutus (p 196r + v); without plate.

8. Hymenoptera

8.1 *Java*

Apis javensis (p 202v) found around Batavia; without plate.

Vespa javensis (p 202r) found around Batavia; without plate.

9. Dictyoptera

9.1 *Java only*

There is no description, and only one plate:

Blatta (p 233) shown on "Tab.6 Blatta, Icones insect. Javan. a Cl.Fr.Hornstedt"; only one figure on this plate.

10. Lepidoptera

There are four unlabelled plates of butterflies

p 220—an unnamed butterfly found at Batavia.

p 319—a small figure of a butterfly from Batavia.

p 328—a large butterfly, without name or legend.

p 329—a butterfly without name, labelled "Tab.45, Batavia 1784".

10.1 *Java*

Phalaena aurora (p 198v) found at Bantam and shown on "Tab.41" figure 5 (p 236).

Phalaena minuta (p 198v) found in Jaccatra, Bantam, Cheribon and shown on "Tab.41" figure 2 (p 236).

Phalaena squadra (p 198r) or "Tab.41" figure 6 (p 236).

Phalaena (species name cannot be read because page is torn) (p 198r) of "Tab.41" figure 4 (p 236).

10.2 *Java, Sumatra, Bali*

Sphinx adscita (p 197r) shown on "Tab.41" figure 7 (p 236).

11. Arachnida

11.1 *Java*

Araneus globulatus (p 172r) without plate.

p 326—a large spider known in Malay as "Cawa cawa" found Batavia, 6 April 1781 on "Tab.49" with a short description, no name.

p 228—"Tab.96" showing seven figures of spiders, without legend.

Figure 11 A sample of the plant drawings: Sina (*Descriptiones* p 321).

B. Plants

There are five plates with plants:
p 321—"Sina, aug.83". (Figure 11.)
p 322—"Tab.52", with three figures without names.
p 323—"Tab.56", with three figures without names.
p 324—"Tab.58" labelled "pointiana".
p 325—"Tab.56" showing "Melabura leucodendra".

C. People

There are eight plates with figures of Indonesian people (i.e. p 224, 226, 227, 280–284).

D. Topography

There are fourteen topographical drawings or maps, mostly outlines of islands. Some of the captions are in Swedish, others in Dutch or German. The outlines are as follows:
p 214 (unnamed), p 216 ("Utsigt af Gomera"), p 217 (Dutch caption), p 218 ("Utsigt af Ascention"), p 219 ("Utsigt af Malacca"), p 220v ("Gesicht von Javas Südküste"), p 222 ("Utsigt af Calicutt"), p 223 ("Aussicht eines Theiles der südliche Kuste von Java"), p 332 ("Casteel Rotterdam") and p 334 ("t Noordelijkste land"). In addition, there is an engraving entitled "Fortresse Coylang, geteekent door J.W. de Graaf 1768" (p 330) and two maps. One is an engraved plan of "Batavia" (p 212), the other the route taken by Hornstedt on his journey in the interior of Java (p 213).