
T R A N S A C T I O N S
OF THE
L I N N E A N S O C I E T Y.

I. *A Dissertation on two Natural Genera hitherto confounded under the name of Mantis. By Anthony Augustus Henry Lichtenstein, D. D. F. M. L. S. Translated from the German by Thomas Young, M. D. F. R. S & L. S.*

Read April 4, 1797.

WHEN I first took up Fabricius's System of Entomology, I was much struck with these words in the preface:—"The science of entomology is as yet in its cradle: it is scarcely so far advanced as botany was at the time of Cæsalpinus." I was then inclined to think that this gentleman, whose excellent moral character I have only since that time had an opportunity, by personal acquaintance, to know and esteem, had at least exaggerated the truth, and done injustice to Linné and the rest of his predecessors. But since I have had an opportunity of observing with accuracy, and of comparing with many descriptions and plates, a large number of insects, chiefly foreign, in the extensive collection of Mr. Holthuysen, I am convinced that this great systematist did not, in making that assertion, go much too far; for what a mass of information has been

added to our knowledge of insects within these twenty years by himself and other active naturalists! And yet we are still very far from having a proper natural arrangement and description of all the orders and genera. I shall say nothing of the species; for here, especially through the imperfection and frequent incorrectness of the synonyms, so much confusion prevails, that it is often difficult to ascertain to what species of Linné or Fabricius a perfectly common indigenous insect belongs. If a genus be truly natural, or, as logicians call it, a *genus proximum*, a single characteristic is almost always sufficient to determine with certainty to what species an individual of this genus is to be referred. The present attempt may serve as a specimen of the manner in which I conceive that still greater genera ought to be treated according to the natural distinctions; fixing the natural genera where the system has not already done it, and placing the species in order under appropriate subdivisions taken from essential differences; describing them with accuracy, and particularly adding the synonyms as completely and correctly as possible.

The idea of separating from the proper *Mantes* those species feeding on plants, that have no falciform fore-feet, but have all their legs formed for running, and making a new genus of them, is by no means of my invention. Caspar Stoll has already proposed it, but has not at all carried it systematically into effect. The splendid work which this zealous entomologist had begun to publish at Amsterdam in 1787 with a Dutch and French text, under the title of *Natuurlyke, en naa'r leeven nauwkeurig gekleurde Afbeeldingen, en Beschryvingen der Spinnen, Wandelnde Bladen, Zabelspringhanen, Krekels, Trekspringhaanen en Kakkerlakken*, in quarto, sold by J: C. Sepp, was interrupted by death, which cut off this gentleman (who, with many peculiarities, had yet undeniably great merit) in the middle of his career. Had he lived longer, this work on the *Ulonata* of Fabricius would

would have been as classical as that for which we are indebted to him on the *Rhynchota*. He would thus have thrown light on all the *Hemiptera* of Linné, and have done as much as a systematic writer for this order of insects, as Pallas has for the unguiculated quadrupeds among the *mammalia*. No one will deny, unless from an absurd prejudice he despise every thing that is Dutch without further examination, that the late Stoll was a very diligent and fortunate observer. His penetrating eye, incredibly experienced and ready in distinguishing objects at first sight, comprehended the whole habit so happily in one fixed point of view, that he discriminated the natural genera as if by internal feeling. The collection of Hoithuyzen, which he had chiefly arranged, was divided almost universally into the same genera which Fabricius has adopted in his *Entomologia Systematica*. Stoll died before this work was published, and Fabricius saw that collection only cursorily in Hamburgh, when his book was all completed but the appendix. This agreement, therefore, between two persons thinking quite independently of each other, shows clearly that entomology is not so uncertain and inconstant as many believe; and that both of these gentlemen were in search of truth, and knew how to find it. Systematical order, indeed, is not to be expected in the writings of Stoll; for, as he had no learned education, he was totally unprovided wjth that artificial logic which is more useful to men of letters in general than they often think proper to allow. Although the idea of this monograph was borrowed from Stoll, yet one acquainted with the subject will soon discover that I have not copied from him, but that I have bestowed much labour of my own on this dissertation.

I shall, in the first place, show that the Spectre of Stoll, or the *Phasma*, is truly different from the *Mantis*; and must be separated from it as a distinct genus; in the next place, treat of both in general, going systematically through their species, and ascertaining the synonyms;

then describe at large the species omitted or newly discovered; and, lastly, enumerate briefly those which I cannot place under their proper genus, because I am only acquainted with them from imperfect descriptions.

Stoll shows the essential difference between the two genera very correctly by the following comparison of the parts and characteristics.

PHASMA. "Laubschrecke."

1. *Antennæ* setaceous with longish divisions.
2. The *head* large and oval-round; the mouth with moveable jaws and four palpi.
3. Small reticulated *eyes* on the forehead.
4. Three clear *stemmata* in a triangle between the eyes.
5. The *body* linear, almost cylindrical.
6. Six *legs* for running.
7. The *tarsi* consist of five joints.
8. The *hemelytra* [deckflügel] skinny, very short, so that they scarcely cover a third part of the abdomen. The wings at the external margin membranous, about as long as the abdomen.

MANTIS. "Fangschrecke."

1. *Antennæ* filiform.
2. The *head* nodding, heart-shaped, with jaws and palpi.
3. Two large prominent *eyes* on the sides.
4. In most species two clear *stemmata* between the roots of the antennæ.
5. The *thorax* narrow, on the back somewhat carinated, at the margin compressed.
6. Six *legs*, the foremost with falciform hands, and a thumb of five joints at their side; the rest slender and unarmed.
7. The *tarsi* have five joints.
8. The *hemelytra* folded crosswise together, of the length of the wings beneath them, covering almost the whole abdomen.

Besides these distinctions taken from the different parts of the body, Stoll appeals, with reason, to the remarkable difference of the mode of life. His Spectres, which I name *Phasmata*, live solely on vegetable food. They lay their eggs, like grasshoppers, in the earth, the females being furnished with a small stile or instrument for depositing them, of an ensiform figure, and covered by three leaflets, which are found on the last division of the abdomen. The *Mantes*, on the contrary, confine themselves entirely to food taken from the animal kingdom; their falciform hands serving them to catch and carry to their mouths flies, and other insects, which they devour. As to what concerns their procreation and metamorphosis—they never lay their eggs in the earth, but fix them on a twig, straw, or blade of grass, and this in rows and regular masses, as Roesel has very correctly described. *Insectorbel.* pt. 4. p. 89. sq. and t. 12. Compare also *Merian. Surin. Ins.* p. 66. *Geoffr. Ins.* t. 1. p. 399. and *De Geer Ins.* pt. 3. p. 399.

It will not be superfluous to add some remarks which Stoll has omitted, and which set the difference between the two genera still more out of doubt. The antennæ of the *Phasmata* are situated on the sides of the head, far apart, and are inserted near the eyes: those of the *Mantes*, on the contrary, are placed on the forehead near together, between the eyes. The difference of the organs of feeding I shall explain more at large in the systematic description of the genera. The thorax, in the first subdivision or family of *Phasmata*, is always extended and cylindrical: sometimes set with little thorns, sometimes without thorns; but in the second family, which in general more resembles the *Mantes*, it is somewhat flattened, and almost marginated. The *Mantes*, on the other hand, have all a more or less carinated thorax: all those of the first family and some small species of the second family have a roundish thorax; but in most of the second family

family it is marginated, and in the fore part extended more or less in breadth, but behind linear.

The abdomen in the *Phasmata* differs in different families. Those of the first family have a rounded cylindrical abdomen, of ten nearly equal divisions, which, within its trifoliated extremity, contains a tail in which the parts of generation are concealed. The second family has the abdomen pressed flat, often even membranous, without any leaflets at the tail. In the *Mantes* the abdomen is very various, but always agrees with the character of the family.

The hemelytra of the *Phasmata* are often entirely wanting; when present they are membranous; in the first family, especially in the males, they are very short, taper at the base, and toward the middle furnished with a small thorn, which is sometimes blunt, sometimes sharp. In the females they are mostly half as long as the wings, rounded off towards the tips, ribbed, and without thorns. In the second family the males have short and very narrow lancet-formed hemelytra; those of the females are broad, veined, and nearly of the length of the abdomen.

The *Mantes* have transparent thin hemelytra, with a broad, membranous, often grooved rib at the outer margin; which are seldom shorter than the wings or abdomen.

The wings of the *Phasmata* are broad, inwards plaited and transparent, with a broad membranous rib at the outer margin, and shorter than the abdomen. In some species of the first family, and in the female of the *Phasma siccifolium*, which is of the second family, and has very large and broad hemelytra, they are entirely wanting.

The *Mantes* have transparent, often colourless wings, more finely plaited, with only a narrow rib at the outer margin, and nearly of the length

length of the abdomen. Only one species of this genus is entirely without wings.

The legs of the *Phasmata* are all formed for running, and like to each other; the fore legs are placed so near to the head that they are excavated near the base to make room for the head between them. This is a very certain natural distinction, by which one may know whether even an imperfect specimen is a *Phasma* or a *Mantis*. The *Phasmata* of the first family have very long and narrow fore feet, frequently with triangular and thorny legs. Those of the second family have shorter fore legs, with broad margins.

The *Mantes* have, instead of fore legs, arms, with nearly scissor-formed hands; the upper arms and elbows are, according to the families, either narrowly or widely dentated or fringed. The four hind legs are for running; mostly plain, more rarely adorned with foliated margins on the thighs, and still more rarely on the tibiæ.

This comparison shows sufficiently that the *Phasma* and *Mantis* are two very distinct genera.

Before I begin the systematic description in the manner of Fabricius, I must speak of the families or divisions of the genera. The primary divisions I have taken from Stoll. They depend in both genera on the rounded or more flattened structure of the whole body, with which also the length of the fore legs agrees. The *Phasmata* of the first family, that is the rounded ones, I divide again into wingless and winged; the flat *Phasmata* require no further subdivision.

The *Mantes* of the first family, that is, (following the same order as in the *Phasmata*, although Stoll takes them last,) the rounded ones, I divide into wingless and winged. The last again according to their eyes, which are either angular or round. The family of the flat *Mantes* may be separated into two companies; the gouty ones, with leaves on their legs, and the round-legged ones, without them.

These companies I divide, lastly, according to the eyes, each into two parties; of which the first contains those with round eyes, the second those with angular eyes. This apparently trifling minuteness or pedantry gives so useful a thread to guide us to the determination of each species of phasma or mantis that occurs, and makes it so easy to any one who will pay the least attention to investigate if and where such an insect has been described, that I do not consider the time and trouble as lost which I have spent on the discovery of these subtleties. True systematical proficients in entomology, who love truth and order, will richly repay this *laborem in tenui* by the approbation which they may be pleased to bestow on it. I will not here attempt a prolix vindication of my having been obliged to alter entirely the description of the genus *Mantis*, and compose new ones of *Phasma* and of *Mantis*, nor of the great difference frequently to be found between my descriptions of the species and those of Linné or Fabricius. True judges will themselves discover my reasons. Such as regard only authority I can assure, that Fabricius approves of my innovations. Amateurs and sharp-sighted observers, who are not fond of the technical and scholastic language, I refer to Stoll, whom I have accurately quoted; to Füesly's *Archives*, and to the Figures which I have here given; but especially to natural specimens. Perhaps many persons will be reconciled to me on examining a well-stored collection, who on the bare reading of the following Latin descriptions will have shaken their heads, or secretly condemned me as an unauthorized pedantic innovator. In these insects the colours often deceive; partly because they are frequently destroyed by the spirits in which the specimens had at first been preserved; partly, because the hemelytra frequently become spotted from thin drops of pus being thrown out and adhering to them when they are stuck through with pins. Hence, the *puncta sparsa elytrorum*, to which one must never trust, unless they agree precisely on both hemelytra. *Sapienti sat.*

119—20. P H A S M A:

Palpi inæquales depresso; antici quadriarticulati; postici triarticulati, articulo extremo longissimo, ovato lanceloato.

Labium adscendens bipartitum, laciniis fissis, pinnis æqualibus.

Antennæ setaceæ, articulis oblongis.

* *Teretia*, pedibus anticis longissimis tenuibus compressus.

† *Aptera*. Elytris alisque in utroque sexu nullis.

filiforme. I. P. pedibus anticis inermibus longitudine corporis, antennis nigris.

TAB. I. fig. I.

Mantis filiformis. Fabric. entom. system. t. 2. p. 12. n. 1.

Mant. inf. I. p. 227. n. 1. Gmel. syst. nat. p. 2048.

n. I.

Small Brasil Quill Locust. Petiver Gazoph. t. 60. f. 2.

Browne Hist. of Jamaica, p. 433. t. 42. f. 5.

Habitat in America australi et insulis oppositis. Museum Ohrtmannianum.

Sequenti ad fine sed multoties minus. Corpus et pedes fusci testaceo annulati. Tarforum articuli primores

Phasmatis corpus filiforme subcylindricum (rarius ab domine depresso) glabrum, immarginatum, tardum: capite prominulo magno ovali, latiore quam thorax; oculis parvis reticulatis frontalibus; sternmatibus tribus lucidis, in triangulum intra oculos dispositis; antennis distantibus lateralibus juxta oculos insertis; thorace elongato linearie cylindrico, scutello nullo; elytris ovalibus parvis (in marginibus minimis, basi saepè aristatis) membranaceis; alis, costa lata membranacea, hyalinis plicatilibus, rarius nullis; pedibus sex, anticis capiti proximis juxta basin intus emarginatis, omnibus cursoriis, tarfis quinquearticulatis; ab domine segmentis decem, anno laminis tribus partes sexuales abscondentibus.

reliquis æquales. Synonyma quæ prætermisi utique excludenda; præsertim *Herbst. arch. inf.* 8. t. 51. f. 2. quæ exhibet larvam alius speciei hujus generis.

- Ferula*. 2. Ph. pedibus aliquanto corpore brevioribus, tarforum articulo primo triangulari erecto.

Mantis Ferula. *Fabric. entom. system.* t. 2. p. 12. n. 2.

Arumatia. *Marcgraf Brasil.* 251.

Roesel inf. 2. *Gryll.* t. 19. f. 10. *Stoll Mant.* t. 13. f. 51.

Habitat cum præcedente. *Museum Holthuys*.

Descriptio Fabricii accuratissime quadrat, nisi quod in nostro exemplari etiam anticorum pedum femora et tibiæ apice subspinosa; item color non viridis sed fuscus testaceo annulatus. Forte quoniam in spiritu vini olim servatum.

- cornutum*. 3. Ph. pedibus anticis mediocribus tibiis omnibus mucicis, capite oblongiusculo cornuto oculis prominulis.

Stoll Mant. t. 15. f. 57. et 57. t.

Habitat in America australi. *Mus. Holthuys*.

Corpus lœve glabrum cylindricum, dilute fuscum; pedes elongati femoribus angulatis.

- Calamus*. 4. Ph. corpore virescente, femoribus striatis.

Mantis Calamus. *Fabric. entom. syst.* t. 2. p. 13. n. 3.

Habitat in insula St. Croix. Mihi haud visum.

- Sceleton*. 5. Ph. pedibus anticis elongatis, thorace cylindrico scabro postice attenuato, capite inermi oculis prominulis.

Stoll Mant. t. 14. f. 55.

Habitat in Sina. *Mus. Holthuys*.

Corpus magnum, elongatum, obscure testaceum. Antennæ setaceæ mediocres. Pedum tarsi articulo

primo

primo triangulari erecto. Ad fine praeter alarum defectum *Pb. necydalooides* cuius tamen vix larva.

- lutipes.* 6. Ph. pedibus mediocribus foliato compressis.

Stoll Mant. t. 14. f. 5+.

Habitat in Amboina. *Mus. Holthuys.*

Corpus magnum, elongatum, lineare, teres, fuscum.

Caput subrotundum; antennae breves, oculi prominenti; ensis partumeius (sive cauda ensiformis) reflexus dentatus.

- Plocaria.* 7. Ph. corpore viridi, femoribus dentatis.

Mantis Rossia. *Fabric. entom. syst. t. 2. p. 13. n. 4.*

Rossi Faun. Etr. 1. n. 636. t. 8. f. 1. mas.

Plocaria domestica. *Scop. delic. Insubr. 1. p. 60. t. 24. f. A. 1—3.*

Habitat in Italia. Mihi haud visum.

†† *Subaptera*, clytris, at alis nullis.

- angulatum.* 8. Ph. capite thoraceque spinosis, elytris rotundatis brevissimis, femoribus subtus angulatis.

Mantis angulata. *Fabric. entom. syst. t. 2. p. 13. n. 5.*

Mantis Gigas. *Drury ins. 2. p. 89. t. 50.*

Mantis gigantea. *Gmelin syst. nat. edit. xiii. p. 2055. n. 49.*

Habitat secundum Fabricium in Guadeloupe, secundum Gmelin in Italia superiori. Mihi haud nota.

††† *Alata.* Elytris alisque in utroque sexu.

- Gigas.* 9. Ph. thorace teretiusculo scabro, elytris planis ovalibus nervosis, pedibus spinosis.

Mantis Gigas. *Linn. syst. nat. 2. p. 689. n. 1. Mus. Lud. Ulr. n. 109.*

Mantis Gigas. *Fabric. entom. syst. n. 6. Stoll Mant. t. 2. f. 5.*

Habitat in Amboina. Mus. Holthuys.

Corpus magnum elongatum, supra cylindricum subtus complanatum. Caput erectiusculum inerme ovale, paulo latius quam thorax. Antennæ setaceæ mediocres. Oculi parvi, frontales vix prominuli. Thorax antice, ubi pedes primores inserti, subdepressus et glabellus; medio teres, granulis elevatis scaber; postice ad basin elytrorum et alarum terminatus appendicula triangulari scutelliformi. Abdomen teres lineare ut in hac tribu semper. Elytra brevia, plana, spathulato ovalia repanda, nervosa (item ut alæ maximæ,) obscure testacea fusco undata. Pedes elongati robusti spinosi dilutius testacei, fusco annulati.

Omnia exemplaria mihi certe adhuc visa sunt sexus feminini. Utrum *Phasma hecticum* infra describendum hujus *Pb. Gigantis* mas sit nec ne, dñs docebit; item utrum color naturalis vel in hac specie sit viridis.

Empusa. 10. Ph. thorace tereti granulato, elytris brevibus ovatis medio gibbis dente elevato obtuso, dilute testaceis basi et apice fuscis, pedibus spinulosis.

Aubent. Miscell. t. 65. f. 1. mala.

Stoll Mant. t. 1. f. 1. bona.

Habitat in India orientali. Mus. Holthuys.

Proxime ad fine antecedenti at diversum forma elytrorum et coloribus. Exemplar Holthuysianum Stollii archetypon est corpore fusco, artibus dilute testaceis fusco undulatis. D'Aubenton exhibet colorem totius infecti viridescentem, præter bases apicesque elytrorum, ut in nostro, fuscos. Forsan ideo, quod ejus exemplar numquam in spiritu vini adservatum fuerat.

Quod

Quod vero idem pedes primores brevissimos pingit; inde sequitur, ut vel defuerint in exemplari Lutetiano, vel spurii fuerint adglutinati, vel denique ut chalco-graphus tabulæ angustiâ se viderit circumscriptum. Quidquid id est, deformat isthæc præternaturalis pendum brevitas omnem phasmatis nostri habitum.

- nævium. 11. Ph. thorace cylindrico scabro, elytris ovatis angulatis, alis oblongis fuscis hyalino fenestratis.

α Femina. Mantis necydaloïdes. *Linn. syst. nat. 2. p. 691. n. 14. Amæn. acad. 6. p. 397. n. 3.*

Mantis necydaloïdes. *Fabric. entom. syst. t. 2. p. 14. n. 7. Rœsel inf. 2. Gryll. t. 19. f. 9. Stoll Mant. t. 3. f. 8.*

β Mas. Mantis cylindrica. *Gmelin syst. nat. edit. xiii. p. 2048. n. 54. Mus. Lejk. p. 46. n. 12.*

Stoll Mant. t. 4. f. 11.

Habitat in Amboina. Mus. Holthuys.

Differt ab antecedentibus, crassitie corporis basi elytrorum multo angustiore et alis fuscis hyalino fenestratis. Mas in hac et sequenti specie (forsan pluribus quoque in hac tribu) multoties minor quam femina, sed antennæ robustiores.

- edule. 12. Ph. thorace tereti (maris scabro, feminæ glabro), elytris alarumque costa læte viridibus, pedibus submuticis.

α Femina. *Stoll Mant. t. 6. f. 20.*

Houttuyn natuurl. histor. t. 79. f. 1.

β Mas. Mantis phthisica. *Linn. syst. nat. 2. p. 689. n. 2.*

Mantis Jamaicensis. *Fabric. entom. syst. t. 2. p. 15. n. 11.*

Gmelin syst. nat. edit. xiii. p. 2054. n. 41. Drury inf. 2.

t. 49. f. 1. Stoll Mant. t. 6. f. 21.

Habitat in India orientali. Mus. Dom. Holthuysen.

Corpus

Corpus magnum, præfertim feminæ, quæ adco crassior quam *Pb. Gigas*, et teste Valentino Malaiis pro cibo inservit. Cf. *Houttuyn. nat. hist.* p. 1. vol. 10. p. 138.

beeticum. 13. Ph. thorace tereti scabriuscule, pedibus angulatis anticis latissimis tibiis dentatis, elytris brevissimis juxta basin spinosis, alis hyalinis fusco maculatis.

TAB. I. fig. 2.

Habitat in Sina. Mus. Dom. Holthuyzen.

A Stollio non depictum. Ulteriorem descriptionem vide infra.

atrophicum. 14. Ph. thorace quadrispinoso, elytris brevissimis, basi aristato mucronatis.

Mantis atrophica. *Pallas spicil. zool. fascic. 9.* p. 12. t. 1. f. 7. *Fabric. entom. syst. t. 2.* p. 14. n. 8. *Gmelin syst. nat.* p. 2054. n. 38.

Habitat in Java.

Exemplar quod Pallas vidit et descripsit fuit mas. Femina adhuc ignota probabiliter est aliquoties major, elytris mediocribus ovali-repandis.

Umbretta. 15. Ph. thorace tereti scabro, elytris brevissimis basi aristato spinosis, alis longitudine abdominis.

Stoll Mant. t. 8. f. 27.

Habitat in Surinamo. Mus. Dom. Holthuyzen.

Exemplar masculum. Color totius corporis obscure fuliginosus; alæ extus maculis oblongis fuscis. Antennæ concolores setaceæ longitudine corporis. Femina adhuc ignota.

roseum. 16. Ph. thorace tereti glabro, elytris lanceolatis, alis roseis costa viridi.

Mantis

Mantis rosea. *Fabric. entom. syst.* t. 2. p. 16. n. 15.

Stoll Mant. t. 5. f. 17.

Habitat in Amboina. Mus. Dom. Holthuyzen.

Fabricius æque ac Stoll vidit exemplar masculum, sed melius siccatum ideoque viride. Femina adhuc latet.

lateralis. 17. Ph. thorace teretiusculo glabro, pedibus inermibus, corpore nigro, elytris brevibus alarumque basi sulphureis.

Mantis lateralis. *Fabric. entom. syst.* t. 2. p. 15. n. 12.

Gmelin syst. nat. p. 2054 n. 42. *Stoll Mant.* t. 10. f. 36 et 37.

Habitat in Indiis. Mus. Dom. Holthuyzen.

Stoll quidem putat se exhibere ambos sexus, sed utraque figura videtur masculina; alioqui magnitudo et elytrorum figura in hac specie pro sexu parum variaret; quod certe contra analogiam hujus generis.

variegatum. 18. Ph. thorace tereti glabro, elytris brevissimis ovatis, alarum costa fusca, fasciis quatuor sulphureis.

Stoll Mant. t. 8. f. 26.

Habitat in Surinamo. Mus. Dom. Holthuyzen.

Parvum. Antennæ setaceæ brevissimæ: alæ juxta basin hyalinæ, costa latissima. Abdomen subdepressum dilute fuliginosum. Alter sexus adhuc latet.

bimaculatum. 19. Ph. thorace tereti glabro, elytris brevissimis lanceolatis dilute fuscis, medio macula sulphurea.

Stoll Mant. t. 8. f. 29.

Habitat in Coromandel. Mus. Dom. de Breukeler Wærth.

Antennæ setaceæ longissimæ; corpus et pedes dilute fuliginosi. Alæ hyalinæ, basi rufescentes, costa dilute fusca. Femina adhuc latet.

cinereum. 20. Ph. thorace tereti glabro, elytris brevissimis lan-
ceolatis cinereis fusco reticulatis, alis dilute cine-
reis fusco venosis costa rufescente.

Stoll Mant. t. 14. f. 56.

Habitat in Surinamo. Mus. Dom. Holthuyzen.

Parvum. Antennæ setaceæ breves. Corpus cinereum.
Femina adhuc latet.

valgum. 21. Ph. thorace tereti glabro, elytris brevissimis ovatis,
alis hyalinis, femoribus anticis extrorsum divaricatis.

Stoll Mant. t. 13. f. 52.

Habitat in Sina. Mus. Dom. Holthuyzen.

Antennæ setaceæ longissimæ nigræ: Corpus parvum.
Femina adhuc latet.

** *Depressa.* Abdomine lato depresso; pedibus anticis brevibus, latis, depresso; tho-
race brevi. (Hæc aliquanto similiora mantibus quam antecedentia teretia.)

Dracunculus. 22. Ph. thorace brevi depresso; mutico; elytris viri-
dibus, apice rubris.

Stoll Mant. t. 18. f. 65. femina declarata.

t. 5. f. 18. feminæ pupa e Mus. Dom.

Holthuyzen, rectius ad sequentem referenda.

Habitat in Indiis.

Antennæ mediocres setaceæ, basi crassiores, manifesto
articulatæ, articulis oblongis depresso. Alæ cinereæ
fusco undatæ; costa testacea fusco maculata, apice
rubra. Pedum anticorum femora late marginata
membranacea.

Forsitan Fabricii *Mantis aurita*, n. 13. est hujus mas,
6 dummodo

dummodo pedes antici membranacei; id quod ex descriptione parum elucet.

- Obrtmanni*. 23. Ph. thorace brevi, teretusculo, sub-biarticulato; elytris mediocribus ovato-oblongis; alis rotundatis, abdomine brevioribus; pedibus anticis latissimis, omnibus membranaceis, marginato-ciliatis.
n.sp.

TAB. II. fig. I.

Habitat in Indiis. Mus. Dom. Ohrtmann.

Antecedenti ad fine sed diversum. Caput antice granulatum, postice spinosum, spina sesquialtera longiore auriformi. Antennæ setaceæ longitudine corporis articulis oblongis depresso. Thorax granulatus. Abdomen elongatum cylindricum. Elytra juxta basin integra, neque ut antecedentis emarginata. Alarum costa concolor griseo fusca.

- manicatum*. 24. Ph. elytris brevissimis, basi denticulo elevato, femoribus anticis membranaceis.

linearis
preoccupied
by
Drury's
species

Mantis linearis. Fabric. entom. syst. 2. p. 16. n. 14.

Habitat in India.

Antecedenti proxime ad fine atque ejus forte mas. Mihi ex sola descriptione Fabricii notum.

- citrifolium*. 25. Ph. thorace brevi, antice depresso, postice obcordato denticulato, femoribus ovatis membranaceis, marginibus denticulatis.

Mantis siccifolia. Linn. syst. nat. 2. p. 689. n. 3.

Mus. Lud. Utr. n. 111. Fabric. entom. syst. 2. p. 18. n. 24.

Roesel ins. 2. Gryll. t. 17. f. 4, 5. femina.

Edw. aves, t. 258.

Houttuyn nat. hist. p. 1. vol. 10. t. 79. f. 2. femina.

Stoll Mant. t. 7. f. 24. mas. f. 26. femina, f. 25. A.
larva junior. f. 25. B. larva adulta. f. 25. C. pupa.
Omnia ex Museo Holthusiano.

Habitat in Indiis.

Antennae setaceae mediocres, manifesto articulatae, articulis oblongis depresso.

Mas minor, angustior, alatus: elytris lanceolatis brevibus, viridibus, alis hyalinis, costa marginali lata virescente.

Femina major, lata, aptera: elytris oblongis venosoreticulatis viridibus fere longitudine abdominis. Alarum rudimentis nullis.

Caput, antennae, oculi, pedes in utroque sexu, item elytra et alae in masculis hanc speciem procul dubio generi *phaesma* vindicant; licet uterque sexus corpore depresso, femoribus membranaceis, et ano simplici; femininus vero praesertim elytris oblongis abdomen tegentibus naturalem transitum faciat ad Mantes.

120. M A N T I S.

Palpi quatuor subæquales, patuli, laterales teretes, filiformes; *antici* quadriarticulati, articulo extremo breviori acuto; *postici* triarticulati, articulo extremo mediocri acuminato.

Labium

Antennæ frontales, approximatæ, plerisque filiformes in utroque sexu; rarius pectinatae vel barbatæ.

* *Teretes.*

Mantis corpus elongatum, plerumque depresso, g'abrum, immarginatum, tardum: capite exerto, latiore quam thorax, cordato, declivi; oculis magnis, prominulis, lateribus; stemmatibus plerumque duobus lucidis, intra basin antennarum; antennis intra oculos

Teretes. Thorace subæquali angusto, abdomine teretiusculo; pedibus anticis longissimis subteretibus, spinoso-ciliatis.

+ Apteræ. Elytris alisque in utroque sexu nullis.

Filum. 1. Mantis corpore filiformi aptero, thorace tereti subgranulato, abdomine depresso-culo, brachiis subcylindricis, pedibus cursoriis ietaceis simplicibus.

TAB. II. fig. 2.

Habitat in Surinamo. Mus. Dom. Holthuyzen, et Dom. Ohrtmann.

Corpus elongatum lineare, ut phasma filiforme, sed duplo minus: caput subtriangulare, declive, latius quam thorax: antennæ filiformes brevissimæ; oculi rotundi laterales prominuli: thoracis pars antica versus caput attenuata et subincurva, quasi collum mentitur, postica longissima, haud manifesto ab abdomine secreta: pedes antici per collum a capite remoti forma et usu brachiorum ut in congeneribus: ulnarum apice spinulis tribus. Pedes intermedii brevissimi, posticique mediocres capillares teretes mutici. Cauda triphylla foliolis acuminatis. Color totius corporis obscure testaceus; oculi soli fusci.

oculos insertis: thorace obovato angusto (rarius strumoso), dorso carinato, margine depresso, scutello nullo; elytris oblongis submembranaceis, basi complicatis (dum sinistrum margine interno semper incumbit basi elytri dextri, ut in loculis Fabricii) longitudine alarum, rarissime nullis: alijs plicatilibus fere totum abdomen tegentibus: pedibus sex; anticis brachiiformibus, qui constant humeris, ulnis, manibus denique falcatis, pollice laterali filiformi quinquearticulato; reliquis pedibus intermediis nempe et pollicis plerumque teretibus muticis, rarius lobatis; tarsis quinque articulatis: abdomine plerumque ovato, depresso, submarginato, rarius teretiusculo, segmentis 8—10, uno simplici. Viëtus e præda animali, quam manibus comprehensam, ut sciuri ori admovent, devorant.

†† *Alcta*. Elytris alisque in utroque sexu.

‡ *Dioptrice*; oculis conico-acuminatis.

oculata. 2. M. corpore filiformi, thorace linearis subcarinato, elytris dimidio brevioribus quam abdomen.

M. bicornis. *Linn. syst. nat.* 2. p. 691. n. 11.

Mus. Lud. Ulr. n. 116.

M. oculata. *Fabric. entom. syst.* 2. p. 19. n. 26.

Stoll Mant. t. 10. f. 38.

Habitat ad Cap. bon. spei. *Mus. Dom. Holthuyse*.

Mantis fausta. *Fabric. entom. syst.* n. 47.

Thunberg nov. inf. sp. 3. p. 63.

Stoll Mant. t. 13. f. 53. vix ac ne vix quidem ab hac specie secerenda videtur.

Hottentottos hanc pro numine tutelari adorare pernegat Sparrmannus.

‡‡ *Boopides*. Oculis simplicibus, rotundis, prominulis.

lipelytra. 3. M. thorace linearis elongato, subdepresso, marginato; elytris angustis longitudine abdominalis, hyalinis costa viridi; alis hyalinis, costa fusco maculata; apice dilute fusca..

Stoll Mant. t. 5. f. 16..

Habitat in Surinamo.

Antennae mediocres filiformes, pedes graciles et, praeter ulnas ciliatas, mutici.

purpurascens. 4. M. thorace linearis; elytris alarumque costa dilute fuscis; alis purpurascensibus, maculis quatuor coeruleis.

Stoll Mant. t. 8. f. 28.

Habitat in Surinamo.

Habitus

Habitus phasmatis sed certissime mantis. Sequenti
adfinis attamen diversa.

- picta.* 5. M. thorace linearie, elytris alarumque costa et apice
fuscis; alis hyalinis, juxta costam quinque maculis
alternis, tribus purpureis, duabus dilute flavis.

Stoll Mant. t. 3. f. 9.

Habitat in Surinamio.

* * *Depressa.* Thoracis basi vel medio latiore. Abdomine ovato depresso; manibus,
femoribus tibiisque compressis; tibiis tarisique anticis spinoso-dentatis.

+ *Arthritica.* Pedibus lobatis.

‡ *Boopides.* Oculis simplicibus rotundis prominulis, thorace elongato filiformi.

- gongylodes.* 6. M. thorace antice dilatato dentato; elytris repandis
costa viridi, longioribus quam alae hyalinæ; femo-
ribus anticis spina, reliquis lobo terminatis.

M. gongylodes. *Linn. syst. nat. 2. p. 690. n. 4.*

Mus. Lud. Ulr. n. 112. Amœn. acad. 1. p. 504.

Fabric. entom. syst. 2. p. 17. n. 17.

Aldrov. inf. t. 13. f. 21.

Marcgraf Brasil. 246. Gaayra.

Act. angl. 301. t. 20. f. 3.

Seb. mus. 4. t. 68.

Roef. inf. 2. gryll. t. 7.

Sulzer char. inf. t. 8. f. 50.

D' Aubent. misc. t. 65. f. 2.

Drury inf. 1. t. 50. f. 2.

Stoll Mant. t. 16. f. 58, 59.

Habitat

Habitat in Indiis. Mus. Dom. Holthuyzen.

Antennæ breves filiformes; capitis vertex subulatus bifidus; ulnæ dilatatae ciliatae; femora introrsum lobo simplici semicordato, extrorsum duplice aculeato, stipitatae; tibiae teretes; elytra et alæ breviores quam abdomen.

flabellicornis. 7. M. thorace antice dilatato, subbidentato; elytris repandis longitudine alarum; antennis pectinatis.

M. flabellicornis. *Fabric. entom. syst.* 2. p. 16. n. 16.

Stoll Mant. t. 17. f. 61.

Habitat in Indiis. Mus. Dom. Holthuyzen.

Proxime antecedenti adfinis. Differt modo antennis pectinatis; alis longioribus quam abdomen; et oculis minus prominulis. Lobi feinorum exakte ut in *M. gongylode*. Quare olim forsitan recte a Fabricio (*Spec. ins.* 1. p. 346. n. 8.) pro eadem specie habita est.

pectinicornis. 8. M. thorace antice unidentato, elytris integerrimis hyalinis costa viridi, alis hyalinis costa fusca, antennis barbatis.

M. pectinicornis. *Linn. syst. nat.* 2. p. 691. n. 10.

Amæn. acad. 6. p. 396. n. 27. *Fabric. entom. syst.* 2. p. 18. n. 25.

M. pennicornis. *Pallas it.* 2. ap. n. 81. *Gmelin syst. nat.* p. 2055. n. 53.

M. pectinicornis. *Herbst. arch. ins.* 8. t. 50. f. 2.

Stoll Mant. t. 9. f. 34. mas. f. 35. femina.

Habitat prope mare Caspium. Mus. Dom. Holthuyzen.

Mas multo minor, thorace mutico; femina thorace ciliata; antennis ulniisque latioribus. Femora in utroque

utroque sexu solummodo gaudent introrsum lobo simplici semicordato subterminali. Tibiae teretes.

In synonymia fortasse passim confusio cum antecedente latet, ob neglectas elytrorum et femorum differentias.

- lobipes.* 9. M. thorace antice subdilatato mutico; elytris aliquo hyalinis, costa striisque obliquis viridibus.

(M. *undata*. *Fabric. entom. syst.* 2. p. 19. n. 28. videtur hujus femina.)

Stoll Mant. t. 8. f. 30. mas.

Habitat in Tranquebar. Mus. Dom. Holthuyzen.

Caput triangulare; frons producta in conum erectum; antennae filiformes brevissimae; oculi exserti. Brachia robusta manusque ut in tribulibus hujus generis femora et tibiae utrinque lobis semicordatis stipitatæ; tibiae item spina subterminali. Elytra et alæ aliquoties longiores quam abdomen. Fabricius in descriptione M. *undatae* videtur usus fuisse femina hujus nostræ *lobipedis*, quæ colorum detrimentum cepit e spiritu vini.

- mendica.* 10. M. thorace antice marginato, ciliato; elytris albo viridiue variis, costa guttis albis adspersa.

M. *mendica*. *Fabric. entom. system.* 2. p. 17. n. 19.

Stoll Mant. t. 12. f. 47.

Habitat in Africa boreali.

Caput triangulare, frons parumper producta, antennæ peñinatæ. Thorax pro hac tribu brevis. Femora sola introrsum lobo semiovato subterminali.

filiata. 11. M. thorace mutico, elytris viridissimis; posticorum pedum femoribus intus, tibiis utrinque lobatis.

Stoll Mant. t. 18. f. 67.

Habitat in Bengalā.

Caput triangulare, frons parumper producta. Antennæ breves filiformes. Oculi exserti. Elytrorum basis interior, alæque hyalinæ. Pedes intermedii teretes.

pauperata. 12. M. thorace spinulofo; humeris extus spina, femoribus intus lobo semicordato terminatis.

*Fabric. entom. system. 2. p. 17. n. 18. Thunberg nov.
inf. spec. 3. p. 61.*

Herbst. arch. inf. 8. t. 51. f. 1. femina.

Stoll Mant. t. 10. f. 40. mas.

Habitat in Coromandel.

Adfinis M. peñtinicorni, at neutquam ejus femina, namque est multoties minor. Differt præterea antennis in utroque sexu filiformibus brevibusque, thorace parum dilatato, elytris integerrimis viridiibus flavo marginatis, et lobis intus modo ad femora adnatis.

bidens. 13. M. thorace scabro, elytris viridibus fasciis nigris, alis fuscis disco atro.

M. bidens. *Fabric. entom. syst. 2. p. 22. n. 39.*

Habitat in America.

Mihi solummodo ex Fabricii descriptione nota.

†† *Diaptrice.* Oculis conico acuminatis, thorace brevi lobato.

coronata. 14. M. thorace cordato, marginato; oculis oblongis porrectis; femoribus intus late lobatis.

Stoll Mant. t. 11. f. 44. Ibid. f. 44. item ejus larva.

Habitat in Amboina.

Antennæ filiformes mediocres. Quintuplo major
quam sequentes.

lobata. 15. M. thorace cordato marginato, elytris maculis binis
quadratis albis.

M. lobata. *Fabric. entom. 2. p. 23. n. 45.*

Thunberg nov. inf. spec. 3. p. 62. f. 73.

Stoll Mant. t. 12. f. 50.

Habitat ad Cap. bon. spei.

Sequenti simillima, at paulo major. Ulnæ angustæ
submuticæ.

nasuta. 16. M. thorace cordato ciliato, fronte porrecta spinoso-
emarginata.

M. nasuta. *Fabric. entom. syst. 2. p. 23. n. 44.*

Stoll Mant. t. 9. f. 33. et t. 12. f. 48.

Herbst arch. inf. 8. t. 51. f. 4. Mantis tricolor. Pupa.

Habitat ad Cap. bon. spei. Mus. Dom. Holthuyzen.

Antecedente paulo minor; abdominis margo lobato
dentatus, lobis recurvis; brachiorum ulnæ latiores
dentato ciliatæ.

† † *Eucnemides.* Femoribus tibiisque simplicibus.

‡ *Boopides.* Oculis prominulis rotundis.

cancellata. 17. M. thorace dilatato, margine membranaceo plano;
elytris ovalibus cancellatis.

M. cancellata. *Fabric. entom. syst. 2. p. 18. n. 23.*

Stoll Mant. t. 11. f. 42.

Habitat in Surinamo.

M. Strumariæ adfinis, sed differt: antennis brevissimis,
thoracis margine plano, elytris ovalibus ferrugineis
fusco cancellatis, medio macula subocellari testacea.

Strumaria. 18. *M. thorace obcordato dilatato, margine subcucullato,*
elytris lanceolatis pellucidulis.

M. strumaria. Linn. *syst. nat.* 2. p. 691. n. 13.
Fabric. *entom. system.* 2. p. 18. n. 21.

Merian. *Surin.* t. 27.

Seb. *Mus.* 4. t. 69.

Roeß. *inf.* 2. *Gryll.* t. 3.

Stoll *Mant.* t. 12. f. 45.

Habitat in Indiis. Mus. Dom. Holthuyser.

Antennæ filiformes elongatæ.

precaria. 16. *M. thorace elongato subciliato, elytris ovatis acumi-*
natis virescentibus, ocello ferrugineo.

M. precaria. Linn. *syst. nat.* 2. p. 691. n. 8. Fabric.
entom. syst. 2. p. 20. n. 32.

Merian. *Surin.* t. 66.

Seb. *Mus.* 4. t. 67.

Houttuyn *nat. hist.* p. 1. vol. 10. t. 79. f. 3.

De Geer *inf.* 3. p. 407. n. 3. t. 36. f. 4.

Herbst *arch. inf.* 8. t. 50. f. 1.

Stoll *Mant.* t. 17. f. 62.

Habitat in America. Mus. Dom. Holthuyser.

Antennæ filiformes mediocres; elytra ovata, acumi-
nata; nunc ocello ferrugineo simplici, nunc dimidi-
ato albo, nunc macula subocellari alba.

bodegetica. 20. *M. thorace elongato subciliato; elytris ovatis acutis,*
viridibus immaculatis; alis hyalinis fusco undatis.

M. carolina. *Linn. syst. nat. 2.* p. 691. n. 9.

Amæn. acad. 6. p. 396. n. 28.

Habitat in Surinamo. Mus. Dom. Holthuyzen.

Antennæ filiformes breves. Ulnæ intus macula magna atra.

irrorata. 21. *M. thorace lœvi subcarinato, elytris viridibus, punctis ferrugineis sparsis.*

M. irrorata. *Linn. syst. nat. 2.* p. 690. n. 7. *Amæn. acad. 6.* p. 397. n. 29. *Fabric. entom. syst. 2.* p. 19. n. 29.

Habitat in America australi.

Antecedenti proxime adfinis, neque ab illa forsitan tamquam peculiaris species diversa. Puncta sparsa elytrorum fortassis a fanie, dum insectum acu occidetur, emicante orta, ut in nostra *M. conspurcata*.

cingulata. 22. *M. thorace elongato subciliato, elytris lanceolatis viridibus, nigro maculatis; alis nigricantibus nigro lineatis, costa ex fusco flavescente.*

M. cingulata. *Gmelin syst. nat. ed. 13.* p. 2055. n. 48.

Drury inf. 2. p. 89. t. 49. f. 2.

Stoll Mant. t. 9. f. 32.

Habitat in America australi. Mus. Dom. Holthuyzen.

Antennæ filiformes mediocres. Abdomen nigro cingulatum.

urbana. 23. *M. thorace elongato subciliato, elytris ovalibus viridibus, fascia punctisque ferrugineis.* *Fabric. entom. system. 2.* p. 23. n. 42. mas.

Stoll Mant. t. 9. f. 31. femina.

Habitat in Indiis. Mus. Dom. Holthuyzen.

Mas multo minor quam femina differt thorace integrum.

Simulaerum. 24. M. thorace subelongato, ciliato; elytris oblongis viridibus macula media alba.

M. *Simulacrum.* *Fabric. entom. syst. 2. p. 21. n. 34.*

Stoll Mant. t. 12. f. 49.

Habitat in Indiis. Mus. Dom. de Breukelerwærth.

Antennæ filiformes longæ; thorax paulo brevior et antice latior, quam in tribulibus.

obsecaria. 25. M. thorace elongato lævi; elytris spathulatis hyalinis, costa viridi; ocello rubro, dimidiato albo; alis hyalinis.

Stoll Mant. t. 18. f. 66.

Habitat ad Cap. bon. spei. Mus. D. de Breukelerwærth.

Antennæ filiformes mediocres. Ulnæ intus macula nigra. *M. oratoria* adfinis, attamen diversa.

oratoria. 26. M. thorace elongato lævi, elytris viridibus immaculatis.

M. oratoria. *Fabric. entom. syst. 2. p. 20. n. 31.*

et mas. *Mantis religiosa.* *Linn. syst. nat. 2. p. 690. n. 5.*

Roef. inf. 2. Gryll. t. 1. f. 1, 2.

Schæf. elem. t. 81.

Seb. Mus. 4 t. 67. f. 7, 8.

Stoll Mant. t. 5. f. 19.

β femina. *M. oratoria.* *Linn. syst. nat. 2. p. 690. n. 6.*

Roef. inf. 2. Gryll. t. 2. f. 5. item inf. 4 t. 12.

Sulz. bist. inf. t. 8. f. 4.

De Geer *inf.* 3. *p.* 410. *n.* 5. *t.* 37. *f.* 2. hic delenda,
nam est *M. sancta*, quod vel magnitudo docet.

Seb. Mus. 4. *t.* 67. *f.* 9, 10.

Stoll Mant. *t.* 17. *f.* 64.

γ *striata*. *M. striata*. *Fabric. entom. system.* 2. *p.* 20. *n.* 30.

Roef. inf. 2. *Gryll.* *t.* 2. *f.* 6.

Habitat ubique in Zona torrida et temperata.

Mas antennis longioribus; thorace breviore. Femina
alis apice viridibus.

confuscata. 27. *M. thorace carinato ciliato, elytris spathulatis hya-*
linis, costa subrepanda viridi, (punctis ferrugineis
sparsis.)

Stoll Mant. *t.* 16. *f.* 60. *ib.* *t.* 4. *f.* 12. pupa.

Habitat in Coromandel. *Mus. Dom. Holthuyse*.

Adfinis *M. oratoriae*, at paulo major; antennae filiformes mediocres. Thorax manifesto ciliatus. Puncta sparsa videntur a fanie, dum occideretur, orta.

grisea. 28. *M. thorace latiusculo; oculis prominentibus; elytris*
alisque griseo hyalinis, fusco maculatis.

M. grisea. *Fabric. entom. syst.* 2. *p.* 22. *n.* 40.

Stoll Mant. *t.* 6. *f.* 23.

Habitat in Coromandel.

Statura mediocris. Caput quale Agrii virginis, at manus. Antennae filiformes mediocres. Corpus artusque grisei, fusco punctati. Elytra oblonga, costa subrepanda.

obroptera. 29. *M. thorace laevi, elytris oblongis testaceis, macula laterali fusca.*

De Geer *inf.* 3. *t.* 36. *f.* 8?

Stoll

Stoll Mant. t. 6. f. 22. pupa? t. 4. f. 13. larva?

Habitat in Coromandel. Adhuc dubia species.

- adpersa.* 30. M. thorace ciliato; elytris alisque longis griseis fusco maculatis.

Stoll Mant. t. 11. f. 41.

Habitat in Africa æquinoctiali.

Similis *M. precariæ*, sed minor. Elytra alæque oblonga integerrima.

- hyalina.* 31. M. thorace ciliato, elytris hyalinis margine viridi, fronte bidentata.

M. hyalina. *Fabric. entom. syst.* 2. p. 21. n. 37.

De Geer inf. 3. p. 410. n. 4. t. 37. f. 1.

Habitat in America.

Nimis adfinis videtur *M. oratoriæ*.

- monacha.* 32. M. thorace lævi, elytris alisque viridi hyalinis.

M. monacha. *Fabric. entom. syst.* 2. p. 21. n. 35.

Stoll Mant. t. 1. f. 2. mas.

Habitat ad Cap. bon. spei.

Similis *M. precariæ*, sed duplo minor.

- sancta.* 33. M. thorace ferrulato, elytris viridibus immaculatis, alis hyalinis.

M. sancta. *Fabric. entom. system.* 2. p. 21. n. 33.

De Geer inf. 3. t. 37. f. 2. *Mantis oratoria*.

Habitat in Europa australi.

Similis *M. precariæ*, at triplo minor. Elytra oblonga integerrima. Alæ apice virescentes.

- fasciata.* 34. M. thorace subcarinato lævi; elytris oblongis integerimis

rimis dilute fuscis; alis cinereis fusco undatis, fascia
lata purpurea juxta basin hyalinam.

Stoll Mant. t. 18. f. 68.

Habitat in Surinamo.

Similis *M. purpurascens*; sed hujus tribus. Antennæ
filiformes mediocres. Thorax elongatus vix margi-
natus, sed subcarinatus nec linearis. Elytra alæque
longitudine abdominis.

truncata. 35. *M. thorace lævi*; elytris integerrimis; alarum apice
exalbido; abdomine depresso, margine lobato.

M. truncata. Fabric. entom. syst. 2. p. 17. n. 20.

Stoll Mant. t. 3. f. 10.

Habitat in America australi.

Parva sed robusta. Abdomen fasciis fuscis cingula-
tum. Elytra puncto disci fusco.

neuroptera. 36. *M. thorace lævi*, antice tereti; elytris alisque hyalinis,
fusco venosis.

Stoll Mant. t. 12. f. 46.

Habitat in Ceylon.

Elytra et alæ fere, ut neuropteris v. c. Hemerobiis,
longiores quam abdomen. Attamen certissime hu-
jus generis et tribus.

Confer *M. perspicua* *Fabric. entom. syst. n. 48.* cui
simillima præter maculas: item

M. parva *Gmelin p. 2055. n. 47. Drury ins. 2. p. 75.*
t. 39. f. 5.

caffrana. 37. *M. thorace lævi*, antice tereti, postice marginato; ely-
tris viridibus, sulphureo marginatis.

Stoll Mant. t. 11. f. 43.

Habitat

Habitat ad Cap. bon. spei.

Proxime adfinis *M. sanctæ*.

- prasinana*. 38. M. thorace depresso, subcarinato, lœvi; elytris brevibus acutis; alis abdomine longioribus nigris apice flavescentibus.

Stoll Mant. t. 1. f. 4.

Habitat in Surinamo.

Corpus parvum viride. Elytra brevia, medio linea elevata fusca, fere ut Phasmatis; sed caput, thorax et brachia Mantin arguunt. Pedes postici teretes tenuissimi.

- minuta*. 39. M. thorace elongato teretiusculo, elytris hyalinis costa virescente.

Fabric. entom. system. 2. p. 24. n. 50.

Stoll Mant. t. 2. f. 7.

Habitat in America australi. Mus. Dom. Holthuyse.

Parva. Caput cordatum oculis lateralibus. Antennæ filiformes breves. Pedes antici a reliquis distantes capiti approximati. Elytra et alæ vîridi hyalinæ.

- pogana*. 40. M. thorace teretiusculo, elytris alisque reticulatis albis, priorum costa macula laterali ferruginea.

Fabric. entom. system. 2. p. 24. n. 49.

Raphidia Mantispa. *Linn. syst. nat. 2. p. 916. n. 2.*

Raphidia stiriaca. *Pod. Mus. Græc. 101. t. 1. f. 15.*

Mantis Perla. *Pallas spicil. zool. fasc. 9. p. 14. t. 1. f. 8.*

Stoll Mant. t. 2. f. 6.

Habitat in Gallia, Germania.

Parva. Caput cordatum oculis lateralibus. Brachia capiti approximata. Thorax brevior quam anteecedentis; vix carinatus, integerrimus.

pufilla.

- pufilla.* 41. M. thorace teretiusculo lævi, elytris alisque oblongis integerrimis hyalinis, priorum costa flavescente.

Fabric. entom. system. 2. p. 25. n. 51.

Pallas spicil. zool. fasc. 9. p. 15. t. 1. f. 9.

Stoll Mant. t. 1. f. 3.

Habitat ad Cap. bon. spei.

Parva, vix major quam *Raphidia Ophioptis*.

- nana.* 42. M. thorace teretiusculo elongato, elytris alisque hyalini fusco venosis, abdomine longioribus.

Stoll Mant. t. 4. f. 15.

Habitat in Coromandel.

Antecedenti adfinis, attamen diversa. Abdomen vix depresso; brachia capiti approximata. Corpus rufum; elytrorum costa angusta rufescens.

†† *Dioptrice*; oculis conico-acuminatis.

- angulata.* 43. M. thorace mediocri, elytris sinuato-repandis, abdome lobato.

Stoll Mant. t. 4. f. 14.

Habitat in Surinamo. Mus. Dom. Holthuyzen.

Corpus mediocre at robustum ferrugineum. Caput cornutum vertice bifido. Antennæ filiformes mediores. Thorax cinereus subcarinatus elongatus lævis. Abdomen rufo-fasciatum, marginatum lobis ciliatodentatis. Brachia ut in congeneribus. Pedes curviori simplicissimi, lobis nullis; quum reliquæ Mantes depressæ dioptricæ omnes quoque simul arthriticæ reperiantur, vel hoc nomine, ut alioque species maxime singularis.

This may be sufficient for the nomenclature of the two genera which I have taken the liberty to name in German *Blattschrecke*; or *Laubschrecke*, and *Fangschrecke*. It is unnecessary to repeat here all that I have said in Latin; I will only make a few general remarks, especially on the species omitted by Fabricius. In the *Entomologia Systematica* we find in all 51 *Mantes*; I here describe 25 *Phasmata* and 43 *Mantes*, together 68 species; hence it might be concluded, that I had 17 new species; but this mode of reckoning is not perfectly sure: it may be, and is, indeed, the fact, that I have added more than 17 species. The descriptions of Fabricius are very good and correct, but they are frequently insufficient to determine to which family a *Mantis* belongs, and, therefore, I cannot always be certain whether this or that species delineated by Stoll, where I do not cite Fabricius, may not yet be found in the *Entomologia Systematica*. But this will be very rarely the case, and nearly all the species of Fabricius, which I pass over in the monograph, are certainly wanting in Stoll.

Every one acquainted with the subject will observe, that the first 15 *Mantes* of Fabricius are one and all *Phasmata*. A certain proof that the difference of the habit struck also the attention of this sharp-sighted entomologist. The *Phasma citrifolium* alone has gone astray among the *Mantes*, under the name of *M. siccifolia*, n. 24. This has been occasioned partly by its belonging to a peculiar family, which has rather more resemblance to the *Mantes* than the other *Phasmata*; and partly from this circumstance, that Fabricius was acquainted only with the female, and not with the male, which bears much stronger marks of a *Phasma* than the female. Three species of *Phasma* occur in Fabricius which Stoll has not, and which I have hesitated to number in the order of species. Not that I doubt their existence, but because they are males, and I cannot be certain that the female is not already reckoned among the species. They are

are the following, *M. spinosa*, n. 9. *M. bispinosa*, n. 10. and *M. aurita*, n. 13. This last is, in all probability, the male of the *Phasma Dracunculus*, provided it has broad forelegs, and in general skinny margins on all its legs, which may easily be determined by inspection of the Lundian collection in Copenhiagen. The next in order, *Pb. lineare*, is certainly at least of the second family, and, probably, the male of my *Pb. Ohrmanni*. The *Pb. spinosum* and *bispinosum* belong certainly to the first family, and are very nearly related to the *Pb. atrophicum* and *hecticum*. The last mentioned are also males, of which the females are, perhaps, already known. In the genus *Phasma*, the males in general are very clearly distinguishable from the females. The sexual distinctions may be taken with the greatest advantage from those species of which the males and females are known with perfect certainty as belonging to each other. These are particularly my *Pb. nævium* and *Pb. edule*. There are, indeed, some genera in which it seems that the difference of the sexes in respect to magnitude is only observable in some species, and not in the genus at large. I need not go so far as to mention that in the genus *Cervus*, the stag, *Cervus Elaphus*, is greater than the hind; and, on the contrary, the roebuck, *Cervus Capreolus*, is considerably smaller than the doe; such considerations would carry me too far from my purpose. I will confine myself to insects. Here we have the *Bombyx dispar*, in which an inequality exists between the two sexes that may be called unexampled in this genus. It were useless to assert that there is a natural genus among the *Glossata* of which the sexes are unequal in size, and which ought to be separated from the genus *Bombyx*, in the same manner as the *Lucani*, where the sexes are of unequal magnitudes, are separated from the more proportionate *Paffali*. Yet, setting aside all these minutiae, we may assume it as a probable hypothesis, until the contrary be clearly proved, that the differences of most, if not of all, the other species of

Phafma, with respect to sex, are analogous to those of the *nauvium* and *edule*. This being granted, we may observe that, 1. The males are always much less than the females. 2. Their antennæ are proportionably longer and thicker. 3. Their hemelytra are smaller, round-oval, sharper at the tip, thorned at the base; those of the females larger, oval, rounded off at the tip, without thorns, but more strongly ribbed. 4. The females of some species are, perhaps, without wings, although they have hemelytra, and the males have really wings. The *Phafma citrifolium* of the second family, and the *Ph. angulatum* of the first, afford examples of this. It is not impossible that some females may be found to want both wings and hemelytra, whose males may have both. At the same time, there are certainly some males without wings in the perfect state. The *Ph. filiforme* in the Ohrtmannian collection is, without doubt, a male, full grown, and yet without any wings. Time will show whether or not this *Ph. filiforme* be the male of the *Ph. Ramulus*. 5. The head and thorax of the male *Phafma* are more thorny than those of the female. 6. The female *Phafmata* have, between the three leaves at the end of the abdomen, a proper spine for laying eggs; the male organs, concealed in a similar position, are in dried specimens not to be clearly distinguished. 7. The forefeet of the males are in proportion longer, thinner, and dentated with fewer but stronger thorns.

These observations may be of use in bringing together the sexes of the same species, and may serve to guide and assist a reader, who has an opportunity of observing these insects alive, to throw more light on their economy and procreation. But, on the other hand, they render difficult the determination of the species. The specific characters ought properly never to be taken from the particulars just mentioned, as they hardly ever agree perfectly in both sexes. I have sought as much as possible to avoid this error in the description of the

the species, of which I knew both the male and the female. Where I could ascertain but one sex, whether in a natural specimen, or in a drawing or description of good authority, I have been obliged, against my own principles, to form the specific characters from those variable distinctions which are subject to change with the difference of sex. In this respect, therefore, whoever shall hereafter think proper to write a more complete and accurate monograph on the *Phasmata*, will find still much room left for corrections and improvements. I consider myself as excused in the eyes of enlightened judges, as having been able to make use only of dried specimens and books; and, besides, as fairly confessing and pointing out the defects of my specific characters, and recommending them to the improvements of those who have opportunity of examining the living subjects.

In the genus of the proper *Mantes*, the difference between the two sexes is far from being so striking as in the *Phasmata*. I believe that I have observed in some species the following sexual characters, which I do not lay down dogmatically, but propose, as a critical reasoner, to be brought to the test by those who have opportunity and skill to make use of them.

1. The male *Mantes* are only a little smaller than the females.
2. Their antennæ are considerably longer, and somewhat thicker, sometimes, although rarely, even pectinated. Thus, perhaps, the *M. flabellicornis* may be the male of *M. gongylodes*; on the other hand, both sexes of the *M. peetlinicornis* seem to have pectinated antennæ.
3. The males have proportionably larger eyes than the females; in respect to form and situation, the eyes of each sex agree of course very exactly.
4. The thorax of the males is narrower, and, especially at the margin, smoother.
5. Their abdomen is narrower and thinner.
6. Their hemelytra are narrower, and often longer.
7. Their wings are longer, and every way larger.
8. Their arms are somewhat longer; the upper and lower arm narrower, and less flattened; the scissar-like, or falciform hand, narrower

and longer; the thumb rounder and longer. The females are proportionately the reverse in all these respects, that is, the whole form is heavier, broader, flatter, and firmer. The proper organs of generation of the *Mantes* do not, in dried specimens, admit of examination.

From this digression on the sexual differences in both genera, I return to the account which I proposed to give.

In Gmelin's thirteenth edition of the *Systema Naturæ* the *Phasmata* stand as in Linné, intermixed with the *Mantes*. But we find some enumerated amongst them that Fabricius has not. The *M. cylindrica*, n. 54. is doubtless the male of *M. neocydaloides*. I have united both under *Ph. nævium*. *M. phthisica* is probably the male of my *Ph. edule*. *M. labiata* is also a *Phasma*, but I can say nothing further of it. *M. gigantea* is our *Ph. angulatum*, as I rather choose to call it after Fabricius; it is this species described from a female.

I now come to the proper *Mantes*. I must here enumerate the following from Fabricius, which I have been obliged to omit, not being able to ascertain to which family they belong: 1. *M. superstitionis* of that author, n. 27. appears to belong to the *Mantes* with a flattened body, rounded feet, and round eyes, and in my series to come in between *M. strumaria* and *precaria*. 2. *M. fenestrata*, n. 38. appears to claim a place in the same family and party. 3. *M. bidens*, n. 39. belongs to my arthritic division with round eyes, between *labipes* and *mendica*. 4. *M. rustica*; n. 43. must, according to analogy, be also arthritical; and, in that case, it follows *M. pectinicornis*. 5. *M. fausta*, Fabr. n. 47. is scarcely a species essentially different from the *M. oculata*. 6. *M. perspicua* must be placed directly after my *neuroptera*.

The following *Mantes* of Gmelin I am quite at a loss to arrange, as I have no sufficient accounts to enable me to ascertain their family and relationship with any certainty. 1. *M. maculata*, n. 45.

2. *M. capensis*, n. 46.
3. *M. angusta*, n. 50.
4. *M. sibirica*, n. 51. and
5. *M. brachypiera*, n. 52.

The new species, which I here describe for the first time, with the addition of coloured plates, are the following:

1. *Phasma hecticum*, TAB. I. fig. 2.
2. *Phasma Ohrtmanni*, TAB. II. fig. 1.
3. *Mantis Filum*, TAB. II. fig. 2.

The *Phasma hecticum*, which is an inhabitant of China, I describe from a specimen in the collection of Mr. Holthuysen; it is of the male sex, and resembles the *Phasma Gigas*; but does not seem to be the male of that species, although its female must be of the size of the *Pb. Gigas*.

The head is oblongo-ovate, highly vaulted, and covered with a shagreen-like skin. The forehead is elongated into a sharp porrected horn, which is excavated in the middle with a deep furrow; the margins are bent round and serrato-dentated. It consists of two leaflets, compressed from the sides, which the insect, when alive, can probably separate at pleasure from each other, and move either of them apart. The organs of feeding are of the same nature with the others of this genus and family. The eyes are situated under the forehead, and are small, round, and black. The antennæ are setaceous, originate between the eyes, and have, at the base, two thick divisions; the rest are longish, and become, by degrees, narrower and narrower.

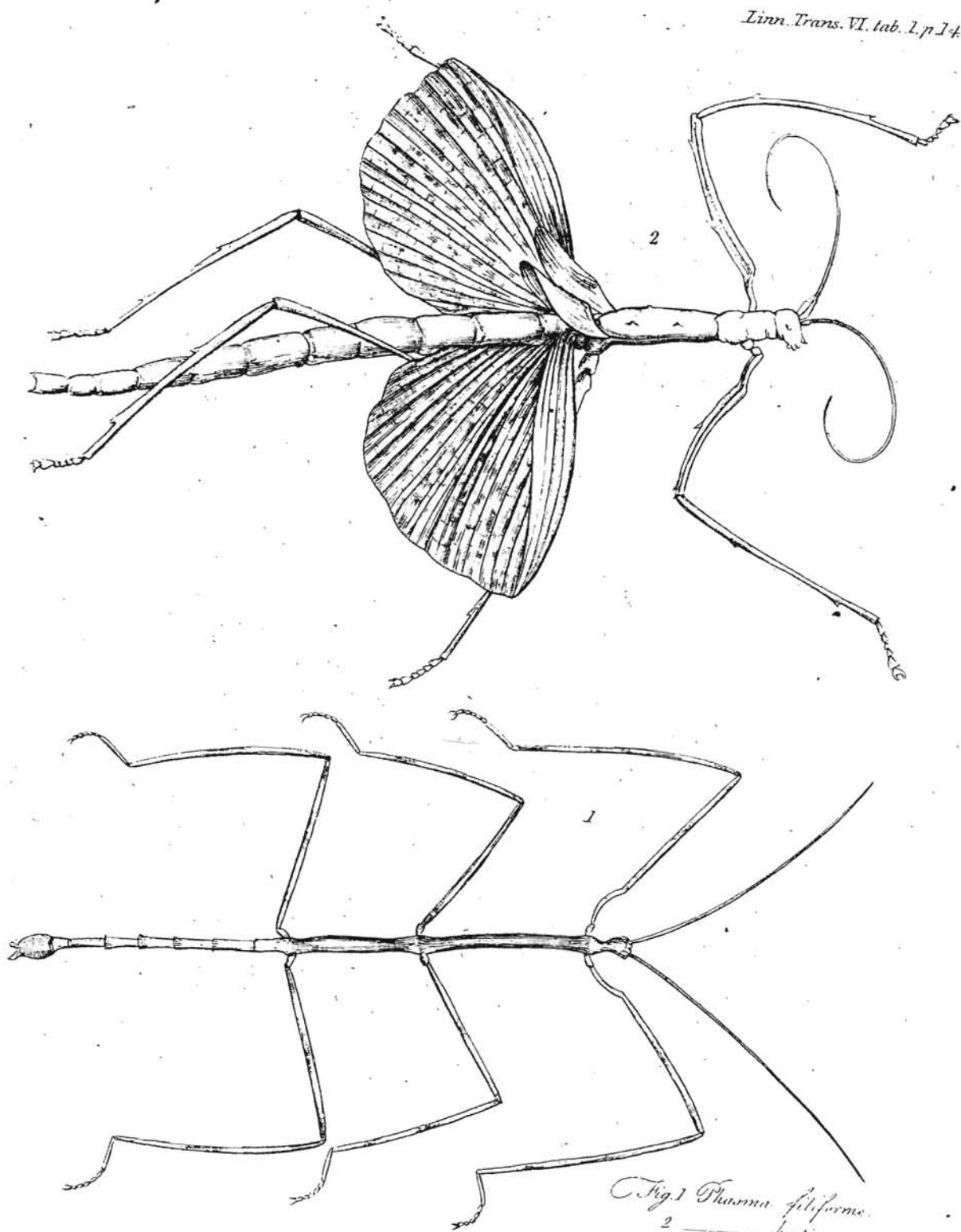


Fig. 1 *Phasma filiforme*
2 — *hecticum*.

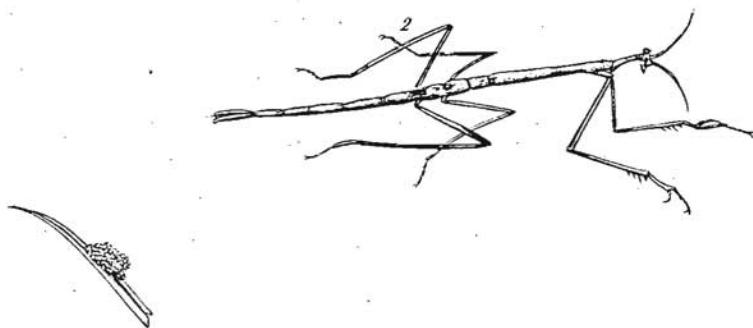
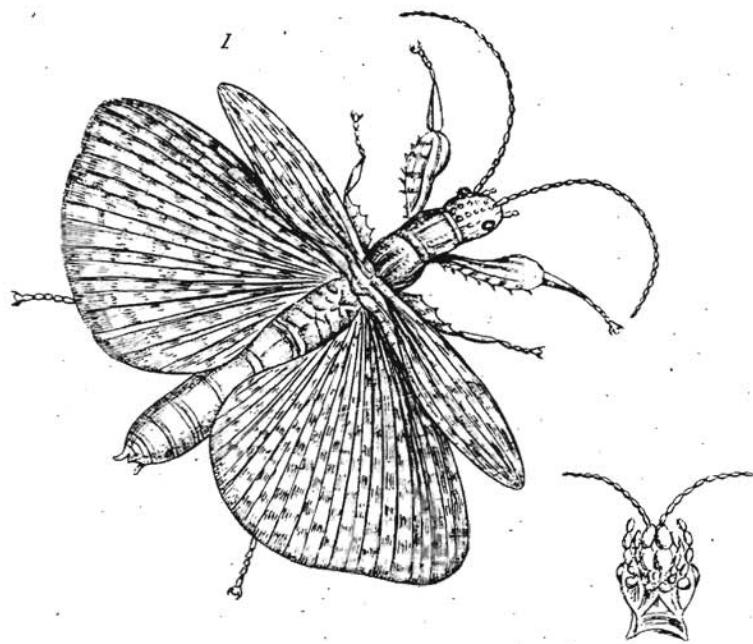


Fig 1 *Phasma Chrtmanni*
2 *Mantis filum*.