HEMIPTERA OF MAURITIUS

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by

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ABSTRACT

An account is given of the apparent history of the flora and fauna of Mauritius. Work by early collectors of Mascarene Hemiptera is outlined and that of more recent authors is reviewed critically. Evidence is adduced to show that the earlier hemipterous fauna is now confined to a small strip of upland subtropical forest and isolated mountain tops, one restricting factor being competition from species inadvertently introduced mostly from Madagascar and Africa. The genital structure, trichobothrial pattern, and skeletal morphology of type material is discussed in detail. Frequently the work of previous authors was unsatisfactory. Unreported structures and organs are described, e.g., gular organs of Laccotrephes (NEPIDAE). Detailed keys to families and lower taxa have been prepared and various dubious statements on morphological points have been clarified, e.g. the male genitalia of CICADIDAE, hemelytral 'fusion' in a gelastocorid. It is shown that in many families male characters are generally the more useful to separate genera (e.g., NEPIDAE, PENTATOMIDAE, CICADIDAE), in others (e.g., KINNARIDAE) the female affords the better characters. A new tribe is described (DISTANTADINI - CICADIDAE) as are 7 new genera and six new species; two new specific names are introduced to replace homonyms; corrections have been made as to the authorship of subfamily, tribal and other names, especially in CICADIDAE and APHIDIDAE. Particular attention has been paid to revising and correcting the synonymy of species. Plates and illustrations have been prepared mostly to record types,

which were often specimens which others have assumed lost [(e.g., Nerthra rugosa - GELASTOCORIDAE), Acrosternum millierei - PENTATOMIDAE)]. Up-to-date lists, with notes on distribution of HYDROMETRIDAE, GERRIDAE, ARADIDAE, MIRIDAE, TINGIDAE, PENTATOMIDAE, LYGAEIDAE, ALEYRODIDAE, CICADIDAE, COCCOIDEA, including many records new to the Mascarene region, have also been prepared. Nomenclatorial notes, pertinent to the taxa described, are given throughout.

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VOL. I.

I. INTRODUCTION.

(a) DESCRIPTION OF THE ENVIRONMENT AND NOTES ON THE ORIGINAL FLORA AND FAUNA.

The island of MAURITIUS (formerly called 'ISLE DE FRANCE') is situated in the Indian Ocean between the parallels of 19°58' and 20°32' South latitude and the meridians of 57°17' and 57°46' East longitude. Together with RÉUNION (formerly BOURBON) and RODRIGUEZ, it forms the MASCARENE ARCHIPELAGO.

The westernmost island of the group is Réunion, which lies 400 miles from MADAGASCAR and has an area of nearly 1,000 square miles. It is very mountainous with lofty peaks rising to 10,000ft.. Mauritius is more than 100 miles north-east of Réunion, a little over 550 miles from Madagascar and just under 1,300 miles from the African mainland. It measures 38 miles by 29 miles and occupies an area of about 700 square miles. Close to it are a number of small islets: the largest of these - 'Flat Island' - is a barren outcrop barely one mile long, but 'Round Island', although only 417 acres in area, has very interesting floral and faunal endemic relics.+

In its physical features Mauritius presents essentially an extensive undulating plain which rises gently to the south-west where it stands at an elevation of about 2,000ft. but occasional peaks reaching heights up to 2,700ft. are found in a few scattered ranges.

Rodriguez, about 350 miles east of Mauritius, is 11 miles long by 5 miles broad, and has an area of just over 40 sq. miles. It is separated from the other Mascarene Islands by ocean depths of over 2,000 fathoms and is a rugged mass of volcanic rock with smaller satellite islets around it.

+vide footnote p.2.

LOCATION MAP OF THE MASCARENE ISLANDS (Fig 1)

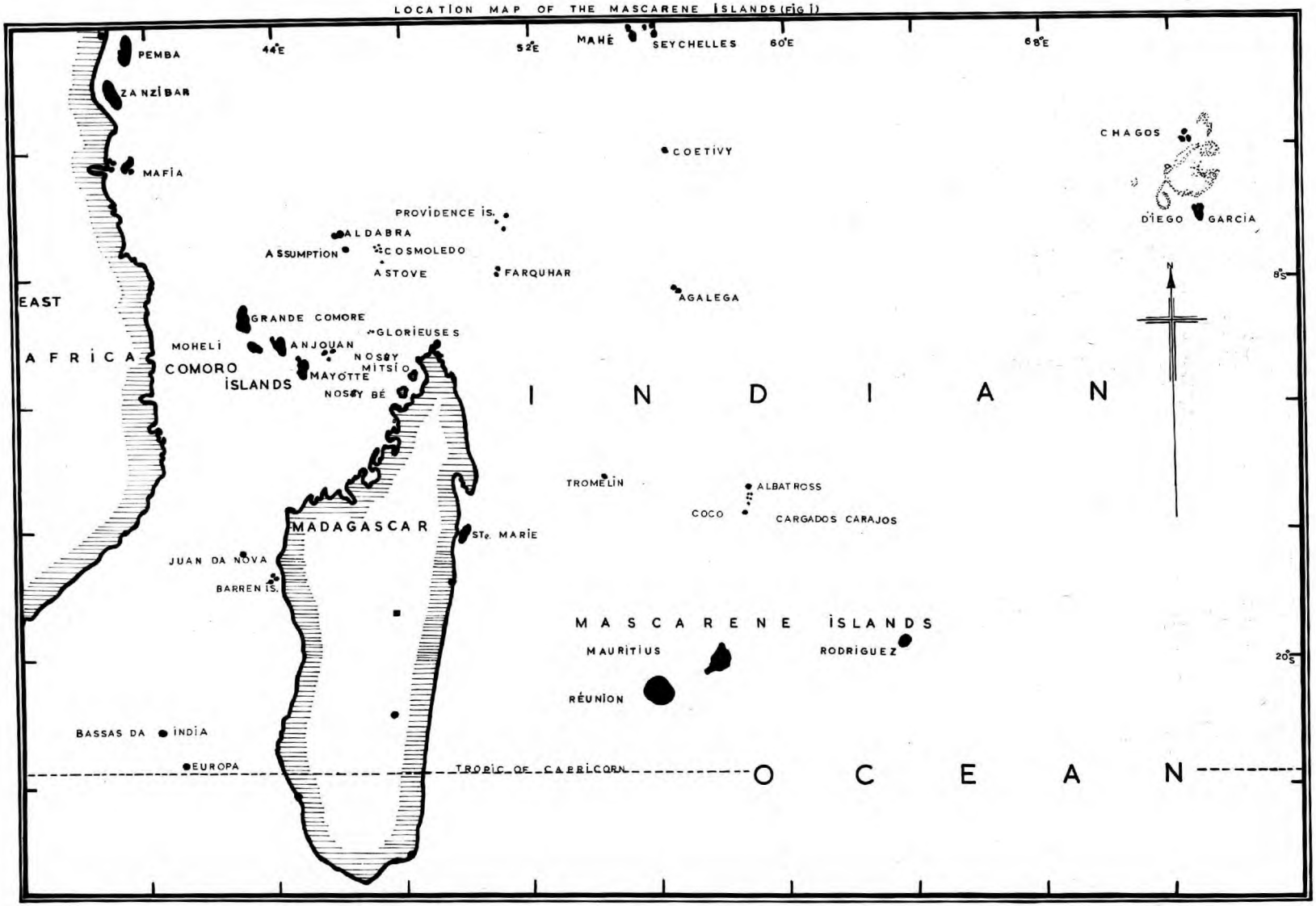

PLATE 1

Long before they were discovered by Europeans these islands were known to Arab navigators who figured them in their 15th century maps under the names of Dina Margabin (Réunion); Dina Arobi (Mauritius); and Dina Moraze (Rodriguez). According to Visdelou-Guimbeau (1948),

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(Note from page 1)

+Bolyeria multicarinata (Boié) (1827) and Casarea dussumieri (Schlegel), two snakes found on Round Is., are probably the whole representatives of an extinct group which preceded the pteroglyphous ophidians. These 'living fossils' belong to the family BOIDAE but are atypical in several respects; lacking the characteristic lateral anal claws in the males; having transversely divided upper maxillae, and being provided, in the posterior dorsal vertebrae with hypapophyses (Vinson, 1953, Proc. Soc. Arts & Sci. Mauritius, 1:253-257).

Among the endemic lizards is Gymnodactylus serpeninsula Loveridge (1951), a gecko described from Serpent Is. (a still smaller speck of land lying 2 miles further north and covering only 78 acres) but also found on Round Is.. This is the only Malagassic representative of a genus which is known from Australia, some Pacific Is., South America, India, Malaya, N. Afrifa. Scincus telfairi Desjardins and Allepharus boutoni Desjardins are also peculiar to Round Island, but Scelotes bojeri Desjardins occurs on many islets.

Of the endemic plants: Latania Loddigesii Martius is confined to Round Island, but Mascarena Revaughanii Bailey - another palm - is also found on Gunner's Coin (an islet with an area of about 180 acres) (Vinson, 1950, Proc. Soc. Arts & Sci. Mauritius, 1:32-52).

Pero Marcarenhas, after whom the archipelago is named, discovered Réunion (Santa Appolonia) about the year 1512, while another Portuguese navigator Domingos Fernandez, had discovered Mauritius in the previous year: Rodriguez, however, was not discovered by Diego Rodriguez until the year 1538. The Portuguese[++] made no attempt at colonization, and on their visits to Mauritius (then called Cirne Is. or Isle of Swans (i.e., of Dodos) merely liberated monkeys, pigs and goats to provide meat for their passing ships.

On 17th September 1598 a Dutch squadron of 5 ships, under Admiral van Warwick, anchored in what is now called Mahebourg Bay on the S.E. coast while on its way to Batavia (Djakarta) and landing parties spent about a fortnight scouting the island. The Dutch East India Company were

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[++]It is not known with certainty why the Portuguese did not colonize the Seychelles and many other islands of the Indian Ocean discovered by them, e.g., the Chagos (in Portuguese 'Chagas'), the Amirantes or 'Ilhas do Almirante' (named after Vasco da Gama who was promoted to the rank of Admiral in 1502 on his second voyage to India), Agalega (named after Juan da Nova, the Galician navigator), Cosmoledo (Como Ledo, according to Toussaint, 1961), the Cargados Garajos (Coroa dos Garajaos, i.e., bank of sea-birds). Perhaps these islands were too small, but it may be that annexation of Portugal by Spain in 1580 or the discovery of Brazil diverted Portuguese energies more towards the New World than the islands of the Indian Ocean (Toussaint, loc. cit.).

impressed by van Warwick's report of the abundance of black, yellow and red ebony[+], and of other resources like edible palms (Dictyosperma, Acanthophoenix) which are useful also for thatching, building, and the preparation of alcoholic liquors.

Antonio van Diemen, who founded Batavia and became its first governor, was quick to recognise the commercial value of Warwick's discoveries[++] and the first Dutch colony was founded in 1638. The Dutch renamed the second largest island of the Mascarenes: Mauritius, in honour of their 'Stathouder' Maurice of Nassau.

According to Vaughan and Wiehé (1937) the ebony forests appear to have reached their maximum development in lowland regions, particularly in the plains of Flacq in the east. Governor Hugo records that so dense were the forests that in making a stretch of road about 4 miles long, 3,300 big trees capable of yielding 10,000 logs of finest quality ebony were felled (Pitot, 1905, from Vaughan et al, loc. cit.).

[+]This wealth of ebony had already previously attracted several other expeditions and two Dutch expeditions to the island ca. 1622.

[++]According to Vaughan 1953 (Proc. Soc. Arts & Sci. Mauritius 1,3:241): "The Dutch had not been slow to realise the immense botanical significance of their geographical discoveries in the Indo-Malayan region and their observations were given to the world in the three great classics of Eastern Botany: H.A. van Rheede Tot Draakestein's 'Hortus Indicus Malabaricus' (1678-1703), J. Burman's: Thesaurus Zeylanicus (1737) and the 'Herbarium Amboinense' of G.E. Rumphius (1741-1750)."

The forests of ebony in the eastern plains and the palm savannah in the west rapidly dwindled away, the latter finally surviving only on small islets in the north of Mauritius (e.g., Gunner's coin). Additional difficulties were caused by crop failures following the passage of severe cyclones and in 1658 the Dutch administration left the island. However, it is more likely that their chief reason for abandoning the island was that the Dutch had found in Cape Colony - discovered a few years earlier (in 1652) - a far better settlement and safer port of call than tiny Mauritius. A second attempt at colonizing Mauritius in 1668 made from the Cape also failed and the Dutch abandoned the place for good in 1710.

The French took possession of Mauritius in 1715, calling it 'Isle de France'; but their first settlers actually came to the island from neighbouring Bourbon in 1721. Under French administration the island's prosperity soared up astonishingly. During the eighteenth century, cereals, sugar cane and coffee were successfully introduced and a great variety of tropical fruits, spices and timber trees cultivated. Coffee from Arabia was first introduced to Bourbon in 1715 and from there to Mauritius. Several attempts to introduce spices were made between 1719 and 1729 and again between 1745 and 1755.

Economic crops and plants were experimentally tested in the fields surrounding the residence of the French Governor at 'Mon Plaisir'. Pierre Poivre was appointed as director of this station which later came to be called The Royal Botanic Garden (Pamplemousses).

Among the more valuable imports of plants were Litchi chinensis Sonn.,

Mangifera indica Linn., Myristica fragrans (Houtt), Eugenia aromatica Baill., Casuarina equisetifolia Linn.

Poivre was a botanist of some distinction, and under his direction the collections were greatly augmented and the import of exotic plants was accelerated. Although the main function of the Garden was to discover the agricultural possibilities of plants, the Institution became important as a source of material for other countries (new colonies) sending out seeds or plants to all parts of the world. Few people to-day realise that the clove plantations of Zanzibar are descended from stock which originated in the gardens of Poivre.+

+Interesting notes of these early introductions are to be found in the concluding pages of the second volume of 'Histoire des Plantes de la Guiane Françoise" (1775) by Jean Baptiste Fusée Aublet, a French botanist who resided in Mauritius from 1752 to 1761.

In 1789, P. Willemet published in a Leipzig botanical journal a descriptive list of plants he had seen and collected (Neue Annalen der Botanik Ed. Dr. Paul Usteri).

Notes on the extensive collections made by Commerson and Stadtmann appeared in Lamarck's 'Encyclopédie Méthodique' and in Willdemow's edition of the 'Species Plantarum' of Linnaeus. Other important works by Du Petit-Thouars, Achille Richard and Bory de St. Vincent which show the high standard of Botany in the 'Isle de France' at that time are: 'Histoire des végétaux recueillis sur les Isles de France, de Bourbon' etc. (1802); 'Monographie des Orchidées' etc. (1828) and 'Voyages dans les quatre principales Iles des Mers d'Afrique' (1804).

In those days, however, phytosanitary measures were almost non-existent and many insect pests were imported inadvertently in this search for useful plants. Indeed, this may be in part the reason why there are far more introduced pests in Mauritius than in Réunion. It is the author's opinion that the alleged affinities of some Mauritian and Asian insects could be traced to these early plant introductions. The coccids are the most important Hemiptera introduced. There are a few indigenous scale insects described from the island but it is clear that a large number of scale insects reported from Mauritius probably escaped detection by the economic botanists of the time. The aphids also are nearly all introduced: of the 29 species and subspecies found in Mauritius, only 3 are probably endemic.

Rodriguez was occupied by the British in 1809 and was made the base of operation against the 'Isle de France' which was captured the following year. In 1814, the 'Isle de France' was ceded to England at the 'Treaty of Paris' at which time it was renamed Mauritius.

From that date until recently the island's economy has depended almost entirely upon its sugar industry. The cultivation of tea, tobacco and fibre was begun only in recent years.

Considering its area, Mauritius is one of the most heavily populated countries in the world. Its total population now in the region of 3/4 million has therefore a density of more than a thousand to the square mile.

The increase of cultivation was made at the expense of the forests. The aboriginal forests, which belonged to the class known as Evergreen Tropical Forests, once so luxuriant, now present a doleful picture,

being reduced to a few isolated tracts in the more inaccessible parts. Indigenous plant communities now cover less than 2 per cent of the acreage and much of this is invaded by exotics. Post-war shortages of timber favoured the planting of quick-growing exotics, mainly conifers, but unfortunately these are particularly susceptible to destruction in cyclones.

Like the endemic plants, the island's animal life has also suffered tremendously. A little over one hundred species of birds are listed from Mauritius. According to Vinson, 1956 (Proc. Soc. Arts & Sci. Mauritius 1,4:387) this figure includes 12 extinct endemics and 15 non-endemics which no longer occur. Excluding the regular migrants and vagrants the true residents are reduced to forty species. It is sad to reflect that between the years 1610 and 1620, Dodos were so abundant in Mauritius that many were captured and shown in London and other European capitals.

With the steady reduction of indigenous forests and the unfortunate importation ca. 1528 of the Monkey (Macaca irus Cuvier) and of the Mongoose (Herpestes griseus Burchell) in 1900, man has brought many more species to the verge of extinction. Three endemic raptorial birds: the Goshawk (Astur alphonsi Newton and Gadow), the Owl (Strix sauzieri Newton and Gadow) and the Scops Owl (Otus commersoni Oustatet) are now extinct.

As to insect life, especially Hemiptera, the introduction of the Indian Mynah (Acridotheres tristis (Linn.)) has almost caused the annihilation of two indigenous CICADIDAE. Among the Lepidoptera the Mynah has virtually exterminated Salamis angustina vinsoni Le Cerf

(NYMPHALIDAE).

The introduction of the lizard (Calotes versicolor (Daudin)) and of the South African toad, Bufo regularis A. Reuss in 1922 were also grave mistakes and many indigenous Carabids have dwindled almost to extinction through this latter introduction.

(b) BRIEF REVIEW OF THE EARLY COLLECTIONS OF HEMIPTERA IN MAURITIUS.

The first hemipteron to be recorded from Mauritius was Tettigonia (now Abricta) brunnea - an indigenous species of CICADIDAE - which was described by Johann Christian Fabricius in his supplementary volume to the 'Entomologia Systematica' in 1798. The specimens were presented to him by Dagobert Carl de Daldorff[+] - one of Fabricius' former students who visited Mauritius, India and the East Indies on several trips and made a name for himself as a collector of Hemiptera.

After his death in 1802 the Daldorff collection was further studied by Fabricius who, a year later, described two more Homoptera from the island in his famous 'Systema Rhyngotorum', namely Issus (now Tylana) carinatus and I. cristatus.

The Napoleonic wars in Europe had repercussions even in distant Mauritius. When the famous British navigator Matthew Flinders, Commander of the 'Investigator', landed in Mauritius, he was held prisoner on the island for 6 years. In his well-known 'Voyage to Terra Australis' he makes little mention of hemipterous insects occurring except the ubiquitous tropical bed-bug, Cimex hemipterus Fabricius.

[+]For a biography about Daldorff vide 'Entomologiske Meddelelser': 15(1922-37): 121-123.

At about the time of Fabricius' death in 1810 the 'Isle de France' became a British colony. Almost a quarter of a century later Laporte[++] (1833) described in Gustave Silbermann's 'Revue Entomologique'[+++] a species of water-scorpion, naming it Nepa annulipes. This is now known to belong not to Nepa but to a new genus appropriately named Laccotrephes (lake dweller) which is widely distributed in the Ethiopian region.

During the period 1817-1820 an important French scientific mission under M. Louis Claude Desaulses de Freycinet made a voyage round the world in the frigate 'Uranie'. As a result of shipwreck in the Falkland Islands another vessel was purchased and named 'La Physicienne'.

When the 'Uranie' berthed at Port Louis on the 6th May 1818, General Hall, then Ag. Governor, made arrangements for the party to be

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[++]Laporte, François Louis Nompar de Caumont (Comte de Castelnau) (1810-1880), one of the 'administrateurs' of the 'Musée d'Histoire Naturelle de Strasbourg'.

[+++]It is unfortunate that Poisson has repeatedly and erroneously quoted 1863 as the date of Silberman's 'Revue Entomologique' where Laporte's description is given. Consequently he has attributed priority to L. vicina (Signoret) - a species described from Réunion which is conspecific with L. annulipes Laporte from Mauritius. Moreover, as Poisson has erected a number of subspecies of L. vicina from the Ethiopian region, these must be altered to subspecies of Laccotrephes annulipes Laporte - probably about half a dozen names are here involved.

given all possible facilities. The zoological observations of the voyage of the 'Uranie' and 'La Physicienne' were published in Volume 3 of the account[+] but it would appear that no collections of Hemiptera were made.

About ten years later, another group of French scientists under Captain M.J. Dumont d'Urville left Toulon on another voyage of discovery which lasted three years. The frigate was the famous 'Coquille' but it made its second voyage under the name of 'l'Astrolabe'[++].

Although hundreds of insects are said to have been captured, no trace of these collections remains. D'Urville (passim.) reports that his insect collections suffered serious damage in Mauritius through the omnivorous cockroaches[+++].

[+]The full title is as given under:-
"Voyage autour du monde entrepris par Ordre du Roi sous de ministère et conformément aux instructions de S. Exc. M. le Vicomte du Bouchage, secrétaire d'Etat au Dép. de la Marine. Exécuté sur les corvettes de S.M. l'Uranie et la Physicienne pendant les années 1817, 1818, 1819 & 1820." Paris 1827. Zoo. 3 + 96 pl. (Atlas).

[++]"Voyage de découvertes de l'Astrolabe exécuté pendant les années 1826, 1827, 1828 and 1829 sous le commandement de M.J. Dumont d'Urville, Capitaine de Vaisseau." Paris 1833-1835.

[+++]The American cockroach Periplaneta americana (Linn.) which was then firmly established in Mauritius had indeed become a scourge of museum specimens and collections.

In 1839, Maximillen Spinola described Ricania (now Tarundia) servillei (FLATIDAE) and Charles Jean Baptiste Amyot and Jean Guillaume Audinet-Serville reported on an interesting coreid with widely separated ocelli to which they gave the generic name Meloza ('luz' in Hebrew = well apart) - now placed under Hypselopus. More Hemiptera from the island were known to them when they published their 'Histoire Naturelle des insectes Hémiptères' in 1843. Thus Montandon (1897) reports that in their collection in the Paris Natural History Museum a species of PLATASPIDAE from Mauritius and Réunion was for a long time labelled Brachyplatys obynastes (Amyot MS.). Only two other local species of Hemiptera are recorded in their classical work: Brixia (Derbe) lunulata and Acopsis viridicans, the latter, a tettigellid, was presented to them by M. Carreno.

In 1844 Dr. Franz XaviorFieber reported on the presence on the island of a gall-making tingid. This insect, recently rediscovered, belongs to the genus Paracopium (fide Drake): its host plant is still unknown. Fieber also described a local member of the NOTONECTIDAE: Bothronotus (now Enithares) concolor. The type is lost and no other specimen seems to have been collected since 1852 unless E. millioti Poisson is a synonym (!).

Earlier (1851) Dr. Victor Antoine Signoret had described an interesting pentatomid Cerataulax (now Mecidea) quadrivittatus and in 1877 he reported the presence of Rhagovelia mayri on the island.

Between 1854 and 1878, the year of his death, the great Swedish naturalist Carolus Stål described about twelve species of Mauritian Hemiptera. He also gave systematic descriptions of some twenty-four

Heteroptera and Homoptera inhabiting Mauritius in his well-known 'Hemiptera Africana'[+] (1865-66) and in several papers published in Öfvers. K. vet. Akad. Forh..

Most of the material for Stål's descriptions was collected by Swedish scientists from the Royal Swedish frigate 'Eugénie'[++] which visited Mauritius in March 1853 during its round-the-world voyage. Stål's work constitutes one of the most valuable contributions to the knowledge of the entomology of Africa and its offshore islands.

From 1882 onwards Professor Odo Morannal Reuter (1882, 1885, 1912), Dr. Leopold Melichar, Dr. Geza Horváth recorded, studied and described a few species from the island but since their descriptions appeared in various scientific journals not available in Mauritius, most of these species remained unknown to local entomologists. By means of the facilities afforded him at the British Museum the present author has been able to delve deep into the scattered literature on the Mascarene fauna and to bring to light more than 150 species either previously

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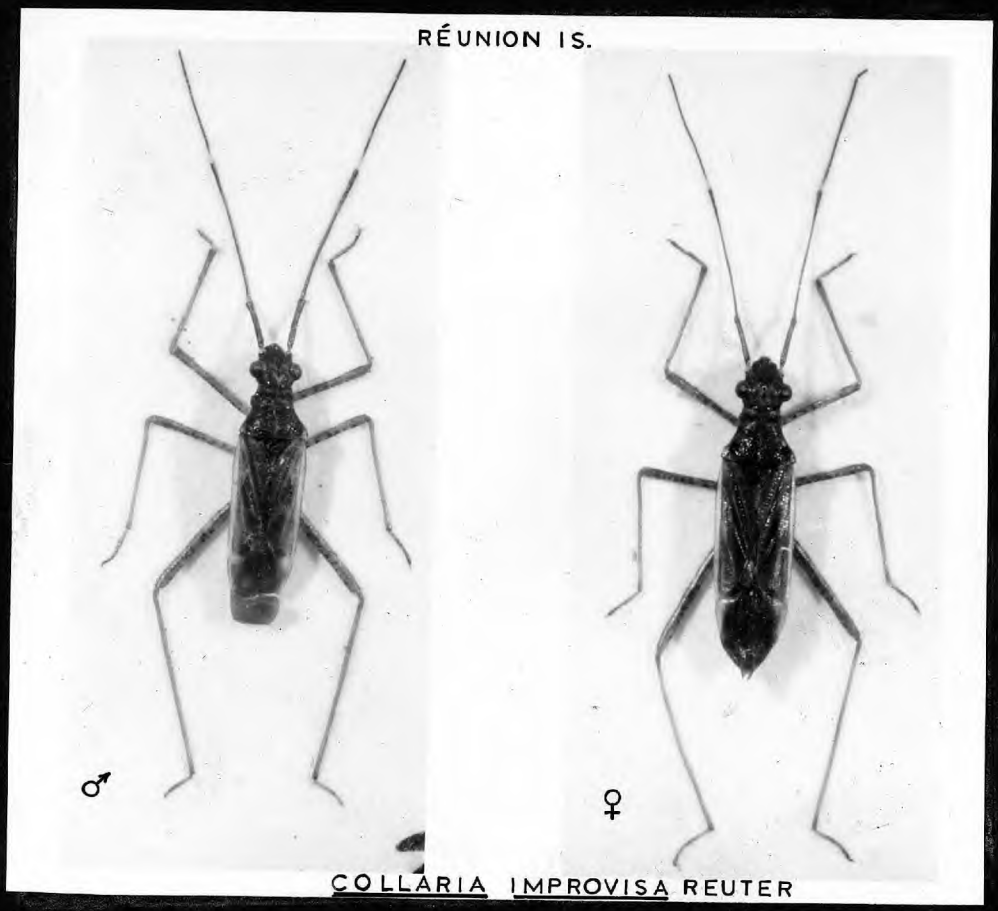
[+]The first volume of Stål 'Hemiptera Africana' bears the date 1864, but was not published, according to Mayr, until the Spring of 1865. Bergroth 1919 Ent. Mitt.:8:(10-12):190-191 gives the date of Stål 1st vol. 1 May 1865, vols. 2-4, May 1866.

[++]For an itinerary with map of the voyage and an account of their stay on the island and their visit to the Royal Botanic Garden (Pamplemousses) vide N.J. Andersen - 1853, p. 263-285: En verkdos omsegling Skildrad i. Bref. Stockholm, Samson & Vallin.

described or previously recorded.

Among the species described by Reuter in 1907 is an interesting species of MIRIDAE with transparent hemelytra Corizidolon notaticolle. The original description is based on a single female from the collection of the famous German collector Dr. Alfred Voeltzkow who in his voyage to Madagascar and the Mascarenes visited Mauritius ca. 1905. Through the courtesy of Dr. Martin Meinander, Universitetets Zoologiska Museum (Helsingfors) the present writer has been able to see the co-type and to rediscover the two sexes of this rare species both from Réunion and Mauritius. A photograph of the male is shown on plate 3. Dr. Meinander also sent another of Reuter's so-called types of Miridae, Collaria improvisa. The type was later re-discovered at the Paris Museum. (PL. 2)

In 1897 Charles Alluaud - the eminent French entomologist - made a collecting trip to Mauritius but unfortunately caught malaria and had to return to France after only a few weeks' collecting. Some extremely interesting Hemiptera from this collection were recently rediscovered by Dr. Carayon (1956) in the accessions of the Paris Museum. In a paper entitled "Quelques Hémiptères ANTHOCORIDAE des Iles Mascareignes" Carayon (1958) describes a new genus from Mauritius, Iella, and a new species I. argentea based on a single female collected at Curepipe by Alluaud; the hairs of this species have a flattened plate-like structure unique in anthocorids. Earlier from the Alluaud collection, Carayon (1956) had noted the presence in Mauritius of another anthocorid Poronotellus (now Buchaniella) sodalis White



COLLARIA IMPROVISA REUTER

(1♂ and 1♀ collected at Mon Trésor).

Dr. A. Villiers (1963) had also found Leptocorisa (Erbula) annulicornis Signoret in the same collection, together with a new species of Oncocephalus which he has now described under the name of O. emmerezi.

During the years 1900 to 1913, Dr. Henri Schouteden and William Lucas Distant listed and reported upon some Mauritian species of Hemiptera. Among the species of Homoptera described by Distant (1905) is a beautiful species of CICADIDAE (sensu lat.) captured on the 2nd May 1836 on the Pouce Mountain by Charles Darwin[+]. This was during the round-the-world cruise of H.M.S. Beagle (Captain Fitzroy) - December 27th, 1831 - October 2nd, 1836. Schouteden's 'Note sur quelques Hémiptères de l'Ile Maurice' (1907) lists twenty-four species but this includes a number of misidentifications. According to Distant Schouteden's 'Nezara emmerezi' which he described in 1905 is a synonym of Acrosternum heegeri Fieber - a photograph of Schouteden's paratype is given on plate 12 - the present author does not agree with Distant that the species belongs to the genus Acrosternum. Also his record of Nysius binotatus Germar is probably incorrect. Schouteden has informed the author that the specimen is not now in his collection. As the species has never been recovered since that date it would appear

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[+]Darwin C. (1897) Journal of Researches into the Natural History and Geology of the countries visited during the voyage of H.M.S. Beagle round the world. LONDON ch. XXI, p. 484.

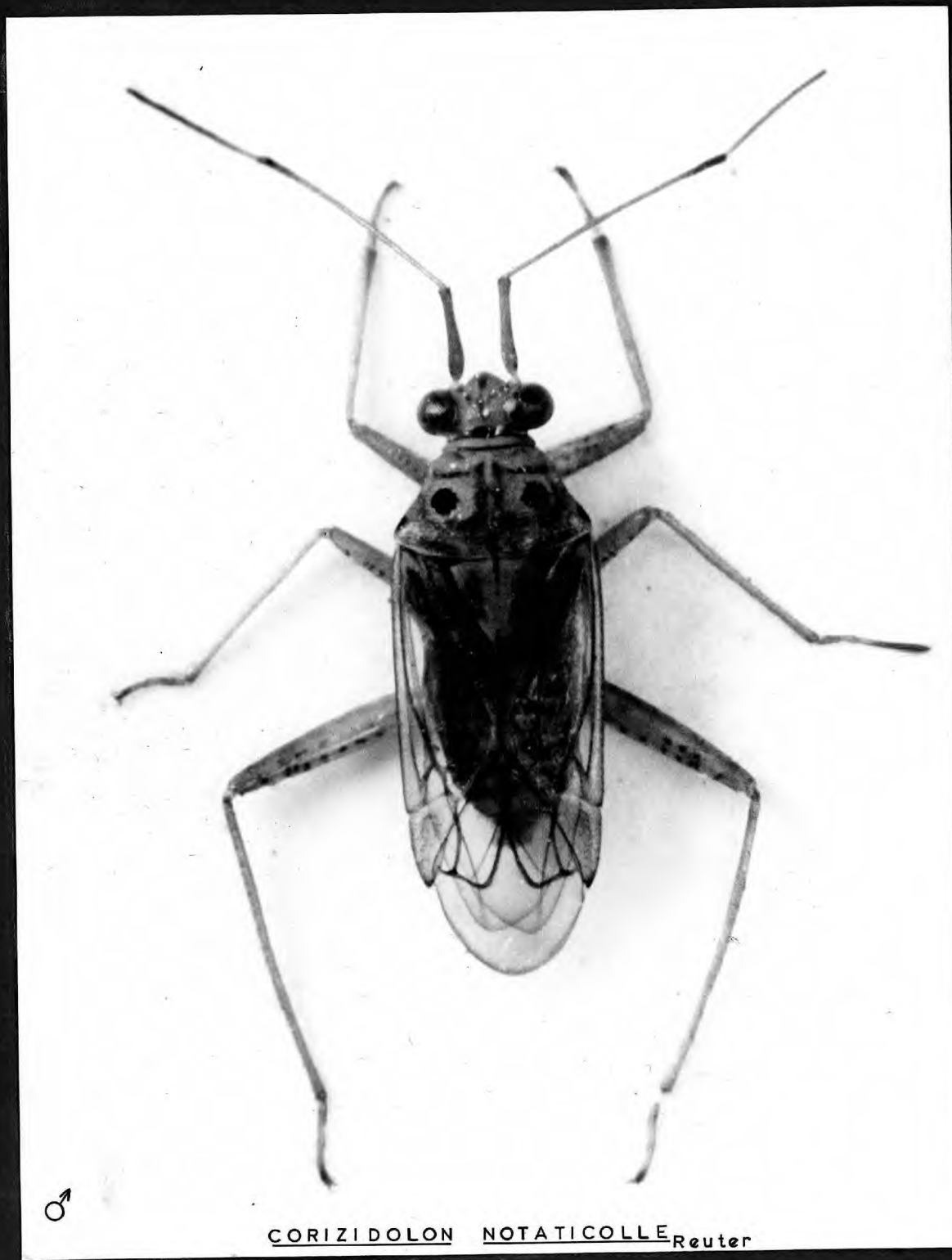
that this record is incorrect. His record of Tettigonia (= Ulozena) lineaticollis Signoret is again an error, this probably refers to Acopsis viridicans Amyot and Serville. U. lineaticollis is a Madagascan species. His Pyrrhocoris apterus L. is a doubtful record, while Conorhinus limbatus de Geer is the widely distributed Triatoma rubrofasciata. Finally, his Stagira darwini var. ? was shown by the present author to be a new genus and species which he described under the name of Mauricia claudeae Orian 1954 .

(c) RECENT WORK ON THE HEMIPTEROUS FAUNA OF MAURITIUS AND NEIGHBOURING ISLANDS WITH A REVIEW OF THE LITERATURE.

Before proceeding to review the literature, it would be well to outline the gradual adaptation of the local institutions in relation to growth and expansion of entomology and consequently the progress of research on the hemipterous fauna of the area.

The first society in Mauritius to concern itself at all with the natural history of the island was the 'Société des Sciences et des Arts de l'Ile Maurice' founded in 1801. One of its notable and most active members was Lislet Jeoffroy. This society, however, was rather shortlived: on the 21st March 1805 it was replaced by the 'Société libre d'Emulation'. As the years passed it became clear to some eminent naturalists living in Mauritius at the time, namely Mr. Charles Telfair, Dr. Lyall and Mr. Venceslas Bojer that if progress on the study of the local flora and fauna was to be achieved, some more specialised organisation was necessary. This conviction led to the formation of a new society which met for the first time on 24th August 1829 - the anniversary of Baron Cuvier's birth, Cuvier's name being then of great

PLATE 3



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CORIZIDOLON NOTATICOLLE Reuter

authority in the field of natural history. They were also fortunate in having as patron of their new 'Society of Natural History' Sir Charles Colville, the Governor and a fervent believer in the importance of natural history studies.

Although some interesting work on Mauritian flora and fauna was produced, studies on the Heteroptera were almost insignificant except for the description of the island's only gelastocorid +Naucoris rugosa Desjardins 1837.

However, in the Homoptera the situation was quite different. In a memoir presented in 1864 to the 'Chamber of Agriculture' Dr. M.E. Icery described under the name of 'Le pou à poche blanche' a species of Coccus causing heavy damage to sugar-cane in the island. He gave a

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+This 'toad bug' is now referred to the genus Nerthra Say. Desjardins stated in his description that the hemelytra are fused together and to the scutellum: Westwood (1840) has supported this view but Serville (1937) is in disagreement (Ann. Soc. ent. Fr. 6:243). The question is further discussed under the section dealing with the GELASTOCORIDAE. Ten specimens of this species were collected in 1835 by Theodore Sauzier in the intertidal zone of the seashore near Mahebourg. Todd (1955) considers it to be the same as Glossoaspis brunnea Blatchey 1925, which is recorded from Panama, Florida(!). The present writer has expressed his opinion regarding this quite extraordinary distribution under the section dealing with this family.

description of the eggs and an account of the development of the 'larvae'. According to William Sweetland Dallas (Zoo. Rec. 1, 1894:588-599) it is evident from Icery's description and from his figures of the male, the 'larva' and 'pupa' that he mistook a minute hymenopterous parasite for stages of the Coccus. F.E. Guérin-Méneville subsequently associated Icery's name with that insect naming it Coccus iceryi (1867) now Pulvinaria iceryi (Guérin). A year later the same author (in a paper entitled 'Études sur les insectes considérés comme la cause de la maladie des cannes à sucre dans les îles Maurice et de la Réunion') showed that the 'colonists' had confused several species under the name: 'pou à poche blanche'. These were Coccus sacchari Guérin, Lecanium iceryi (Guérin), L. guérinii (Signoret) and Aleurodes bergii (Signoret). (Ann. Soc. ent. Fr. (4) 9:97-104 1869) at about the same time, Signoret reported on the presence of Diaspis bromeliae (Kerner) in Réunion. From this island also Dr. Ch. Coquerel had noted the presence of Pentalonia nigronervosa on Musa spp. while Signoret 1860 (1859) (Ann. Soc. ent. Fr. 32:239-260) had described and figured an interesting aphid, Schizoneura rotundiventris on the sedge Cyperus rotundus Linn. According to Dr. V.F. Eastop (personal communication) this may well be the same as Schizaphis cyperi (van der Goot) 1917, described from Java as living on the same plant.

In 1862 L. Maillard, a colonial engineer, published his classical work entitled 'Notes sur l'Ile de la Réunion'. In 'Annexe J' of this work is an article by Signoret, the first scientific list with description of the Hemiptera of that island. Fifteen species are

recorded but some of the types are now untraceable.+

Nezara prasina there listed is a synonym of Nezara viridula smaragdula (Fabr.), Acanthia rotundata Signoret is now placed in the genus Saldula; Conorhinus stalii Signoret is the cosmopolitan Triatoma rubrofasciata (de Geer) and Nepa vicina Signoret 1862 as pointed out earlier is identical with Laccotrephes annulipes (Laporte) (1833) previously described from Mauritius.

In 1876 Arthur Gardiner Butler published a 'Preliminary notice of new species of Orthoptera and Hemiptera collected in the Island of Rodriguez etc. .....' The small collection of Hemiptera was made by George Gulliver in the autumn of 1874 whilst accompanying the 'Transit of Venus Expedition++ under Moebius and Balfour. Butler had worked chiefly on the Lepidoptera. It is not surprising, therefore, that of the four hemipterous species he described as new, three species, namely Reduvius laniger, Velia infernalis and Sigara felix, have been synonymised or transferred to other genera: the fourth,

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+viz: Aspongus rotundatus, Anisoscelis flavopunctatus Vinson, Gerris cereiventris.

++A century earlier in June 1761, the French Academy under the auspices of the Cardinal de Luynes and Monsieur Le Monier had sent the corvette 'Mignonne' with a number of French scientists to observe the transit of Venus. The party stayed till September 18th - any collections then made have never been traced.

Coccus ceratiformis, is not even referable to the order Hemiptera (vide Mrs. Maria Fernald - 1903:p.380) but cannot be identified more precisely as unfortunately the type-slide is lost (F. Laing - personal communication). Butler's R. laniger is now known to be Perigrinator biannulipes Signoret; his V. infernalis should be known as Rhagovelia infernalis infernalis according to Poisson (1957). Finally his Sigara is Micronecta felix.

In 1879, Butler listed a total of sixteen species of Heteroptera and three of Homoptera - also collected by Gulliver - in the Philosophical Transactions of the Royal Society (extra volume 168:549-553). By then (1879) it had become widely apparent that a still better organization was needed for promoting general study of Science and Philosophy as well, to ensure that valuable research made by foreign workers was not overlooked.

In 1880 therefore the Mauritius Institute was founded with government backing. Several existing organizations, including the Natural History Society, started nearly fifty years before were absorbed into its framework. A. Daruty de Grandpré, the superintendent of the former 'Desjardins Museum' (which had by then been incorporated as the Natural History Museum of the Mauritius Institute) and his assistant, Donald d'Emmerez de Charmoy, devoted much time to the classification and determination of local insects, in the Hemiptera, paying particular attention to the COCCIDAE. Some eighteen years later in the 'Publications de la Société Amicale Scientifique' (1899), these authors jointly published their 'Notes sur les cochenilles suivie d'une liste raisonnée des espèces Mauriciennes' in which are recorded forty-five species of

coccids and six so-called 'varieties'. In these times little importance was attached to original specimens and in consequence the type-slides on which the descriptions are based were not preserved. However, it is clear that because the authors did not stain their preparations, a few species were misidentified. This work nevertheless is still important as the first scientific paper on Mauritian Homoptera by local entomologists, and when Mrs. Fernald brought out her "Catalogue of the COCCIDAE of the World' she included, with but few corrections, nearly all the Mauritian species given in Daruty and d'Emmerez's list.

As a result of the 'Percy Sladen Trust Expedition to the Indian Ocean' in 1905 a first list of COCCIDAE from the islands of the western Indian Ocean, south of the equator, was published in 1907 by Edward Ernest Green, Government Entomologist, Ceylon. Here too, the list of Mascarene COCCIDAE is virtually the same as Daruty and d'Emmerez's but seventeen species from a collection made by R. Dupont in the Seychelles are also included. In 1906 Distant brought out his 'Synonymic catalogue of HOMOPTERA - CICADIDAE' in which he listed the world cicadas. In this catalogue four species are stated to occur in Mauritius: Stagira darwini Distant, Abricta ferruginosa Stål, A. brunnea (Fabricius) and Abroma guérinii Signoret. As first noted by Professor Arnold Jacobi (1917), Distant is in error in mentioning Mauritius as the type locality of A. guérinii. This species was originally described from Madagascar (Signoret 1860, Ann. Soc. ent. Fr. (3) 8:180).

In 1907, H. Schouteden published a 'Note sur quelques Hémiptères de l'Ile Maurice' listing twenty-four species. This list contains some

errors of identification to which attention has already been drawn.

Shortly after the creation in Britain of the 'Entomological Research Committee - Tropical Africa' (1909) it became evident that a special service was needed for rapid identification of economic pests in the 'Empire'. In its early days the Committee passed on to various world specialists specimens which could not be identified by their own staff. In 1910, Dr. Géza Horváth described a new species of Nysius, which he received from Dr. E. Bordage, naming it N. euphorbiae (vide Pls. 17f, 17f$_1$). This lygaeid, which is frequently seen on EUPHORBIACEAE and various other plants, is a carrier of the trypanosomid, Phytomonas (Leptomonas) davidi Lafont[+].

In January 1913, the 'Imperial Bureau of Entomology' was founded in Britain to speed up the identification of all injurious insects sent from all over the Empire by Departments of Agriculture and Public Health laboratories overseas. Shortly after this a post of Entomologist was created in Mauritius as part of the newly formed Department of Agriculture and in May 1913 Donald d'Emmerez de Charmoy was appointed to it.

[+]The discovery of a trypanosomid in the latex of plants is due to M. David, a young Mauritian working as Assistant to A. Lafont at the 'Bacteriological Laboratory', Réduit.
A common weed, Euphorbia hirta Linn., is particularly susceptible to infestation (as much as 40% of the plants), heavily parasitised specimens losing their leaves. Lafont called this pathological condition 'La Flagellose'.

D'Emmerez's correspondence shows the value of help received by way of identifications from outside specialists through the agency of the 'Imperial Bureau'. Many new species of COCCIDAE were described by Professor Robert Newstead of the Liverpool School of Tropical Medicine, and by E.E. Green, to whom the Bureau at the time were sending material for identification.

During the years 1913-31 several coccid outbreaks were reported from various separate localities. However, the iceryine scale Icerya seychellarum Westwood, one of the oldest known coccids of Mauritius, already had an island-wide distribution. In 1915 d'Emmerez attempted to control it by introducing the well-known coccinellid predator Rodalia cardinalis Muls. from South Africa.+ This failed due to the inability of the coccinellid to breed successfully on I. seychellarum. The young larvae, which feed more readily on eggs than on adults of Icerya, seem to experience a lack of food when bred on I. seychellarum, perhaps because the ovisac in this species is more or less closed as compared with the open condition of I. purchasi, Mask. (vide Moutia and Mamet 1946:463). In 1921 d'Emmerez published jointly with S. Gébert a bulletin on 'insect pests of crops and fruit trees' in which a few Hemiptera are listed. In 1922, d'Emmerez first recorded the diaspid scale Aspidiotus destructor Signoret on Psidium guajava Linn.. It spread

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+Icerya seychellarum is now successfully controlled by a dipterous parasite introduced from Madagascar in 1952: Cryptochaetum monophlebi Skuse (vide Crian 1962:p.20).

quickly and by 1927 had become a threat to coconut plantations all over the island: at Pointe aux Sables over 50% of the palms were found dying from the attack. Importation of suitable predators and parasites successfully controlled the pest after eight to ten years.

One of the most important problems d'Emmerez had to face was the control of the prickly pears: Opuntia monacantha Haw. and O. tuna Mill. probably introduced ca. 1846. The cochineal insects Dactylopius indicus (the Indian strain from South Africa) and D. tomentosus Lam from Ceylon were successfully introduced in 1913-15 and 1927 respectively, and are now established. The biology of D. tomentosus in Mauritius was studied by d'Emmerez[+] in 1928 (Rev. agric. Maur. 42:264-267).

Our knowledge of the Hemiptera of Rodriguez is due to the labours of Dr. W.E. China, who a few years earlier (1924) had worked on a collection presented in 1919 to the University Museum of Zoology, Cambridge. In a paper entitled 'The Hemiptera-Heteroptera of Rodriguez, etc.' (Ann. Mag. nat. Hist. (9), 14:427-453) he amended Butler's 1879 list and raised to fifty-one the number of Hemiptera recorded from that island. With a new species of

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[+]Some of the early introductions of beneficial insects were made through the agency of Farnham House Laboratory 1927-1940 and later when it was replaced, by the 'Imperial Parasite Service Canada'; later still by the 'Bureau of Biological Control' (1947) and since 1951 by the 'Commonwealth Institute of Biological Control'.

of CICADIDAE which he named Cicada (now Distantada Orian 1964) thomasseti[++] and with certain corrections he made China (1924, 1925, 1926) altogether recorded fifty-six hemipterous species from Rodriguez.

The FULGORIDAE of Rodriguez were worked out by Frederick Muir and were published in the Transactions of the Entomological Society of London 1925 (1924). This collection of fulgorids, also made by Thomasset and Snell, was remarkable for its wealth of endemic species hitherto unknown. Muir's paper, together with China's, brought up the total number of Hemiptera known from Rodriguez to sixty-nine. Some of the genera and species described by Muir and China are now probably on the verge of extinction, the native vegetation of Rodriguez having been destroyed to such an extent as to survive only in narrow rifts and valleys.

Muir (1926) working on mixed South African collections, came across and recorded for the first time the presence in Mauritius of the sugar cane leaf hopper Perkinsiella saccharicida Kirkaldy, a single specimen having

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[++]The collections of Rodriguan Hemiptera were made by H.P. Thomasset and H.J. Snell in 1918. Thomasset resided in the Seychelles and for many years had given much assistance in the collecting of the fauna of those islands by the Percy Sladen Trust Expedition. He was on a visit to Rodriguez when he met Mr. Snell, an employee of the Eastern Telegraph Co., and in whom he aroused an interest in collecting.

been collected by J.E.M. Brown.[+]

Two remarkable TINGIDAE were described by China, namely Teleonemia insularis and Litadea delicatula.[++] Drake (1948) in his 'New genera and species of TINGIDAE (Hemiptera)' (Proc. bio. Soc. Wash. 61:149-156) has moved T. insularis to his new genus Agygotingis. In the Tinginae the number of dorsal cephalic processes generally varies from none to five. This genus is unique in having seven, an additional 'genal pair' (Drake & Davis 1960 pp. 9 & 42) arising just anterior to the eyes. China in his description counted nine spines including two 'antenniferous processes'. As noted by China, this species also has the distal tarsal segment greatly enlarged.

A capsid described from Rodriguez as Chaetodapsus scotti China and later transferred by this author to his new genus Rodriguaria, has now been synonymised with Hallodapus (Carvalho 1952 - An. Acad. Brasil. Sci. 24(1)70). Also the only cicadid described from Rodriguez has been removed from the genus Cicada to a new genus Distantada (Orian 1964).

[+]James Edward Myles Brown, b. Mauritius 1875 - graduated M.B. (Ed.) 1903. Returned to Mauritius 1910, remaining there until 1914. At the beginning of 1st world war he emigrated to South Africa with his collections.

[++]The generic name Litadea was dedicated to the author's wife.

In 1929 W.H. Edwards, Lecturer in Entomology at the College of Agriculture, Mauritius, acted as Entomologist for a short period. In the annual report of the Department for 1929 he made brief notes on the occurrence of major pests. Among the Hemiptera he mentioned Aphis sacchari, Aleurodes bergi, Shionaspis tegalensis, Pulvinaria gasteralpha, all on cane; Aspidiotus destructor on coconut and Pinnaspis minor on Aloe.

In 1930, a year before d'Emmerez's death, the 'Imperial Institute of Entomology' replaced the 'Bureau'. From 1930 to 1947 L. André Moutia was Ag. Entomologist in Mauritius. In his papers he generally reported on the economic status of the hemiptera as pests. In 1936, Dr. W.F. Jepson[+] of the staff of the Imperial Institute of Entomology was detailed to study the problem of Clemora smithi (Arrow), a noxious pest of cane. Shortly after his arrival he published jointly with P.O. Wiehé a paper on 'Pineapple Wilt in Mauritius' (Bull. Dep. Agric. Mauritius 47:15pp. 2 app.). The cause of the disease in Mauritius had earlier been proved by G. Orian[++] (Jepson & Wiehé, loc. cit.) to be due to Pseudococcus (now Dysmicoccus) brevipes Cockerell. From about that period to 1956, J. Raymond Mamet[+++] published a long series of papers on the COCCIDAE of the

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[+]Phytalus Investigation Officer - Appointed Entomologist 23 March 1937.

[++]Department of Agriculture, Botany & Mycology Section (1927-39) - Plant Pathology Section, 1945-57.

[+++]1933-38 (voluntary worker); 1939-44 scientific assistant - 1945-56 assistant entomologist.

Mascarene Islands: a complete list of these is given in the bibliography.

Some of Mamet's early descriptions of COCCIDAE are now in need of revision. In 1941 he described 'A new mealy-bug attacking pineapple plants in Mauritius' under the name of Dysmicoccus pseudobrevipes. This does not appear to the present author to be a valid species. In 1939, 1943 Mamet also published 2 papers on the APHIDIDAE of Mauritius based on identification made mostly by Dr. Ryoichi Takahashi. These are now out of date and a revision with keys is included in the present study.

Notes on the sugar-cane scale Aulacaspis tegalensis Zehnt. were published by Moutia in the Bulletin of Entomological Research (35:1944: 69-77, 2 figs.). In 1947 J.R. Williams did some work in connection with the tobacco leaf curl vector (Bemisia tabaci Lindl., ALEYRODIDAE). In that same year Moutia and Mamet published 'An annotated list of Insects and Acarina+ of Economic importance in Mauritius'. Perusal of this list shows clearly that the authors simply enumerated those insects commonly known to them at the time. Many so-called 'insects of economic importance' are annotated by them as being 'rare' - terms which are not reconcilable. It is evident also that the authors' knowledge of previous literature was deficient in many ways. It would seem that neither Stål's well-known 'Hemiptera Africana' nor Schouteden's list was consulted. As said by Dr. W.E. China (in Orian 1956) regarding Moutia and Mamet's list - 'The Hemiptera (Heteroptera) are very lightly dealt with in their work. Only

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+For the sake of consistency it would have been better to use 'Insecta and Acarina' or 'Insects and Acarines' in the title.

twenty four species (excluding Sternorhyncha) being listed'. The present author, in a series of papers (1954, 1956, 1957, 1962) has corrected a number of misidentifications which occur in Moutia and Manet's list. Among other errors, 'Gerris sp.', for example, which belongs to the GERRIDAE, is misplaced in the HYDROMETRIDAE. The genera 'Notonecta' and 'Corixa' which are not represented in Mauritius are also listed. Under CICADIDAE the authors list 'Cicada viridis' as occurring in Mauritius but the habitat of this species as given in Olivier's Encyclopaedia (5:755,35) is Brazil. The present author has shown that the two green CICADIDAE (sensu lat.) occurring in Mauritius are: Stagira darwini Distant and Mauricia (now Dinarobia) claudeae (Orian). Also their so-called 'C. mauritiana' does not belong to the genus Cicada. Almost a century earlier Stål had placed the two other species occurring in Mauritius under Tibicen (subgenus Abricta).

In 1953 the present author worked in the Department of Entomology (British Museum) as a long-vacation student. He was able to identify a large part of his collection of about one hundred species of Hemiptera. Following this he was advised to draw up a complete list of Mauritian Hemiptera (excluding Sternorhyncha) based on his own collection, on specimens in the British Museum and those otherwise recorded in the literature. The author listed 119 species: of these more than a score were new records for the island and many species proved to be undescribed. (Ann. Mag. nat. Hist. (12) 9:641-654). In this list he recorded for the first time the presence in the island of the well-known lantana tingid: Teleonemia scrupulosa.

The only recent list of Hemiptera from Réunion is that of J.R. Williams and C.M. Courtois (Rep. to Director - unpublished) who collected out there for a month in August 1951. A published list of the COCCIDAE then collected was given by Mamet (1952b).

In August 1957 Mamet brought out a 'Revised and annotated list of the Hemiptera (Heteroptera and Homoptera excluding Sternorhyncha) of Mauritius'. Dates of publication[+] as well as the authorship[++] of many genera and species described by Latreille, Germar, Stål, Fieber, Signoret and Guérin-Méneville are erroneous.

[+]Erroneous dates of publication in Mamet's list - given in order of appearance in his list.

p.35 Antestia Stål 1864 should be 1865.
" Pentatoma mauritii Stål 1858 should be 1859.
p.36 Aspavia Stål 1864 should be 1865.
p.40 Aradus hystrix Germar 1837 should be 1840.
p.41 Leptoglossus Guérin-Méneville 1830 should be 1831.
p.42 Leptocorisa Latreille 1825 should be 1829.
p.43 Stenocephalus Latreille 1825 should be 1829.
" S. punctarius Stål 1865 should be 1866.
p.44 Leptocoris haematica Germar 1837 should be L. haematicus Germar 1840.
p.45 Nariscus Stål 1865 should be 1866.
p.45 Neuroctenus Fieber 1861 should be 1860.
p.50 Beosus placidus Stål 1865 should be 1866.
p.59 Triatoma Laporte 1832 should be 1833.
p.78 Delphax maculigera Stål 1856 should be 1859.

[++]Erroneous authorships.

p.35 Afrius (Subafrius) flavirostrum Schouteden, given by Mamet is erroneous: the species was described by Signoret 1861 [Ann. soc. ent. Fr. (3) 8:921] under Afrius flavirostrum.
p.55 Dysdercus Aud-Serv. should be Dysdercus Guérin (vide Dupuis 1952 b:450)
p.66 Hydrometra Fabricius should be Hydrometra Lamarck.

Other errors occur where specific names are dedicated to well-known collectors, e.g. on p.38, he refers to Acrosternum millierei Mulsant and Rey as A. millieri.

A note by these authors makes further comment unnecessary: "Cette espèce est méridionale: Elle a été prise dans les environs de Cannes (Alpes Maritimes) par notre ami M. Millière"- Ann. Soc. Linn. Lyons 1867 [1866] (2) 14:290.

The list, however, has a certain value by reason of being the most recent: the present author has therefore endeavoured to correct such errors.

Since Mamet's list is based on determinations carried out by others, little of the credit can be attached to him for that which is right, none of the blame for that which is wrong, the latter making up the greater part of the paper: separate emendations are given under the taxa concerned.

Apart from Muir's work on the FULGORIDAE of Rodriguez, too little attention has been paid to the Mascarene Fulgoroidea.

In recent years various papers have been produced by Evans (1953), J.R. Williams (1959), Synave (1958a, b, 1959a, 1960a, b) and especially Fennah (1963, 1964).

Evans in a paper on 'a Natural classification of leaf-hoppers' (Trans R. ent. Soc. Lond. 98:105-271) considered Draeculacephala to be a synonym of Acopsis[+] - a view which is no longer held.

Williams' work was mainly concerned with cane pests (Perkinsiella, Perigrinus) and their biological control via stylopisation.

Synave's studies range through the cixids, kinnarids, and associated families. In the kinnarids he made a notable error in placing a new Mascarene taxon[++] within the concept of Distant's Indian genus Paramicrixia but his work is nevertheless valuable.

[+]Signoret [Ann. Soc. ent. France 3 (1855)] placed Acopsis with Tettigonia on the basis of similarity between A. viridicans from Mauritius and T. viridescens from Madagascar. T. viridescens is now placed under Ulozena. The odd distribution Acopsis - Draeculacephala which would appear to be America - Mauritius - Réunion is incorrect. Acopsis has affinities with the Madagascar fauna - a fact which is to be expected.

[++]Fennahius dedicated by the present author to R.G. Fennah, the authority on the Fulgoroidea.

Fennah's studies are centred on the delphacid genera Ugyops, Nesodryas, Toya, Delphacodes, Leptodelphax, Sogatella, Sogatodes, Stenocranus, Thriambus, Nycheuma, Numatodes, Cemus.

Among the heteropteran groups mention must be made of the works of Villiers and Miller on REDUVIIDAE. The latter author also described (1951) a predatory pentatomid Afrius williamsi which the present author has found to be a synonym of A. flavirostrum Signoret 1861 (Ann. Soc. ent. Fr. (3) 8:921), a species distributed through Madagascar, Aldabra and the Mascarenes.

The extensive collecting made by the present author in the Mascarene islands and the personal contacts established with various specialists throughout the world is enabling work on the hemipterous fauna of the area to proceed at a much more rapid rate than before.

Material from his collections is now being studied by Villiers (REDUVIIDAE), Poisson (aquatic bugs), Hoberlandt (ARADIDAE), Slater (Blissinae, Pachygronthinae), Scudder (LYGAEIDAE other than Blissinae, etc.), Young (TETTIGELLIDAE), Ross & Knight (Empoasca) and Grant (COREIDAE).

The present author's contribution is summarised below:-

A. Description of new genera and species:

(a) HETEROPTERA:

(1) NEPIDAE: A new species of Ranatra from Mauritius.

(2) REDUVIIDAE: A new species of Sastrapada from Mauritius.

(3) " " " " " Sastrapada (s.g. Harpagochares) from Mauritius.

(4) " Two new species of Gardena from Mauritius and Réunion.

(5) ANTHOCORIDAE: A new genus and 2 new species of ANTHOCORIDAE from Réunion and Mauritius.

(6) PENTATOMIDAE: Chinavia gen. nov. from Africa, Madagascar and Mauritius, with notes on the related genus Acrosternum Fieber.

(7) " A new species of Bathycoelia from Africa, Madagascar and the Mascarenes.

(8) " Pseudobathycoelia gen. nov. from Madagascar and the Mascarenes.

(9) " Bathycoeliopsis, a new genus of PENTATOMIDAE from West Africa.

(10) MIRIDAE: A new species of Tinginotum (MIRINI) from Réunion.

(11) " A list of the MIRIDAE recorded from Madagascar, the Seychelles and Mascarene Islands.

(b) HOMOPTERA:

(12) CICADIDAE: A synopsis of the CICADIDAE of Mauritius with a description of Mauricia claudeae gen. et. sp. nov.

(13) " A new genus of CICADIDAE from the island of Rodriguez with notes on the nomenclature of the family.

(14) APHIDIDAE: The APHIDIDAE of the Mascarene Islands, with additional notes on some Madagascan forms.

(15) ALEURODIDAE: The ALEURODIDAE of the the Mascarene Islands with a list of the species recorded from Madagascar.

(16) COCCIDAE: A list of the COCCOIDEA recorded from the Mascarenes, the Seychelles and other islands of the Western Indian Ocean (excluding Madagascar) south of the Equator.

B. Morphology:

(17) The morphology of the male genitalia of Abricta ferruginosa (Stål) (Homoptera:CICADIDAE).

(18) The morphology of the male genitalia of Laccotrephes (Heteroptera-NEPIDAE).

(19) On the presence of a gular organ apparently peculiar to Laccotrephes (NEPIDAE).

III - Faunistic analysis

In the author's opinion there is need for more exhaustive collecting surveys of the Hemiptera of the Mascarene Islands, especially Réunion and Rodriguez, but even more important is the work which must be done on the Madagascan fauna. Until this is much more thoroughly known it is unwise to propound any detailed speculations on the faunistic distribution.

With these reservations in mind the present author believes that the islands of the Western Indian Ocean, south of the equator form a distinct zoogeographic and perhaps even phytogeographic sub-region of the Ethiopian region ..... 'a sort of Macronesia in the Indian Ocean' as Paulian puts it.

The term 'Madagasia' is therefore proposed for this sub-region to include the islands shown under Plate I:

I - Madagascar including its satellite islands NossyBé, NossyMitsi, Nossy Komba, Ile Ste. Marie (its area about a quarter of a million square miles).

II - The Seychelles group (Mahé Is., Praslin, St. Anne, etc.).

III - The Comoro islands (Gde. Comore, Moheli, Anjouan, Mayotte).

IV - The Mascarenes (Mauritius, Réunion, Rodriguez).

V - The minor groups of coral and other islands indicated on the location map of the Mascarenes, namely Europa, Bassas da India, Barren Is., Juan da Nova, Iles Glorieuses, Assumption Is., Astove, Cosmoledo, Aldabra, Providence Is., Farquhar group, Coetivy, Agaléga Islands, Chagos Archipelago (Diego Garcia), Tromelin, Coco, Albatross (Cargados Carajos Archipelago).

Of these, Madagascar and the Seychelles have very old rocks over 150 million years old. In the Mascarene group, Rodriguez[+] - furthest from the African mainland - is the olest, Réunion, nearest to it, the youngest.

Rodriguez has retained relics of ancestral groups, whilst Mauritius has a high percentage of endemic forms. The picture is much the same with Réunion but the absence of CICADIDAE cannot easily be explained.

As in Madagascar, MEMBRACIDAE are totally lacking in the Mascarenes. Evans has shown that membraciform cicadellids seem to occupy the niche usually filled by membracids in Madagascar, but these are not represented in the Mascarenes.

Many families represented in Madagascar do not occur in the Mascarene the hemipterous fauna of the latter having been built up gradually from accidental introductions which probably started towards the end of the Miocene - perhaps even earlier.

[+]The occurrence of 'volcanic-island chains', the age of which tends to increase with their distance from the mid-ocean ridge, is a fact of great significance. J. Tuzo Wilson, Professor of Geophysics and Director of the Institute of Earth Sciences (Toronto) has already discussed this problem at length (vide: Scientific American April 1963, pp.86-100).

IV. Material & Methods.

(a) Sources of material:

The present work is based on the author's personal collections from Mauritius and offshore islets, from Réunion, Madagascar, the Seychelles, the Chagos Archipelago, Agalega and various smaller islands of these groups. Mauritius itself was surveyed particularly thoroughly over a period of four years: collections were made from all over the island in varied habitats, mountain peaks, valleys, sea shores, fresh and brackish pools. The author has also made observations on living specimens of some species maintained in his insectarium at Réduit (Mauritius). Other studies have been made on preserved material in the various world collections listed under 'Acknowledgements'. It should be pointed out that although this faunistic study is mainly concerned with the Mascarene fauna, comparisons with material from the whole of the Ethiopian Region have been made. In some cases, e.g. APHIDIDAE, B.M. material from all over the world has been examined. Collections made by Mauritian colleagues in the Department of Agriculture, and by former students of the College of Agriculture, have also been a profitable source of specimens and data.

(b) Collecting methods:

Methods employed include the usual sweeping, beating and 'pooter' aspiration techniques but the equipment found by far the most useful was the portable vacuum-collecting apparatus as supplied by Everett J. Dietrick (Ventura - California) and

manufactured under the name D-Vac[+] Inc.. This apparatus is adequately described in an article published in the Journal of Economic Entomology (1961) 54:394-395, and in the references cited in this paper.

For collecting aphids Moericke trays appear to be the best method, especially where an estimate of population is required. Collections have been made at various times of the day and night; trapping at light was also used on several occasions.

(c) Preparation of specimens for study:

As pointed out by Fieber, Pruthi, Muir and others the study of genitalia plays an important rôle in taxonomy. The identifications in the present study have mostly been made by reference to type material and over 150 dissections of genitalia have been made. Morphological studies of the male genitalia have disclosed many useful taxonomic characters, in particular on the pygophore, parameres, conjunctival appendages and vesica.

Observations were made with a Leitz stereo-microscope; figures were drawn with a Leitz drawing prism and corrected where necessary with an ocular grid. Inflation of the phallus after steaming was obtained mostly by manipulation after treatment with potash (10%), and rinsing in acetic acid.

(d) Illustrations and general procedure:

In a taxonomic study of the Hemiptera good photography plays a major rôle. The procedure adopted throughout has been the following:

[+]Now at D-Vac Co., P.O. Box 2095, Riverside, California 92506.

(1) Location of type: Horne & Kahle, 1935-37, Entomologische Beihefte is a useful first reference.

(2) Photograph of holotype when not available on loan. This is important irrespective of whether the specimen can be borrowed or not since it forms a permanent record against loss or damage. Photographs, like figures, could even be used in the designation of lectotypes (vide. I.C.Z.N. Art. 74b + 75) or neotypes.+

(3) Dissection of genitalia was often easier after staining with acid-fuchsin. The method is the same as that commonly used for coccids and is given in Appendix II.

Where a slide preparation is to be photographed the best mountant seems to be that used for Aphids [details given under Appendix I - F.A.O., Plant Protection Bulletin (1961) 9:46]. Its only drawback is that if the preparations are to be retained the coverslips must be ringed with 2 or 3 coats of Euparal and Murrayite (Flatters & Garnett). At least 3 weeks must be allowed (oven temperature 30 - 40°C) for mountant to harden sufficiently.

Plates 18 e-g, 19 d & e, 24, 35 & 36 are photographs of slide preparations using this mountant.

+Vide Bull. zoo. Nomencl. 21, 6:432-434, pl.4, 444-446, pl.5.

V - Classification.

A. Heteroptera.

In the author's opinion there is still no satisfactory overall classification of the Heteroptera. Some of the older systems of [1]Dumeril, [2]Latreille, [3]Billberg, [4]Laporte, [5]Dufour, [6]Herrich-Schäffer, [7]Blanchard, [8]Spinola, [9]Rambur, [10]Amyot and Serville, [11]Amyot, [12]Fieber, [13]Dallas, [14]Dohrn, [15]Baerensprung, although based on observations made before the finer improvements of microscopy, could well be studied again with advantage. It would be inappropriate here to attempt such a task.

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1. Dumeril: 'Zoologie analytique' (1806).
2. 'Genera Insectorum et Crustaceorum' III (1807):108-152. Familles naturelles du règne animal (1825):418 following.
3. Enumeratio Insectorum (1820):66-71.
4. 'Essai d'une classification systématique de l'ordre des Hémiptères' (Guérin, Magasin de Zoologie 1832).
5. 'Recherches anatomiques et physiologiques sur les Hémiptères' (Mém. des Savants étrangers, 1833).
6. in 'Nomenclator entomologicus' (1835) p.35.
7. 'Histoire naturelle des insectes' III (1840) p.86 following.
8. 'Essai sur les Insectes Hémiptères' etc. (1840) p.55.
9. 'Faune entomologique de l'Andalousie' (1842) p.95 following.
10. 'Histoire Naturelle des Insectes (1843).
11. 'Entomologie francaise. Rhynchotes, Méthode Mononymique (1848) p.30 following.
12. Entomological Monographs (1844) p.25.
13. List of the specimens of Hemipterous Insects etc. (1851-52).
14. Catalogus Hemiptorum (1859).
15. " Hemipterorum Europae (1860) Berl. Entom. Zeitschr. 4.

Later works by Reuter, Stål, Distant, Leach, Oshanin, Van Duzee, Kirkaldy, Myers, Jaczewski, Silvestri, Kormeliev, Bergroth, Lundblad, Hungerford, Metcalf, Poisson, China, Esaki, Pruthi, Villiers, Carvalho, Drake, Usinger also contain large amounts of information on family relationship and phylogeny. Still more recently, the publications of Carayon, Leston, Dupuis, Cobben, Southwood, Pendergrast, Matsuda, Parsons, Slater have brought to light a large number of facts which have considerably increased knowledge of structure but there is still great need for more general comparison of all known differences: In too many cases the phylogeny of separate families of the Heteroptera is still only vaguely understood.

Although nomenclature and classification is continually changing it is always advisable for a faunistic list to be based on some major reference work. In the present case the author has chosen China and Miller's 'Check-list and keys to the families and subfamilies of the Hemiptera-Heteroptera' 1959: to this he has made a few changes suggested by his own recent work and that of other authors.

B. Homoptera.

The works of Stål, Fieber, Hansen still form the foundation of the most generally accepted classification of the HOMOPTERA. Melichar's monographs, although an invaluable source of references, are sometimes uncritical in the choice of characters. Kirkaldy was known to have views on the classification of this suborder, but it appears that he never committed them to writing. Muir's work is of high standard: like Fieber he recognised the diagnostic value of

the male genitalia. In recent years the descriptive works of Ribaut, Ossiannilsson, Fennah, Evans, Young, Ross, Le Quesne have greatly increased the number of known genera and species. Of these authors Evans especially has worked also on the broader aspects of classification. In the Cicadoidea, Kolenati, Distant, Davis, Myers, Torres, Kato, Metcalf have been the more productive workers.

Except for a description of a new genus Fennahius the Fulgoroidea are excluded from the present study. In the APHIDOIDEA most of the work on classification has been by Börner, Shilder, Mordwilko, Passerini and more recently Hille Ris Lambers. The pioneer workers in ALEURODOIDEA have been Quaintance and Baker, Sampson & Drews, while Trehan and Butani have contributed with a valuable bibliography. The more important papers on the PSYLLOIDEA seem to have been those by Aulmann, Crawford, Patch, Witlaczil, Weber, Heslop-Harrison, Vondráček.

The COCCOIDEA have not been studied in detail in the present work but a list has been drawn up; the synonymies of species described by Mamet have been checked in co-operation with Dr. D.J. Williams (Commonwealth Institute of Entomology) but nomenclatorial notes have not been included.

VI. Work on Male and Female genitalia of Heteroptera.

Hem Singh-Pruthi's study (1925) of the male genitalia and Snodgrass's work on ♂ and ♀ genitalia are valuable contributions to the subject.

Of recent works Dupuis' contributions (1953, 1955[+], 1963[++]) are now perhaps the most significant, because of the bibliography with critical annotations, a particularly useful glossary of terms and the morphological conclusions drawn. On ♀ genitalia the work of Scudder presented a new approach in apposition to that of Snodgrass; although in Hemiptera his studies are restricted to Heteroptera his findings seem to be applicable to certain of the Homoptera (vide description of Fennahius).

[+]A summary of work on hemipteran genitalia is to be found in Dupuis' 'Mémoire' entitled 'Les Genitalia des Hémiptères Hétéroptères' and in his 2nd D.Sc. thesis:

[++]'Progrès Récents de l'étude des génitalia des Hétéroptères.'

VII. 'Taxonomic advances proposed in this study':-

The following list includes some of the more important taxonomic advances proposed in this study of Mascarene Hemiptera:-

New tribes: DISTANTADINI (CICADIDAE)

CHREMISTICINI (" to replace TIBICENINI Distant 1889)

New genera:

Chinavia, Pseudobathycoelia, Bathycoeliopsis	PENTATOMIDAE
Gilldaya	CYDNIDAE
Doncasteriella	ANTHOCORIDAE
Fennahius	KINNARIDAE
Distantada	CICADIDAE

New species:

Ranatra poissoni	NEPIDAE
Aethus izzardi, Macroscytus rodriguezensis	CYDNIDAE
Sastrapada villiersi, " noeli	REDUVIIDAE
Trioza eastopi	PSYLLIDAE

New names in replacement of other names based on homonyms:-

Aleurotrachelus moundi (ALEYRODIDAE) to replace A. pauliani Tak. 1961 preoccupied by A. pauliani Tak. 1960.

Stenarus poppiusi to replace S. basalis (preoccupied).

Nezara orbiculata (Distant) comb. nov. (for Rhaphigaster orbiculata Distant) to replace Nezara o-

Subgenus given generic status:-

Subafrius Schouteden [PENTATOMIDAE].

Subspecies given full specific status:-

Amphorophora phyllanthi subspecies wikstroemiae Mamet now in Macrosiphum replaced by Macrosiphum (Sitobion) wikstroemiae (Mamet) [APHIDIDAE].

Of the various cases of erroneous synonymy mentioned in the text, the following is perhaps the most significant (because of the economic importance of the species involved):-

Nesidiocoris volucer Kirkaldy and N. tenuis Reuter (MIRIDAE) are two quite distinct species.

Invalid species:-

Afrius williamsi Miller 1951 is a synonym of Picromerus flavirostrum Signoret, which should now be called Subafrius flavirostrum (Signoret).

Aneurus mauritianus Mamet 1957 (ARADIDAE) is a synonym of A. angustatus described 43 years earlier.

Authorship of family-name:-

STENOCEPHALIDAE Dallas 1852 (correction of STENOCEPHALIDAE Douglas & Scott - acc. to Scudder 1957a).

VIII. KEY TO THE FAMILIES OF MAURITIAN HETEROPTERA.

1. Abdominal trichobothria absent 2

-. Abdominal trichobothria present 17

2. Trichobothria on head in three longitudinally arranged pairs ..... Amphibicorisa 3

-. Trichobothria rarely present on head in which case not arranged in 3 pairs as above 7

3. Claws terminal 4

-. Claws subterminal, i.e., inserted before apex of tarsus 6

4. Head long and narrow, as long or longer than the entire thorax. Eyes small, placed near middle; ocelli absent, antennae 4 or 5 segmented; metasternum without scent gland pores (omphalia). Apterous forms common. Usually slender, stick-like insects with very thin legs; walking on surface of water near margin ..... HYDROMETRIDAE (Billberg), 1820 (p.50)

-. Head shorter, not exceeding the combined length of pronotum and scutellum 5

5. Eyes large with inner margins excavate; ocelli present, often contiguous; membrane of hemelytron with 4 rarely 5 parallel-sided closed cells; mandibular plates prominently convex, transverse and shining; scutellum large and triangular, usually longer than broad; apterous forms unknown. Fairly large family of small littoral, cursorial bugs, usually inhabiting mud or salt marsh plants .... SALDIDAE (Amyot & Serville), 1843 (p.51)

-. Eyes medium sized, inner margins not distinctly excavate; ocelli present, never contiguous; membrane of hemelytron never with 4 or 5 closed cells, sometimes without cells, or with membrane broken off; mandibular plates not as above, scutellum usually bilobed, shorter than wide at base; apterous forms common. Small family of relatively small species walking on floating vegetation ..... MESOVELIIDAE Douglas & Scott, 1867 (p.51)

6. Legs inserted more or less equidistantly; vertex usually with a distinct, percurrent, median longitudinal suture or glabrous line, rarely obsolete in which case eyes small, not extending backwards on to sides of pronotum; scent glands usually with paired lateral channels terminating above hind acetabula in a tuft of hairs; inner margin of eyes straight; male harpagones large and distinct - hind legs not elongate. Skating actively on surface of streams and ponds ..... VELIIDAE (Amyot & Serville), 1843 (p.52)

-. Front legs widely separated from middle and hind pairs. Vertex usually without a distinct percurrent median longitudinal suture or line, rarely present, in which case eyes large, distinctly extending backwards on to sides of pronotum; scent glands medial (omphalium) usually without lateral channels; inner margin of eyes sinuate; male harpagones rudimentary. Hind legs elongate. Skating on the surface of still or running water, often pelagic ..... GERRIDAE Leach, 1815 (p.53)

7. Antennae strongly reduced, shorter than head, generally placed in grooves under the eyes ..... Hydrocorisa 8

-. Antennae much longer than head, always visible from above ..... Geocorisa 11

8. Rostrum very short and broad, sunk into clypeus, not distinctly segmented; front tarsi modified into spatulate palae fringed with stiff bristles; base of head laminate, overlapping front of pronotum; nymphs with 3 dorsal abdominal scent gland openings; head as wide or wider than pronotum, hind tibiae flattened and fringed with swimming hairs; tarsi without claws.
True water bugs with air bubble respiration .... CORIXIDAE Leach, 1815 (p.55)

-. Rostrum cylindrical or cone-shaped, distinctly 3- or 4-segmented; front tarsi not as above; base of head inserted into pronotum; nymphs without or with only 1 dorsal scent gland opening 9

9. Abdomen with a pair of long, slender posterior appendages forming a respiratory siphon; hind coxae short, free rotary anterior legs raptoria; tarsi 1-segmented; ocelli absent; wings present, reticulately veined, antennae 3-segmented.
Water bugs living in vegetation close to the surface; respiration by siphon ..... NEPIDAE (Latreille), 1802 (p.57)

-. Abdomen without such appendages 10

10. Anterior legs raptorial, the femur very strong and broad with the anterior surface either sulcate or flanged. Body broadly oval; head transverse with subpedunculate eyes. Hemelytra coriaceous, hind legs normal.
Toad bugs living and burrowing in rock-crevices in the inter-tidal zone of the sea shore ..... GELASTOCORIDAE Kirkaldy, 1897 (p.60)

-. Anterior legs not raptorial. Body wedge-shaped; head rounded; eyes not subpedunculate. Hemelytra membranous, hind legs, especially, fringed with swimming hairs ..... NOTONECTIDAE Fallèn, 1814 (p.62)

11. Head with a dorsal transverse furrow or sulcus dividing it into two lobes, usually running between or just below the eyes; if obsolescent or indistinct (Triatominae); hemelytron with 2 large cells and at most one longitudinal vein except in Emetinae in which hemelytron are entirely membranous ..... REDUVIIDAE Latreille, 1807 (p.62)

-. Head without a dorsal transverse furrow or sulcus dividing it into two lobes; membrane of hemelytron seldom with two large cells, in which case there are also several supernumarary longitudinal veins extending from them towards the apical margin of the membrane 12

12. Sides of rostral groove (bucculae) strongly elevated and extending the whole length of underside of head, forming a groove in which lies the basal segment of the rostrum 13

-. Sides of rostral groove not strongly elevated throughout the whole length of underside of head 14

13. Hemelytra densely reticulate or areolate; second antennal segment always shortest, eyes always distinct; head usually, but not always, with several anteriorly directed spines; scutellum usually covered by pronotum, if visible, small and indistinct. Buccal groove closed anteriorly.
Small delicate bugs living on shrubs and low plants ..... TINGIDAE (Laporte), 1832 (p.69)

-. Hemelytra when present not densely reticulate or areolate with clavus, corium and membrane usually distinct; second antennal segment generally never shortest; eyes, usually exserted, mandibular and maxillary setae very long and coiled inside head capsule. Buccal groove open anteriorly.
Medium sized bugs, strongly flattened, living under bark; mycetophilous ..... ARADIDAE (Spinola), 1837 (p.72)

14. Ocelli absent 15

-. Ocelli usually present 16

15. Clypeus triangular, broadening apically to truncate apical margin, hemelytra always rudimentary; female with opening to Ribaga's organ on ventral surface of abdomen. Small blood sucking bugs ..... CIMICIDAE (Latreille), 1804 (p.77)

-. Clypeus not as above; hemelytra, usually fully developed with a distinct cuneus. Ribaga's organ usually absent ..... MIRIDAE (Hahn), 1831

16. Male genitalia asymmetrical, hemelytra with a distinct cuneus; rostrum 3-segmented; tarsi 3-segmented; hemelytral membrane with at most 4 longitudinal veins ..... ANTHOCORIDAE (Amyot & Serville), 1843 (p.100)

-. Male genitalia symmetrical; hemelytra without a cuneus, rostrum 4-segmented; hemelytral membrane with numerous longitudinal veins ..... NABIDAE Costa, 1852 (p.106)

17. Scutellum large, sometimes completely covering the abdomen and hemelytra; at least as long as clavus, if not (brachypterous forms), clavus corium and membrane fused; no claval commissure present; antennophores not or scarcely visible from above 18

-. Scutellum smaller, shorter than clavus, a distinct claval commissure present; antennophores visible from above; antennae 4-segmented 20

18. Apices of median and posterior coxae with fringes of closely set stiff setae or pegs; tibia usually multispinous. Small to medium sized black or dull brown coloured, shining species often with a row of bristles along anterior margin of head; sometimes with anterior and posterior legs for digging. Usually feeding on the roots of plants .... CYDNIDAE (Billberg), 1820 (p.107)

-. Apices of median and posterior coxae without fringes of closely set stiff setae; tibiae not multispinous, at most with short bristles or depressed hairs 19

19. Hemelytra much longer than abdomen so that they are folded between membrane and corium in order to be hidden under scutellum; scutellum always more or less covering the abdomen; ventral abdominal segments with a straight, black, transverse sulcus on each side level with the trichobothria; sometimes abdominal ventrites fused laterally.

Small to moderately large bugs usually very convex and shining on upper side and flattened on ventral side, often living on leguminous plants ..... PLATASPIDAE Dallas, 1851 (p.109)

-. Hemelytra not or only slightly longer than abdomen, not folded between membrane and corium although at rest sometimes almost completely covered by the scutellum; scutellum often not covering the abdomen so that hemelytra are fully exposed; ventral abdominal segments without black transverse sulcus on each side; abdominal ventrites rarely fused laterally.
A very large family of phytophagous and predaceous bugs showing considerable variation in form ... PENTATOMIDAE (Leach), 1815 (p.110)

20. Ocelli absent; membrane of hemelytron usually with 3 basal cells from which 7 - 8 branching, longitudinal veins extend to the apical margin.
Medium sized bugs, brightly coloured, usually phytophagous, seed feeding species ..... PYRRHOCORIDAE (Amyot & Serville), 1843 (p.129a)

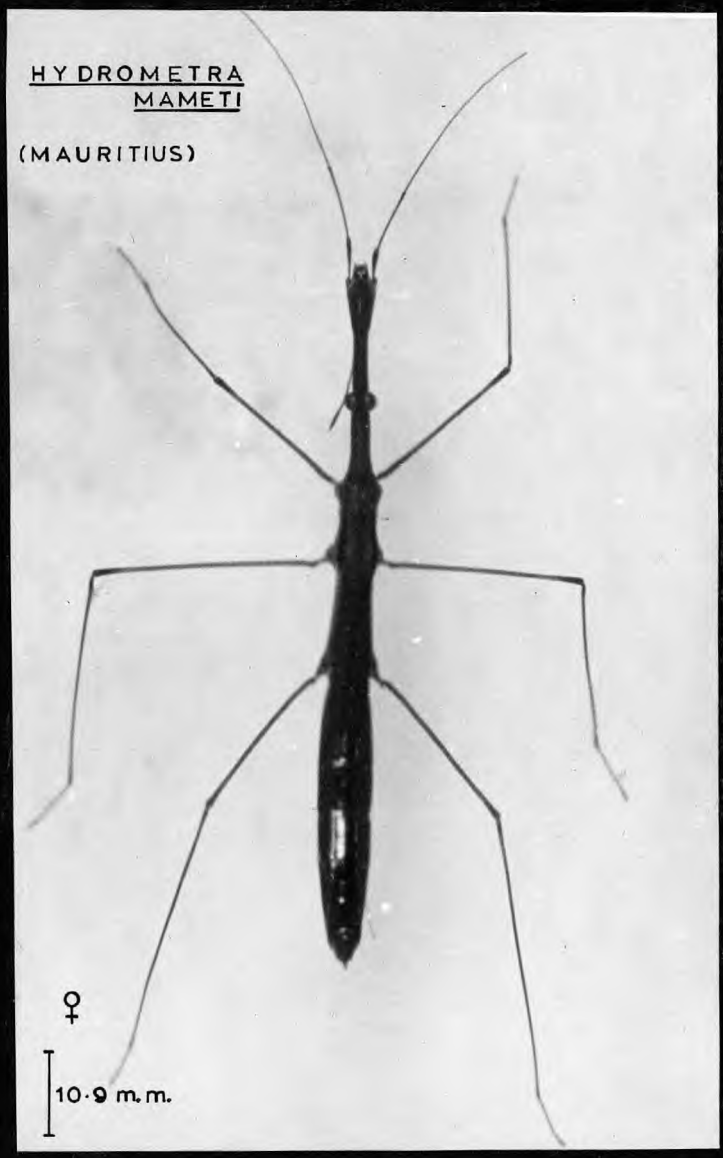
-. Ocelli present 21

21. Antennophores dorsal. Membrane of hemelytron with richly branched venation.
Medium to large phytophagous bugs sometimes with dilated antennae or posterior tibiae; posterior femora in male often strongly swollen and spined ..... COREIDAE Leach, 1815 (p.130)

-. Antennophores lateral and ventral of a line from centre of eyes to apex of head 22

22. Juga acuminate and contiguous at base in front of tylus; basal antennal segment strongly thickened and much thicker than remaining segments, densely, setosely pubescent.
A small family of medium sized bugs formerly placed in the Coreid tribe Stenocephalini and related to the Lygaeidae ..... STENOCEPHALIDAE Dallas, 1852 (p.137)

-. Juga rarely acuminate and extending in front of tylus, if so, never contiguous at base in front of tylus; basal antennal segment not greatly thicker than remaining segments, pubescence sparse and non bristly.
A large family of small to medium bugs, mainly dull in colour but with one subfamily (Lygaeinae) brightly coloured ..... LYGAEIDAE (Schilling), 1829 (p.138)


HYDROMETRA
MAMETI
(MAURITIUS)
♀
10·9 m.m.

IX. HYDROMETRIDAE Billberg 1820

Enum. Ins. Mus. Billb. p.67 (Hydrometrides)

Hydrometra Lamarck 1801[+]

Latreille, Précis Caract. gén. Ins., p.86, 1796 (invalid)

Lamarck, Syst. Anim. s. vert., p.295, 1801 (valid)

Type-species: Cimex stagnorum Linn.

H. mameti Hungerford 1951.

J. Kans. ent. Soc., 24:109.

Type-locality: Mauritius.

This species is common along the water's edge on streams and rivers sheltered from the sun in upland regions (e.g., Réduit, Le Pouce Mt.) (Plate 3 a ♀).

The record of H. aegyptia Hungerford & Evans 1934 (Annls. hist.-nat. Mus. natn. hung. 28:83) from Mauritius fide Mamet (1957b:66), a species described from Egypt, is open to grave suspicion. Mamet states that Poisson identified his aquatic bugs whereas in fact only part of his collection was seen by this specialist; furthermore, Poisson has never seen the type of aegyptia (personal communication).

[+]Mamet (1957b:66) gives Fabricius as authority (for the genus) in error. Hydrometra was originally established by Latreille without species. Lamarck 1801 was the first to include species from which Latreille 1810 selected one as type species. The present author follows Van Duzee and considers Lamarck to be the authority - Fabricius having simply used the name two years later in 1803, Syst. Rhyng., p.256.

x SALDIDAE (Amyot & Serville) 1843

Hist. nat. Hémipt. p.X/IX (Groupe Saldides)

Saldula[+] Van Duzee 1914

Trans. S. Diego Soc. nat. Hist. 2:32 (new name for Acanthia Reuter 1912 nec Fabricius 1775)

Type-species: Cimex saltatorius Linn. (fixed by Van Duzee)

S. mametiana Drake 1953.

Nat. Malgache 5:167.

Type-locality: Mauritius.

This species has striking whitish markings; brachypterous and macropterous forms both occur on the island.

Mamet (loc. cit. p.69) records the presence of S. ornatula (Reuter) var. from Mauritius. According to Dr. R.H. Cobben - Laboratorium voor Entomologie van de Landbouwhogeschool, Wageningen, Netherlands - this record is probably erroneous. The present author is studying the question.

MESOVELIIDAE Douglas & Scott, 1867

Entomologist's mon. Mag. 4:3 (Tribe)

Mesovelia Mulsant & Rey 1852

Ann. Soc. Linn. Lyons p.138

Type-species M. furcata M. & R.

[+]Stål (Hem. Afr. 3:25) records Acanthia (= Saldula) rotundata from Réunion (Signoret collection) and China (1924:447) described S. subcarinata from Rodriguez.

M. vittigera Horváth 1895. [+]Mauritius, Réunion, Madagascar, Congo, Sudan, Ethiopia, S. India, Ceylon, Sumatra, Java, Formosa, N. Guinea.

Rev. Ent., Caen 14:160.

Very common on ponds and marshes throughout the island[+], especially in the warmer regions, e.g. Gd. Bay, Trou-aux-Biches.

M. vittigera Horváth f. orientalis Kirkaldy 1901. (R. Poisson 1955) Mauritius[++], Philippines[++], Guam[++].

Kirkaldy 1901 Annali Mus. civ. Stor. nat. Giacomo Doria (II), 20:808.

Poisson has confirmed this identification based on specimens in the author's collection from La Nicolière (Jan. 1962).

VELIIDAE (Amyot & Serville) 1843

Hist. nat. Hémipt. pp.1, 448 (Groupe Velides)

Microvelia Westwood 1834

Ann. Soc. ent. Fr. 3:647

Type-species: M. pulchella Westw. 1834 [acc. to Drake & Hussey (1955) 37, 3:96-98]

Velia pygmæa Dufour 1833 [acc. to China 1943 - Gen. names Brit. Ins. pt.8. p.275]

M. gracillima Reuter 1882. Mauritius, W. Africa.

Öfvers finska Vetensk Soc. Förh., 25:38.

From neighbouring Réunion, Poisson 1957 has described another species M. bourbonensis [Mém. Inst. sci. Madagascar (E) 8:391].

Rhagovelia Mayr 1865

Verh. zool.-bot. Ges. Wien, 15:445

[++]The above distribution is probably incomplete.

Type-species Velia nigricans Burm. (fixed by Kirkaldy 1901 Entomologist 34:286)

R. seychellensis Lundblad 1936. Mauritius, Seychelles.

Ark. Zool., 21:51.

Very common on running water.

R. infernalis infernalis (Butler) 1876. Mauritius, Réunion, Rodriguez, Seychelles, Ethiopia, Egypt, Syria, Ceylon.

Syn. Velia infernalis Butler, Ann. Mag. nat. Hist. (4) 17:411.

Widely distributed over the Ethiopian region. Both sexes produce ♂ & ♀ apterous and macropterous forms: ♀ apterous, often more prevalent than ♂ & ♀ macropterous.

XIII - GERRIDAE Leach 1815

Brewster's Edin. Encyc. 9:123

Limnogonus Stål 1868

K. svenska Vetensk-Akad. Handl., 7:132

L. cereiventris cereiventris (Signoret)[+], 1863 in Maillard 'Notes sur l'Ile de la Réunion', pp. 18, 30. Mauritius[+], Réunion, Rodriguez[+].

Type-locality: Réunion.

Mamet records the presence of L. leptocerus Reuter from Mauritius. According to Poisson this is an error since L. cereiventris leptocerus

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[+]L. dolosus (Bergroth) recorded from Rodriguez by China (1924 p.447) and by Orian (1956 p.650) from Mauritius, appears to be in fact L. cereiventris cereiventris.

(Reuter) 1882 (Öfvers finska Vetenck. Soc. Förh. 25:40) is 'inféodée à l'Afrique éthiopienne et à la Palestine' (personal communication).

Common on natural and artificial ponds and on slow moving rivers and streams.

L. aegypticus Puton. — Mauritius, Seychelles, Rodriguez.

This species does not figure in the author's collection.

Tenagogonus[+] Stål 1853

Öfvers Vetensk-Akad. Förh. Stockh. 10:263

Type-species: T. albovittatus Stål 1855

Nya Genera bland Hemiptera ibid 12:45

[Note: [+]The review by Hungerford & Matsuda, Kansas Univ. Sci. Bull. 39, 9 (1958):371-457, suggests that there is a complex relationship between the genera Tenagogonus Stål and Limnometra Mayr.]

Sub-genus Tenagogonella Poisson 1948

Type-species of sub-genus: Tenagogonus madagascariensis Hoberlandt 1947

[++]T. (Tenagogonella) madagascariensis (Hoberlandt) 1947. — Mauritius, Réunion, Madagascar.

= Tenagogonus madagascariensis Hoberlandt.

Acta. Mus. nat. Prag. 1947.

[++][This may be the genus referred to by Mamet (1957b:69) when he mentions that he has in his collection 'nymphs of a species belonging to a genus near Haloblates'][+++]

[+++]From Réunion Poisson (1957), Mém. Inst. Sci. Madagascar (E) 8:389, records Limnometra fluviorum (Fabricius) 1803, a species said to occur in Ceylon, the East Indies and Java.

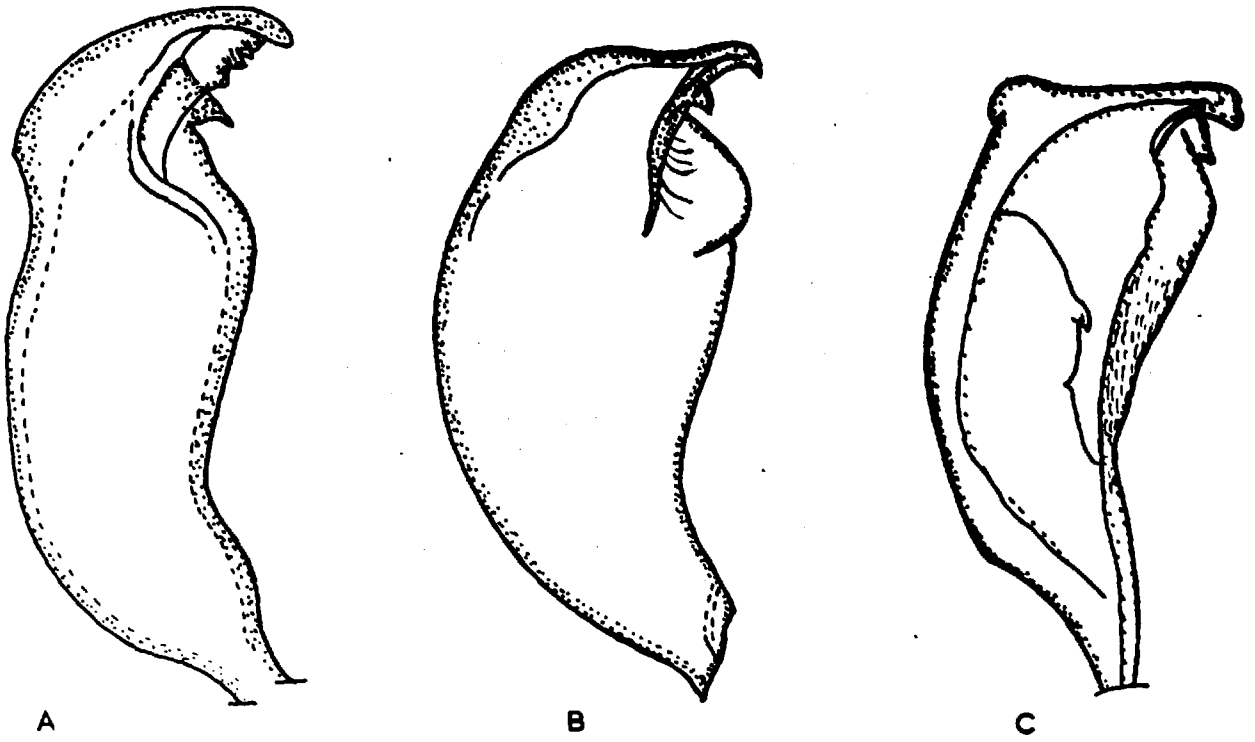


PLATE 3 b

A. Sigara (Tropocorixa) alluaudi alluaudi (Kirk.) : Madagascar.

B. S. (T.) alluaudi bourbonensis Poiss. : Réunion.

C. S. (T.) alluaudi mauricensis nov. subsp. : Mauritius.

T. (Tenagogonella) madagascariensis Poisson.

Mém. Inst. sci. Madagascar (A) 1 fasc. 2:94.

XIV CORIXIDAE Leach 1815

Brewster's Edinb. Encyc. 9:124 (Corixida)

Sigara Fabricius 1775

Systema Entomologiae p.691

Type-species: Notonecta striata Fabricius 1775 (monobasic)

Sub-genus: Tropocorixa Hutchinson 1940.

Trans. Corn. Acad. Arts Sci. 33:413 & 415.

Type-species: Corixa promontoria Distant.

(fixed by Hutchinson, 1940, Trans. Corn. Acad. Arts. Sci. 33:413-415)

S. (Tropocorixa) alluaudi mauriciensis nov. subsp.

Locality: Mauritius.

This new subspecies is being described by Poisson from material in the present author's collection. The general conformation of the right paramere is different in S. (T.) alluaudi alluaudi (Kirkaldy) from Madagascar and from S. (T.) alluaudi bourbonensis (Réunion): a diagram showing the diagnostic features is given on plate 3b .

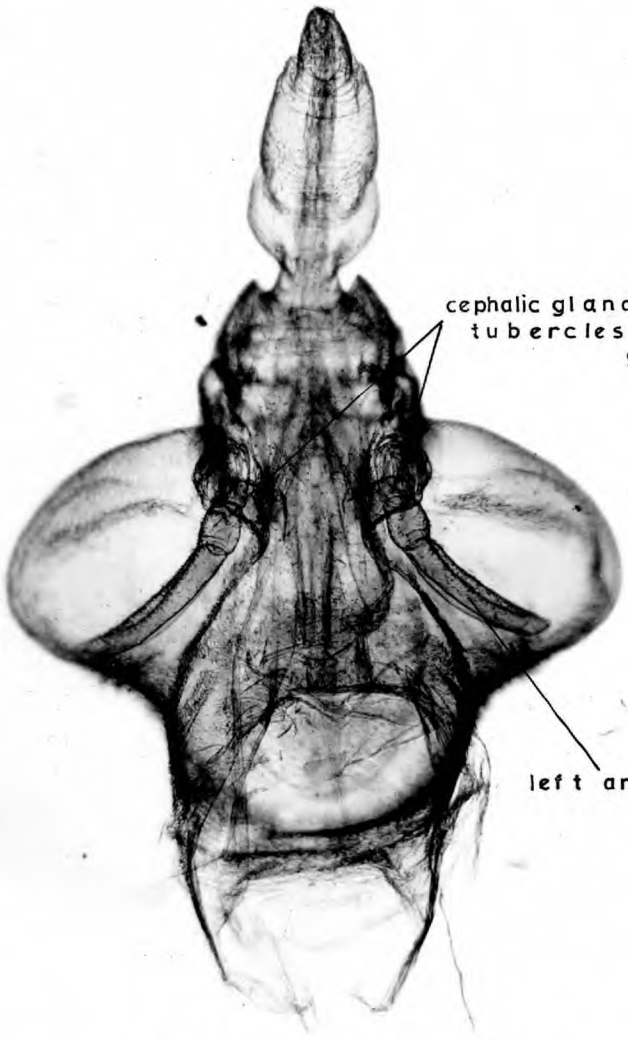
XV. NEPIDAE (Latreille) 1802

Hist. nat. Crust. Ins. 3:252 (Neparinae)

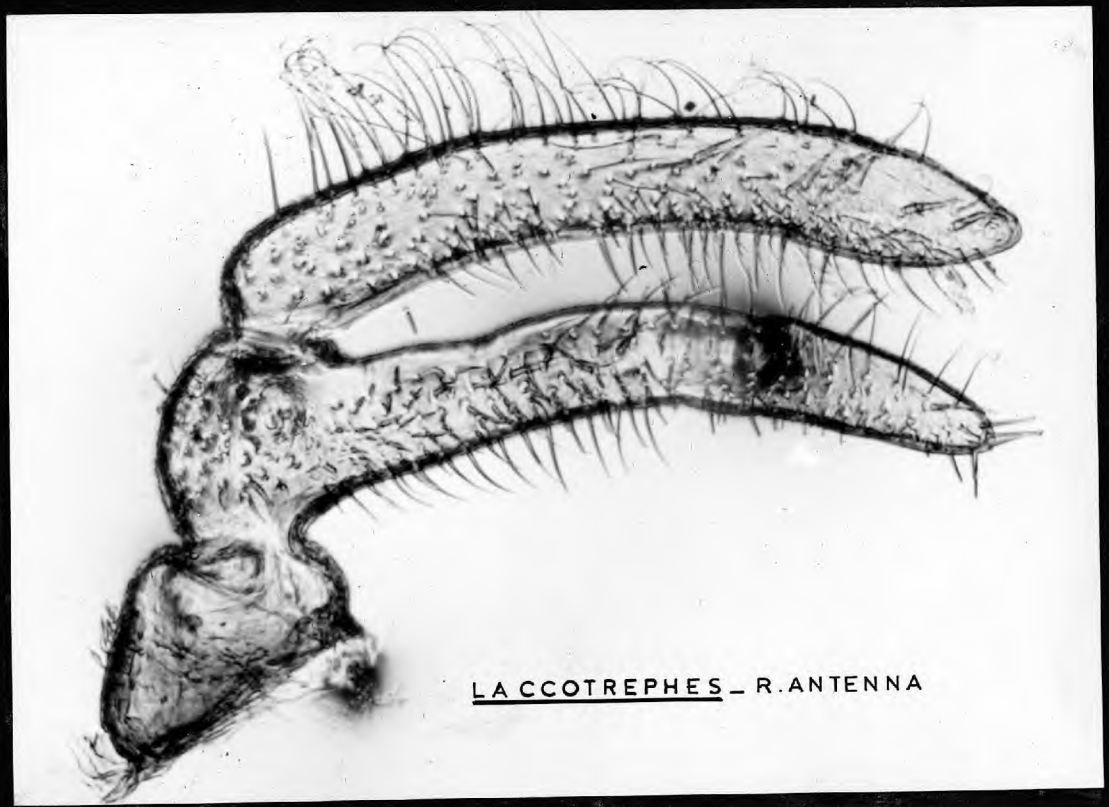
The two genera represented in Mauritius may be distinguished as follows:-

1. Medial length of pronotum much less than its greatest width. Width at anterior margin much greater than head. Anterior coxae short; anterior femora strongly thickened. A pair of cephalic-

LACCOTREPHES
ANNULIPES (LAPORTE)

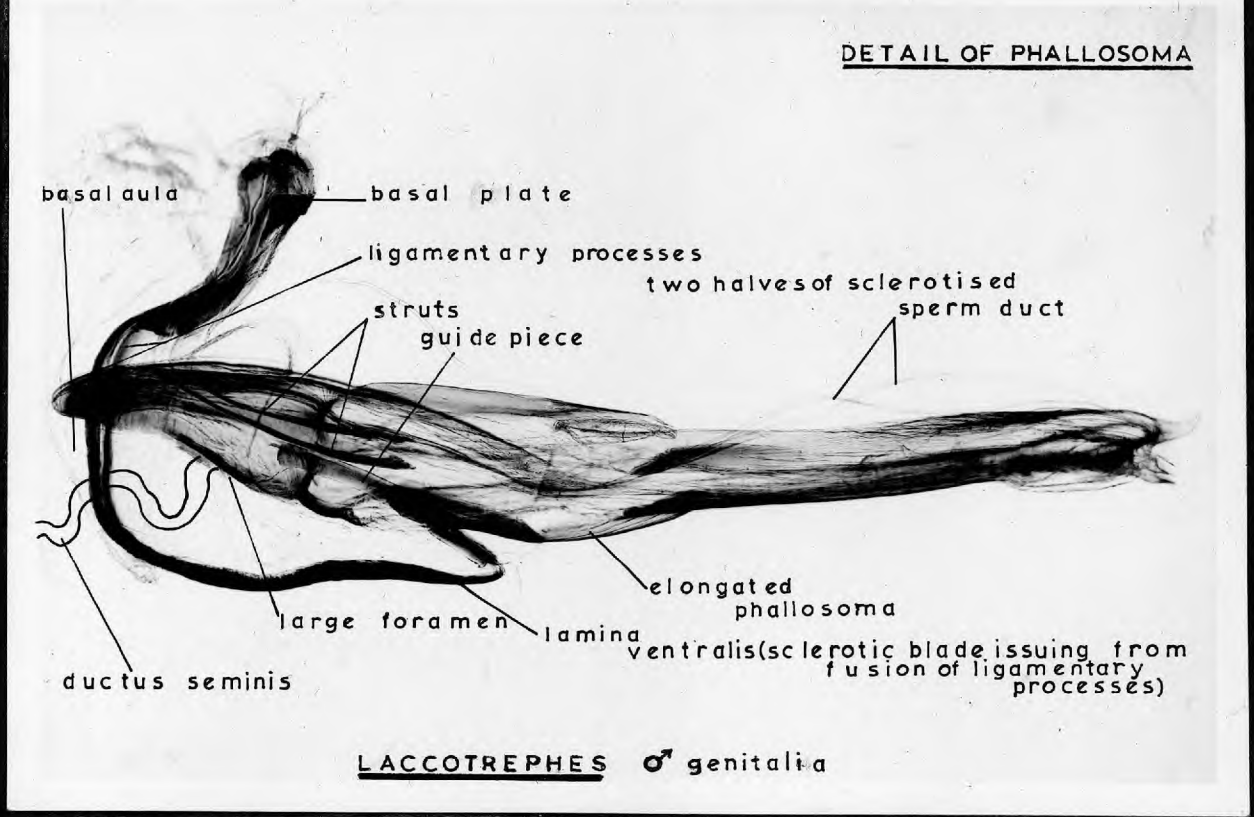


HEAD OF LACCOTREPHES (cleared)
showing gular organs



LACCOTREPHES – R. ANTENNA

PLATE 3e



LACCOTREPHES ♂ genitalia

PLATE 3f

gland tubercles covered with tactile hairs present on the gula entad of the basal segment of the antennae which are directed laterally. Genitalia: lamina ventralis articulate; a conspicuous pair of apodemes attached to sclerotised ductus seminis present inside aedeagus. Corium of egg with 9-10 respiratory horns ..... Laccotrephes Stål 1865

-. Pronotum considerably longer than broad. Anterior coxae long; anterior femora not strongly thickened. Gula smooth without ventral cephalic tubercles. Antennae directed caudad. No sclerotised aedeagal apodemes. Corium of egg-shell with 2 respiratory horns ..... Ranatra Fabricius 1794

Laccotrephes Stål 1866[+]

Hem. Afr. 3:186

Type-species: Nepa fabricii[++] Stål (by subsequent designation Distant Fauna Brit. Ind. Rhynchota 3:17)

L. annulipes (Laporte) 1833. Mauritius, Réunion, Madagascar, Comores.

Type-locality: Mauritius.[+++]

= Nepa annulipes Laporte 1833, in Silberman Rev. Ent. 1:35.

Syn.: N. vicina Signoret 1860-1863.

Dr. Poisson is in agreement with the present author regarding the above synonymy.

Ranatra Fabricius 1790

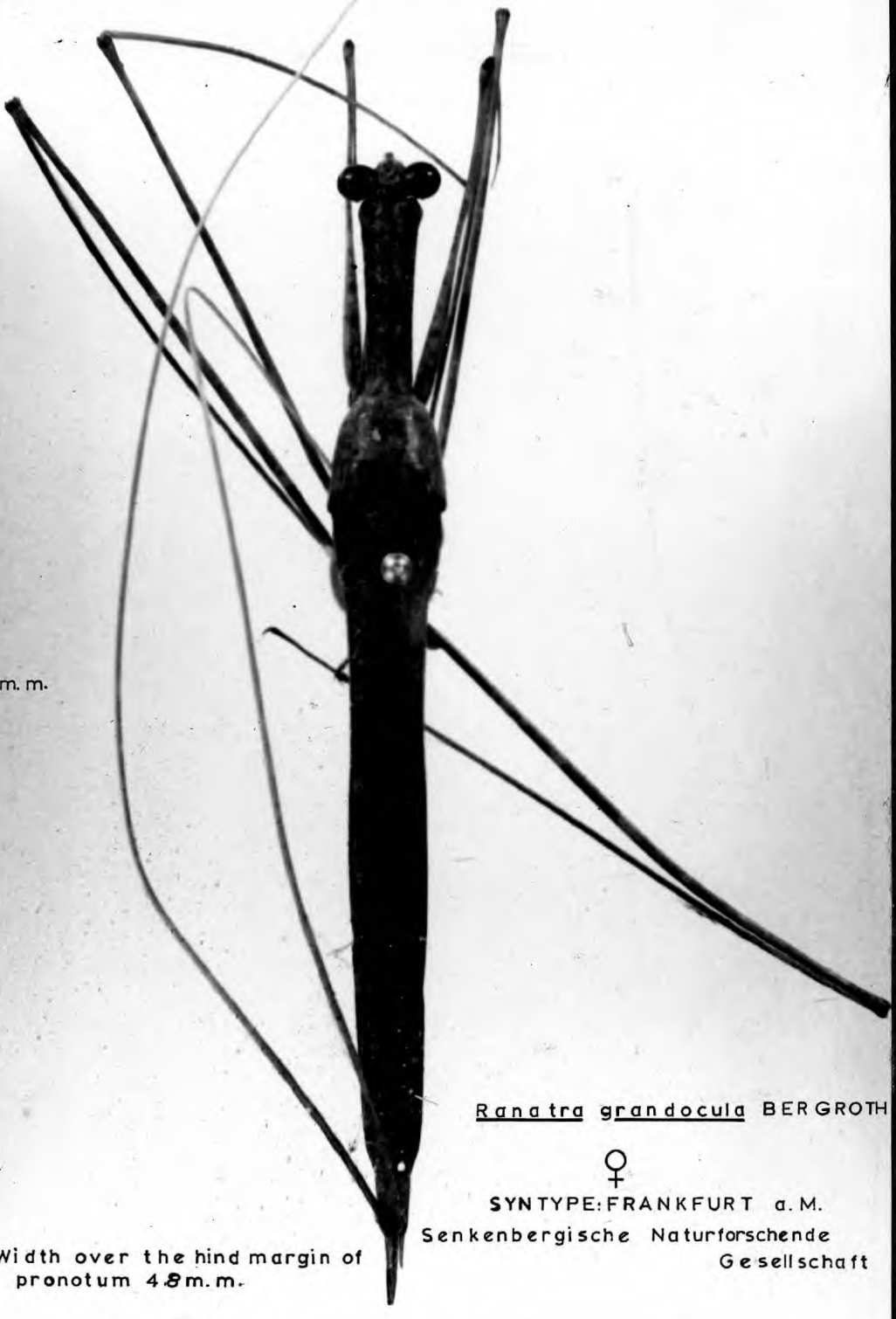
Nova Insectorum Genera. Skr. Naturh. Selsk. kjobenhavn 1:2

Type-species: R. linearis (L.) 1758 - the common European species: subsequent fixation by Latreille 1810, Consid. gén. Crust. Arach. Ins. 434.

[+]The date (1865) given by Mamet (1957b:72) is incorrect (vide Introduction p.13 - footnote).

[++]N. fabricii is a synonym of grossus, 'an included species'. Kirkaldy's designation of N. atra L. appeared a few months after Distant's. Nearly all authors have followed Kirkaldy in error.

[+++]After his description Laporte states that specimens were sent to him by M. de Romand (Isle de France).



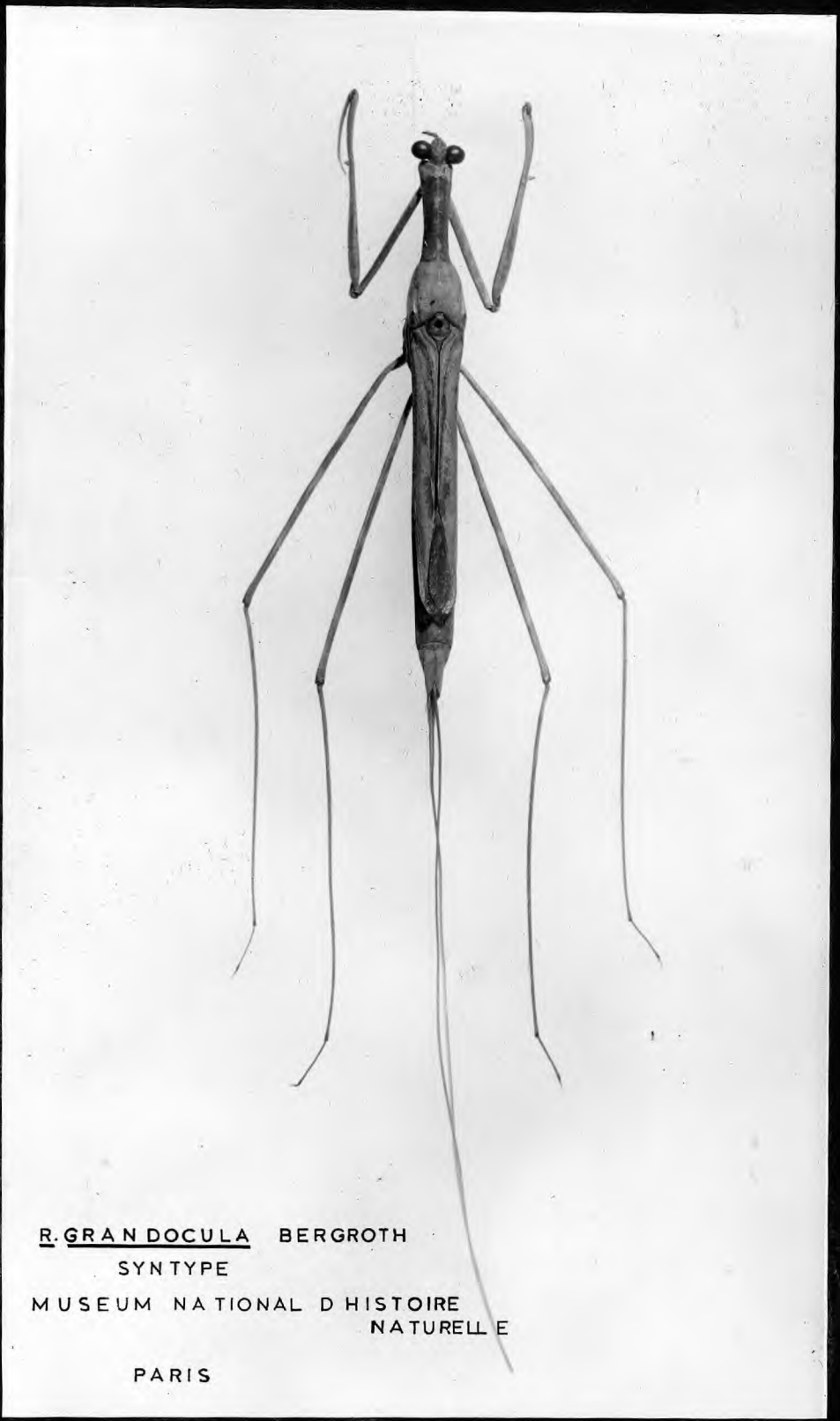
47 m. m.

Width over the hind margin of pronotum 4.8 m. m.

Ranatra grandocula BERGROTH

♀

SYNTYPE: FRANKFURT a. M.
Senkenbergische Naturforschende Gesellschaft

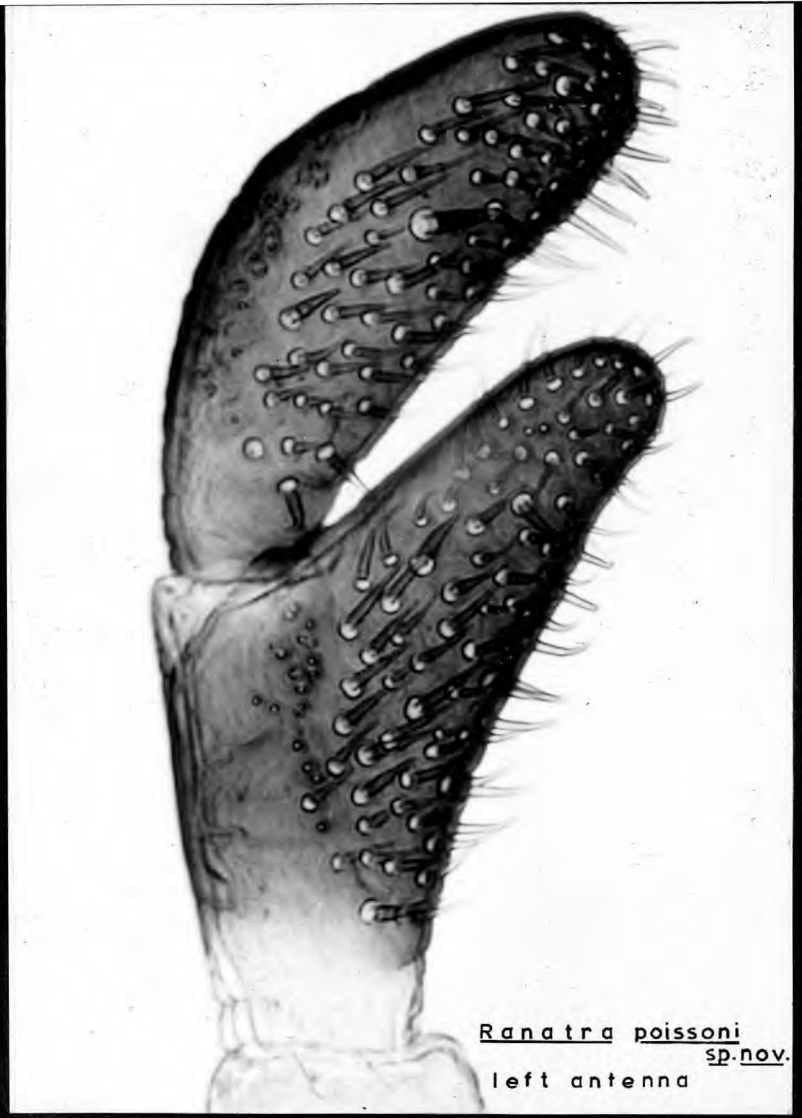


R. GRANDOCULA BERGROTH

SYNTYPE

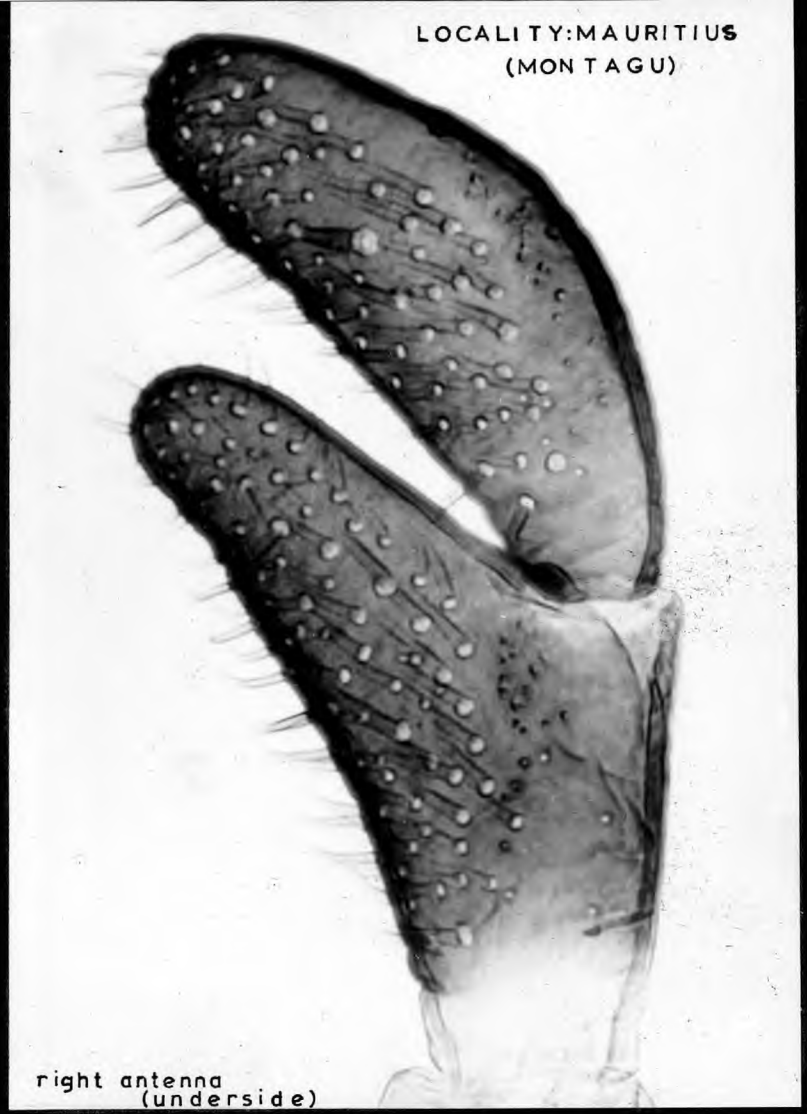
MUSEUM NATIONAL D HISTOIRE NATURELLE

PARIS



Ranatra poissoni sp. nov.

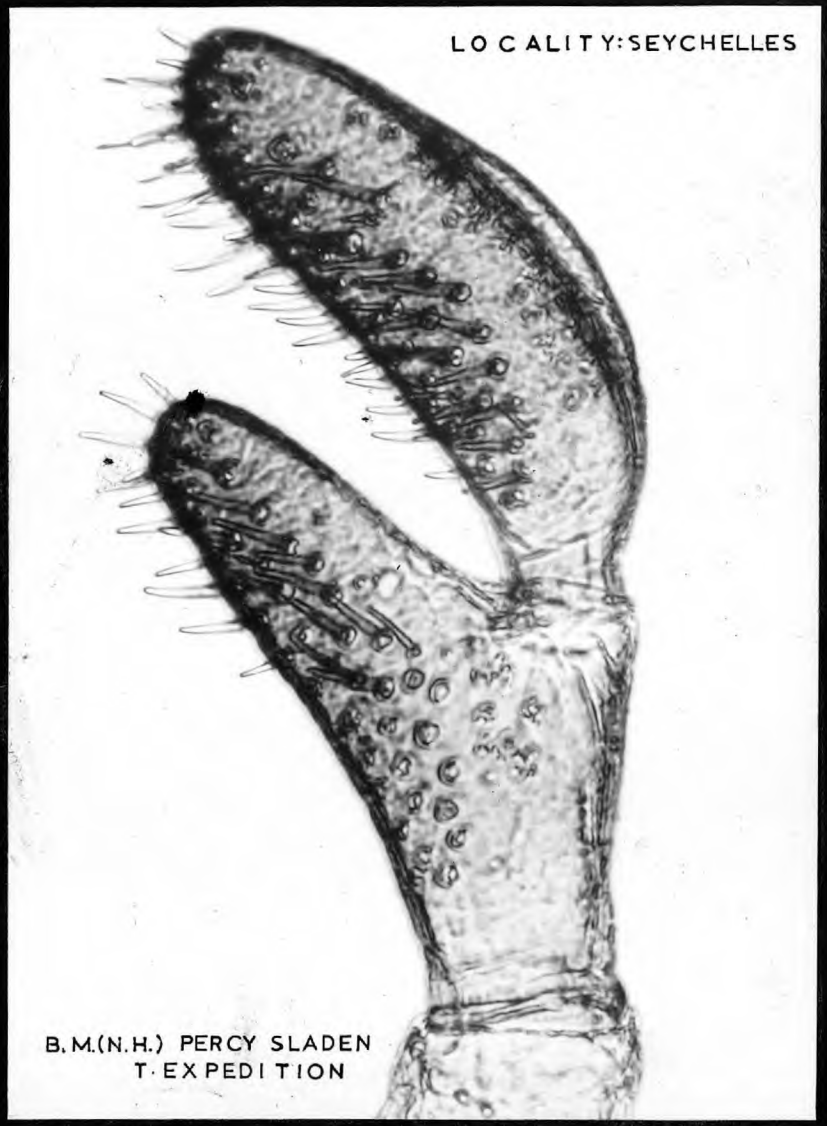
left antenna



LOCALITY: MAURITIUS (MONTAGU)

right antenna (underside)

PLATE 31


LOCALITY: SEYCHELLES
B.M.(N.H.) PERCY SLADEN
T. EXPEDITION

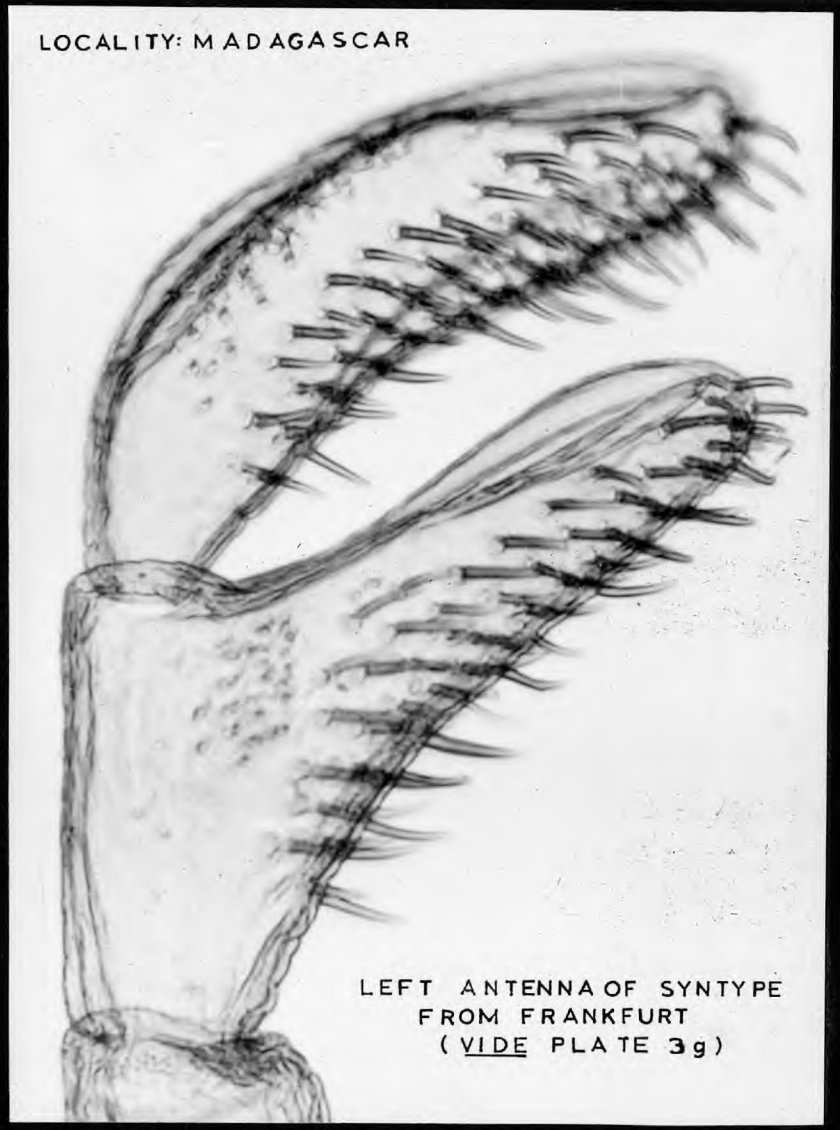

LOCALITY: MADAGASCAR
LEFT ANTENNA OF SYNTYPE
FROM FRANKFURT
(VIDE PLATE 3g)

PLATE 3j

[Note: Distant's selection Faun. Brit. India Rhynchota 3:19(1906) of R. filiformis Fabr., a south Indian species as type is invalid. He probably selected filiformis because it was the first of the three species included by Fabricius, overlooking the fact that the type-species had already been designated by Latreille]

R. poissoni[++] sp. nov.

(Orian in press).

Type-locality: Mauritius.

XVI. GELASTOCORIDAE Kirkaldy 1897

Entomologist, 30:258.

Nerthra Say 1832

Heter. Hem. N. Amer. p.37

N. rugosa (Desjardins).

Type-locality: Mauritius.

= Naucoris rugosa Desjardins, 1837 (Ann. Soc. ent. Fr. 6:239).

[++]Mamet records the occurrence of Ranatra grandocula Bergroth 1893 (Rev. Ent., 12:207) in Mauritius and the Seychelles. This is an error. The type locality of R. grandocula is Madagascar (Nosi-Bé). According to Poisson 'Bergroth avait fait de la femelle une espèce distincte. R. subulata Bergr. (!) J'ai rattaché à R. grandocula une forme africaine: R. grandocula uelei Poisson 1949 présentant un ensemble de caractères différentiels d'avec les specimens de Madagascar'. Poisson was under the impression that the type was lost.

Thanks to the courtesy of Dr. Heinz Schröder of the Natur-Museum und Förschungs-Institut, Frankfurt a.M. and of Mr. J.A. Grant (British Museum, Natural History), a photograph of the type ♀ was obtained (Plate 3g).

A micro-slide preparation of the antenna by the present author shows considerable differences in the pilosity, general shape of the segments, etc. (Plate 3j).

According to Mamet[+] (loc. cit. pp.72-73): 'This species has a very peculiar distribution: the type was described from Mauritius and Blatchley recorded it, under the name of Glossoaspis brunnea (Ent. News, 36:49-52), from Florida, U.S.A.. This name has recently been synonymised with Nerthra rugosa (Desjardins) by Todd (1955, Univ. Kansas Sci. Bull., 37:414). Todd (loc. cit.) has also recorded it from Panama'.

The present author has already referred to this in a foot-note (vide Introduction, p.17). In order to test the validity of this extraordinary distribution the type specimens of both species were obtained. In a letter to Dr. China (3rd April, 1963) Todd wrote as follows: 'I did examine the type of Glossoaspis brunnea Blatchley ..... I have seen only six specimens of this species - 1 in U.S. National Museum (Panama), 2 in Purdue collection (Florida), 2 in Kansas University collection (Florida), and 1 in British Museum (Natural History) (New Guinea ?).

Through the courtesy of Dr. Leland Chandler (Associate Professor - Purdue University) the present author examined the holotype of Glossoaspis brunnea, which he compared with the two co-types of Nerthra rugosa[++] (1♂ & 1♀).

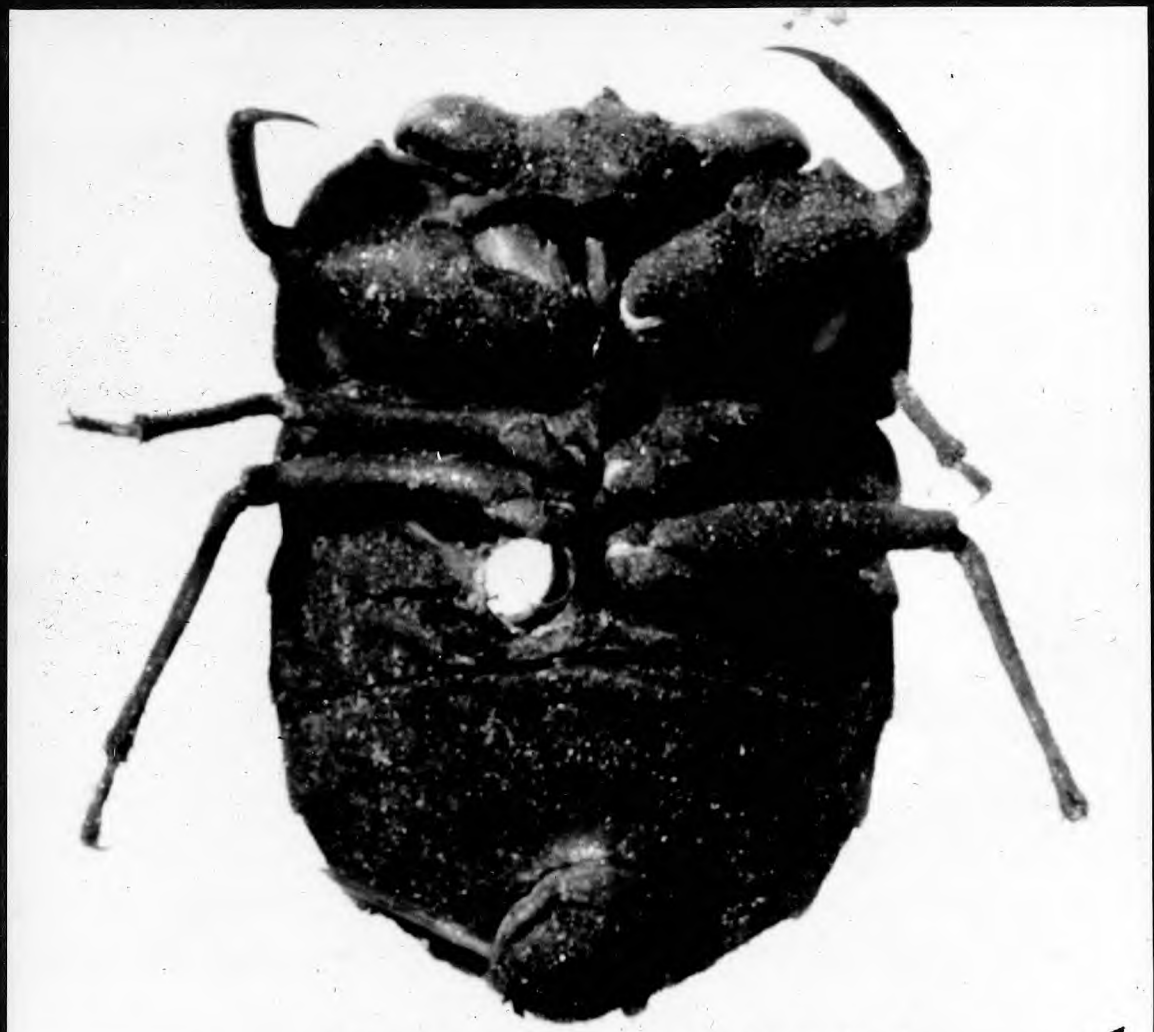
The series of plates show that although grossly similar they are quite distinct species. Plate 4f. is especially useful as it shows that apart from the size difference (the specimen is larger than N. rugosa), Glossoaspis brunnea (♀) has a pronounced 'protergal convexity' which is lacking in ♂♂ of N. rugosa.

[+]He was merely repeating Todd's views.

[++]The specimens of the original type-series were rediscovered in Paris through the efforts of Dr. Poisson, Dr. Villiers and Mr. Roland Besnard.

PLATE 4

NERTHRA RUGOSA (Desjardins) ♂ Lectotype



NERTHRA RUGOSA (Ventral view) ♂

PLATE 4a

NERTHRA RUGOSA

♂

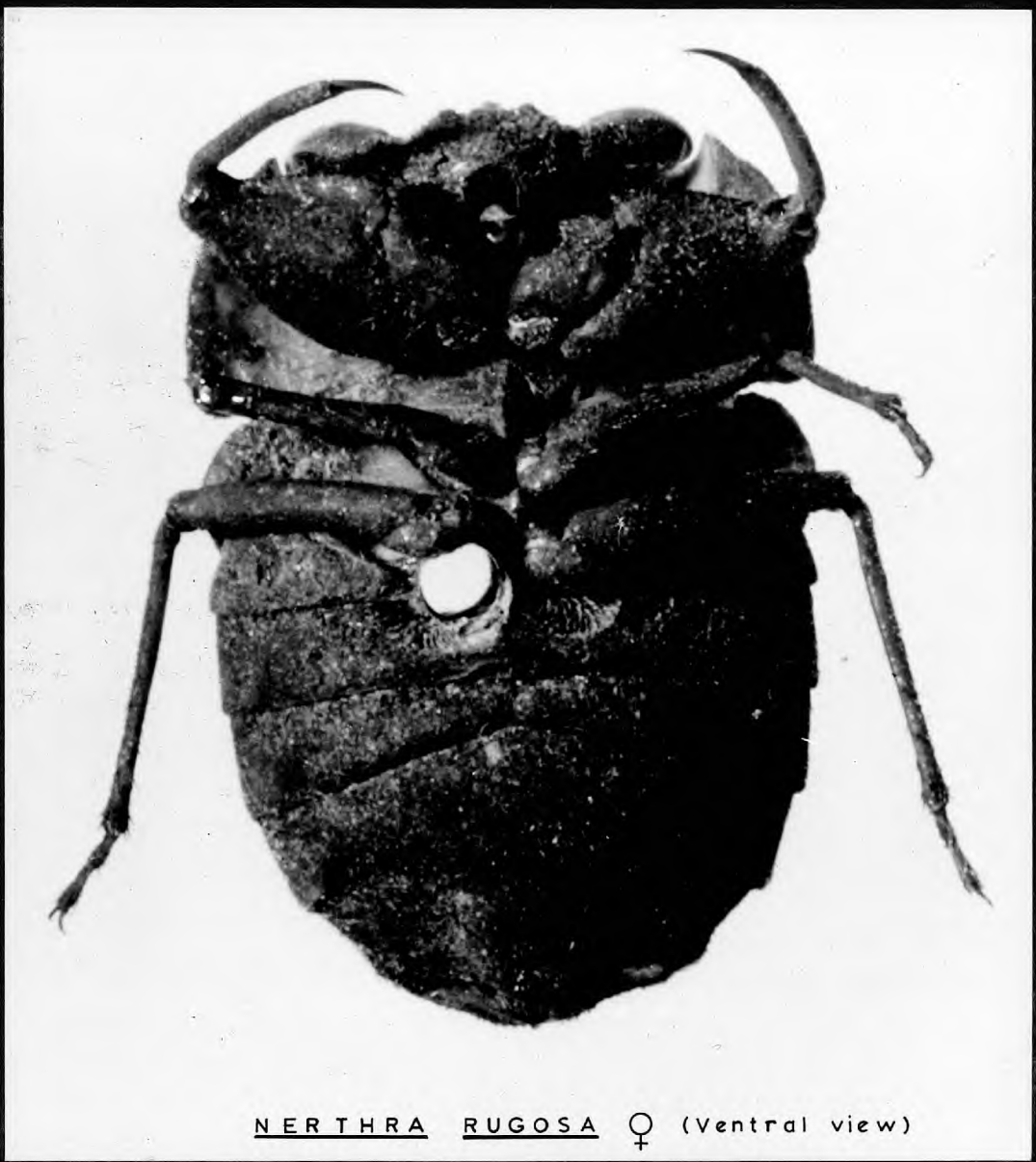
(ventral view)

PLATE 46

NERTHRA RUGOSA (Desjardins) ♀ Lectotype

MUSEUM NATIONAL D'HISTOIRE NATURELLE PARIS LECTOTYPE
Locality: MAURITIUS

NERTHRA RUGOSA (Desjardins) ♀



NERTHRA RUGOSA ♀ (Ventral view)

♂ NERTHRA RUGOSA _Hemelytra drawn apart

NERTHRA RUGOSA _AEDEAGUS

PLATE 4f

Glossoaspis brunnea BLATCHLEY

HOLOTYPE: Purdue Univ. Indiana

The matter is discussed in more detail in a paper now in preparation. Further differences lie in the shape of the eyes and pronotum.

The position can now be summarised as follows:-

(a) The initial mistake in synonymising N. rugosa with G. brunnea was made by Seguy, who carried out the examination on Todd's behalf.

(b) G. brunnea therefore retains its type integrity.

(c) A search made in the British Museum collection has failed to reveal the existence of any specimen of N. rugosa Desjardins (locality: N. Guinea given by Todd in doubt).

(d) N. rugosa Desjardins is a Mauritian species, which does not occur in America. On a previous footnote which appeared on p.17 mention was made of the disagreement between Desjardins, Westwood on one side and Serville on the other, as to whether the hemelytra really were fused.

Examination of the hemelytra shows that there is no true fusion between left and right. With the exception of the opposed edges the hemelytron is uniformly coriaceous, lacking a clavus; the right hemelytron slightly overlaps the left which is slightly ridged along the junction. The underlying edge is thin and hyaline, perhaps representing a 'vestigial membrane', the condition is reminiscent of the HELOTREPHIDAE[+]; hind wings are absent. (Plate 4 d shows the hemelytra of the male drawn apart.)

Nomenclatural note: Some authors place Nerthra under Nerthrinae Kirkaldy 1906. Although the generic name Nerthra Say 1832 is older than Mononyx Laporte 1833, the family-group name Mononychinae Fieber 1851 has priority

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[+] vide Esaki & China, Trans. ent. Soc. London 1927, part II:279-295.
" " " Eos: A monograph of the Helotrephidae 1928:129-172.

over Nerthrinae Kirkaldy 1906. Todd 1957 Proc. ent. Soc. Washington 59:145 states that the family name Mononychidae is a homonym of Monychus Schup. in Coleoptera.

XVII NOTONECTIDAE Leach 1815

Brewster's Edinb. Encyc. 9:124 (Notodectida)

Anisops Spinola 1840

Essai Hém. p.58

A. ciliata[+] Stål 1868. Mauritius[+].

Ofv. Vet. Ak. Forh., 7:137.

(The type which was in the Copenhagen Museum is now lost - vide Lundblad 1933, Arch. fur Hydrab., Suppl., 12:164).

From the description alone Brooks 1951 (Univ. Kansas Sci. Bull., 34:462) is of the opinion that A. ciliata is very near A. stali Kirkaldy (1904 - Wien ent. ztg., 3: 113, 132).

A. vitrea Sign. 1860. Mauritius, Réunion, Madagascar, Aldabra, Comores.

Recorded from Mauritius (Brooks, 1951 loc. cit. 14:451).

According to Brooks the type is in Stockholm.

Very common, feeds on mosquito and other larvae.

A. vitrea f. mauricensis Poisson 1945. Mauritius.

Anisops pellucens grandis Poisson 1937. Mauritius, Madagascar.

Ann. Soc. ent. Fr., 106:120.

[+]A. alluaudi Poisson 1945 (Bull. Soc. ent. Fr., 50:92-93) is described from Réunion Is., Plaine des Palmistes, and also recorded from Plaine des Marsouins.

PLATE 4g

NOTONECTIDAE

ANISOPS PELLUCENS GRANDIS Poisson

This is the largest species of Mauritian Anisops (9-10mm. long). Brooks has raised the subspecies to species rank on differences in ♂♂ of pellucens pellucens Gerstaecker 1873 and P. grandis.

The type of pellucens, according to I. Lansbury (Hope Natural History Museum, Oxford) is lost; according to Brooks the type is in the Berlin Museum. A specimen of this species is shown on Plate .

Enithares Spinola 1837

Ess. Ins. Hémipt., 60.

E. concolor (Fieber). Mauritius, Réunion, E. Africa.

= Bothronotus concolor Fieber, 1852.

Abh. böhm. Ges. Wiss., (5) 7:471.

Kirkaldy has stated that the type was in the Paris Collection. The present author and the staff of the Paris museum were unable to trace it. Poisson maintains that the type is lost. The author has seen specimens of concolor determined by Fieber on loan to Mr. I. Lansbury at Oxford.

E. milloti Poisson 1948. Mauritius, Madagascar.

Mém. Inst. sci. Madagascar, (A) 1:116.

XVIII _ REDUVIIDAE Latreille 1807

In 1956 Miller published 'a preliminary list of the REDUVIIDAE of Mauritius, with descriptions of a new genus and three new species': altogether he recorded 10 species. In the same year the present author listed 16 reduviids from the island. Mamet (1957b) recorded 11 species; unfortunately, some of his identifications were not based on type material. In synonymising Sastrapada baerensprungi (Stål) with Pygolampis innotata (Walker) he appears to be repeating an error made earlier by Distant [vide: Faun. Br. Ind. Rhynch., 2:224 (1904)]. The type of S. baerensprungi is apparently lost, but according to Villiers (personal communication) many species were at one time lumped together under that name.

In the author's collection 2 species of Sastrapada belonging in 2 different subgenera are to be found (vide pls. 5, 5a, 5b, 5b, 5c):

S. (Harpagochares) noeli sp. nov.

S. (Sastrapada) villiersi sp. nov. - According to Villiers this species is very near S. beieri but differs from it in the shape of the pygophore and hairs on parameres.

Examination of the type[+] of Pygolampis innotata (Walker), a species described from Mauritius[++] (vide Pl. 5a - everted aedeagus) shows it to be near Sastrapada (Harpagochares) noeli sp. nov. Yet another species of Sastrapada (S. incerta Signoret[+++]) appears to

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[+]British Museum (N.H.).

[++]Specimens described by Walker came from Dr. Beke's collection (Walk. Cat. Hem. Het. 8:36(1873)).

[+++]In Stål, Hem. Afr. 3(1866) - locality Réunion & Madagascar, vide Signoret Ann. soc. ent. Fr. (3)8:968.

be present in the Mascarenes, but there seems to be some doubt as to the validity of this record.

In the present study, in view of the limited time at the author's disposal, attention can only be drawn to a few errors found in the literature.

Concerning Gardena chinai: Wygodzinsky's description contains a few errors (in his measurements) which are corrected further in the text. (The species is recorded here from Réunion for the first time.) Another species of Gardena (G. richardsi M.S.) occurring in Mauritius is being described in another study.

Oncocephalus sp. listed by Mamet (loc. cit. p.59) is the species named O. emmerezi by Villiers (1961b).

According to Ghauri (Ann. Mag. Nat. Hist. (13)5:417-420) Opsicoetus biannulipes Montrouzier & Signoret should be placed under Peregrinator Kirkaldy 1904 - Villiers 1948[+] holds other views. Physadores sp. listed by Mamet (loc. cit. p.59) is now referable to Epiroderiodes mauriciensis Villiers. The author also has in his collection a new genus and species to which Villiers has given the name Mametina marmorata.

Before any conclusions can be drawn as to the affinities of the reduviid fauna of the Mascarenes much more work has to be done on the group. Plates 5a, 5a, 5b, 5b, 5d show clearly that comparison of parameres and evertion of the aedeagus is often essential for confirmation of specific and subgeneric characters (cf. Pls. 5a & 5b). Thus Miller (loc. cit. p.311) in his description of Mametocoris, states that the genus is apparently allied to Margasus Stål but

---

[+]Faune de l'Empire Francais. Hémiptères, Réduviides, de l'Afrique Noire - Paris.

examination of the everted aedeagus of many members of the latter genus seems to indicate that the genera are widely separated. The various spp. of Margasus thus examined do not possess the characteristic balloon-like projections present on the aedeagus of Mametocoris (vide Pl.5a).

Sastrapada villiersi sp. nov.[+]

Holotype: male.

Size: Length 15mm., width across anterior margin of pronotum 1mm., width of basal margin of pronotum 2mm., width of posterior margin of last visible tergite 1.7mm.

Colour: More or less uniformly coloured above, pale sordid yellowish brown except for darker brown head, paired black connexival spots and a large median black spot on hemelytron on the distal cross-vein of the discoidal cell and the base of the inner membranal cell. Sides of head and pronotum (propleura) dark brown with some narrow, pale, longitudinal lines; hemelytron marbled with obscure pallid spots.

Underside with a median dark brown median percurrent stripe, broad from prosternum to metasternum, then continuing as a narrow brown stripe to base of pygophore, on most segments a narrow pale yellow line is superimposed median on the brown stripe but is obsolete on the mesosternum and dies out at the apex of the sixth abdominal sternite; remainder of venter marbled with brown or pallid markings.

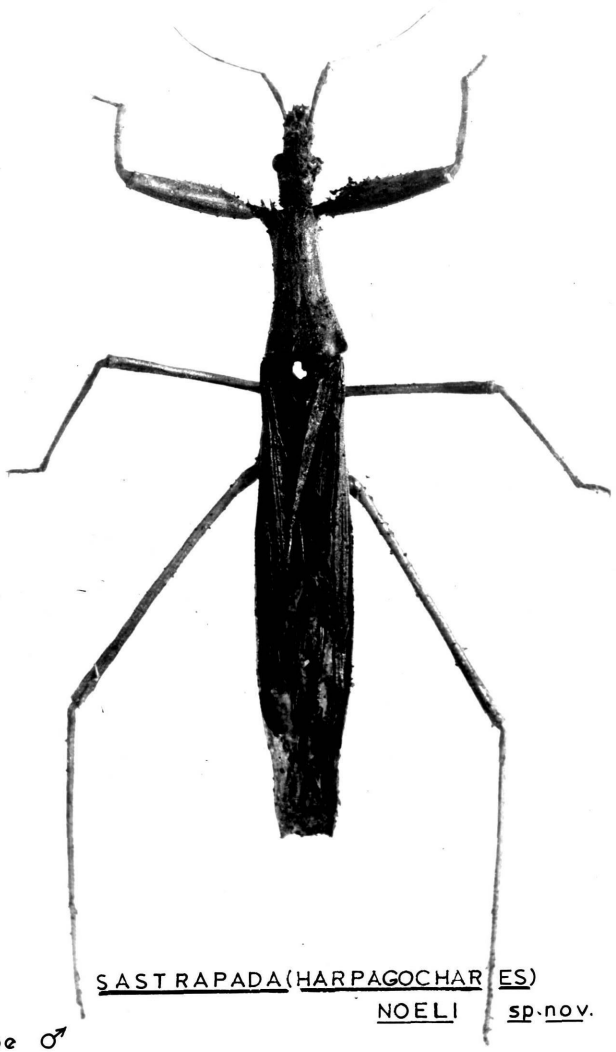
Rostrum pale yellow with a narrow brown stripe on each side of second and third labial segment; apical segments entirely brown.

Antennae yellowish, the underside of the distal half of first segment marbled with brown; the second, third and fourth segments infuscate.

Legs pale yellowish: anterior tibiae with three brown annulations distally, proximally and medially, coxae and front femora with longitudinal brown stripes.

[+]The author is pleased to dedicate this interesting species to Dr. André Villiers (Muséum National d'Histoire Naturelle, Paris), the authority on REDUVIOIDEA.

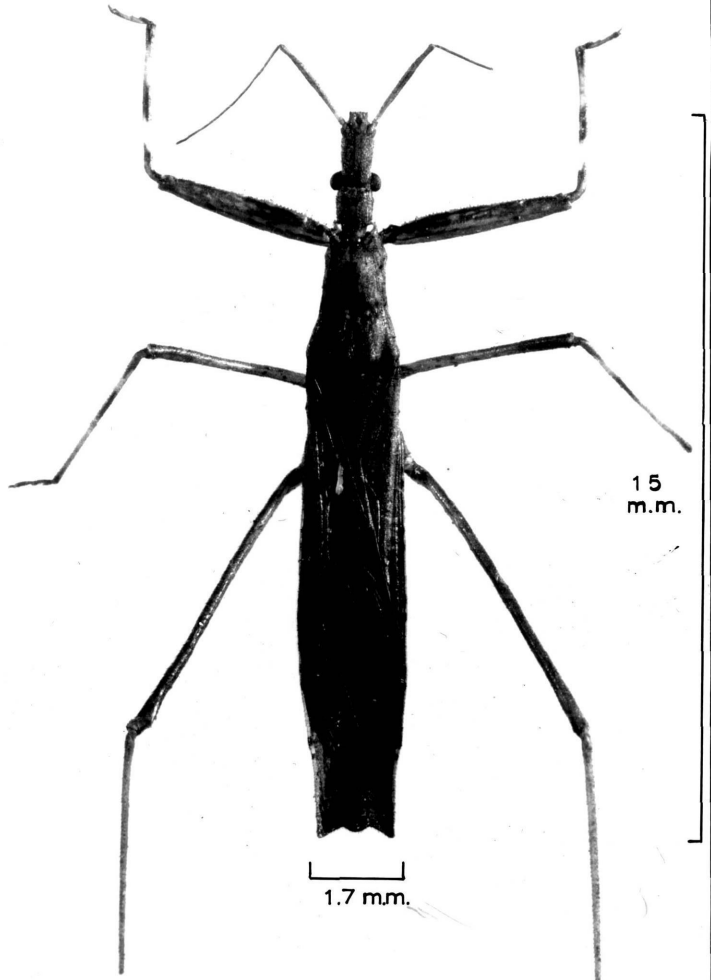
LOCALITY: SAVANNAH_MAURITIUS
COLL. A. ORIAN



SASTRAPADA (HARPAGOCHARES)
NOELI sp. nov.

Holotype ♂
Museum National d'Histoire Naturelle _PARIS

ROSE HILL_MAURITIUS COLL. A. ORIAN



SASTRAPADA VILLIERSI sp. nov.

Holotype ♂
Museum National d'Histoire Naturelle _ PARIS

PI ATE 5

Structure: Postocular lobe of head about ½ length of anteocular lobe; lateral margins of postocular lobe armed with 6 setigerous tubercles, posterior margin with six in two pairs: relative length of first two antennal segments 2:3; third and fourth missing in type specimen.

First segment of rostrum extending to middle of eyes.

Median length of pronotum about twice the width at humeral angles.

Hemelytron extending to base of seventh abdominal tergite.

Underside of anterior trochanter with two distal, one proximal spine and some bristles; on the femur a double row of small pointed tubercles - 7 larger teeth in dorsal row, 4 in ventral row, the latter dying out on apical third of femur.

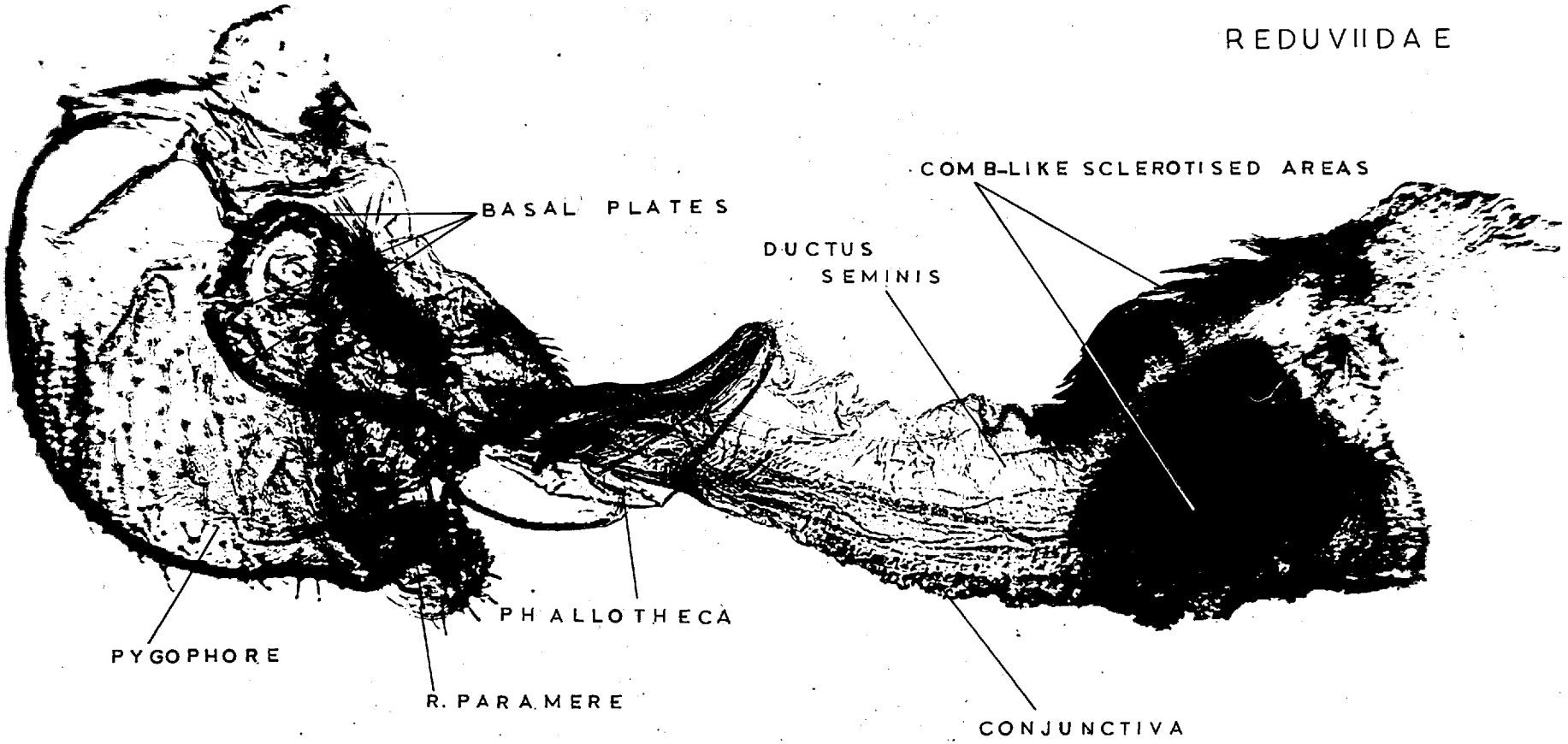
Prosternal spines armed below with two setigerous spinous tubercles.

Discoidal cell roughly hexagonal, about 2½ times as broad as long, black spot as indicated above.

Allotype ♀: Almost identical to ♂ in coloration; abdomen extending much further beyond hemelytra.

Genitalia: Detail on Plate 5 a .

Types: Holotype ♂ and allotype ♀: Muséum National d'Histoire Naturelle, Paris.



AEDEAGUS OF SASTRAPADA VILLIERSI everted (l. paramere removed)

PLATE 5a

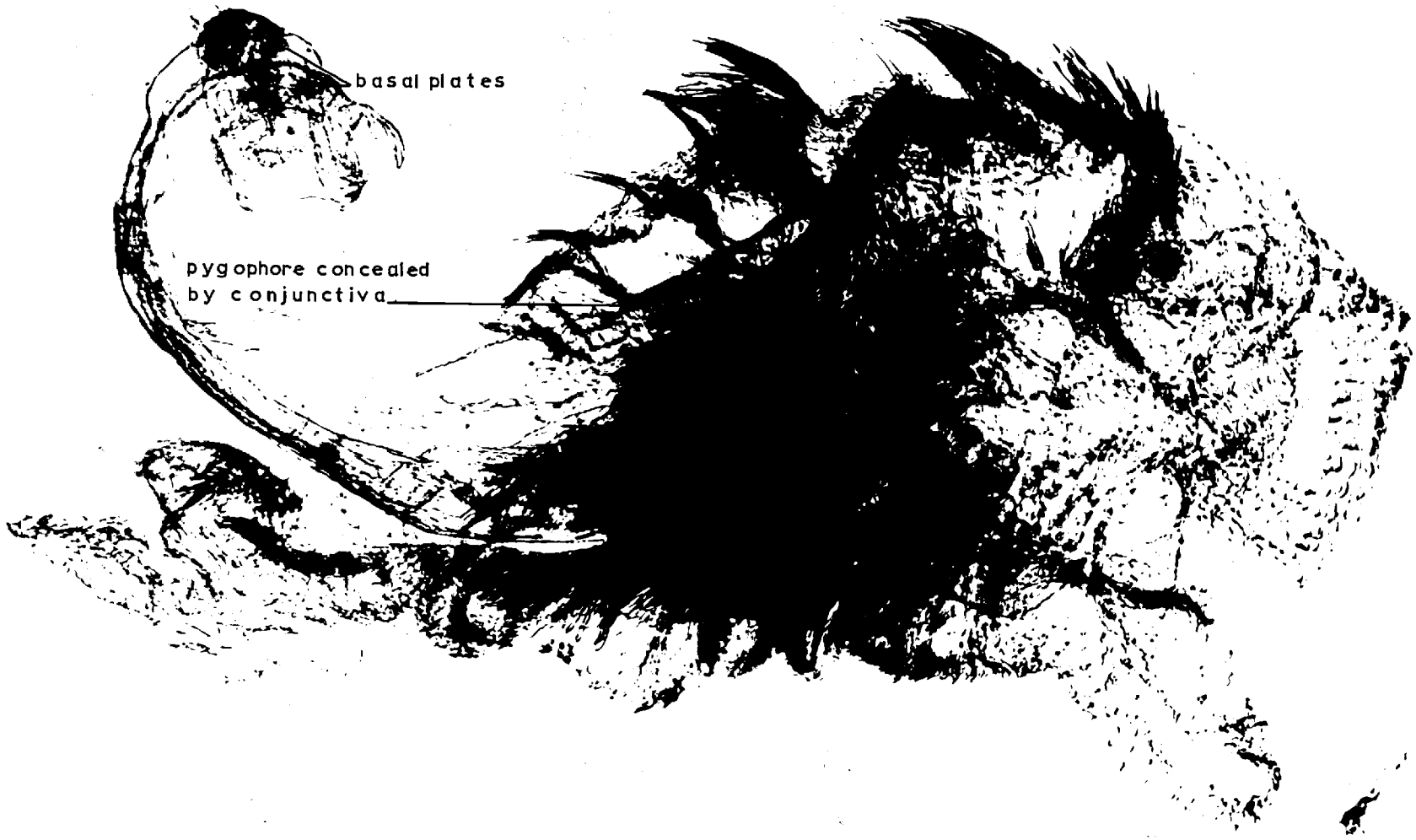


PLATE 5a$_1$

SASTRAPADA INNOTATA(Walker) comb.n.

(aedeagus everted)

REDUVIIDAE

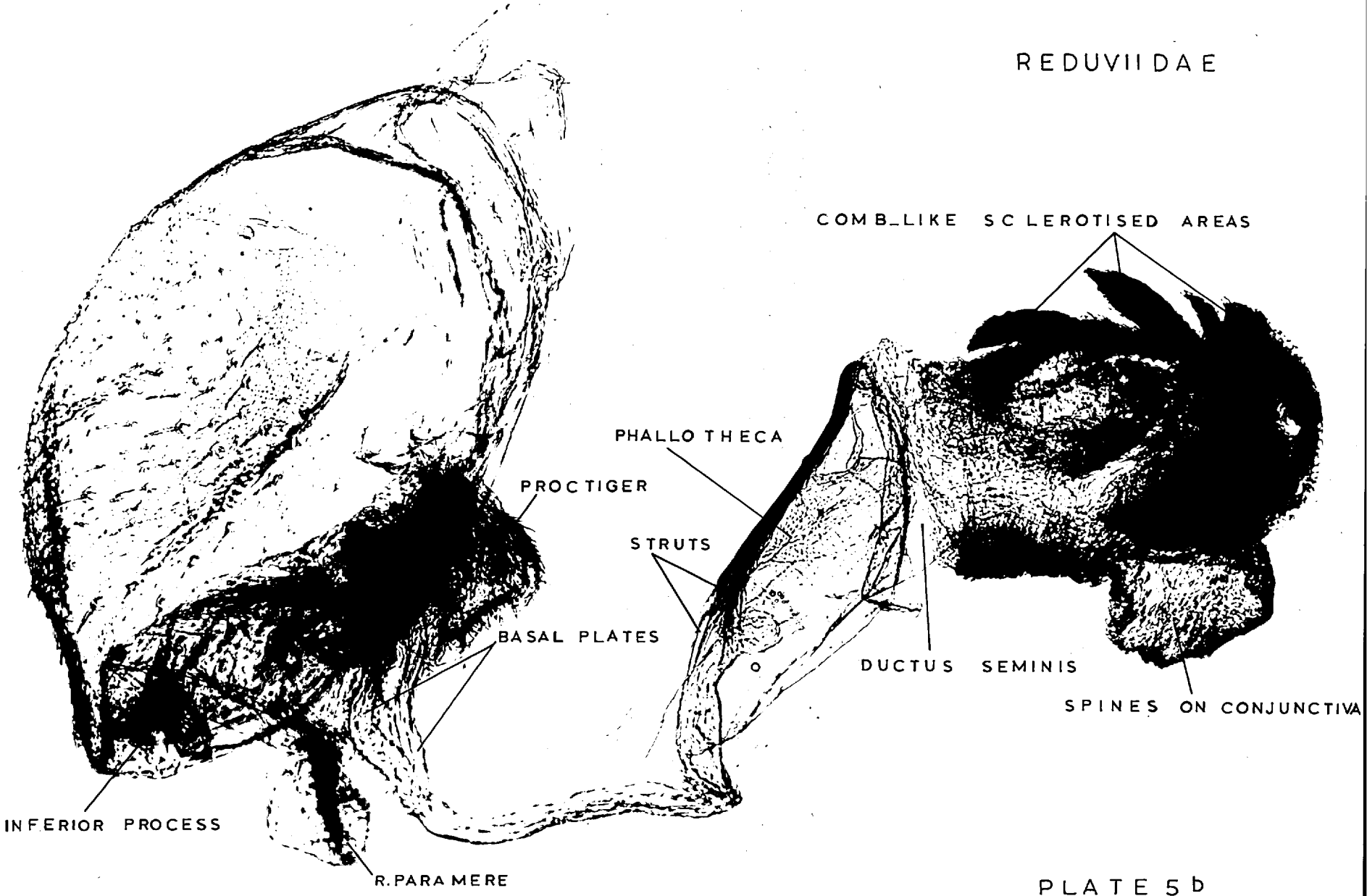


PLATE 5b

PYGOPHORE & AEDEAGUS OF SASTRAPADA (HARPAGOCHARES) NOELI

SASTRAPADA VILLIERSI sp.nov.

SASTRAPADA (HARPAGOCHARES) NOELI sp.nov.

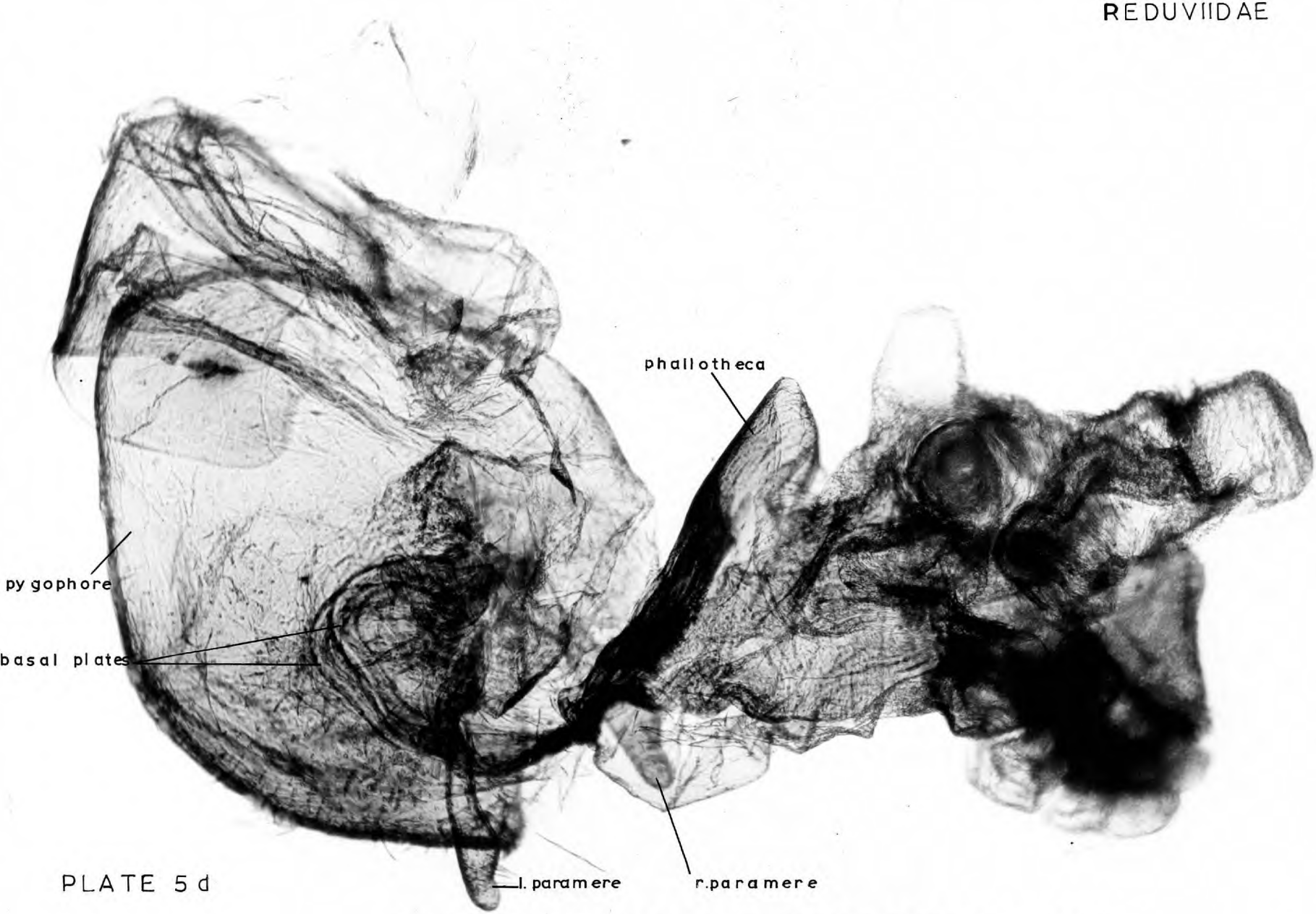


PLATE 5 d

PYGOPHORE & AEDEAGUS OF MAME TOCORIS FURTIVUS MILLER

Gardena chinai Wygodzinsky[+] - Redescription (Plate 5e)

Winged form: Length of ♂ and ♀ 10.5mm.; in male head 1.17. Pronotum 1.8mm. Distance from posterior border of pronotum to apex of abdomen 6.5mm.

General colour: Brownish black, post-ocular lobe of head paler, ventral surface of thorax and abdomen black; fore legs with coxae black, femora reddish brown, tibiae slightly paler, tarsi black; middle and hind femora brownish black gradually becoming black towards apex, apex of middle femur and base of middle tibia with a sub-apical pale ring; apex of hind femur and base of hind tibia white; middle and hind tibiae otherwise brown at base gradually becoming paler towards apex. Forewings dusky, the veins concolorous (with membrane). Surface of head and abdomen minutely aciculate, pronotum very finely rugose with humeral angles smooth and shining and posterior lobe with wrinkles stronger.

Structure: Head with anteocular lobe shorter than posterior lobe (37:42); width of head between eyes about half total width across eyes (25:55); posterior lobe of head fairly strongly rounded at base, thence gradually narrowed to base. First antennal segment about 4 times length of head. In ♂ clothed with numerous long and delicate erect hairs.

Pronotum with anterior lobe separated from posterior lobe by a deep

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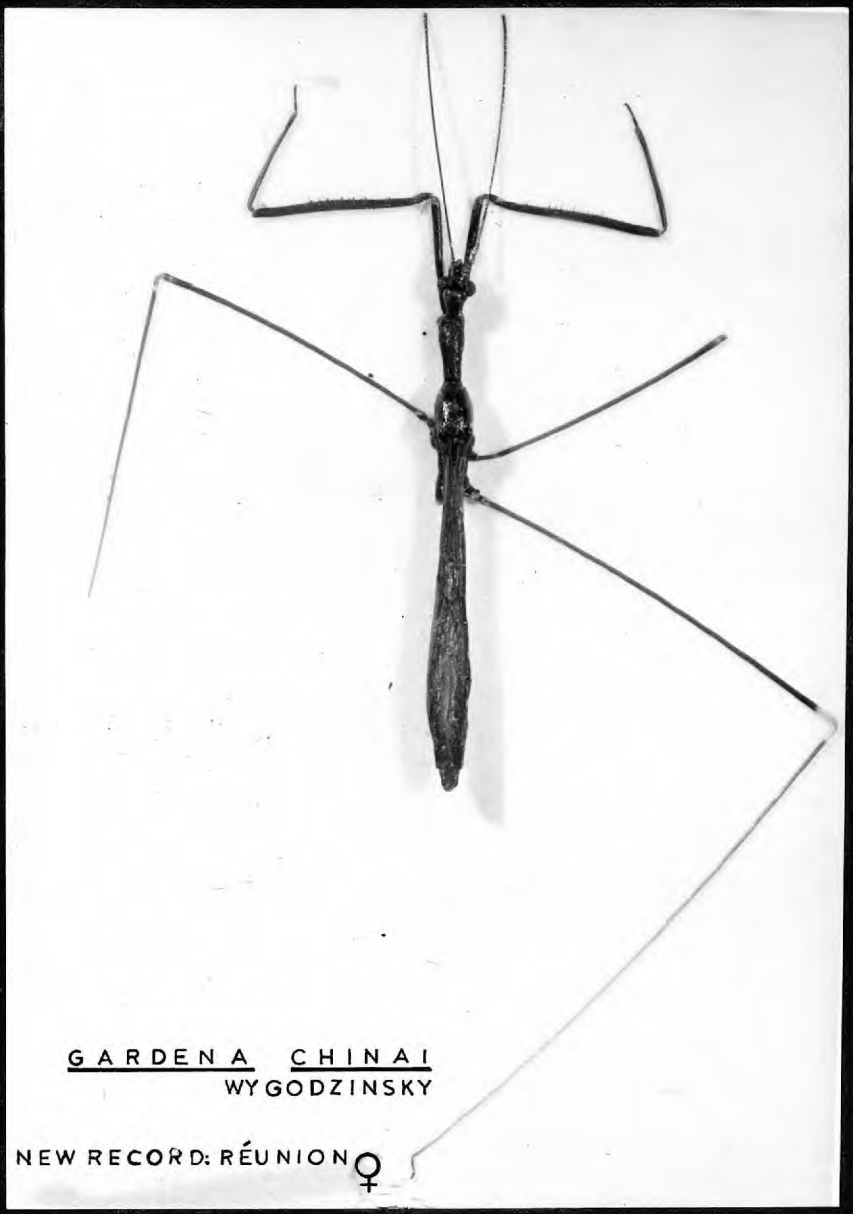
[+]Whilst working at the B.M. on a collection of Hemiptera sent by Dr. Paulian (1955) from Réunion, the present author has come across two specimens of Gardena labelled as representing a new species. Checking Wygodzinsky's description of G. chinai, a species which seemed to come closest to it, revealed that some of the measurements were erroneous. Reference to both the holotype ♂ and allotype ♀ in the B.M. Collection - type locality S. Africa; coll.: Capener - confirmed that the specimens from Réunion are identical with G. chinai.

Also, Wygodzinsky's illustrations do not show the presence of long hairs on the inner side of the tibia. The species is probably a recent introduction into Réunion.



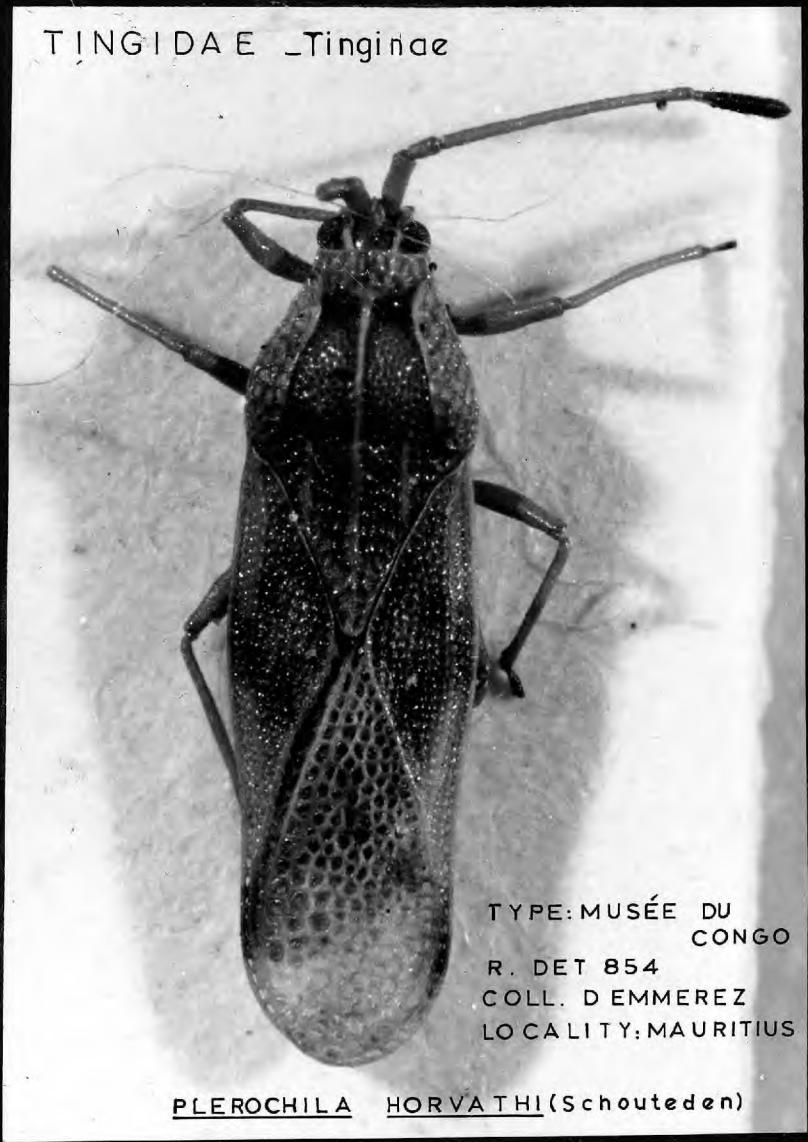
GARDENA CHINAI
WYGODZINSKY

NEW RECORD: RÉUNION ♀

sulcus, the anterior lobe with a short, broad, longitudinal sulcus at base; hind lobe strongly convex and more or less laterally compressed, its sides slightly convergent towards base; distinctly shorter than front lobe (26:28).

Remaining part of Wygodzinsky's description fits the types accurately.

TINGIDAE _Tinginae



PLEROCHILA HORVATHI (Schouteden)

XIX. TINGIDAE
(of the Mascarene Islands)

CANTACADERINAE

Genus Cantacader Amyot & Serville 1843
Hist. Hem., p.299.

Type species: Piesma quadricornis Le Peletier & Serville 1828.
Encyclopédie Méthodique 10:2:345-832.

C. afzelii Stål 1873. — Mauritius, Belgian Congo, Sierra Leone (type locality)

Enum. Hem. (K. Svenska Vet. Akad. Handl.) 11, 2:116.

In upland regions of the island - first recorded in 1956 (Drake & Mamet, Mauritius Inst. Bull. 3:300-302).

Type: In Stockholm.

C. insularis Drake 1957. — Réunion (Plaines des Cafres, Pîton Manuel).

Mém. Inst. sci. Madagascar (E) 8:399-400.

TINGINAE

Genus Caurythauma Drake and Poor 1939
Proc. Hawaiian Ent. Soc., 10, 2:206.

Type species: Leptopharsa ayzari Drake.

C. ayzari (Drake) — Mauritius, Oriental & Ethiopian regions.

Host plant: Jasminum sp. First recorded from Mauritius by Orian 1958.

Genus Cysteochila Stål 1872
Enumeratio hemipterorum (K. Svenska Vet. Akad. Handl., 11, 2:129)

Type species: Monanthia (?) tingoides Motschulsky 1863.
Bull. Soc. Imp. Nat. Moscow, 36:1-153.

C. rustica Drake 1957. — Réunion.

Mem. Inst. sci. Madagascar (E) 8:400-401.

Genus Hegesidemus Distant 1911

Type species: H. eliyanus Distant
Entomologist 44:270.

H. pauliani Drake 1957. — Réunion (Piton Bébour).

Mem. Inst. sci. Madagascar (E) 8:402.

Genus Leptopharsa Stål 1873
(= Leptostyla; = Gelchossa)
Enum. Hem. 2:122 & 126.

Type species: L. elegantula Stål

L. reuniona Drake. — Réunion (Piton Bébour).

Mem. Inst. Sci. Mad. (E) 8:404.

Genus Litadea China 1924
China loc. cit. p.438-439.

L. delicatula China. — Rodriguez.

(Type species by monotypy and original designation.)

Genus Nesotingis Drake 1957
Mém. Inst. sci. Madag. (E) 8:402-404.

Type species: N. pauliani Drake.

N. pauliani Drake 1957. — Réunion.

ibid. (E) 8:402-404.

N. vinsoni (Drake & Mamet) 1956. — Mauritius, Réunion.

= Eteoneus vinsoni Drake & Mamet.
Mauritius Inst. Bull. 3:101-103, 1 fig.

Genus Ogygotingis Drake 1948
Proc. biol. Soc. Wash. 61:149

Type species: Teleonemia insularis China 1924.
Ann. Mag. nat. Hist. (9) 14:427-453

O. insularis (China). Rodriguez.

China 1924 loc. cit. p.436 (p.437 ill.)

Genus Teleonemia Costa 1864
Annuario del Museo Zoologico della Universita di Napoli 2:145

Type species: T. funerea Costa

T. scrupulosa Stål, 1873. Original home Mexico - now a cosmopolitan insect.

(= T. lantanae Distant 1917).

First noted from Mauritius by Orian (1956, loc. cit., p.647). Mamet at the time threw doubt on the authenticity of this record but now accepts it.

The author has encountered this species also in Réunion.

It was introduced in Madagascar in 1952.

Genus Plerochila Drake 1954
Philippine Journ. Sci. 83:69

Type species: Teleonemia australis Distant

P. horvathi (Schouteden) 1907. (PL.5 c_1) Mauritius, Réunion, Kenya, Tanganyika, Belgian Congo, Central & West Africa.

= Cysteochila horvathi (Schouteden).

Originally described from Mauritius - widely distributed in Central Africa.

Host plants in Mauritius: Jasminum sp., Olea europea L.

(Note: In the literature P. australis Distant 1904 is recorded from Mauritius but this record is probably erroneous.)

xx ARADIDAE[+] Spinola 1837

Aradites Spinola 1837, Essai sur les Hémiptères, p. 157.

Key to the subfamilies of Mascarene ARADIDAE

1. Genae not produced on either side of clypeus to form a cleft apex. Rostrum very long, longer than the head. Dorsal abdominal scent-gland openings three in number, equally developed and equally spaced ..... Aradinae A. & S. 1843(p.73)

-. Genae well developed, usually surpassing clypeus to form a cleft or emarginate apex. Rostrum short, contained in a longitudinal rostral groove. First dorsal abdominal scent-gland opening large, the second rarely well developed, third obsolescent 2

2. Rostrum arising from an open atrium. Anterior dorsal abdominal scent-gland opening not or only slightly displaced backward ..... Aneurinae[++] Douglas & Scott 1865(p.73)

-. Rostrum arising from closed atrium, through a longitudinal slit-like opening, rarely with the opening widened anteriorly. Opening of dorsal abdominal scent-gland of third segment displaced to middle or hind margin of fourth segment. Metapleural scent-gland openings well-developed ..... Mezirinae Oshanin 1908(p.74)

[+]Keys to the subfamilies, genera and species adapted from Usinger and Matsuda's 'Class. ARADIDAE' and also from Hoberlandt's work on the aradid fauna of the region.

[++]Southwood & Leston 1959 p. 6 have given this group family status.

Subfamily Aradinae A. and S. 1843

Hist. nat. Ins. Hém. p. 307

Genus Aradus Fabricius 1803

Syst. Rhyng., p. 116

Type-species Cimex betulae L.

A. flavicornis Dalman 1823. Palaearctic,
Analecta Entomologica Holmiae p. 88. Ethiopian,
Oriental.

[= flavo-maculatus, Luc.
Puton 1878, Bull. Soc. ent. Fr. (5) 8:xxxii & xxxiii]

According to Kiritshenko (vide Usinger & Matsuda loc. cit. p. 40) this species is often found associated with Salix which is not endemic to Mauritius, nor to Sierra Leone, from which the insect was originally described. It follows that either Kiritshenko is in error, or the species was introduced into the Ethiopian region on cultivated Salix, or again that A. flavicornis may occur on other host plants.

First recorded from Mauritius (Curepipe) by Orian 1959.

Subfamily Aneurinae Douglas & Scott

ANEURIDAE D. & S. 1865, British Hemiptera pp. 26, 267

Genus Aneurus Curtis 1825

Brit. Ent., 2 pl. 86

Type-species: Aradus laevis Fabricius

A. angustus Bergroth. 1914 Mauritius,
Ann. Hist. Nat. Mus. Hung., 12:96-97, 98. Réunion.

Mamet (1957 pp. 44-48) referred specimens of Aneurus from Mauritius to a new species which he described under the name of A. mauritianus.

CTENONEURUS GULLIVERI (CHINA)

TYPE LOCALITY: RODRIGUEZ ♂

This description is inadequate since it lacks illustrations and any indication of the sex of the type specimen.

Hoberlandt 1957 loc. cit. pp. 106-107, figs. 124-125, who examined a male paratype from Mamet's collection has shown that this specimen is undoubtedly A. angustus described by Bergroth from Réunion: there is thus strong reason to suspect that the type would also prove to be Bergroth's species.

Subfamily Mezirinae Oshanin

Brachyrhynquides Amyot & Serville, 1843, loc. cit., pp. xli, 303

Mezirina Oshanin, 1908, Verz. Palae. Hemipt., 1:478

Key to the genera of Mascarene Mezirinae

1. Fourth, fifth and sixth ventral segments without a transverse carina at base; sometimes with a row of granules. Head with distinct post-ocular lobes or spines ..... Mezira A. & S. 1843

-. Fourth, fifth and sixth ventral segments each with a distinct, continuous, transverse carina at base. Head with post-ocular lobes more or less reduced 2

2. Body thick, sides subparallel. Rostrum reaching to prosternum ..... Ctenoneurus Bergroth 1887

-. Body thin, sides usually subrounded. Rostrum very short, not reaching to the end of head ..... Neuroctenus Fieber 1860

Genus Mezira Amyot & Serville[+]

Hist. Hem. 1843, p. 305

Type-species Aradus membranaceus Fabricius 1803

[+]According to Hoberlandt 1957 p. 48, the majority of species are American, but the genus also occurs in Africa, Madagascar and Europe. The Madagascan species belong to the typical African groups.

M. mauricii Hoberlandt. Mauritius.
Acta Entomologica Musei Nationalis Pragae 1957, Suppl. 4:69-72.

This indigenous species is very common under the bark of dead mulberry trees.

[Mezira membranacea (Fabr.) recorded by Mamet 1957 loc. cit. p. 47 is more probably a misidentification of mauricii.]

Genus Ctenoneurus Bergroth 1887

Öfv. Finska Vet. - Akad. Förh., 29:188

Type-species Neuroctenus hochstetteri Mayr.

C. gulliveri (China) 1923 (PL.5f) Rodriguez

This species was first recorded from Rodriguez (Phil. Trans. Roy. Soc. 1879 clxviii Hemipt. p. 550) under the name Mezira caffra Butler nec Stål. China 1923 Ann. Mag. nat. Hist. p. 430 described it as a new species of Mezira but in 1924 on the advice of Dr. E. Bergroth he transferred it to the genus Neuroctenus. However, the present author is of the opinion that this species does not belong to Neuroctenus. According to Hoberlandt (personal communication) it should stand under Ctenoneurus Bergroth.

Genus Neuroctenus Fieber 1860

Europ. Hemipt., p. 34

Type-species Neuroctenus brasiliensis Mayr
(= N. punctulatus Burmeister)

Key to the species of Mascarene Neuroctenus

1. Abdomen slightly widened posteriorly; postero-lateral angles of connexival segments not or very slightly projecting, lateral margin of 7th connexival segment slightly sinuate or straight, postero-lateral angles shortly lobate ..... N. caffer (Stål) 1855

-. Abdomen strongly widened posteriorly; postero-lateral angles of connexival segments distinctly lobately projecting, lateral margin of 7th connexival segment strongly sinuate, postero-lateral angles strongly lobate and broadly rounded ..... N. tenuicornis (Signoret) 1860

N. caffer (Stål)

Brachyrhynchus caffer Stål 1855. Ofv. vet. Akad. fört., 12:38

Mauritius, Madagascar, Comores, East Africa, South Africa (type locality)

N. caffer; Orian 1956 Ann. Mag. nat. Hist. (12) 9:645.

N. caffer; Hoberlandt, 1957, Acta entomologica Mus. Nat. Pragae, Supp. 4:83, 88-91, figs. 101-104.

N. caffer; Hoberlandt, 1963, ibid:35:157-158.

The record of N. caffer from Rodriguez (Mamet 1957; p. 47) is probably erroneous.

N. tenuicornis (Signoret)

Aneurus tenuicornis Signoret 1860, Ann. Soc. ent. Fr. 8:958.

Madagascar, Comores, Réunion+

Neuroctenus tenuicornis; Hoberlandt 1957 loc. cit. p. 83, 94-97, figs. 109-112.

+The author is very grateful to Dr. R. Paulian for specimens of N. tenuicornis from Réunion, which are the first recorded from the island: their identification has been confirmed by Dr. Hoberlandt.

XXI. CIMICIDAE Latreille 1804

Hist. Nat. Crust. Ins. 12:235

Genus Cimex L. 1758

Syst. Nat. X, p.441

C. hemipterus (Fabricius) — Tropicopolitan, Mauritius, Seychelles, N. Africa, E. Indies, Ceylon, India, Formosa, China.

= Acanthia hemiptera Fabricius 1803
Syst. Rhyng. p.113.

= C. rotundatus Signoret 1852
Ann. Soc. ent. Fr. p.540, pl.16, auctt.

XXII. MIRIDAE Hahn 1833

Wanz. Ins. I:234

This large family is well represented in the Madagascar-Mascarene-Seychelles area but the huge collections in the Institut de Recherches Scientifiques de Tananarive have been insufficiently studied: Carvalho (1953) [Mém. Inst. sci. Mad. (E) 3:41-51] listed 64 species and 36 genera from Madagascar. The present list records 108 species (52 genera) from Madagascar, the Seychelles and the Mascarenes. In Mamet's list (loc. cit.) 4 specific identifications and seven species identified to genera are given. In the present list the author records 18 species from Mauritius, 13 from Réunion and 8 from Rodriguez.

New records from Mauritius include: Collaria improvisa Reuter (Pls. 2 & 2a), Corizidolon notaticolle Reuter (Plate 3), Creontiades elongatus (Léthierry), Proboscidocoris sp.nov. otiolatus Odh., P. punctaticollis Reuter, Nesidiocoris tenuis Reuter,

Dereocoris ostentans Stål and Fulvius pictus Distant. Of these N. tenuis[+] is by far the most important crop-pest in Mauritius: the effects of its sap-feeding on tomato plants are seen in the ring-like lesions (feeding-rings) and in the weakening of the young growing parts which develop a tendency for abscission at the site of the punctures.

Carvalho and China (1952) synonymised N. tenuis Reuter and N. volucer Kirkaldy in error: the species are quite distinct. N. volucer[++] differs from N. tenuis in the structure of the tip of the left paramere and in the shape of the projections of the posterior margin of the pygopher. The right paramere is also quite different. Antennal measurements also confirm that the species are not the same. Under Mauritian conditions 'volucer' is especially common on tobacco flower-heads whilst 'tenuis' is a pest of tomato plants.

The comment by Odhiambo (1961) that N. tenuis is a New World species cannot be supported: the type-locality (as stated by Reuter) is Madeira.

Miller (1956) described Dereocoris limbatus and Campylomma agalegae from the madreporic islands of Agalega; the latter is a predator of Tetranychus sp.. Lygus pallidus Blanchard in the list

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[+]cf. Tanada, Y. & Holdaway, F.G. - Feeding habits of the tomato bug, Cyrtopeltis (Engytatus) modestus Distant with special reference to the feeding lesion on tomato - Tech. Bull. Hawaii agric. Exp. Station 24:1-40, 12 figs, 91 refs. Honolulu (1954).

[++]Vide J.I. Robert (Bull. ent. Res. 21:174 (1930) cf. China & Carvalho (1952) Ann. Mag. nat. Hist. (12)5:158-166.

given hereafter belongs in the subgenus Taylorilygus Leston [1952 - Ent. Gazette 3:219]. Carayon [(1960) J. Agric. trop. Bot. appl. 7:110-120] described Stethoconus frappai from Madagascar. This predatory mirid [Phylinae-Diciphini] of the coffee tingid Dulinius unicolor (Signoret) is likely to play an important rôle in the biological control of this pest.

In the main the affinities of the mirid fauna of Madagascar-The Seychelles and The Mascarene Islands lie with the African fauna. The few species reported as common to Asia, Madagascar, Australia & Madagascar seem to merit further distributional studies.

Percentage endemism in Madagascar suggested by the species list is just under 50%.

[Note: Sthenarus basalis Poppius, Acta. Soc. Sci. Fenn. 44(3):96 described from Madagascar is preoccupied by S. basalis Reuter, Ofv. F. Vet. Soc. Forh. 49(5)26 - a Jamaican species.

S. poppiusi nom. nov. is here proposed to replace S. basalis Poppius.]

XXIIa. List of MIRIDAE from Madagascar, The Seychelles and Mascarene Islands.

MIRINAE Hahn 1833

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
STENODEMINI China 1943 Gen. Names Brit. Ins. 8 Hem:262.								
Collaria Provancher 1872 Nat. Can. 4:79.								
C. improvisa Reuter 1893 Rev. Ent. Fr. 12:208.	+	+			+	+		S. & E. Africa.
Trigonotylus Fieber 1858 Wien Ent. Monat. 2:302.								
T. dohertyi Distant 1904 Faun. Brit. Ind. Rhync. 2:425.						+		America, Ceylon, Christmas I., Formosa, India, Japan, Australia.
T. ruficornis Geoffroy 1762 Hist. Abreg. Ins. 1:47.								
T. tenuis Reuter 1893 Rev. d'Ent. 12:208.	+	+						
HYALOPEPLINI Carvalho 1951 Trans. IX. Int. Congr. Ent. 1:133.								
Corizidolon Reuter 1907 Ofc. F. Vet. Soc. Forh. 49(7):2.								

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
HYALOPEPLINI (Cont'd.)								
C. notaticolle Reuter 1907 ibid.					+	+		
Hyalopeplus Stål 1870 Ofv. K. Sv. Vet. Akad. Forh. 28:670.								
H. rama Kirby 1891 Jour. Linn. Soc. Zool. 24:106.	+	+						Ceylon, India, Queensland.
MIRINI Hahn 1831 Wanz. Ins. 1:234.								
Adelphocoris Poppius 1912 Acta Soc. Sci. Fenn. 41(3):3,47.								
A. brunnea Poppius 1912 ibid. p.47.		+						
A. elongata Poppius 1912 ibid.		+						
A. laevigata Poppius 1912		+						
Anosibea Carvalho 1953 Mém. Inst. Sc. Madag. (E) 3:47.								
A. orthotyloides Carvalho 1953 ibid. (E) 3:49.		+						

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
MIRINI (Cont'd.)								
Creontiades Distant 1883 Biol. Cent. Amer. Rhync. 1:237.								
C. elongatus (Lethierry) 1881 Ann. Mus. Civ. Gen. 16:293.						+		Abyssinia, Pemba, Sciva.
C. hildebrandti Poppius 1912 Acta Soc. Sci. Fenn. 41(3):20, 21.		+						
Creontiades sp.						+		
C. pallidifer Walker 1873 Cat. Het. 6:199.								India, Ceylon, Christmas I., Fiji, Formosa, Guam, Java, Marianas, Minikoi Is., N. Hebrides, Philippines, Samoa, St. Cruz Is., Yunnan.
C. pallidus Rambar 1842 Faun. Andal. p.159.	+	+					+	Aden, Africa, Brazil, Canary Is., Cyprus, Greece, Egypt, Sicily, Spain, Tunis, Tromelin Is., Morocco.
C. simillimus Poppius 1912 Acta Soc. Sci. Fenn. 41(3):20,22.		+						
Eurystylus Stål 1870 Ofv. K. Sv. Vet. Akad. Forh. 37:671.								

MIRINI (Cont'd.)	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
E. alboplagiatus Distant 1913 Trans. Linn. Soc. London 16(2):178.	+							
Eurystylus sp.					+			
Lygus Hahn 1833 sensu lat. Wanz. Ins. 1:47.								
L. cinnamoneus Distant 1913 Trans. Linn. Soc. London 16:178, pl.13, fig.16.	+							
L. hovanus Poppius Acta Soc. Sci. Fenn. 41(3):89,102.		+						
L. pallidulus Walker 1873 Cat. Het. 6:116.						+		S. Africa.
L. sanguineosignatus Distant 1913 Trans. Linn. Soc. London 16:178.	+							
L. silhouettensis Dis Distant 1913 ibid. 16:179, pl.13, fig. 8.	+							
Megacoelum Fieber 1858 Wien Ent. Monat. 2:305.								

	Seychelles	Madagascar	Agalega	Comcres	Réunion	Mauritius	Rodriguez	Other localities
MIRINI (Cont'd.)								
M. flagellatum Distant Trans. Linn. Soc. London 16:174, pl.13.	+							
M. hovana Kirkaldy 1902 Entom. 35:(474)283.		+	+					
M. madagascariensis Poppius 1912 Acta Soc. Sci. Fenn. 41(3):30,32.		+						
Polymerus Hahn 1831 Wanz. Ins. 1:27.								
P. madagascariensis Poppius 1914 Acta Soc. Sci. Fenn. 44(3):125.		+						
P. obscuratus Poppius 1912 ibid. p.148, 146.		+						
P. voeltzkovi Reuter 1907 Ofv. F. Vet. Soc. Forh. 49(7):18.		+						Usumbara, Zanzibar.
Proboscidocoris Reuter 1882 25:30.								
P. fulginosus Reuter Ofv. F. Vet. Soc. Forh. 25:36.		+						Africa, Pemba.

MIRINI (Cont'd.)	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
Proboscidocoris sp. near ostiolatus Odh.						+		
P. intermedius Poppius 1912 Acta Soc. Sci. Fenn. 41(3):141, 136		+						Congo, Sénégal, Uganda, Victoria Nyanza.
P. madagascariensis Poppius 1912 ibid. 144, 136.		+						
P. pluto Distant 1913 Trans. Linn. Soc. London 16:179, pl.13, fig. 4.	+							
P. punctaticollis Reuter 1905 Ofv. F. Vet. Soc. Forh. 47(10):16.		+			÷	÷	+	Africa, Zanzibar, Pemba.
P. signoreti Poppius 1912 Acta. Soc. Sci. Fenn. 41(3):140, 136.		+						Togo.
P. tibialis Poppius 1912 ibid. p. 142, 136.		+						Togo.
Schoutedeniella Poppius 1912 Acta Soc. Sci. Fenn. 41(3):77.								

MIRINI (Cont'd.)	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
S. pilosula Poppius 1912 ibid.		+						
Stenotus Jakovlev 1877 Bull. Soc. Nat. Mosc. 52(1):288.								
S. fulvus Poppius 1912 Acta Soc. Sci. Fenn. 41(3):64.		+						
S. longulus Poppius 1912 ibid. p. 70, 61.		+						
S. rubripedes Carvalho 1953 Mém. Inst. Sci. Madag. (E) 3:47.		+						
S. transvaalensis Distant 1904 Ann. Mag. Nat. Hist. 13:196.		+						Africa.
Taylorilygus Leston 1952 Ent. Gaz. 3:219.								
T. complexus (Taylor) 1947 Can. Ent. 87(7):281.		+						Uganda.
T. cupressus (Taylor) 1947 Bull. Ent. Res. 38(2) 241, 246.		+						Uganda.

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
MIRINI (Cont'd.)								
T. simonyi (Reuter) 1903 Ofv. F. Vet. Soc. Forh. 45(6:11.		+						Aden, S. Africa, Congo, E. Africa.
T. vosseleri (Poppius) 1912 Acta Soc. Sci. Fenn. 41(3):89, 99.		+						E. Africa, Congo, Delagoa Bari, Port Guinea.
Tinginotum Kirkaldy 1902 Trans. Ent. Soc. London, p.263.								
T. obscurum Poppius 1912 Acta Soc. Sci. Fenn. 41(3):82.		+						
T. villosulus Distant 1913 Trans. Linn. Soc. London 16:179, pl. 13, fig. 5.	+							
Tinginotum sp.					+			
ORTHOTYLINAE van Duzee 1916								
ORTHOTYLINI Van Duzee 1916 Univ. Cal. Pub. Ent. 1:203.								
Cyrtorhinus Fieber 1858 Wien Ent. Monat. 2:313.								

ORTHOTYLINI (Cont'd.)	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
C. caricis (Fallen) 1807 Mon. Cimic. Suec. p. 102		+						Europe, N. America, Russia, Siberia.
Ellenia Reuter 1910 Acta Soc. Sci. Fenn. 37(3):168.								
E. annulicornis (Poppius) 1914 ibid. 44(3):80.		+						Nyassa.
E. insularis (Poppius) 1914 ibid. p.75, 78.		+						
E. kilimana Poppius 1914 ibid. p. 75.		+						Kilimanjaro, Sénégal, Usambara.
Felisacodes Bergroth 1926 Deut. Ent. Zeit. 64.								
F. bryocorina Poppius 1914 Acta Soc. Sci. Fenn. 44(3):64.					+			Rhodesia.
Madagascariella Carvalho 1953 Mém. Inst. sci. Madag. (E)3:44.								
M. longipedes Carvalho 1953 ibid. p.44, fig. 5.		+						

ORTHOTYLINI (Cont'd.)	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
Maralauda Distant 1913 Trans. Linn. Soc. London 16:183.								
M. lania Distant 1913 ibid. p. 182.	+							
Mecomma Fieber 1858 Wien Ent. Monat. 2:313.								
M. madagascariensis Reuter 1892 Ent. Mon. Mag. 28:185.		+						
Orthotylus Fieber 1858 Wien Ent. Monat. 2:315.								
Orthotylus sp.					+			
Pseudoloscops Kirkaldy 1905 Wien Ent. Zeit. 24:268.								
P. sanguinarius (Distant) 1913 Trans. Linn. Soc. London 16:175, pl.13, fig. 12.	+							
PILOPHORINI Douglas & Scott 1865 Brit. Hem. p. 30, 358.								
Eucompsella Poppius 1914 Acta Soc. Sci. Fenn. 44(3):60, 62.								

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
PILOPHORINI (Cont'd.)								
E. elongantula Poppius 1914 ibid, p. 62.		+						
PHYLINI Douglas & Scott 1865 Brit. Hem. 30:346.								
Campylomma Reuter 1878 Hem. Gymn. Eur. 1:52; 3:50 (1883).								
C. agalegae Miller 1956 Mauritius Inst. Bull. 3, 318, 320, figs. A and D.			+					
C. selecta China 1924 Ann. Mag. nat. Hist. (9) 14:444, fig. 3.							+	
Campylomma sp.						+		
Cephalocapsus Poppius 1914 Acta Soc. Sci. Fenn. 44(3):86, 89.								
C. bergrothi Poppius 1914 ibid, p. 89, 90.		+						
C. howanus Poppius 1914 ibid. p. 89.		+						

PHYLINI (Cont'd.)	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
Plagiognathus Fieber 1858 Wien Ent. Monat. 2:320.								
Plagiognathus sp.								
Psallus Fieber 1858 Wien Ent. Monat. 2:321.								
Psallus sp.					+			
Psallus sp.						+		
Sthenarus Fieber 1858 Wien Ent. Monat. 2:321.								
S. leucochilus Reuter Ofv. F. Vet. Soc. Forh. 47(21):8.	+	+			+		+	E. Africa, Pemba, Tromelin.
S. poppiusi nom. nov. (for basalis)		+						
Stenarus sp.					+			
Trevessa China 1924 Ann. Mag. nat. Hist. (9)14:445.								
T. albidopicta China 1924 ibid. p. 446, fig. 3.							+	

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
PHYLINI (Cont'd.)								
Tuponia Reuter 1875 Rev. Crit. Cays 1:98.								
T. mascarenensis Carvalho 1953 Mém. Inst. sci. Madag. (E) 3:51.		+						
Tyttus Fieber 1864 Wien Ent. Monat. 8:82.								
T. mundulus (Breddin) 1896 Deut. Ent. Zeit. p. 106.						+ Introduced 1957		Australia, Fiji, Hawaii, Java, Philippine Is.
T. parviceps Reuter 1890 Rev. d'Ent. 9:258.	+						+	Africa, Cuba, Egypt, Florida, Gipegio Is., Italy, Morocco, Nicaragua, Panama, Paraguay, Puerto Rico, St. Vincent, St. Helena, Venezuela, Virgin Is.
HALLODAPINI van Duzee 1916 Univ. Cal. Pub. Ent. 1:203.								
Acrorrhinium Noualhier 1895 Rev. d'Ent. 14:175.								
A. pauliani Carvalho 1953 Mém. Inst. Sci. Madag. (E) 3:45.		+						

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
HALLODAPINI (Cont'd.)								
Hallodapus Fieber 1858 Wien Ent. Monat. 2:307.								
H. albofasciatus (Motchusky) 1863 Bull. Soc. Nat. Mosc. 36(3):86.		+						
H. scotti China 1924 Ann. Mag. nat. Hist. (9)14:442, fig. 3.							+	
Lissocapsus Bergroth 1903 Wien Ent. Zeit. 22:256.								
L. wasmanni Bergroth 1903 ibid. 22:256.		+						
Malgacheocoris Carvalho 1952 Mém. Inst. Sci. Madag. (E) 1(1):69.								
M. myrmicoides Carvalho 1952 ibid. p. 69.		+						
Myrmicopsella Poppius 1914 Acta Soc. Sci. Fenn. 37(3):151.								
M. nitidipennis Poppius 1914 ibid. 44(3):37.		+						

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
DICYPHINI Reuter 1883 Hem. Gymn. Eur. 3:408.								
Cychrocapsus Poppius 1914 Acta Soc. Sci. Fenn. 44(3):8, 24.								
C. alluaudi Poppius 1914 ibid. p. 24.		+						
Cyrtopeltis Fieber 1860 Eur. Hem. 1861, p. 76, 323.								
Subgenus Nesidiscoris Kirkaldy 1902 Trans. ent. Soc. London, p. 247.								
N. atricornis Distant 1913 Trans. Linn. Soc. London 16:180, pl.13, fig.3.	+							
N. tenuis Reuter 1895 Rev. Ent. Fr. 14:139.				+		+	+	Cosmopolitan.
N. volucer Kirkaldy 1902 Trans. ent. Soc. London, p.27.					+	+		Cosmopolitan.
Dicyphus Fieber 1858 Wien Ent. Monat. 2:326.								

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
DICYPHINI (Cont'd.)								
Dicyphus ? sp.						+		
Hildebrandtiella Poppius 1914 Acta Soc. Sci. Fenn. 44(3):8, 25.								
H. scutellaris Poppius 1914 ibid. p.25.		+						
DERAEOCORINI Douglas & Scott, 1865 Brit. Hem. 29:445.								
Deraeocoris Kirschbaum 1855 Jahrb. Ver. Nat. Nassau 10:208.								
D. brunneus Poppius 1912 Acta Soc. Sci. Fenn. 41(3):120, 126.		+						
D. cardui Distant 1913 Trans. Linn. Soc. London 16:181, pl.13, fig.1.	+							
D. hildebrandti Poppius 1912 Acta Soc. Sci. Fenn. 41(3):120, 129.		+						
D. howanus Poppius 1912 ibid. p.125.		+						

DERAEOCORINI (Cont'd.)	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
D. limbatus Miller 1956 Mauritius Inst. Bull. 3:5:317.			+					
D. obscuriventris Poppius 1912 Acta Soc. Sci. Fenn. 41(3):120, 132.		+						
D. ostemtans Stål, 1855 Ofv. Vet. Akad. Forh. 12:37.		+		+	+	+		E. Africa, Congo; Caffraria, Gold Coast.
D. sexvittatus Poppius 1912 Acta Soc. Sci. Fenn. 41 (3):120, 127.		+						
D. seychellensis Distant 1913 Trans. Linn. Soc. London 16:180, pl. 12, fig. 19.	+							
D. signatus Distant 1907						+		Ceylon, India.
Deraeocoris sp.						+		
Fingulus Distant 1904 Ann. Mag. nat. Hist. (7)13:275.								
F. atrocaerulus Distant 1904 Ann. Mag. nat. Hist. (7)13:275.		+						Queensland.

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
DERAEOCORINI (Cont'd.)								
Pauliana Carvalho 1952 Mém. Inst. Sci. Madag. (E) 1(1):68.								
P. antennatus Carvalho 1952 ibid.		+						
CYLAPINAE Kirkaldy 1903								
FULVIINI Uhler, 1886 Check list, p.19.								
Fulvius Stål 1862 Stett. Ent. Zeit. 23:322.								
F. discifer Reuter 1907 Ofv. F. Vet. Soc. Forh. 49(7):22.		+						Funda Is.
F. dolobratus Distant 1913 Trans. Linn. Soc. London 16:181.	+							
F. niger Distant 1913 ibid. p.182, pl.13, fig.9.	+							
F. pictus Distant 1913 ibid. p.181, pl.13, fig.11.	+							

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
FULVIINI (Cont'd.)								
Fulvius sp., nr. pictus.					+			
CYLAPINI Kirkaldy 1903 Entom. 26(6):203.								
Cylapomorpha Poppius 1914 Wien Ent. Zeit. 33:124.								
C. migratorius (Distant) + (Carvalho n. comb.)								
Paracylapus Carvalho 1952 Mém. Inst. Sci. Madag. E1(1):71.								
P. insularis Carvalho 1952 ibid. p.72.		+						
Vannius Distant 1883 Biol. Cent. Amer. Rhynch. Het. 1:246.								
V. annulicornis Poppius 1909 Acta Soc. Sci. Fenn. 37(4):14.		+						
V. mahensis Distant 1913 Trans. Linn. Soc. London, 16:176, pl.13, fig.8.	+							

	Seychelles	Madagascar	Agalega	Comores	Réunion	Mauritius	Rodriguez	Other localities
BRYOCORINI Baerensprung 1860 Cat. Hem. Eur., p.13.								
Felisacus Distant 1904 Faun. Brit. Ind. Rhync. 2:439.								
F. auritulus Distant 1913 Trans. Linn. Soc. London 16:177.	+							
F. madagascariensis Poppius 1912 Acta Soc. Sci. Fenn. 43(3):182.		+						
Monalocoropsis Poppius 1912 ibid. 41(3):176, 197.								
M. madagascariensis Poppius 1912 ibid. p.197.		+						
MONALONIINI Reuter 1892 Ann. Soc. Ent. Fr. 61:398.								
Arculanus Distant 1904 Ann. Mag. Nat. Hist. (7)13:198.								
A. madagascariensis Poppius 1912 Acta Soc. Sci. Fenn. 41(3):191.		+						

XXIII. The ANTHOCORIDAE of the Mascarene Islands with a description of *Doncasteriella insularis* gen. et sp. nov.

From a familial standpoint the Mascarene anthocorids are still insufficiently known. Such comment in no way detracts from the individual value of descriptive work on various species by the authors now reviewed.

China (1924) cited two species from Rodriguez, namely *Lasiochilus sladeni* Distant and *L. seychellensis* Distant. Moutia and Mamet (1947) reported on the presence in Mauritius of (?) *Piezotrachelus*[+] *flavipes* Reuter, and Carayon (1956) recorded *Buchananiella sodalis* (B. White) from the same island. The last named author also described two new species from Réunion: [++]*Physopleurella flava* and *P. pessoni* (a larviparous species which deposits the nymph in its first instar).

In 1957 Carayon noted that another species *Poronotellus continuus* (B. White) previously recorded from other localities occurred in Réunion.

[+] cf. Reuter 1875, *Bihang. Sv. Ak. Handl.*, 3,1:65 where the name *Piezostethus flavipes* is used. Orian (1956), p.649, showed that the species belongs in *Xylocoris* Dufour 1831: *X. flavipes* (Reuter) is cosmopolitan.

[++] The present author has collected a single ♀ of a species of *Physopleurella* identified by Dr. Ghauri (C.I.E.) as *P. signatus* Distant - a species described from the Seychelles [*Dep. Agric. Mauritius*, Ref. No. 731 - C.I.E. 17431 - List 6122 (Africa) 14/2/61].

In 1958, in a paper on Mascarene anthocorids, he described an interesting genus (with subsquamiform hemelytral hairs) which he named Iella (I. argentea) [Coll. Ch. Alluaud - Curepipe, Mauritius (1897)] and a species 'pleneti' which he placed in the genus Lasiochiloides [Coll. A. Plénet, Réunion]; he later transferred this species to Blaptostethus [vide Carayon 'S. African Animal Life' (1961) 8:547]. Carayon also recorded the following species from Réunion: Buchananiella continua (B. White)+, Cardiastethus pseudococci Wagner and C. fulvescens (Walker). It is interesting to note that in Egypt C. pseudococci++ is often found on sugar-cane infested with Pseudococcus sacchari Ckll. [(vide Priesner H. & Alfieri A. (1953), Bull. Soc. Fouad 1er ent., 37:1-119].

At one time Carayon (1957 vide Ref. below) considered the Réunion C. pseudococci (which is found there in nests of the Schlug-Schlug bird -Ploceus spilonotus vigors) to be a distinct subspecies with a range apparently extending also to Madagascar and Java (?). The Egyptian C. pseudococci he referred to as subspecies pseudococci and the Mascarene - Oriental, as dentalis. This view he now seems to have dropped. The present author working on specimens sent from Réunion by Dr. Paulian has come across immature specimens of Orius sp., Xylocoris sp., Cardiastethus sp. and perhaps Scoloposcelis sp. (Carayon is doubtful about this last identification). Paulian's

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+Previously known from Madeira and the Azores.

++Wagner E. (1951): Neue Wanzenarten aus Aegypten (Hem.-Heteropt.) - Bull. Soc. Fouad 1er ent. 35:141-144. C. pseudococci bears an 'omphalus' (vide Carayon - 'Introduction à l'étude des ANTHOCORIDAE omphalophores' etc., Ann. Soc. ent. France 126:176 (1957). B. continua is also omphalophorous (Carayon loc. cit.).

collection also contains an interesting lyctocorine genus[+] apparently new to science, and here dedicated to J.P. Doncaster, Keeper of Entomology, B.M. (N.H.) in grateful acknowledgement of the opportunities provided for study in his department.

In 1964, from Mauritius, J. Monty collected a species of Montandoniola (Poppius 1910), probably a very recent introduction.

[Carayon (S. African Animal Life loc. cit. p.557) records Montandoniola moraguesi from S. Africa - this is usually considered to be a palaearctic species!]

However, Mamet's record of no less than 4 species of Anthocoris in Mauritius should be treated with extreme reserve, since the present author has encountered no other evidence for any member of the genus in the whole Mascarene area.

The Seychelles fauna appears to be particularly rich in species of Lasiochilus. The following are some of the species described from there:-

L. alluaudi Reuter, L. scotti Distant, L. gardineri Distant, L. sladeni Distant, L. seychellensis Distant, L. praslinensis Distant, also from the Seychelles are Paralosiocolpus piceus Distant and P. marginatus Distant.

As the family ANTHOCORIDAE so far has not been thoroughly investigated in Madagascar it is impossible at present to draw further conclusions on the origin of the Mascarene anthocorid fauna.

[+]Doncasteriella n.g.

D. insularis sp. nov.

Type slide: deposited in the B.M. (N.H.)

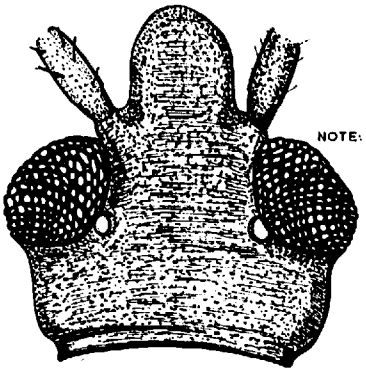


FIG 1: HEAD
NOTE: OCELLI ALMOST TOUCHING EYES

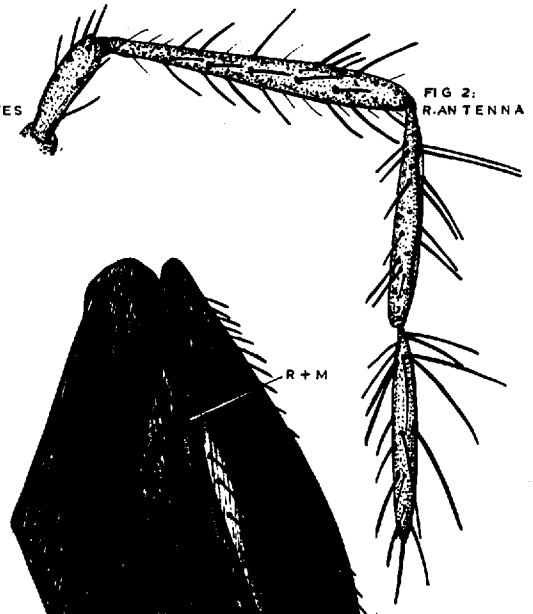
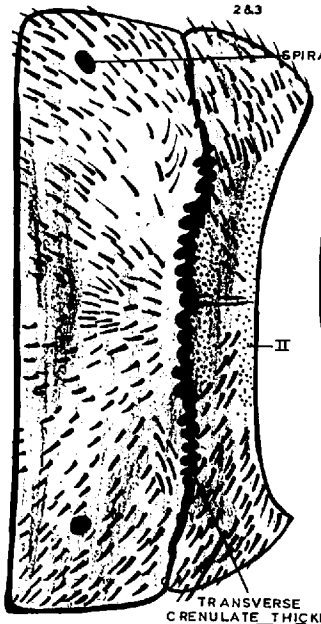


FIG 2:
R. ANTENNA

FIG. 3: ABDOMINAL SEGMENTS 2&3



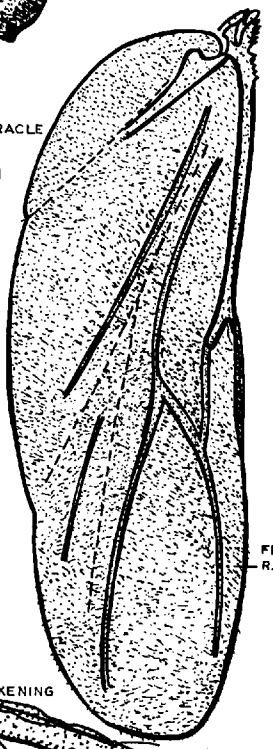


FIG. 4:
R. WING

FIG. 5:
R. HEMELYTRON

FIG. 6: RIGHT POST LEG

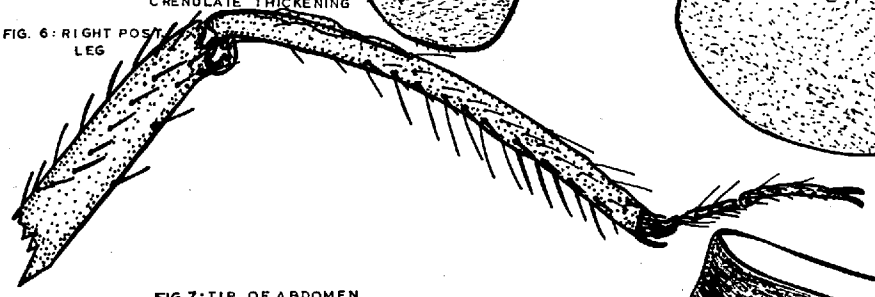


FIG. 7: TIP OF ABDOMEN (DORSAL VIEW)

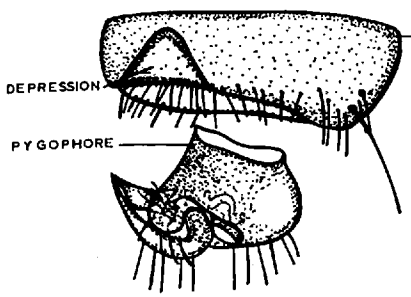


FIG 8. PYGOPHORE

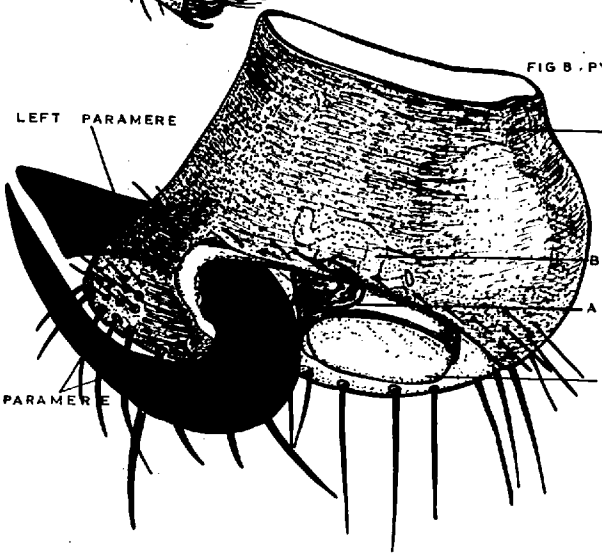


PLATE 59 – DONCASTERIELLA INSULARIS Gen. & sp. nov. ♂

DONCASTERIELLA, a new genus of Lyctocorinae from the island of Réunion[+], with a description of the type-species D. insularis sp. n. (Hemiptera: ANTHOCORIDAE).

Status of the family ANTHOCORIDAE.

Southwood and Leston regard the anthocorid bugs merely as a subfamily of CIMICIDAE; the author prefers to accord them both familial rank within the superfamily CIMICOIDEA.

DONCASTERIELLA gen.n.

General coloration brown, matt; embolium invested with a short dense pilosity of minute brown hairs; membrane greyish due to micro-trichial covering.

Structure and measurements (the latter given in mm.)

Head: length (0.30), almost equal to width, including the eyes (0.32); eyes moderately large, weakly prominent; ocelli close to inner margins of eyes, almost touching them.

Length of antennal segments:- I, 0.11; II, 0.32; III, 0.20; IV, 0.23. First antennal segment extending very slightly beyond apex of head. Third and fourth segments more slender, and with long hairs; 4th antennal segment slightly fusiform as in Anthocorinae. Rostrum (0.52) reaching beyond front coxae.

Pronotum moderately convex, regularly finely punctate; anterior collar distinct but narrow; lateral margins of pronotum distinctly carinate; posterior margin more or less convex throughout. Metapleural scent gland channels (rima of Reuter) bent at right angles, the terminal part running along lateral margin of pleuron.

[+]Mascarene group (Indian Ocean).

Legs with relatively slender femora, without armature and about equal in length to tibiae; hind tibiae curved and with a row of long bristles entad; hind tarsi more than a third as long as femur. Wings - basal cell of hind wing without hamus. Hemelytron with broad embolium, with costal margin convex; corium sparsely finely punctate; embolium: R + M distinct, reaching about 3/4 of its length; with a long, broad and very distinctive band of dense fine pubescence down middle (apparently not known in any other genus) as well as some seta-like hairs generally distributed; cuneus short; membrane without veins or basal spur, densely covered with microtrichia.

Length (1.43). Width across membrane (0.54).

Abdomen with second and third (n.b., first and second apparent) tergites fused, the suture forming a transverse crenulate thickening, abdomen in male strongly tapering posteriorly; the 9th segment (pygophore) telescoped forward asymmetrically inside seventh - apices of parameres fitting into angular depression in 8th segment.

D. insularis sp.nov.

Right hand paramere long, curved and pointed (vide figure); left hand paramere dilated, widening to a truncate apex.

Aedeagus apparently membranous as in CIMICIDAE.

Affinities: Runs down in Poppius' key ('Beitrage zur Kenntnis der Anthocoriden' - Acta Soc. Sci. Fennicae 37, 9:1-43 (1909), to Hypophloeobiella Reuter but differs in convex disc of pronotum; broad embolium with convex lateral margin and longitudinal band of dense entangled pubescence; curved hind tibiae with rows of long bristles.

Holotype ♂: slide - mounted, in the B.M. (N.H.).

Locality: La Réunion - Forêt du Brûlé de Mare Longue.

Collection: Mare Longue. 13.11.55; Dr. R. Paulian.

XXIV. +NABIDAE Costa, 1852

Genus Nabis Latreille 1807
Gen. 3:127.

N. capsiformis Germar, 1837. — Cosmopolitan.
in Silberman Rev. Ent. 5:132.

N. sp. nr. capsiformis. — Mauritius.

In B.M. collection are 2 specimens collected by J.E.M. Brown (vide footnote p.26).

Genus Arbela Stål, 1860
Hem. Afr. 3:38, 42.

A. elegantula Stål 1865. — Réunion (type locality), Mauritius, Seychelles (?), E. Africa (?), Tanganyika.

Type is a ♀ and is located in the Museum (Stockholm).

First recorded from Mauritius by Orian 1962.

Stål 1865 (Hem. Afr. 3:142) described the basal swelling in the hind tibia. Bergroth 1893 recorded a female from Mahé, Seychelles; Reuter recorded its presence in the Seychelles. He also saw a ♂ from Morogono (Tanganyika).

(Ref. Harris 1938 for a statement of taxonomic problems arising from the lack of tibial enlargement in Seychelles specimens.)

+N.B. Apparently genitalia do not present very useful diagnostic features.

XXV. CYNIDAE (Billberg), 1820

Enum. Ins. Bilb., p. 70 (Cydnides)

[Nomenclature: Billberg gave the first suprageneric recognition of the group but Fabricius 1803 first described the genus Cydnus.

By the designation of Cimex aterrimus Forster as type-species of Cydnus Fabricius, Blanchard 1844 in effect transferred the name Cydnus from the large genus Cydnus auct. nec. Cydnus Fabricius to the small genus previously known as Brachypelta Amyot and Serville 1843.

When China wrote his Generic Names of British Insects (1943) he showed that the proper generic name for Cydnus was Aethus Dallas 1851. The type-species of Aethus was fixed by Van Duzee 1914 (Canadian Ent., 46:377-378) Westwood. Froeschner has recently shown that Aethus so restricted does not occur in the U.S.A. but that the Aethus of American authors should take the name Tominotus Mulsant and Rey 1866: type-species T. signoreti M. & R. by monotypy = not a European species but a S. American one: constrictus Bergroth which falls as a synonym of T. signoreti.

Aethus Dallas: type-species C. indicus F. is represented in Europe by a number of species which may possibly be shown to be generically distinct from Aethus Dallas and may take the name Trichosternus M. & R. (Type Cydnus pilosus H. Sch.)

In view of the above Mamet's remarks under Macroscytus sp. (p. 34 in his 1957 list) are shown to be misinformed.]

The cydnids are well represented in Madagascar but only a few species are represented in the Mascarenes: Macroscytus rodriguezensis

sp.nov.[+] [vide Plate $6c_2$, $6c_3$, $6c_3'$], Geotomus pygmaeus (Dallas) Gilldaya[++] lautipennis (Stål) comb.n., Aethus izzardi sp.nov. (This is the species referred to as Cydnus sp. by Mamet.)

[+]Recorded under Macroscytus privignus Horváth from Rodriguez by China (1924 loc. cit. p. 427).

[++]Dedicated to Gillian M. Day [Hemiptera Section - B.M. (N.H.)].

PLATE 6

Macroscytus rodriguezensis sp. nov.

AETHUS IZZARDI sp.nov.

TWO VIEWS OF LEFT PARAMERE

PLATE 6a

CYDNIDAE

AETHUS LAUTIPENNIS (STÅL)

TYPE: RIKSMUSEUM STOCKHOLM

REF.NO.302/63

KUISIP. AFRICA E

PLATE 6b

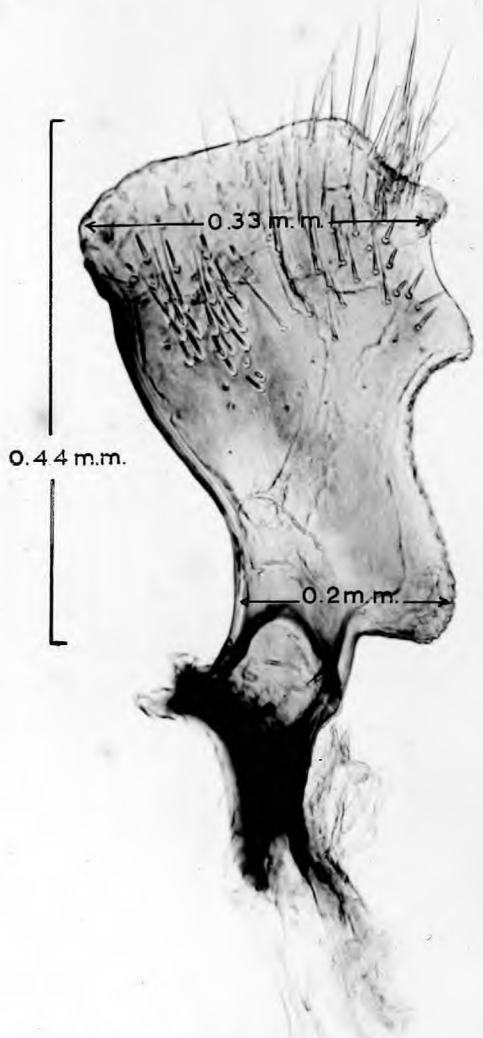
CYDNIDAE

TYPE HEM.NO 64

CYDNUS INDICUS WESTWOOD

HOPE DEPARTMENT OXFORD

CYDNIDAE



MACROSCYTUS RODRIGUEZENSIS sp. nov.

PLATE 6 c_2

TWO VIEWS OF LEFT PARAMERE

MACROSCYTUS
PRIVIGNUS Horváth

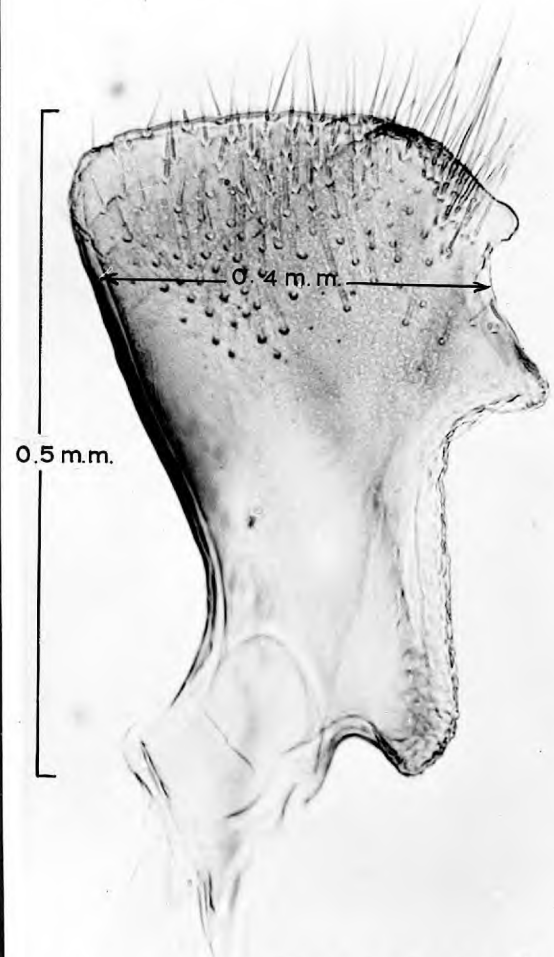
MAGYAR NEMZETI
MUZEUM
BUDAPEST

LOCALITY:
FIANARANTSOA
MADAGASCAR

$\frac{1}{4}$ m. m.

CYDNIDAE

PLATE 6 c_3'



MACROSCYTUS PRIVIGNUS HORVÁTH

TWO VIEWS OF LEFT PARAMERE

XXVI. PLATASPIDAE Dallas, 1851

Although about fifty species of this family have been described from Madagascar, the present author has come across two species only from the Mascarene Is.: Brachyplatys hemispherica (Westwood) - only one specimen[+] collected in Mauritius (1951) and Brachyplatys testudonigra (de Geer). The following note in Montandon 1897 Ann. soc. ent. France 55:440 is worth quoting:

'B. testudonigra de Geer var ? [Ile de la Réunion (Walkener 1837, Desjardins 1837), I. Maurice (Desjardins 1836 & 1840)] irradiations jaunes abdominales dévelopées, aussi longues ou plus longues que larges; cette espèce était étiquetée obynastes Amyot, inédit.'

Kirkaldy (1909) gave the varietal name mascarena, The present author does not believe that Mascarene specimens are different from African specimens. It is a pest of Cajanus cajan Millsfs which is apparently sporadically introduced, being very common in 1932, 1942, 1953. The coloration of specimens from Africa is very variable.

Stål [Hem. Afr. 1:8(1865)] recorded it as B. pallides Fabr. but later (Addenda to Vol. 4) he synonymised it with B. testudonigra (de Geer) (= Cimex testudonigra de Geer).

The type is now believed lost.

[+]Probably an accidental introduction.

XXVII. KEY TO THE GENERA OF MAURITIAN PENTATOMIDAE

1. Rostrum thickened: the basal segment very thick; lying mainly outside the buccal groove ..... Asopinae Amyot & Serville ... 2

-. Rostrum slender: the first segment not thickened; lying within the buccal groove 3

2. Anterior femur on upper side with only a tubercle near apex; scutellum much longer than width at base. Body of scutellum convexly shield-shaped, the apex produced out as a parallelised prolongation; apex of scutellum and costal margins of hemelytra ivory white; in the male a depressed area of pale silky hairs on each side of the midline of the venter extending from third to sixth segment ..... Andrallus Bergroth (p.115)

-. Anterior femur on upper side with a distinct spur or tooth near apex; scutellum scarcely longer than width at base; form not as above; male without concave area of pale silky hairs on each side of the middle line of venter .....[+] Subafrius Schouteden (p.116)

3. Basal segment of rostrum extending beyond the posterior ends of bucculae; apex of scutellum usually narrowed, not nearly reaching to apex of abdomen ..... Pentatominae A. & S. ... 4

-. Basal segment of rostrum not extending beyond the posterior ends of bucculae; apex of scutellum broad, nearly reaching apex of abdomen .....[+] Podopinae A. & S. ..... Scotinophara[++] Stål[+++] (p.117)

[+] Subgenus Subafrius Schouteden here considered as a distinct genus. Cantheconidea migratoria Distant 1907 described from Aldabra also belongs to this genus and is here synonymised with S. flavirostrum (Signoret). Afrius williamsi Miller is also a synonym.

[++] Graphosoma lineatum italicum Müell. dubiously recorded from Mauritius by Schouteden (1907) is not considered by the author to form part of the local fauna: It is therefore not included in this key.

[+++] Stål 1867 used the spelling Scotinophara. If based on the Greek σκοτος meaning darkness the second word should be phora (Greek φορα) meaning bearer (of darkness). Scotinophara are blackish insects.

However, the spelling Scotinophara has been in constant use and it would be confusing to change the spelling now.

4. Lateral margins of head and pronotum armed with flattened spine-like processes; antenniferous tubercle with a long spine; third and fourth antennal segments greatly swollen; surface scabriform; posterior lateral angles of connexival segments prominent dentiform ..... Phricodus Spinola (p.118)

-. Lateral margins of head and pronotum not spined; third and fourth antennal segments not strongly swollen; surface not scabriform; angles of connexival segments not prominent and dentiform 5

5. Underside of abdomen on each side of middle line with an area of very fine stridulations (stridulatory area); narrow elongate bugs with juga apically pointed and almost contiguous in front of tylus; scutellum narrow lanceolate. Second antennal segment triangular in section with a broad sulcus dorsally; carinate intad ..... Mecidea Dallas (p.119)

-. Underside of abdomen without stridulatory areas; broader insects; juga not contiguous in front of tylus, scutellum narrow, lanceolate. Antenna not as above 6

6. Venter with a deep longitudinal median furrow extending from the slightly prominent base of venter nearly to apex of abdomen 7

-. Venter without a ventral furrow as above 9

7. Dorsal side of tibia with a percurrent distinct sulcus. World-wide ..... Bathycoelia+ A. & S. (p.120)

-. Dorsal side of tibia with sulcus absent or obsolete, occurring only on apical quarter of tibia 8

+According to Bergroth 1913 (Ann. Soc. ent. Belg. 57:230) Bathycoelia and Gastraulax are almost identical save for the presence of a dorsal sulcus on the tibiae: he considers that these genera should be united. It is certain that a degree of variation occurs in the presence or absence of the tibial sulcus even within the same species. If this character is to be maintained it will be necessary to restrict Bathycoelia to those species in which the tibial sulcus is percurrent and very distinct leaving all those species in which it is either absent or partly obsolete and not percurrent in the genus Gastraulax.

A study of the male genitalia throws little light on this problem. The present author thinks that it might be better to reserve Bathycoelia and Gastraulax for all those species with the tibial sulcus very distinct or absent respectively and to establish a new genus Pseudogastraulax for the intermediate forms.

Herrich-Schaeffer based his Gastraulax on two species G. thalassinus H.S., a well-known pest of cocao and bananas and G. torquatus H.S. Bergroth

Footnote[+] continued from preceding page:

states that G. thalassinus is a Bathycoelia but Kirkaldy has fixed the relatively unknown species G. torquatus H.S. as the type. Until torquatus from the Philippines is identified, it is impossible to state exactly what Gastraulax is. Bathycoelia distincta Distant is also doubtfully a Bathycoelia - the shape of the superior processes and of the pygophore shows it to be quite distinct from true Bathycoelia. The present author wishes to erect the genus Bathycoeliopsis with B. distincta as type species.

8. First antennal segment shorter than head which is rather pointed at apex. Obsolete sulcus only occupying 1/3 of the tibia. Madagascar and Mascarene Islands ..... Pseudobathycoelia gen. nov. (p.121)

-. First antennal segment reaching apex of head which is more rounded at apex. Tibial sulcus almost completely absent - only a trace at extreme apex of tibia. Oriental, Philippines etc. . Gastraulax H.-S. (")

9. Base of venter armed, the second ventral segment with a distinct spine or tubercle pointing forwards between the hind coxae towards metasternum 10

-. Base of venter unarmed, the second ventral segment without an anteriorly-directed pointed tubercle or spine 13

10. Basal ventral spine long, extending well forward between hind coxae to middle coxae 11

-. Basal ventral spine very short, tuberculate, not extending forward between hind coxae 12

11. Spiracles not black, placed on postero-lateral side of shining yellow convex spots; black spot on posterior lateral angle of connexival segment extending as a small spot on to base of following segment; dorsal surface of connexiva with black band at apex and base of each segment..... Chinavia g.n. (p.122)

-. Spiracles black, not raised on yellow shining spots; no black spot on posterior lateral angle of connexival segment; puncturation infuscate ..... Piezodorus Fieb. (")

12. Femora with apical dorsal terminal spine; apex of abdomen spined; humeral angles acutely spined. Overall colouration dark brown ..... Aspavia Stål (p.123)

-. Femora without apical terminal spines; apex of abdomen not spined. Overall colouration green ..... Acrosternum Fieber (")

13. Body densely pubescent; hemelytral membrane extending a third or more of its length beyond apex of abdomen ... Agonoscelis Spinola (")

-. Body almost glabrous; hemelytral membrane not extending far beyond apex of abdomen. Rostrum short, not extending onto abdomen 14

14. Lateral margins of head reflexed, juga overlapping apically narrowed tylus. Metapleural scent gland opening obscure, evaporatium absent ..... Bagrada Stål (p.124)

-. Lateral margins of head not reflexed, juga not overlapping tylus which is not narrowed at apex. Metapleural scent gland opening distinct, evaporatium present ..... Antestiopsis Leston (")

XXVIII PENTATOMIDAE

The family is poorly represented in the Mascarenes where only twenty species are recorded (cf. Madagascar where more than two hundred species are known to occur). In Mamet's list (1957b) the annotation 'not recorded elsewhere' is given under the following species: Afrius williamsi Miller, Mecidea quadrivittata (Signoret), Antestia mauritii (Stål) and Nezara emmerezi Schouteden.

The present studies, which are based on type material, disprove this view: A. williamsi is synonymous with Subafrius flavirostrum described by Signoret[+] almost a century earlier and now known to be widespread in Madagascar, Aldabra, the Comores; M. quadrivittata was recorded from Rodriguez by China as far back as 1926; Antestia (= Antestiopsis[++]) mauritii occurs over the whole of the Ethiopian region; Nezara emmerezi which was recorded later by Schouteden from Africa (Zanzibar) is also known from Madagascar where it is often confused with Horváth's Acrosternum bergrothi; 'emmerezi' and 'bergrothi' have been shown by the present author to belong in another genus which he has called 'Chinavia'.

Mamet also lists Bathycoelia distincta Distant and B. thalassina (H.-Sch.) from the island. Both these records are erroneous (vide footnote under genus Bathycoelia).

According to Moutia and Mamet (1947 - p.4) Agonoscelis erosa (Westwood) is 'commonly found in fields.....' In another note,

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[+]Mamet (loc. cit. p.35) attributes the authorship to Schouteden in error.

[++]vide etiam Leston 1952a.

however, Mamet (1957b, p.36) writes as follows: 'apparently first recorded by Mamet and Moutia in 1947 etc.' ..... These comments are misleading; the species was very abundant in 1926 and was first collected by d'Emmerez de Charmoy (vide his correspondence with Imperial Bureau of Entomology and specimens in B.M. collection). It has not been collected since that date.

Andrallus spinidens (Fabricius) and Bagrada picta Fabricius were were recorded for the first time from the island in 1960-1961 by the present author.

The other pentatomids found in the island include cosmopolitan pests like Nezara viridula (Linn.), N. viridula torquata (Fabr.), N. viridula smaragdula (Fabr.) ('smaragdula' being commonest) and the different species of Aspavia, Bathycoelia, Chinavia also widely distributed in the Ethiopian region. On the whole the pentatomid fauna of the Mascarene Islands - with the few exceptions mentioned above: Mecidea, Pseudobathycoelia - is composed of introduced species ..... their introduction probably began when the island was first visited in the sixteenth century and has continued almost unabated to the present day.

Genus Andrallus Bergroth 1905

Type-species: Audinetia aculeata Ellenrieder 1862, a junior synonym of Cimex spinidens Fabricius 1787.

Andrallus Bergroth 1905 Ann. Soc. ent. Belg. 49:307 (new name for Audinetia Ell. preoccupied - Lepeletier, Hymenoptera, 1841).

Audinetia Ellenrieder 1862 Nat. Tijdschr. Ned. Ind. 24:136, fig.1.

A. spinidens (Fabricius). — Mauritius, Madagascar, Mesopotamia, Arabia, Asia Minor, Pakistan, Sikkim (Bengal), India, Ceylon, Malaya, Sumatra, New Caledonia, Fiji, Philippines, Java, apparently also from Mexico.

Cimex spinidens Fabricius 1787 Mant. Ins. 2:285.

Audinetia aculeata Ell. 1862 Op. cit. 137 pl.1, fig.1.

Host plant: Oryza sativa L. (Ellenreider l.c.; Kirkaldy 1909, p.14).

First recorded from Mauritius by Orian (Ann. Rep. Dep. Agric. 1961). Only one ♀: coll. R. Maurel Oct. 1961 - Trou-aux-cerfs.

Adequate figures and descriptions of this almost cosmopolitan insect are to be found in Schouteden 1904 pp. 40-41. Acanthidium cinctum Montrouzier 1858 (Ann. Soc. Linn. Lyons 5:252) is also a synonym, according to Schouteden Ann. Soc. ent. Belg. 1907 51:3-15: 'Les types d'Hémiptères de Montrouzier'.

Genus Subafrius (Schouteden)

Type-species: Picromerus flavirostrum Signoret 1861, fixed by Schouteden, 1907:51.

S. flavirostrum (Signoret). — Mauritius, Madagascar, Aldabra (?).

Picromerus flavirostrum Signoret 1861, Ann. Soc. ent. Fr. (3) 8:921.

Afrius (Subafrius) flavirostrum (Signoret) - vide Schouteden 1907 in P. Wytsman's Gen. Ins. Heteroptera PENTATOMIDAE pp.50-52.

CANTHECONIDEA MIGRATORIA DISTANT 1907

TYPE BM.(N.H.)

A SYNONYM OF SUBAFRIUS FLAVIROSTRUM (SIGNORET) 1861

TYPE LOCALITY OF DISTANT'S C.MIGRATORIA: ALDABRA

PLATE 6c

AFRIUS WILLIAMSI MILLER 1951 from MAURITIUS

TYPE BM(N.H.)

ALSO A SYNONYM OF SUBAFRIUS FLAVIROSTRUM (SIGN)

PLATE 6 C5

+Afrius williamsi Miller 1951. Bull. ent. Res. 42:183.

Genus Scotinophara Stål 1867
Ofv. Vet. Ak. Forh., 24:502.
(Plate 7a)

S. fibulata (Germ.) (?). Mauritius, Madagascar, Ethiopian Region.

Podops fibilatus Germar, 1880, Zeitschr. Ent., 1:65.

According to Schouteden (letter to Mr. Izzard 12/XI/64), the syntypes of this species (from the Cape) kept at Lemberg University (LWOW) were destroyed during World War II. It is therefore impossible to say whether Mauritian specimens belong to this species. In Madagascar several other species of Scotinophara also exist. The author has compared genitalia of Mauritian specimens with S. madagascariensis Schouteden and is satisfied they are different.

Fairly common in the warmer regions of the island, sometimes found on Maize; often attracted to light.

+Described as a distinct species from Mauritius by Miller and in consequence recorded under this name by Orian 1954 and by Mamet 1957. A predator of Schematiza cordiae Barber (GALERUCIDAE), a beneficial coleopteron introduced to control the noxious weed Cordia macrostachya Jacq. (Black Sage).

The present writer recorded S. flavirostrum as a predator also of the well-known Lantana bug, Teleonemia scrupulosa Stål (Hemiptera - TINGIDAE). It also feeds on caterpillars.

Distant's Cantheconidea migratoria 1907 Trans. Linn. Soc. London (2) 16:144-145 is here considered to belong in the genus Subafrius and the species is identical with flavirostrum Signoret.

Population studies reveal a range of colour variation, some individuals being pale yellowish brown while others again are dark brown in colour. Common throughout the year: most abundant from November to March.

Genus Phricodus[+] Spinola 1839
Rev. Zool. 2:231
(Plate 7)

Type-species Phricodus hystrix Spinola = Aradus hystrix Germar 1840 in Silberman, Rev. Ent. 5:134.

[This is obviously an aberrant genus; the insect bears superficial resemblance to an Aradid but because of the relative lengths of the clavus and scutellum, the trichobothrial pattern, the genitalia, the structure of stylets, etc., is considered to be a member of the Pentatominae]

P. hystrix Spinola.
Spinola 1839 l.c.

Mauritius, Rodriguez, Nyasaland, S. Africa, S. India (?).

Aradus hystrix Germar 1840 l.c.

Stenotoma desjardinsi Westwood 1847, Trans. ent. Soc. Lond. (1) 4:248-249, pl.18, fig.6 is another synonym.

Stål first recorded it from Mauritius in 1865 (Hem. Afr. 1:92). Specimens collected in the island are also to be found in the Hope Natural History Museum coll. J. Desjardins & Templeton.

The present author finds that specimens from India in the B.M. show differences which seem to indicate the presence of another species there.

The slender thread-like connections between the second and third, and third and fourth joints of the antennae suggested to Westwood the generic name Stenotoma.

[+]According to a manuscript note by Dr. Sherborn in vol.5 of B.M. (N.H.) copy Silberman's Rev. Entomologique must have been published as a series of short livraisons. Vol.5 comprising 6 livraisons appeared over the years 1839-1840: The date 1837 given on the title page for this volume and later referred to by various authors is therefore incorrect. The 3rd livraison (27th of the whole series), i.e., pp.121-168 was actually published in 1840. One outcome of this is a nomenclatural change in the status of Aradus hystrix Germar (descr. pp.134-135) which falls as a junior synonym of Phricodus hystrix Spinola. It is a curious coincidence that both authors independently had used the same species name though referring the insect to different genera.

Genus Mecidea Dallas 1851[+]

List Hem. B.M. 1:131, 139
(Plates 8 & 9)

Type-species M. indica Dallas 1851 designated by Distant 1902, Faun. Brit. Ind. 1:140-

Mecidea quadrivittata (Signoret) 1851. Ann. Soc. ent. Fr. (2) 9:336. — Mauritius, Rodriguez.

Abundant wherever savannahs of Heteropogon contortus Linn. occur in the island, more especially in Black River (Tamarin) and in other warm localities, e.g., Flacq, Ferney, Beau-Bassin. Abundant in May.

The antennal ratios and the puncturation of the body show a certain amount of variation, in the former case perhaps sexual dimorphism. Most species have been described on too few specimens - frequently of only one sex - confusion has resulted.

Location of type: Naturhistorische Museum, Vienna.

[+]Dallas 1851 erected the genus Mecidea for the species indica (locality: Bengal) and linearis (locality unknown). Signoret in that same year described a monobasic genus Cerataulax (κέρας=horn, αὐλαξ , groove) - a name suggested by the broad sulcus on the dorsal surface of the 2nd antennal segment. He based his genus on the Mauritian species quadrivittatus, which was not known to Dallas. Later Signoret (October 1851) stated that his paper: 'Description de nouvelles espèces d'Hémiptères (Ann. Soc. ent. France (2) 9:329-348) had been published after Dallas' 'List of the specimens of hemipterous insects in the collection of the B.M.' In his observations on Dallas' list which appeared in the Bulletin Soc. ent. Fr. Cviii, he stated that Cerataulax vittatus (lapsus calami) is a synonym of C. linearis Dallas. The present author agrees with Sailer (1952) that Signoret's synonymy of his Mauritian species quadrivittatus with Dallas' species linearis is open to doubt for the following reasons:-

(1) The types were never actually compared: the synonymy was based on correspondence alone.

(2) Dallas' species is without any locality data at all.

(3) Dallas was under the impression that his specimen was male: the abdomen of the type is now missing but antennal ratios strongly suggest it is female.

Genus Bathycoelia[+] Amyot & Serville 1843
Hist. Hem., p.110.

Type-species Pentatoma buonopoziensis P.B.
" locality Buonopoze (Cware-Africa)

B. rodhaini Schouteden 1913. — Congo, W. Africa, Madagascar, Mauritius, Réunion.
Rev. zool. afric. 2:193.

(vide Plates 14, 14a)

This species appears to have reached Madagascar and Mauritius comparatively recently. It is not listed by Cachan (1952) and Mamet's earliest record of the species bears the date 1947. The present author collected a few specimens in Mauritius in 1945 and Dr. Paulian gave him some specimens from Réunion collected in 1956. More recently he received a single female from a collection of PENTATOMIDAE sent by Dr. Malzy from Madagascar.

Host plant: Terminalia catappa L.

The species is frequently caught at light and causes considerable damage to the fruits which fall when still immature as a result of sap bleeding.

[+]Mamet records two species of Bathycoelia from Mauritius: B. thalassina Herrich-Schaffer 1844, Wanz. Ins., 7:62 and B. distincta 1898, Ent. Mon. Mag. 14:247. Both these species are readily identifiable and do not occur on the island. His B. thalassina is in fact B. rodhaini: the species he calls B. distincta was described from Réunion by Stål as Jurtina bipunctula, a species which resembles B. distincta only superficially but shows considerable differences in puncturation, shape of parameres and other characters of the pygophore and genitalia. Externally the bluish-green coloration of 'bipunctula' is more intense than 'distincta' and the anterior part of the prothorax which is yellowish to ochraceous in both cases bears 2 spots instead of 4: 'bipunctula' is very near 'bifoveolata' described from Madagascar by Reuter but is a distinct species. B. flavolimbata is a Rodriguan species.

Genus Pseudobathycoelia gen. nov.
vide 'Keys to genera' vide etiam Plates 17, 17a, 17b

Type-species: Jurtina bipunctula Stål
" locality: Réunion.

P. bipunctula (Stål). Réunion, Mauritius.

(Jurtina bipunctula Stål.)

In 1876 Stål in Part 5 of his Enumeratio Hemiptorum (Kongl. Svenska Vet. Akad. Hand 14:101) described a new pentatomid from Réunion under the name of Jurtina bipunctula. At this time he also noted the genus Jurtina was distinguishable from Bathycoelia A. & S. by the presence in the latter of a sulcus on the anterior tibia.

Tibiis teretibus, sulco destitutis ..... Jurtina

Tibiis superne, sulco distincto instructis ..... Bathycoelia

The present author, now engaged on a revision of the genus Bathycoelia, finds that the sulcation of the tibia is not an entirely satisfactory character. A detailed study based on genitalia indicates that Bathycoelia is an Ethiopian genus with representatives in Africa, Madagascar, the Seychelles and the Mascarenes.

Stål's Jurtina bipunctula Stål (until recently placed under Gastraulax - the name Jurtina being preoccupied) is distinct from Gastraulax which is not an Ethiopian genus. In his key to the Genera of Mauritian PENTATOMIDAE the author erected the genus Pseudobathycoelia to include Jurtina bipunctula Stål from the Mascarenes and Gastraulax bifoveolata Reuter 1887 from Madagascar - type-species Jurtina bipunctula Stål.

In the Mascarenes, there appears to be two subspecies of 'bipunctula'.

Genus Chinavia Orian 1965
Plates 11 below, 12, 15, 15a & 16.

Type-species: Rhaphigaster pallidoconspersum Stål 1858

Ofv. Vet. Ak. Förh., 15:437.

C. pallidoconspersa (Stål).comb. nov. — Mauritius, Réunion, Ethiopian Region.
1858, vide Raphigaster above.

Host plants: Cajanus cajan Mills., Brassica sp.

Often caught in light traps.

C. emmerezi (Schouteden).comb. nov. — Mauritius, Rodriguez, Madagascar, Zanzibar, Ethiopian region generally.

Nezara emmerezi Schouteden.
1905, Wien. Ent. Zeit., 24:52.

Mamet following Schouteden placed this species under Nezara Distant 1913, Trans. Linn. Soc. Lond. Zool., 16:144, considered this species to be a synonym of Acrosternum heegeri Fieb., under which name it was also recorded by China from Rodriguez. The present author has reviewed the position of this species in a paper entitled 'Chinavia gen. nov. etc.' in press (Trans. R. ent. Soc. London).

Genus Piezodorus Fieber 1861
Eur. Hem., pp. 78 & 329.

P. rubrofasciatus Fabricius. — Mauritius, Madagascar, Africa, India, Malaya, Japan, New Caledonia, Java, Sumatra, India, Assam.

(Cimex rubrofasciatus Fabricius, 1787).
Mant. Ins. 2:293.

Host plant: Tephrosia sp.

According to Schouteden this species was redescribed under the name Rhaphigaster oceanicus in Ann. Soc. Linn. Lyons (2) 11:224 (1864). Schouteden was also the first to record this cosmopolitan species in Mauritius 1907, Ann. Soc. Ent. Belg., 51:285.

Genus Aspavia Stål 1865
(Plates 9a, 9b)
Hem. Afr., 1:136.

Type-species: Cimex armiger Fabr. 1781, Spec. Ins., 2:348)

A. armigera (Fabricius). — Mauritius, Réunion, Madagascar (?), Guinea, Ghana, West Africa, Congo.

(Cimex armiger Fabr.).

First recorded from Mauritius by Signoret (1862 in Maillard) - the original specimens used by Fabricius for his description, together with the left paramere of the male, are illustrated in the text. The species is sometimes found on the inflorescences of parsley (Carum petroselinum Benth. & Hooker) and of various Asclepiadaceae.

It can be distinguished from A. longispina (vide infra) by the black coloration of the lateral thoracic spines: also the 2 basal callosities on the scutellum are larger. 'Armigera' closely resembles 'longispina' - the pygophore and parameres being similar - the coloration is lighter in 'longispina' and the puncturation, though darker, is less dense.

A. longispina Stål 1865. — Mauritius, Madagascar, Ethiopian region.
Hem. Afr., 1:137.

Originally described from Mauritius.

Genus: Acrosternum (vide Plates 11, 11a, 13, 13a & Section under Chinavia etc.)

Genus Agonoscelis Spinola 1837
Ess. Ins. Hémipt., p.327.

Type species: Cimex nubilis Fabricius (Asia)

A. erosa (Westwood). — Mauritius, South & West Africa, Sierra Leone, Transvaal.

Aelia erosa Westwood, 1837 in Hope Cat. Hem., 1:33.

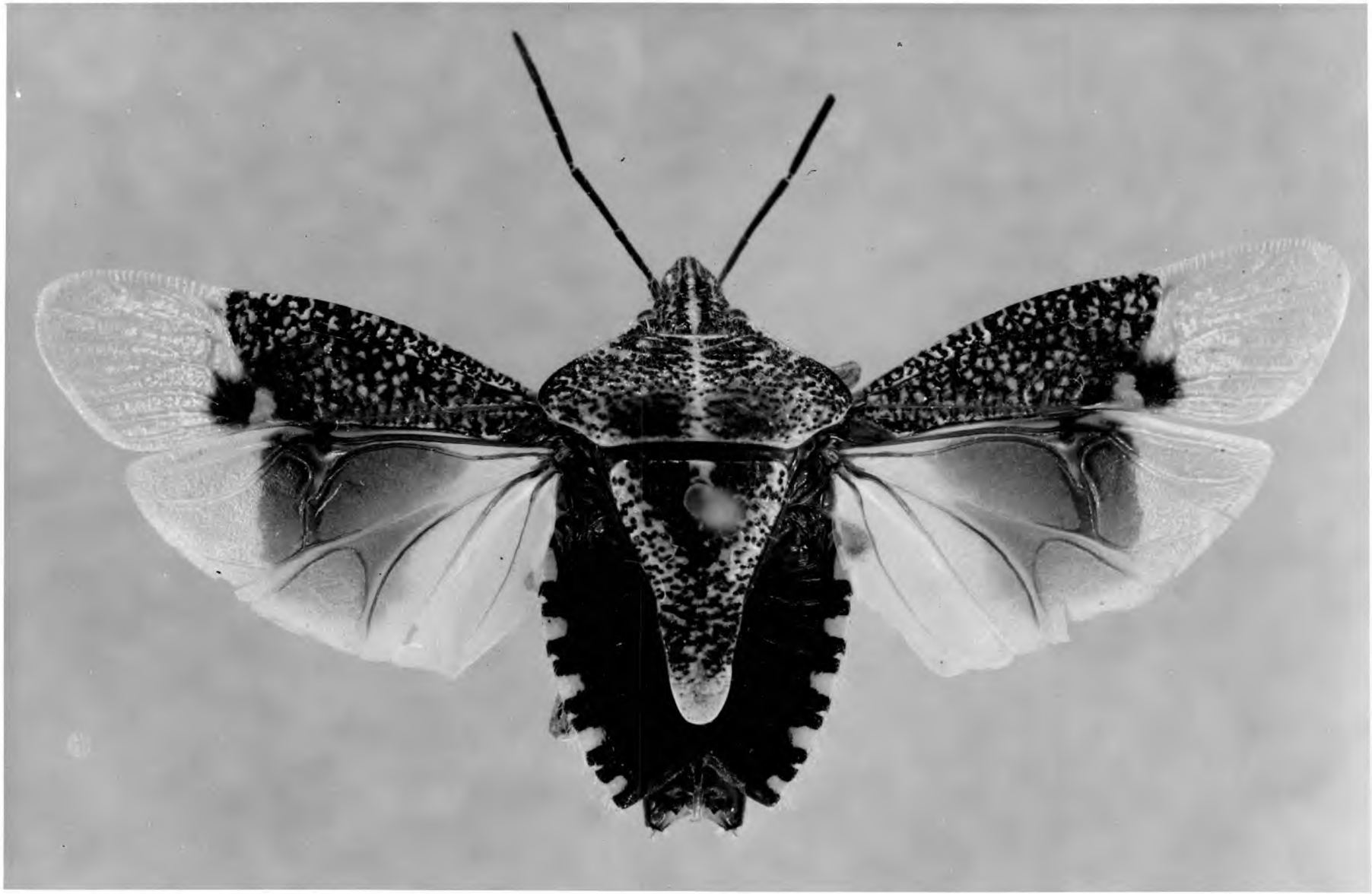

PLATE 7

AGONOSCELIS EROSA (Westwood)

Note the long median retrorse process arising from VIIth tergite

♂

PLATE 7 a AGONOSCELIS EROSA (Westwood)

♂

The males in this striking species can easily be distinguished from those of A. versicolor (Fabr.) - the well-known millet pest - by the presence of a long median retrorse process arising from the apical margin of the seventh tergite - this process is absent in 'versicolor'.

Genus Bagrada Stål 1862
Stett. Ent. Zeit. 23:105.

Type-species: Cimex hilaris Burm., 1835. Handb. II, 1:368.

B. picta Fabricius 1775.
Syst. ent., p.715 (Cimex).

Ethiopian region, Madagascar, Mauritius, E. & W. Africa, Mesopotamia, Turkey.

A severe pest of Brassica spp. First recorded by Orian (1961) under the name B. hilaris Burm. (Ann. Rep. Dep. Agric.) - a recent introduction.

Genus Antestiopsis Leston 1952
Rev. Zool. Bot. Afr. 45:268-270.

Type-species: See Note below.†

A. mauritii (Stål) 1859.

Mauritius, Rodriguez, Ethiopian region.

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†Adapted from Leston (1952a): In 1865 Stål erected the genus Antestia for the reception of a large group of Ethiopian and Oriental species. Later (1876) he removed some to his Aegaleus and Menida Motsch. In 1929 China (Entomologist 62:16) wrote as follows: "The genus Antestia is a composite one. The type has unfortunately been fixed by Distant as A. maculata Dall.. This species is certainly not congeneric with the African and Oriental species, A. orbitalis Westw., lineaticollis Stål and A. cruciata F., which is most unfortunate because it means that sooner or later the generic names of these two well-known coffee pests must be changed." In 1948 Ghesquière & Carayon 'A propos de quelques Antestia et Helopeltis de l'Afrique tropicale (Hemiptera PENTATOMIDAE & MIRIDAE)' (Rev. Zool. Bot. Afr. 41:55-63) studied A. bechuana (Kirk.), A. transvaalia Distant and a third species which they described as A. intricata. Leston 1952 erected the genus Antestiopsis for the coffee bug in which he included A. faceta Germar., A. cruciata, the lineaticollis - Stål group and A. anchora Thunb. At present the genus Antestia contains only one species, A. maculata Dallas, only a few specimens of this species being available from Africa.

Pentatoma mauritii Stål 1859.
Frég. Eug. Resa. Ins. Hem. p.227.

Described and recorded from Mauritius.

Location of type: Stockholm Museum.

Host plant: Arachis spp.

Genus Nezara Amyot & Serville 1843
Hist. Hem., p.143

Type-species: Cimex smaragdulus Fabricius, 1775
= viridulus Linn., 1758.

N. viridula (Linn.). — Ethiopian region, India, Ceylon, China, East Indies, Madagascar, Mauritius, Réunion, Rodriguez.

C. viridulus Linnaeus 1758, Syst. Nat., X, p.444.

Rare - a yellow species with green spots on the prothorax, the scutellum and the hemelytra.

N. viridula smaragdula (Fabr.) — Cosmopolitan.

C. smaragdulus Fabr.

Commonest form in the island - general coloration green - a pest of Ricinus communis L.

N. viridula torquata (Fabr.) — Cosmopolitan.

C. torquatus (Fabr.).

Common - green in colour with anterior part of head and prothorax orange yellow or yellow.

HOPE MUSEUM OXFORD
SPECIMEN FROM TYPE SERIES OF
STENOTOMA
DESJARDINSI
WESTWOOD
NO 397

PHRICODUS HYSTRIX SPINOLA 1839

NOTE THE CURIOUS DEFORMATION OF THE ANTENNA

PLATE 7 a

SCOTINOPHARA MADAGASCARIENSIS

TYPE: MUSÉE DU CONGO
LOCALITY MADAGASCAR
(SIKORA)
COLL: SCHOUTEDEN

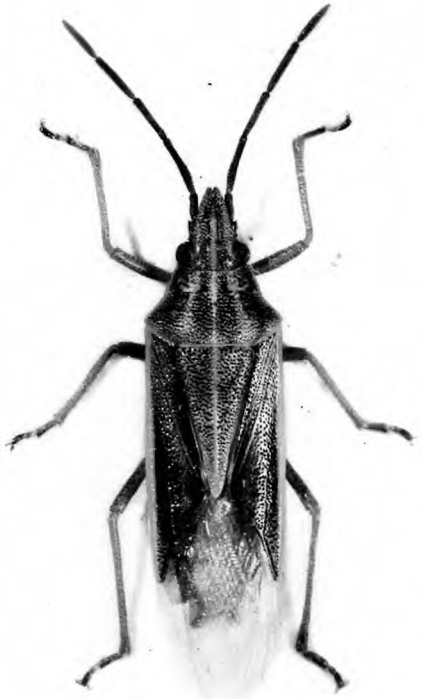
SCHOUTEDEN

♂

LOCALITY: MAURITIUS

PENTATOMIDAE

♀

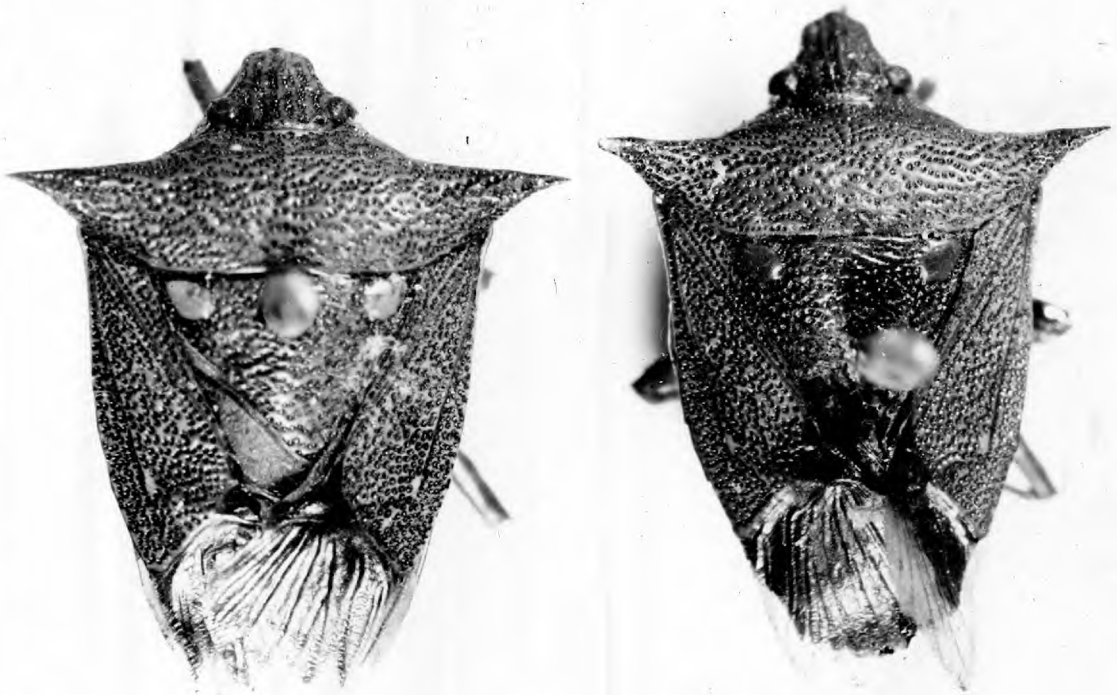


♂

MECIDEA QUADRIVITTATA (SIGNORET)

PLATE 8


MECIDEA QUADRIVITTATA
(Signoret)
♂



SYNTYPES OF ASPAVIA ARMIGERA (FABR.)

From the collection of SIR JOSEPH BANKS now at the B.M.(N.H.) LONDON.

(SYNTYPE) TWO VIEWS OF LEFT PARAMERE

OF A. armigera (FABR.)

PLATE 9b

XXIX. Chinavia gen. nov. from AFRICA, MADAGASCAR, & MAURITIUS, with notes on the related genus ACROSTERNUM FIEBER

In 1858, Stål (Oef. vet. Ak. Förh. 15:437) described a new species of PENTATOMIDAE from Madagascar naming it Rhaphigaster pallidoconspersus.

Several years later Signoret (Ann. Soc. ent. France 1861, 8(3):935) redescribed it as a new species of Nezara Amyot & Serville 1843 under the name of N. flavopunctata.

In 1865 Stål (Hem. Afr. 1:196) synonymised the two but agreed the species was referable to the genus Nezara.

In 1866 Mulsant & Rey (Pentatomides:288-298) redescribed species of Acrosternum and Nezara under Nezara A. & S., thereby withdrawing the genus Acrosternum Fieber 1860[+] as a junior synonym of Nezara.

In 1890 Sharp (Trans. ent. Soc. Lond. 406-408. pl. XIII, figs. 11, 12, 16, 17) in his study of the 'structure of the terminal segment in some male Hemiptera' produced strong evidence that Nezara and Acrosternum are distinct genera.

In 1909 the next important work on the genus Nezara followed when Kirkaldy (Cat. Hem. 1:115-118) divided Nezara into six subgenera: Nezara A. & S. 1843, Acrosternum Fieber 1860, Pellaea Stål 1872, Banasa Stål 1860, Atomosira Uhler 1871 and Rio gen. nov. Kirkaldy 1909. He placed N. pallidoconspersa (Stål) in the subgenus Acrosternum, where it has

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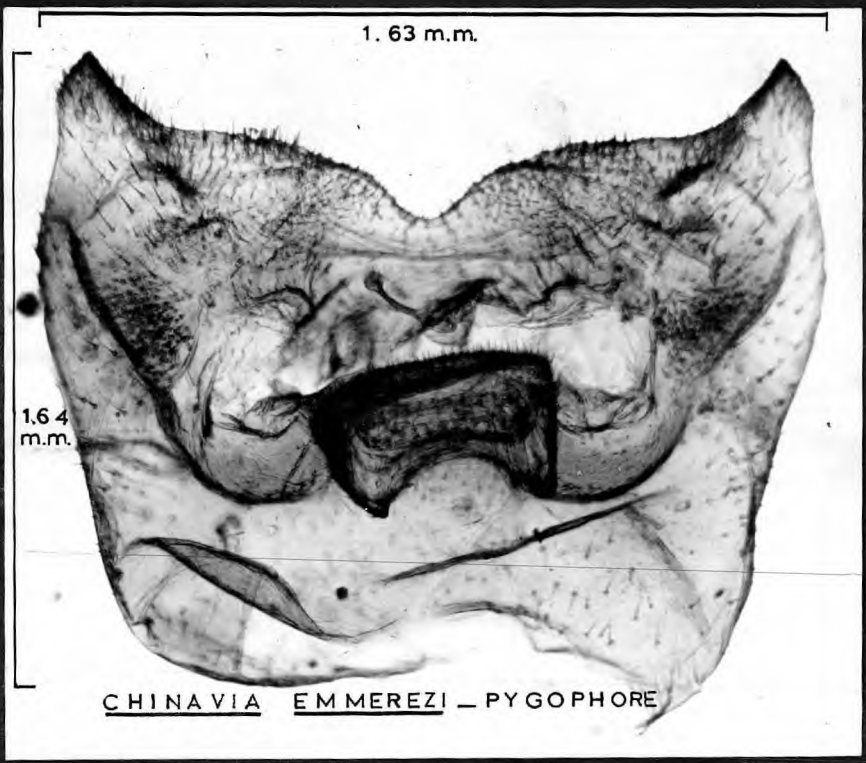
[+]Fieber's 'Die Europäischen Hemiptera' was first published in parts, pp. 16-108 (acc. to Hagen, Bibliotheca Entomologica:233) 1-112 (acc. to Van Duzee, Cat. Hem. Amer. N. Mexico:831) appearing in 1860 and the balance in 1861. The genus is keyed on p. 79. In accordance with art. 21d of the Int. Code Zoo. Nomen. 2nd Ed. 1964:21, the present author accepts 1860 as the valid year of publication for Acrosternum.

PYGOPHORE OF ACROSTERNUM HEEGERI FIEBER



CHINAVIA EMMEREZI — PYGOPHORE

remained ever since although, following Bergroth ('Notes on some genera of Heteroptera':Ann. Soc. ent. Belg. 1914, 58:23-28) this subgenus is now generally regarded as a distinct genus.

In 1926 Kiritschenko (Beiträge zur Kenntnis paläarktischen Hemipteren - Konavia 5:61-62) also considered Acrosternum to be an independent genus.

In order to form his own opinion of the true affinities of 'pallidoconspersum' the author borrowed the type species of Acrosternum Fieber (i.e., A. heegeri Fieber) from the Naturhistorisches Museum (Vienna) through the courtesy of Professor Dr. Max Beier (Plate 13. Holotype female, dorsal and ventral views).

The dissection and examination of the male genitalia and pygophore (Plate 10 above, Plate 11 above) at once indicated that A. heegeri was generically distinct from pallidoconspersum. Plates 15, 15a Figs. 1-5 & Plates 10, 11, 13) show these differences clearly.

A. pallidoconspersum does not fit into any known genus of PENTATOMINAE: a new genus is therefore proposed to contain this species and a number of other African and Madagascan species apparently with close affinities. The genus is dedicated to Dr. W.E. China, world renowned hemipterist at the British Museum (Natural History) during the past 40 years.

Chinavia gen. nov.

Subfamily PENTATOMINAE Amyot & Serville 1843

Tribe Pentatomini Kirkaldy 1909

Relatively large-green obovate pentatomids, above fairly densely punctate, below smoother, obsolete punctate.

Head with tylus and juga almost equal in length, bucculae well developed extending ~~forward~~ back to a point level with the hind margin of eye. First rostral segment as long as bucculae extending back to a point level with hind margin of eye, basal antennal segment not extending beyond juga. ~~Bucculae continued back to hind margin of head.~~

Metathoracic scent gland peritreme elongate and acuminate, extending antero-laterally to run parallel to the hind margin of mesopleuron as in some species of Acrosternum.

Spiracles eccentrically placed on the posterior lateral edge of an elevated, shining round spot varying in colour according to species. Pygophore generally shallowly concave, ventral margin not strongly produced into lateral lobes as in Acrosternum, if produced, e.g. in C. litura (Horv.) the apex of lateral lobe pointed and not broadly truncate as in Acrosternum (heegeri). Ventral margin is deeply emarginate in posterior view, giving rise to two sublateral vertical lobes. Parameres always tongue-shaped with the apex pubescent and with the basal spur on the outer margin.

Type-species: Rhaphigaster pallidoconspersus Stål.

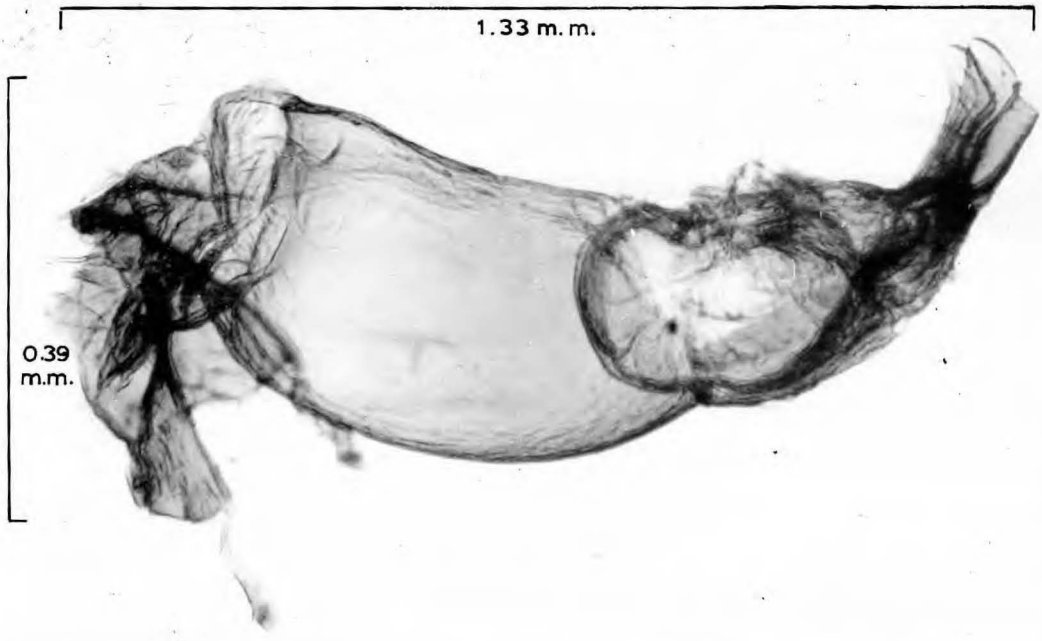
Type-locality: Madagascar.

The author considers that the following pentatomine species should be assigned to Chinavia; the genera under which they were originally described are indicated below within square brackets:-

Acrosternum acutum (Dallas) ..... E.& W. Africa, Madagascar
[Rhaphigaster]

A. bergrothi (Horv.) ..... Madagascar, Mascarenes
[Nezara]

ACROSTERNUM HEEGERI_ aedeagus (everted)



A. emmerezi (Schouteden) ..... Mauritius
[Nezara]

A. lituratum (Horv.) ..... Madagascar
[Nezara]

A. macrorhaphis (Horv.) ..... W. Africa
[Nezara]

A. punctatorugosum (Stål) ..... W. Africa
[Rhaphigaster]

A. rinapsus (Dallas) ..... W. Africa
[Rhaphigaster]

A. varicornis[+] (Dallas) ..... W. Africa
[Rhaphigaster]

1. Chinavia pallidoconspersa[++] (Stål) comb. n.

Plates 15 & 16, ♀♀, figs.

Synonymy

Rhaphigaster pallidoconspersus Stål 1858 (Oef. Vet. Ak. Förh. 15:437).

Nezara flavopunctata Sign. (Ann. Soc. ent. France 8(3):935).

N. (Acrosternum) pallidoconspersa Kirkaldy 1909 (Cat. Hem. 1:115-118).

Acrosternum pallidoconspersum Cachan 1952 (Mém. Inst. Sci. Mad. (E) 1:446)

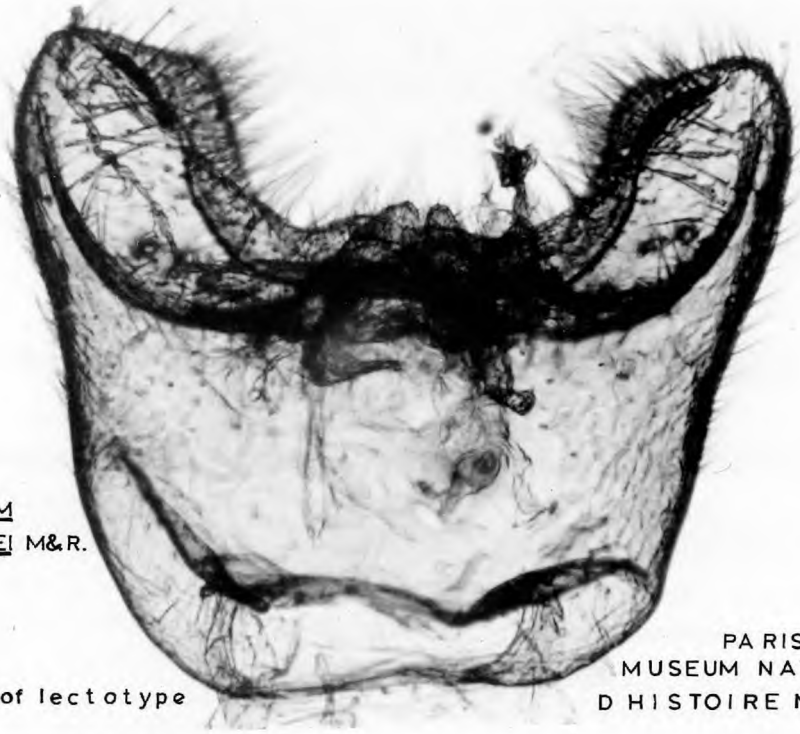
Redescription

♂: Length 12-15mm. maximum pronotal width 7.5 - 9mm.

♀: " 14-17mm. " " " 8.5 - 10mm.

[+]It is interesting to note that Lethierry & Severin (Gen. cat. Hem. 1:201) were unable to place this species from Dallas' description.

[++]This species is a pest of Cajanus cajan Mills. and of Brassica sp. in Mauritius.



ACROSTERNUM
MILLIEREI M&R.

Pygophore of lectotype

PARIS
MUSEUM NATIONAL
D HISTOIRE NATURELLE

ACROSTERNUM MILLIEREI – AEDEAGUS(everted)

Lateral margins of head and pronotum orange yellow; apex of tylus green or yellowish green; eyes prominent; ocelli almost touching the anterior margin of the pronotum. Antennae with first and second segments green; apex of third, apical half of fourth and fifth infuscate. The distinguishing characteristics of this species are the numerous conspicuous small whitish or yellowish callosities dotted over the pronotum and corium, the pale spiracles with the aperture on the posterior lateral surface[+] of raised bright orange swellings located in the anterior half of each segment (Plate 15 above, Plate 16 below). Trichobothria long, arranged in pairs transversely on the sternites, the ental trichobothrium more strongly developed and longer than the ectal, the rim of the insertion pit very distinct, appearing from above as a whitish green knob. The ectal trichobothrium lying in the spiracular line, the ental distinctly intad.

General puncturation dark green; basal angles of scutellum without impressed pit but with small white levigate spot and two larger ones along basal margin, one on each side of middle line. Lateral margins of abdomen orange yellow both ventrally and dorsally; apical angles of connexivum ventrally with a black spot and dorsally with a black transverse band or spot. Basal ventral abdominal tubercle extending forward to intermediate coxae.

Pygophore (Plate 15 a, fig. 5).

Apical inner surface of pygophore near the dorsal margin covered with dense regular pubescence directed towards the centre of the pygophore.

[+]Cachan's statement that the spiracles lie 'au centre d'une callosité orange' is incorrect (Cachan 1952:446).

Dorsal margin concavely emarginated on each side of the broad median process which extends posteriorly to the base of the proctiger. Proctiger apically arcuate with a triangular pit on its dorsal surface, the apex of the triangle directed anteriorly, sides of triangle appearing as two distinct ridges which fit in the emargination of median lobe. Male genitalia (Plate 15 figs.1-5).

Theca well sclerotized with wide opening. Ventral conjunctival appendages lobe-like when inflated but acuminate and sclerotized apically, rounded at base, numerous longitudinal pleats or creases indicating the previous undilated folds; dorsal pair elongate in lateral view strongly sclerotized. Vesica short, arising in between the dorsal appendages, with a well-developed reservoir contained in the theca. Parameres simple, tongue-shaped with a lateral external spur at base directed cephalad, apex pubescent (Fig. 4).

Fig ., 2 Aedeagus, dorsal, expanded. Basal area omitted.

" 3 Aedeagus, lateral, expanded.

Fig., 4 Left paramere (dorsal view).

Female redescription based on Stål's 'type' specimen of R. pallidoconspersus (Locality: Madagascar) and from Signoret's 'type' specimen of N. flavopunctata: generalities confirmed from a number of ♂♂ and ♀♀ from Madagascar and S. Africa (Pretoria, Natal), Uganda, E. Africa, Nyasaland, Zululand, Cameroons, in the B.M. collection and from specimens from Mauritius in the author's own collection.


CHINAVIA EMMEREZI (Schouteden) comb. n.
MUSEE DU CONGO
COLL. Schouteden
HEMELYTRAL
CALLOSITIES
♂
PARATYPE

MANN_SPALATO

ACROSTERNUM HEEGERI FIEBER 1862

VIENNA

HOLOTYPE ♀ - NATURHISTORISCHES MUSEUM

PLATE 13

LECTOTYPES
MUSEUM NATIONAL
D'HISTOIRE NATURELLE
PARIS

♀

PLATE 13a

♂

ACROSTERNUM MILLIEREI M.& R.

2. Chinavia emmerezi (Schouteden) comb. n.

(Plate 10 below, Plate 11 below, Plate 12)

Synonymy.

Nezara emmerezi Schouteden 1905, Wien. Ent. Zeit., 24:52.

Acrosternum heegeri Fieber 1860 (Distant, in error: 1913 Trans. Linn. Soc. London Zool. 16:144)

Type locality: Mauritius.

Redescription.

Closely allied to C. bergrothi but differing slightly in shape of paramere and pygophore. Coloration very similar to bergrothi (Horv.) from Madagascar except for the tarsal articulations which are slightly yellow dorsally, whereas in bergrothi the articulations generally are dark-green or even blackish. Possibly a sub-species of C. bergrothi (Horv.).

Oval to round in shape; smaller than 'pallidoconspersa'.

♂ Length 11.5 - 12mm.; maximum pronotal width 7 - 7.5mm.

♀ " 13mm. ; " " " 8mm.

Greenish above, pale greenish below, darker green anteriorly, densely but minutely punctate.

Head green with inferior border reddish to straw-coloured. Antennae green, apex of third segment dark, apical part of 4th and 5th segments brown except at the base.

Pronotum and scutellum with irregular transverse slightly callous areas. Hemelytral callosities less distinct than in pallidoconspersa.

Basal ventral abdominal tubercle short and stout, extending only to posterior coxae. Spiracles dark on creamish white rounded spot. Trichobothria as in pallidoconspersa but smaller. Rim of insertion pit more distinct, brownish.

Recent work on Acrosternum and Nezara

Some useful notes on the characters of Acrosternum and Nezara are to be found in Freeman's 'Contribution to the study of the genus Nezara' (Trans. R. ent. Soc. Lond. 1940, 90:351-374).

Freeman, like Bergroth, separates the two genera on the structure of the metapleural orifices. If this criterion is adopted then many Nearctic and Neotropical pentatomine species fall under Acrosternum, a view which is open to doubt.

Equally Freeman's statement p.353, ♂ 3, that in 'Nezara' the 'ninth segment of the male is clearly visible in ventral view, whereas in Acrosternum it is retracted into the abdomen and is hardly visible in ventral view' should be re-examined: in the opinion of the present author this is an artefact condition more directly related to the methods employed for killing and drying the insect. It should be noted that N. o. (Sign.)[+] must now be replaced by the next available name:-

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[+]Since Art. 11g(i) of the International Code of Zoological Nomenclature (2nd ed. 1964:13) insists that 'a species name must be a simple word of more than one letter'.

N. orbiculata Dist.[+] The former was originally described under Rhaphigaster (Thoms. Arch. Ent. 1858, 2:289) but placed under Nezara by Stål (Hem. Afr. 1865, 1:197). Examination of the type specimen in the B.M. collection shows that it is the female of Nezara o. Schouteden (Cat. rais. F. ent. Congo Brussels 1909:60) had previously hinted on this possibility in his comment concerning N. orbiculata. He noted that the species was 'fort voisin d'aspect du Nezara O. Signoret, ne lui serait-il pas identique?'

It is worth using this opportunity to point out that in his article entitled 'Zur systematik der Gattung Acrosternum Fieber, Bull. Soc. Entom. Egypte 1959, 43:413-418, Wagner gives an inaccurate diagram for the genital segment of Acrosternum heegeri (p. 415, Fig. 10). A photograph of a preparation of the original 'type' series determined by Fieber himself (No. 365. Mann 1868 Spalato) clearly shows that the dorsal margin of the pygophore is prominently produced caudad to meet the base of the proctiger. Also the middle of the ventral margin of the pygophore is largely convex with a central concavity as shown in plate 10 above. Neither Lindberg[++] nor Vidal[+++]'s sketches of the genital segments show these feature clearly. Wagner (loc. cit.:416-417) also points out that Lindberg (loc. cit.) has established that Nezara heegeri Fieb.

[+](Proc. Zoo. Soc. 1890:476)

[++]Hemiptera Insularum Canariensum - Soc. Sci. Fenn. Comm. Biol. 1953, 14:44 Abb. 2, c & d.

[+++]Hémiptères de l'Afrique du Nord et des pays circum-méditerranéens. Mém. Soc. Sci. nat. Maroc, Rabat. 48, 1949, p. 173, fig. 122.

var. rubescens and N. millierei M. & R. var. rosea - both varieties described by Noualhier - are identical with Acrosternum canariense Lindberg: the present author is in agreement with this. Of the three names rubescens has priority over rosea by virtue of appearing earlier on the page (Noualhier Voy. Ch. Alluaud îles Canaries page 8) the species should be called Acrosternum rubescens Noualhier 1893 with the names 'rosea' and 'canariensis' as synonyms.

Wagner has shown that many of other so-called colour varieties in A. heegeri Fieb. and A. millierei Muls. are not even varieties but only stages in progressive loss of colour, which has as its end point unicolorous green.

In the light of the above it might prove interesting to re-examine all pentatomine species placed under Acrosternum, in particular the American species, to see whether the genus is widely distributed or, as would appear from the B.M. collections, confined to the Palaearctic - Mediterranean region. On the other hand, the various species of Chinavia appear to be widely distributed in the Ethiopian region generally.

The author wishes to tender his thanks to Mr. J.P. Doncaster, Keeper of Entomology at the British Museum (N.H.) for providing facilities for work in the Department of Entomology.

Professor O.W. Richards, F.R.S. and Dr. W.E. China made valuable suggestions.

XXIXa. Bathycoelia rodhaini[+] Schouteden 1913

Rev. zool. afric. 2:193-194.

The Mauritian specimens (Plates 14 & 14a) agree very well with B. rodhaini Schouteden described from the Congo (Sankisia) collected by Dr. Bequaerti, 3.4.1911.

The holotype ♀ was communicated to the author by Dr. Schouteden. The male not having been described yet, the author accordingly includes a description in the present study. Additional notes on the female are also given. Dr. Schouteden kindly sent also a male from Lulua (Katanga - coll. G.F. Overlast, 1.1933).

Diagnosis: ♂ Ground colour: pale olivaceous, bluish green in some specimens, especially on disc of pronotum. Underside of head whitish. Lateral margins of head, pronotum and abdomen narrowly black, bordered on innerside with a pink stripe of equal width on head and thorax narrower on the abdomen - entad of this on the laterotergite of the abdomen a broader red stripe; a narrow black stripe between eye and antennophore; antennae greenish grey with basal segment and basal half of second segment pale pinkish violet; antennal pubescence made up of whitish or lightly coloured setulae and setae; proximal fourth of costal margin of hemelytra red with the external margin narrowly pallid; scutellum with a large pale orange, laevigate, convex spot at the basal angles but without any black pit at the extreme angle; legs pale olivaceous, pro- and meso-pleura pale bluish green laterally whitish or light-yellowish brown; abdomen above

---

[+]Dr. Schouteden appends the following note to his description: 'Je dédie cette magnifique espèce, voisine de thalassina H. Sch. et bequaerti Schout. à M. le Dr. Rodhain, Chef de la Mission d'étude de la maladie du Sommeil [au Katanga 1911-1913].

BATHYCOELIA
RODHAINI
SCHOUT.

♂

B. RODHAINI SCHOUTEDEN

♂

PLATE 14

mainly concolorous, but a large part of the disc of ventral side fulvous.

Description:

(a) Size:[+] ♂♂ Body length 19-20 (hemelytral membrane not included).

♀♀ 21.4-22.0 " " " "

Maximum pronotal width - ♂ 10.5.

♀ 13.0

This is the largest pentatomid species in Mauritius.

(b) Structure: Head subtriangular, slightly shorter than width across eyes (1:1.1) finely aciculately punctate; ocelli more than twice as far from one another as each is from an eye. Ratio of antennal segments[++] 1.0:1.6:3.0:3.2:2.9. Rostrum extending to base of seventh abdominal sternite, almost to apex of median sulcus of abdomen. Median length of pronotum rather greater than that of head. Corium distinctly densely punctate; membrane subhyaline; underside impunctate; glabrous. Spiracles concolorous without adjacent raised spots. Median sulcus deep, extending to seventh ventrite. Trichobothria long, arranged in pairs transversely on the sternites, slightly entad of spiracular line, rim of insertion pit distinct, brownish.

Host plant: Terminalia catappa L. (COMBRETACEAE).

Distribution: Mauritius,[+++] Réunion, Madagascar, East Africa, West Africa.

In Mauritius the author finds that specimens are more commonly

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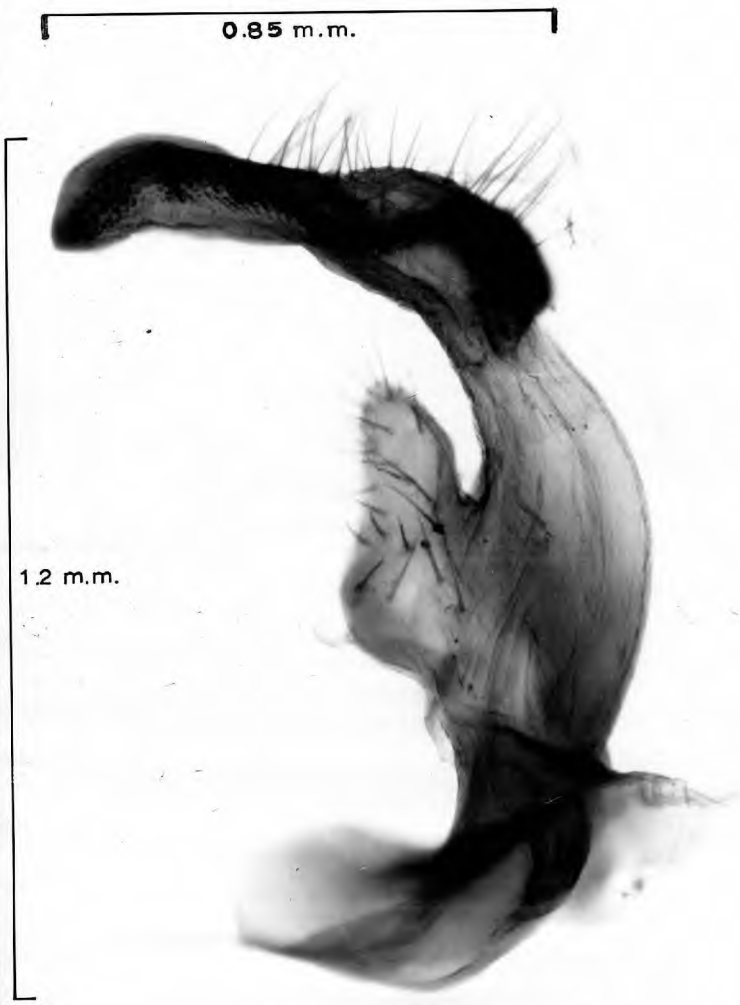
[+]All measurements in mm.: based on 3♂♂ and 7♀♀.

[++]Based on ♀♀.

[+++]On the island of Rodriguez a very different species Bathycoelia flavolimbata China (1924) occurs: the parameres of this species are not typical of the genus. (Orian 1956: B. buonopziensis P.B. in error.)



BATHYCOELIA RODHAINI L. PARAMERE

captured during the warmer months of the year (December-April) and in the hotter regions of the island, e.g., Rose Hill, Black River, G'Bay.

Specimens examined: 3♂♂ & 3♀♀ ex. (A. Orian) from Rose Hill, Mauritius & L.P. Regnard (Black River: 26.iii.1948). 2♀♀ from St. Paul - Hermitage (Réunion Is.) ex. Renaud Paulian, 15.vi.56 (Inst. Sci. Madagascar); ♀ from Madagascar Est. Tamatave x.58 ex. (R.E.) (Institut Sci. Madagascar). ♀ East Africa, Lake Victoria Is. ex. Dr. G.H. Carpenter 5.ii.1919. 2♀♀ West Africa, Principe I. 19.xii.1932, W.H. Tams. ♀ Tamsoo, Gold Coast - 1901 (other data unknown), Schouteden's type ♀ from the Congo and a male (from the same area).

Specimens of B. rodhaini have been erroneously referred to as B. thalassina Herrich-Schaeffer by Mamet (Bull. Mauritius Inst. 1957, 5:40).

Genitalia: ♂ pygophore trapezoid (2.48mm. wide by 2.09 long), biconvex dorsoventrally; lateral apical lobes of genital cup well-developed and auriculate with a heavily sclerotized and darkly tanned transverse protruberance bearing hairs. Diaphragm bearing a pair of broad, bicuspidate sclerotized superior processes near the dorsal margin which is concave. Ventral margin bisinuately concave - two centrally placed lobes with a notch between them.

Parameres lying almost horizontal in the pygophore; roughly T-shaped, the stem (1.200m. long) bearing a dorsal side-lobe with its apex directed caudad, the terminal bar (0.85mm. across) developed into an explanate head recurved at the tip and forming a slightly notched margin bearing several rows of tiny tubercles (Plate 14a).

Aedeagus: Phallotheca heavily sclerotized all round, vesica very short,

tube-like and lying between two heavily sclerotized spatulate dorsal conjunctival appendages; another pair of fleshy bilobate leaf-like conjunctival appendages - the larger lamina of which ends in a sclerotized tooth - surrounds the vesica; ventrally there is also a small membranous lobe which may represent a third pair of conjunctival appendages.

BATHYCOELIA FLAVOLIMBATA CHINA

CHINAVIA gen. nov.

C. PALLIDOCONSPERA (Stål)

PLATE 15

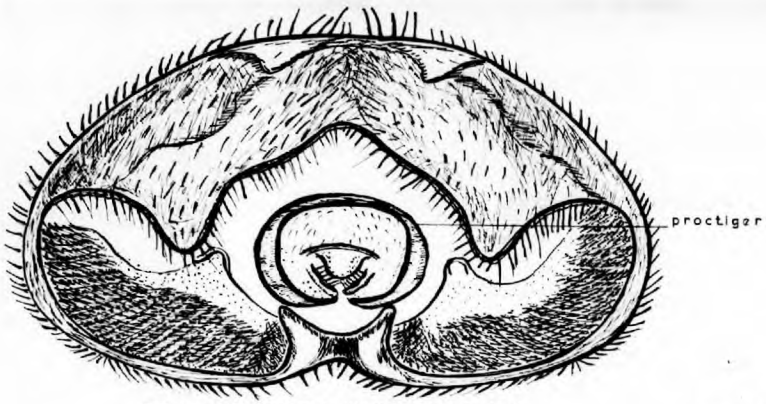


FIG 1 PYGOPHORE viewed from behind (parameres removed)

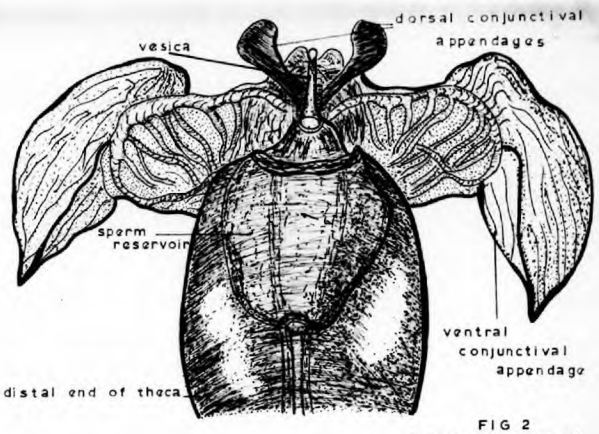


FIG 2 AEDEAGUS: dorsal view

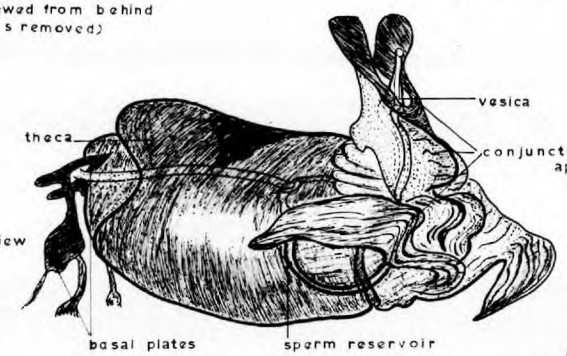


FIG 3 AEDEAGUS: 3/4 lateral view

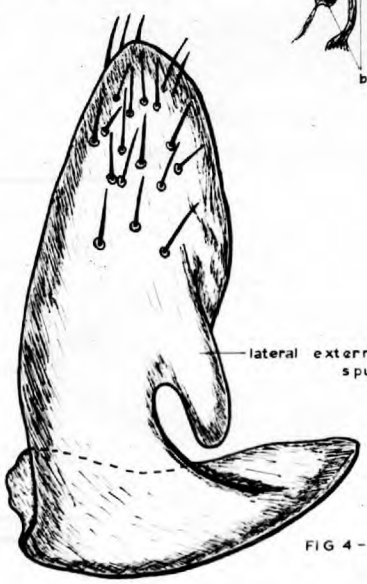


FIG 4 - PARAMERE (left)

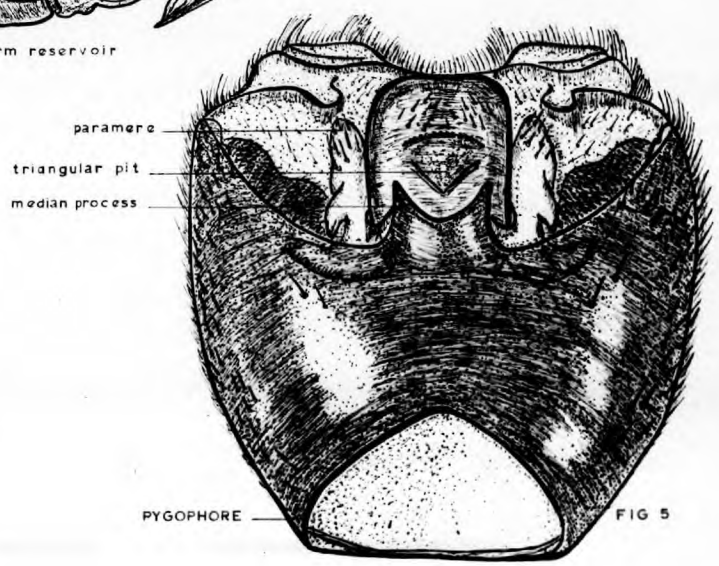


FIG 5

PLATE 15 a CHINAVIA PALLIDOCONSPERSA (Stål)


CHINAVIA
GEN. NOV.
PITS OF TRICHOBOTHRIA
SPIRACLE WITH APERTURE ON THE POSTERIOR LATERAL SURFACE OF RAISED ORANGE SWELLING

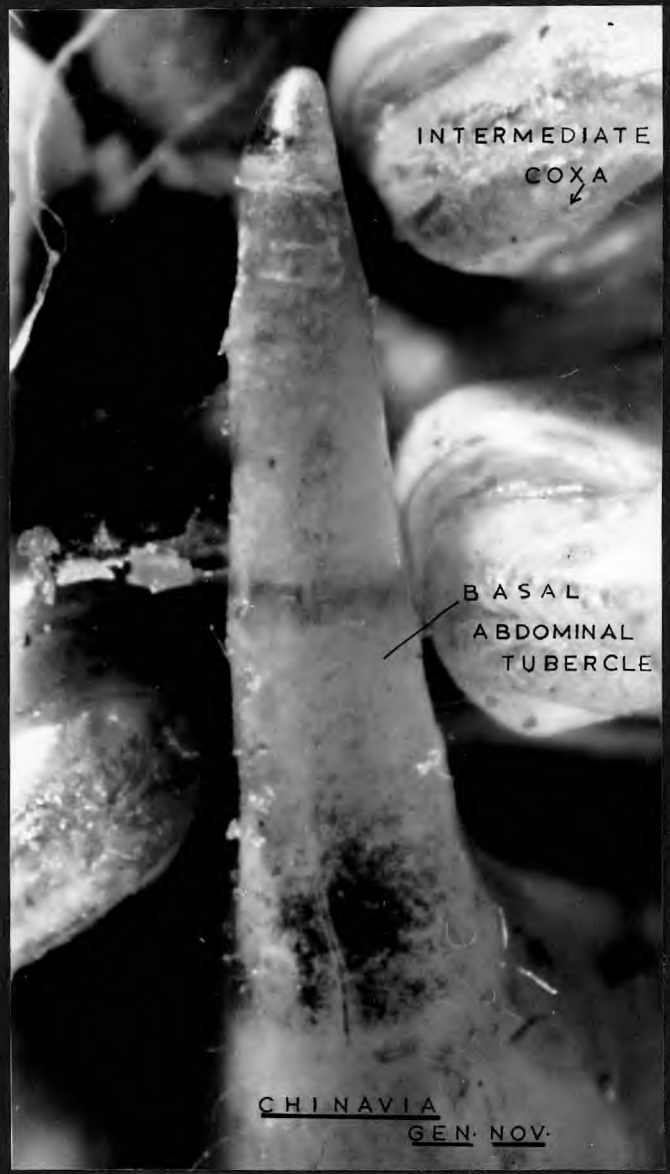
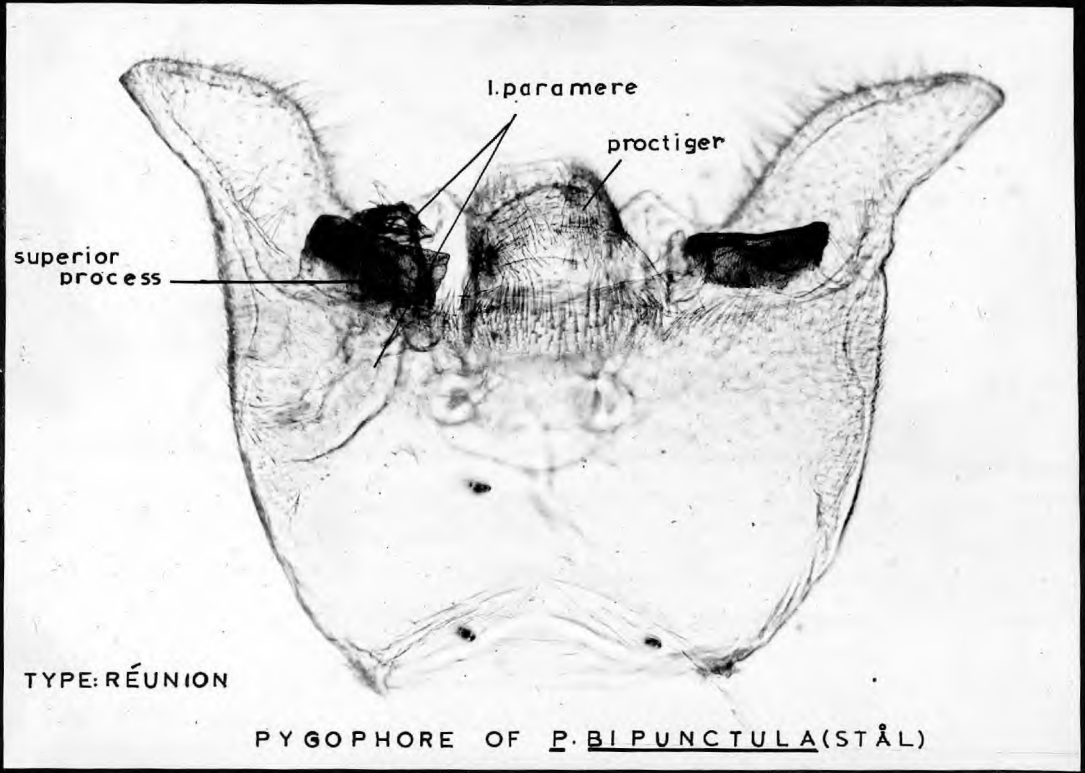

INTERMEDIATE COXA
BASAL ABDOMINAL TUBERCLE
CHINAVIA
GEN. NOV.

PLATE 16

PSEUDOBATHYCOELIA gen. nov.

P. BIPUNCTULA (STÅL) MASCARENE IS.

P. bipunctula - l. paramere
(TYPE)



PYGOPHORE OF P. BIPUNCTULA (STÅL)

XXX. PYRRHOCORIDAE (Amyot & Serville) 1843

Mamet's list (1957b) is apparently complete, but he repeats an error made by many authors in giving credit to Audinet-Serville for the generic name Dysdercus. Dupuis (1952, p.450) has shown that "'Dysdercus' Guérin 1831 a la priorité sur Dysdercus Serville in Boisduval 1835 et Dysdercus Amyot et Serville 1843."

XXXI COREOIDEA Reuter, 1910

China and Miller (1959) in their 'Check-list and Keys to the families and subfamilies of the Hemiptera-Heteroptera' divide the 'COREIDAE' into 5 subfamilies: Agriopocorinae, Rhopalinae, Alydinae, Merapachynae, Pseudophloeinae, Coreinae. They also consider that some of the tribes of the Coreinae are worthy of elevation to subfamily rank, e.g. Prionotylinae.

More recent work [e.g., Schaefer's studies on 'the Morphology and Higher Classification of the Coreoidea (Hemiptera-Heteroptera): Parts I & II (Ann. entomol. soc. Amer. 57:670-684 (1964)] leads to the conclusions 'that a lygaeoid ancestral stock has given rise to 2 superfamilies, the Coreoidea (COREIDAE, ALYDIDAE, RHOPALIDAE and STENOCEPHALIDAE) and the Pyrrhocoroidea (LARGIDAE and PYRRHOCORIDAE): and that the STENOCEPHALIDAE and the LARGIDAE are the least advanced in their respective superfamilies.'

Schaefer's views - also shared by the present author - are that 'within the COREOIDEA, the COREIDAE, ALYDIDAE and RHOPALIDAE merit family status; and that, of these, the RHOPALIDAE are the most generalised, the COREIDAE the most advanced and the ALYDIDAE intermediate in some respects but highly specialised in others'.

A detailed study of the various 'coreoids' of the Madagascar-The Mascarene-The Seychelles area might reveal facts of importance in family relationships and phylogenies of the tribes and subfamilies. Unfortunately for almost one hundred years no recent revision for the fauna of the area has appeared. Signoret and Stål's revisions are still very useful.

Although the ♂ genitalia of some Mauritian forms (especially

types) have been dissected, it has not been found possible to discuss these in the present study. Simple characters to separate the families are given below as well as a list of species from Mauritius in the author's collection.

COREIDAE, RHOPALIDAE & ALYDIDAE: Diagnostic characters.

COREIDAE	RHOPALIDAE	ALYDIDAE
Scent gland orifice, typically speaking: large, bilobate, easily seen in side view. Some exceptions, e.g., Pseudophloeinae, Aranocorinae.	Scent gland orifice very often hidden - covered over by extension of the thoracic pleura behind mesocoxa (N.B., Pygophore characteristically shallow, often 'open' posteriorly and usually retracted within the seventh).	Scent gland orifice usually not bilobate and not generally visible in lateral view, having moved to a ventral position. (N.B. Head to pronotal ratio significantly different from COREIDAE & RHOPALIDAE as is the extension of the bucculae.

RHOPALIDAE

Genus Leptocoris Hahn 1831
Wanz. Ins., 1:200.

L. haematicus Germar 1840[+].
Silb. Rev. ent. 5:144-154.

Type: B.M. (N.H.) ♀ Ex. coll. Drège [vide Plate 17h]

Type locality: Cape of Good Hope.

Mauritius, Rodriguez, Réunion, Madagascar. Seychelles, Cosmoledo, Aldabra, S. & W. Africa, Ethiopian region.

(Serinetha lateralis Signoret 1861.
Ann. soc. ent. Fr., (3)8:939.

Stål (1865, Hem. Afr. 2:114) considers L. lateralis[+] (Sign.) as a synonym or, at the most, a colour variety of L. haematicus).

L. mutilatus (Gerstäcker) 1873 (?).

(= Serinetha mutilatus. Ann. soc. ent. Belgique 38:547(1894).

Tanganyika, Mombasa S. Rhodesia, Transvaal, Natal, E. Africa, Mauritius (?)

[+]Mamet's spelling L. haematica is erroneous: as pointed out earlier in this study 'all generic names ending in -coris are masculine.' Therefore correct specific name is haematicus (lateralis is both masculine and feminine. Mamet is in error also about the date which he gives as 1837.

N.B. This species was first described as a lygaeid by Gerstäcker in V.d. Decken's Reisen III:2:412. In Walker's catalogue it is placed in the genus Tynotoma (specimens in author's collection det. by C.I.E., Ref. No. 18002).

Genus Liorhyssus Stål, 1870
En. Hem., 1:22

Type-species: L. hyalinus Fabr.

L. flavomaculatus Signoret, 1859. Mauritius,
Ann. soc. ent. Fr.+ (3)7:89. S. Africa.

First recorded from Mauritius by Orian (1956 loc. cit., p.645).

L. natalensis Stål 1855.

= Coriz·us variegatus Signoret 1859 Ann. Soc. ent. Fr. (3)7:89.

= C. truncatus Ramb., (fide Stål, 1865 2:118).

Host plant: Tephrosia sp.

L. hyalinus (Fabricius) 1794. Mauritius,
Ent. Syst. 4:168:115. Rodriguez, Hawaii,
Cosmopolitan.

Host plants: Croton persicaria Baill.,

Lactuca sativa L., Sonchus oleraceus L.

♀ recopulates after oviposition. Ova with process on chorion below opercular suture & operculum.

Genus Stictopleurus Stål, 1872

(?) Stictopleurus sp. near scutellaris Dallas. Réunion (New record)

[Specimen determined by China].

+Mamet (1957b) gives series (2) in error.

COREIDAE

Genus Leptoglossus Guérin 1831[+]

Voy. Coq. Zool. 2;2:174 and Plates

Type-species: L. dilaticollis Guérin 1831

L. membranaceus (Fabr.) — Seychelles, Rodriguez, Mauritius, Réunion, widely distributed over Africa, India, Australia.

= Cimex membranaceus Fabricius 1781. Spec. Ins. 2;79.

First record from Mauritius: Schouteden 1907.

Common on Cucurbita pepo L., & C. maxima Duchenne.

Genus Hydara Dallas

H. tenuicornis (Westwood). — Mauritius, Africa, Madagascar, Seychelles.

Coreus tenuicornis Westwood 1842, in Cat. Hem. coll. Hope 2:224.

Type Ref. - Oxford Univ. Museum (Hope Department) No. 379.

Hosts: Asystasia coromandeliana Nees.

Ipomea batatas Lam.

Genus Cletus Stål

Stål, 1858[++] Freg. Eng. Resa. Ins. Hem. p.236.

Type-species: Cimex tugonus Thunberg.

C. ochraceus (H.-Schaffer). — Mauritius, Réunion, Rodriguez, Madagascar, Africa.

[+]Mamet gives 1830 in error - date of plates which appeared in 1831 should be taken (Art. 21, Règles Inst. Nom. Zool. cf. Opinion No. 1 of I.C.Z.N.)

[++]cf. Mamet's date 1859.

= Gonocerus ochraceus H.-Sch.
[+]1837 Wanz. Ins. 6:7, fig.563.

Originally described from Cape Colony.

Host: Amaranthus sp.

C. fuscescens Walker. — Mauritius (?), West Africa.

Cletus fuscescens Walker 1891, Cat. Hem. Het. B.M. 4:190.

C. capensis Westwood. — S. & W. Africa, Kenya, Uganda, Mauritius.

Coreus capensis (Hope cat., 2:23 (1842)).

(Ref. No. C.I.E. 18093).

(New record)

Genus Cletomorpha Mayr. 1866
Reise Nov., Hem. p.118.

Cletomorpha sp.

(Orian, 1956 loc. cit. p.644)

Genus Acanthomia[++] Stål 1873
K. Svenska vet. Ak. Handl., 11, No. 2:82.

A. horrida (Germ.) — S. Africa, Madagascar, Zansibar, Seychelles, Mauritius, Réunion, Rodriguez.

Syromastes horridus Germar 1837.
in Silbermann, Rev. Ent., 5:145.

First record: Signoret (1862 in Millard p.28)

[+]cf. Mamet's date 1842.

[++]There seems to be some doubt as to the exact position of this genus.

ALYDIDAE

Genus Leptocorisa[+] Latreille

L. apicalis Westwood 1842 (in Mamet's list, p.42).

According to Ahmad (Imtiaz) Ph.D. thesis LONDON[++], this species should now be known as Stenocoris (Erbula) annulicornis (Signoret) 1860 (on graminaceous weeds).

Again according to Dr. Ahmad (p.206) another species occurs in Mauritius: Stenocoris (Stenocoris) phthisica.
(1♂ in B.M. coll. by J.E.M. Brown det. by Blöte as Leptocorisa annulicornis).

S. phthisica is also recorded from the Congo, Tanganyika, The Seychelles.

It would appear that Stål's synonymy of L. apicalis and L. annulicornis is erroneous. Vide et Blöte (1937) and Villiers 1963.

Genus Hypselopus Burmeister, 1835
Handb., 2:1:328.

(Vide Plates 17c, $17c_1$)

H. villosipes (Amyot & Serville) 1842. — Mauritius, Rodriguez, Réunion, Cape of Good Hope.

Meloza villosipes A. & S., 1843, Hist. Hem. p.221.

[+]The genus Leptocorixa was first named by Berthold (1827) as in Latreille's French edition (1825) the genus was only indicated with the French name Leptocorise. Later Latreille (1829) p.197, note, used the name Leptocorisa. The case is fully studied by China & Ahmad in Bull. Zool. Nomencl., 20;6:435-437 (December 1963). [Leptocorixa Berthold, 1827 (Insecta, Hemiptera) proposed suppression under the plenary powers in favour of Leptocorisa Latreille, 1829. Z.N. (S.) 1589]

[++]Studies on the taxonomy of the ALYDIDAE with special reference to the subfamily Leptocorisinae (Heteroptera) - 1963.

HYPSELOPUS VILLOSIPES
AMYOT & SERVILLE

♂

HYPSELOPUS VILLOSIPES A.& S.

(Described from Mauritius - Type ♀ in Signoret's Collection.)

It appears from a preliminary study of specimens of this species that H. prolixus Stål 1858 - Freg. Eug. Resa. Ins. Hem. p.233 is not a distinct species but the corresponding sex (♂) 'prolixus' has stronger femora and shows differences in pronotal patches.

Genus Daclera Signoret 1862
in Maillard p.27.

D. punctata Signoret 1862. Mauritius,
(loc. cit. p.27) Réunion, Ibadan,
Sierra Leone,
Originally recorded from Mauritius by Signoret, Tanganyika.
p.28.

Genus Tupalus Stål 1859
Ofv. Vet. Ak. Förh. p.460

T. arcuatus (Fabr.) 1798. East Indies,
Madagascar (?),
Lygaeus arcuatus Fabricius, Ent. Syst. Suppl., p.238. Mauritius (?)

Habitat: According to Fabricius, East Indies. It would be desirable to check on the actual distribution and identity of 'arcuatus'.

Specimens in author's collection appear different from those from Madagascar and East Indies.

Genus Nariscus Stål 1866
Hem. Afr. 2:100.

N. cinctiventris Germar, 1837. Ethiopian region,
Mauritius.
in Silbermann, Rev. Ent. 5:152.

Genus Euthetus Dallas 1852
List. Hem., pp.467 & 479.

Euthetus sp., according to Mamet is closely related to E. sordidus Stål, described by S. Africa. According to Dr. Ghauri (C.I.E. Ident. List 16676) specimens from Mauritius are near 'pallescens' Distant.


TYPE
BRITISH MUSEUM (NAT. HIST.)
♀
LEPTOCORIS HAEMATICUS Germ.

XXXII. STENOCEPHALIDAE Dallas 1852

Nomenclature:

The first use of the family group name STENOCEPHALIDAE was by Dallas 1852 Cat. Hemipt. B.M. 2:480; but he included besides STENOCEPHALIDAE the Alydid genus Leptocorisa. Scudder (Proc. R. ent. Soc. Lond. (A) 32:147) attributes STENOCEPHALIDAE to Douglas and Scott, presumably because they included in the group only the genus Stenocephalus. This was undoubtedly due to the fact that Leptocorisa is not a British genus. China 1943 drew attention to the priority of Dicranocephalus over Stenocephalus. Unfortunately he cited Dicranomerus instead of Dicranocephalus (lapsus calami).

Genus Dicranocephalus Hahn, 1852
Icones ad Monographiam Cimicum
[= Stenocephalus Berthold 1827 (Latreille 1825)]
[Plate 17d]

D. punctipes (Stål). — Madagascar (Nossy Bé), Seychelles, Rodriguez.

= Stenocephalus punctipes Stål, 1873. Kongl. Sv. Vet.-Ak. Handl. 11, 2:85.

Often caught in light traps.

Type locality: Madagascar.

D. punctarius (Stål). — Réunion, Mauritius (?)

Described from Réunion. The author suspects this so-called distinct species to be the female of D. punctipes. The type is a female slightly darker in colour than 'punctipes' and apparently otherwise distinguishable from it only by the last antennal segment which is longer than the second segment.

PLATE 17d.

STENOCEPHALIDAE DALLAS 1852

TYPE LOCALITY:
MADAGASCAR

DICRANOCEPHALUS PUNCTIPES (STÅL)

XXXIII. LYGAEIDAE Schilling 1829

[correction of LYGAEIDES[+] Schilling, Beitr.]

Of all the major hemipterous families in the Madagascar - Seychelles - Mascarene region the LYGAEIDAE were the least understood. The appearance in 1964 of a 'Catalogue of the LYGAEIDAE of the World', Vols. I & II (Slater J.A.) with the considerable changes of nomenclature has improved the situation. The present author is in agreement with most of the changes proposed for the taxa of the region. A good deal of research has yet to be done, however, on ♂ and ♀ genitalia, more especially detailed examination of the inflated phallus and trichobothrial pattern.

Professor G.G.E. Scudder in his recent revisions of the world Ishnorhynchinae and Heterogastrinae and of the tribe NININI (CYMINAE) has also made important changes to the status of many lygaeids from the area. Some of Scudder's recently described species are not included in Slater's Catalogue. Scudder's present revision of the world Rhyparochrominae will include descriptions of many species of Rhyparochromi*ne*s from the Mascarene Islands.

[+]Article 11(e)(iii) of the International Code 1961 clearly states that vernacular names of family-groups which were not fully latinised are available from the original date if they have been latinised by later authors and generally accepted. Amyot & Serville's 1843 family group names are therefore available from that date, even though the endings do not conform to modern usage. China and Miller, writing 2 years before the publication of the Code, decided to use Amyot & Serville's names, but being uncertain whether such names would be accepted in the forthcoming Code, they also gave the next available which would be used if A. & S. names had been invalidated by the Congress of Zoology 1958. In the present case they accepted Schilling as authority for LYGAEIDAE.

Other active workers on the LYGAEIDAE are Ashlock, Sweet, Woodward, Gross, Štys[+] but their studies are concerned mostly with other regions, not with the 'Madagascar - Seychelles - Mascarene' area. Slater (1955) in his revision of the world Pachygronthinae described a new species: Pachygrontha paralineata[++] from Mauritius. In Scudder's paper 'The Ischnorhynchinae of the World (Hemiptera - LYGAEIDAE)'[+++] description is given of a new genus: Madrorgus.

The present author has in his collection numerous specimens of M. malagasicus Scudder which is abundant in Réunion. Scudder records it also from Madagascar, but it seems that the species has not yet reached Mauritius.

Part III of Scudder's 'World Rhyparochrominae'[++++] dealing with the Ethiopian region includes description of another interesting genus Necellochromus. The species N. distinctus, although it occurs almost through the whole of the Ethiopian region and Madagascar, has yet to be collected in the Mascarenes. In this same paper (p.1242) Scudder records Serranegra brevirostris Scudder and Migdilybs nudus Scudder from Madagascar. In another of his papers (unfortunately omitted from the thesis bibliography)[+++++] he describes (on p.407) a new species Afraethalotus maculatus from Madagascar.

Examination of the list of LYGAEIDAE given hereafter suggests that the Madagascar - Mascarene fauna has mainly African affinities:

[+]Malcinae (of the world).

[++]The present author recorded this species under the name Pachygrontha sp. nr. lineata. Mamet's comment p.53 (in his list) that this refers to P. bipunctata is erroneous.

[+++]Trans. R. ent. Soc. Lond. 114:163-194 (1962).

[++++]Canad. Ent. (95:1233-1253).

[+++++]'A Revision of the genus Astacops sensu lat.' - Pacific Insects 5:315-415 (1953).

HOLOTYPE –
NYSIUS EUPHORBIAE
HORVÁTH
♂

ALLOTYPE ♀

NYSIUS EUPHORBIAE HORVÁTH

the Seychelles fauna on the other hand has many Indian forms. However, it should be emphasized that many of the lygaeid species common to the Madagascan - Mascarene subregion and Africa show various degrees of intra-specific variation, in some cases amounting to subspeciation. One of the more notable cases is that of Spilostethus pandurus Scopoli; the Madagascan - Mascarene form is quite distinct, lacking the prominent white blotch of the hemelytra.

+Emendations to Mamet's list

p.48: Lygaeus pandurus (Scop.) should be referred to as Spilostethus pandurus asiaticus Kolenati.

" L. festivus Thunb. (preoccupied) should be replaced by S. furculus (H.-Sch.)

p.49: Graptostethus servus (Fabr.) - The Mauritian subspecies is G. servus insularis (Stichel).

" Melanotelus argillaceus Reuter belongs in Lagaeosoma Spinola 1837.

p.51: Mamet's note that Lethaeus longirostris Reuter (listed by Orian 1956:146) does not occur in Mauritius is erroneous.

p.52: 'Aphanus sp.' refers to Rhyparochromus consocialis Distant or R. sordidus F.

p.53: Geocoris mauritii Stål is a variety of G. pallidipennis Costa.

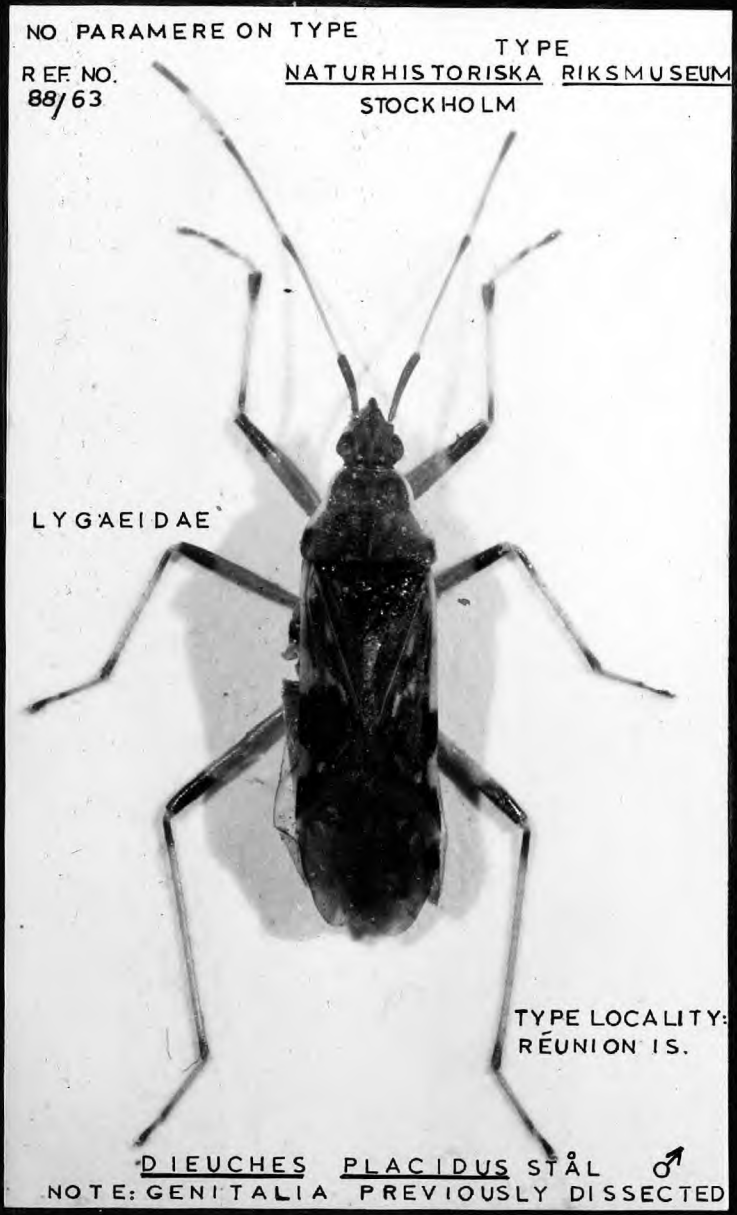
" Cymus mauritii (Stål) is now in Cymodema Spinola.

p.54: Arocatus sp. is the common 'Coenocoris nerii' Germar.

" Orthaea sp. is referable to Pachybrachius lounsburyi Distant.

+Some of these emendations apply to previous lists of records from Mauritius.

PLATE 17 g


NO PARAMERE ON TYPE
TYPE
REF. NO.
88/63
NATURHISTORISKA RIKSMUSEUM
STOCKHOLM
LYGAEIDAE
TYPE LOCALITY:
RÉUNION IS.
DIEUCHES PLACIDUS STÅL ♂
NOTE: GENITALIA PREVIOUSLY DISSECTED

AROCATUS NERII(Germar)
(Note attached pollinia on left legs)

XXXIV. LYGAEIDAE Schilling 1829

[established as LYGAEIDES, Beitr. Ent. Schles. Fn. 1:35, Key (Division II), and 1:37, under genera]

(Annotated list of LYGAEIDAE from the Madagascar-Mascarene-Seychelles area)

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
LYGAEINAE Schilling 1829							(For complete list of localities vide Slater's Catalogue)
Genus Aspilocoryphus Stål 1874 Enum. Hem. 4:99.							
Type-species Lygaeus fasciativentris Stål 1858, fixed by Distant 1904							
*Genus Afraethalotus Scudder 1963 Pacific Insects 5:405, A. maculatus Scudder loc. cit.				+			Africa, Lake Ngami.
Genus Caenocoris Fieber 1860 Eur. Hem. pp.44, 166.							
Type by monotypy C. nerii Germar							
+C. nerii (Germar) 1847 Faun. Eur. 24:17.	+		+				Europe, Africa, Middle East, India, Pakistan.
* C. simillimus Horváth 1924 Ann. Mus. Nat. Hung. 21: 189-190.				+			

+[Recorded from Rodriguez by China 1924, p.432; referred to as Arocatus sp. by Mamet 1957b, p.54.]

*Indigenous.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
Genus Graptostethus Stål 1868 Kongl. Svensk. Vet. Akad. Handb. (11):7:73:74.							
Type-species Cimex servus Fabricius 1787, fixed by Distant 1904							
G. incomptus (Herrich-Schaeffer) 1847 Wanz. Ins. 8:104-105.				+			Celebes, Ceylon, India, Lombok, N. Guinea, Port Guinea.
G. servus (Fabricius) 1787 Mant. Ins. 2:300.	+		+	+			Europe, Africa, China, India, Indonesia, Japan, Australia, N. Guinea, Polynesia.
G. servus insularis (Stichel) 1957 Ill. Bst. Wanz. Eur. II, 4, 3:76. (= G. servus f. insularis Stichel)	+						
*G. sternalis Distant 1918 Ann. Mag. nat. Hist. (9) 2:420.				+			
Genus Haematorrhytus Stål 1874 Enum. Hem. 4:99, 115 (monotypic)							
*H. mirabilis Slater 1964 nom. nov. pro L. discoidalis Signoret 1860 (preoccupied)				+			
Genus Lygaeodema Horváth 1924 Ann. Mus. Nat. Hung. 21:190. (monotypic)							

*Indigenous.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
*L. breviceps Horváth 1924 ibid. 190-1.				+			
+Genus Lygaeosoma Spinola 1837 Essai Gen. Ins. Hem. pp.254-256. Type-species L. sardea Spinola as monotype							
*L. argillacea Reuter 1885 Rev. d'Ent. 4:202-3. (Described under Melanotelus from Mauritius).	+						
*L. lateralis Signoret 1885 Ann. Soc. ent. Fr. (6) 5:27-28.				+			
Genus Oncopeltus Stål 1868 (Lygaeus s.g. Oncopeltus Stål) Hem. Fabr. 2:70, 75. Type-species Cimex famelicus (Fabricius) fixed by Distant 1904							
O. famelicus (Fabricius) 1781 Spec. Ins. 2:365.				+			Africa.
Genus Spilostethus Stål 1868 Kongl. Svensk. Vet. Akad. Handl. 7:11:72. Type-species Cimex militaris Fabricius 1775, fixed by Slater [Cat. Lygaeidae of the World 1:193 (1964)].							

+Mamet records L. (Melanotelus) bipunctata (Dallas) from Mauritius. This is a doubtful record.

*Indigenous.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
+S. furculus (Herrich-Schaeffer) Wanz. Ins. 9:197. 1850				+			Mascarene Is., Africa, Europe.
++S. pandurus asiaticus (Kolenati) 1845 Mel. Ent. 2, 72-73 (colour ill. Plate VIII, Fasc. II, Fig. 12)	+			+			
Genus Stalagmostethus Stål 1868 Hem. Fabr. 1:72 [Lygaeus s.g. Stalagmostethus Stål]							
Type-species Cimex furcatus Fabr. (monotypic)							
S. furcatus (Fabricius) Mant. Ins. 2:301.				+			Africa.

+Recorded by Orian 1956 p.645, and by Mamet 1957b (p.48) as Lygaeus festivus Thunberg. Slater has shown that this name is preoccupied (Gen. Cat. Lygaeidae etc. 1:p.196) by L. festivus Billberg.

++According to Mamet, Stål* (1865, Hem. Afr. 2:134), under the name L. militaris, recorded a species later synonymised with L. pandurus (Scop) by Oshanin (1906, Verz. Pal. Hem., 1:247). The present author has never collected what is now considered to be S. pandurus militaris in Mauritius, which is not therefore listed here.

Slater's ref. Gen. Cat. LYGAEIDAE etc. ..... 1:p.211 - ref. 38, Mascarenes, refers to Stål's record cited above.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
ORSILLINAE Stål 1872							
[as Orsillaria Stål 1872 Ofv. vet. Akad. Forh. 29:7: 43-44]							
Tribe Orsillini Stål 1872							
Genus Nysius Dallas 1852 List Hem. B.M. 2:551-552.							
Type-species fide Slater Gen. Cat. 1:257, Lygaeus thymi Wolff 1804, fixed by Oshanin 1912 (by action of Int. Comm. Zool. Nomencl. Opinion 319), footnote below.+							
N. albipennis Distant 1913 Trans. Linn. Soc. Lond. (Zool.) 16:12:149.	+		+		+		Aldabra Is.
N. binotatus (Germar) 1837 In Silberman, Rev. Ent. 5:138.	+ (?)						S. Africa, Uganda. Recorded from Mauritius by Schouteden. Doubtful record (vide p.15).

+In 1943 China (The generic names of British Insects pp.236-237) pointed out that the first type-species designation for Nysius Dallas 1852 was Nysius zealandicus Dallas 1852, a New Zealand species cited by Distant in 1903 (Faun. Brit. India, Rhyn. 2:17) - and that consequently the Nysius of authors not of Dallas would have to take the next available name Macroparius Stål 1872 with type-species Heterogaster graminicola Kolenati 1846 by monotypy. Usinger and Sailer 1945 applied to the Int. Comm. Zool. Nomencl. to have the current usage of Nysius auct. validated by suppressing Distant's 1903 type designation. This was accepted by the Commission which designated N. thymi Wolff 1804 as type-species of Nysius Dallas 1852 by the use of its plenary powers. The ruling was published as Opinion 319 in 1955. E. Wagner 1958 has set this out in the introduction to his paper 'Der Nysius komplex (Hem. Het. LYGAEIDAE) in der Palaearktic' - Commentat. biol. 19:5.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
N. euphorbiae Horváth 1910 Ann. Mus. Nat. Hung. 8:13-14. (originally described from Mauritius - vide Plates 17f, vide etiani p.22 & footnote).	+		+		+		
ISCHNORHYNCHINAE Stål 1872							
[as Ischnorhyncharia Stål, Ofv. Vet. Akad. Forh. 29:44 (keyed)]							
Genus Madrorgus Scudder 1962 Trans. Roy. ent. Soc. Lond. 114(6):166-7, 177-8.							
Type-species M. malagassicus Scudder 1962							
M. malagasicus Scudder 1962 ibid.:169:178-9.		+		+			
Genus Pylorgus Stål 1874 Enum. Hem. 4:128, 125.							
Type-species Cimex colon Thunberg 1784 (monotypic)							
*P. femurmaculosus Scudder 1962 ibid.:184:187-8.				+			
*P. flavolineatus Scudder 1962 ibid.:184:188-9.				+			
*P. nigritellus Scudder 1962 ibid.:114.				+			
P. aethiopicus Scudder 1964 S. Afr. Anim. Life 10:80.	+						Illtr. S. Africa, S. Rhodesia. ~~Transvaal~~.

*New locality.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
*P. scutellaris (Horváth) 1924 Ann. Mus. Nat. Hist. 21:192.				+			

CYMINAE Stål 1862

Ofv. vet. Akad. Forh. 19:211
(Descr., keys)

[Baerensprung, Berl. Ent. Zeit. 4:10 used Cymides 1860]

Tribe Cymini Stål 1872
Ofv. vet. Akad. Forh. 29:44.

Cymodema Spinola 1837
Essai Hem. pp.213-215.

Type-species C. tabida Spinola
(as monotype)

+C. mauritii (Stål) 1858 Freg. Eug. Resa 3:251.	+						Doubtfully recorded from Ruanda by Schouteden 1957, Ann. Mus. Roy. Congo Belge (8) Sci. Zoo:256.

Tribe Ninini Barber 1956
Proc. ent. Soc. Wash. 58:282

+Originally described from Mauritius under the genus Bedus Stål (Freg. etc. p.251) with B. mauritii as monotype. Later synonymised by Stål with Cymodema (Hem. Afr. 2:149-150).

Mamet in a note under Cymus mauritii states that he obtained 22 ex. from sweepings from grasses. The present author has always found this species associated with CYPERACEAE, more especially on inflorescences of Fimbristylis ferruginea Vahl., a plant which grows in marshes (brackish water).

*Indigenous.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comoro Is.	Other localities
Genus Cymoninus Breddin 1907 Deut. Ent. Zeit. 38. Type-species C. subunicolor Breddin = Ninus sechellensis Bergroth							
C. sechellensis (Bergroth) 1893 Rev. d'Ent. 12:198, 201. (= Ninus sechellensis) Originally described from the Seychelles (locality Mahé). First recorded from Mauritius by Orian 1962.	+	+			+		+New Hebrides, Philippines, West Ceylon, etc.
BLISSINAE Stål 1862 Ofv. vet. Akad. Forh. 19:210. China & Miller 'Check-list etc.' 1959:42 note as follows: This subfamily is "distributed in all zoogeographical regions except Mascarene". The present author has from time to time seen peaches (at Customs) heavily infested with (?) Blissus diplopterus (Distant), commonly known as the 'Grain Bug' in S. Africa.							
Genus Blissus Burmeister 1835 Handb. Ent. 2:290. Type-species B. hirtulus Burmeister 1835 (as monotype)							

+Scudder 1957, Publ. Culturais da Companhia de Diamantes da Angola, 34:91-102, has synonymised C. philippinus Bergroth (with C. unicolor Breddin and C. subsissilis Kirkaldy) under C. sechellensis (Bergroth).

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comoro Is.	Other localities
(?) B. diplopterus Distant	+						S. Africa. Often collected in ports on wheat, peaches, etc.
(According to Slater in litt. the species belongs in another genus)							
Genus Ischnodemus Fieber 1837 Beitr. Ges. Natur. Heilwiss. 337-8.							
*I. pilosulus Horváth 1924 Ann. Mus. Nat. Hung. 21:192-3.				+			
GEOCORINAE Stål 1862							
[as Geocorida Stål, Ofv. vet. Akad. Forh. 19:212 (des., keys) (cf. Geocorides Baerensprung, Ber. Ent. Zeit. 4:11).							
Tribe Geocorini Stål [Montandon 1913 Bull. Acad. Roumaine 2:48-49, 53-54, used Geocorini]							
Genus Geocoris Fallen 1814 Spec. Nov. Hem. Disp. Meth. p.10.							
Type-species Cimex grylloides Linnaeus 1761, fixed by Oshanin 1912 (Ref. Slater loc. cit. 1:526.							
*G. pallidipennis mauritii Stål 1854 Ofv. vet. Akad. Forh. 11:236. Originally described from Mauritius under the name Geocoris mauritii Stål, common on lawns.	+						

*Indigenous.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comoro Is.	Other localities
(G. pallidipennis Costa is an almost cosmopolitan species)							
Genus Germalus Stål 1862 Stett. Ent. Zeit. 23:311-312.							
Type-species Henestaris kinbergi Stål 1859 fixed by Distant 1910.							
* G. kinbergi (Stål) 1859 Freg. Eng. Resa 3:248.	+						
Genus Hypogeocoris Montandon 1913 Bull. Acad. Roum. 2:55.							
Type-species Geocoris violaceus Signoret 1884 by original designation.							
* H. alluaudi (Montandon) 1908 Bull. Soc. Sci. Buch. 17:125-126.				+			
*H. violaceus (Signoret) 1881 Ann. Soc. ent. Fr. (6) 1 pl.L.				+			
OXYCARENINAE Stål 1862							
[as Oxycarenida Stål, Ofv. vet. Akad. Forh. 19:212 - keys]							
Genus Oxycarenus Fieber 1837 Beit. Nat. Ges. Heilwiss. pp.339-340. (n.n. Stenogaster Hahn 1835 preocc.)							

*Indigenous.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comoro Is.	Other localities
Type-species Stenogaster tardus Hahn 1835							
O. annulipes Germar 1837 (Stenogaster) = O. albidipennis Stål, Ofv. vet. Akad. Forh. 12:35.	+						Ethiopian region.
*O. fumigatus (Distant) 1913 Trans. Linn. Soc. Lond. (Zool.) 16:151.					+		
O. hyalinipennis (Costa) 1847	+						Cosmopolitan.
Aphanus tardus var. hyalinipennis Costa, Att. R. Inst. Sci. Nat. Napoli 7:184-185.							
[Mamet 1957b loc. cit. p.54 gives an earlier reference, Costa 1838, la Centurie p.45]							
PACHYGRONTHINAE Stål 1865							
[as Pachygronthida Stål, Hem. Afr. 2:121, 145-6]							
Tribe Pachygronthini Stål 1872 Ofv. vet. Akad. Forh. 29:39.							
Genus Pachygrontha Germar 1837 Silb. Rev. Ent. 5:152-3.							
P. bipunctata Stål 1865 Hem. Afr. 2:149.	+				+		Africa, India, China, Philippines, Australia.

*Indigenous.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comoro Is.	Other localities
*P. paralineata Slater 1955 Phil. Jour. Sci. 84:71-2.	+						
=+Pachygrontha sp. nr. lineata Orian (nec Germar), Ann. Mag. nat. Hist. (2) 9:646.							
*P. quadripunctata (Signoret) 1860 Ann. Soc. ent. Fr. (3) 8:948.				+			
Tribe Teracriini Stål [established as Teracriina Stål 1872] Ofv. vet. Akad. Forh. 29:38-9.							
Paristhmius Reuter 1887 Ent. Tidsk. 8:94-5.							
Type-species P. vitticollis Reuter 1887.							
*P. vitticollis Reuter 1887 Ent. Tidsk. 8:95.				+			
Teracrius Stål 1858 Ofv. vet. Akad. Forh. 15:317.							
Type-species T. namaquensis Stål (monotypic)							
T. namaquensis Stål 1858 Ofv. vet. Akad. Forh. 15:317.				+			N. Gami, S. Africa, Uganda.

+Mamet's sweeping statements about the existence of Pachygrontha in Mauritius should be ignored.

*Indigenous.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comoro Is.	Other localities
HETEROGASTRINAE Stål 1872 Ofv. vet. Akad. Forh. 29:40, 62							
Hyginellus Distant 1913 Trans. Linn. Soc. Lond. (Zool.) 16:(2):150.							
Type-species H. gayei Distant (as monotype)							
*H. gayei Distant 1913 ibid. p.150.					+		
Hyginus (Stål) 1859 Freg. Eug. Resa 3:241.							
Type-species Phygadicus kinbergi Stål 1859							
H. kinbergi (Stål) 1859 Freg. Eug. Resa 3:241.		+ *					Malacca, Philippines.

*This record from Mauritius is erroneous because Slater's ref. in his Cat. 1:767 cannot be found in the paper he cites.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
RHYPAROCHROMINAE* Amyot & Serville 1843 Hist. nat. Ins. Hémipt.:251							
Type-genus Rhyparochromus Hahn, 1826							
Tribe Lethaeini Stål 1872 Ofv. vet. Akad. Forh. 29:59							
Genus Diniella Bergroth 1893 Rev. d'Ent. 12:202.							
D. nitida (Reuter) 1882 Ofv. Finsk. Vet. soc. Forh.				+	+		East Africa, Ghana, Guinea, Ruanda.
Genus Lethaeus Dallas 1852 List. Hem. B.M. 2:557							
Type-species Lethaeus africanus Dallas 1852							
L. longirostris Reuter 1887 Ent. Tidsk. 8:102-3.	+		+	+			N. Rhodesia, S. Africa.
*L. nodulinervis Bergroth, 1905 Ann. Ent. Soc. Belg. 49:373.				+			
+*L. punctus Bergroth 1893 Rev. d'Ent. 12:198, 203.					+		
+*L. snelli China 1924 Ann. Mag. Nat. Hist. (9) 14: 434			+				

*Vide Slater and China, Bull. zool. Nomencl., 18, 5:342-345 (1961) for a discussion as to authorship, etc.

+*New record.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
L. stellatus Distant 1913 Trans. Linn. Soc. Lond. Zool. 16(2):155-156.		+(?)	+		+		Aldabra, Assumption.
*L. typicus (Distant) 1913 Trans. Linn. Soc. Lond. Zool. 16(2):156-157.					+		
Genus Lispolophus Bergroth 1894 Ann. Soc. Ent. Belg. 38:547.							
Type-species Lethaeus marginatus Signoret 1860.							
L. marginatus Signoret 1860 Ann. Ent. Soc. Fr. (3):8:948-9.				+			
Tribe Antillocorini Ashlock*							
Genus Cligenes Distant 1893 Biol. Centr. Am. Het. Supp. 1:405.							
Type-species C. distinctus Distant							
*C. gardineri Distant 1913 Trans. Linn. Soc. Lond. (Zool.) 16(2):153-4.					+		
Tribe DRYMINI Stål (correction of Drymaria Stål Ofv. vet. Akad. Forh. 29:59)							
Salaciola Bergroth 1906 Wein. Ent. Zeit. 25:19.							
*Type-species S. nana Bergroth 1906 Wein. Ent. Zeit. 25:19.				+			

*The author has not seen this paper - vide Slater Cat. Lygaeidae etc. 2:843.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
Stilbocoris Bergroth 1893 Rev. d'Ent. 12:198, 201-2.							
Type-species S. solivagnus Bergroth 1893							
*S. solivagnus Bergroth 1893					+		
Tribe CLERADINI Stål 1874 Enum. Hem. 4:143. (correction of Cleradaria)							
Genus Clerada Signoret 1863							
Type-species C. apicicornis Signoret in Maillard, Notes sur l'île de la Réunion etc., p.28.							
C. apicicornis Signoret 1863 (monotypic)	+	+		+	+		Cosmopolitan.
*C. minuta China 1924 vide China Ins. Samoa 2:3:127 (1930) syn. with Reclada moesta							
Genus Reclada Buchanan-White Ann. Mag. nat. Hist. (5): 1:370.							
Type-species R. moesta Buchanan							Distribution sporadic.
R. moesta Buchanan-White 1878 Ann. Mag. nat. Hist. (5)1:370			+				Carolines, Christmas Is., Fiji, Hawaii, Marianas, Samoa.
Tribe OZOPHORINI Sweet (MS)							
Genus Migdilybs Hesse 1925 Ann. S. Africa Mus. 23:76-7							
Type-species M. furcifer Hesse 1925 (as monotype)							
M. nudus Scudder 1963 Canad. Ent. 95:1248.							
Tribe MYODOCHINI Boitard 1827 [Myodogues] Man. d'Hist. Nat. 1:438.							

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
P. gracilis (Rambur) 1839 Fn. Andal. 2:140.			+	+	+		Europe, Africa, India, Middle East.
Tribe RHYPAROCHROMINI Amyot & Serville (Vide footnote under RHYPAROCHROMINAE)							
Genus Dieuches Dohrn 1860 Stett. Ent. Zeit. 21:159. Type-species D. syriacus Dohrn 1860							
D. annulatus (Signoret) 1860 Ann. Ent. Soc. Fr. (3)8: 949-50.				+	+		Somalia.
D. armipes (Fabricius) 1794 Ent. Syst.	+						Europe, Africa, India, Pakistan.
*D. cardui Distant 1913 Trans. Linn. Soc. Lond. 16, (2):155.					+		
*D. fuscus Reuter 1887 Ent. Tidskr. 8:100.				+			
D. humilis Reuter 1887 ibid. 101-2.				+			Ruanda.
D. lateralis Signoret 1863 in Maillard etc. loc. cit. p.29.	+	+	+				
†D. placidus (Stål) 1865 Hem. Afr. 2:170-1.	+	+			+		

*Indigenous.

† A SYNONYM OF D. LATERALIS.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
*Dieuches sp. Distant 1909, Trans. Linn. Soc. Lond. (2) Zool. 1:35.					+		
Genus Elasmolomus Stål 1872 Ofv. Vet. Akad. Forh. 29:58. Type-species Cimex sordidus Fabricius 1787.							
E. mendicus Stål 1872 Ofv. Vet. Akad. Forh. 29:58.				+			S. Africa.
E. transversus Signoret 1860 Ann. Ent. Soc. Fr. (3)8:950.				+			Angola, Kinchassa, Somalia.
Genus Graptopeltus Stål 1872 Ofv. Vet. Akad. Forh. 29:57. Type-species Cimex linceus Fabricius 1775.							
*G. filicornis Bergroth 1894 Ent. Nachr. 20:358-9.				+			
Genus Lachnesthus Bergroth 1915 Jour. Bombay Nat. Hist. Soc. 24:173. Type-species Lanchnophorus guttulatus Reuter 1887							
*L. albidomaculatus (Distant) 1913 Trans. Linn. Soc. Lond. (2)16: 153.					+		

*Indigenous.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
Genus Mimobius Bergroth 1921 Ann. Mus. Nat. Hung. 18:77. Type-species Mimobius capito Bergroth							
*M. capito Bergroth 1921 Ann. Mus. Nat. Hung. 18:77-8.				+			
Genus Pachybrachius Hahn 1826 Icon. Mon. Cim. 1:18. Type-species P. luridus Hahn							
P. capicolus (Stål) 1874 Enum. Hem. 4:148.			+	+			Africa.
*P. circumcinctus (Walker) 1872 Cat. Hem. Het. B.M.5:97-98.					+		
P. ebenaui (Reuter) 1887 Ent. Tid. Skr. 8:96-7.			+	+			Cape Verde Is.
*P. reductus Walker 1872 Cat. Hem. Het. B.M. 5:120-1.					+		
*P. sladeni (Distant) 1913 Trans. Linn. Soc. Lond. Zool. (2)16:152-3.					+		
Genus Paromius Fieber 1860 Eur. Hem. pp. 45, 170-1. Type-species Stenocoris gracilis Rambur 1839							
P. apicatus (Stål) 1855 Ofv. Vet. Akad. Forh. 12:1:34.	+		+		+		Africa.

*Indigenous.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
L. guttulatus Reuter 1887 Ent. Tidskr. 8:99.	+			+			Ruanda.
*L. rodriguezensis China 1925 Ann. Mag. Nat. Hist. (9) 15:163-4.			+				
L. singalensis Dohrn							Africa, Ceylon, India.
Genus Nocellochromus Scudder 1963 Canad. Ent. 95:1228-1229.				+	+		
N. distinctus Scudder							Uganda, Kenya, Congo.
Genus Perimeda Reuter 1887 Ent. Tidskr. 8:97-8.							
Type-species P. dimidiata Reuter 1887							
*P. dimidiata Reuter 1887 Ent. Tidskr. 8:98.				+			
Genus Poeantius Stål 1865 Hem. Afr. 2:163.							
Type-species Rhyparochromus nigropictus Stål 1855							
*P. unidentatus Reuter 1887 Ent. Tidskr. 8:102.				+			
Genus Rhyparochromus Hahn 1826 Icon. Mon. cim. 1:17.							
Type-species Cimex pini Linnaeus 1758							
R. consocialis (Distant) 1913 Trans. Linn. Soc. Lond. (Zool.) (2) 16:154.					+		India, Cape Verde Is., Sénégal, Somalia.

*Indigenous.

	Mauritius	Réunion	Rodriguez	Madagascar	Seychelles	Comores	Other localities
R. geniculatus (Signoret) 1860 Ann. soc. ent. Fr. (2)8:949.				+			
R. raptorius Signoret 1860 ibid. (3)8:950.				+			
Tribe MEGALONOTINI							
Genus Polycrates Stål 1865 Hem. Afr. 2:161.							
Type-species Pachymerus consutus Germar 1837							
P. crassicornis Horváth 1924 Ann. Mus. Nat. Hung. 21:193.				+			
P. triguttulatus Slater 1964 World 2:1387.				+			
P. tschitocherini Bergroth 1906 Rev. Russ. Ent.:146-147.				+			
Tribe: Unknown.							
Genus Nesodromus Bergroth 1905 Ann. soc. Ent. Belg. 49:371-2.							
Type-species N. pleuriticus Bergroth							
N. pleuriticus Bergroth 1905 Ann. Soc. Ent. Belg. 49:372.				+			