

THE TYPES OF THE SCOLIIDAE
DESCRIBED BY FREDERICK SMITH *ref.*
(HYMENOPTERA)



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TRUSTEES OF
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THE TYPES OF THE SCOLIIDAE
DESCRIBED BY FREDERICK SMITH¹
(HYMENOPTERA)

WITH DESCRIPTIONS OF NEW TAXA, AND NOTES
ON THE ORIENTAL LOCALITIES WHERE
ALFRED RUSSEL WALLACE COLLECTED

By J. CHESTER BRADLEY and J. G. BETREM

IN 1926 J. G. Betrem spent a few days at the British Museum and at Oxford intensively studying the type-material of Smith's Indo-Australian Scoliidae. The results were published in his great monograph of those wasps (1928). His frequent statement 'Holotype Smith's B.M.' or 'Oxford' was actually intended, in many cases, to serve as equivalent to a selection of lectotype, but we are agreed that it is insufficient to meet all the technicalities of lectotype selection, and in this paper we have tried to make clear the status of individual specimens as holotypes or lectotypes, following Betrem's original intent wherever another course is not clearly indicated. Betrem continued his study at Oxford in July, 1958, and subsequently, and at the British Museum on several subsequent dates up to and including August, 1966.

In the autumn of 1928 and in 1929 Bradley spent many months at the British Museum, and a period at Oxford, working on Scoliidae, and giving particular attention to the study of types. He placed red holotype or lectotype labels on many of Smith's, Cameron's and Kirby's specimens.

Frederick Smith was born in London in 1805. As a boy he was a close friend of W. E. Shuckard, who, himself developing a taste for entomology, introduced his companion to its pleasures. Smith became a professional engraver. From about 1841 to 1850 he held the post of Curator of the Collections and Library of the Entomological Society of London. Then he became Assistant Keeper of Insects in the British Museum. Up to this time, Smith's numerous papers (Horn and Schenkling list 150 up to 1863) were mostly on bees or ants, but thereafter he broadened his field to include aculeate Hymenoptera in general with a few papers on beetles. Although often thought of as only a museum taxonomist, we are told that Smith had in reality an extensive field knowledge of British aculeate Hymenoptera. He died in London in 1879, in his 74th year.

Dr M. W. R. de Vere Graham, curator of insects in the Oxford Museum, has prepared and sent to us through courtesy of Professor G. C. Varley, the following statement concerning Scoliidae in that institution:

¹ This paper was completed with aid of a grant from the National Science Foundation of the U.S.A.

'The collections of Hymenoptera made by Alfred Russel Wallace in the eastern part of Indonesia and in New Guinea passed (at least mainly) into the hands of W. W. Saunders.² They form the entire substance of the series of papers subsequently published by Frederick Smith in the Journal of the Linnean Society. This material is now divided between the British Museum (Natural History) and the Hope Department of the Oxford University Museum. The old museum collection of the latter institution (Hope-Westwood collection) also contains Scoliidae, including Gray's type of *Scolia fulva*, and some species given manuscript names by Westwood; another, the Rottney collection, contains Scoliidae studied by Cameron'.

'It is clear that in some cases, syntypes of a particular species may exist both in the B.M. and in the Hope Department; such cases must be examined individually in order to decide on a lectotype.'

Before selecting a lectotype Bradley has endeavoured to locate each syntype, wherever located, and to select the one that is most suitable to become lectotype, taking into account its sex, its conformity with the original description, its locality of capture, and the collection in which it is located; also whether Betrem, 1928, intended to make a selection.

[I have found two more places in the literature which confirm that the Wallace insect-collections, except the Coleoptera, were the property of W. W. Saunders.

I. Wallace stated in the introduction to his book *The Malay Archipelago* (4th ed., 1872 : VIII): 'The remaining orders of insects . . . are in the collection of Mr. William Wilson Saunders . . . The Hymenoptera alone amounted to more than nine hundred species . . .'

II. Smith (1862 : 36) wrote: 'Many fine additions of the Aculeata are contained in the present collections which are the property of William Wilson Saunders, Esq.'

It seems reasonable to me that Smith sent back to Saunders the specimens that we now consider as typical (syntypes) and that he retained the duplicates. Therefore we must select lectotypes in the first place from the Wallace material in the Saunders collection. It follows that a lectotype may be selected from the duplicates in the British Museum only if it can be demonstrated that there is no material that accords with the description in the Saunders collection.

It has been assumed that all the material that Wallace collected is either in the museum at Oxford or in the British Museum. Therefore I was greatly astonished to find some Wallace material in New York in the collection of the American Museum of Natural History when I restudied their scoliid collection in December, 1965. A

² The evidence for this is contained in *Jour. Proc. Linn. Soc. (Zool.)* 1857, 1 : 4 where Saunders states 'A large portion of Mr. Wallace's entomological collections pass into my hands' . . . Saunders further states that he asked Francis Walker to catalogue the Diptera; presumably, in the same way, he must have asked Smith to deal with the Hymenoptera.

[Smith, 1861 : 94 wrote 'This fine collection is the property of W. W. Saunders', a note which may indicate that the other Wallace material was also Saunders' property. In the paper in question he described *Scolia culta*, *morosa*, and *ducalis* as new. The following entries in the accessions book of the British Museum show that some of the material collected by Wallace was sold to Stevens: '5/4. 11 April, purchased from Stevens, coll. by Alfred Wallace, 75 Hym., plus many other insects', and '8/2 from Salawaty of New Guinea, purchased of Stevens, coll. by A. R. Wallace'.

Horn (1926, *Suppl. Ent.* 12 : 107) stated that the Hymenoptera of the W. W. Saunders collection went to the Hope Museum via J. O. Westwood, which is certainly not, in general, true. J.G.B.]

In describing the majority of his oriental species, Smith has stated that the material is in the Saunders collection.

female of *Scolia apicata* and a specimen of *Scolia dimidiata* are there. The former is probably type of the species. Furthermore there is a syntype of *Scolia zonata*, a species that Smith described from the British Museum collection. All three were derived from the collection of J. Angus that was obtained by the American Museum many years ago. That gentleman was an old-timer who had a large private collection. He exchanged material with entomologists all over the world. Very likely he obtained this material from the British Museum, possibly through Smith. It is not at all probable that he exchanged with the museum at Oxford, because one of the species, *Scolia zonata*, definitely comes from the British Museum.

There are many indications (see, e.g. *S. indica*, *ignita*, *erratica*, and *fasciatopennis*) that Smith studied the older material of the Museum at Oxford before he wrote the scoliid portion of his Catalogue of the hymenopterous insects in the collection of the the British Museum. It is not improbable that some of his types were originally part of the material in the Oxford Museum. J.G.B.]

[Notes on the localities where Wallace or Allen collected in the East Indies

Smith wrote the following two lists dealing with the distribution of the Hymenoptera that are of interest to us:

I. Notes on the geographical distribution of the aculeate Hymenoptera collected by Mr A. R. Wallace in the Eastern Archipelago (1863). This list gives more localities than the second one, but does not contain the localities mentioned in Smith's 1864 paper.

II. A catalogue of the Aculeate Hymenoptera and Ichneumonidae of India and the Eastern Archipelago, with introductory remarks by A. R. Wallace (1870).

The introduction by Wallace is important because of its biological notes. The list of localities of the scoliids is very incomplete. In this paper Smith followed the system of the catalogue of de Saussure & Sichel and accepted *Elis*, now *Campsomeris*, as a good genus.

More peculiarities about the localities where Wallace collected may be found in the second list and in his book: *The Malay Archipelago* (1st ed., 1869).

Wallace did not himself visit all of the localities from where material in his collection came. Many were visited only by his assistant Charles Allen, especially many of the islands in the Moluccas. I have indicated the localities which were visited especially by the latter.

Singapore. Wallace collected especially in the central hills where primary forests still existed.

Penang. This island was not mentioned by Wallace in his publications. It seems that he or Allen collected there during the journey to or from the Malay Archipelago.

Malacca. This is a country in the south-eastern portion of Malaya. Almost all the collecting was done on Mount Ophir; cf. Smith, 1857.

Borneo. Wallace collected there only in the south-western portion of what is now called Sarawak. The town of Sarawak, which he mentioned, is Kutching (Koetjong). The different localities are not indicated on the labels.

Sumatra. Wallace collected in the residency Palembang, mostly along the river Ogan, probably near the present Batu Radjah.

Java. Wallace collected in east Java mostly in the village of Djapanan near Wonosalam in the district of Bareng, according to his map near Modjo-Agung. This locality is not on the slopes of Mt Ardjuno as he stated, but on the slopes of Mt Welirang.

In west Java, Wallace collected mostly on Mt Megamedong on Pundjakpas, at 4,500 ft, 20 miles south-east of Bogor (Buitenzorg).

Bali. Wallace collected at Bileling (Buleleng).

Lombok. Collecting was done by Wallace at Ampenan and Labuan Tring.

Flores. Allen collected here, not Wallace.

Timor. Wallace collected at Coupang (Kupang) in the Indonesian half and at Delli (Dilly) in the Portuguese portion.

Celebes. Wallace visited this island three times, the first time from September to November, 1856. He collected at Makassar and the district Goah, east of Makassar. Smith reported about this collection in 1858.

The second time Wallace was in the Celebes was from July to September, 1857; he collected then at Maros, 30 miles north of Makassar. Smith enumerated the collected species in his paper of 1861. No scoliids were caught. It seems that all specimens were labelled Makassar.

The third time Wallace collected in the north of Celebes in the country called Minahassa, from June to September, 1859. Menado or Tondano is written on the labels. Smith published about this collection in 1864.

Wallace himself collected on the *Banda* Islands, *Ambon*, *Buru*, *Goram*, *Martabello* (*Ceram Laut* Islands), *Waigiou* (*Waigeou*), *Ternate*, *Tidore*, *Makian*, *Kaisaa* (*Kaioa*), *Batchian* (*Batjan*), *Aru*-Islands and the *Key*-Islands.

Charles Allen collected on the *Sula*-Islands (*Isle Mangola!*), *Morty* (*Morotai*), *Mysol*, and *Salwatty* (*Salawaty*).

Both men collected on *Ceram*. The specimens labelled *Wahai* were perhaps collected by Allen. Both collected on *Gilolo*. The specimens recorded in the paper of 1864 by Smith were probably collected by Allen in north *Gilolo*.

Wallace and Allen both collected in *New Guinea*. Wallace's insects were labelled 'Dorey', those of Allen probably: 'New Guinea'. They were collected in Sorong (*Mal. Arch.* : 571) one of most western localities on this island, and on a trip inland. The specimens collected by Allen were treated by Smith in his publications of 1863 and 1864. J.G.B.]

In his 1855 Catalogue, Smith printed 'B.M.' in the margin if the museum contained specimens of a given species. But that does not necessarily mean type-material.

The serious error that can arise from abbreviated pin-labels is illustrated by Wallace's specimens from Makassar in the South Celebes, which, Betrem points out, are all labelled just 'Mak'. This was invariably interpreted by Betrem, 1928, to mean 'Makian', an island in a region that is zoogeographically quite different. Since 'Makian' was therefore erroneously published as the type-locality of a number of species in Betrem's monograph, corresponding corrections must be made.

Betrem states that in the Wallace material, according to the museum authorities, the locality-label was placed on the pin of only the first of a series of specimens from the same locality. This explains why we often encounter unlabelled syntypes.

Betrem & Bradley have considered all points in this paper, and are in agreement upon each. Where the manuscript has been written by Betrem it is followed by his initials and enclosed in square brackets. Bradley is author of the remainder. Betrem's manuscript was written at Ithaca, N.Y., in March, 1962, November, 1964, November, 1965, September, 1966 and in London in July, 1966. Bradley's manuscript was written much earlier.

The synonymies that follow the centre-headings are not complete bibliographies of the species. All of Smith's new names or nominal species and what is believed at the moment to be the correct formula for the taxonomic species involved, are entered. The latter are indicated by a preceding 'equals' sign (=). In Palaearctic and Indo-Australian species, as well as African Campsomerinae, these have usually been determined by Betrem, and all such have been verified by him. In addition, references have been entered that indicate the origin of senior synonyms, or that indicate shifting generic or subgeneric position, as well as some others for special reasons.

In work in progress on the Scoliidae, Betrem will create certain new subgenera, and he, Mr C. Jacot Guillarmod and myself are agreed, that, in revising the classification of the family, certain taxa, heretofore ranked as subgenera, should be accorded full generic rank. These changes will have been published in a paper in press, it is hoped, before this paper appears.

Betrem proposed many years ago in a letter to me that *Austroscolia*, *Carinoscolia*, *Laeviscolia*, *Microscolia*, *Liacos*, and *Diliacos* should each be elevated to the status of genus. He accepted my representation that the time was not then ripe for such action. Since then we have learned so much more about the world fauna, especially the Ethiopian, that it is clear that in order properly to represent the taxonomy and zoogeography of the Scoliidae, Betrem's proposal should now be put into effect.

Betrem, 1967: 25 has raised *Campsomeriella* to generic rank.

All new combinations of generic and specific names that appear in the list of species are to be accredited to Betrem.

[DESCRIPTIONS OF NEW GENERA AND SUBGENERA

Here follow the descriptions of one new genus and three new subgenera in order that their names may be used in the list of species that follows, without being *nomina nuda*.

CAMPSOMERINAE, tribe TRIELINI

GUIGLIANA gen. n.

Type-species: *Scolia aliena* Klug, 1835 = *Guigliana aliena* (Klug, 1835) **comb. n.**

♀. Anterior rim of the clypeus complete, not interrupted at the sides; disc of the clypeus usually not strongly elevated, but strongly elevated in one subgenus, with a semicircular marginal carina. No frontal cross-furrow above the spatium frontale; punctuation of the spatium frontale not extending beyond the upper end of the laminae frontales, as is the case in the genus

Campsomeris. Mesopleura with a distinct elevation below the forewings as in *Scolia*. Transition between the dorsal area and the vertical portions of the metapleura gradual. Three submarginal cells; two recurrent veins. First submarginal cell not setose. Black wasps, usually with black, but rarely with yellow-brown, vestiture.

♂. Quite like the female, almost no sexual dimorphism.

Habitat: Ethiopian Region.

Tribe CAMPSOMERINI

CAMPSOMERIS

MEGAMERIS subgen. n.

Type-species: *Campsomeris mansuefacta* Bradley, 1931 = *Campsomeris* (*Megameris*) *soleata* (Gerstaecker, 1870).

♀. Front usually impunctate medially, short; carina occipitalis complete above. Transition between the dorsal and the vertical areas of the mesopleura not strongly elevated either medially or anteriorly, straight or almost straight; transition between the dorsal and the vertical areas of the metapleura sharp but not like a carina. First submarginal cell setose only above. Longer spur of tibia III usually very dark; acute, blunt, or rarely spatulate. Basal portion of the carina lateralis attaining the spiracles; transition between the area horizontalis lateralis and the area lateralis sharp, usually with a high carina that has a groove on the inner side. Basal tergites usually opaque, rarely more or less shining. Vestiture on the thorax often dense and long. Large to very large species.

♂. Spatium frontale densely punctate. Basal tergites usually with broad, yellow, apical bands that are strongly broadened medially in front. Volsellae very densely covered with long setae.

Habitat: Ethiopian Region.

This subgenus is allied to *Megacampsomeris* Betr., 1928 of the Indo-Australian Region.

MICROMERIS subgen. n.

Type-species: *Scolia marginella* Klug, 1805 = *Campsomeris* (*Micromeris*) *marginella* (Klug, 1805).

♀. Front impunctate medially; carina occipitalis complete above; temporal groove absent. Transition between the dorsal and the vertical areas of the mesopleura gradual, somewhat elevated medially; transition between the dorsal and the vertical areas of the metapleura very gradual; upper plate of the metapleura impunctate. First submarginal cell bare, setose only along its upper margin. Area posterior medialis impunctate or with fine punctures; transition between the area horizontalis lateralis and the area lateralis rounded, without a distinct carina lateralis except for an apical indication; basal portion of the carina lateralis attaining the spiracles. Basal tergites opaque. Vestiture never entirely dark. Small species.

♂. Interspaces between the punctures of the spatium frontale larger than their diameters. Volsellae not densely setose.

Habitat: Ethiopian Region, Southern Palaearctic Region, Indo-Australian Region as far as, but not including, New Guinea.

PHALERIMERIS subgen. n.

Type-species: *Elis* (*Campsomeris*) *phalerata* Sauss., 1858 = *Campsomeris* (*Phalerimeris*) *phalerata* (Sauss., 1858).

♀. A group of deep punctures on the front before the anterior ocellus; temporal groove usually not deep but present; carina occipitalis usually more or less interrupted above. No shallow groove on the scapulae; transition between the dorsal and the vertical areas of the mesopleura not elevated medially, practically straight; transition between the dorsal and the vertical areas of the metapleura not gradual, sometimes almost without an edge, sometimes with a distinct edge, never like a carina. First submarginal cell setose in greater part. Spurs white, longer spur of tibia III blunt or acute, never spatulate. Basal portion of the carina lateralis attaining the spiracles. Basal tergites opaque. Vestiture usually in greater part brown-yellow. Tergites often with yellow apical bands.

♂. Area frontalis densely punctate. Scutellum and metanotum usually yellow. Paramera with an angular circumference.

Habitat: Indo-Australian Region including New Guinea and adjacent islands, but not Australia. J.G.B.]

THE LIST OF SPECIES

I. *agilis*

1859. *Scolia agilis* Smith, ♂: 10. 'Hab. Celebes'.

1864. *Elis (Dielis) agilis* Saussure & Sichel, ♂: 203, n. 8.

1928. *Campsomeris leefmansii leefmansii* Betrem, ♀, ♂: 130, **syn. n.**, *teste* Betrem.

1928. *Campsomeris leefmansii problematica* Betrem, ♀: 131, **syn. n.**, *teste* Betrem.

1967. *Campsomeriella (Campsomeriella) agilis* Betrem, ♀: 28.

= *Campsomeriella (Campsomeriella) agilis* (Smith) Betrem.

There is a male of *agilis* in the Saunders collection. It bears the pin-label 'Mak'. (Makassar, South Celebes) and also Smith's manuscript label '*Scolia agilis*'. It was marked by Betrem 'lectotype'. Its palettes are exposed, and as Betrem's key stands it runs quite certainly to *manokwariensis* on p. 78, but this is without significance, since the males of related species cannot be distinguished, as Betrem notes below, and since the male that he described as *leefmansii* (actually *agilis*) is not included in his key.

[I referred in 1928:130, to the male from Makassar as holotype of *agilis* but placed it as the male of *C. micans bernsteini*, because I thought at that time that 'Mak.' was an abbreviation of Makian. A second male came from Celebes and is in the British Museum. On p. 124 of the same work I referred to it as 'type of *agilis* Smith', but queried it there as a probable synonym of *C. manokwariensis* Cam. My label 'lectotype' on the specimen in the Oxford Museum is therefore correct, and its publication as 'holotype' in my monograph must be correspondingly corrected. The males of the species of *Campsomeriella* in the eastern part of Indonesia cannot be distinguished from one another with certainty. They can be named only by the locality in which they were caught. The identity of the Celebes male in the British Museum therefore remains questionable. The only species that occurs in the South Celebes is *C. leefmansii* Betr., 1928. This name must now be replaced by *C. agilis* (Smith). The subspecies *problematica* that I described from the South Celebes, and the subspecies *leefmansii* that occurs in Eastern Java, must both be suppressed, because it appears, now that more material is available, that these nominal taxa cannot be distinguished. There is a second male of *C. agilis* in the Saunders collection from 'Wag.' (Waigiou). This cannot be a syntype. Probably it is a male of *C. loriae* Cam., because it has only three yellow bands on the abdomen. J.G.B.]

2. *albofimbriata*

1879. *Scolia* (*Dielis*) *albofimbriata* Smith, ♀, ♂: 189. 'Hab., Costa Rica, Cache'.
 1893. *Elis albofimbriata* Cameron, ♀, *Biol. Centr. Amer.*, Hym. 2: 229, pl. 12, f. 13.
 = 1957. *Campsomeris* (*Lissocampsomeris*) *columba albofimbriata* (Smith) Bradley: 75.

The holotype is in the British Museum and bears the number: '15.1378'. For details cf. Bradley, 1945: 30.

3. *alecto*

1858. *Scolia alecto* Smith, ♀, ♂: 10. 'Hab. Celebes'.
 1864. *Scolia* (*Triscolia*) *alecto* Saussure & Sichel, ♀, ♂: 48, n. 24.
 1928. *Scolia* (*Triscolia*) *alecto* Betrem, ♀, ♂: 237.
 = 1964. *Megascolia* (*Regiscolia*) *alecto alecto* (Smith) Betrem & Bradley: 443, n. 4a.

The lectotype is the only female in the Saunders collection without locality label, but bearing Smith's mss. label '*Scolia alecto* Sm.'. It has been marked by Betrem and published by him (1928: 237) as 'Hololectotype'.

The male specimen which Betrem (1928: 237) referred to as 'allotype' bears the pin-label 'Mak' (Makassar, S. Celebes). There are also a male and a female in the British Museum which Betrem referred to as paratypes.

[The mesoscutum of the female lectotype is more densely punctate anteriorly than in *Megascolia alecto regnatrix* (i.e. *cincta*); it is broadly impunctate medially, very remotely punctate posteriorly as well as along the parapsidal grooves. The carina behind the tubercle on tergite 2 (1) is blunter and longer than in *M. alecto regnatrix*. Wings reflecting blue-violet; the veins dark; no distinct pale area in the first submarginal cell. J.G.B.]

4. *ambigua*

1862. *Scolia ambigua* Smith, ♀: 52. 'Hab. Gilolo'.
 1864. *Scolia* (*Discolia*) *ambigua* Saussure & Sichel, ♀: 108, n. 99.
 1928. *Campsomeris* (*Dielis*) *nigerrima ambigua* Betrem, ♀: 106.
 1963. ?*Campsomeris* (*Laevicampsomeris*) *nigerrima* Krombein, ♀: 568.
 = *Campsomeris* (*Laevicampsomeris*) *nigerrima* (Smith) Betrem, infrasubspecific form *ambigua* Smith.

The lectotype is in the Saunders collection and bears a label 'Gil' and a Smith mss. label '*Scolia ambigua* Sm.'. It has been labelled and published by Betrem as 'Hololectotype' (1928: 106). [There are two other female syntypes in the Oxford Museum, one labelled 'Gil', the other 'G'. One of these has three punctures on one side of the scutellum, while the scutellum of the other is impunctate. Krombein regards *ambigua* as only a variant of *nigerrima*. J.G.B.]

5. *apicata*

1862. *Scolia apicata* Smith, ♀: 52. 'Hab. Celebes' (Tondano).
 1864. *Scolia* (*Triscolia*) *apicata* Saussure & Sichel, ♀: 46, n. 21.
 1928. *Scolia* (*Microscolia*) *apicata* Betrem, ♀, ♂: 208.
 = *Microscolia apicata* (Smith) Betrem, **comb. n.**

[There is one female of *Scolia apicata* Smith in the American Museum of Natural History. It bears three labels: (1) a round, white label 'Tond.' (Tondano) such

as is normal for Wallace material; (2) '349'; (3) 'Collection J. Angus'; cf. the introduction.

Since neither of us could find the type nor any specimen whatsoever of *apicata* in either Oxford or London, and since this specimen belongs to the Wallace material and came from the type-locality, Tondano, it must be presumed to be the holotype, although it would seem that Smith or the British Museum would only have sent the unique type to Angus through some error. The specimen agrees exactly with the description. J.G.B.]

6. *ardens*

1854. *Scolia fervida* Burmeister, ♂, ♀: 20, n. 12.
 1855. *Scolia ardens* Smith: 112, n.n. for *fervida* Burm., 1854, nec Smith, 1852. 'Hab. Mexico'.
 1864. *Scolia (Triscolia) fervida* Saussure & Sichel, ♀: 53, n. 30.
 = 1964. *Triscolia ardens* (Smith) Betrem & Bradley: 437.
 1966. *Triscolia ardens* Bradley & Betrem, ♀, ♂: 75.

A new name for *fervida* Burmeister and therefore with the same type.

7. *arrogans*

1853. *Scolia decorata* Burmeister, ♂, ♀: 20, n. 39.
 1865. *Scolia arrogans* Smith, ♂: 81. 'Hab. Sumatra', syn. n. Betrem..
 1928. *Campsomeris arrogans* Betrem, ♂: 332.
 = 1964. *Scolia (Discolia) decorata* Betrem & Bradley: 93, n. 66.
 1966. *Scolia (Discolia) decorata decorata* Bradley & Betrem, ♀, ♂: 75.

The unique male in the Saunders collection is the holotype and has been so labelled by Betrem. It bears a pin-label 'Sum' and Smith's mss. label '*Scolia arrogans* Sm.'

aureipennis

1855. '*Scolia aureipennis* St. Fargeau' Smith, ♀: 94. 'Hab. South Africa (Gambia) B.M.', a misidentification.
 1864. ?*Scolia (Discolia) smithii* Saussure & Sichel, ?♀, ♂: 86, n. 64, nec Fox, 1896.
 1906. ?*Scolia (Discolia) smithii* Schulz.

Smith cited St. Fargeau as author, but the material in the British Museum, seen in 1929, that he had before him, as well as the Gambian locality, shows that he misidentified Lepeletier's oriental species. As a consequence Smith established no new name and no type.

[I could not find any material in the British Museum from Gambia in 1966 that Smith could have studied. J.G.B.]

Saussure & Sichel described both ♀ and ♂ of *smithii*, the former with a query. They cited Smith's misidentification of *aureipennis* as a synonym of the probable female, but whether rightly or wrongly can only be determined after the lectotype of *smithii* Saussure & Sichel has been selected. The material of Saussure & Sichel came from Cape of Good Hope, not Gambia, and the female is excluded from selection as a lectotype, because it was attached to *smithii* with a query.

Since this taxon involves no Smith type, I have assigned it no number in the heading.

8. *aurulenta*

1855. *Scolia aurulenta* Smith, ♀, 'Habitat Philippine Ids. B.M. '.

1864. *Elis (Dielis) aurulenta* Saussure & Sichel, ♀: 206, n. 221.

1928. *Campsomeris (Dielis) aurulenta aurulenta* Betrem, ♀, ♂: 98.
= *Campsomeris (Phalerimeris) aurulenta aurulenta* (Smith) Betrem.

[The holotype is in the British Museum, and bears the following labels: (1) '53/71' which means 'Philippine Islands, purchased from Cuming'; (2) '*aurulenta* Smith type'; (3) 'B.M. type Hym. 15.1318'; (4) 'Holotype', added by Betrem in 1966.

The vestiture on the head, thorax, and femora is yellow-brown, except that it is partly white on femora III, and is white on the base of the abdomen.

There are three other females that stand as *aurulenta* in the British Museum, none of them syntypes: One is *C. aurulenta defectiva* Betr., and bears the following labels: (1) '55/8', which means 'Ceram, purchased of S. Stevens, collected by Mrs Ida Pfeiffer'.

The structure is as in typical *aurulenta*, but the vestiture on the under side of the head, on the propleura, mesopleura, base of t. 2(1), and on all femora is white. This colouration agrees with that of the subspecies *tondanensis* Betr., but in that subspecies the yellow-brown apical bands on the basal tergites are narrow.

The second specimen is *C. aurulenta tondanensis* and comes from Tondano in the Celebes.

The third specimen is *C. extrania leveri* Krombein. It bears the following label: '56/85', which means, 'Salomon Island, 467 collected by Sir Y. Siddel. Purchased by the B.M. after 1855'. J.G.B., July, 1966].

9. *bifasciata*

1775. *Scolia bicincta* Fabricius, ♀, ♂, *Syst. ent.*: 356, n. 6, *nec* Scopoli, 1786, *nec* Rossi, 1792.

1855. *Scolia bifasciata* Smith: 97. 'Hab. North America', n.n. for *bicincta* Fabricius.

1864. *Scolia (Discolia) bicincta* Saussure & Sichel, ♀, ♂: 129-130, n. 135.

= *Scolia (Discolia) bicincta* Fabricius.

Smith gave no description, but intended *bifasciata* as a new name for *bicincta* Fabr. which he mistakenly quoted as from the *Ent. syst.*, 1793, and therefore invalidated by *bicincta* Rossi, 1792, whereas *bicincta* Fabr. actually dates from the *Syst. ent.*, 1775, and itself preoccupies all the other uses of *Scolia bicincta*. Smith also included *obscura* Klug and *radula* Sulz. in the synonymy of *bifasciata*. The former is a synonym of *bicincta* F., and the latter is not an American species. From a nomenclatural standpoint it can be questioned whether Smith did anything more than create a *nomen nudum*, or if it be held that he proposed a new name for one of the three that he cited, and that the first reviser has settled which, then Saussure & Sichel, 1864: 130, have restricted it to being a replacement-name for *bicincta* F. The matter is of only academic interest, since *bifasciata* was itself preoccupied by Rossi, 1792, and *bicincta* F. is a valid name. For somewhat similar cases see *erratica* and *soror*.

10. *bimaculata*

1854. *Scolia frontalis* Saussure, ♀, ♂, *Mém. Soc. Phys. Hist. nat. Genève* **14** : 38, n. 16, fig. 13; *teste* Betrem, **syn. n.**
 1855. *Scolia bimaculata* Smith, ♀: 115, 'Hab. New Holland, Port Stephen. B. M. '
 1855. *Scolia coronata* Smith, ♀: 112, 'Hab. Australia (Adelaide)'; *teste* Betrem, **syn. n.**
 1928. *Scolia (Laeviscolia) frontalis frontalis* Betrem, ♀, ♂: 222.
 = *Laeviscolia frontalis* (Saussure, 1854) Betrem, **comb. n.** and **syn. n.**

[There is one female in the British Museum with the label '44/105', on the reverse 'P. Stephen'; this means: 'Port Steven(s)' (harbour in New South Wales, Co. Gloucester, 32° E., 42° S.) 'pres. by the Earl of Derby, coll. by Mac Gillavry'.

This specimen is the holotype of *Sc. bimaculata*. It agrees with Smith's description, and the type locality is so extraordinary, that there can be no doubt about it. I have labelled it 'Holotype'. It is registered as B.M. type, Hym. 15.1423.

There is one male of the same species in the British Museum collection with the label 'Adelaide' and 'Smith coll. pres. by Mrs Farren-White 99-303'. It is not a syntype, because Smith did not mention a male.

Betrem (1928 : 113) synonymized this species with *Elis anthracina* var. *consanguinea* Saussure, 1854, probably on the authority of Saussure & Sichel (1864 : 140, n. 148), although he had seen the type in the British Museum in 1926.

Smith placed *bimaculata* in the wrong division. The type has no second recurrent vein in the fore wings. This fact and the very obvious transverse yellow band on the vertex leave no doubt that *bimaculata* is a synonym of *S. frontalis* Saussure, 1854. [J.G.B.]

11. *captiva*

1862. *Scolia captiva* Smith, ♂: 52. 'Hab. Gilolo'.
 1862. *Scolia ambigua* Smith, ♀: 52. 'Hab. Gilolo'.
 1864. *Scolia (Discolia) captiva* Saussure & Sichel, ♂: 107, n. 98.
 1928. *Campsomeris (Dielis) captiva* Betrem, ♂: 107.
 1933. *Campsomeris (Laevicampsomeris) captiva* Betrem: 240.
 = *Campsomeris (Laevicampsomeris) captiva* (Smith) Betrem, ♂.

A male from Gilolo (i.e. Halmahera) in the Saunders collection agrees with Smith's description and was referred to by Betrem, 1928 : 107, as Smith's holotype. I hereby designate it to be the LECTOTYPE. There is also a male from Gilolo in the British Museum bearing the Smith collection printed label on which someone, but not Smith, has written 'type'. It may be a syntype or it may be from later material, probably the former.

[The male of *Scolia captiva* in the British Museum bears the pin-label 'Gil', not 'Cel' as I had thought in 1926. The locality that I gave for 'Paratype Smith's', 1928 : 107, should therefore be Gilolo, not Celebes. This male also bears the following information on its labels: 'F. Smith Coll. 19-22', and 'type no. 15-1392'. In 1864 : 28, Smith recorded this species also from Waigeou and Martaballa. A specimen marked 'Wag.' is in the Saunders collection.³

I placed *Scolia captiva* in my monograph in the synonymy of *Scolia (Austroscolia)*

³ Krombein, 1963 : 566, regards Smith's Waigeou and New Guinea specimens as being *C. (L.) bonguensis* Betrem, 1933.

nitida also (1928 : 210). I indicated that the male allotype of *nitida* is the holotype of *Scolia captiva* Smith. These references must be deleted. They probably were inserted by an error, the nature of which cannot now be ascertained, since the notes that I made in 1926 were lost in Java during the war. On re-examining the collections of the Hope Museum at Oxford in 1964, I could not find a specimen of any species of *Austroscolia*. This erroneous citation has already caused some confusion in the literature, ex. gr. Krombein, 1963 : 566.

There are two females of *Carinoscolia opalina* Smith under the label *captiva* in the Oxford Museum, which must have been placed there by accident.

It is not known with which female *C. captiva* belongs, because the males of almost all species of the subgenus *Laevicampsomeris* are so similar.

Krombein (1963 : 159), could also not distinguish the males of *C. bonguensis* from those of *C. nigerrima*. The male type of *captiva* and the female type of *ambigua* are each from Gilolo so that they appear to belong together. If we synonymize *ambigua* Sm. with *nigerrima* Sm., *captiva* Sm. would become a synonym of the last mentioned nominal species. J.G.B.]

12. *cincta*

1858. *Scolia cincta* Smith, ♀: 89. 'Hab. Borneo' (Sarawak), nec *Scolia cincta* Klug.

1864. *Scolia (Triscolia) cincta* Saussure & Sichel, ♀: 45, n. 19.

1928. *Scolia (Triscolia) alecto cincta* Betrem, ♀: 226.

= 1964. *Megascolia (Regiscolia) alecto regnatrrix* Betrem & Bradley: 442.

There are two females in the Saunders collection each bearing Smith's mss. label '*Scolia cincta* Sm.'. One bears a pin-label 'Sum', the other 'Sar.'. Betrem has correctly labelled the latter 'Holotype'. On the back of Smith's name label on this specimen is written: 'New sp. most like *patricialis* but without pale maculae on abd.'. The specimen agrees with Smith's description. The other female from 'Sum' is not a type. It is a different species, *azurea* according to Betrem (see below). Betrem, 1928 : 226, has included '*alecto* subsp. *cincta* Sm.' in his key, but has omitted the subspecies *cincta* under his account of the species *alecto* on p. 237. He therefore gives a short description here of the holotype.

[Description of the Holotype of *Scolia cincta*

♀. Spatium frontale above, front, vertex and upper temples yellow. Vestiture black except long setae on the central apical part of tergite 2(1), the fringes of tergite 3(2), long setae on the epipygium, and fringes on the sides of the last sternite yellow-red.

Mesonotum densely punctate anteriorly, broadly impunctate medially and posteriorly, more densely punctate along the parapsidal furrows. Tubercle of tergite 2(1) not very large, elongate in the form of a carina.

Wings with a greenish, yellow-golden effulgence; a distinct transverse pale area in the first submarginal cell; veins yellowish.

The female from Sumatra in the Saunders collection, bearing Bradley's label '1.4.2.29 *alecto*' is a specimen of *azurea*, as is proven by the presence of a deep groove behind the tubercle of tergite 2(1). It has red setae only on the epipygium, and there are two obscure red spots on tergite 4(3). The pale colour on the head is yellow. J.G.B.]

13. *conspicua*

1845. *Colpa wesmaeli* Lepeletier, ♀: 536, n. 3.
 1855. *Scolia conspicua* Smith, ♀: 107. 'Hab. Brazil (Para) (H. W. Bates) B.M.'.
 1864. *Elis (Dielis) conspicua* Saussure & Sichel, ♀, ♂: 228, n. 243.
 1945. *Campsomeris wesmaeli* Bradley, ♀, ♂: 25.
 = 1957. *Campsomeris (Lissocampsomeris) wesmaeli* (Lepeletier) Bradley: 76.

The holotype is in the British Museum, cf. Bradley, 1945: 26.

14. *coronata*

1854. *Scolia frontalis* Saussure, ♀, ♂, *Mém. Soc. Phys. Hist. nat. Genève*, **14**: 38, n. 16, fig. 13.
 1855. *Scolia coronata* Smith, ♀: 112. 'Hab. Australia (Adelaide) B.M.'.
 1928. *Scolia (Laeviscolia) frontalis frontalis* Betrem, ♀, ♂: 222.
 = *Laeviscolia frontalis frontalis* (Saussure, 1854) Betrem, **comb. n.**

[The specimens in the British Museum are:

A. A female bearing the following labels: (1) 'S. *coronata* Sm. type', a white label with red margin; (2) 'lectotype', attached by Betrem in 1966. There is no locality label. It is registered as B.M. Type, Hym. 15.1427. Smith did not observe the three submarginal cells, because the very dark wings are folded over the back.

B. A female labelled: (1) '52/9', with 'Adelaide' on the reverse. This label means 'S. Australia (Adelaide), purchased from Stevens, collected by Dr. Wilson'; (2) 'paralectotype' attached by Betrem in 1966.

C. A male also labelled '52/9'.

D. A male labelled: '99-303' meaning 'Adelaide, Smith coll., presented by Mrs Farren-White'.

E. Another male, with the same label as D, but actually a male of *bimaculata* Sm.

The males are not syntypes, since Smith did not describe that sex. J.G.B., 1966.]

15. *culta*

1838. *Scolia formosa* Guérin, ♀, in Duperry, *Voy. Coquille.*, Zool., **2**, pt 2: 252.
 1861.⁴ *Scolia culta* Smith, ♀: 117. 'Hab. Dory' (N. Guinea).
 1864. *Scolia (Discolia) culta* Saussure & Sichel, ♀: 122, n. 123.
 1928. *Campsomeris (Pseudotrielis) formosa culta* Betrem, ♀, ♂: 87.
 1963. *Campsomeris* (subg.?) *formosa* Krombein, ♀, ♂: 571, fig. 16.
 = *Campsomeris (Laevicampsomeris) formosa formosa* (Guérin, 1838) Turner, infrasubspecific form *culta* Smith.

A specimen in the British Museum was collected by Wallace at Dory and was purchased in 1858 from Stevens; it is the only *culta* in that museum. But Smith described *culta* as from the Saunders collection (cf. Smith, 1861: 94) and there is a specimen in that collection which bears Smith's mss label '*Scolia culta* Sm', but not 'type'. Betrem has marked but not recorded it as 'type'. I hereby confirm it as LECTOTYPE, assuming that Smith saw also the British Museum specimen. The latter agrees with Smith's description, except that the hind tibiae are not black

⁴ This is a correction of the reference to the preceding volume 4, 1860, both by Dalla Torre and by Betrem, 1928: 87.

beneath at base, and the line on tergite 5(4) is very weak. The type in Oxford has a much stronger second recurrent vein, as also the line on tergite 5(4) and the hind tibiae dark at base within.

The strength of the second recurrent vein is variable. The types agree with typical *formosa* (Guérin) as described by Betrem, 1928 : 86. The taxonomic subspecies identified by Betrem as *culta* must be abandoned, certainly the name *culta*, as has been suggested by Tuijn, 1961, and by Krombein, 1963 : 572, to which Betrem agrees.

16. *dubia*

1864. *Scolia dubia* Smith, ♂: 28, *nec* Say, 1837. ' Hab. Ceram '.
1889. *Diliacos dubia* Kirby, ♀, *Trans. Ent. soc. Lond.*: 444, a misidentification.
1896. *Scolia loewitii* Dalla Torre: 168, n.n.
1928. *Scolia (Austroscolia) aruicola* Betrem, ♂, ♀: 216.
1933. *Scolia (Austroscolia) loewitii* Betrem,: 254.
= *Austroscolia loewitii* (Dalla Torre, 1896) **comb. n.**

Three males in the Saunders collection bear Smith's mss. label '*dubia*'. One, from 'Wag' is not a syntype, another is from 'Ceram.'. The third bears the label 'Cer. E.' (East Ceram) and is the lectotype. It is the specimen called 'Holotype' of *loewitii* by Betrem, 1928 : 212, although it does not belong in the taxonomic species in which he placed it.

[This is the taxonomic species that I described as *aruicola*, 1928 : 216, but which is in fact *Sc. loewitii* Dalla Torre, 1896. The taxon that I erroneously called *Sc. (Austroscolia) loewitii* Dalla Torre (loc. cit.: 212), I renamed *Scolia (Austroscolia) nitidella dallatorrei* in 1933 : 354.

A female stands under the label *dubia* in the British Museum with the pin-label 'Ceram $\frac{5.5}{8}$ '. It is *Diliacos gracilipes* Micha, 1927 : 75. I think that it cannot be a syntype of *dubia*, because it seems to have been already acquired in 1855. The females recorded by Kirby from the Solomon Islands are *Diliacos glabrata* Micha, subspecies *praslini* Bradley, according to the specimens in the British Museum. Another female from Ceram in the British Museum standing as *dubia*, was presented by Turner (1913-438) but is in reality a specimen of Micha's *gracilipes* mentioned above. J.G.B.]

17. *ducalis*

1861. *Scolia ducalis* Smith, ♀: 118. ' Hab. Kaisaa '.
1864. *Scolia (Triscolia) ducalis* Saussure & Sichel, ♀: 49, n. 25.
1928. *Scolia (Megascolia) ducalis ducalis* Betrem, ♀: 244.
= 1964. *Megascolia (Megascolia) velutina ducalis* (Smith) Betrem & Bradley: 444, n. 3a.

An unique female in the Saunders collection bears the pin-label 'Kai' and also Smith's mss. label '*Scolia ducalis* Sm.'. It is the holotype, and has been so labelled by Betrem, who (1928 : 244) recorded it erroneously as being in the British Museum.

18. *erratica*

1854. *Scolia verticalis* Burmeister, ♂: 37, n. 61. A misidentification of *S. verticalis* Fabricius.
 1855. *Scolia erratica* Smith, ♂, not ♀: 88. 'Hab. India, Sumatra', a new name for *Scolia verticalis* Fabricius, as misidentified by Burmeister.
 1911. *Scolia erratica* Turner, *Ann. Mag. nat. Hist.* (8) 8 : 619.
 1928. *Scolia (Scolia) erratica erratica* Betrem, ♀, ♂: 271.
 1964. *Scolia (Discolia) erratica* Betrem & Bradley: 92, n. 29.
 = *Scolia (Discolia) erratica erratica* Smith, 1855.

Burmeister in 1854 described a male *Scolia* from Sumatra under the name *verticalis* Fabricius. This was a misidentification of the Fabrician species, which came from 'New Holland' (Australia).

The following year Smith proposed a replacement name for *verticalis* sense of Burmeister, not of Fabricius. This new name was '*erratica*'. He did not say 'new name', to use those words was not his custom, but he did write as a synonym '*Scolia verticalis* Burm., *Abh. Nat. Ges. Halle*, i.37.61 (*nec. Fabr.*)' and he backed up the synonymy by translating Burmeister's Latin description of the male (the only sex described by Burmeister⁵).

To this he added a single character ('the prothorax sometimes red') drawn from a female of another species⁶ which he erroneously supposed to be the female of *erratica*.

The case obviously comes under Article 72(d) of the code⁷ and the type must be sought for among Burmeister's specimens.

The fact that Saussure misidentified *erratica* Smith in 1858 and that he and Sichel, 1864 : 111, n. 104, renamed his misidentified material *molesta*, has no bearing on the matter.

Turner, 1911 : 619, noted that Saussure's description of *molesta* answers well 'to Smith's type' (of *erratica*), but it is not possible to construe this as having any bearing upon the identity of the latter.

[There is a specimen in the British Museum labelled in Smith's handwriting '*erratica* Sm. type'. It bears a second label: 'B.M. type Hym. 15 : 311.'. It has no locality label. In July, 1962, I marked it 'lectotype', but probably wrongly. Smith's label suggests that he intended to establish a new species, but our present rules do not seem to admit that interpretation. Since it is a male of *Scolia erratica erratica* the matter is not of great significance. Its fore wings are dark, with a coppery reflection, more rose-purple at apex. J.G.B.]

[There is a male in the old collection of the Oxford Museum that is labelled '*Sc. erratica verticalis*'. This is further indication that Smith studied the material in that museum. J.G.B.]

⁵ Betrem, 1928 : 271, under the synonymy of *erratica* refers to *verticalis* Burmeister '♂, *nec* ♀'; but as Burmeister described only the male, '*nec* ♀' must be struck out. For the same reason the entire first line in the synonymy of *vollenhoveni* on p. 289 must be struck out.

⁶ [The specimen is in the collection of the British Museum and is a female *S. vollenhoveni* Saussure, 1859. J.G.B.]

⁷ Article 72(d). Types of replacement nominal species.

If an author proposes a new specific name expressly as a replacement for a prior name, but at the same time applies it to particular specimens, (the male *erratica* and mistakenly identified female that Smith had before him) 'the type of the replacement nominal species' (here *erratica*) 'must be that of the prior nominal species' (*verticalis* Burmeister, *nec* Fabricius) 'despite any contrary designation of type-specimen or different taxonomic usage of the replacement name'.

19. *eximia*

1854. *Scolia guttata* Burmeister, ♀: 36, n. 57.
 1855. *Scolia eximia* Smith, ♀: 99. 'Hab. India, B.M.'.
 1864. *Elis (Dielis) eximia* Saussure & Sichel: 195, n. 208.
 1928. *Campsomeris eximia* Betrem, ♀: 333.
 1964. *Scolia (Discolia) guttata*, var. *eximia* Betrem & Bradley: 96, n. 134.
 = *Scolia (Discolia) guttata* Burmeister, infrasubspecific form *eximia* Smith.

A female in the British Museum (type no. 15.1282) has no locality label but bears Smith's mss. label '*eximia* Sm. type'. It is the holotype, and is a specimen of *guttata* Burm., the published locality 'India' being incorrect. Bingham reported, incorrectly, that the type is not in the British Museum. This species should be deleted from Betrem's key to *Campsomeris*, 1928 : 66, couplet 1b, and from p. 333. It is a neotropical taxon.

20. *facilis*

1839. *Elis elegans* Brullé, ♂, ♀, *Hist. nat. des Îles Canaries*, 2, pt. 2 : 91, n. 50, pl. 3, fig. 18, ♂, 19, ♀.
 1855. *Scolia facilis* Smith, ♀: 98. 'Hab. Canary Ids. (Coll. W. W. Saunders, Esq.)'.
 1864. *Elis (Dielis) elegans* Brullé, Saussure & Sichel, ♀, ♂: 174, n. 177.
 = *Campsomeris (Micromeris) aureola elegans* (Brullé) **comb. n.** and **stat. n.**, teste Betrem.

There are two female syntypes in the Saunders collection from the Canary Islands. They stand in front of the label '*facilis* Smith'. I hereby designate the one with a large spot at each side of the third tergal band 'LECTOTYPE', and I have so labelled it. It is an *elegans* with an exceptional amount of yellow on the first three tergites.

[There are also two females labelled 'Can'y' (Canary Islands) in the old collection at Oxford. They have an exceptional amount of yellow on the basal tergites. I suppose that these are syntypes. J.G.B.]

Betrem is responsible for giving *elegans* the status of a subspecies of *aureola* in the subgenus *Micromeris*, but Turner transferred *aureola* to *Campsomeris*.

[The wings not pilose except extreme anterior margin; longer spur of tibiae III distinctly but slightly spatulate; transition between the horizontal area and the vertical parts of the metapleura forming a blunt angle. Clypeus striate anteriorly. The preceding characters appertain to the lectotype and paratype. J.G.B.]

21. *fasciatopennis*

1855. *Scolia fasciatopennis* Smith, ♀, ♂: 103. 'Hab. West Africa (Coll. F. Smith)'.
 1864. *Elis (Dielis) fasciatopennis* [sic!] Saussure & Sichel, ♀, ♂: 169, n. 171, an emendation.
 1889. *Discolia fasciatopennis* Kirby, ♀, ♂, *Trans. ent. Soc. Lond.*: 448.
 = 1964. *Scolia (Discolia) fasciatopennis* Betrem & Bradley: 94, n. 95.

There is a female in the British Museum that bears a mss. label '*fasciatopennis* Sm.' [sic!] and a second printed label 'F. Sm. Coll. 79 : 22' with 'type' written on it. It is the British Museum Type 15.1287. It agrees with the description. I hereby designate it LECTOTYPE and Betrem has labelled it, July, 1966. Another female in the British Museum has no label except 'W. Afr.' but there is nothing to indicate that it came from the Smith collection. The two are identical.

The male allotype, from 'Gambia' is also in the British Museum. It is one of a series of types purchased by the Museum from the Smith collection after his death.

The original description of this species was included among those having two recurrent veins, but the lectotype has only one. Kirby says this was done inadvertently, but it caused Saussure & Sichel to confound *fasciatiopennis* with a species of *Campsomeris*.

[There is a specimen marked 'type' in the Oxford Museum and it is in drawer 43 of the type-collection, but has been extracted from drawer 40 of the old Hope collection. It is a *Scolia* from Sierra Leone as indicated by the initials 'S. L.' on the label.

The following specimens are labelled *fasciatiopennis* [*sic!*] in drawer 40: (1) a female *Campsomeris* with dark anterior wing-margin from Sierra Leone; (2) a female *Liacos* labelled 'Raddon, W. Africa'; (3 and 4) two male *Scoliae* from Sierra Leone; (5) a male *Scolia* labelled 'Raddon, Gold Coast'; (6) a female *Liacos* from Lake N'Gami, Castelneau, 1862. It is possible that Smith saw this mixture of specimens that all look alike but have different wing-venation, and that it is the explanation of his confusion.

Except the Castelneau specimen, I suppose that the other specimens are old because William Raddon published in 1835 and 1836 according to Horn. J.G.B.]

22. *fascinatus*

1873. *Scolia (Discolia) fascinatus* Smith, ♂: 185. 'Hab. Hiogo Japan'.
 1917. *Discolia fascinatus* Matsumura, ♂, *Konchu Bunruigoku* 2 : 307.
 1928. *Scolia (Carinoscolia) vittifrons vittifrons* Betrem, ♂, *nec* ♀: 186.
 1941. *Scolia (Carinoscolia) fascinatus fascinatus* Betrem, ♂, ♀: 113.
 = *Carinoscolia fascinatus fascinatus* (Smith) Betrem, **comb. n.**

There is only one male from Japan in the British Museum. It bears a printed label 'Hiogo Japan', a museum printed type-label, a mss. label '*Scolia fascinatus* Smith', and a printed label 'Smith Coll.' on one end of which is written 'type'. It is the holotype. In Betrem's key (1928 : 177) it runs to *vittifrons* with which Betrem at that time identified it.

[I could not find the type in the British Museum in 1966. I now regard the Japanese *fascinatus* as a species distinct from the Chinese *vittifrons*. I have stated the reason in my 1941 paper. J.G.B.]

23. *fenestrata*

1854. *Elis dimidiatiopennis* Saussure, ♀, *Mém. Soc. Phys. Hist. nat. Genève* 14 : 64, n. 32.
 1855. *Scolia fenestrata* Smith, ♀: 104. 'Hab. Congo=Gambia'.
 1864. *Elis (Dielis) dimidiatiopennis* Saussure & Sichel, ♀: 168, n. 170.
 1896. *Scolia dimidiatiopennis* Dalla Torre: 154.
 = *Campsomeriella (Campsomeriella) dimidiatiopennis* (Saussure) Betrem.

Although Betrem, 1947 (1945) : 413, listed *dimidiatiopennis* as a subspecies of *thoracica*, he no longer so regards it. There are three female syntypes in the British Museum, two from 'Congo' and one from 'Gambia'. One of those from Congo is marked 'type' on Smith's mss. label, and I hereby designate it LECTOTYPE.

[The lectotype bears the labels: (1) 'Congo'; (2) a white label with red margin, '*fenestrata* Sm. type'; (3) 'lectotype', label added by Betrem, 1966. It is registered as B.M. Type, Hym. 15.1425. I find two syntypes from Gambia.

A female in the old collection at Oxford is labelled 'S. L.' (= Sierra Leone). Since Smith did not mention this locality it is not a syntype. J.G.B.]

24. *fervida*

1805. *Scolia analis* Klug, ♀, *Beitr. z. Naturk.* 1 : 36, n. 31, *nec* Fabricius, 1804.

1810. *Scolia cruenta* Klug, ♀, *loc. cit.* 2 : 168, n.n. for *analis* Klug, *nec* Fabricius.

1852. *Scolia fervida* Smith, ♀: 46, 'Hab. Poona, collected by Ezra T. Downes. Presented to the Honorable The East India Company'.

1928. *Scolia (Scolia) sexpustulata* Betrem, 1928: 310.

= 1964. *Scolia (Discolia) cruenta* Klug, Betrem & Bradley: 93, n. 59.

[The holotype, a female in the British Museum, bears the following labels: (1) 'Ind' (India); (2) a blue paper label, '*fervida* Smith'; (3) '99-303', which means: 'Smith coll., presented by Mrs Farren-White'; (4) 'holotype', added by Betrem in 1966. It is registered as B.M. Type, Hym. 15.1430.

This is *Scolia cruenta* Klug without any doubt. Some difficulty arises in my key, 1928 : 257, because the type has a distinct, but faint, red cross-band on the front. J.G.B., July, 1966.]

25. *flavidula*

1855. *Scolia flavidula* Smith, ♀: 115. 'Hab. Australia, B.M.'.

1864. *Elis (Trielis) flavidula* Saussure & Sichel, ♀: 143, n. 151.

1909. *Campsomeris (Trielis) flavidula* Turner, ♀, ♂, *Ann. Mag. nat. Hist.* (8) 4 : 171.

1928. *Campsomeris (Pseudotrielis) flavidula* Betrem, ♀: 85.

= *Trisciloa (Pseudotrielis) flavidula* (Smith) Betrem, **comb. n.**

The holotype in the British Museum bears Smith's mss. label '*flavidula* Sm. type', and the type-number: 15.1518.

26. *flavopicta*

1854. *Scolia decorata* Burmeister, ♀, ♂: 30, n. 39.

1855. *Scolia flavopicta* Smith, ♀: 91. 'Hab. Java. B.M.'.

1864. *Scolia (Discolia) decorata* Saussure & Sichel, ♀, ♂: 122, n. 122.

1928. *Scolia (Scolia) decorata decorata* var. *flavopicta* Betrem, ♀: 321.

= *Scolia (Discolia) decorata decorata* Burmeister, infrasubspecific form *flavopicta* Smith, *teste* Betrem.

[The holotype, a female in the British Museum, bears the following labels: (1) '49/5' with 'Java' on the reverse, means '14 Hym. Java purchased of Argent'; (2) 'holotype', attached by Betrem in 1966. It is registered as B.M. Type, Hym. 15.1432.

There is another female of *flavopicta* in the British Museum labelled '54/76', on the reverse 'Sumatra'; the reference means 'various localities, purchased of Stevens'. A specimen of *Megascolia (Regiscolia) azurea* is similarly labelled, and bears additional labels: (1) '*flavopicta*, type'; (2) 'B.M. type Hymen. 15.1296'; (3) a white label with red margin, 'type'. Type-labels on this female are of course false. J.G.B., 1966].

27. *fraterna*

1855. *Scolia fraterna* Smith, ♀, ♂: 94. 'Hab. Port. Natal'.
 = 1864. *Scolia (Discolia) fraterna* Smith, Saussure & Sichel, ♀, ♂: 82, n. 59.

A female in the British Museum from 'Port Natal' bears Smith's mss. label 'Sc. *fraterna* Sm. type' and 'B.M. Hym. 15.1285'. I hereby designate it LECTOTYPE. It does not exactly agree with the description which fails to mention red antennae, and the punctuation on the abdomen is very fine and sparse, especially on tergite 2(I).

28. *fulgidipennis*

1859. *Scolia fulgidipennis* Smith, ♀, ♂: 152. 'Hab. Aru'.
 1864. *Scolia (Discolia) fulgidipennis* Saussure & Sichel, ♀: 109, n. 101.
 1889. *Diliacos fulgidipennis* Kirby, *Trans. ent. Soc. Lond.*: 444.
 1928. *Scolia (Liacos) fulgidipennis* Betrem, ♀, ♂: 175.
 1963. *Scolia (Liacos) fulgidipennis* Krombein, ♀, ♂: 609.
 = *Liacos fulgidipennis* (Smith) Betrem, **comb. n.**

A female and a male are in the Saunders collection labelled 'Aru', and a female labelled 'Dor' (= Dorey). I hereby select the female labelled 'Aru' to be LECTOTYPE (Betrem, 1928: 175, referred to it as holotype). It agrees with Betrem's description but its wings reflect brilliant green, more yellow-green toward the margin. Seen in a certain light their reflection is violet-blue on the basal part, green-blue at the margins. A specimen in the British Museum bears, incorrectly, the label 'type 15.1374'.

29. *fulvipennis*

1859. *Scolia fulvipennis* Smith, ♂: 10. 'Hab. Celebes'.
 1864. *Scolia (Discolia) fulvipennis* Saussure & Sichel, ♀: 125, n. 129.
 = 1928. *Scolia (Scolia) fulvipennis* Smith, Betrem, ♂, ♀: 276.

There are two male syntypes in the Saunders Collection. Betrem has labelled 'lectotype' the one that bears Smith's mss. label '*fulvipennis*', but he referred to it (1928: 276) as 'holotype Smith's' from Makian, misinterpreting its locality label 'Mak' as meaning the island of Makian, instead of Makassar in the South Celebes. I hereby confirm the status of this specimen as LECTOTYPE. It agrees with Betrem's interpretation of the species 1928: 276.

30. *habrocoma*

1855. *Scolia habrocoma* Smith, ♀: 100, 'Hab. India (Coll. W. W. Saunders, Esq.)'.
 1864. *Elis (Dielis) habrocoma* Saussure & Sichel, ♀: 198, n. 212.
 = 1928. *Campsomeris (Megacampsomeris) habrocoma* (Smith) Betrem, ♀, ♂: 144.

An unique female in the Saunders collection agrees exactly with the original description. It stands in front of the label '*habrocoma* Sm. Ind.'. It bears a pin-label 'E.I.', but, as pointed out by Betrem, it bears a label '*E. servillei* Guér.? Voy. Coq.'. This label, if not indeed present by mischance, is without significance. It can represent nothing more than someone's incorrect endeavour to identify the specimen with *servillei* which is South American. The pin label 'E.I.' is correct,

since the taxonomic species *habrocoma* occurs in Java, but not in India. Smith published a wrong type-locality. Betrem, 1928 : 144, referred to this specimen as 'holotype' and I have so labelled it.

31. *hirtipennis*

1855. *Scolia oryctophaga* Coquerel, ♀, *Ann. Soc. ent. France* (3) 3 : 170, pl. 10, fig. 2.

1855. *Scolia hirtipennis* Smith, ♀, ♂: 95. 'Hab. Madagascar (coll. F. Smith)'

= 1864. *Scolia (Discolia) oryctophaga* Coquerel, Saussure & Sichel, ♀, ♂: 78, n. 52.

A female in the British Museum bears Smith's mss. label '*Scolia oryctophaga* Co. *S. hirtipennis* Smith' and also a museum printed label 'Smith Coll.' with the word 'type' written on it. Another female bears Smith's mss. label '*hirtipennis* Smith type' but there is nothing to indicate that it came from the Smith collection. This specimen has a hairy propodeum which does not appear sericeous and which has its punctures more or less obscured by hair. In the former the propodeum is denuded, therefore appears 'more finely punctate and covered with a sericeous pile' as described by Smith. I hereby designate the female with Smith's mss. type-label to be LECTOTYPE, and have so labelled it (B.M. type, Hym. 15.1421), despite the fact that the other agrees better with his description.

32. *ignita*

1854. *Scolia indica* Saussure, ♀, *Mém. Soc. Phys. Hist. nat., Genève*, 14 : 46, fig. 10.

1855. *Scolia ignita* Smith: 101, ♀, 'Hab. Silhet, North Bengal; Travan, B.M.'

1928. *Campsomeris (Campsomeris) indica* Betrem, ♀, ♂: 116.

1928. *Campsomeris (Trielis) assamensis* Betrem, ♂: 111, **syn. n.**, Betrem.

1941. *Campsomeris (Colpacampsomeris) indica* Betrem: 101.

= *Campsomeris (Colpacampsomeris) indica indica* (Saussure) Betrem, **stat. n. teste** Betrem.

[The holotype was in the British Museum labelled 'type $\frac{45}{107}$ Sylhet' but I could not locate it in 1966, and it is not in the card-index of types. This species is identical with *indica* Saussure for which that author mentioned no type-locality. I distinguish four subspecies as follows:

1. *C. (Colpacampsomeris) indica indica* (Saussure, 1854) Betrem [= *ignita* Smith, 1855] [= *assamensis* Betrem, 1928, **syn. n.**]. Silhet.
2. *C. (Colpacampsomeris) indica eliformis* (Saussure), **stat. n.** Ceylon.
3. *C. (Colpacampsomeris) indica salvazai* Betrem, 1941. Cochin China (South Vietnam).
4. *C. (Colpacampsomeris) indica pseudojavanica* Betrem, 1928, **stat. n.** Taiping, in Perak, Malay Peninsula.

Saussure & Sichel, 1864, give 'Bengalia, Silhet' as locality for *indica* Saussure, 1854. This may be construed as fixing a type-locality for that species, and as it is the type-locality for *ignita* one may conclude that Saussure & Sichel were correct in synonymizing the two. Sylhet is in extreme north-eastern East Pakistan, in what was formerly Assam, but prior to 1874 was partly Bengal.

There are three females named '*indica*' in the Oxford Museum. Their pin-labels are respectively 'Sylhet', 'Travancore', and 'India'. They may be syntypes of *ignita*. J.G.B.]

33. *instabilis*

1854. *Scolia jurinei* Saussure, ♀, ♂, *Mém. Soc. Phys. Hist. nat., Genève*, **14** : 45, n. 21.
 1855. *Scolia instabilis* Smith, ♀, ♂: 88. 'Hab. India. B.M.'
 1864. *Scolia (Discolia) aureipennis* Saussure & Sichel, ♀, ♂: 109, n. 102. Misidentification of *aureipennis* Lepeletier.
 1928. *Scolia (Scolia) aureipennis* Betrem, ♀, ♂: 280. Misidentification of *aureipennis* Lepeletier
 1941. *Scolia (Scolioides) jurinei* Betrem: 136.
 = 1964. *Scolia (Discolia) jurinei* Saussure, Betrem & Bradley: 93, n. 34.

[There is only a single female in the British Museum that agrees with the original description and that is old enough to be a syntype; it bears the following labels: (1) 'Madras', (mss.), and (2) '*instabilis* Smith' on blue paper in Smith's mss. I hereby designate it LECTOTYPE, and have added a label to that effect. It is registered as B.M. Type, Hym. 15.1424. The male syntype referred to by Smith was in the extension collection of the British Museum. It was presented by Mrs Farren-White. J.G.B., August, 1966].

34. *insularis*

1859. *Scolia insularis* Smith, ♂: 153. 'Hab. Key Islands. Saunders Coll.'
 1864. *Scolia (Discolia) insularis* Saussure & Sichel, ♂: 107, n. 97.
 = 1927. *Diliacos insularis* (Smith) Micha, ♂, nec ♀: 73.
 1928. *Scolia (Diliacos) insularis* Betrem: 191.

Four males in the Saunders collection bear Smith's mss. label '*Scolia insularis*'. One is from Aru, one has no locality label, one is from 'Cer. E.' and the fourth is labelled 'Ke' which I assume to mean Key Id. This last one agrees with the original description and I hereby designate it LECTOTYPE and have so labelled it. It was referred to by Betrem, 1928 : 192, as 'holotype' but not labelled. Since the male without pin-label may be a syntype it is safer to say lectotype rather than holotype.

[The male lectotype in the Saunders collection labelled 'Ke' has somewhat reddish effulgence of the wings. That of the male from Aru is more golden. There is some difference between the two in the punctuation of the mesoscutum. The male from eastern Ceram is *Diliacos gracilipes* Micha, 1927, which was described from Ambon. The apical half of the disc of its tergite 2(1) is impunctate, whereas in *insularis* it is entirely, rather densely, punctate.

The material labelled *insularis* in the British Museum consists of two males of *insularis* from 'Ke I.' from the Smith collection, one presented by Mrs Farren-White, and another male from the Smith collection no. 79-22 that is not an *insularis*, because the lower plate of the mesopleura is deeply, roughly, punctate, possibly it is the male of *Liacos schindleri* (Betrem), 1933, **comb. n.** J.G.B.]

35. *intrudens*, 1862

1862. *Scolia intrudens* Smith, ♂, ♀: 53. 'Hab. Celebes (Tondano)' nec 1868 : 241.
 1864. *Scolia (Triscolia) intrudens* Saussure & Sichel, ♂: 42, n. 14.
 1928. *Scolia (Megascolia) ducalis gribodoi* Betrem: 244, **syn. n.**, *teste* Betrem.
 = 1964. *Megascolia (Megascolia) velutina intrudens* (Smith) Betrem & Bradley: 441, n. 3b.

The holotype, a male, is in the Saunders collection. It bears a label 'Tond.' (i.e. Tondano, N. Celebes) and Smith's mss. label '*Scolia intrudens* Smith' and has been noted by Betrem, 1928 : 246. It is a male of the taxonomic species to which Betrem, (1928 : 245) applied the name 'velutina Sauss.'. The two other males in the Saunders collection are neither one from the type locality, hence are not syntypes.

36. *intrudens*, 1868

1775. *Tiphia radula* Fabricius, ♀ *Syst. ent.*: 354, n. 5.
 1868. *Scolia (Dielis) intrudens* Smith, ♀: 241. 'Hab. Champion Bay (Australia)'.
 1909. *Campsomeris radula* Turner, *Ann. & Mag. nat. Hist.* (8) 3 : 484.
 1928. *Campsomeris (Dielis) radula* Betrem, ♀, ♂: 88.
 = 1962. *Campsomeris (Radumeris) radula* (Fabricius) Betrem, *teste* Betrem, *Ent. News*: 206.

[The holotype, a female in the British Museum, bears the following labels: (1) 'Champion Bay'; (2) 'H. du Boulay, Smith coll.'; (3) '*Scolia (Dielis) intrudens*'.

Smith, 1868 : 231, stated 'The species not indicated as being in the National collection are in my own collection'.

Without a doubt this is *radula* F. There are specimens in the British Museum that have a narrow, yellow, apical line on tergite 2(1), but none with red tibiae and tarsi. J.G.B., July, 1966].

37. *iridicolor*

1855. *Scolia iridicolor* Smith, ♂: 95. 'Hab. Madagascar (Coll. F. Smith)'.
 = 1864. *Scolia (Discolia) iridicolor* Smith, Saussure & Sichel, ♂: 79, n. 54.

The holotype male is in the British Museum, and I have so labelled it. It bears the museum type number 15.1422. It agrees with the description and bears a label 'F. Sm. Coll. 79.22' and a mss. label (probably Smith's) '*Scolia iridicolor* Sm.'. Another specimen in the British Museum that bears the museum 'type' label and also Smith's mss. label '*iridicolor* Sm. type' is not a type, for it is a female, much too large to fit the description and did not come from the Smith collection but was purchased in 1858 from Stevens.

38. *irregularis*

1793. *Scolia variegata* Fabricius, *Ent. syst.*, 2 : 230, n. 10.
 1855. *Scolia irregularis* Smith, ♀, ♂: 107. 'Hab. Brazil. B.M.'.
 1864. *Elis (Dielis) variegata* Saussure & Sichel, ♀, ♂: 226, n. 242.
 = 1957. *Campsomeris (Aelocampsomeris) variegata* (Fabricius) Bradley, 1957: 74.

In 1940 : 6, I incorrectly referred to the 'holotype' from Brazil. As the species was described from syntypes representing each sex, this must now be corrected to lectotype, ♀. The LECTOTYPE, by present designation, is in the British Museum; it agrees with Smith's description.

[The female lectotype bears the labels: (1) 'Braz'; (2) '*irregularis* Sm. Type'; (3) a round white paper label with red margin 'type'; (4) a red label 'lectotype', added by Betrem in 1966 to replace the former holotype label; (5) 'stands as *variegata* in the Smith coll.'. It is registered as B.M. Type, Hym. 15.1426. There are no males. J.G.B., July, 1966].

39. *japonica*

1787. *Tiphia histrionica* Fabricius, ♀, *Mant. ins.* 1 : 243, *nec Scolia histrionica* F., 1798.
 1873. *Scolia japonica* Smith, ♀, ♂: 185. 'Hab. Hiogo (Japan)'.
 1928. *Scolia (Scolia) japonica* Betrem, ♀, ♂: 322.
 1941. *Scolia (Scolioides) japonica* Betrem, ♀, ♂: 166.
 = 1964. *Scolia (Discolia) histrionica histrionica* (Fabricius) Bradley & Betrem: 15.

Betrem (1928 : 322) referred to Smith's female syntype in the British Museum as the holotype, but since there are at least two syntypes, female and male, it is necessary to designate the female LECTOTYPE. Its bears the museum type-number 15.1298.

40. *laeviceps*

1855. *Scolia laeviceps* Smith, ♀, ♂, p. 91. 'Hab. Hong Kong. B.M.'.
 1864. *Scolia (Discolia) laeviceps* Smith, Saussure & Sichel, ♀, ♂: 118, n. 116.
 1928. *Scolia (Scolia) laeviceps* Betrem, ♀, ♂: 265.
 = *Scolia (Discolia) laeviceps* Smith.

The lectotype ('Hololectotype') male, selected by Betrem, 1928 : 266, is in the British Museum.

[The lectotype bears the following labels: (1) '48/60', on the reverse: 'Hong Kong'; (2) '*laeviceps* Sm., type'; (3) 'B.M. type Hymen. 15.1401'; (4) a white paper label with red margin 'Type'. J.G.B., 1966].

41. *larradiformis*

1864. *Scolia larradiformis* Smith, ♀: 28. 'Hab. Waigeou'.
 1864. *Scolia morata* Smith, ♂: 28. 'Hab. Mysol', new probable synonymy, Betrem.
 1927. *Diliacos larradiformis* Micha: 140, 9.
 1928. *Scolia (Diliacos) larradiformis* Betrem, ♀: 196.
 1963. *Scolia (Diliacos) larradiformis larradiformis* Krombein, ♀, ♂: 615.
 = *Diliacos quadriceps larradiformis* (Smith) Micha, **stat. n.**

The unique type is in the Saunders collection, as already indicated by Betrem, 1928 : 196, and I have labelled it 'Holotype'. It bears a pin-label 'Waig.' and Smith's blue mss. label '*Scolia larradiformis* Sm.'. One wing is half torn. It agrees with Smith's description. [I re-examined the types of *larradiformis* and of *quadriceps* Smith in 1964 and regard them as subspecies, differing only in wing-colour. J.G.B.]

42. *litigiosa*

1855. *Scolia litigiosa* Smith, ♀: 113. 'Hab. India. B.M.'.
 1864. *Elis (Trielis) litigiosa* Saussure & Sichel, ♀: 158, n. 164.
 1950. *Campsoscolia (Campsoscolia) litigiosa* Bradley: 436.
 = *Trielis (Trielis) litigiosa* (Smith) Betrem, **comb. n.**

The holotype is an unique female in the British Museum bearing a mss. label '*litigiosa* Smith type'. Its number is 15.1362. It agrees with Smith's description.

[Description of the holotype of *Scolia litigiosa* Smith.]

♀. Black, the following parts brown-yellow: the sides of the clypeus, area frontalis, spatium frontale, front, vertex, upper temples, scapulae, tergites 4(3) and 5(4) each except for a median line.

Clypeus with a broad anterior margin, the median part rather finely striate, scarcely raised, the sides coarsely punctate. Spatium frontale with only a few coarse punctures, somewhat raised, the transverse groove deep, dark-brown; fissura frontalis deep on the spatium frontale, slightly indicated on the front. Front with only a few rather coarse punctures; the postfrontal suture distinct on the sides of the front, forming a depression; front outside of this depression impunctate. Vertex very broad with coarse punctures behind the lateral ocelli.

Scapulae with sparse, coarse, punctures; mesoscutum punctate except for a rather large impunctate median area; scutellum impunctate except for some punctures anteriorly and at the sides; metanotum in greater part impunctate; metapleura strongly raised medially below the front wings; the upper anterior area of the mesopleura densely, coarsely, punctate; the upper posterior area densely punctate, except for a small area; the posterior, lower, part of the mesopleura punctate except anteriorly and posteriorly; mesopleural crest not sharp, with sparse punctures; metapleura impunctate except for some punctures below the hind wings; transition between the horizontal and vertical parts very gradual.

Area horizontalis medialis densely, coarsely, deeply, punctate. Area horizontalis lateralis with the same kind of punctures except for an impunctate area on the inner basal corner. Area before the stigma impunctate; carina lateralis distinct; area lateralis punctate above, sparsely below; area posterior medialis punctate except below; area posterior lateralis regularly punctate.

Wings dark, reflecting blue, not setose, a transverse brown-yellow line in the first submarginal cell. Longer spur of tibia III absent on the type on both sides. Vestiture black.

Tergites sparsely, rather coarsely, punctate; tergite 2 (1) without a tubercle.

This description was drawn from the type in the British Museum, which bears three pin-labels: 1st label, 'B.M. type Hymenoptera 15.1362'; 2nd label, '*litigiosa* Smith, type'; 3rd label, 'Ind.'. I doubt whether India is the correct locality, at most it could have come from West Pakistan.

This species is allied to *Trielis interrupta* (Fabricius). It differs from *Trielis klugii* (v.d. Linden), **comb. n.**, its closest ally, by its more punctate vertex, the deeper depression on the front, the more sparsely punctate scapulae, and the darker wings. J.G.B.]

43. *luctuosa*

1854. *Scolia 4-guttulata* Burmeister, ♀: 21, n. 17.

1855. *Scolia luctuosa* Smith, ♀: 101. 'Hab. Silhet (India) B.M.'.

1864. *Elis (Dielis) luctuosa* Saussure & Sichel, ♀, ♂: 194, n. 206.

1928. *Campsomeris (Colpa) peregrina* Lepeletier var. *4-guttulata* Betrem, ♀: 115.

1941. *Campsomeris (Sericocampsomeris) 4-guttulata* Betrem: 92.

= *Campsomeris (Sericocampsomeris) quadriguttulata quadriguttulata* (Burm.) Betrem, **stat. n.**

[The holotype is a female in the British Museum. It bears the following labels: (1) 'Silhet'; (2) '*luctuosa* Sm., type'; (3) a white label with red margin, 'type'; (4) 'B.M. type Hymen. 15.1343'; (5) 'Holotype', added by Betrem, 1966. Another old specimen in the British Museum is from Sarawak. It was purchased from Stevens. There are two females in the Oxford Museum that may be syntypes. Both are from Silhet in the extreme north-eastern part of East Pakistan (Bengal in 1855). One has an entirely black abdomen. The other has four yellow spots on it. J.G.B.]

44. *minuta*

1859. *Scolia minuta* Smith, ♂: 11. 'Hab. Celebes'.
 1864. *Scolia (Discolia) minuta* Saussure & Sichel, ♂: 125, n. 128.
 1928. *Campsomeris (Campsomeris) marginella terminata* (Smith) Betrem: 137.
 1937. *Campsomeris marginella terminata* var. *minuta* Betrem, ♂: 41, footnote.
 1941. *Campsomeris (Campsomeriella) marginella terminata* Betrem: 90.
 = *Campsomeris (Micromeris) marginella terminata* (Smith) Betrem, infra-subspecific form *minuta* Smith, *teste* Betrem.

A male in the Saunders collection bears a label 'Mak' and has been correctly labelled 'holotype' by Betrem (1928 : 137). But its pin-label 'Mak' refers to Makassar in the South Celebes, not to the island of Makian.

[The holotype belongs to the subspecies *terminata* of *Campsomeris (Micromeris) marginella* but differs as a variety in being much smaller, having only two yellow scutellar spots, and in having its metanotum yellow medially. Its abdominal bands are normal. J.G.B.]

45. *modesta*

1855. *Scolia modesta* Smith, ♀, ♂: 91. 'Hab. Philippine Islands, B.M.'.
 1864. *Scolia (Discolia) modesta* Saussure & Sichel, ♀, ♂: 124, n. 126.
 1893. *Discolia modesta* Gribodo, ♂, *Bull. Soc. ent. ital.* **25** : 178.
 1928. *Campsomeris (Campsomeris) marginella modesta* Betrem, ♀, ♂: 136.
 1941. *Campsomeris (Campsomeriella) marginella modesta* Betrem: 90.
 = *Campsomeris (Micromeris) marginella modesta* (Smith) Betrem.

Betrem (1928 : 136) stated that the holotype is in the British Museum and indicated that a male syntype belongs to a different species. Since *modesta* was described from syntypes, I hereby designate the female to be LECTOTYPE, not holotype, and it has been so labelled.

[The lectotype bears the following labels: (1) '42/22', on its reverse 'Philip. Isl'; (2) '*modesta* type Smith'; (3) 'B.M. type Hym. 15. 1332'; (4) a white paper label with red margin. J.G.B., 1966].

46. *morata*

1864. *Scolia morata* Smith, ♂: 28, 'Hab. Mysol'.
 1864. *Scolia larradiformis* Smith, ♀: 28, 'Hab. Waigeou'.
 1963. *Scolia (Diliacos) larradiformis morata* Krombein, ♂: 615, 619, fig. 30.
 = *Diliacos quadriceps larradiformis* (Smith) Micha or possibly *Diliacos quadriceps morata* (Smith) Micha.

[There are two males in the Saunders collection. Specimen A bears a circular label on which is written just 'M', which presumably stands for Mysol. Specimen B bears no label, but undoubtedly is also a syntype from Mysol, being an instance of what is referred to in the introduction where only the first of two specimens from the same locality bears the locality label. Specimen B bears my label 'Holotype' but since the species was described from syntypes, I now select it to be the LECTOTYPE, and have so labelled it.

Professor Varley of the Oxford Museum very kindly loaned these two syntypes to Dr Krombein, who sent them to me for re-examination here in Ithaca, March, 1962. I examined them again in 1964. Both agree with Smith's original description.

Both belong to the same taxon, but differ slightly in structure. Specimen (A) has the disc of the clypeus and of the mesonotum less punctate than has specimen (B). My description of the male of *morata* (1928 : 192) was drawn from specimen (B), the lectotype. The male lectotype of *morata* Smith is probably the male of *Diliacos larradiformis* (Smith, 1864), which was described from the female. Krombein established *morata* as a subspecies of *larradiformis*; on p. 615 he says: 'The female of *larradiformis larradiformis* may not be separable from that of *l. morata*. I have examined the male type of *S. morata* from Mysol. It differs slightly in the shape of the parameres (squamae), the volsellae (fig. 30) are slightly more slender and the wings have greenish golden reflection'.

The female from Mackay that I assigned to *morata* (1928 : 192) is not the female of that species. In 1933, I made it the holotype of a new species, *papuasiae*, which Krombein (1963 : 622) has synonymized with *D. glabrata glabrata* Micha. He also has described the male (loc. cit.). I agree with him. J.G.B.]

47. *morosa*, 1861

1859. *Scolia velutina* Saussure, ♂, *Stettin. ent. Ztg* 20 : 175.

1861. *Scolia morosa* Smith, ♀: 118. 'Hab. Amboyna, Saunders Collection', *nec* 1862 : 53.

1864. *Scolia (Triscolia) velutina* Saussure & Sichel, ♂: 41, n. 13.

1927. *Triscolia velutina velutina* Micha: 102.

1928. *Scolia (Megascolia) velutina velutina* Betrem, ♂, ♀: 245.

= 1964. *Megascolia (Megascolia) velutina velutina* (Saussure) Betrem & Bradley: 441, n. 3c.

The female 'holotype' of *morosa* in the Saunders collection has been so labelled by Betrem and is referred to in his monograph, 1928 : 246. It agrees with Smith's description. It belongs to the taxonomic species and subspecies to which Betrem applied there the name *velutina*.

[There is a second female in the Saunders collection labelled '*Scolia morosa* Smith, Sul.' i.e. Sulu Islands. It stands above a label '*nigrita* Fabr.'. It cannot be a syntype. J.G.B.]

48. *morosa*, 1862

1862. *Scolia morosa* Smith, ♀: 53. 'Hab. Celebes (Tondano), Saunders Coll.', *nec* 1861.

1864. *Elis (Dielis) morosa* Saussure & Sichel, ♀: 193, n. 204.

1897. *Scolia celebesiaca* Dalla Torre : 151.

= *Campsomeres (Sericocampsomeris) quadriguttulata celebesiaca* (Dalla Torre) Betrem, **comb. n.** and **stat. n.**

Betrem was originally unable to find the type in the Saunders collection, where it should be. There is, however, a female labelled 'Tond' in that collection that is not labelled as *morosa* '62, but that agrees precisely with Smith's description of that species. We agree that it is undoubtedly the holotype. Probably Saunders or someone noted that it did not agree with specimens in the collection labelled '*morosa* Smith' (but which are *morosa* 1861, not 1862) and set it aside without a label, not realizing that Smith had described a second *morosa*. I have labelled it 'Holotype *morosa* Smith 1862, *nec* 1861'. Since *celebesiaca* D. T. was a new name for *morosa*, 1862, both have the same type.

S. celebesiaca D.T. as defined by Smith's type of *morosa* '62, is not the species to which Betrem misapplied the name *morosa* Sm. (1928 : 110). The latter taxonomic species at present stands without a name but Betrem is here establishing a name for it. See below.

Provision for *celebesiaca* D.T. (= *morosa* Smith '62, *nec* '61) can be made by the following addition to Betrem's key to the females of *Campsomeris*, 1928 : 74 (for revision of couplet 76 see Betrem, 1933 : 239).

In lieu of 77a, read:

- 77a. V. und Tempora fast ganz glatt 77 1/2
 77 1/2a. T. nicht matt, glanzend, deutlich fein punktiert, hinter der subapikalen
 Punktreihe nur schmal glatt; Scut. fein, ziemlich dicht, eingestochen p.,
 hinten glatt (? auch in *sitolensis*) 78
 b. T. matt; Scut. glanzend, vorn und auf den Seiten mit einigen groben P.
celebesiaca D.T.

In lieu of 79a read:

- 79a. P. der Ar.h.m. feiner, ziemlich fein p. so gross wie die Zwischenraume zwischen
 ihnen; P. der T. dichter *bradleyi* Betrem.

[Description of the holotype of *Scolia morosa* Smith, 1862.

♀. Anterior margin of the clypeus rounded, broader medially than at the sides of its central portion, the lateral lobes flattened, disc uneven, its anterior border striate. Impunctate part of the front short; fissura frontalis deep; a small group of punctures just below the front ocellus. Vertex impunctate except its declivous portion deeply and densely punctate; a row of punctures next to the orbits; temples impunctate; sides of the front near the orbits deeply punctate.

Scapulae densely and deeply punctate with a deep longitudinal depression, their posterior margin broadly impunctate; sides behind the punctate callosity impunctate, sharply limited above from the punctate scapulae. Upper area of the mesopleura almost entirely impunctate except for a small area below the fore wings; the upper half of the lower posterior area of the mesopleura impunctate. Transition below the hind wings blunt; metapleura with only minute punctures. Carina lateralis long, extending to the sides of the area horizontalis lateralis and the area posterior lateralis. Mesoscutum impunctate medially, deeply, coarsely, and densely punctate anteriorly and laterally; scutellum impunctate except for lateral anterior, triangular, coarsely punctate areas; metanotum densely, deeply punctate, except at the sides, posteriorly, and a narrow impunctate median strip. Area horizontalis medialis not so coarsely punctate as the metanotum, laterally finely punctate, an indication of a blunt transverse carina at its apex; area horizontalis lateralis with a transverse punctate area; area posterior impunctate except for fine punctures on the upper third of its median plate.

Fore wings without setae, except along their anterior margins. Inner spur of tibia III brown, blunt, not spatulate. Basal tergites opaque. Tergite 2(1) truncate anteriorly. Description drawn from the holotype of *Scolia morosa* Smith, from Tondano. J.G.B.]

[*Campsomeris (Tristimeris) bradleyi* Betrem, sp. n.

1928. *Campsomeris (Trielis) morosa* Betrem, ♀, ♂: 110. A misidentification of *Scolia morosa* Smith, 1862, *nec* 1861.

1938. *Campsomeris bradleyi* Betrem, *nomen nudum*: 358 and 360.

In discussing the Scoliidae of the Celebes I twice mentioned a *Campsomeris bradleyi* (Betrem, 1938 : 358 and 360). This is a manuscript name which I now wish to validate.

♀. The description of the female applied incorrectly to *Campsomeris morosa* (Smith, 1862) by Betrem, 1928 : 110, is the description of the female of this species.

Holotype ♀. The holotype is the female referred to by me, loc. cit., as 'Plesio-type (Paratype Smith's?) Celebes, leg. Pfeiffer, Coll. Smith, pres. by Farren-White, B.M.'. It is registered as B.M. Type, Hym. 15. 1431.

♂. The description of a male applied incorrectly to *C. morosa* Smith by Betrem, 1928 : 110, is the description of the male of this species.

Allotype, ♂. The allotype is the male referred to by me, loc. cit., as 'Allotype: Pagoewat, Celebes, leg. Rosenberg, M. L.'. J.G.B.]

49. *nigerrima*

1861. *Scolia nigerrima* Smith, ♀: 116. 'Hab. Dory, Saunders Coll.'.

1864. *Scolia (Discolia) nigerrima* Saussure & Sichel, ♀: 105, n. 93.

1928. *Campsomeris (Dielis) nigerrima nigerrima* Betrem, ♀: 106.

= 1933. *Campsomeris (Laevicampsomeris) nigerrima* (Smith) Betrem: 238.

1963. *Campsomeris (Laevicampsomeris) nigerrima* Krombein, ♀: 568.

The holotype is in the Saunders collection and bears a label 'Dor' and Smith's mss. label '*Scolia nigerrima*.' Betrem has labelled it 'type' and recorded it as 'Holotype', 1928 : 106.

50. *nitida*

1859. *Scolia nitida* Smith, ♀: 152. 'Hab. Aru'.

1864. *Scolia (Discolia) nitida* Saussure & Sichel, ♀: 108, n. 100.

1928. *Scolia (Austroscolia) punctatissima cupreopennis* Betrem, ♀, ♂: 212.

1963. *Scolia (Austroscolia) nitida nitida* Krombein, ♂, ♀: 641.

= *Austroscolia nitida nitida* (Smith) Betrem, **comb. n.**

This is not the taxonomic species which Betrem (1928 : 210) termed *nitida* and which (1933 : 254) he renamed *nitidella*. A female specimen in the Saunders collection has been labelled 'Lectotype' by Betrem, but not published. Thinking that it was the only example from Aru I incorrectly labelled it holotype.

[I hereby designate the female from Aru in the Saunders collection to be the LECTOTYPE.

There is also a female syntype in the British Museum labelled as follows: (1) '*Sc. nitida* Sm. Aru'; (2) 'Smith coll., presented by Mrs. Farren-White'; (3) 'Type'.

A male from Aru (variety) and a female and a male from Morty Island are not syntypes. J.G.B., July, 1966].

The following characters appertain to the lectotype of *nitida*: Wings green-gold to gold-green, with the apical third purplish red. Dorsal surface of the propodeum polished and almost impunctate, but with very fine, sparse, shallow punctures; disc of tergite 2(1) highly polished and impunctate behind the middle; sides of the tergites punctate, but not closely so; propodeum and sides of the tergites not long-hairy.

51. *nudata*

1855. *Scolia nudata* Smith, ♀: 110. 'Hab. North Bengal. B.M. '.

1864. *Scolia (Triscolia) nudata* Saussure & Sichel, ♀, ♂: 38, n. 7.

1928. *Scolia (Austroscolia) nudata* Betrem, ♀: 219.

= *Austroscolia nudata* (Smith) Betrem, **comb. n.**

There are only two females among the older material in the British Museum. One is from 'Madras', hence not the type. The other bears the museum 'Type' label, a label 'N. Bengal', and Smith's mss. label '*nudata* Sm. type.'. It is the specimen from which Betrem (1928 : 219) drew his description and referred to as 'holotype'. I have labelled it 'Holotype'. It is registered as B.M. Type, Hym. 15.1400. It agrees with *nudata*, female, in couplet 7b of the key to species of *Austroscolia*, Betrem, 1928 : 209.

52. *opalina*

1858. *Scolia opalina* Smith, ♀, ♂: 89. 'Hab. Sarawak'.

1864. *Scolia (Triscolia) opalina* Saussure & Sichel, ♀, ♂: 42, n. 15.

1928. *Scolia (Carinoscolia) opalina opalina* Betrem, ♀, ♂: 178.

= *Carinoscolia opalina opalina* (Smith) Betrem, **comb. n.**

Betrem, 1928 : 178, incorrectly stated that the holotype is from Borneo in the British Museum. He should have said 'in the Saunders collection'. Since there are two male, and one female syntypes in the Saunders collection it is necessary to select a lectotype labelled 'Sarawak'. I hereby designate a female in the Saunders collection to be LECTOTYPE and have so labelled it. It is the female above mentioned that Betrem labelled and published as holotype. It bears labels 'Sar' and in Smith's mss. '*Scolia opalina* Sm.' and Betrem's label 'Holotype'. The type agrees with *opalina* subspecies *opalina* in Betrem's key, 1928 : 178, couplet 9a, Bb.

[There are also two females in the British Museum, both representing a manuscript species that Smith never described. One bears the labels: (1) 'Sar'; (2) '56/44'; (3) 'type'; (4) 'type, Hym. 15.1407'. It has no card in the index. J.G.B., 1966].

53. *ornata*

1830. *Scolia maculata* Guérin, ♀, in Duperry, *Voy. Coquille, Zool.*, 2, pt. 2 : 255.

1855. *Scolia ornata* Smith: 96. 'Hab. Georgia', *nec ornata* Lep., 1845.

1864. *Scolia (Discolia) nobilitata* var. *maculata* Saussure & Sichel: 132, n. 138.

= *Scolia (Discolia) nobilitata* Fabricius, infrasubspecific form *maculata* Guérin, **stat. n.**

This was proposed as a new name for *Scolia maculata* Guérin, *nec* Drury, and therefore takes the same type. Both *maculata* and *ornata* are invalid as subspecific names for this variety, but as an infrasubspecific variant, although a name is not essential, *maculata* is available.

54. *personata*

1854. *Scolia fulvifrons* Saussure, ♀, *Mém. Soc. Phys. Hist. nat., Genève*, 14 : 43, pl. 19, fig. 11.

1855. *Scolia personata* Smith, ♂: 91. 'Hab. Silhet. B.M. '.

1864. *Scolia (Discolia) fulvifrons* Saussure & Sichel, ♀, ♂: 116, n. 11.

1928. *Scolia (Triscolia) fulvifrons* Betrem ♀, ♂: 238.

= 1964. *Megascolia (Regiscolia) fulvifrons* (Saussure) Betrem & Bradley: 444, n. 7.

[The holotype, a male, is in the British Museum and bears the following labels: (1) '45/107' with 'Silhet' on the reverse (3 Hymenoptera from Silhet, purchased of Rev. Stainsforth); (2) '*personata* Sm., type'; (3) a white label with red margin 'type'; (4) 'Lectotype', attached by Betrem, 1966. It is registered as B.M. Type, Hym. 15.1428. There is also a female from Silhet, but Smith did not describe it. J.G.B., July, 1966].

55. *prismatica*

1855. *Scolia prismatica* Smith, ♀: 102. 'Hab. Shanghai. B.M.'.

1864. *Elis (Dielis) prismatica* Saussure & Sichel, ♀: 199, n. 214.

= 1928. *Campsomeris (Megacampsomeris) prismatica* (Smith) Betrem, ♀, ♂: 152.

[The holotype, a female, is in the British Museum. It bears four labels: (1) '52/28' (meaning from Shanghai, collected by Mr Fortune) and on the reverse 'Shanghai'; (2) a white mss. label '*prismatica* Sm. type'; (3) a white label with red margin 'type'; (4) 'B.M. type Hym. 15.1329'. I have added a holotype label. J.G.B.]

[Characters of the holotype of *S. prismatica*

♀. Front imp. except deeply p. laterally; v. entirely deeply p., medially, anteriorly rather coarsely, densely p., interspaces between the p. very narrow; mesoscut. imp. medially, its hind margin p.; scut. heavily damaged by the pin, but probably p. in greater part (cf. *S. farrenwhitei* below). J.G.B., July, 1966].

[There are two other female specimens in the British Museum named '*S. prismatica*' by Smith but probably not syntypes. The one, which I designate 'A', bears two labels: (1) a mss. label on blue paper '*prismatica* Smith'; (2) 'F. Sm. coll. 79-22'. It is a true specimen of *prismatica*. Fr. p. only laterally; fiss.fr. distinct; mesoscut. p. along its posterior margin; scut. densely p., except its posterior margin.

The second specimen, which I designate 'B' is the holotype of *S. farrenwhitei* Betrem, 1928, a valid species. It bears six labels: (1) a white, triangular, mss. label 'E. Ind'; (2) a blue mss. label '*prismatica* Smith'; (3) '*Campsomeris farrenwhitei* Holotype det. Betrem'; (4) 'Smith coll. pres. by Mrs. Farren-White 99-303'; (5) a white label with red margin 'Type'; (6) 'B.M. type Hym. 15.1335'. Fr. imp., fiss.fr. deep; anterior portion of v. more or less p., its left half more so; post frontal suture deep and distinct, entirely obscured by p. in the holotype of *prismatica*; posterior margin of the mesosc. imp.; scut. broadly imp. medially. J.G.B.]

56. *pulchra*

1854. *Scolia picteti* Saussure, ♀, *Mém. Soc. Phys. Hist. nat., Genève*, 14: 42, n. 18.

1855. *Scolia pulchra* Smith, ♀: 88. 'Hab. India. B.M.'.

1864. *Scolia (Discolia) histrionica* Saussure & Sichel, ♀: 121, n. 121, nec Fabricius, 1787.

1928. *Scolia (Scolia) histrionica* Betrem, ♀: 330.

1941. *Scolia (Scolioides) picteti* Betrem: 166.

= 1964. *Scolia (Discolia) picteti* Saussure, Betrem & Bradley: 94, n. 73.

[The female holotype in the British Museum bears the following labels: (1) '♀, Ind.'; (2) '*pulchra* Sm. type'; (3) '*histrionica* F. *pulchra* Sm. of Smith's coll.'; (4) a white label with red margin 'type'; (5) 'B.M. type Hym. 15.1373'; (6) 'Holotype' attached by Betrem in 1966. J.G.B., July, 1966].

57. *quadriceps*

1859. *Scolia quadriceps* Smith, ♀, ♂: 153. 'Hab. Aru. Saunders Collection'.
 1864. *Liacos (Diliacos) quadriceps* Saussure & Sichel, ♀: 37, n. 6.
 1928. *Scolia (Diliacos) quadriceps* Betrem, ♀, ♂: 194.
 1963. *Scolia (Diliacos) quadriceps* Krombein, ♀: 613, 615.
 = *Diliacos quadriceps quadriceps* (Smith) Betrem, **comb. n.**

There are two females but no males in the Saunders collection. One of the females bears the pin-label 'Bac' meaning Bachian and Smith's white mss. label '*Scolia quadriceps* Smith'. Since this specimen does not come from Aru it is not a syntype of *quadriceps*, and has, in fact, been made the holotype of *poultoni* Betrem, 1928. The second female bears no locality label. As Betrem, 1928 : 194, pointed out, it does not belong to the same taxon as the female from Bachian, and is in fact the specimen of *quadriceps* which he used when differentiating *poultoni* from that species. A third female is in the British Museum. It bears the pin-label 'Aru' and also a printed Smith collection label on which has been written (but not by Smith) the word 'type'; Betrem (1928 : 194) referred to this specimen as Smith's holotype, but we must now say LECTOTYPE. He has re-examined it in 1964, and finds it identical with the unlabelled female in the Saunders collection. Doubtless the two originally stood together, the second one also from Aru, but not given a pin-label.

[*S. quadriceps* differs from *larradiformis* only in the colour of the wings. Krombein, 1963 : 613, has written '*S. quadriceps* Smith from Aru is an earlier name and may replace either *larradiformis* or *ribbei* for one of those polytypic species'. J.G.B.]

58. *rubromaculata*

1855. *Scolia rubromaculata* Smith, ♀: 99. 'Hab. India. B.M.'.
 1864. *Elis (Dielis) rubromaculata* Saussure & Sichel, ♀: 196, n. 209.
 1928. *Campsomeres (Dielis) rubromaculata rubromaculata* Betrem, ♀: 119.
 = 1941. *Campsomeres (Sericocampsomeres) rubromaculata rubromaculata* Betrem, ♀: 94, 95.

[There are three females in the old collection of the British Museum, one is unlabelled, the other two bear old labels 'Ind?'. Probably they belonged originally with the series in Oxford (a female from India and another without pin-label). I believe that the lectotype should be selected from among the three females in the British Museum. J.G.B., July, 1966].

59. *ruficeps*

1855. *Scolia ruficeps* Smith, ♀, ♂: 111. 'Hab. Philippine Islands. B.M.'.
 1927. *Triscolia ruficeps ruficeps* Micha, ♂: 96.
 1928. *Scolia (Austroscolia) ruficeps ruficeps* Betrem, ♀, ♂: 217.
 = *Austroscolia ruficeps ruficeps* (Smith) Betrem, **comb. n.**

There are only three specimens amongst the old material in the British Museum: two males from the Philippines and one female with the labels 'E. Ind' and '43 : 43' as well as Smith's mss. label '*ruficeps* Smith type'. The notation '43 : 43' refers to an accession book which shows the specimen came from 'Moulmein, E. India' i.e. Burma. Since the typical subspecies, well-characterized by its cupreo-violaceous

wings in both sexes, is widely distributed over the Philippines, Java, Burma, eastern India, and elsewhere, it seems very likely that the female from Moulmein is actually the specimen from which Smith drew his description, and that he merely failed to publish that locality in addition to the Philippines from which his males came. Betrem, 1928 : 217, wrote 'Holotype Smith's Philippinen, B.M. ♀', but there is no female from the Philippines to be found and he and I are forced to conclude that he had reference to the Moulmein female, and that recording it from the Philippines was an error in his notes, which unfortunately were destroyed during the war.

[Smith published an eight-line description of the female, and only a two-line description of the male. Although he gave only the Philippines as locality, his female did not come from there, because he stated for that sex 'Wings dark fuscous, and having a bright coppery effulgence, dashed with purple in certain lights'. This is true of all Asian females, but not those from the Philippines, the wings of which have a blue-violet effulgence. This species has been split into a number of subspecies in the East Indies. Philippine material is of a subspecies different from the Asian.

From these considerations I hereby designate the female from Moulmein to be the LECTOTYPE. It bears the following labels: (1) '43/43', on the reverse 'E. Indies', the number means: 'Six Hymenoptera, E. Indies (Moulmein) purchased from Archdeacon Clerk'; (2) '*ruficeps* Sm. type'; (3) a white label with red margin 'type'; (4) a red label 'lectotype' attached by Bradley in 1929; (5) 'B.M. type 15.1889'. The wings of the lectotype are more bronze, without purple. This involves a correction of the published type-locality.

The subspecifically different males bear the label '55/77' meaning: '6 Hymenoptera. Philippine Isl. purchased from Cuming'. J.G.B., July, 1966].

60. *rufipes*

1855. *Scolia rufipes* Smith, ♂: 95. 'Hab. Port Natal. B.M.' nec Illiger, 1802.

1864. *Scolia (Discolia) rufipes* Saussure & Sichel, ♀, ♂: 91, n. 75.

= 1964. *Scolia (Discolia) rufipes* Smith, *teste* Betrem & Bradley: 95, n. 118.

This is a species which I cannot at present place. An unique male in the British Museum labelled 'Port Natal, 52-79' and bearing Smith's mss. label '*rufipes* Sm. Type' is the holotype. It is not advisable to rename this nominal species before its synonymy is known.

61. *senex*

1855. *Scolia senex* Smith, ♂: 94. 'Hab. Cape of Good Hope (Coll. Saunders, Esq.)'.

= 1864. *Scolia (Discolia) senex* Smith, Saussure & Sichel: 98, n. 87.

There is only one male in the Saunders collection. It bears a label '*S. incana* mss. C. G. H. Drege' (i.e. Cape of Good Hope), and a mss. label, not written by Smith, that it is *Scolia senex* Sm. I have labelled it 'Holotype'.

62. *signata*

1855. *Scolia signata* Smith, ♀: 105. 'Hab. South Africa (Gambia). B.M.' nec Panzer, 1799.
 1864. *Elis (Dielis) signata* Saussure & Sichel, ♀♀: 176, n. 180.
 1906. *Scolia (Dielis) labilis* Schulz n.n., *Spolia hymen.*: 164.
 = *Campsomeris (Megameris) labilis* (Schulz) Betrem, **comb. n.**

The holotype, an unique female, is in the British Museum marked 'type' on Smith's mss. pin-label. [This specimen bears four labels, as follows: 'B.M. Type Hym. 15.1355', 'Holotype *signata* Smith teste 1928, J. C. Bradley', '*signata* type, Smith' 'Gambia'. J.G.B.] It is registered as B.M. Type, Hym. 15.1227.

[Description of the type of *Scolia signata* Smith

♀. Black; mandibles and anterior margin of the clypeus dark-brown; the following parts yellow; the apical half of tergite 2(1), the apical 2/3 of tergite 3(2), except for dark lateral incisions, and the apical 2/3 of tergite 4(3), narrowed laterad at halfway from the centre. Vestiture almost white except for the setae on abdominal segments 5(4) and following, those on the sides of tergite 4(3) and the fringes of sternites 3(2) and 4(3). Wings yellow-hyaline; veins brown, the costa and subcosta very dark. Longer apical spur of tibiae III somewhat spatulate but not very broad, dark brown; spines of tibiae almost black.

The structure is quite like that of *Campsomeris soleata* (Gerstaecker), but is more punctate between the ocellar triangle and the upper part of the eyes; the mesoscutum medially is more impunctate, the scutellum and metanotum have fewer punctures, the latter being rather sparsely punctate. The very sharp crest of the mesopleura is notable.

Described 5th July, 1964 from the holotype in the British Museum. J.G.B.]

63. *soror*

1845. *Scolia cyanipennis* Lepeletier, ♀, *Hist. nat. ins. Hymen.* 3 : 524, n. 7. A misidentification of *Scolia cyanipennis* Fabricius, 1804.
 1855. *Scolia soror* Smith: 96, n. 50, n.n.
 1855. *Scolia viridipennis* Smith; 96, n. 52, n.n.
 1864. *Scolia (Discolia) soror* Saussure & Sichel: 126, n. 131.
 1928. *Scolia (Austroscolia) soror* Betrem, ♀, ♂: 213.
 = *Austroscolia soror* (Smith) Betrem, **comb. n.**

Four lines apart on p. 96 of his catalogue Smith rechristened Lepeletier's misidentification of *cyanipennis* Fabr. first *soror*, then *viridipennis*. Lepeletier, p. 254, printed a description of a female from 'Port-Jackson, Nouvelle Holland' which he misidentified as *cyanipennis* F. He did not use *cyanipennis* as a name for a new species, homonym of *cyanipennis* F., but the description that he gave applies to a species that had not at that time been given a name of its own. Consequently there is neither holotype nor syntypes of *cyanipennis* Lepeletier, because the type of that nominal species is Fabrician.

The type-material of both *soror* and *viridipennis* must be identical, and can only be that upon which Lepeletier's new description of what he misidentified as *cyanipennis* was based. In searching for Lepeletier's types, I paid no attention to *cyanipennis* for that was not one of Lepeletier's nominal species. However, Saussure & Sichel, p. 126, referred to material from 'Nova Hollandia' in 'Musea Guérinianum, Parisiense, Saussurianum.'. Some of these collections may contain Lepeletier's specimens, especially Paris. But search must also be made in Turin.

Which name, *soror* or *viridipennis*, shall be retained has been settled by Saussure & Sichel, 1864, as first revisers. They adopted *soror*.

[The use of two new names by Smith for *Scolia cyanipennis*, sense of Lepeletier, not of Fabricius, may be explained by the fact that he had before him two forms: the one that he called *soror* has wings with blue effulgence, the other that he called *viridipennis* has wings with green effulgence. Wings of the latter type occur among subspecies of *Austroscolia nitida* Smith, a form of which occurs in Australia, but I have no specimens from there for comparison.

I was unable to find a specimen in the British Museum that Smith had labelled *viridipennis*. J.G.B., September, 1966.]

[I am uncertain about the real identity of *Scolia cyanipennis* in the sense of Lepeletier, not Fabricius. As long as the type is unknown we are agreed that it is better to accept my interpretation (1928, p. 213) which is based on specimens in my collection.

There is only one specimen of *soror*, a male, in the British Museum that predates the establishing of the name *soror*; it bears the following labels: (1) '63/56' with 'Sydney, NSW.' on the reverse, the numerals meaning also: 'NSW. Sydney pres. by Dr. Andrew St. Clair'; (2) '*cyanipennis* St. F. *soror* Sm. of Smith coll.'

The mesonotum in *soror* is entirely, very remotely, punctate. J.G.B., July, 1966].

64. *specifica*

1855. *Scolia specifica* Smith, ♀: 89. 'Hab. India (Coll. W. W. Saunders, Esq.)'.

1864. *Scolia (Discolia) specifica* Saussure & Sichel, ♀: 89, n. 13.

1928. *Scolia (Scolia) decorata specifica* Betrem, ♀: 322.

1964. *Scolia (Discolia) decorata* Betrem & Bradley: 93, n. 66.

= *Scolia (Discolia) decorata specifica* Smith.

Betrem has indicated that a female in the British Museum is the holotype, but it is only a syntype. Smith stated that his description is based on material in the Saunders collection. There is an unique female in the Saunders collection which it is necessary to designate LECTOTYPE and I hereby do so.

An interrupted yellow line on the shoulders of the type, mentioned by Smith, throws the species into couplet 39a on p. 260 of Betrem's key, 1928. *Sc. histrionica* [= *japonica*] also comes under couplet 39a.

65. *speciosa*

1858. *Scolia speciosa* Smith, ♀: 90. 'Hab. Sarawak'.

1864. *Scolia (Triscolia) speciosa* Saussure & Sichel, ♀: 44, n. 17.

1928. *Scolia (Megascolia) speciosa* Betrem, ♀, ♂: 243.

= 1964a. *Megascolia (Megascolia) speciosa* (Smith) Betrem & Bradley: 441, n. 4.

The holotype (so labelled by Betrem, although he does not mention it in his monograph, 1928 : 243) is in the Saunders collection. It is an unique female labelled 'Sar' and bearing Smith's mss. label '*Scolia speciosa* Sm.'. It agrees exactly with Smith's description.

66. *subobscura*

1845. *Colpa infuscata* Lepeletier, '♀' (*recte* ♂) *Hist. nat. ins. Hymen.*, 3 : 537, n. 4, *nec* Klug, 1832. Cayenne.
 1854. *Scolia infuscata* Burmeister, ♀: 23, n. 23.
 1855. *Scolia subobscura* Smith: 102, n. n. for *infuscata* Lepeletier.
 1855. *Scolia vitripennis* Smith, ♂: 108. 'Hab. Brazil (Amazonas) Coll. W. W. Saunders, Esq. '.
 1864. *Elis (Dielis) infuscata* Saussure & Sichel: 215, n. 230.
 1864. *Elis (Dielis) vitripennis* Saussure & Sichel, ♂: 216, n. 231.
 = 1957. *Campsomeris (Campsomeris) vitripennis* (Smith) Bradley: 75.

Subobscura was a new name for *infuscata* Lep., hence based on Lepeletier's type. In 1957, as first reviser, I selected *vitripennis* as the valid name of the species, rejecting *subobscura*. For a full discussion of this case see Bradley, 1964a : 106.

67. *terminata*

1859. *Scolia terminata* Smith, ♂: 10. 'Hab. Celebes'.
 1864. *Scolia (Discolia) terminata* Saussure & Sichel, ♂: 124, n. 127.
 1928. *Campsomeris (Campsomeris) marginella terminata* Betrem, ♀, ♂: 137.
 1937. *Campsomeris marginella terminata* Betrem, ♂: 92.
 1941. *Campsomeris (Campsomeriella) marginella terminata* Betrem: 90.
 = *Campsomeris (Micromeris) marginella terminata* (Smith) Betrem.

The holotype is an unique male labelled 'Mak' in the Saunders collection. This label refers to Makassar and not Makian. This specimen bears Smith's mss. label '*Scolia terminata* Sm.' and Betrem's holotype label. It runs to '*marginella* sub-species *terminata*' in Betrem's key, 1928 : 79, couplet 47a. Betrem (1937 : 93) has published a revised key. Betrem, from a re-examination of the type, notes that the scutellum and metanotum are yellow, and that the band on tergite 3(2) turns abruptly forward at each side; compare also *minuta*.

68. *undulata*

1775. *Tiphia tricineta* Fabricius, ♂, *Syst. ent.*: 354, n. 6.
 1855. *Scolia undulata* Smith, ♀: 104. 'Hab. Africa (Coll. F. Smith.)'.
 1864. *Elis (Dielis) undulata* Saussure & Sichel, ♀, ♂: 175, n. 179.
 1927. *Campsomeris tricineta* Rohwer, ♀: 153.
 1957. *Campsomeris (Xanthocampsomeris) tricineta* Bradley: 71.
 = *Campsomeris (Xanthocampsomeris) tricineta* (Fabricius) Rohwer.

Two females from the Smith collection are in the British Museum, labelled respectively in the same mss. 'Afr.' and 'W. Afr.'. The former also bears Kirby's mss. blue label '*undulata* Sm.' and a museum type-label '15.1361'. It agrees with the description, while the other varies in detail of colour markings and has black antennae. I have labelled the former 'Holotype'. One antenna is broken at the third segment and the other is lacking. The three segments are rufous, infuscated above. The locality is false, for the type is a specimen of the West Indian *tricincta*.

69. *ventralis*

1873. *Scolia ventralis* Smith, ♂: 186. 'Hab. Iihogo (Japan)'.
 1928. *Campsomeris ventralis* Betrem, ♂: 337.

1941. *Scolia (Scolioides) histrionica ventralis* Betrem, ♀, ♂: 165.
 = *Scolia (Discolia) decorata ventralis* Smith.

[The holotype is in the British Museum, it bears the museum number '15.1333', 'Ihogo' [*sic!*] 'Japan, *Scolia ventralis* Smith type ♂', 'type', and 'Smith collection 79-22'. J.G.B.]

70. *venusta*

1855. *Scolia venusta* Smith, ♀, ♂: 90. 'Hab India (Coll. Saunders, Esq.)'.
 = 1864. *Scolia (Discolia) venusta* Smith, *teste* Saussure & Sichel, ♀, ♂: 120, n. 120.

1928. *Scolia (Scolia) venusta*, ♀, ♂ Betrem: 292.

1941. *Scolia (Scolioides) venusta* Betrem: 147.

There are a male and a female in the Saunders collection, labelled 'Ind' and a female labelled 'Ceylon'. Betrem, 1928: 292, referred to the female from India as 'Holotype' but since the species was described from both sexes it is only a syntype. I hereby designate it LECTOTYPE, and have so labelled it.

71. *viridipennis*

1845. *Scolia cyanipennis* Lepeletier, ♀: 524, n. 7, *nec* Fabricius.

1855. *Scolia soror* Smith: 96, n. 50, n. n.

1855. *Scolia viridipennis* Smith: 96, n. 52, n. n.

1864. *Scolia (Discolia) soror* Saussure & Sichel, ♀, ♂: 126, n. 131.

= *Austroscolia soror* (Smith) Betrem, **comb. n.**

See under '63 *soror*' for details of this case.

72. *vitripennis*

1845. *Colpa infuscata* Lepeletier, '♀' (*recte* ♂): 357, n. 4, *nec* Klug, 1832.

1854. *Scolia infuscata* Burmeister, ♀: 33, n. 33.

1855. *Scolia subobscura* Smith: 102, n. n. for *infuscata* Lep., *nec* Klug.

1855. *Scolia vitripennis* Smith, ♂: 105. 'Hab. Brazil (Amazonas) (Coll. W. W. Saunders, Esq.)'.

1864. *Elis (Dielis) infuscata* Saussure & Sichel, '♀' (*recte* ♂): 215, n. 230.

1864. *Elis (Dielis) vitripennis* Saussure & Sichel, ♂: 216, n. 231.

= 1957. *Campsomeris (Campsomeris) vitripennis* (Smith) Bradley: 75.

The holotype, which I have so labelled, is in the Saunders collection. It bears a label: 'Amaz.' and agrees with the description. For a detailed discussion of this case, see Bradley, 1964*b*: 106. Also see under *infuscata* Smith, above.

[There are also two males in the British Museum, one incorrectly labelled type. They are: (A) labelled (1) 'Mex. 61/118'; (2) '*vitripennis* Sm. type'; (B) labelled 'Para, 70/16'. Neither can be a syntype, since they were obtained by the British Museum later than 1855. J.G.B., July, 1966].

73. *vivida*

1855. *Scolia vivida* Smith, ♂: 89. 'Hab. Madras, B.M.'.
 = 1864. *Scolia (Discolia) vivida* Smith, teste Saussure & Sichel, ♂: 123, n. 125.
 1928. *Scolia (Scolia) vivida* Betrem, ♀, ♂: 329.

[There are two males in the British Museum. I hereby designate the LECTOTYPE to be the one bearing the following labels: (1) 'Madras'; (2) '99/303' which means 'Smith coll. presented by Mrs. Farren-White'; (3) 'Lectotype', label attached by Betrem, 1966. It is registered as B.M. Type, Hym. 15.1429. The second specimen, without a label, is probably a syntype. J.G.B., July, 1966].

74. *zonata*

1855. *Scolia zonata* Smith, ♀, ♂: 116. 'Hab. New Holland. B.M.'.
 1864. *Elis (Trielis) zonata* Saussure & Sichel, ♀, ♂: 141, n. 150.
 1928. *Campsomeris (Pseudotrielis) zonata* Betrem, ♀, ♂: 83.
 = *Trisciloa (Pseudotrielis) zonata* (Smith) Betrem, **comb. n.**

A female in the British Museum bears a museum type-label '15.1310', a label '56/94' (which means 'Between Sydney and Moreton Bay or in S. Australia') and Smith's mss. label reading 'Zonata Sm. Type'. I hereby designate this female to be the LECTOTYPE and have so labelled it. Betrem, 1928: 84, called it 'Holotype' but the species was described from two sexes without specification of the type.

[There is one female of *Scolia zonata* in the American Museum of Natural History. It bears the following labels: (1) 'Austr.' on a round blue label, characteristic for Smith; (2) 'Collection J. Angus 346'; (3) '*Scolia zonata* Sm.'; (4) 'Australia'. It came from the collection of J. Angus, along with the presumptive holotype of *Sc. apicata*, referred to above. This female may be regarded as an additional syntype. J.G.B.]

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⁸ [I did not find the exact date of publication known in the British Museum, but the preface is dated March 7, 1855. J.G.B.]

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