ANNOTATIONS ON THE GENERA TRISCOLIA, MEGASCOLIA AND SCOLIA (HYMENOPTERA, SCOLIIDAE)

by

J. G. BETREM and **J. CHESTER BRADLEY**[1])

This communication has been divided in three sections. Section A deals with the types of some taxa belonging to the genera *Triscolia, Megascolia* and *Scolia*; section B deals with the species of the genera *Triscolia* and *Megascolia*; a third section dealing with the species of the genus *Scolia* will be published separately in the next volume of this journal.

Lists of the species belonging to these genera and many of their synonyms are added.

Section A. Types of some taxa belonging to the genera Triscolia and Scolia

It has been accepted as a fact by Sherborn's Nomenclator Zoologicus, by the Prussian Academy's Nomenclator Zoologicus, and by taxonomists, that the taxa *Discolia* and *Triscolia* were established by De Saussure & Sichel, 1864[2]). It has likewise been accepted that Ashmead, 1903, had properly designated *Scolia apicicornis* Guérin, an Ethiopian species, to be the type-species of *Discolia*, and that Bartlett, 1912, had correctly designated *Scolia flavifrons* Fabr. to be the type-species of *Triscolia*. Without adequate study of *S. apicicornis*, a little-known species, it has been assumed that it belonged to the same taxon as *S. quadripunctata* Fabr., the type-species of *Scolia*. Therefore *Discolia* came to rest as a junior subjective synonym of *Scolia*.

The senior author has recently observed that De Saussure anticipated the joint publication of these names by using them in a paper published in the preceding year, 1863. He placed two species in *Discolia*, namely *Scolia nobilitata* Fabr. and *Scolia consors* Saussure. We now select *S. nobilitata* to be the type-species of that taxon. De Saussure included only *S. badia* Saussure in *Triscolia*, which is therefore the type-species by monotypy.

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1) This paper has been completed with the assistance of a grant from the National Science Foundation of the United States of America.

2) Two published references attributing *Triscolia* to De Saussure, 1854, are incorrect.

The genus *Lisoca* was erected by Costa, 19 December 1858, for some species of the genus *Scolia*. It is therefore older than both *Discolia* Saussure, 1863, and *Scolioides* Guiglia, 1934.

Betrem (1928, p. 56) selected *Lisoca citreozonata* Costa as the type of *Lisoca*. This designation is invalid because the species was described later than the genus, viz., in an addition dated 15 October 1861 (see Guiglia, 1934, p. 115). Other type designations for the genus are not known.

Costa (1858, p. 4, 8) erected *Lisoca* for a taxon that has two cubital cells and one recurrent vein, while he restricted the old genus *Scolia* to the species with three cubital cells and one recurrent vein. These are the taxa *Discolia* and *Triscolia* respectively of De Saussure (1863, 1864).

Costa originally included the following species in *Lisoca*:

1) *Lisoca unifasciata* (Cyrillo) with which he synonymized *Scolia sicula* Lepeletier. His description made it clear that he meant by this *S. erythrocephala nigrescens* Saussure. His new variety *melanocephala* is identical with *S. hirta unifasciata* Cyrillo and his variety *nigra* with *S. neglecta* Cyrillo.

2) *Lisoca bifasciata* (Rossi) with which he synonymized *S. bicincta* Rossi nec Fabr. He included a variety *notata* Fabr. The species is identical with *S. hirta* (Schrank), the variety with *S. quadricincta* (Scopoli).

3) *Lisoca quadripunctata* (Fabr.) with which he synonymized *S. sexpunctata* Rossi, furthermore he enumerated the varieties: *sexpunctata, quadripunctata* and *bipunctata*. This is the species known as *S. sexmaculata* (O. F. Müller) (syn. *S. quadripunctata* Fabr.).

We now select *Scolia quadripunctata* Fabr., 1775, to be the type-species of the genus *Lisoca*. This type designation causes no alteration in the use of names; it makes *Lisoca* isogenotypic with *Scolia*.

The selection of *L. unifasciata,* the first mentioned species, as the type would be very infortunate because it is a complex species. To make it the type-species would cause *Lisoca* to become a senior synonym of *Discolia* which would cause a most unfortunate alteration.

Guiglia, 1934, divided the subgenus *Scolia* into two natural sections, *Scolioides* Guiglia, type-species *Scolia hirta* Schrank, and *Scolia* sensu stricto. Betrem, 1941, adopted this division and showed that *Scolia* s.s. is a compact taxon, principally Mediterranean, characterized by dense brushes of silky setae covering the base of the volsellae of the male. *Scolioides,* which future study may further subdivide, is a negative group, about which one can only say that such brushes of setae are lacking.

From this standpoint *S. nobilitata* Fabr. and almost certainly *S. apicicornis* Guérin belong to *Scolioides*. It is therefore impossible to avoid resuscitating the sleeping name *Discolia,* and listing *Scolioides* as its junior synonym.

Betrem, 1928, divided *Triscolia* into two sections, *Triscolia* proper and *Megascolia* Betrem. The former has been understood to include, besides several Oriental species, two Mediterranean species, and two North American species. *Megascolia* includes only several Oriental species. A study of the two North American species has convinced us that they belong to a taxon different from that of the Mediterranean and Oriental species, and the junior author has for some time been planning to erect a new subgenus to contain them. Now that the Mexican (Baja Californian) *S. badia* Saussure is known to be the type of *Triscolia,* that name must be applied to the American taxon, and *Megascolia* will be the name for the Old World taxon, with its typical division identical with the section called *Megascolia* by Betrem, 1928.

We are here establishing the new subgenus *Regiscolia* for the section that Betrem, 1928, called *Triscolia.*

We are petitioning the International Commission of Zoological Nomenclature to place the names *Ascoli* Guérin, 1838, and *Ascoli* Betrem, 1926, on the Official Index of Rejected and Invalid Generic Names in Zoology. The former is an unavailable name because it was proposed for a hypothetical concept. It is possible that Betrem technically established *Ascoli* in 1926, but we believe not. Just in case the Commission should rule that *Ascoli* Betrem is available, we hereby designate *Scolia haemorrhoidalis* Fabricius to be its type-species. This is one of the four species first mentioned in connection with it. That was done by Betrem, 1926. If available it will replace the generic name *Megascolia* and the subgeneric name *Regiscolia.*

The species listed in this paper are those which are known to one or both of the authors to be, or believed to be, species of the taxa *Triscolia, Megascolia,* and *Scolia.* It has been customary to regard the former two as subgenera of *Scolia,* but the authors, along with Mr. C. Jacot Guillarmod, working together intensively on the world-classification of Scoliidae, have arrived at the conclusion that, along with other taxa that stand as subgenera of *Scolia,* each require generic rank. We have made no attempt to list nominal species that belong to these other taxa, or that are erroneously included in *Scolia* for other reasons. The American species of *Campsomeris,* many of which have been standing in *Scolia,* have recently been listed by Bradley (1957).

The African and Malagasy species belonging to the other subgenera of *Scolia,* mostly those we now rank as genera, have also been treated by him (Bradley, 1959).

Literature cited in section A

Ashmead, W. H., 1903. Classification of the fossorial predaceous and parasitic wasps of the superfamily Vespoidea; Family XXXVI, Scoliidae. Canad. Ent., vol. 35, p. 7-8.

Bartlett, O. C., 1912. The North American Digger Wasps of the Subfamily Scoliinae. Ann. Am. Ent. Soc., vol. 5, p. 293-340.

Betrem, J. G., 1926. Subfamilie Scoliinae sensu Handlirsch. Tijdschr. v. Ent., vol. 69, Versl., p. XII-XIV.

——, 1928. Monographie der Indo-Australischen Scoliiden mit zoo-geographischen Betrachtungen. Treubia, vol. 9 suppl., p. 1-388.

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Bradley, J. Ch., 1957. The taxa of Campsomeris (Hymenoptera: Scoliidae) occurring in the New World. Trans. Am. Ent. Soc., vol. 83, p. 65-77.

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Costa, A., 1858. Famiglia degli Scoliidei; Scoliidea. Fauna del Regno di Napoli (Naples).

——, 1861. Sequito agli Scoleidea. Fauna del Regno di Napoli (Naples).

Guérin-Méneville, F. C., 1838. Crustacés, Arachnides et Insectes, in: Duperrey, M.L.I., Voyage autour du Monde sur la corvette: La Coquille, vol. II part 2, genre Scolie, p. 246-255. (Paris).

Guiglia, D. & F. Capra, 1934. Revisione delle Forme Italiane del sottogenere Scolia. Boll. Soc. Ent. Ital, vol. 66, p. 112-124.

Saussure, H. de, 1863. Sur quelques Scolies de Basse-Californie. Ann. Soc. Ent. France, ser. 4 vol. 3, p. 17-19.

Saussure, H. de & J. Sichel, 1864. Catalogue des espèces de l'ancien genre Scolia. (Genève & Paris).

Section B. Lists of the species of the genera Triscolia and Megascolia

The following lists of species are presumed to be complete.

Triscolia Saussure, 1863

1863. *Scolia* (*Triscolia*) Saussure, Ann. Soc. Ent. France, ser. 4 vol. 3, p. 17.
1893. *Triscolia* Gribodo, Bull. Soc. Ent. Ital., vol. 25, p. 150 (as genus).
1928. *Triscolia* Betrem, Treubia, vol. 9 suppl., p. 224 (as subgenus).

Type-species (by monotypy): *Scolia* (*Triscolia*) *badia* Saussure.

Wings with three submarginal cells. Moderate sized species with dark violaceous wings. The basically black body-colour is replaced by red on all abdominal segments except the first, or the entire colour may be red. The red areas bear long and abundant setae, wholly or in part red.

♀. Anterior margin of the clypeus rounded, devoid of lateral brushes;

median surface of the clypeus with a rounding prominence, furrowed medially at the base. Spatium frontale densely and coarsely punctate, the area of dense punctuation terminating above in a transverse impression, sometimes feeble, above which the frons bears coarser, evenly separated punctures, that extend evenly to the ocelli and to the sinus ocellaris. Laminae frontales strongly divergent, elevated as in *Megascolia;* fissura frontalis not distinct, the median pit feeble. Surface within the sinus ocellaris elevated; a distinct but not sharply carinate temporal ridge close behind the eyes; distance from the eyes to the hind margin of the head longer than the lesser diameter of the upper lobe of an eye; ocellar furrow deep; a depressed basin on each side of the hind ocelli; hind ocelli about as close to each other as to the eyes; the upward slope of the vertex behind the ocelli as long as the apical declivity. Scapulae without a tubercle. Area horizontalis media densely and coarsely punctate, much longer than the metanotum. Tergite 2(1) (first of gaster) somewhat more than twice as broad as long, neither tubercle nor groove at its apex; tergites rather uniformly punctate except for a median glabrous area at base of tergite 2(1); a row of punctures bearing a strong apical fringe on each tergite.

♂. A carina, shaped like an inverted V, enclosing the front ocelli. Scapulae without a tubercle; area horizontalis media longer than the metanotum. Tergite 2(1) twice as broad as long, with neither median groove nor tubercle at its apex. The basal external lobe of the volsella indicated as a feeble shoulder scarcely separated by a notch; sensory cones few and feebly developed; cuspis volsellaris with a blade-like appendage along the inner edge that is devoid of setae and perhaps nearly membranous, the cuspis with fine, short, apical setae; lateral plates of aedeagus tapering, their teeth serrate but not needle-like.

Distribution. — Sonoran zone of North America.

List of the species of the genus *Triscolia* Saussure

1. *Triscolia ardens* (Smith, 1855), n. comb.
2. *Triscolia badia* (Sauss., 1863), n. comb.

Megascolia Betrem, 1928

1928. *Triscolia* Betrem, Treubia, vol. 9 suppl., p. 224 (as subgenus) (nec *Triscolia* Saussure, 1863).

Diagnosis as given by Betrem, 1928, p. 239.

Subgenus **Megascolia** Betrem, 1928 [3])

1928. *Megascolia* Betrem, Treubia, vol. 9 suppl., p. 239 (as sectio).

Type-species (by original designation): *Scolia procer* Illiger, 1802.

Diagnosis. — As given by Betrem, 1928, p. 239.

Comparison of *M. velutina* Saussure with *Triscolia*. — ♂, volsella without a blade-like appendage; apical setae of the cuspis long, coarse, and conspicuous; teeth of the plates of the aedeagus needle-like.

Megascolia (Megascolia) procer procer (Illiger, 1802), n. comb.

1802. *Scolia procer* Illiger, Mag. f. Insektenkunde, vol. 1, p. 196, n. 6, ♀, ♂.
1805. *Scolia procer* Fabricius, Syst. piez., p. 238, n. 1.
1893. *Triscolia procer* forma genuina *scapulata* Gribodo, Bull. Soc. Ent. Ital., vol. 25, p. 163, ♀ lectotype from Sumatra only.
1927. *Triscolia procer* f. *procer* Micha, Mitt. zool. Mus. Berlin, vol. 13, p. 104, ♀, ♂ (Java as a locality erroneous).
1927. *Triscolia procer* f. *luteifrons* Micha, Mitt. zool. Mus. Berlin, vol. 13, p. 108, ♀, ♂.
1928. *Scolia* (*Triscolia*) *procer* Betrem, Treubia, vol. 9 suppl., p. 240, ♀, ♂.
(Only pertinent references are listed above).

Lectotype. — Illiger's material, containing both sexes, was collected in Sumatra by Daldorf. The lectotype selected and labelled by Bradley in 1928, is in the Berlin Museum. It is a ♀ which formerly bore the mss. label in Illiger's handwriting "♂ *capitata* F. var. Sumatra. Dald.". The true ♂ bore Illiger's mss. label "Sum. Dald. *procera* Ill.". Over this Klug, who was later curator, added the false label "Java Hagenb.". It is clear, from the erroneous statement of sex, that Illiger's two labels became interchanged, and Dr. Bischoff of the Berlin Museum again reversed them.

Klug's false label "Java" has been the source of confusing this Sumatran form with the Javanese subspecies. Micha referred to "type" of ♀ from Sumatra, and "type" of ♂ from Java, so she made no selection of lectotype. Betrem (1933, Stett. ent. Zeitung, vol. 94, p. 255) gave reasons that he now regards as erroneous, for thinking that the typical ♀ came from Java.

The Fabrician material is in the Museum at Copenhagen. It also was collected in Sumatra by Daldorf, and while probably never seen by Illiger and hence not true syntypes, was part of the same source material whence Illiger's syntypes were derived. Betrem has studied the Fabrician material, both ♀ and ♂, each labelled "Sumatra, Daldorf, M. Sehestedt, *Scolia procer* F.". The ♀ has a black ocellar triangle, with all the rest of the vertex and frons yellow. This is the typical coloration of Sumatran material. Micha noted the presence of two black lines extending onto the vertex from the

3) The material concerning four subspecies of *M. procer* (*procer, javensis, nigriventris,* and *bimaculata*) and that concerning *M. velutina,* except as concerns types, has been provided by Betrem.

ocellar triangle. These are a feature of Javanese material, but also occur in Sumatran specimens. The Fabrician male has only the ocellar triangle black on the front and a yellow strip behind the ocelli. This is the normal coloration of Sumatran material.

There being thus no sufficient indication that the locality given by Illiger was erroneous, it is necessary to separate the Javanese material as a separate geographical subspecies from the typical Sumatran subspecies *M. p. procer.* The "form" *luteifrons* Micha must be relegated to the synonymy of typical *M. p. procer.*

The lectotype of *T. scapulata* Gribodo. — Gribodo intended his name *scapulata* to apply to the typical form of *M. p. procer.* In such cases zoologists currently repeat the species name instead of adopting a different one. Gribodo did not distinguish between the typical subspecies of *M. p. procer* (which as seen above comes from Sumatra), and a subspecies from Java. His syntypes of *T. scapulata* came from both Sumatra and Java. Bradley, in 1928, selected and labelled a ♀ from Sumatra to be the lectotype, and this selection we hereby publish. The specimen bears Gribodo's manuscript label "var. *scapulata* ♀♂ Grib." and a locality label "Lieva" (= Liewa in Sumatra). The form *scapulata* is thus restricted to the synonymy of the typical *M. p. procer,* from Sumatra, as Gribodo intended.

Megascolia (Megascolia) procer javanensis Betrem, n. subsp.

1893. *Triscolia procer* forma genuina *scapulata* Gribodo, Bull. Soc. Ent. Ital., vol. 25, p. 163, ♀ ♂ Java material only.
1927. *Triscolia procer* var. *scapulata* Micha, Mitt. zool. Mus. Berlin, vol. 13, p. 104, Java material only.
1928. *Scolia (Triscolia) procer* Betrem, Treubia, vol. 9 suppl., p. 240, ♂, Java material only.

♀. Frons yellow; ocellar triangle with a rectangular black spot having two stripe-like black extensions on the vertex which is usually less extensively yellow than in the subspecies *M. p. procer.*

Holotype. — ♀, Western Java, Tapos, Gedeh, alt. 900 m. (Leefmans — coll. Betrem).

Distribution. — Other Java localities are recorded by both Micha, 1927, and Betrem, 1928.

Megascolia (Megascolia) procer nigriventris (Mantero), n. comb., n. stat.

1903. *Scolia (Triscolia) procer* var. *nigriventris* Mantero, Bull. Soc. Ent. Ital., vol. 35, p. 33, ♀.
1928. *Scolia (Triscolia) procer* var. *nigriventris* Betrem, Treubia, vol. 9 suppl., p. 242.

The tubercle on the sides of the pronotum much smaller than in *M. p.*

procer. On this account this could be regarded as a species; but Betrem regards the matter as not very important, because it belongs to the same "Artenkreis" as *M. p. procer* and for at least the present we rank it as a subspecies. Betrem has seen no specimens.

Holotype. — Bradley in 1928 studied the holotype which is in the Genoa Museum. It bears a printed label "Is. Nias J. Elemboli Agosto 1886 Modigliani". He at that time made a memorandum that it is a species distinct from *M. p. procer*.

Megascolia (Megascolia) procer bimaculata (Gribodo), n. comb., n. stat.

1893. *Triscolia procer* forma *bimaculata* Gribodo, Bull. Soc. Ent. Ital., vol. 25, p. 164.
1927. *Triscolia procer procer* var. *bimaculata* Micha, Mitt. zool. Mus. Berlin, vol. 13, p. 104.
1928. *Scolia* (*Triscolia*) *procer* var. *maculata* Betrem, Treubia, vol. 9 suppl., p. 242.

This should not be regarded as a variety of either *M. p. procer* or *M. p. nigriventris* because it is known only from Palawan which is not within the range of either. Betrem has seen no specimens. Bradley in 1928 studied the holotype which is in the Genoa Museum. It bears Gribodo's manuscript label "*bimaculata*". Regarding *M. p. nigriventris* as a valid species, Bradley at that time made the memorandum that this insect should be regarded as a subspecies of the former.

When this wasp was placed in the genus *Scolia* by Betrem in 1928, its name became a secondary homonym of both *Scolia bimaculata* Fabr., 1781, and of *S. bimaculata* Smith, 1855. But no one renamed it, and since we no longer retain it in *Scolia,* its specific name *bimaculata* is valid under the new Code.

Megascolia (Megascolia) velutina velutina (Saussure, 1859), n. comb.

The locality labels of the 3 syntypes of this wasp read "Java, Kuhl & van Hasselt". That is an error. These gentlemen never collected in the eastern parts of Indonesia, but at the time the material was collected, C. G. C. Reinwardt was collecting in North Celebes and the Moluccas and that is where the species actually occurs. The syntypes were surely collected there by him.

Only one kind of male of the subgenus *Megascolia* is known in Celebes and the eastern part of Indonesia and that is a strong indication that only one true species lives there. We have not observed any structural difference between the taxa in which the female has yellow on the head, such as *M. v. ducalis* Smith, and those taxa, such as *M. v. velutina,* that have entirely black heads. Therefore we may not regard them at present as truly different species.

Betrem (1928, p. 246) stated that the hololectotype ♂, is in the Leiden Museum. There is no type material in Geneva. Saussure described *S. velutina* from only the male. Betrem described the ♀ from Buru, which, as first reviser, he regards as the type-locality.

List of species of the subgenus *Megascolia* Betrem

1a. *Megascolia* (*Megascolia*) *procer procer* Illiger, 1802.
(= *Triscolia procer* forma *scapulata* Gribodo, 1893; = *Triscolia procer luteifrons* Micha, 1927, n. syn.).
var. *sumatrensis* Gribodo, 1893.
(= forma *capitata* Micha, 1927, and Betrem, 1928, misidentification of *capitata* Fabr., 1804).
var. *sarawakensis* Betrem, 1928.
1b. *Megascolia* (*Megascolia*) *procer javanensis* Betrem, n. subsp.
1c. *Megascolia* (*Megascolia*) *procer nigriventris* (Mantero, 1903), n. comb., n. stat.
1d. *Megascolia* (*Megascolia*) *procer bimaculata* (Gribodo, 1893), n. comb., n. stat.
2. *Megascolia* (*Megascolia*) *scutellaris* (Gribodo, 1893), n. comb.
3a. *Megascolia* (*Megascolia*) *velutina ducalis* (Smith, 1861), n. comb.
(= *Triscolia halmaheira* Micha, 1927).
3b. *Megascolia* (*Megascolia*) *velutina intrudens* (Smith, 1861), n. comb.
(= *Triscolia ducalis*, Gribodo, 1893, nec Smith, 1861, misidentification; = *Scolia* (*Triscolia gribodoi* Betrem, 1928, n. syn.; = *Triscolia velutina styx* Micha, 1927, n. syn.).
3c. *Megascolia* (*Megascolia*) *velutina velutina* (Saussure, 1859), n. comb.
(= *Scolia morosa* Smith, 1861).
3d. *Megascolia* (*Megascolia*) *velutina keyensis* (Micha, 1927), n. comb.
4. *Megascolia* (*Megascolia*) *speciosa* (Smith, 1857), n. comb.

Regiscolia Betrem & Bradley, n. subg.

1928. *Triscolia* Betrem, Treubia, vol. 9 suppl., p. 228 (as sectio) (nec *Triscolia* Saussure, 1863).

Type species (by present designation): *Scolia flavifrons* Fabricius, 1775.

Distribution. — Mediterranean subregion, Oriental region.

Diagnosis. — As given by Betrem (1928, p. 228) for his sectio.

Comparison of the type-species with *Triscolia*. — ♀. Spatium frontale finely punctate, often with its center impunctate; lamina frontalis elevated as in *Triscolia*; temporal ridge barely indicated, and as far behind the eyes as the lesser diameter of the upper lobe of an eye; distance from the eyes to the hind margin of the head equal to about twice the diameter of the upper lobe of an eye; ocellar furrow shallow; no depressed basin on either

side of the hind ocelli; hind ocelli much closer to each other than to the eyes. Area horizontalis media finely punctate. Tergites anteriorly widely glabrous; the apical fringe of each tergum lost in a mass of dense setae.

♂. Front ocelli not enclosed by a carina. A large hook separated by a deep notch at the base of each volsella; sensory cones more numerous than in *Triscolia*; terminal part of volsella with a blade-like appendage as in *Triscolia*; lateral plates of aedeagus roundedly subtruncate.

Megascolia (Regiscolia) alecto regnatrix Betrem & Bradley, nom. nov.

1857. *Scolia cincta* Smith, Journ. Proc. Linn. Soc. Lond., Zool., vol. 2, p. 89 (nec *Scolia cincta* Klug, 1805).
1928. *Scolia* (*Triscolia*) *alecto* subsp. *cincta* Betrem, Treubia, vol. 9 suppl., p. 226.

This subspecies of *M. alecto* Smith has been included in the senior author's key to the species of *Triscolia* (Betrem, 1928, p. 226), but has been omitted from his text on p. 237.

The material that follows concerning *M. c. capitata* and *M. c. pendleburyi* has been contributed by Betrem.

Megascolia (Regiscola) capitata capitata (Fabr., 1804), n. comb. [4])

1804. *Scolia capitata* Fabricius, Syst. piez., p. 239, no. 3, ♂.
1853. *Scolia patricialis* Burmeister, Abh. Naturf. Ges. Halle, vol. 1, p. 17, n. 10, ♂.
1893. *Triscolia patricialis* var. *plebeja* Gribodo, Bull. Soc. Ent. Ital., vol. 25, p. 168, ♂, not ♀, n. syn. (nec Betrem, 1928, p. 235).
1928. *Scolia* (*Triscolia*) *patricialis* Betrem, Treubia, vol. 9 suppl., p. 233, ♀, ♂.

Gribodo described *Triscolia patricialis* var. *plebeja* from a ♀ from Borneo and a ♂ from Malacca. These two specimens actually represent two different geographical subspecies. Bradley studied the material in the Genoa Museum in 1928 and found no male specimen. He therefore selected the ♀ to be lectotype and we hereby publish that selection. From this it results that *T. patricialis plebeja* is the Bornean-Sumatran subspecies and not the Malaccan, which Betrem is now naming *T. capitata pendleburyi*. But Fabricius had already described Gribodo's subspecies under the name *Scolia capitata* from Sumatra. Lectotype, a ♀ from Borneo in the Museo Civico di Storia Naturale Giacomo Doria in Genoa. It bears Gribodo's pin label "*plebeja*".

Megascolia (Regiscolia) capitata pendleburyi Betrem, n. subsp.

1893. *Triscolia patricialis* var. *plebeja* Gribodo, Bull. Soc. Ent. Ital.. vol. 25, p. 168, ♀, not ♂ (nec *Scolia plebeja* Klug, 1810).

4) Betrem established this synonymy when studying the type of *Scolia capitata* in the Fabrician collection.

1927. *Triscolia patricialis plebeja* Micha, Mitt. zool. Mus. Berlin, vol. 13, p. 116, ♀, ♂, misidentification.
1928. *Scolia (Triscolia) patricialis plebeja* Betrem, Treubia, vol. 9 suppl., p. 235, misidentification.

♂. Head colored as in the subspecies *M. c. capitata* (Fabr.); thorax entirely black; tergite 2 (1) black; tergite 4 (3) with a more or less interrupted yellow band.

The typical subspecies has yellow markings on the scutum of the metanotum, and the area horizontalis media.

Holotype. — Straits Settlements, Perak, Gunong Kledang, alt. 2650 ft., 26 November 1927 (E. Seimund — coll. Betrem).

Distribution. — Federated Malay States, Perak (holotype); 1 ♂, Kedah, Kedah Peak, alt. 3000 ft., 30 November 1915 (coll. Betrem), paratype. Other localities in Federated Malay States listed by Betrem, 1928, p. 235.

List of species of the subgenus *Regiscolia* Betrem & Bradley, n. subg.

Group *flavifrons*

1a. *Megascolia (Regiscolia) flavifrons flavifrons* (Fabr., 1775), n. comb.
1b. *Megascolia (Regiscolia) flavifrons haemorrhoidalis* (Fabr., 1787), n. comb.
2. *Megascolia (Regiscolia) rubida* (Gribodo, 1893), n. comb.
(= *Scolia haemorrhoidalis* Betrem, 1928, nec. Fabr., n. syn.).
3a. *Megascolia (Regiscolia) splendida splendida* (Saussure, 1858), n. comb.
(= *Scolia wetterensis* Betrem, 1928, n. syn.[5]).
3b. *Megascolia (Regiscolia) splendida floresensis* (Betrem, 1928), n. comb.
4a. *Megascolia (Regiscolia) alecto alecto* (Smith, 1858), n. comb.
4b. *Megascolia (Regiscolia) alecto regnatrix* Betrem & Bradley, n. nom. for *S. cincta* Smith, nec Klug.
5. *Megascolia (Regiscolia) philippinensis* (Rohwer, 1921), n. comb.
6a. *Megascolia (Regiscolia) azurea azurea* (Christ, 1791), n. comb.
(= *Scolia ornata* Lepeletier, 1845[6]).
var. *rubiginosa* Fabr., 1793.
(= var. *intermedia* Betrem, 1928[7]).
var. *democratica* Micha, 1927.
6b. *Megascolia (Regiscolia) azurea christiana* (Betrem & Guiglia, 1958), n. comb.

5) Bradley established this synonymy when he examined the type of *S. splendida* in the De Saussure collection in Geneva.
6) Betrem has rearranged the subspecies of *M. azurea* here.
7) For this synonymy cf. Betrem & Guiglia, 1958, Ann. Mus. Civ. Stor. Nat. Genova, vol. 70, p. 96.

(= *Scolia azurea rubiginosa* Betrem, 1928, nec Fabr., 1793; = *Scolia azurea azurea* Micha, 1927, nec Christ, 1791).

var. *magnifica* Saussure, 1859.

6c. *Megascolia* (*Regiscolia*) *azurea siamensis* (Betrem, 1928), n. comb.

6d. *Megascolia* (*Regiscolia*) *azurea cochinensis* (Betrem, 1928), n. comb.

6e. *Megascolia* (*Regiscolia*) *azurea hindostana* (Micha, 1927) n. comb.
(= *Triscolia erratica* Micha, 1927).

7. *Megascolia (Regiscolia) fulvifrons* (Saussure, 1854), n. comb.

Group *capitata*

8a. *Megascolia* (*Regiscolia*) *capitata capitata* (Fabr. 1804), n. comb.
(= *Triscolia patricialis* var. *kunzeni* Micha, 1927, n. syn. [8]).

var. *patricialis* Burmeister, 1854.

var. *plebeja* Gribodo, 1893, ♂, nec ♀.

var. *leefmansi* Betrem, 1928, ♀.

?var. *brunneipennis* Micha, 1927.

8b. *Megascolia* (*Regiscolia*) *capitata pendleburyi* Betrem, n. subsp.
(= *Scolia patricialis plebeja* Betrem, 1928, nec Gribodo, 1893; = *Scolia plebeja* Gribodo, 1893, ♀ nec ♂).

Group *bidens*

9. *Megascolia* (*Regiscolia*) *bidens* (L., 1767), n. comb.

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8) Betrem established this synonymy when studying the type of *S. capitata* Fabr. in the Fabrician collection in Copenhagen.