An attempt on an introductory review of *Smaragdina* Chevrolat, 1836 species from the continental part of Southeastern Asia (Coleoptera: Chrysomelidae: Clytrinae)

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**ABSTRACT.** A concise review of the *Smaragdina*-species from Southeastern Asia with a key to determination, illustrations, alphabetical check-list of all discussed taxa and the complete relevant bibliography are given. A replacement name, *Smaragdina sassii nom. nov.*, is proposed for *Smaragdina divisoides* Medvedev, 1988 nec Chûjô, 1952.

Key words: entomology, taxonomy, Coleoptera, Chrysomelidae, genus *Smaragdina*, Southeastern Asia, check-list, key, bibliography.

**INTRODUCTION**

This paper is an attempt to bring together and to organize the very scattered published information on *Smaragdina*-species distributed in the continental part of Oriental region and on the nearby islands of Sri Lanka, Hainan and Taiwan. Limits of Oriental area in China are defined here as in my recent work (Warchalowski 2010), along North fronters of the provinces: Xizang, Szechwan, Hubei, Henan, Anhui and Jiangsu. Consequently, a few species known only from the Palaearctic part of Oriental Asia were not considered in the key to determination. Complete corresponding bibliography and a list of species with indication of all taxonomical changes are given. In the absence of suitable taxonomical revisions the presented key to determination is based mainly on secondary features and can be used rather to organize materials in collections; at the present stage of research more precise and more comprehensive identifications are not yet possible.
The genus *Smaragdina* Chevrolat, 1836, closely related to *Clytra* Laicharting, 1781, contains about 270 species distributed almost exclusively in Old World, mainly in Palaeotropical superarea. The creation of this genus was from beginning based on negative features, and additionally definitions of allied genera (*Aetheomorpha* Lacordaire, 1848, *Clytra* Laicharting 1781, *Exomis* Weise, 1889, *Physosmaragdina* Medvedev, 1971) are not precise; consequently, species have often been moved between the genera. Therefore generic assignment of some species needs still confirmation and this problem refers in particular to a few larger *Smaragdina* species of body length more than 6 mm and to a certain number of smaller (4-5 mm) species with broader epipleural lobes and pygidium not entirely covered by elytra, often determined and ranked, perhaps rightly, as *Aetheomorpha*.

As features differentiating *Aetheomorpha* from *Smaragdina*, only the distinctly or strongly lobed epipleura combined with pygidium not covered by elytra are given. However, between strongly developed and almost absent epipleural lobes all possible intermediate forms exist; at the same time the very sloping, often almost vertical position of pygidium allows not define, particularly in females, whether it is covered by elytra or not. In my opinion, until an exact definition of both genera is published, it would be more convenient to treat *Smaragdina* and *Aetheomorpha* as congeneric.

In Palaearctic fauna the genus *Smaragdina* is divided in a few subgenera, but for the Palaeotropical species a breakdown into subgenera is not yet possible; the nominotypical subgenus is probably not represented here and the majority of species belong to the subgenus *Monrosia* Medvedev, 1971; a few species possibly also to *Nanosmaragdina* Lopatin et Kulenova, 1986 and Medvedevella Öz dikmen, 2008 (replacement name for *Smaragdinella* Medvedev 1971, nec Adams et Reeve, 1848). The temporary character of actual divisions is emphasized in the recent Catalogue of Palaearctic Coleoptera (löbl and Smetana, 2010), where all subgeneric names of *Smaragdina* are treated as synonyms.

There are about 130 species in the discussed area.

Recently Medvedev (2010) published a similar work in form of an identification key, discussing the most part of here treated species and containing descriptions of 11 new species, but passed in silence over further about 35 species from India, Indochina and China, described originally as *Smaragdina* (*Cyaniris*, *Gynandrophthalma*). All these species are included into present key to determination, but undoubtedly some of them can turn out to belong to allied genera *Aetheomorpha*, *Aetheodactyla* or *Dia-promorpha*.

During my studies on discussed genus a secondary homonym (*Smaragdina divisoides* Medvedev, 1988: 33, nec *Gynandrophthalma divisoides* Chûjô, 1952: 48) was detected. I propose for this species the replacement name *Smaragdina sassii* nom. nov., in honour of the eminent coleopterologist, dr Davide Sassi (Castelmarte, Italy).

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KEY TO AUXILIARY GROUPS

1. Pronotum entirely pale ........................................................................................................ 2.
   –. Pronotum bicolored (pale with black pattern) or entirely dark (metallic or black) ................................................................. 4.
2. Elytra entirely pale .......................................................... Auxiliary group A.
   –. Elytra bicolored or entirely dark ........................................................................ 3.
3. Elytra bicolored .............................................................. Auxiliary group B.
   –. Elytra dorsally entirely dark or sometimes with epipleura pale only ........................ Auxiliary group C.
4. Pronotum bicolored .......................................................... 5.
   –. Pronotum entirely dark, black or metallic .............................. Auxiliary group G.
5. Elytra entirely pale .......................................................... Auxiliary group D.
   –. Elytra bicolored or entirely dark ....................................................................... 6.
6. Elytra bicolored .............................................................. Auxiliary group E.
   –. Elytra entirely dark .......................................................... Auxiliary group F.

Auxiliary group A
(both pronotum and elytra entirely pale, very rarely with somewhat darkened, blurred, indistinct spots on pronotum or humeri or with other blurred, rather pale brownish, never black or blackish, darkenings on upper side)

Key to species

1. Head black ........................................................................................................................ 30.
   –. Head pale, at most partly (mandibles, genae) blackened, in female sometimes generally darkened, but not black ................................................................. 2.
2. Body dark yellowish, elytra distinctly paler, pale flavous. Antennomeres 4-11, tibiae and tarsi black. Aedeagus as in figs 1, 2, its apical part broadened with narrow and relatively long lamella. Length 4.9 mm. Described from Vietnam ............................................ insulana Medvedev, 1992c.
   –. Not as above .............................................................................................................. 3.
3. Punctation of elytra extremely fine, sparse and shallow, surface at first sight almost or entirely impunctate ................................................................. 4.
   –. Punctation of elytra sometimes very fine, but always perceptible ..................... 5.

5. Pronotum on each side with an oblique depression laterally in basal part, hind angles somewhat elevated. In female pygidium with deep triangular emargination. Length 5.5-7.5 mm. Here the palest variation of *fuscicornis* (see thesis 17).

– Not as above ........................................................................................................ 6.

6. Pronotum entirely impunctate, at most with a few minute punctures at basal margin ......................................................................................................................................... 7.

– Pronotum punctate, Punctuation sometimes sparse and fine, but always perceptible at least basally or laterally ................................................................. 26.


– At least antennomeres 5-11 darkened or black, often also tarsi and breast darker than remaining body ........................................................................................................ 10.

8. Larger species, length of body 5.0-6.7 mm ........................................................................ 9.

– Much smaller. Hind angles of pronotum rounded. Aedeagus as in fig. 6. Frons 1.3 \( \times \) as wide as transverse diameter of eye. Pronotum relatively narrow, 1.65 \( \times \) as wide as long. Length 3.6 mm. Described from Vietnam, based on one male only ........................................................................................................................ 10.

9. Hind angles of pronotum marked, surface entirely impunctate. Legs short, slender, tarsi very short, tarsomeres 1 and 2 trigonal, equal. Elytra very finely punctate, punctures arranged in regular or almost regular rows. Length about 5.4 mm (= *citrinella* Jacoby, 1908). Aedeagus as in fig. 5. One subspecies, *S. c. rufocapitris* Medvedev et Kantner, 2002, differing from the nominotypical subspecies by reddish-brown head and by presence of a weak rib on underside of aedeagus, is described from Northern India; nominotypical form is distributed in Sri Lanka, Laos and Thailand ........................................................................................................ *chrysomeloides* Lacordaire, 1848.

1-6. Aedeagus in dorsal and lateral view (1, 2, 5, 6 after Medvedev 1910, 3, 4 after Medvedev 1988a, 5 after Medvedev 1984) 1, 2 – Smaragdina insulana, 3, 4 – *S. montana* differently presented, 5 – *S. chrysomeloides*, 6 – *S. daklaka*
In pronotum hind angles broadly rounded. Pronotum less than 2 times broader than long. Aedeagus with longitudinal ridge on underside of basal part, its general outline as in fig. 15. On each elytron sometimes a blurred, dark spot in hind part; this spot may be prolonged anteriad. A very dark (unnamed) aberration also exists, with elytra black or black with pale apex. Length 5.7-6.7 mm. Described from Pakistan .......................................................... *pakistanica* Medvedev, 2010.

10. Apical part of antennae and sides of sternum only slightly darkened. On pronotum a few punctures at basal margin. Aedeagus as in figs 19, 20, in dorsal view shortly finger-shaped, in lateral view crooked down. Length 4.0-4.6 mm. Described from India (Darjeeling) .................................................................. *fulvitarsis* Medvedev, 1992.


1. Not as above ..................................................................................................... 14.

12. Antennomeres 5-11 and tarsi (not always) black. Breast more or less darkened ........................................................................................................................... 13.


—. Similar to *divisa*, but frons narrow, two times narrower than transverse diameter of eye, aedeagus as in fig. 14, with characteristic bristles. Length about 5.0 mm. Described from N India ................................. *oculata* MEDVEDEV, 1988b.  
14. Similar to *divisa* (thesis 13), but antennomere 4 much smaller, elytra not distinctly paler in apical half and in female apices of tibiae, metasternum and apex of abdomen strongly darkened. Length 4.4-4.8 mm. Described from Thailand ........................................... *divisomima* MEDVEDEV, 2010.  
—. Not as above .................................................................................................. 15.  
15. Antennomeres 4-11 strongly dilated, 5-11 black ................................. 16.  
—. Antennomeres 4-11 often robust, but not particularly strongly dilated ....... 17.  
16. Frons narrow, in male about 0.7 × narrower than transverse diameter of eye, in female as broad as this diameter. Prothorax in both sexes twice as wide as long. Aedeagus very characteristic (fig. 16). Length 5.0-6.0 mm. Described from Thailand .................................................. *constrictifrons* MEDVEDEV, 2010.  
—. Frons not particularly narrow. Pronotum in male 1.5×, in female 2× broader than long, posterior angles rounded, surface impunctate. Punctation of elytra very close and fine, arranged in irregular rows. Length about 6.0 mm. Described from Myanmar. After MEDVEDEV (2010) an unclear species, possibly belonging to another genus. ................................................................. *fuscitarsis* (JACOBY, 1900).  
17. Antennomeres 5-11 fuscous Pronotum 1.3 times broader than long, entirely impunctate. Elytra very variably coloured (figs 27-37) finely but distinctly punctate. Legs subequal, rather robust. Aedeagus as in fig. 17. Length about 6.5 mm. A rather poorly studied species described from E India. Sometimes ranked as *Aetheomorpha* ................................................................. *fuscicornis* (LACORDAIRE, 1848).  
—. Antennomeres 4-11 black or at least strongly darkened ......................... 18.  
18. Very small, Length of body under 3.0 mm .......................................... 19.  
—. Body length at least 3.2 mm ........................................................................ 20.  
19. Flavous, breast and abdomen black. Antennomeres 4-11 slightly darkened, 4-11 strongly serrate, basal antennomeres as in fig. 7. Pronotum 1.5× broader than long,
impunctate. Elytra subcylindrical, finely puctate-striate. Aedeagus as in fig. 18. Length 2.5 mm. Described from India (Belgaum) based on one specimen (sex not determined) only............................................................ minuta (Jacoby, 1908).

—. Body entirely pale except for black antennomeres 4-11. Antennae distinctly serrate, antennomere 4 triangular, but much smaller than 5. Pronotum impunctate with arcuate impression before scutellum. Punctuation of elytra arranged in regular rows, in hind part almost disappearing. Aedeagus (fig. 22) in dorsal view with triangular apical part. Length 2.8 mm. Described from Malakka based on one male only ................................................................................ malaccana Medvedev, 2010.

20. Antennomere 3 short and cylindrical, 4 elongate, widened at apex, but much smaller than 5, 5-10 as long as broad. Propleurae bare. Male unknown. Described from N Vietnam based on a few females only ................... tamdaoana Medvedev, 2010.

—. Not as above .................................................................................................... 21.


Elytra parallel-sided, scarcely but perceptibly punctate. Legs elongate. Length about 4.5 mm. Female unknown. Described from India (Nilgiri) based on one specimen only ................................................................. *nigrotibialis* (*Jacoby*, 1908).

- Pronotum at most 2.5× broader than long ................. 22.

22. Larger, body length 6.0-6.5 mm ................................................................. 23.

- Smaller, body length under 4.8 mm ..................................................... 24.

23. On pronotum five or six rather indistinct darker (pale fuscous) spots, Tarsi and antennomeres 4-11 black, all remaining parts of body flavous. Pronotum slightly more than twice as broad as long, impunctate. Elytra very finely, rather closely, randomly punctate. Aedeagus as in **figs 23, 24**. Length about 6.0 mm. Described from India (Sikkim) ..................................................... *sikkimia* (*Jacoby*, 1903).

- Upper side fulvous. Knees, tarsi and tibiae black. In male labrum and anterior margin of clypeus blackened. on ventral side of aedeagus (**fig. 25**) a longitudinal ridge. Length 6.3-6.4 mm, possibly conspecific with (rather insufficiently described) *sikkimia*, (thesis 23). Described from NE India ....... *sprecherae* *Medvedev*, 2002.

24. Body entirely pale, antennae partly, tibiae and tarsi slightly infuscate, metasternum and abdomen darkened, brown to pitch black .............................................. 25.

- Body entirely pale except for antennomeres 4-11 darkened or black. Antennomere 3 much smaller than 2. Elytra very distinctly and confusedly punctate, on apical slope almost impunctate. Aedeagus with short finger-shaped, slightly emarginate process (**fig. 26**). Length 3.7-4.0 (male) to 4.3-4.7 (female). Described from S India ................................................................. *pacholatkoi* *Medvedev*, 2003.

27-37 elytral pattern in *Smaragdina fuscicornis* (after *Medvedev* 1984)
25. Antennomeres 2 and 3 subequal in length. Head and pronotum impunctate, primary punctures on elytra partly arranged in subregular rows. Length 3.2-4.0 mm (= divisoides Chûjô, 1952). Aedeagus as in figs 38, 39. Described from China (Hupeh), known also from Taiwan ............................... fulveola (Jacoby, 1890).

–. Antennomere 3 small and narrow, shorer than 2. Very similar to fulveola, but aedeagus (figs 71, 72) strongly differing. Here pale form. In typical form on elytra two brown stripes (see schereri, auxiliary group B thesis 34).

26. Smaller. Body entirely pale except for antennomeres 6-11 and tarsi pitch black. Pronotum very minutely punctate, elytral punctures doubly, consisting of strong and fine punctures Length 3.0-3.2 mm. Similar (perhaps conspecific) to fulveola (thesis 25), but generally more robust and with longer scutellum. Endemic to Taiwan .......................................................... nomurai Kimoto, 1976.

–. Larger, length of body about 4.5 mm or more ........................................ 27.

27. Frons very broad, more than twice as broad as the transverse diameter of eye Punctuation of elytra strong. Aedeagus simple, its dorsal view as in fig. 40. Length 5.1 mm (male) to 5.3-5.7 mm (female) (= divisoides Medvedev, 1988, nec Chûjô, 1952). Described from N Vietnam .............................. sassii nom. nov.

–. Frons at most 1.5 times as broad as the transverse diameter of eye. Punctuation of elytra fine or very fine ..................................................... 28.


–. Body very elongate, subcylindrical, thorax strongly transverse, short, laterally very minutely, sparingly punctate. Underside, antennomeres 4-11 and tibiae black, tarsi darkened. Elytral Punctuation very fine, arranged in irregular rows, disappearing in apical part. Length 6.5 mm. Described from SE India (Travancore, Wallardi). Recently ranked as Aetheodactyla ................. wallardiensis (Jacoby, 1908).

29. Length about 6.0 mm (flavimana Chûjô, 1952). Primary punctuation of elytra minute and irregular. Aedeagus as in figs 41, 42. Distributed in Japan, Ryukyu Is., China (Chekiang) and Taiwan ................................................. nipponensis (Chûjô, 1951).

–. Length about 4.5 mm. Externally similar to divisa (thesis 13), but diverges by partly punctate pronotum and very different aedeagus shape (figs 43, 44). Described from S Vietnam ............................................... kimotoi Lopatin, 2003.

30. Head black with pale clypeus, on humeral callus black or bownish spot. Underside black, femora black with pale basal part, tibiae and tarsi pale. Pronotum impunctate, elytral punctures fine. Apex of aedeagus (figs 45, 46) in lateral view bent ventrally, in dorsal view narrowed, transversely cut and emarginate. Length 4.4-6.1 mm (= divisella Medvedev, 1988). After the original description of divisella pygidium not covered by elytra (= Aetheomorpha?). Externally very similar to divisa (thesis 10), but differing by the shape of aedeagus and by the presence of humeral spot. Distributed in China (Yunnan), Vietnam and Laos. .......... diversiceps Pic, 1941.

Auxiliary group B
(pronotum unicolorous, pale, elytra bicolored)

1. Elytra dark (black or blue) with pale apex ........................................................... 2.
   –. Elytra differently coloured ............................................................................. 9.
2. Larger species, body length at least 4.0 mm ......................................................... 3.
   –. Small species, body length at most 3.5 mm ......................................................... 5.
3. Breast and abdomen black, elytra dark blue, their apical part yellow. Females of
   *ihai* key out here (antithesis 4).
   –. Breast pale, sometimes brown, rarely blackened ............................................. 4.
4. Fulvous; apical antennomeres black; elytra black, extreme apex fulvous. Antennae
   fuscous, comparatively long and slender, antennomeres 1-4 or 1-5 flavous, third
   conspicuously small, fourth and following triangularly widened. Pronotum about
twice as broad as long, impunctate. Scutellum pale, its apex raised and thickened.
   Elytra sparingly and minutely punctate. Aedeagus as in figs 47-50. Length 4.0-4.6
   mm. (= *maduraiensis* ERBER et MEDVEDEV, 1999). Described from S India (Madura-
   i). Original descriptions show no significant differences between *flaviventris*
   and *longicornis* JACOBY, 1897 from Bengal, but the allospecificity of both mentioned taxa
   should be confirmed by a revision based on types ...... *flaviventris* BRYANT, 1934.
   –. Head, prothorax and legs yellowish brown, lustrous, scutellum shining black;
   elytra deep blue, strongly shining, with the apical area light yellow-brown. In male
   mesothorax yellow-brown sometimes blackened, metathorax and abdomen black.
   Antennae short and robust, serrate, antennomere 1 strongly dilated and much thicker
   than the others, 11 longest. Pronotum very finely and closely punctate on the whole
   surface coarsely and irregularly, laterobasally and nearly along all borders stronger.
   Elytra strongly and closely punctate, the punctures partly arranged in longitudinal
   rows, obsolete or weakened on the apical area. Length 4.0-4.8 (male) to 4.5-5.0
   (female). Described from Ruykyu Islands (Okinawa) ...... *ihai* (CHÛJÔ, 1958).

38-44. Aedeagus in dorsal and lateral view (38, 39 after LOPATIN 2006, 40 after MEDVEDEV 1988a, 41, 42 after
   MEDVEDEV 19 38, 39 – *Smaragdina fulveola*; 40 – *S. sassii*; 41, 42 – *S. nipponensis*; 43, 44 – *S. kimotoi*
5. Primary punctation of elytra almost regular or subregular arranged in longitudinal rows ............................................................. 6.
   – Primary punctation of elytra more irregularly scattered, random or arranged in indistinct rows or longitudinal stripes .............................................. 7.

6. Primary punctation of elytra arranged in almost regular longitudinal rows, sides and apex almost impunctate. Pronotum two times or slightly more as broad as long. Abdomen pale, sternum partly blackened. Legs fulvous. Length about 3.0 mm. Described from India (Nilgiri) ............................ *frontalis* (Jacoby, 1908).
   – Primary Punctation of elytra arranged in 11 subregular rows, their intervals covered by minute secondary punctures. Antennae robust, short, antennomeres 1-4 pale, remaining black. Pronotum about 1.6 × as broad as long. Upper side bicolored ([fig. 51](#)). Abdomen, meso- and metasternum black. Legs pitch black with lightened proximal part of tibiae. Aedeagus as in figs 52, 53. Length 3.2-3.5 mm. Described from Laos ................................................. *laosensis* Kimoto et Gressitt, 1979.

7. The smallest species. Head black. Thorax very short, more than twice as broad as long. Elytra very closely and distinctly punctate, legs pale. Length about 2.0 mm. Described from India (Bombay, Belgaum)............... *orientalis* (Jacoby, 1908).
   – Somewhat larger species, body length over 2.75 mm. Head pale with two dark spots on vertex ........................................................................... 8.

8. Elytra blackish with pale apex. Underside blackish, legs yellowish brown, tibiae and tarsi infuscate. Length 2.8 mm. Known from Taiwan only ................................................................. *apiciflava* (Chūjō, 1952).
   – Elytra dark blue with with fulvous apex. Underside fulvous, sides of breast infuscate, legs entirely pale. Length about 3.5 mm. Described from India (Nilgiri) .................................................................................. *apicipennis* (Jacoby, 1908).

9. Small species, body length at most 3.5-4.2 mm .............................................. 10.
   – Larger species, body length at least 4.0 mm ............................................. 19.
10. Body entirely pale, tarsal claws and apex of elytra black only. Pronotum almost impunctate, elytral punctures distinct, fine, partly arranged in irregular rows. Length 3.5-4.0 mm. Here Aetheomorpha apicata Medvedev, 1988, until 2010 known as Smaragdina nigroapicalis Lopatin, 2005.

- Upper side coloured differently ................................................................. 11.

11. Elytra pale with black sutural stripe and black lateral margins ...................... 12.

- Elytra differently coloured ........................................................................ 13.

12. Black sutural (narrower) and lateral (broader) stripes not very large (fig. 54). Flavous; antennomeres 3-11 or 4-11, tarsi, tibiae and breast black or blackish. Sutural stripe angularly widened anteriorly, lateral stripes gently widened at middle and at apex. Pronotum about 3× broader than long, impunctate. Elytra very finely and rather remotely punctate, here and there arranged in semiregular rows. Length about 3.0 mm. Described from India (Nilgiri) .......... nigosuturalis (Jacoby, 1908).

- Black stripes on elytron large; the central pale stripe does reach nor basal neither apical border. Scutellum, abdomen and legs pale, breast blackish. Punctation of elytra arranged in distinct subregular rows. Length about 3.0 mm. Described from N Vietnam .......................................................... atrocineta (Pic, 1932).

13. On elytra characteristic black markings as in fig. 55. Head, underside and legs mostly blackish. Length 3.0-3.3 mm. Described from S China (Yunnan) ............. .......................................................... scalaris (Pic, 1927).

- Elytra differently coloured ........................................................................ 14.

14. Elytra yellowish brown with humeral and sutural areas widely brownish sheen, moreover with an elongate brownish path behind the middle Length about 3.5 mm. Here females of variabilis (auxiliary group G, thesis 6).

- Elytra differently coloured ........................................................................ 15.

15. Elytra black, on each elytron two (subhumeral and preapical), rather large pale spots. Head pale with blackish genae and mandibles, legs pale with tarsi and apices of tibiae blackened. Pronotum over 2× as broad as long, impunctate and lustrous. Punctation of elytra moderately strong, confused, disappearing before apex. Apex

of aedeagus in dorsal view triangular, in lateral view crooked down. Aedeagus as in figs 140, 141. Length 3.4–3.6 mm. Described from Laos, reported also from Assam ......................................................... ornatipennis Medvedev, 2004.

16. Elytra differently coloured ............................................................................... 16.

16. Black colour on elytra covers (broadly) basal and (more narrowly) apical area, rather narrowly lateral margin, more broadly hind part of suture and short transverse stripe just behind midlength. Breast black, legs flavous with infuscate tarsi. Aedeagus as in fig. 56. Length (male) 2.5 mm (= var.? discoidalis Pic, 1932). Distributed in Myanmar and Vietnam ........................................ crucipennis (Jacoby, 1908).

17. Upper side fulvous, antennomeres 3–11 black, on each elytron before apex two transversely posed, piceous spots (fig. 58). Antennae very slightly serrate, antennomere 4 widened to apex but much smaller than 5. Pronotum impunctate, punctures on elytra arranged in regular rows. Aedeagus as in fig. 57. Length 3.0 mm. Described from Burma based on one male only ........... bisbipunctata Medvedev, 2010.

18. Underside pale. Black colour on elytra forms two rundish (anterior) and obliquely ovale (posterior) spots. All remaining parts of body pale ochraceous. Pronotum about 1.6× broader than long, very sparsely and finely punctate, the Punctuation of elytra not dense, shallow, irregular. Aedeagus as in figs 59, 60. Length 3.5 mm. Described based on one male only from Afghanistan, but reported later from Pakistan, N India and Nepal ......................... minutissima (Lopatin, 1967).

18. Underside black, abdomen with metallic luster. Upper side orange-yellowish, two spots on each elytron (at one third and behind middle) blackish. Metasternum and abdomen black. Pronotum twice as broad as long, convex, impunctate; Punctuation of elytra distinct, in basal part relatively dense, in hind part shallow, here and there forming irregular rows. Aedeagus as in figs 61, 62. Length about 3.0 mm. Described from Yunnan ......................................................... quadrimaculata Lopatin, 2009.
19. Elytra flavous, with broad transverse black or bluish band near apex, sometimes occupying the entire hind part ................................................................. 20.
–. Elytra differently coloured ............................................................... 24.
20. Underside black, legs pale ................................................................. 21.
–. Underside and legs reddish fulvous ............................................... 22.
21. Upper side flavous, on elytron before apex a broad transverse bluish-black band not reaching suture or lateral margin, its outline somewhat irregularly notched. Pronotum without any trace of punctures, elytra finely but distinctly punctate. Length about 6.5 mm. Described from N India based on one female only .......
–. Upper side flavous, underside black, legs pale, basal part of femora, apices of tibiae and tarsi darkened. On elytra a very broad transverse bluish-black band from before middle to near apex. In variations the blue zone on each elytron reduced to a large bluish spot either separated from the other by pale suture, or both spots are fused in the middle. Pronotum impunctate, elytra very finely punctate. Length 5.0-6.0 mm. Possibly a paler form of *duvivieri* (thesis 21). Described from S India (Ramnad). Discussed also as *Physosmaragdina* ....... *fabrei* (LeFèvre, 1883).
22. Similar to *crassipes* (thesis 41) and *duvivieri* (thesis 21), but larger, broader and with very densely punctate elytra. In variations the blue colour occupies all hind part of elytra; such variations differ from *flavobasalis* (thesis 23) by bluish (not black) colour of elytral patch, by larger body and more densely punctate elytra. Aedeagus as in figs 63, 64. Described from Nepal, recently (Medvedev, 2010) ranked as *Physosmaragdina* .......................... *motschoulskyi* Medvedev, 1992.
–. Not as above ................................................................. 23.
23. Elytra divided into two zones: anterior flavous extended to near the midlength and posterior black, occupying the hind part. On the middle of pronotum a shallow, finely punctate groove. In male fore legs longer than the others, tarsi short. Length about 6.0 mm. Described from S India based on one male only; possibly conspecific with insufficiently described *terminalis* (LeFèvre, 1883) from S India (Ramnad), after Medvedev (2010) belonging probably to *Aetheodactyla* or *Physosmaragdina* ................................................................. *flavobasalis* (Jacoby, 1908).
–. Elytra coloured differently ................................................................. 24.
24. Elytra black with flavous stripe or another pale pattern on black ground ...... 25.
–. Elytra differently coloured ................................................................. 26.
25. Elytra without any trace of punctuation, smooth and shining. Body generally fulvous, elytra black, a triangularly elongate space below the scutellum and the klateral margins anteriorly more or less fulvous. Pronotum impunctate, twice as broad as long. Aedeagus as in fig. 65. Length 5.5 mm. Described from S. India ................................................................. *laevipennis* (Jacoby, 1908).
–. Elytra distinctly punctate, punctures unequal. Ground of elytra black, in hind part an arched flavous stripe. Length about 4 mm. here the form of *crucipennis*, known as *discoidalis* (Pic, 1932), see thesis 16.
26. Elytra pale, margins and suture black .................................................. 27.
–. Elytra pale with black (sometimes brown) spots, stripes or bands on disc ...... 29.
27. Body entirely pale, darkened only fore tibiae, all tarsi and very narrowly suture and lateral margins of elytra. Aedeagus as in figs 66, 67. Punctuation of elytra fine, confused. Length about 4.0 mm. Described from Cambodia .............................................. murzini LOPATIN, 2003.

–. Not as above ........................................................................................................ 28.

28. Upperside, underside, antennomeres 1-3 and legs flavous, antennomeres 4-11 and scutellum black. On elytra broad sutural stripe and shorter lateral stripe, both broadened behind midlength, black. Variations of elytral pattern as in figs 73-76. Pronotum impunctate, elytral Punctuation very fine and obsolete. Aedeagus as in fig. 68. Length about 4.0 mm. Described from S India (Nilgiri) .................. nilgiriensis (JACOBY, 1903).

–. Upper side flavous, impunctate, each elytron around with rather broad black bordering. Metasternum largely blackened, abdomen pale. Legs pale, outer faces of tibiae and partly tarsi darkened. Length 3.7-3.9 mm. Described from Vietnam .................................................. dalatensis KIMOTO et GRESSITT, 1979.

29. Elytra pale with black humeral spot only ......................................................... 30.

–. Elytra differently coloured ............................................................................... 33.

30. Pygidium in female with deep, approximately arcuate, emargination. Body pale, head black, underside and tibiae partly blackened. Two variations (conspecific?) were described: legs entirely pale, humeral spot reduced or absent, head pale (ab. hoana Pic, 1928); underside also uniformly pale (ab. clermonti Pic, 1928). Described from N Vietnam (Tonkin). An insufficiently studied species, synonymized with Aetheomorpha sodalis (LACORDAIRE, 1848) later separated again as a species belonging to the genus Smaragdina. Male unknown .......... coomani (Pic, 1928).

–. Pygidium in female differently shaped ........................................................... 31.

31. Scutellum pale. Fulvous, antennal segments 5-7 with black widened part, segments 8-11 black, elytra with small black humeral spot, pygidium black at least in basal half, metasternum and abdominal sternites 4 and 5 black at sides. Tarsi more or less infuscate. Pronotum 1.85× broader as long, surface glossy and impunctate. Elytra
shining, 1.45 times as long as broad, finely and densely punctate. Aedeagus as in fig. 69. with very acute triangular apex and sharp ridge on basal half of underside. Length 5.3-5.7 mm Described from NE India ..............................................................

............................................................................................................................... **megalayana** **Medvedev** et **Kantner**, 2002.

–. Scutellum black or blackish ................................................................. 32.

32. Head black, scutellum and underside blackish. Legs black, basal 1/4 of femora and basal half of tibiae pale. Length about 6.0 mm. Here females of *Tituboea paviei*, misidentified and described as *Cyaniris bicoloripes* by Pic (1929).

–. Head reddish with blackish vertex, antennomeres 4-11, scutellum, small humeral spot, metasternum and usually the middle of abdomen black or blackish, legs flavous, tarsi not darkened. Pronotum impunctate except a few strong punctures near base, elytral Punctuation of elytra rather strong, confused, at apex faded. Aedeagus as in fig. 70. Length 4.9-5.7 mm. Described from N India (Assam) ............................................................................ **nigriscutis** **Medvedev**, 1970.

33. Upper side rufo-flavous, head black, on elytra humeral spot, hind part of suture and apical margin (extending sometimes on hind part of lateral sides) black. Underside, antennae (except for basal antennomeres) and legs brown. In male fore legs more robust. Length about 6.0 mm. Described from China (Chekiang) ............................................................................ **subsignata** (Fairmaire, 1888).

–. Not as above .......................................................................................... 34.

34. Upper side, except for antennomeres 5-11 and apices of mandibles pale yellowish or pale ochraceous, on each elytron two brownish longitudinal stripes (discal and preapical) often very pale or barely visible, sometimes perceptible only in transparence; on humerus and at basis of scutellum sometimes also brownish darkenings. Here keys out the typical form. In pale form all the brownish pattern is absent (see auxiliary group A, antithesis 25). Aedeagus as in figs 71, 72. Length 4.5 mm. Known only from China (Sichuan) ....................... **schereri** **Lopatin**, 2006.

–. Not as above .......................................................................................... 35.

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35. On each elytron 4 black spots. Two anterior spots (humeral and postscutellar) obliquely, two remaining (postmedian) transversely situated ..................... 36.
–. Black markings on elytra situated differently ............................................. 38.
36. Body generally light yellowish brown, patches on elytra dark brownish. Antennomeres and apices of mandibles infuscate. Legs robust, tarsi short, strongly widened. Pronotum impunctate and shining, Punctuation of elytra distinct, with a tendency to arrange in longitudinal rows, in basal part diameter of punctures is larger than interspaces. Length 4.2-5.1 mm. Described from Pakistan ................................................ mapellii TAKIZAWA, 1990.
–. Patches on elytra dark. Tarsi not strongly widened ...................... 37.
37. Scutellum and the major part of underside black. Length about 5.0 mm. Described from China (Fukien) ................................................................. nigrosignata (PIC, 1954).
38. Scutellum, breast and apex of pygidium black. On each elytron four large black spots and narrow black apical stripe ......................................................... 39.
–. Colouration of body different ................................................................. 40.
39. Anterior (humeral and postbasal) and postmedian spots form two transverse bands, apical stripes and inner postmedian spots fused on the suture. Pronotum on the disc impunctate, around margins finely punctate. Punctuation of elytra strong, coarse and somewhat rugose. Length 4.0-5.0 mm. Described from Tibet (Xizang) ................................................................. cribripennis TAN, 1988.
40. Body relatively large, elongate, parallel. Antennomeres 5-11, scutellum, humeral spot and a common large central on elytra black. Tarsi darkened. In dark varia-

73-78. Variations (unnamed) of elytral pattern (after MEDVEDEV 1984): 73-76 – Smaragdina nilgiriensis; 77, 78 – S. wittmeri
tions the pale ground of elytra largely reduced and on pronotum a dark, central, somewhat blurred spot. Femora and tibiae pale or partly infuscate. Antennomere 1 larger than usually, three following antennomeres small. Length 6.0-7.5 mm (= *davidis*, Lefèvre, 1893). In the recent catalogues cited in the genus *Exomix* Weise, 1889. Distributed in China from Kansu to Sichuan and Yunnan ................................................................. *peptopteroides* (Weise, 1889).

41. Black humeral spot absent ................................................................. 42.

42. On each elytron a postmedian, on hind margin notched, transverse black band. In male femora thickened, tibiae and tarsi robust, fore tibiae somewhat elongate. Pronotum finely punctate troughout. Elytra punctate finely but somewhat rugosely with numerous stronger punctures scattered on whole surface. Length 6.0-7.0 mm. Described from E India .................................................. *crassipes* (Duvivier, 1891).

43. In male on each elytron near suture two small black spots (pre- and postmedian), sometimes longitudinally fused (figs 79, 80), in female additionally also three spots situated on lateral margin: humeral (larger), posthumeral (small) and postmedian. Head and underside black, legs fulvous. Pronotum strongly transverse, impunctate. Length 5.0-5.5 mm. Distributed in Ryukyu Is. .......................... *quadratomaculata* (Jacoby, 1896).

44. On elytra two broad transverse black bands (basal and preapical); hind band often interrupted on suture. Vertex blackish, apical part of antennae brown, apical part

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of tibiae and whole tarsi infuscate. Remaining parts of body pale. Length 4.0-4.5 mm. Here females of *Tituboea paviei* from S Vietnam, misidentified by Pic (1929) and described as *Smaragdina bicoloriceps*.

–. Black markings of elytra different ............................................................ 45.

45. In hind part of elytra a small black spot near suture only (fig. 81). Scutellum and underside blackish, legs pale, darkened on dorsoapical part of femora and along dorsal side of tibiae. Insufficiently described from N Vietnam .................................................

................................................................................................. *duporti* (Pic, 1937).

–. Elytra differently coloured ........................................................................... 46.

46. On elytron anteriorly two small black spots (humeral and postscutellar) and a postmedian transverse band, widened laterally and almost reaching suture. Pronotum smooth, impunctate, elytra rather strongly and irregularly; punctate, the punctures behind the middle much weaker. Length 5.0-5.3 mm. described from Myanmar and S Vietnam. In recent works discussed in the genus *Aetheomorpha* ........................................................................... *cochinchinensis* (Lefèvre, 1889).

–. Elytra differently coloured ........................................................................... 47.

47. On elytron anteriorly humeral spot only. In midlength a broad black band laterally widened and narrowed or interrupted at suture. Length about 4.5 mm. Described from India (Bengal, Konbir). Mentioned also as *Aetheomorpha* ................................................................. *semipunctata* (Duvivier, 1891).

–. Elytra with black pattern ........................................................................... 48.

48. Scutellum pale. Body yellowish red, apices of mandibles, last palpomeres and sometimes vertex darkened, elytral pattern, apical part of antennae black, tarsi and often external edge of tibiae blackened. The blackish colouration variable, occupying sometimes also partly the ventral surface of body. Length 4.5-5.6 mm. Aedeagus as in figs 82, 83. Described from W India (Maharashtra) ....................

................................................................................................. *kejvali* Kántner et Bezděk, 2011.


Auxiliary group C
(pronotum entirely pale, elytra entirely pitch, black or metallic, at most with pale epipleura)

Key to species

1. Smaller species, body length at most 4.3 mm ........................................... 2.

–. Larger species, body length at least 4.5 mm .......................................... 10.

2. Elytral punctures strong, arranged in fairly regular rows, interstices distinctly convex or costate, particularly in female in hind part ........................................... 3.
1. Elytral punctures at most partly arranged in subregular rows, interstices never costate ................................................................. 4.

3. Pronotum about two times as broad as long, impunctate, usually with a small fovea on each side. Elytra and ventral surfaces of body, except prosternum, with deep blue metallic sheen, head, pronotum, legs and the antennomeres 1-4 testaceous, antennomeres 5-11 piceous. On head three foveae arranged in a triangle. Antennae short, not attaining the posterior margin of the pronotum. Length; 2.6-4.2 mm. Described from Tibet ................................................................. *costata* Tan et Wang, 1981.

- Pronotum very short, at least three times as broad as long. Elytra bright blue, scutellum, metasternum and abdomen black. Aedeagus as in fig. 84. Length about 3.0 mm. Described from N India (Sikkim) .................. *laticollis* (DuVivier, 1892).

4. Pronotum transverse, 2-2.5× broader than long ........................................ 6.

- Pronotum less transverse, about 1 2/3 × broader than long ........................ 5.

5. Head, pronotum, antennae and legs fulvous, elytra dark metallic green, abdomen and pygidium black with greenish reflection. Head smooth; vertex with short longitudinal impression; frons near eyes weakly transversely impressed. Antennomere 3 as long as 4; antennomere 5 widened to apex, antennomeres 6-9 wider than long. Pronotum shining, extremely finely and sparsely punctate. Elytra strongly and contiguously punctate, interspaces flat, wider than punctures. In fore tarsi tarsomere 1 elongate and dilated, the second tarsomere triangular, feebly dilated. Aedeagus as in figs 85, 86. Length 3.4 mm. Female unknown. Described from S China (Yunnan) based on one male only .............................................. *volkovitshi* Lopatin, 2004.

- All external features as in *volkovitshi*, but differing by larger body (length 3.8-4.0 mm). Aedeagus not studied; possibly conspecific with the previous species. Very similar also to *laosensis* (auxiliary group B, antithesis 6), but somewhat larger and differing by uniformly dark elytra. Described from Vietnam .................. *vietnamensis* Kimoto et Gressitt, 1979.

6. Pronotum more transverse, about 2.5× broader than long. Body black, head, pronotum, scutellum and legs fulvous; elytra black; pronotum impunctate, elytra closely

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punctate. Length about 3.5 mm (= marginata Pic, 1938). Variation: tarsi and apices of tibiae darkened (ab. kwatunensis Pic, 1954). Described from Hupeh, known also from a few other south-eastern provinces of China ... laevicollis (Jacoby, 1890).
– Pronotum about 2.0× broader than long. ........................................................... 7.
– Pale parts of body fulvous. Pronotum impunctate and lustrous, elytra uniformly or almost uniformly punctate ........................................................................ 8.
– Whole elytra bluish ............................................................................................ 9.
9. Head fulvous with black vertex. Antennomeres 2 and 3 small and slender, almost equal. Length 3.7 mm. Male unknown. Described from Laos based on one female only .............................................................. bezdeki Medvedev, 2010.
– Head metallic blue with anterior margin of clypeus fulvous. Antennomere 3 short and slender, 4 widened to apex. Elytra strongly and densely punctate. Length 3.1-3.3 mm. Similar to East Palaearctic species S. semiauranthiaca (Fairmaire, 1888), but much smaller. Described from Thailand ........ thailandica Medvedev, 2010.
10. Black parts of upper side with distinct or strong green metallic sheen. Species described from continental Asia ................................................................. 13.
– Black parts of upper side without or with very feeble metallic sheen ........... 11.
11. Species from Taiwan and Ryu-Kyu Isl. .............................................................. 12.
– Body black, pronotum and basal part of antennae rusty-red. Punctuation of elytra minute and sparsely scattered. Length 5.0 mm. Insufficiently described species from Yunnan ................................................................. atriceps (Pic, 1927).

12. Head, pronotum and scutellum yellowish brown, lustrous, with apices of mandibles and antennae (except the basal segments) somewhat infuscated; elytra shiny black, with basal and sutural margins piceous; underside yellowish brown to piceous or black. Legs either yellowish brown in general colour, with apices of femora, tibiae and tarsi blackish brown to black, or tarsi, hind-coxae and dorsal surfaces of tibiae and femora more or less infuscated. Pronotum strongly transverse, about 3× broader than long, extremely finely punctulate throughout. Elytra rather strongly punctate, the punctures becoming feeble posteriorly, interstices very finely punctulate together with the humeral calli which are free from the larger punctures. Length 5.0-6.0 mm. Described from Taiwan based on two females .......................................................... nigripennis (Chûjô, 1952).

–. Scutellum shining black; elytra deep blue-black. Head, prothorax and legs yellowish brown, lustrous. Antennae short and robust, serrate, antennomere 1 strongly dilated and much thicker than the others, 11 longest. Pronotum very finely and closely punctate on the whole surface coarsely and irregularly, laterobasally and nearly along all borders stronger. Remaining characters as in male. Length 4.5-5.0 mm. Described from Ruykyu (Okinawa). Here females of ihai (Chûjô, 1958), see auxiliary group B, antithesis 4.

13. Here keys out an insufficiently described species from Tibet. The whole characteristic: „Testaceous, antennae infuscate, head broadly [green], scutellum and elytra green, underside black. Punctation of pronotum minute, of elytra fine and sparse. Length about 5.0 mm”. Described from Tibet, perhaps conspecific with moutoni (thesis 10) ............................................................. semiviridis (Pic, 1922).

–. Descriptions more detailed .............................................................................. 14.

14. Mouth parts and labrum, basal antennomeres, pronotum and legs dark yellow or pale orange-ochraceous, tarsal claws darkened. Elytra steely-blue black, often with weak purplish sheen laterally. Underside in darker specimens black, in paler or not definitively sclerotized specimens brown, paler laterally, with greenish sheen on metasternum and on central part of abdomen. Pronotum more than 2× broader than long, almost impunctate, with some fine but distinct punctures scattered near base. Punctuation of elytra entirely irregular, fine, being weaker on apical part. Length 5.5-6.2 mm (= mandarina Lefèvre, 1892, nec Weise, 1889). Distributed in China (Kiangsu, Kiangsi, Hunan, Sichuan) ........................................ moutoni (Pic, 1897).

–. Labrum piceous, general hue of black parts not bluish, but greenish, pronotum somewhat longer, 2× broader than long, remaining characters as in moutoni. Length 4.9-5.4 (male) to 5.7-6.6 (female). Described from China (Sichuan) and Russian Far East ........................................... potanini Medvedev, 1970.

Auxiliary group D
(pronotum bicolored, elytra pale)

Key to species

1. Head black. Along the middle of pronotum runs a broad, black stripe. Sutural edge and lateral margins of elytra very narrowly blackened, tarsi and apical part of
tibiae blackish. Here paler coloured specimens of *imitans*, see auxiliary group E, thesis 6).

– Colouration of upper side as above, but elytra uniformly pale ......................... 2.

2. Excavation on head not bifurcate, Punctuation of elytra finer. Legs largely darkened. Colouration of upper side as in fig. 88. Aedeagus as in fig. 87. Length 6.5-7.0 mm. Variation: legs almost entirely pale (ab. *binhana* Pic, 1928) ............................................

– Excavation on head bifurcate, punctuation of elytra stronger. Two species differing by shape of aedeagus ........................................................................................................ 3.

3. Smaller. Apical process of aedeagus triangular, acute, strongly curved downwards (figs 89, 90). Length 4.5-4.8 mm. Described from Vietnam .................................................................

– Larger. Apex of aedeagus widened and shallowly incised (figs 91, 92). Length 5.3-7.5 mm Described from Vietnam ...................... *bertiae* Medvedev, 1992b.

**Auxiliary group E**

(pronotum bicolored, elytra bicolored)

**Key to species**

1. Upper side pitch or black with brownish shine, on pronotum and elytra indistinct, blurred lightenings. See *variabilis* (auxiliary group G, thesis 6).

– Not as above ..................................................................................................... 2.

2. Black pattern on pronotum formed as one large central spot or patch, often as median, broad longitudinal band, lateral sides pale, rarely (in *signaticollis*) with a small additional spot on each side ................................................................. 3.

– Black pattern on pronotum situated transversely and consists of 2-4, sometimes irregular, spots, formed as transverse band or at least distinctly formed as a transverse spot ....................................................................................................... 16.

3. Length of body at most 3.5 mm ........................................................................ 4.

– Length of body over 4.0 mm ......................................................................... 10.

4. Elytra margined with black ............................................................................... 5.

– Elytra differently coloured ................................................................................. 7.

5. Hind part of head flavous, vertex crossed by a black transverse band. A spot on anterior part of pronotum, scutellum, margins of elytra and breast black. Pronotum with surface impunctate, transversely before scutellum, a large black patch on the middle of the anterior margin extending downwards nearly to the base. Legs and abdomen flavous. Antenna black, basal four joints flavous, fifth and following strongly transverse. Elytra not perceptibly punctate. Length 2.5 mm. Described from S India (Nilgiri) ................................................................. *planifrons* (JACOBY, 1908).

– Vertex, breast and tarsi black, thorax with a very large central black spot, three basal antennomeres flavous, fourth and following strongly transverse .......... 6.

6. Pronotum more than twice as broad as long, impunctate. Elytra narrow and parallel, suture narrowly, sides more broadly black. Aedeagus not studied. Length about
3.0 mm. Described from S India (Nilgiri). The descriptions do not allow distinguishing imitans from the previous species (planifrons); perhaps conspecific with it ................................................................. imitans (JACOBY, 1903).

–. Pronotum not fully twice as broad as long, narrowed anteriad. Elytra narrow and parallel, sutural and lateral black borders moderately broad. Abdomen dark. Aedeagus as in fig. 141. Length 2.4 mm. Described from Vietnam based on one male ................................................................. regularis MEDVEDEV, 1985.

7. Elytra black with bluish sheen, their apex fulvous, the apical spot rounded, fulvous, or ivory coloured. Head with fulvous spot. Pronotum flavous with bluish black central band. Antennae comparatively robust, extending slightly beyond the thorax. Thorax twice as broad as long, cylindrical, impunctate, very shining, the central band of regular shape. Elytra very finely and rather regularly punctate in rows. Legs and tarsi rather long and slender, first tarsomere as long as the following two joints united. Legth about 3.0 mm. Described from S India (Nilgiri) ................................................................. delesserti (LACORDAIRE, 1848).

–. Elytra coloured differently ................................................................. 8.

8. Elytra flavous, with black broad lateral stripe widened basally almost to scutellum, apical part, common spot on suture just behind the middle, and suture between this spot and apex. Aedeagus as in fig. 93, 94. From crucipennis (auxiliary group B, thesis 16) differs only by the presence of brown, somewhat cordiform spot on pronotum. Very probably a colour variation of this species. In some works discussed as Aetheomorpha. Length 2.8-3.0 mm. Described from China (Yunnan) ................................................................. centromaculata MEDVEDEV, 1995.

–. Elytra coloured differently ................................................................. 9.

9. Elytra black with blurred patch behind middle. Fulvous, vertex, 4-11 segments of antennae, middle of pronotum, scutellum, apices of tibiae and tarsi black. Elytra black with poorly delimited pale flavous patch in hind part. Female coloured

95-97 Pattern on upper side (95 after JACOBY, 1908, 96 after KIMOTO et GRESSITT, 1979, 97 after TAN, 1988):

95 – Smaragdina striatipennis; 96 – S. guillebeaudi; 97 – S. symmetria
similarly, but spot of pronotum sometimes enlarged, breast, pygidium and legs more or less black, elytra mostly with additional small and poorly delimited patch behind base. Antennae distinctly serrate from the 4th segment, which is triangular and almost as large as 5th; segments 5-10 transverse, subquadrangular. Pronotum two times as wide as long, practically impunctate except a few punctures at anterior margin and base. Elytra extremely finely indistinctly punctate. Length 3.5 mm (male) to, of (female) 3.4-4.2 mm. Described from Sumatra and Perak .......

..........................................................................
flavovariegata Medvedev, 1999.

–.  Elytra pale with suture and lateral margins black with greenish sheen. Head metallic green; antennomeres 4-11 and breast black; pronotum fulvous with central greenish patch, strongly ointed at base, scutellum metallic green; abdomen and legs flavous, femora in the middle and tibiae at apex greenish. Pronotum impunctate with an anterior and posterior transverse sulcus. Elytral punctures arranged in regular rows. Tarsi rather slender, first tarsomere twice as long as the second. General view as in \textbf{fig. 95}. Female: pronotal patch larger, subquadrate, elytra entirely greenish (see auxiliary group F, thesis 5), punctation of elytra finer. Described from S India (Nilgiri). Length 3.0-4.0 mm ................................ striatipennis (Jacoby, 1903).

10.  Elytra pale with black humeral spot only (fig. 96). Pronotum in the middle black, laterally pale. Length about 5.0 mm. Very insufficiently described from S China (Yunnan) ........................................................ guillebeaui (Pic, 1927).

–.  Elytra differently coloured ................................................................. 11.

11.  On each elytron four black spots situated obliquely. Body black; pronotum fulvous with black spots; labrum, palpi, antennomeres 1-4 and legs entirely fulvous. Antennomeres 4-10 distinctly widened to apex, transverse. Pronotum 1.9 times as broad as long, surface smooth. Scutellum coarsely wrinkled. Elytra distinctly and confusedly punctate, with punctures diminishing apically. Pygidium at apex with short emargination. Meso- and metathorax finely rugose. Length of body 4.8 mm. Aedeagus as in \textbf{figs 138, 139}. Female unknown. Described from S China (Yunnan) ........................................................ tani Lopatin, 2004.
–. Elytra differently coloured ............................................................................... 12.
12. On elytra a large spot at base, and a broad band at middle, apex and apical part of suture black. Female: body black; pronotum flavous, a central broad band and a spot at sides black. Elytra flavous, a large spot at base, a broad band at middle, posterior part of suture and apex black. Antennae slender extending to the base of pronotum, basal joint pale fulvous. Pronotum twice as broad as long, very regularly cylindrical, surface very smooth. Scutellum black. Elytra very finely and superficially punctate. Legs black, first tarsomere of fore tarsi longer than second. Length 4.5 mm. Male unknown. Described from N India (Kashmir). After Medvedev (2010) supposedly conspecific with Miochira nepalica Medvedev, 1998 .......................................................................................................................... signaticollis (Redtenbacher, 1846).

–. Elytra differently coloured ............................................................................... 13.
13. On elytra a common rhomboidal spot behind middle, and on each two further spots: a large humeral and a small lateral just behind midlength; apical part of suture blackened (fig. 97). Scutellum black, legs yellow. Pronotum two times as broad as long, impunctate. Elytral punctation fine, arranged in irregular stripes or rows. Length 4.5-5.3 mm. Variation: the rhomboidal spot on elytra enlarged, connected with the lateral spot (unnamed). Described from Tibet (Xizang) ................................................................. symmetria Tan, 1988.

–. Not as above ................................................................................................... 14.
14. On each elytron two large transverse bands. On pronotum the central spot sometimes reduced to a irregular patch. Underside and pygidium black, legs yellowish, with mid and hind femora somewhat darkened. Hind angles of pronotum obtusely and moderately broadly rounded. Externally rather similar to tonkinensis, (antithesis 15) but tonkinensis is smaller (under 4.2 mm) and its hind angles of pronotum are obtusely but rather weakly rounded. Aedeagus as in fig. 98, 99. Length 5.0-6.1 mm. Described from W India (Maharashtra) ................................................................. maharashtra Kantner et Bezděk, 2007.

–. Elytra differently coloured ............................................................................... 14.
15. On elytra humeral spots and two transverse ragged bands fused with sutural stripe and with broad lateral stripe encroaching also on apex. Head, scutellum, suture, humeral spot and two dentate bands, fused with sutural stripe and with broad lateral stripe encroaching also on apex alike entire underside black. Pronotum orange with a pitch brown blurred spot at base near scutellum. Two basal antennomeres and legs except for apices of tarsi rusty-yellowish. Pronotum covered by sparse, fine punctures, almost disappearing laterally. Punctures on elytra distinct and deep, at suture in hind part arranged in close rows, on remaining part of surface random. Aedeagus as in figs 100, 101. Length 4.5 mm (male, holotypus) to 5.3 mm (female, paratypus). From scalaris differs by two, not three, transverse bands on elytra and by punctation. Described from S. China (Yunnan) .......... virgata LOPATIN, 2004.

apex of the pygidium and the last abdominal segment partly, black. Antennae with terminal joints fuscous. Legs testaceous, tarsi fuscous. Antennomeres 4-11 strongly transversely serrate, Pronotum impunctate, Elytra subquadrately oblong, strongly and closely punctate anteriorly, very finely and much more distinctly so towards the middle. First tarsomere slightly longer than any of the following joints. Length about 4.0 mm. Described from N India (Assam). [Recently treated also as Aetheomorpha and than, because of a secondary homonymy, under the replacing name jacobyi Medvedev, 1988b: 473] assamensis (Jacob, 1908).

Not as above ........................................................................................................ 18.

18. Ground of elytra bluish black, each elytron with an ill-defined longitudinal brownish stripe, usually divided in two weakly separated parts. Head bluish black with frons and mouth part reddish brown. Black pattern in female as in fig. 105, in male as in fig. 106. Antennae short, robust, with third segment small, hardly thickened apically. Prothorax, nearly twice as wide as long, distinctly but not closely punctate. Elytra strongly and thickly punctate. Length: 2.8-3.8 mm. Described from Taiwan miyakei Kimoto, 1976.

–. Ground of elytra pale ..................................................................................... 19.

19. On elytra very narrow sutural stripe and humeral spot black only. Fulvous; pronotum usually with 4 spots in a transverse row and often with an additional small spot before scutellum; sometimes all spots connected in a serrate transverse band which reaches to neither basal nor lateral margin. Prothorax 1.8 times as broad as long, impunctate except a few punctures on short basal lobe. On elytra inner part with distinct punctures arranged in irregular rows, laterally and apically punctures very feeble or disappearing. Tarsi thin, tarsomere 1 of anterior tarsi narrow and elongate, about twice as long as broad in both sexes. Aedeagus as in fig. 107. Length of male 2.8-2.9 mm,(male) to 3.4-3.8 mm (female). Described from SW China (Sichuan) micheli Medvedev, 1995.

Elytron reddish with two discal longitudinal stripes black. Head black with mouth parts reddish, pronotum reddish brown with a transverse medio-basal and a pair of lateral markings black, scutellum pitch black; elytron reddish brown, with two discal longitudinal stripes black; underside black; legs reddish brown with dorsal surfaces of femora and tibiae and entire tarsi black. Antenna short, robust. Pronotum nearly 2.75 times as wide as long, sparsely impressed by small punctures. Elytra strongly and thickly punctate. Aedeagus as in figs 108, 109. Length 3.6-4.2 mm. Described from Taiwan kurosuji KIMOTO, 1984.

20. In male between the eyes a horn-like projection. Body very large. On elytra characteristic black pattern as in fig. 110. Thorax nearly three times as broad as long, impunctate. Elytra very finely and rather closely punctate. Base of femora and abdominal segments more or less fulvous; anterior legs and the metatarsus rather elongate. Length 6.0-8.0 mm. Variations: humeral spot prolonged along lateral margin to apex (unnamed); humeral spot brown, all other markings absent (unnamed). Described from India (Kanara, Belgaum). Recently discussed also as a separate genus Ceroclytra MEDVEDEV cornuta JACOBY, 1895.

21. Larger species, body length 5.0-7.5 mm .......................................................... 22.

22. Elytra reddish brown, anterior and postmedian spots on elytra situated transversely. Head entirely black, pronotum reddish brown with a large marking black, scutellum entirely pitch black; antenna pitch black with three or four basal antennomeres somewhat paler; ventral surfaces black; legs reddish brown with dorsal surfaces of femora and tibiae and entire tarsi black. Antenna short and robust. Pronotum sparsely impressed by small punctures. Elytron distinctly but rather not closely punctate. Aedeagus as in figs 111, 112. Length 5.3-5.5 mm. Described from Taiwan kuromon KIMOTO, 1984.

23. On each elytron four black spots (2:2) .......................................................... 24.
24. Pronotum in hind part with two pitch black markings placed transversely, sometimes fused into a transverse blackish band. Head black, antennomeres 5-11, meso- and metathorax piceous or black. Scutellum black. On each elytron four black spots (humeral, postbasal and two in midlength situated somewhat obliquely). Upper surfaces of tibiae partly or nearly entirely blackish brown to black; tarsi dark yellowish brown to blackish brown. Pronotum finely but not thickly punctulate throughout. Elytra rather thickly punctate, in hind part more finely and shallowly, partly arranged in longitudinal rows, interspaces very finely and thickly punctulate throughout together, also on the humeral calli. In male last abdominal sternite with apical margin strongly and widely emarginate. Aedeagus as in figs 113, 114. Length 5.0-7.0 mm. One variation is described: on pronotum a great spot, elytral markings enlarged, abdomen black (ab. *melania* Chûjô, 1952). Distributed in Taiwan .............................................................................. *octomaculata* (Chûjô, 1952).

25. Body rusty-yellowish. On pronotum two semilunar black spots, sometimes interrupted (figs 123, 124), their convexity posed posteriad. On each elytron four large black spots (figs 120-122), sometimes partly fused. Head and underside, except for prosternum, black. Disc of pronotum mirror-smooth, impunctate, some shallow punctures before scutellum only. Punctation of elytra rather strong and deep, here and there arranged in irregular longitudinal rows or stripes. Aedeagus as in figs 118, 119. Length 3.5 mm (male), to 4.5-4.8 mm (female). Described from SW China (Sichuan) ................................................................. *nigroguttata* Lopatin, 2002.


27. On pronotum a prebasal, broad, transverse band. Ground of upper side ochraceous,
head and scutellum black, on each elytron a longitudinal posthumeral spot, one ovale premedian spot near suture and before apex a transverse band, not reaching suture. Underside mainly black. Dorsal surface of femora, most part of tibiae and tarsi blakish. Pronotum minutely and sparsely punctate, more distinctly punctate along basal margin. Punctuation of elytra distinct, dense, moderately strong. Length 4.5-4.8 mm (= *fasciata* Medvedev, 1988b?). Described from Nepal, ranked also as *Aetheanta* higuchii Kimoto et Takizawa, 1981.

28. On pronotum two prebasal transverse spots, usually connected by a short transverse black band just before scutellum. On each elytron a humero-basal transverse band and apex black (fig. 115). Body black, antenomeres 1-4 brownish. Inner surface of femora and tibiae and the last tarsomere brownish, the remaining parts black. Pronotum about three times as broad as long largely glabrous, only minutely punctate on black patches. Elytra ruged, very coarsely punctate, and with the interspaces strongly raised. The first joint of hind tarsi about as long as the following two joints combined. Length 5 mm. Described from S China (Yunnan) impressicollis Tan, 1992.

Elytral pattern (fig. 116) different, rather similarly shaped as in *cornuta* (thesis 19). Scutellum, tarsi and distal part of all tibiae black. Thorax nearly three times as broad as long, impuncate, with two pairs short, transverse, shallow furrows. Male unknown. Length 4.5-5.3 mm. Described from Tibet (Xizang) bothrionota Tan, 1987.
Key to species

1. Body larger, length about 5.0 mm ................................................................. 2.
   – Body smaller, at most 4.5 mm ................................................................. 5.
2. Legs entirely black. Hind angles of pronotum well-marked, elytra distinctly narrowed posteriad. Body black, lateral sides of pronotum pale. Elytra black with violaceous tinge, finely, irregularly punctate. Length about 5.0 mm. Species insufficiently described from S China (Yunnan) ....... subacuminata (Pic, 1927).
   – Legs pale or somewhat darkened on dorsal side ........................................ 3.
   – Legs pale, on dorsal side of femora and tibiae darker, tarsi entirely darkened. Head pale rusty-reddish, vertex bluish black. Two externally similar species, differing by shape of aedeagus and other form of pronotal pattern ................................. 4.

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5. Punctuation of elytra strong, arranged in regular or almost regular rows. Head metallic green; antennae (except for 3 basal antennomeres) and breast black; pronotum fulvous, central greenish patch, strongly pointed at base. Elytra greenish, legs flavous, femora in the middle and tibiae at apex greenish. Here females of *striatipennis* (see auxiliary group E, antithesis 8).

6. Elytra strongly and thickly punctate, the punctures tending to form longitudinal rows and becoming feebler posteriorly .................................

7. Punctuation of elytra fine or at most moderately strong .................................


9. Black patch on pronotum not rhomboidal, head at least partly pale ...............

8. Pronotum 2.2 times as broad as long, hind angles broadly rounded; surface without any impressions, impunctate except a short transverse punctate impression on short basal lobe. Punctuation of elytra deep and coarse. Head testaceous, vertex bluish black, scutellum and underside black; pronotum fulvous with broad parallel-sided central stripe black; elytra dark violaceous; legs fulvous with tarsi weakly darkened. Antenna short; Elytron 4 times as long as broad, on apical slope punctures smaller and more sparsely scattered; interstices much smaller than diameter of punctures. Length 4.0 mm. Described from S China (Yunnan) ................................................


and much narrower than the 4th. Length male 3.0 mm (male), 3.75 mm (female). Described from Taiwan ........................................... *maculicollis* (Chûjô, 1952).

9. Elytra covered by extremely fine punctation. Black central stripe on pronotum occupies about 1/3 of the breadth. Legs fulvous. Aedeagus as in fig. 133, 134. Length 3.5-3.9 mm (male) to about 4.2 (female). Described from S China (Yunnan) .......................................................... *emarginata* Medvedev, 1995.

–. Elytra not extremely finely punctate ............................................................... 10.

10. Larger. Length of body at least 4.0 mm. Legs pale testaceous, claws darkened. Prothorax testaceous with broad central portion (more than 1/3 of area) pitch black. Scutellum piceous. Elytron greenish blue strongly at apex tinged with purplish brown. Ventral surface except for prosternum, brown. Pronotum nearly impunctate Elytron broadly rounded apically, fairly deep irregular punctate. Pygidium finely and closely punctate. Legs slender hind tarsomere 1 nearly as long as 2+3. Male unknown. Length 4.0-4.4 mm Described from China (Sikang) ............................

–. Smaller. Length of body at most 3.8 mm. Legs black. Body black; labrum, antennomeres 1-3 rusty. On pronotum in anterior half of lateral sides with two blurred, two similar but smaller spots at scutellum, a small arched spot behind midlength and a roundish spot at apex; all mentioned spots somewhat indistinct, upperside at first glance black. Pronotum finely and sparsely punctate, only the depression before hind margin more distinctly punctate. Punctuation of elytra moderately strong, in apical part fading. Female unknown. Length 3.4 mm. Described from China (Yunnan) .............................................................. *aethiops* Lopatin, 2004.

**Auxiliary group G**

(pronotum entirely black or metallic)

**Key to species**

1. Elytra entirely pale, antennomeres 1-3 and abdomen except for anal sternite flavous, labrum lightened, remaining parts of body black. Pronotum shining and impunctate, Punctuation of elytra dense, confused. Aedeagus (fig. 135) with regularly rounded apex. Length 4.3-4.4 mm. Described from Laos ..........................................................

–. Elytra, similarly as pronotum, entirely black or metallic .................................. 2.

2. Large species, length about 7.0 mm Underside pale, tibiae darkened at apex. Vertex impunctate. Thorax rather more than twice as broad as long, Hind angles distinct. First tarsomere of hind tarsi longer than the second. Described from Myanmar .......................................................... *coerulea* (Jacoby, 1892).

–. Smaller species, length at most 5.5 mm .......................................................... 3.

3. Smaller species, length always under 4.0 mm ................................................. 4.

–. Larger species, length always over 4.4 mm .................................................... 7.

4. Length under 3.2 mm. Black, head and prothorax with very feeble metallic tint, elytra dark greenish blue, basal segments of antennae and sometimes also basal
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half of fore tibiae dark fulvous. Very similar to yunnana (antithesis 6), but differs by on average smaller size, not widened antennomere 1 and fore tarsomere 1 in male, aedeagus not distinctly widened in apical part. Length 2.4-3.1 mm (male) to 2.8-3.1 mm (female) (= minuta Medvedev, 1995, nec Jacoby 1895). Described from S China (Yunnan) ........................................... levi Lopatin, 2004.

–. Not as above ........................................................................................................ 5.


–. Body not distinctly parallel and slender, vertex punctate ................................ 6.

6. General colour black, somewhat lustrous, with a strong greenish brownish sheen on the head and a feeble brownish sheen on the pronotum, scutellum and elytra. Antennae, mouthparts and lateral areas of pronotum more or less stained with dark brown to piceous; elytra with long brownish stripe approached to suture. Head strongly punctate. Somewhat similar to striatipennis (auxiliary group E, antithesis 8), but differing by confused punctuation of elytra, brownish (not greenish) sheen of blackish parts, somewhat smaller body and strongly punctate head. Length 2.75-3.5 mm. Described from Taiwan .......... variabilis (Chûjo, 1952).

–. Length 3.4-3.6 mm]. Body narrow, elongate, dark blue, underside black, antennae black with fulvous basal segments, legs pitch black, sometimes more or less dark fulvous, especially the anterior ones. Antennae short, antennomeres 5-10 distinctly serrate. Prothorax about 1.85 times as broad as long, covered by sparse fine punctures, very often almost impunctate in the center, especially in female; males usually with stronger punctures, mainly along margins, but sometimes also in the middle. Elytra about 1.5 - 1.6 times as long as broad, with deep and strong confused punctures, interspaces as broad as punctures, extremely finely punctate. In male tarsomere 1 of fore tarsi widened. Aedeagus as in fig. 137. Length 2.7 - 3.3 mm (male) to 3.4 - 3.8 mm (female). [Probably here belongs the somewhat larger szechuana Medvedev, 1995, described from Sichuan. All characters, including the shape of aedeagus, but except for the colouration of legs (fulvous and not rather dark with lightnings) as in yunnana]. Described from S China (Yunnan) ........................................................................................................... yunnana Medvedev, 1995.

7. All legs, including coxae, flavous. Blackish blue; mouthparts, clypeus and all legs, including coxae flavous. Antennae dark brown with fulvous basal segments. Prothorax usually almost black, elytra much more metallic. Head distinctly punctate. Antennomeres 5-11 serrate, antennomeres 3 and 4 very small. Pronotum 2,2 times as broad as long, narrowed anteriorly, with hind angles broadly rounded. Surface shining, with small and sparse, sometimes indistinct punctures, mostly near anterior margin and hind angles. Elytra densely and deeply punctate, more feebly behind. Proepisterna smooth, without any punctures or pubescence. Length 4.4-4.5 mm. Described from Sichuan ........................................... flavicoxis Medvedev, 1992.

–. Legs dark, at most fore tibiae or hind femora partly pale ................................ 8.
8. Larger. Body black, upper side with greenish sheen, hind femora partly pale. Punctuation of elytra fine, partly arranged in regular rows. Length 5.5 mm. Insufficiently described species from China ......................... compressipennis (Pic, 1927).

–. Smaller. Legs dark, black or pitch, at most basal part of fore tibiae pale. Elongate and parallel sided, black, basal joints of the antennae and base of tibiae fulvous, elytra metallic dark blue. Scutellum blackish. Antennomeres 4-11 black, second antennomere small, third elongately subtriangular, the following antennomeres transverse. Pronotum entirely impunctate. Elytra elongate very closely and finely punctate in irregular rows. Aedeagus as in fig. 136. Length 4.5 mm. Described from N India (Asssam) ........................................... dohertyi (Jacoby, 1908).

LIST OF SPECIES

Smaragdina aethiops Lopatin, 2004

Smaragdina aethiops Lopatin, 2004b: 188.

Locus typicus: ad Lijiang, Julongxue Shan mountains, Yunnan, China.

Smaragdina apiciflava (Chûjô, 1952)

Gynandrphthalma apiciflava Chûjô, 1952a: 49.

Locus typicus: Tompo, Niitaka-Gun, Taiwan.

Smaragdina apicipennis (Jacoby, 1908)

Gynandrphthalma apicipennis Jacoby, 1908: 105.

Terrae typicae: Nilgiri, India.

Smaragdina assamensis (Jacoby, 1908)

Gynandrphthalma assamensis Jacoby, 1908: 111.

Terrae typicae: Nilgiri, India.

Smaragdina atriceps (Pic, 1927)

rufithorax = atriceps: Medvedev, 2010

Terrae typicae (pro rufithorax): China.
Terrae typicae (pro atriceps): Yunnan, China.
**Smaragdina atrocincta** (Pic, 1932)

*Cyaniris atrocincta* Pic, 1932: 14.


**Smaragdina atropyga** (Pic, 1941)

(not included in the key)

*Cyaniris atropyga* Pic, 1941: 15.


**Smaragdina bertiae** Medvedev, 1992b


*Locus typicus*: Mont Maison, Vietnam.

**Smaragdina bezdeki** Medvedev, 2010


**Smaragdina bicoloriceps** (Pic, 1929)

*Cyaniris bicoloriceps* (Pic, 1929): 36.

*Terra typica*: Vietnam merid. (Cochinchine).

**Smaragdina bisbipunctata** Medvedev, 2010

*Smaragdina bisbipunctata* Medvedev, 2010: 270.

*Terra typica*: Mandalay, Burma (Myanmar).

**Smaragdina bohemi** (Jacoby, 1908)

*Gynandrophthalma bohemi* Jacoby, 1908: 107.

*Terra typica*: India merid.

**Smaragdina bothrionota** Tan, 1987

*Smaragdina bothrionota* Tan, 1987: 42.

*Locus typicus*: Zhangmu, Xizang, Tibet, China.
Smaragdina centromaculata Medvedev, 1995


*Terrain typica*: mts Weishan, Yunnan, China.

**Smaragdina chrysomeloides** (Lacordaire, 1848)

*Clythra chrysomeloides* Lacordaire, 1848: 268.
*Gynandrophthalma citrinella* Jacoby, 1908: 115.  
*citrinella = chrysomeloides*: Medvedev, 2010: 270.

*Terrain typica* (pro *chrysomeloides*): India sept.  
*Terrain typica* (pro *citrinella*): India sept.

**Smaragdina chrysomeloides** subsp. *rufocapitis* Medvedev et Kantner, 2002


*Locus typicus*: Ban Sanpakia, Chiang Mai prov., N Thailand.

**Smaragdina cochinchenis** (Lefèvre, 1889)

*Gynandrophthalma cochinchenis* Lefèvre, 1889: 290.  
*Diapromorpha birmanica* Jacoby, 1892.  

*Locus typicus* (pro *cochinchenis*): Saigon, Vietnam merid.  
*Locus typicus* (pro *birmanica*): Palon, Burma.

**Smaragdina coerulea** (Jacoby, 1892)

*Diapromorpha coerulea* Jacoby, 1892: 877.

*Terrain typica*: Karen Hills (Carin Chibà), Burma.

**Smaragdina compressipennis** (Pic, 1927)

*Cyaniris compressipennis* Pic, 1927: 28.

*Terrain typica*: China.

**Smaragdina constrictifrons** Medvedev, 2010


*Locus typicus*: Mae Hong Son, Huai Tua Sao distr., Thailand.
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Smaragdina coomani (Pic, 1928)

Cyaniris Coomani Pic, 1928: 35.
Cyaniris Coomani var. hoana Pic, 1928: 35
Cyaniris Coomani var. Clermonti Pic, 1928: 35.
coomani = Aeheomorpha sodalis Lacordaire, 1848: 313; Medvedev, 1970b: 284.
coomani = Smaragdina coomani bona species; Medvedev, 1988a: 30.

Terra typica: N Vietnam (Tonkin).

Smaragdina cornuta (Jacoby, 1895)

Tituboea cornuta Jacoby, 1895: 259.

Terra typica: Kanara, India merid.

Smaragdina costata Tan et Wang, 1981

Smaragdina costata Tan et Wang, 1981: 448 [455].

Locus typicus: Honglhashan, distr. Mangkam, Tibet orient., China.

Smaragdina crassipes (Duvivier, 1891)


Locus typicus: Konbir, Jharkhant, O India.

Smaragdina cribripennis Tan, 1988

Smaragdina cribripenne Tan, 1988: 322 [332].

Locus typicus: Manyeweng, distr. Medog, Tibet orient., China.

Smaragdina crucipennis (Jacoby, 1908)

Gynandrphthalma crucipennis Jacoby, 1908: 118.
Cyaniris discoidalis Pic, 1932: 14.
discoidalis = crucipennis; Medvedev, 1995: 90.
discoidalis = bona species; Medvedev, 2010: 283.

Locus typicus (pro crucipennis: Ruby Mines, Burma.

Smaragdina dklaka Medvedev, 2010

Smaragdina dklaka Medvedev, 2010: 266.

Locus typicus: ad Eakao lake, Daklak prov., Vietnam.
**Smaragdina dalatensis** Kimoto et Gressitt, 1979


**Locus typicus**: Đà Lạt, Lâm Đồng prov., Vietnam merid.

**Smaragdina delesserti** (Lacordaire, 1848)

*Clythra Delesserti* Lacordaire, 1848: 267.

**Terra typica**: Nilgiri, India merid.

**Smaragdina diversesignata** (Pic, 1946)

(not included in the key)


**Terra typica**: S India.

**Smaragdina diversiceps** (Pic, 1941)

*Cyaniris diversiceps* Pic, 1941: 15.


*divisella* = *diversiceps*: Medvedev, 1992b: 24.

**Terra typica**: (pro *diversiceps*): N Vietnam.

**Locus typicus**: (pro *divisella*): Kaziranga, Assam, India sept.

**Smaragdina divisa** (Jacoby, 1889)

*Gynandrophthalma divisa* Jacoby, 1889: 156.

*Gynandrophthalma indica* Jacoby, 1895: 203.

*indica* = *divisa*: Weise, 1910: 26.

**Locus typicus** (pro *divisa*): Bhamo, Burma.

**Locus typicus** (pro *indica*): Belgaum, India merid.-occid.

**Smaragdina divisomima** Medvedev, 2010

*Smaragdina divisomima* Medvedev, 2010: 266.

**Locus typicus**: Mae Hong Son, Bon Huoi Po distr., Thailand.

**Smaragdina dohertyi** (Jacoby, 1908)

*Gynandrophthalma dohertyi* Jacoby, 1908: 107.

**Terra typica**: montes Patkai, Assam, India.
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**Smaragdina duporti** (Pic, 1937)

*Smaragdina Duporti* Pic, 1937: 19.


**Smaragdina duvivieri** (JACOBY, 1908)

*Clytra duvivieri* JACOBY, 1908: 155.

**Terrae typicae**: India sept.

**Smaragdina emarginata** MEDVEDEV, 1995


**Locus typicus**: ad Lijiang, Yunnan sept., China.

**Smaragdina eroshkinae** MEDVEDEV, 1988


**Locus typicus**: Tam Dao, prov. Vinh Phu, Vietnam.

**Smaragdina fabrei** (LEFÈVRE, 1883)

*Gynandrophthalma fabrei* LEFÈVRE, 1883: 111.

**Locus typicus**: Ramnad, Tamil Nadu prov., India merid.

**Smaragdina flavicoxis** MEDVEDEV, 1992a

*Smaragdina flavicoxis* MEDVEDEV, 1992a: 382.

**Locus typicus**: mont Emei, Sichuan, China.

**Smaragdina flavifrons** GRESSITT et KIMOTO, 1961

*Smaragdina flavifrons* GRESSITT et KIMOTO, 1961: 103.

**Locus typicus**: ad Muping, Sikang, China.

**Smaragdina flavilabris** (BREIT, 1917)

(E Palaearctic species, not included in the key)

*Cyaniris flavilabris* BREIT, 1917: 66.

**Locus typicus**: vicinity of lake Kuku-Nor, Tibet.
Smaragdina flaviventris (Jacoby, 1908)

Gynandrophthalma flaviventris Bryant, 1934: 226.
Smaragdina (Smaragdinella) maduraiensis Erber et Medvedev, 1999: 8.
maduraiensis = flaviventris: Medvedev, 2010: 262.

Locus typicus: (pro flaviventris): Javalgiri, North Salem, India.
Locus typicus (pro maduraiensis): Shembaganur (Madurai), India merid.

Smaragdina flavobasalis (Jacoby, 1908)

Gynandrophthalma flavobasalis Jacoby, 1908: 121.

Terra typica: India merid.

Smaragdina flavovariegata Medvedev, 1999


Terra typica: Parapat (Simalungun), Sumatra sept., Indonesia.

Smaragdina frontalis (Jacoby, 1908)

Gynandrophthalma frontalis Jacoby, 1908: 104.

Terra typica: Nilgiri, India.

Smaragdina fulveola (Jacoby, 1890)

Gynandrophthalma fulveola Jacoby, 1890: 86.

Locus typicus (pro divisoides): Musya, Nôkô-Gun, Taityû-Syô, Taiwan.

Smaragdina fulvitarsis Medvedev, 1992a


Locus typicus: Magghal Dhara, Darjeeling, India.

Smaragdina fuscicornis (Lacordaire, 1848)

Clythra fuscicornis Lacordaire, 1848: 386.

Locus typicus: India orient.
Smaragdina fuscitarsis (Jacoby, 1900)

*Damia fuscitarsis* Jacoby, 1900: 99.

**Terra typica:** Burma.

*Smaragdina guillebeaui* Pic, 1927

*Cyaniris Guillebeau* Pic, 1927: 27.

**Terra typica:** Yunnan, China.

*Smaragdina higuchii* Kimoto et Takizawa, 1981


*higuchii* = *Aetheanta*: Medvedev, 2010: 286.

**Locus typicus** (pro *higuchii*): Sheopuri, Nepal.

**Locus typicus** (pro *fasciata*): Cherrapunji, Khast Hills, Assam, India.

*Smaragdina himalayana* Medvedev, 2010


**Locus typicus:** 9 km ad Joval, prov. Megalaya, India.

*Smaragdina ihai* Chûjô, 1958


**Locus typicus:** Nakasone isl., Okinawa, Japan.

*Smaragdina imitans* (Jacoby, 1903)

*Gynandrophthalma imitans* Jacoby, 1903: 84.

**Terra typica:** India.

*Smaragdina impressicollis* Tan, 1992


**Locus typicus:** Yongsheng, Yunnan, China.

*Smaragdina insulana* Medvedev, 1992c

*Smaragdina insulana* Medvedev, 1992c: 73.

**Terra typica:** Isl. Tjam, Vietnam.
Smaragdina jeannei (Pic, 1932)


**Locus typicus**: Chapa (Sa-Pa), Vietnam sept.

Smaragdina kejvali KANTNER ET BEZDEK, 2007

*Smaragdina kejvali* KANTNER ET BEZDEK, 2007: 252.

**Locus typicus**: 4 km S ad Leonavala, Bhushi Dam env, Maharashtra, India occ.

Smaragdina kimotoi LOPATIN, 2003

*Smaragdina kimotoi* LOPATIN, 2003: 301.

**Locus typicus**: ad Hoshimin, distr. Kat-Tsen, Vietnam merid.

Smaragdina kimshona MEDVEDEV, 1988


**Locus typicus**: Kim-Son, Vin-Phu prov., N Vietnam.

Smaragdina kuromon KIMOTO, 1984

*Smaragdina kuromon* KIMOTO, 1984: 43.

**Locus typicus**: Fenchihu, Chiayi Hsien, Taiwan.

Smaragdina kurosuji KIMOTO, 1984

*Smaragdina kurosuji* KIMOTO, 1984: 42.

**Locus typicus**: Tungpu Spa, Nantou Hsien, Taiwan.

Smaragdina laboissierei (Pic, 1928)

*Cyaniris Laboissierei* Pic, 1928: 34.
*Cyaniris Laboissierei* var. *binhana* Pic, 1928: 34.

**Terra typica**: Vietnam sept. (Tonkin).

Smaragdina laevicollis (JACOBY, 1890)

*Gynandrophthalma fulveola* JACOBY, 1890: 86.

**Terra typica**: distr. Changyang, Hupeh prov., China.
**Smaragdina laevipennis** (Jacoby, 1908)

*Gynandrophthalma laevipennis* Jacoby, 1908: 122.

*Terra typica*: India merid.

**Smaragdina laosensis** Kimoto et Gressitt, 1979


*Locus typicus*: Sedone, Paksong prov., Laos.

**Smaragdina latemedionotata** (Pic, 1946)

*Cyaniris latemedionotata* Pic, 1946: 3.

*Terra typica*: Malakka.

**Smaragdina laticollis** (Duvivier, 1892)

*Gynandrophthalma laticollis* Duvivier, 1892: 399.

*Terra typica*: plateau Chota Nagpur (Chotah-Nagpore), India.

**Smaragdina levi** Lopatin, 2004


*levi* nom. nov. pro *minuta*: Lopatin, 2004a: 31.

*Locus typicus*: Lijiang, Yunnan sept., China.

**Smaragdina longicornis** (Jacoby, 1897)

*Damia longicornis* Jacoby, 1897: 422.

*Locus typicus*: Mandar, India occid.

**Smaragdina maculicollis** (Chûjô, 1952)

*Gynandrophthalma maculicollis* Chûjô, 1952b: 73.

*Locus typicus*: Musya, Nôkö-Gun, Taiwan.

**Smaragdina maharashtra** Kantner et Bezdék, 2007


*Locus typicus*: 5 km S ad Lonavala, Bhushi Dam env., Marahasthra, India occ.
Smaragdina malakkana Medvedev, 2010

Terra typica: Malakka.

Smaragdina mangkamensis Tan et Wang, 1981

Terra typica: India sept.-orient.

Smaragdina mapellii Takizawa, 1990

Locus typicus: Dhanjuri, Dinajpur distr., Pakistan.

Smaragdina medvedevi Medvedev, 1984

Locus typicus: 38 km SO of Anuradhapura, Sri Lanka.

Smaragdina megalayana Medvedev et Kantner, 2002

Terra typica: India sept.-orient.

Smaragdina micheli Medvedev, 1995

Locus typicus: ad Maowen, Sichuan sept.-occid., China.

Smaragdina minuta (Jacoby, 1908)

Gynandrophthalma minuta Jacoby, 1908: 115.

Locus typicus: Belgaum, India merid.-occid.

Smaragdina minutissima (Lopatin, 1967)


Locus typicus: ad Barikot, Nuristan, Afghanistan.
Smaragdina miyakei Kimoto, 1976

Locus typicus: Jiuyuehtan, Nantou Hsien, Taiwan.


Smaragdina miyakei Kimoto, 1976

Smaragdina miyakei Kimoto, 1976: 3.

Locus typicus: Taotsua ad Hotso, Nantou Hsien, Taiwan.

Smaragdina montana Medvedev, 1988

Smaragdina montana Medvedev, 1988a: 30.

Locus typicus: Tam-Dao, Vietnam sept.

Smaragdina motschulskyi Medvedev, 1992a

Smaragdina motschulskyi Medvedev, 1992a: 382.
Smaragdina motschulskyi [sic!] Medvedev, 2010: 283.
motschulskyi = Physosmaragdina: Medvedev, 2010: 283.

Locus typicus: Bhandar, Nepal orient.

Smaragdina moutoni (Pic, 1897)

Gynandrophthalma mandarina LeFèvre, 1892: XCIV, nec Weise, 1889: 579.
Gynandrophthalma moutoni Pic, 1897: 86.
moutoni nom. nov. pro mandarina LeFèvre: Pic, 1897: 86.

Terra typica: China.

Smaragdina murzini Lopatin, 2003


Locus typicus: res. nat. Phnom-Bokor, Cambodia.

Smaragdina nagaensis (Jacoby, 1908)

Gynandrophthalma nagaensis Jacoby, 1908: 112.

Terra typica: montes Naga Hills, Assam, India.

Smaragdina nigricollis Medvedev, 2004

Smaragdina nigricollis Medvedev, 2004: 301.

Locus typicus: ad Phongsaly, Phongsaly prov., Laos.
Smaragdina nigripennis (Chûjô, 1952)

Gynandrophthalma nigripennis (Chûjô, 1952b: 77).

Locus typicus: Kôsyun, Kôsyun-Gun, Taiwan.

Smaragdina nigriscutis Medvedev, 1970


Smaragdina nigroguttata Lopatin, 2002

Smaragdina nigroguttata Lopatin, 2002: 874.

Locus typicus: Kandin, Sichuan, China.

Smaragdina nigropygidialis (Pic, 1946)

(insufficiently studied, not included in the key)

Cyaniris nigropygidialis Pic, 1946: 3.

Terra typica: S India.

Smaragdina nigrosignata Pic, 1954


Terra typica: China.

Smaragdina nigrosternum Erber et Medvedev, 1999


Locus typicus: ad Zhangla, Sichuan, China.

Smaragdina nigrosuturalis (Jacoby, 1908)

Gynandrophthalma nigrosuturalis Jacoby, 1908: 118.

Terra typica: Nilgiri, India.

Smaragdina nigrotibialis (Jacoby, 1908)


Terra typica: Nilgiri, India.
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Smaragdina nigroviolacea Lopatin, 2004

Smaragdina nigroviolacea Lopatin, 2004a: 30.

Locus typicus: Xiagung, Dacan, Yunnan.

Smaragdina nilgiriensis (Jacoby, 1903)

Gynandrophthalma nilgiriensis Jacoby, 1903: 85.

Terrae typicae: Nilgiri, India.

Smaragdina nipponensis (Chûjô, 1951)

Gynandrophthalma nipponensis Chûjô, 1951: 33.
Gynandrophthalma flavimana Chûjô, 1952: 76.
Gynandrophthalma chrysomeloides Lacordaire, 1848: 268 sensu Baly, 1873: 81 [misidentification]
Cyaniris fuscitarsis (Jacoby, 1900): Chûjô, 1935: 71 [misidentification].
flavimana = nipponensis: Kimoto et Takizawa, 1994: 278.
chrysomeloides sensu Baly = nipponensis: Chûjô et Kimoto, 1961: 130

Locus typicus (pro nipponensis): Tarumi-cho, Shikoku, Japan.
Locus typicus (pro flavimana): Tipon, Taitô-Gun, Taiwan.
Locus typicus (pro chrysomeloides Baly): Kawachi, Hokkaido, Japan.

Smaragdina nomurai Kimoto, 1976


Locus typicus: Nanshanchi, Nantou Hsien, Taiwan.

Smaragdina oblonga Lopatin, 2009.

Smaragdina oblongum Lopatin, 2009: 3.

Locus typicus: Tiger Leaping Gorge, ad Lijang, Yunnan, China.

Smaragdina octomaculata (Chûjô, 1952)

Gynandrophthalma octomaculata Chûjô, 1952: 81.
Gynandrophthalma octomaculata var. melanis Chûjô, 1952: 81.

Locus typicus (pro octomaculata): Hori, Nôkô-Gun, Taiwan.
Locus typicus (pro melanis): Rara-san, Bunzan Gun, Taiwan.
Smaragdina oculata Medvedev, 1988

Smaragdina oculata Medvedev, 1988b: 471.

Locus typicus: Kaziranga, Assam, India.


Smaragdina occidentalis Medvedev, 2010: 262.

Locus typicus: Yourdu, Jammu and Kashmir, India.

Smaragdina orientalis (Jacoby, 1908)

Gynandrophthalma orientalis Jacoby, 1908: 105.

Locus typicus: Mumbai (Bombay), India.

Smaragdina ornatipennis Medvedev, 2004

Smaragdina ornatipennis Medvedev, 2004: 300.

Locus typicus: Ad Phongsaly, Phongsaly prov., Laos.

Smaragdina pacholatko Medvedev, 2003


Locus typicus: Kunchappanai, Nilgiri Hills, Tamil Nadu, India.

Smaragdina pakistanica Medvedev, 2010

Smaragdina pakistanica Medvedev, 2010: 261.

Locus typicus: Changa Manga forest, 70 km ad Lahore, Punjab, Pakistan.

Smaragdina peplopteroides (Weise, 1889)

Exomis peplopteroides Weise, 1889: 577.

Terra typica: Kansu, China.

Smaragdina piceifrons (Pic, 1941)

(not included in the key)

Cyaniris piceifrons Pic, 1941: 15.

Terra typica: India.
Smaragdina planifrons (Jacoby, 1908)

Gynandrophthalma planifrons Jacoby, 1908: 113.

Terra typica: montes Nilgiri, India orient.

Smaragdina potanini Medvedev 1970


Locus typicus: Da-dzjan-lu, Sichuanj, China.

Smaragdina quadrimaculata Lopatin, 2009


Locus typicus: Tiger Leaping Gorge, ad Lijang, Yunnan, China.

Smaragdina quadratomaculata (Jacoby, 1896)

Gynandrophthalma quadratomaculata Jacoby, 1896: 5.

Terra typica: Ryu-Kyu (Loo-Choo) Isl.

Smaragdina reductelineata (Pic, 1946)

(not included in the key)

Cyaniris reductelineata Pic, 1946: 3.

Terra typica: S India.

Smaragdina regalini Medvedev et Kantner, 2002


Terra typica: India sept.

Smaragdina regularis Medvedev, 1985


Smaragdina salemensis (Pic, 1946)

(not included in the key)


Terra typica: S India.
Smaragdina sassii nom. nov.


**Locus typicus:** ad Thai-Nguyen, Bak-Thai prov., N Vietnam.

*Smaragdina scalaris* (Pic, 1927)

*Cyaniris scalaris* Pic, 1927: 27.

**Terrae typicae:** Yunnan, China.

Smaragdina schereri Lopatin, 2006

*Smaragdina schereri* Lopatin, 2006: 593.

**Locus typicus:** Guanyongshang, NE of Danba, Sichuan, China.

*Smaragdina semiauranthiaca* (Fairmaire, 1888)

*Gynandrophthalma semiauranthiaca* Fairmaire, 1888b: 150.

**Locus typicus:** Beijing (Pékin), China.

*Smaragdina semipunctata* (Duvivier, 1891)


**Terrae typicae:** plateau Chota Nagpur (Chotah-Nagpore), India.

*Smaragdina semiviridis* (Pic, 1922)

*Cyaniris semiviridis* Pic, 1922: 27.

**Terrae typicae:** Tibet, China.

*Smaragdina signaticollis* (Redtenbacher, 1848)

*Coptocephala signaticollis* Redtenbacher, 1848: 561.


**Terrae typicae:** Kashmir.

*Smaragdina sikkimia* (Jacoby, 1903)

*Gynandrophthalma sikkimia* Jacoby, 1903: 85.

**Terrae typicae:** Sikkim, India sept.
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Smaragdina spenceri Kimoto et Gressitt, 1979


Locus typicus: Kirirom, Kampong Speu prov, Cambodia.

Smaragdina sprecherae Medvedev, 2002

Smaragdina sprecherae Medvedev, 2002: 246.

Locus typicus: ad Tura, Meghalaya, E India.

Smaragdina striatipennis (Jacoby, 1903)

Gynandrophthalma striatipennis Jacoby, 1903: 85.

Terrae typicae: India.

Smaragdina subacuminata (Pic, 1927)


Terrae typicae: China.

Smaragdina subdivisa (Jacoby, 1900)

Gynandrophthalma subdivisa Jacoby, 1900: 98.

Locus typicus: Shillong, Meghalaya prov., India sept.-orient.

Smaragdina subsignata (Fairmaire, 1888)

Gynandrophthalma subsignata Fairmaire, 1888a, 32: 36.

Terrae typicae: Chekiang, China.

Smaragdina symmetria Tan, 1988

Smaragdina symmetria Tan, 1988: 323.

Locus typicus: pass Gelongla, Medog prov., Tibet, China.

Smaragdina szechuana Medvedev, 1995


Locus typicus: Dadzjan-lu, Sichuan, China.
**Smaragdina tamdaoana** Medvedev, 2010

*Smaragdina tamdaoana* Medvedev, 2010: 266.

**Locus typicus:** Tam Dao, Vietnam.

**Smaragdina tani** Lopatin, 2004


**Locus typicus:** Binchuan Co, ad Zhouchengzen, Yunnan, China.

**Smaragdina taynguensis** Medvedev, 1985


**Locus typicus:** Konhanung, distr. Thai Nguyen, Vietnam sept.

**Smaragdina terminalis** (Lefèvre, 1883)

*Gynandrophthalma terminalis* Lefèvre, 1883: 112.


**Locus typicus:** Ramnad, prov. Tamil Nadu, India merid.

**Smaragdina thailandica** Medvedev, 2010


**Locus typicus:** Dui Suthep-pui, Thailand.

**Smaragdina tonkinensis** (Lefèvre, 1891)

*Damia tonkinensis* Lefèvre, 1891: 254.

*Gynandrophthalma apicalis* Lefèvre, 1893: 114.


*Gynandrophthalma subdivisa* Jacoby, 1908: 121.

*Smaragdina brancuccii* Medvedev, 1988b: 472.

*apicalis = tonkinensis:* Clavareau, 1913: 66.

*subdivisa = tonkinensis:* Medvedev, 2010: 286.

*mungphuensis = tonkinensis:* Kimoto, 1970: 413

*subdivisa = tonkinensis:* Medvedev, 2010: 286.


**Locus typicus** (pro *apicalis*): Tonkin, Vietnam.

**Terra typica** (pro *tonkinensis*): N Vietnam.

**Locus typicus** (pro *mungphuensis*): Mungphu, Sikkim, N India.

**Locus typicus** (pro *brancuccii*): Gangani, Uttar Pradesh, India.
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Smaragdina trimaculaticeps (Pic, 1946)
(not included in the key)


Terra typica: S India.

Smaragdina variabilis (Chûô, 1952)


Locus typicus: Baibara, Nôkô-Gun, Taiwan.

Smaragdina vietnamensis Kimoto et Gressitt, 1979


Locus typicus: Đăk Song, Đắk Nông prov., Vietnam.

Smaragdina vinula (Weise, 1903)

Aetheomorpha vinula Weise, 1903: 29.
Gynandrophthalma ceylonica Jacoby, 1908: 113.

ceylonica = vinula: Medvedev, 1984: 103.

vinula = Ceratobasis: Medvedev, 2010: 286.

Locus typicus (pro vinula): Kandy, Sri Lanka.
Locus typicus (pro ceylonica): Kanara, India merid.

Smaragdina virgata Lopatin, 2004


Locus typicus: ad Lijiang, Yunnan, China.

Smaragdina viridipennis (Pic, 1937)

Cyaniris viridipennis Pic, 1937: 19.

Terra typica: China.

Smaragdina volkovitshi Lopatin, 2004


Locus typicus: ad Lijian, Yunnan.

Smaragdina wallardiensis (Jacoby, 1908)


Locus typicus: Wallardi (Wallardie), Travancore, India merid.
**Smaragdina wittmeri (Medvedev, 1970)**


*Locus typicus*: Tissamaharama, South Prov., Sri Lanka.

**Smaragdina yunnana Medvedev, 1995**


*Locus typicus*: Baishui, montes Yulongshan, Yunnan, China.

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