

African Clytrinae (Coleoptera, Chrysomelidae) in the collection of the Institut Royal des Sciences Naturelle de Belgique

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Abstract

A collection of African Clytrinae from the Institut Royal des Sciences Naturelle de Belgique was studied, including types of Lefevre, Jacoby, Burgeon and Jolivet. Three new species from Zaire ["Democratic Republic of Congo" or "Congo-Kinshasa"] are described: *Antipus nasicornis*, *Melitonoma joliveti*, *Smaragdina joliveti*. New synonyms: *Plecomera quadraticollis* LACORDAIRE, 1848: 105 = *P. thunbergi* LACORDAIRE, 1848: 104; *Smaragdina leopoldi* BURGEON, 1942 = *S. africana* JACOBY, 1894; *Afrophthalma elongata* JACOBY, 1897 = *A. miochiroides* LEFEVRE, 1877. New combinations: *Diapromorpha bomaensis* JACOBY – to *Peploptera* LACORDAIRE, 1848; *Smaragdina martini* CLAVAREAU to *Aetheomorpha* LACORDAIRE, 1848; *Damia collarti* Jolivet to *Smaragdina* CHEVROLAT, 1837. *Smaragdina marginicollis kivuana* JOLIVET is erected to independent species.

Key words: Chrysomelidae, Clytrinae, Africa, new species, new synonyms, new combinations.

Introduction

I had a good opportunity to study African *Clytrinae* from the collection of the Institut Royal des Sciences Naturelle de Belgique, represented mostly with the collection of F. Chapuis and types of E. Lefevre, M. Jacoby, L. Burgeon, P. Jolivet. As a result of this study three new species are described and numerous taxonomical changes are proposed.

The following abbreviations are used for the Institutes where the types of described new species are deposited: IRSNB – Institut Royal des Sciences Naturelles de Belgique, Bruxelles [Brussels]; LM – author's collection, Moscow.

Taxonomical part

Plecomera thunbergi (LACORDAIRE, 1848)

Plecomera quadraticollis LACORDAIRE 1848: 105 is a new synonym of *P. thunbergi* LACORDAIRE 1848: 104. These two forms have same form of aedeagus and differ only in pattern of upperside. Typical *P. thunbergi* has unspotted prothorax and 4 spots on elytra (humeral, subhumeral and 2 behind middle). Typical *P. quadraticollis* has 2 spots on prothorax and humeral spot on elytra. Females were unknown to Lacordaire. Now it is clear that many transitional forms exist. Here is a list of registered aberrations.

1. Prothorax unspotted, elytra with humeral spot (male)
2. Prothorax unspotted, elytra with 4 spots (male, female)
3. Prothorax with 2 spots, elytra with humeral spot (male, female)
4. Prothorax with 2 spots, elytra with 4 spots (male, female)
5. Like preceding, but humeral and subhumeral spots connected (female).

Both *P. quadraticollis* and *P. thunbergi* are distributed in South Cape. *P. quadraticollis namaquensis* L. MEDVEDEV, 1993 differs from typical form with apex of aedeagus and with a more northern distribution, in Namaqualand. Now it has to be renamed as *P. thunbergi namaquensis* L. MEDVEDEV, 1933.

Protoctytra (Hirtolenes) baculus LACORDAIRE, 1848

Protoctytra forcipata BURGEON, 1942 was already united with this species (MEDVEDEV, 1993). In the IRSNB collection there is a small type series of *P. forcipata* BURGEON, represented by both sexes. Because of this I depict the aedeagus (fig. 8), spermatheca (fig. 26) and gut press (fig. 25) of specimens from this series of syntypes to show that these are identical to *P. baculus*.

Antipus nasicornis L. MEDVEDEV, sp. n.

HOLOTYPE (male): Congo belge (= D. R. Congo), P. N. U., Lusinga, 1760 m, 12-17.XII.1947, Mission G. F. de Witte (IRSNB).

PARATYPES: same locality, 28.XI-6.II.1947, 1 male (LM); - same locality, 1-8.XII.1947, 1 female (IRSNB).

DESCRIPTION. Male. Fulvous red with elytra more pale, antennae except segments one to three, scutellum, humeral spot, legs and underside black, antennal segments 1-3 black or dark brown

Head with large horn on clypeus directed upwards and deeply concave on anterior margin (fig. 1). Other characters as in *A. rufa rufa* DEGEER, 1778. Aedeagus (fig. 10) with apical part in form of elongate triangle. Length 7.3-8.6 mm.

Female. General colour as in male, but antennae entirely black, elytra with large subquadrate basal spot, not reaching suture and broad postmedian band black (fig. 2). Length 7 mm.

DIAGNOSIS. Very near to *A. rufa rufa* DEGEER, but differs immediately with entirely black legs and large horn on head of male, having rather peculiar form. Male of *A. rufa rufa* DEGEER has only a small tubercle on clypeus.

Aedeagus of both these species are very alike, but in *A. rufa rufa* DEGEER it is much more spoon-like (fig. 11), with apical part in form of short triangle.

A. rufa cornuta MEDVEDEV, 1993 from Malawi has also horn, which is however more short, and prothorax with broad black median stripe.

REMARK. This species from the same locality was already cited in the literature (Jolivet, 1955) with Jolivet's determination as *A. rufa* DEGEER. However, a typical *A. rufa rufa* DEGEER is also known from Belgian Congo (.D. R. Congo), I saw two males: "Katanga,

Kinda, 1926, leg. F. G. Overlaet" (IRSNB) and: Bas-Congo: Mayid, 1942, leg. R. P. Van Eyen: (LM).

Peploptera bomaensis (JACOBY, 1901) (comb. nov.)

This species, described in *Diapromorpha* LACORDAIRE, 1848 is a typical *Peploptera* LACORDAIRE, 1848. It has an entirely black prothorax and very constant pattern of elytra (fig. 3) Aedeagus – fig. 12. Length of male 4.6-4.8 mm, of female 5.1-5.7 mm. Specimens studied are topotypes and entirely correspond to original description.

MATERIAL EXAMINED. Belgian Congo (=D. R. Congo), Boma, leg. M. Tschoffen, 5 ex.; - Belgian Congo, C.F/M/, km. 14, 6. III.1926, leg. A. Collart, 1 ex. with Burgeon's determination.

Aetheomorpha martini (CLAVAREAU, 1906) (comb. nov.)

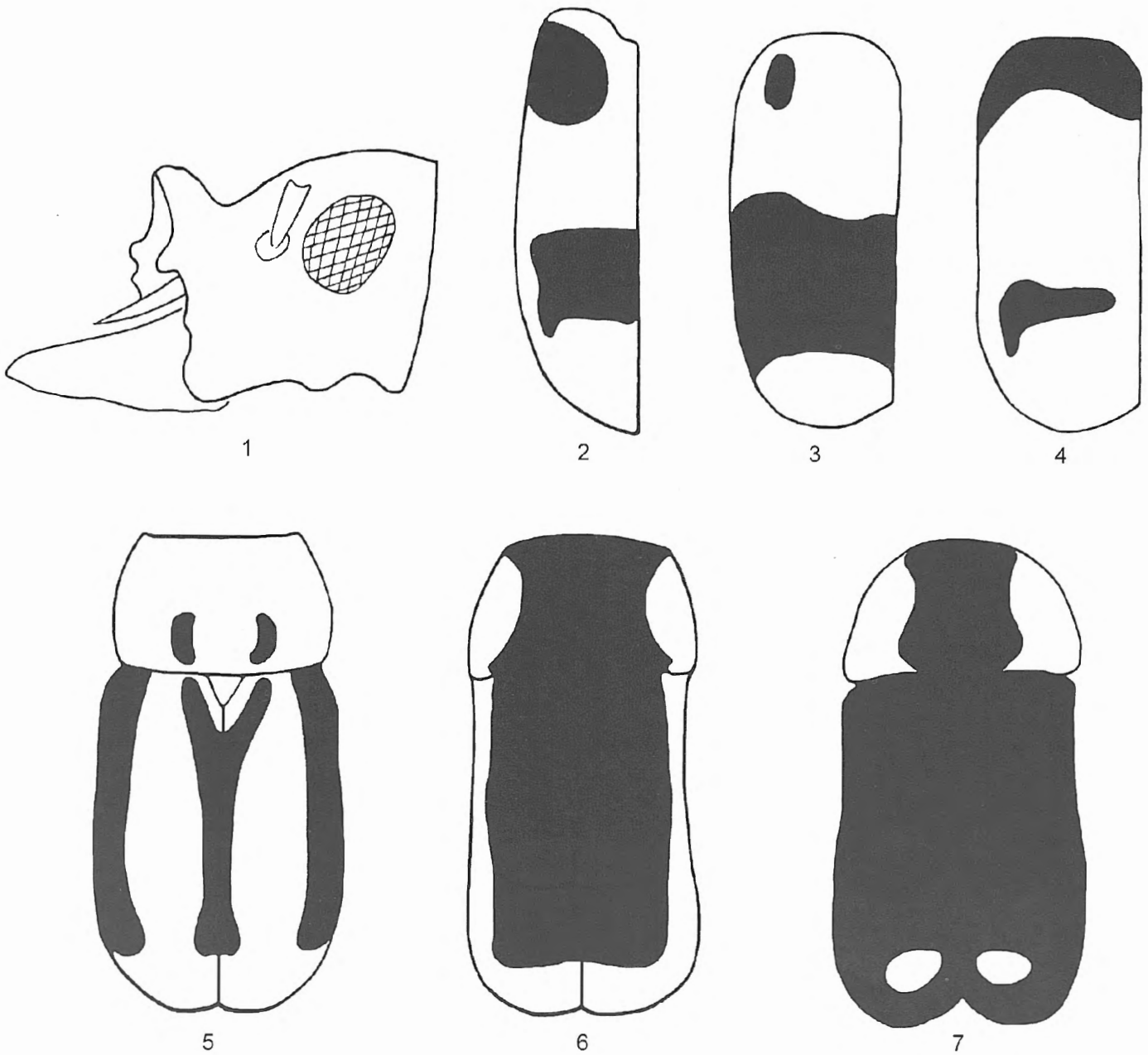
Smaragdina martini CLAVAREAU (= *Gynandrophthalma placida* JACOBY, 1894) is transferred to *Aetheomorpha* LACORDAIRE, 1848 because this species has a fully exposed pygidium and distinct elytral lobes. Aedeagus – fig. 9.

MATERIAL EXAMINED. Kinshasa: Lout, 7-8.X.1929, leg. A. Collart, 2 ex.; - Park National Albert, Katanga, 950 m, 30.XI.1934, leg. De Witte, 1 ex.; - Ruwenzori, Mutwanga, Park National Albert, 1000-1300 m, X.1937, leg. Hackars, 1 ex.; - Tanzania: Zanguebar, Mhonda-Ouzigouam 1879-1880, leg. A. Hacquardnis, 1 ex.

Melitonoma kivuensis (BURGEON, 1942)

The taxonomical position of this species was already studied (Medvedev, 1993). Here I give a figure of the aedeagus which never was published. Aedeagus (fig. 13) broadest in apical third, strongly narrowed to base, underside with deep groove on each side before apex, its middle part roof-like, with distinct ridge.

MATERIAL EXAMINED. Zaire, Park Nat. Albert: Rutshuru, 15-25. IX. 1933, leg. G. F. de Witte, 1 ex.; - Rutshuru, 17-24. VI. 1934, leg. G. F. de Witte, 1 ex.; - Rutshuru, 7-9.VI. 1934, leg. G. F. de Witte, 1 ex.; - N lac Kivu, Ngoma, II. 1936, leg. H. Damas, 1 ex.; - Ruhengeri (source), 6. IV. 1935, leg. G. F. de Witte, 1 ex.; - Kanyabayongo (Kabasha), 1760 m, 6. XII. 1934, leg. G. F. de Witte, 1 ex.



Figs 1-7 – 1. *Antipus cornuta* sp. nov., lateral view of head; 2-4. pattern of elytron: 2. *Antipus cornuta* sp. nov., 3. *Peploptera bomaensis* JACOBY, 4. *Afrophthalma jucunda* LEFEVRE, type; 5-7. pattern of upperside: 5. *Smaragdina leopoldi* BURGEON, paratype, 6. *Burgeonia bryanti* JOLIVET, paratype, 7. *Burgeonia collaris* L. Medvedev, paratype

***Melitonoma collarti* BURGEON, 1942**

4 paratypes were studied, aedeagus – fig. 14. This is a very distinct species belonging to the *M. sobrina* group.

***Melitonoma vivicola* (LEFEVRE 1884)**

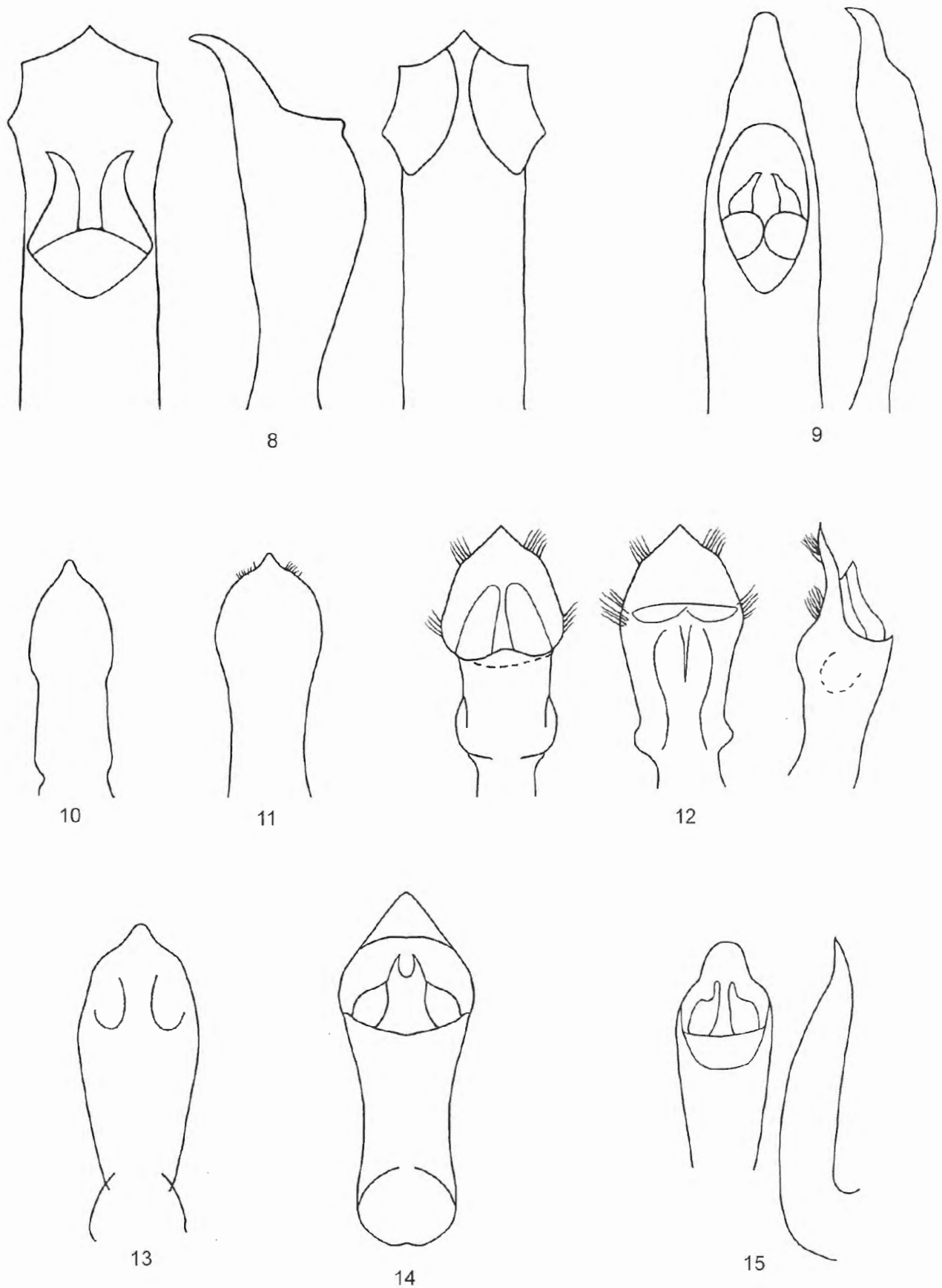
A type of this species with a label “Vivi, Congo” is a female. However in the collection of IRSNB there are 5 specimens from Congo (Boma; Lolo-Damvu;

Banana, Bas-Congo; Banana-Boma), which are entirely identical with the type. Aedeagus of male from Boma is shown on fig. 15.

This species belongs to a comparatively small group with shining, more or less punctured prothorax and dull elytra. The species can be grouped as follows:

1(4) Apex of elytra fulvous.

2(3) Legs black. Aedeagus with very elongate apex.....
*M. decempunctata* (OLIVIER, 1808)



Figs 8-15 – aedeagus, d – dorsal, l – lateral, v – ventral: **8.** *Protoclytra forcipata* BURGEON, d, l, v, paratype; **9.** *Aetheomorpha martini* CLAVAREAU, d, l; **10.** *Antipus nasicornis* sp. nov., v; **11.** *Antipus rufa* DE GEER, v; **12.** *Peploptera bomaensis* JACOBY, d, l, v; **13.** *Melitonoma kivuensis* BURGEON, v; **14.** *Melitonoma collarti* BURGEON, paratype, d, l; **15.** *Melitonoma vivicola* LEFEVRE, d, l

3(2) Tibiae fulvous. Aedeagus with elongate triangular apex..... *M. vivicola* (LEFEVRE, 1884)

4(1) Apex of elytra black.....
M. juvenca (LACORDAIRE, 1848)
M. rugosicollis BURGEON, 1942
M. tigrina BRYANT, 1948
M. ghanensis L. MEDVEDEV, 1978
M. decempunctata simoni WEISE, 1882

Melitonoma joliveti L. MEDVEDEV, sp. nov.

HOLOTYPE (male): Belgian Congo (= Zaire), Banana Boma, 1891, leg. M. Tschoffen (IRSNB).

PARATYPES: same locality, 1 male, 1 female (IRSNB), - Boma, leg. M. Tschoffen, 3 males, 3 females (IRSNB, 2 ex. - LM).

DESCRIPTION. Black, basal segments of antennae fulvous, prothorax fulvous with 5 black spots (2, 3), sometimes more or less connected, elytra fulvous with 5 black round spots (1, 2, 2) and extreme apical margin black, 3 basal abdominal tergites fulvous.

Body cylindrical. Head pubescent, more densely near eyes, and sparsely punctuate, frons with 3 feeble grooves, anterior margin of clypeus triangularly emarginated. Mandibles short, with basal part evenly convex, subglobose. Antennae short, scarcely reach base of prothorax, distinctly serrate from the 5th segment, segment 4 triangular, but much smaller than 5. Prothorax 1,7 times as wide as long, broadest behind middle, surface smooth, shining, impunctate. Scutellum triangular, smooth, feebly convex. Elytra 1.5 times as long as wide, shining, densely punctuate, interspaces with microscopical punctures. Anterior tarsi of male not elongate, with segment 1 about 1.5 times as long as wide. Aedeagus (fig. 16) with longitudinal impression at apex. Sexual dimorphism very feeble. Length of male 5.3-5.5 mm, of female 6-6.2 mm.

DIAGNOSIS. Differs well from all species of the genus with a set of the following characters: mandibles of male not lobed at base, elytra shining, with 5 spots and extreme apex black, legs black, basal abdominal tergites fulvous. This species is similar to *M. sobrina* Lacordaire 1848, but differs with black apex of elytra and fulvous abdominal tergites.

Smaragdina kivuana JOLIVET, 1951 (comb. nov.)

This form was described as a subspecies of *S. mar-*

ginicollis (JACOBY, 1900), which is a synonym of *S. scitula* (LACORDAIRE, 1848) (MEDVEDEV, 1968). After studying the large type series I found that *S. kivuana* Jolivet is a distinct species differing well enough from *S. scitula* Lac. as follows:

1(2) Head and dark pattern of upperside black. Head without distinct impressions and strong punctures along inner margins of eyes. Frontoclypeal area flat. Tibiae and tarsi very often fulvous. Aedeagus narrow, cover plate of orifice elongate (fig. 17). Length 3.5-4.7 mm
 *S. scitula* LACORDAIRE, 1848

2(1) Head and dark pattern of upperside, especially elytra distinctly metallic blue. Head densely punctuate along inner margins of eyes, with distinct transverse impression before vertex and more feeble lateral impression; frontoclypeal area convex. Tibiae and tarsi black. Aedeagus much broader, cover plate of orifice different (fig. 18). Length 4.2-5.6 mm
 *S. kivuana* JOLIVET, 1951

MATERIAL STUDIED. Type series of *S. marginicollis kivuana* JOLIVET (16 ex.).

Smaragdina africana (JACOBY, 1894)

Smaragdina leopoldi (BURGEON, 1942) is new synonym of *S. africana* JACOBY. It differs from the typical form of *S. africana* only in having scutellum and anterior part of suture fulvous instead of black (fig. 5), but such forms are also known among *S. africana* (MEDVEDEV, 1973).

MATERIAL EXAMINED. A paratype of *Gynandrophthalma leopoldi* BURGEON (female) from Likimi: Bokapo (Kinshasa).

Smaragdina joliveti L. MEDVEDEV, sp. nov.

In the IRSNB collection there is a series of 5 females from Zaire identified by Dr. P. Jolivet as *Gyriodera capensis* JACOBY, 1901. Now this species is included in the genus *Smaragdina* CHEVROLAT, 1837 (MEDVEDEV, 1989). A population from Zaire is very similar to *S. capensis* JACOBY, but it was really strange that a species known only from the Cape was also found in a much more northern region. Happily I have in my collection a male of the species in question, and its aedeagus differs sharply from such of *S. capensis* JACOBY. So it is no doubt a new species.

DESCRIPTION. Black, basal segments of antennae reddish,

elytra with subquadrate humeral area and apex fulvous. Morphologically it is very similar to *S. capensis* JACOBY. Head densely punctuate, sparser on vertex, with deep groove between eyes. Prothorax with obtuse hind angles and moderately dense punctures, which are much larger than in *S. capensis* JACOBY. Elytra with strong dense punctures. Propleurae concave. Tibiae wide. Segment 1 of fore and mid tarsi widened. Aedeagus (fig. 19) with complicated structure of underside. Length of male 4.1 mm, of female 3.7-3.9 mm.

HOLOTYPE (male): Zaire, Elizabethville, 25-30. XI. 1930, leg. R. Massart (LM).

PARATYPES: Congo belge (Zaire), P. N. U., Lusinga, river Kamitungulu, 13. VI. 1945, leg. G. F. de Witte, 4 females (IRSNB, 1 ex. - LM); - P. N. U., Kankunda, 1300 m, 19-24. XI. 1947, leg. G. F. de Witte, 1 female (IRSNB).

Smaragdina collarti (JOLIVET, 1951) (comb. nov.)

Damia collarti JOLIVET, 1951

A type (= holotype) and paratype, both with label "Congo belge, Faradje Sesenge, 17. III. 1930, leg. A. Collart" were studied. Aedeagus - fig. 20.

This species is very near to *Smaragdina punctipennis* (LEFEVRE, 1877) and differs only by the colour of the head and prothorax and a little with the form of aedeagus, which has a less acute apex in *S. punctipennis* (fig. 21).

Smaragdina brittoni (JOLIVET, 1955)

Gynandrophthalma brittoni JOLIVET, 1955

Two paratypes were studied. The aedeagus (which has not been figured before) has feeble impressions on the underside divided with obtuse longitudinal elevation (fig. 22).

Paratypes examined: Congo belge, P. N. U., Mukana, Lusinga, 1810 m, 15. III. 1948, Mission G. F. de Witte, 1387a; - Congo belge, P. N. U., Grde Kafwe of Dr. Lufwa, 1780 m, 5. III. 1948, Mission G. F. de Witte, 1373a.

"*Smaragdina*" *ochropus* HAROLD, 1880

This species is of course not *Smaragdina* and possibly has to be described as a new genus after generic revision of the subfamily. The species has distinct hind angles of prothorax, developed epipleural lobe of elytra, exposed

pygidium, boldly punctuate head and upperside, strongly sclerotized spermatheca of unusual form (fig. 27).

MATERIAL EXAMINED. D. R. Congo, Kinshasa, Faradje: Mongapi, 13-14. IV. 1930, leg. A. Collart, 6 ex.

Burgeonia bryanti (JOLIVET, 1955) (comb. nov.)

This species, described as *Gynandrophthalma*, has a specific structure of the prothorax typical for the genus *Burgeonia* L. MEDVEDEV, 1993 and represents a second species of this genus. The two species differ as follows:

1(2) Elytra metallic blue with fulvous apical spot divided from hind margin with dark stripe. Prothorax strongly convex with broad fulvous sides, narrowed anteriorly (fig. 7). Humeral angle of elytron rectangular in male..... *B. collaris* L. MEDVEDEV, 1993

2(1) Elytra blackish bronze with broad fulvous margins prolonged on apex to suture. Prothorax moderately convex, with narrow fulvous sides, widened anteriorly (fig. 6). Humeral angle of elytron rounded in male. Aedeagus (fig. 23) same as in preceding species *B. bryanti* (JOLIVET, 1955)

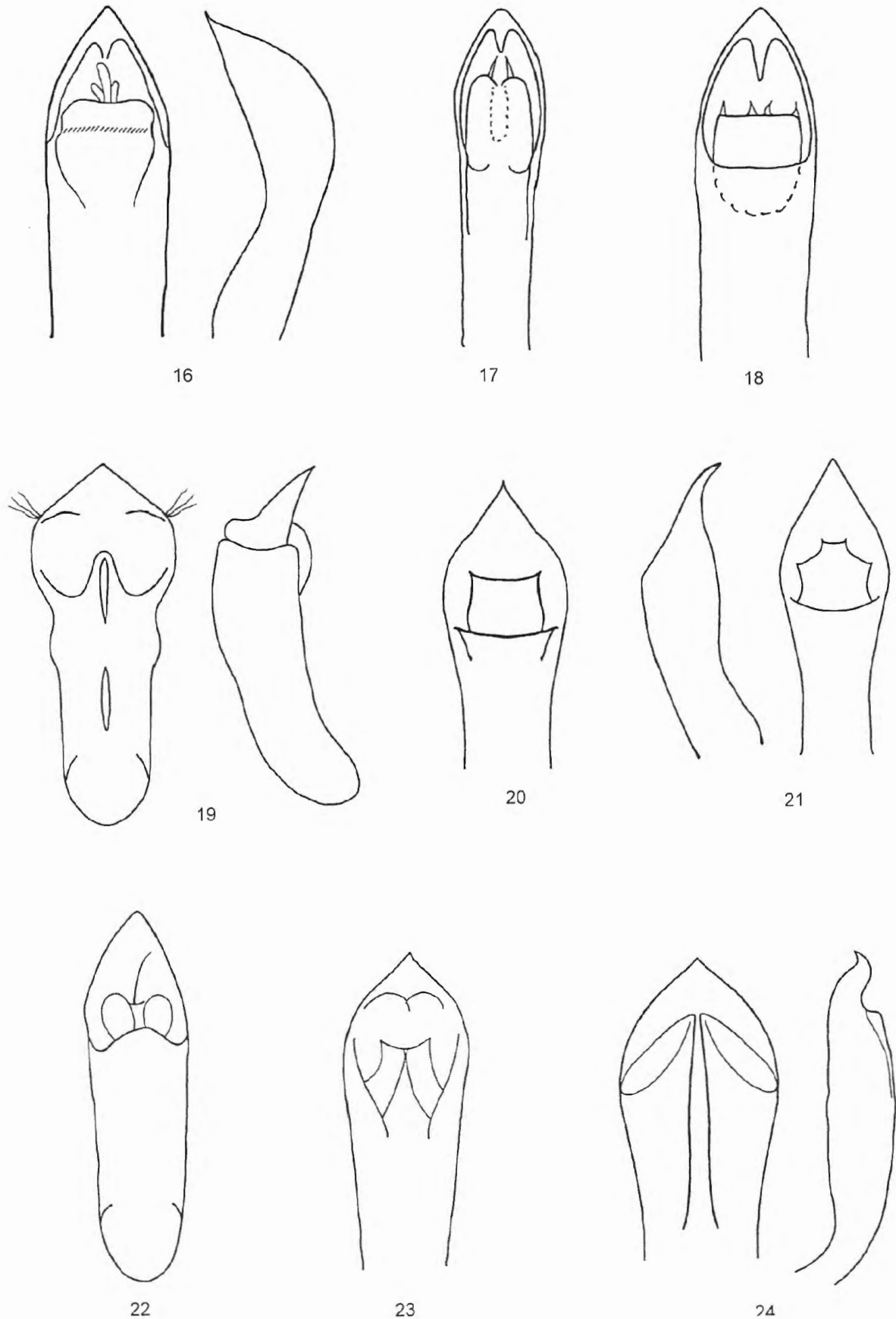
MATERIAL STUDIED. 20 paratypes (12 males, 8 females) from Lusinga, Belgian Congo.

Afrophthalma jucunda (LEFEVRE, 1877)

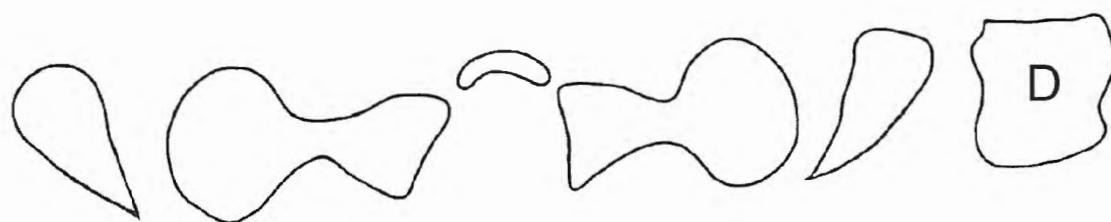
The type series, according to the original description, includes at least 2 specimens. A single female in the IRSNB collection differs a little in colour from the description. The specimen in question has a dark piceous head with a fulvous anterior part of the antennae, an entirely fulvous scutellum and an elytral pattern as in fig. 4. In the description it was said: "capite nigro, ...antennis fulvis, apice magis minusve nigro-fuscis, ...scutello nigro".

A specimen studied belongs to a small group with entirely fulvous antennae and seems to be near *A. somaliensis* Jacoby 1898, which differs only by a black central spot on prothorax. But in main characters it is very similar to *A. zanzibarica* LEFEVRE, 1877, which has apices of antennae darkened.

MATERIAL EXAMINED. Type specimen with labels: "Abyss. Raffray", "coll. Chapuis", "*Gynandrophthalma* sp. nov." (Lefevre's handwriting), "*Gynandrophthalma jucunda* n. sp. det. LEFEVRE, 1877" (modern handwriting).



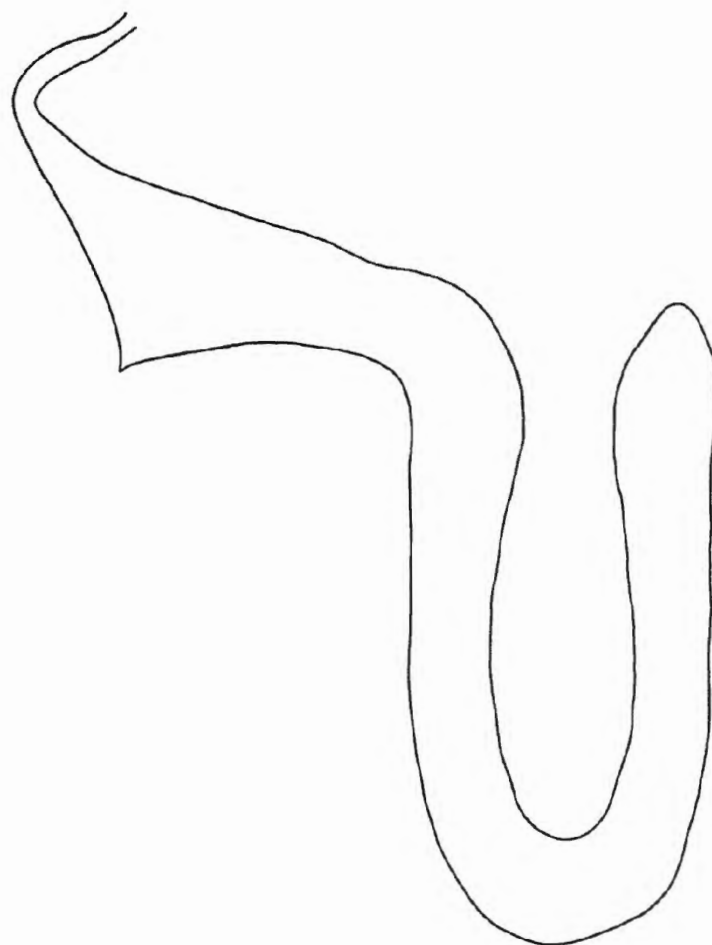
Figs 16-24 – aedeagus, d – dorsal, l – lateral, v – ventral: **16.** *Melitonoma joliveti* sp. nov., d, l; **17.** *Smaragdina scitula* LACORDAIRE, d; **18.** *Smaragdina kivuana* JOLIVET, paratype, d; **19.** *Smaragdina joliveti* sp. nov., v, l; **20.** *Damia (= Smaragdina) collarti* JOLIVET, paratype, d, l; **21.** *Smaragdina punctipennis* LEFEVRE (type of *Damia frontalis* JACOBY), d; **22.** *Smaragdina brittoni* JOLIVET, paratype, d; **23.** *Burgeonia bryanti* JOLIVET, paratype, d; **24.** *Coptocephala upembana* JOLIVET, paratype, v, l



25



26



27

Figs 25-27 – *Protoclytra forcipata* BURGEON, paratype: 25. gut press, D – dorsal sclerite; 26. spermatheca; 27. "*Smaragdina*" *ochropus* HAROLD, spermatheca.

Afrophthalma miochiroides (LEFEVRE, 1877)*Afrophthalma elongata* (JACOBY, 1897) (syn. nov.)

A type (female) was studied. It seems to be a single specimen, which might be interpreted as a holotype.

For a long time the status of this species was not clear, because in the very short original description the form of clypeus was not described. Earlier I proposed (Medvedev, 2006) that *A. miochiroides* might be identical with *A. filiformis* (LACORDAIRE, 1848) or *A. elongata* (JACOBY, 1897) Now it is clear that it is fully identical with *A. elongata* JACOBY because of the triangularly emarginated anterior margin of clypeus. *A. miochiroides* is widely distributed in Africa.

MATERIAL EXAMINED. A type with a label "Abyss(inia), Raffray".

Coptocephala (Anisognatha) upembana JOLIVET, 1955

Two paratypes were studied. This species belongs to subgenus *Anisognatha* LACORDAIRE, 1848 and might be placed near *C. leroyi* BURGEON, 1942. Aedeagus – fig. 24.

PARATYPES STUDIED: Congo belge, P. N. U., Lusinga, 1760 m, 11. IV. 1947, leg. G. F. de Witte, 1 male; - same locality, 15. IV. 1947, 1 female.

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