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Contribution to the synonymies, distributions, and bionomics of the Old World species of *Macrosiagon* (Coleoptera: Ripiphoridae)

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Abstract. Selected material of 26 species of *Macrosiagon* Hentz, 1830 from the Old World and Australia has been studied. Based on the examination of type specimens, the following 27 species group names are synonymised in this paper: *Macrosiagon axillaris* (Gerstaecker, 1855) = *M. maculaticeps* Pic, 1913, syn. nov., = *M. axillare* var. *bedoci* Pic, 1930, syn. nov., = *M. subparallelum* Pic, 1930, syn. nov., = *M. elongatum* Pic, 1950, syn. nov., = *M. axillare* var. *discithorax* Pic, 1951, syn. nov., = *M. axillare* var. *senegalense* Pic, 1951a, syn. nov., = *M. axillare* var. *senegalense* Pic, 1951b, syn. nov., = *M. conradsi* Pic, 1951, syn. nov.; *Macrosiagon bequaerti* Pic, 1913, stat.nov. = *M. diversipenne* Pic, 1930, syn. nov., = *M. monardi* Pic, 1949, syn. nov., = *M. rubronotatum* Pic, 1950, syn. nov., = *M. rubronotatum* var. *leyei* Pic, 1950, syn. nov., = *M. villiersi* Pic, 1953, syn. nov.; *Macrosiagon bifasciata* (Marseul, 1877) = *M. medana* Pic, 1910, syn. nov.; *Macrosiagon biguttata* (Blanchard, 1846) = *Rhipiphorus biguttatus* Blanchard, 1853, syn. nov.; *Macrosiagon bimaculata* (Fabricius, 1787) = *Ripiphorus dubius* Motschulsky, 1849, syn. nov.; *Macrosiagon caffra* (Fåhraeus, 1870) = *M. caffrum* var. *fahraeusi* Pic, 1953, syn. nov.; *Macrosiagon ferruginea* (Fabricius, 1775) = *Ripiphorus indicus* Hope, 1831, syn. nov.; *Macrosiagon gabonica* Pic, 1950 = *M. senegalense* Pic, 1951, syn. nov.; *Macrosiagon inferna* (Schaufuss, 1872) = *Rhipiphorus lugubris* Fairmaire, 1887, syn. nov., = *Macrosiagon longipes* Pic, 1929, syn. nov., = *M. longicolle* Pic, 1931, syn. nov., = *M. longithorax* Pic, 1947, syn. nov.; *Macrosiagon marcelli* Alluaud, 1902 = *M. lemoulti* Pic, 1930, syn. nov., = *M. theresae* Pic, 1950, syn. nov., = *M. auberti* Pic, 1951, syn. nov.; *Macrosiagon signaticollis* Pic, 1907 = *M. signaticollis* var. *usambarensis* Pic, 1909, syn. nov. *Macrosiagon axillaris* var. *bequaerti* Pic, 1913 is raised to species status. The lectotype of *Emenadia armata* Waterhouse, 1883 is designated. *Aerva javanica* (Burm.f.) Juss. and *Sericocomopsis* sp. (*S. hildebrandtii* Schinz or *S. pallida* (S.Moore) Schinz) (both Amaranthaceae: Aervinae) are reported as the plants visited by adults of *Macrosiagon terminata* (Laporte, 1840) and *M. ferruginea* in the Arabian Peninsula, Sudan and Kenya. The plant subfamily Aervinae is recognised as playing an important role in the bionomics of these two *Macrosiagon* species in the area. Nine *Macrosiagon* species groups are recognised, six of them are newly

established; *M. bifasciata* species group is redefined and additional species have been proposed for inclusion. Three *Macrosiagon* species, *M. axilaris*, *M. caffra* and *M. inferna*, were found to occur both in continental Africa and Madagascar. Their possible significance for future biogeographic studies is shortly outlined. Eight species of *Macrosiagon* are identified as widely distributed Afrotropical species. The first distributional records from the following countries or provinces are given: Africa: Angola, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Democratic Republic of the Congo, Gabon, Gambia, Guinea, Kenya, Malawi, Mozambique, Madagascar, Namibia, Nigeria, Republic of South Africa, Senegal, Sierra Leone, Sudan, Tanzania, Tunisia, Uganda, Zambia and Zimbabwe; Asia: Bhutan, China (Gansu, Guizhou, Hainan Isl.), India (Darjeeling, Himachal Pradesh, Kashmir, Karnataka, Kerala, Tamil Nadu, Uttar Pradesh), Indonesia (Java, Kalimantan, Sulawesi, Sumatra), Iran, Laos, New Guinea, Pakistan, Philippines, Solomon Isl., Sri Lanka, 'Thibet' and Vietnam; Australia: Queensland; Europe: continental Greece.

Key words. Coleoptera, Ripiphoridae, *Macrosiagon*, taxonomy, new synonymy, distribution, Old World, bionomics

Introduction

The genus *Macrosiagon* Hentz, 1830 is distributed worldwide with about 230 available species group names. Of the 92 available species group names from the Palaearctic Region only 16 are currently recognised as valid (Batelka 2008a, this study). However, the taxonomy of *Macrosiagon* is still burdened with numerous unrecognized and invalid names, complicating our understanding of the distribution and biogeography of many species and species groups. Some *Macrosiagon* species are variable in size, color, density of punctation (e.g. on different regions of the pronotum), even in the shape of the body (allometry) and some of the diagnostic characters (e.g. metatarsomeres or medial lobe of the pronotal disc). This variability may be caused by larval development under different conditions or on different hosts and can sometimes make it difficult to match individual specimens of the same species.

While the process of updating synonymies has been nearly completed for Palaearctic and Oriental Regions, with only several taxonomic problems remaining (Batelka 2003, 2004, 2007a, 2008b; Batelka & Hoehn 2007), the systematics of the genus in Africa is still unclear due to several tens of unrevised species group names. These were mostly established by Maurice Pic and are known only from his descriptions based on single type specimens. Moreover, many *Macrosiagon* species are widely distributed, sometimes even across several continents, and Pic's species-concept of 'many endemic taxa' is apparently incorrect. Pic often compared his *Macrosiagon* species or varieties with taxa from different species groups; thus they cannot be correctly identified owing to his vague diagnoses. The decision about their validity without the relevant types in hand has not been possible. In this study I continue with the review of type material associated with species distributed in the Old World, result-

ing in the proposal of 27 new junior synonyms, mainly from Africa. *Macrosiagon axillaris* var. *bequaerti* Pic, 1913 is raised to species status. In addition, 86 new country or provincial records from the Old World and Australia are provided. New records of plants visited by *Macrosiagon* adults important for the phoresy of the first instar larvae in several species are given and discussed.

Material and methods

The following codens identify the collections housing the material examined:

BMNH The Natural History Museum, London, United Kingdom (Maxwell V. L. Barclay);
IRSNB Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium (Pol Limbourg);
JBCP Jan Batelka collection, Praha, Czech Republic;
JHCP Jan Horák collection, Praha, Czech Republic;
MNHN Muséum National d'Histoire Naturelle, Paris, France (Antoine Mantilleri);
MRAC Musee Royal de l'Afrique Centrale, Tervuren, Belgium (Marc De Meyer);
MSNC Museo di Storia Naturalle e del Territorio, Calci, Italy (Marco Dellacassa);
NHMB Naturhistorisches Museum, Basel, Switzerland (Michel Brancucci);
NHMW Naturhistorisches Museum, Wien, Austria (Manfred A. Jäch);
NHRS Naturhistoriska Riksmuseet, Stockholm, Sweden (Bert Viklund);
NMPC Národní muzeum, Praha, Czech Republic (Vladimír Švihla, Jiří Hájek);
SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany (Wolfgang Schawaller);
ZMHB Museum für Naturkunde, Berlin, Germany (Manfred Uhlig, Bernd Jaeger);
ZMUC Universitetes Zoologiske Museum, Copenhagen, Denmark (Alexey Solodovnikov);
ZMUM Moscow State University, Moscow, Russia (Aleksey Gusakov, Nikolay B. Nikitsky);
ZSMC Zoologische Staatssammlungen, München, Germany (Michael Balke).

Abbreviation used in the text: MT = metatarsomere.

Images were taken using either an Olympus Camedia C-5060 digital camera attached to an Olympus SZX9 binocular microscope or a Canon EOS 550D digital camera with an MP-E 65 mm macrolens; partially focused images of each figure were completed using Helicon Focus 3.20.2.Pro software.

Exact label data are cited: lines are indicated by a single slash (/), separate labels are indicated by a double slash (//). My comments are found in square brackets, using the following abbreviations: [p] – printed, [hw] – autograph, handwritten.

According to Falin (2004a) the genus *Macrosiagon* is treated as feminine in gender.

Results

Macrosiagon abyssinica Pic, 1909

Macrosiagon abyssinicus Pic, 1909: 148. Type locality: Abyssinie, Erythrée [=Eritrea].

Type material examined. Syntype: 1♂ (MNHN – coll. Pic, box no. 6), 'Sheleb / Erythrea / (Rolle) [Pic's hw, almost illegible] // type [Pic's hw] // type [p, red label] // M. abyssinicus / Pic [Pic's hw]'.

Remarks. Orange; head, all extremities and basal and apical regions of elytra black. MT 2 slightly shortened but not flattened dorsally. Vertex compressed anteriorly, but rounded dorsally. Pronotal disc with one shallow impression on each side of the medial lobe. Elytra long

and narrow, with slender apices. The species differs from all other *Macrosiagon* species by the compressed vertex and by impressions on pronotal disc.
Distribution. So far known only from the type specimen from Eritrea.

Macrosiagon armata (Waterhouse, 1883)

(Figs. 1–2)

Emenadia armata Waterhouse, 1883: 280.
Macrosiagon armatum: Csiki (1913): 10 (new combination). Type locality: India, Coimbatoor [= India, Tamil Nadu].

Type material examined. Lectotype (by present designation): 1 ♀ (Figs.. 1–2) (BMNH), 'Type / H. T. [rounded white label with red margin] // S. / Ind. [grey round label] // Emenadia / armata / Waterh. [hw, white label] // LECTOTYPE [p, red label] // *Emenadia armata* / Waterhouse, 1883 / Lectotype / Jan Batelka design. 2010 [p]'.
Additional material examined. INDIA: Tamil Nadu: 1 ex. (antennae are missing) (BMNH), 'Coimbatore [hw, round grey label]'. **Darjeeling (West Bengal):** 1 ♀ (BMNH), 'Mungphu [p] // Atkinson / col. / 92-3 [p]'. **INDONESIA: Sumatra:** 1 ♂ (JHCP), 'Indonesia / W. Sumatra / 7.1991 [p]'.

Variability. Male similar to female in coloration, no sexual dichroism observed.
Remarks. Waterhouse (1883) placed a male symbol after his description, however in the BMNH only females have been identified including the specimen labeled as a type. He did not state on how many specimens his description was based upon. Since the existence of other syntypes cannot be excluded (e.g. the specimen of unknown sex from the type locality in Additional material examined) I propose to designate a lectotype to stabilize the nomenclature in the group (Article 74.7. and Recommendation 73F of the ICZN 1999).
Distribution. The species seems to be widely distributed in the Oriental Region, reaching also the Palaearctic Region in Darjeeling, but apparently is uncommonly collected. So far known only from the type locality situated in the Tamil Nadu (India). It is recorded here from Darjeeling district (West Bengal, India) and Sumatra (Indonesia) for the first time.

Macrosiagon axillaris (Gerstaecker, 1855)

(Figs. 3–7)

Rhipiphorus axillaris Gerstaecker, 1855: 31. Type locality: Guinea.
Macrosiagon axillare: Csiki (1913): 10 (new combination).
Macrosiagon maculaticeps Pic, 1913: 162, **syn. nov.** Type locality: Congo Belge [= Democratic Republic of the Congo], Kilwa.
Macrosiagon axillare var. *bedoci* Pic, 1930: 31, **syn. nov.** Type locality: Gabon.
Macrosiagon subparallelum Pic, 1930: 32, **syn. nov.** Type locality: Guinée Portugaise [= Guinea Bissau].
Macrosiagon elongatum Pic, 1950c: 361, **syn. nov.** Type locality: [Democratic Republic of the Congo], Mahagi Niarembe.
Macrosiagon axillare var. *discithorax* Pic, 1951a: 15, **syn. nov.** Type locality: Tanganyka [= Tanzania].
Macrosiagon axillare var. *senegalense* Pic, 1951a: 15, **syn. nov.** Type locality: Senegal.
Macrosiagon conradsi Pic, 1951a: 14, **syn. nov.** Type locality: Tanganyka [= Tanzania].
Macrosiagon axillare var. *senegalense* Pic, 1951b: 15, **syn. nov.** Type locality: Senegal.

Type material examined. *Rhipiphorus axillaris*. Syntype: 1 ♀ (Figs.. 3–5) (much damaged, right posterior leg, right middle tarsus and both antennae are missing) (ZMUC), 'Type [p, red label] // Guinea / Kruger / Axillaris / Gerst!! [hw]'.
Macrosiagon maculaticeps. Holotype: 1 ex. (Fig. 6) (sex unknown, antennae are missing) (MRAC), 'MUSÉE DU CONGO [p] / Kilwa / 29.XII.1911 [hw] / Dr. Bequaert [p] // R. DÉT. [p] / C [hw] / 79 [p] // Macrosiagon / maculaticeps / Pic. [Pic's hw] // Holotypus [p, orange label]'.

Macrosiagon subparallelum. Syntype: 1 ♀ (much damaged, posterior legs are missing, completely ferrugineous specimen) (MNHN – coll. Pic, box no. 6), 'Gui Port [hw] // type [Pic's hw] // type [p, red label] // subparallelum / n. sp. [Pic's hw]'.

Macrosiagon axillare var. *bedoci*. Syntype: 1 ex. (much damaged, hind legs are missing, specimen in black and ferrugineous combination) (MNHN – coll. Pic, box no. 6), 'Congo [p, blue label] / axillaris / un var [Pic's hw] // type [Pic's hw] // type [p, red label] // v. Bedoci Pic [Pic's hw]'.

Macrosiagon elongatum. Holotype: 1 ♀ (Fig. 7) (MRAC), 'MUSÉE DU CONGO / Mahagi – Niarembe / -IX-1935 / Ch. Scops [p] // Macrosiagon / elongatum / n. sp. [Pic's hw] // Holotypus [p] / elongatum / Pic [hw, orange label]'.

Macrosiagon axillare var. *discithorax*. Syntype: 1 ♂ (MNHN – coll. Pic, box no. 6), 'XII / 2562 a [hw] // type [Pic's hw] // type [p, red label] // *discithorax* [Pic's hw]'.

Macrosiagon conradsi. Syntype: 1 ♀ (MNHN – coll. Pic, box no. 6), 'u ii. co. [hw] // Tanganyka / illegible [Pic's hw] // type [Pic's hw] // type [p, red label] // M. Conradsi / mihi [Pic's hw]'.

Macrosiagon axillare var. *senegalense* (described by Pic (1951a)). Syntype: 1 ♀ (MNHN – coll. Pic, box no. 6), 'Sénegal / Juin 1883 [hw] // Coll. Aubert [Pic's hw] // type [Pic's hw] // type [p, red label] // v. senegalense / mihi [Pic's hw]'.

Additional material examined. DEMOCRATIC REPUBLIC OF THE CONGO: 1 ♂ (MT 2 flattened dorsally) (MRAC), 'COLL. MUS. CONGO / Elisabetville [= Lubumbashi] (á la lumiére) / XII – 1952 / H. Bomans [p]'; 1 ♀ (MT 2 cylindrical) (MRAC), 'COLL. MUS. CONGO / Kibali–Ituri: Nioka [p] / VI. [hw] 1953 [p/hw] / J. Hecq [p]'. **GUINEA:** 1 ♂ (JBCP), 'Irr. Gvineya [p], okr. Kindia [10°03′N, 12°51′W] / Pik. Gangan / 24.VI. 1984 [hw] S. V. Murzin [p, in Russian]'. **MADAGASCAR:** 1 ex. (antennae are missing) (NMPC), 'La Mandraka / Madagascar / Mus. Praha [p]'; 1 ♀ (MNHN – general coll.), 'Madagascar / Antsianaka / et lac Alaotra / 2e Trimestre 1889 / Perrot Frères [lgt.] [p]'; 1 ex. (MNHN – general coll.), 'Madagascar / Antsianaka / Perrot Frères [lgt.] / 2e Trimestre 1893 [p]'. **MALAWI:** 1 ♀ (JBCP), 'Malawi centr. / Dedza env. / 16.-18.xii. 2001 / J. Bezděk leg. [p]'; 1 ♀ (JBCP), 'Africa – Malawi / 85 km SE Lilongwe / Dedza 17.-19.XII. / J. Halada leg. 2001 [p]'; 1 ♂ (JBCP), 'Malawi centr., Kahingina / Forest reserve, 70 km N / of Kasungu, 29.-30.xii. 2001 / M. Obořil leg. [p]'. 2 ♂♂ 1 ♀ (BMNH, JBCP), 'Nyasaland / Mlanje / Feb. 8. 1913 [respective Jan. 29.1913 and Jan. 13.1913] / S.A. Neave / 1913-140 [p]'; 1 ♂ (BMNH), 'Nyasaland / Mlanje / S.A. Neave / 1913-140 [p] // Mt. Mlanje / Nyasaland / 14.I.1913 S.A. Neave [hw/p]'; 2 ♂♂ 1 ♀ (BMNH), 'Nyasaland / Mlanje / 10. Feb. 1914 [respective 20. Jan. 1914 and 13. Feb. 1914] / S.A. Neave // 1914-416 [p]'; 2 ♂♂ (BMNH), 'Nyasaland / Cholo / R.C. Wood // Pres by / Comm. Inst. Ent / B.M.1981-315 [p]'. **SENEGAL:** 1 ♀ (MT 2 flattened dorsally) (MRAC), 'SENEGAL: / Ziguinchor [p] / 11. [hw] viii.1979 / A. Pauly rec [p] // FL 25 [p, on *Croton hirtus* (Euphorbiaceae) (for details of habitat see Pauly 1984)]'. **TANZANIA:** 1 ♂ (JBCP), 'Tanzania NE / W of Kiberashi / (Kitwei Plain) / 16.3.2002 / Lgt. M. Snížek [p]'; 1 ♀ (ZMHB), 'D.-O. Afr. / 7.xii 1904 / Karasek [hw]'. **ZAMBIA:** 3 ♂♂ 1 ♀ (JBCP), 'Zambia NC / Mkushi env. E / 16.-18.12.2004 / Snížek [&] Tichý [lgt.] [p]'; 1 ♂ (JBCP), 'Zambia C 2004 / 100 – 140 km NE of / Kapiri Mposhi / ATB Lodge env. / 15.12. Snížek [&] Tichý [lgt.] [p]'; 1 ♂ (BMNH), 'N. W. Rhodesia: / Solwesi [p] / xii. 1916 [hw] / H.C. Dollman [p] // N. W. Rhodesia: / Solwesi District / 26°20′E 12°10′S [p] // H.C. Dollman / Coll. 1919 - 79 [p]'; 2 ♂♂ (BMNH), 'N. W. Rhodesia: / Mwengwa / 27°40′E 13°S [p] / 14.ix. 1914 [respective 13.xii.1914] [hw] / H.C. Dollman [p] // H.C. Dollman / Coll. 1919 - 79 [p]'. **ZIMBABWE:** 1 ♂ (BMNH), 'Salisbury [= Harare] / Mashonaland [p] / Feb. 1899 [hw] / G.A.K. Marshall [p] / sweeping [hw] // Brit. Mus. /1922-431 [p]'.

Variability. This species is variable in coloration and in shape of MT 2, which is otherwise used as a reliable diagnostic character for representatives of other *Macrosiagon* species groups worldwide (Batelka 2004, 2010; Falin 2004a). The four specimens from Mkushi provide evidence that the variability in the selected characters presented in the Table 1 have neither sexual, territorial, nor taxonomic value in this species. Examined male genitalia of both forms did not show any remarkable differences.

Comparative diagnosis. *Macrosiagon axillaris* is closely related to the Asian *M. pusilla* (Gerstaecker, 1855) from which it differs mainly in the patterns of the colour variability: in *M. pusilla* elytra are always completely black, other body parts are black or ferrugineous, but no transitional combination of colours (i.e. clearly bicolor or with dull dark combination of both colors (F / B and D in Table 1)) are expressed.

Table 1. Variability of *Macrosiagon axillaris* (Gerstaecker, 1855) from the selected localities. Coloration: F = ferrugineous, B = black, F / B = the both colours are presented, D = dark (combination of both colours but very dull in appearance).

Specimen identity	Head	Pronotum	Elytra	Body	Legs	Shape of MT 2
♀ type of *axillaris*	F	F	F / B	F / B	B	cylindrical
♀ type of *conradsi*	D	D	D	D	D	cylindrical
♀ type of *senegalense*	D	D	D	D	D	cylindrical
♀ type of *elongatum*	F	F	D	D	D	cylindrical
♂ Guinea	B	B	B	B	F	cylindrical
♀ Dedza (Halada lgt.)	B	F	F	B	B	cylindrical
♀ Dedza (Bezděk lgt.)	B	F	B	B	B	cylindrical
Madagascar, Mandraka	B	F	B	B	B	cylindrical
♂ Zambia, Mkushi	B	F / B	F	F / B	B	cylindrical
♀ Zambia, Mkushi	F	F	B	F	F	flattened dorsally
♂ Zambia, Mkushi	F	F	F	F	F	flattened dorsally
♂ Zambia, Mkushi	B	B	B	F / B	F / B	flattened dorsally
♂ Malawi, Kahingina	F	F	B	F	F / B	flattened dorsally
♂ Zambia, Mposhi	F	F	B	F	F	flattened dorsally
♂ Tanzania, Kiberashi	F	F	B	F	F	flattened dorsally
♀ Tanzania ZMHB	F	F	F	F	F	flattened dorsally
4 ♂♂, 2 ♀♀ Mlanje	F	F	B	F	F	flattened dorsally
1 ♂ Mlanje	F	F	F	F	F	flattened dorsally
♂ type of *discithorax*	F	F / B	B	F	F	flattened dorsally
type of *maculaticeps*	F	F	B	F	F	flattened dorsally

Remarks. Examined types of *Macrosiagon maculaticeps*, *M. subparallelum*, *M. axillare* var. *bedoci*, *M. elongatum*, *M. axillare* var. *discithorax*, *M. axillare* var. *senegalense* sensu Pic (1951a,b) and *M. conradsi* fall within the variability of *M. axillaris* and are proposed here as junior synonyms.

According to the original description, the type locality of *M. axillare* var. *bedoci* should be 'Gabon', but the examined syntype specimen is labeled 'Congo'. There is no *M. axillaris* specimen from Gabon in Pic's collection (box no. 6).

Maurice Pic used the name '*senegalense*' for a new species group taxon in the *Macrosiagon* three times in the same year (Pic 1951a, 1951b and 1951d). While the names '*senegalense*' published by Pic (1951a) and Pic (1951d) belong to two different taxa (see further under *M. gabonica*), the description by Pic (1951b) is a slightly modified description of *M. axillare* var. *senegalense* Pic, 1951a and most probably no type specimen exists.

Distribution. The species is widely distributed in the Afrotropical region. It was described from Democratic Republic of the Congo, Gabon (probably by error), Guinea, Senegal and Tanzania under various names. It is recorded here from Madagascar, Malawi, Zambia and Zimbabwe for the first time.

Macrosiagon bequaerti Pic, 1913 stat. nov.

(Figs. 8–11)

Macrosiagon axillaris var. *bequaerti* Pic, 1913: 161. Type locality: Congo Belge [= Democratic Republic of the Congo], Kundelungu.
Macrosiagon diversipenne Pic, 1930: 31, **syn. nov.** Type locality: Guinée Portugaise [= Guinea-Bissau].
Macrosiagon monardi Pic, 1949: 12, **syn. nov.** Type locality: Guinée Portugaise [= Guinea-Bissau].
Macrosiagon rubronotatum Pic, 1950d: 927, **syn. nov.** Type locality: [Senegal], Casamance.
Macrosiagon rubronotatum var. *leyei* Pic, 1950d: 927, **syn. nov.** Type locality: [Senegal], Casamance, Kolda.
Macrosiagon villiersi Pic, 1953: 497, **syn. nov.** Type locality: Senegal, Sébikotane.

Type material examined. *Macrosiagon axillaris* var. *bequaerti*. Holotype: 1 ♂ (Figs. 10–11) (MRAC), 'MUSÉE DU CONGO / Kundelungu [= Democratic Republic of the Congo, Kundelungu National Park] / 1912 / Dr. Bequaert [p] // M. axillaris / v. Bequaerti Pic [Pic's hw] // R. DÉT. [p] / H. [hw] / 79 [p] // HOLOTYPUS [p, orange label]'.
Macrosiagon diversipenne. Syntype: 1 ex. (much damaged) (MNHN – coll. Pic, box no. 6), 'Gui Port [hw] // type [Pic's hw] // type [p, red label] // diversipenne / n. sp. [Pic's hw]'.
Macrosiagon monardi. Syntype: 1 ♂ (MNHN – coll. Pic, box no. 6), 'Mansoa / déc. 37 [hw] // Guinée Port / (D. Monard) [Pic's hw] // type [Pic's hw] // type [p, red label] // monardi / n. sp. [Pic's hw]'.
Macrosiagon rubronotatum. Syntype: 1 ♂ (MNHN – coll. Pic, box no. 6), 'Casa / mance [p, almost invisible] // Casamance [Pic's hw] // type [Pic's hw] // type [p, red label] // Macrosiagon / rubronotatum / n. sp. [Pic's hw]'.
Macrosiagon rubronotatum var. *leyei*. Syntype: 1 ♂ (MNHN – coll. Pic, box no. 9), 'Kolda / Casamance / 44. T. Leye [hw] // désiré [Pic's hw] // Macrosiagon / rubronotatum / v. n. Leyei [Pic's hw] // type [p, red label]'.
Macrosiagon villiersi. Syntype: 1 ♂ (MNHN – coll. Pic, box no. 9), 'IFAN 1951 [p] / Sebikotane / Senegal / 8. XI. 56 [hw] // IFAN 1951 [p] / Coll: / A. Viliers [hw] // désiré [Pic's hw] // type [p, red label] // Macrosiagon / villiersi mihi [Pic's hw] // peut être var [= probably a variety] / de / rubronotatum / Pic [Pic's hw]'.
Additional material examined. DEMOCRATIC REPUBLIC OF THE CONGO: 1 ♂ (MNHN – coll. Pic, box no. 6), 'MUSÉE DU CONGO [p] / Lukonzolwer [the locality is illegible] / 5.1.1912 [hw] / Dr. Bequaert [p] // type [Pic's hw] // type [p, red label] // Macrosiagon / axillaris v. / Bequaerti Pic [Pic's hw]. **GAMBIA:** 1 ♂ (NHRS), 'Gambia Kombo St. Mary / Fajara / (UTM: 28P CK 16 88) [p] / 12 [hw] xii 1979 G. Wängsjö [p]'. **GUINEA:** 1 ♂ (Fig. 9) (JBCP), 'Irr. Gvineya [p], okr. Kindia [10°03' N, 12°51' W] / okr. Pastorii / 17.VII. 1984 [hw] S. V. Murzin [p, in Russian]'. **KENYA:** 1 ♂ (MNHN – coll. Alluaud), 'Afrique ORle Anglaise / MOMBASA / Ch. Alluaud..... 190... [p] // 6 [hw] // voir / lugubris / Fairm. [hw]'. **NIGERIA:** 1 ♂ (BMNH), 'U. C. Ibadan [p] / 13.10. 1954 [hw] / G. H. Caswell [p] // Citrus [p] // Leaf [p] // Cit. 76 [p] // M. sp.: / axillare Gerst. [hw] / R. D. Pope det 195[p]4[hw] // Pres. by / Com. Inst. Ent. / B. M. 1957 – 7 [p] // Macrosiagon / ?conradsi ? / Pic, 1951 / Det. ZHFalin '05 [p]'. **SENEGAL:** 1 ♂ (IRSNB), 'Coll. J. Thomson // 195 [p] // R. [Ripiphorus] / Senegalensis / Buq. [unpublished name] / Senegal [hw, round pink label] // n. sp. ? / réc... [Pic hw, partly illegible] // Determin. / M. Pic [p]'. **SIERRA LEONE:** 1 ♂ (BMNH), 'S. Leone / 67 – 71 [p]'. **TANZANIA:** 1 ♂ (IRSNB), 'Nguela [= Ngwelo] / Usambara [Mts.] [p]'. **UGANDA:** 1 ♂ (BMNH), 'Uganda Prot. / Mbale-Kumi Rd. / 3,700 ft. S of / L. Salisbury // Aug. 15-17, 1911. / S. A. Neave. // 1912 – 193 [p] // Macrosiagon / ?conradsi ? / Pic, 1951 / Det. ZHFalin '05 [p]'. **ZAMBIA:** 1 ♂ (Fig. 8) (JBCP), 'Zambia / Copperbelt / 50 km W Chingola / 31.12.02-2.1.03 & 10.-12.1.03 / A. Kudrna Jr. lgt. [p]'.

Comparative diagnosis. *Macrosiagon bequaerti* differs from *M. axillaris* by having MT 2 long and slender, not shortened or flattened dorsally, shorter elytra, widest in the humeral area, more dehiscent and not as convex as those of *M. axillaris*. Its elytra are also characteristic by a lighter color in their posterior half, whitish or even transparent in some specimens, but always with a black apex. Differences between both taxa are of specific value and *Macrosiagon axillaris* var. *bequaerti* is therefore raised here to species status.

Remarks. Locality label data associated with the specimen from Democratic Republic of the Congo deposited in Pic's collection (see Additional material examined) and labeled by Pic as a 'type' do not agree with the type locality given in the description. Moreover, existence of any additional syntype of this taxon is in contradiction with the foreword of the paper where

Pic (1913) explicitly listed the species available for description 'en plusieurs exemplaires' (= in more specimens) but did not mention any *Macrosiagon* species in this list. Pic probably labeled another voucher specimen from the same expedition of Dr. Bequaert as the 'type' after the description was published and this specimen cannot be therefore regarded as a syntype.

According to the original description the 'type' of *Macrosiagon rubronotatum* var. *leyei* and *M. villiersi* should be deposited in 'IFAN' but they are actually deposited in MNHN.

Macrosiagon diversipennis Pic, 1930 is a senior homonym of *M. leseleuci* var. *diversipennis* Pic, 1951 (a junior synonym of *M. spinicollis* (Fairmaire, 1893)).

The type specimens of *Macrosiagon diversipenne*, *M. monardi*, *M. rubronotatum*, *M. rubronotatum* var. *leyei* and *M. villiersi*, are morphologically indistinguishable from *M. bequaerti*, fall within its colour variability and all are therefore proposed as its junior synonyms.

Distribution. Afrotropical species. Described under various names from Democratic Republic of the Congo, Guinea-Bissau and Senegal. It is recorded here from Gambia, Guinea, Kenya, Nigeria, Sierra Leone, Tanzania, Uganda and Zambia for the first time.

Macrosiagon cf. *bequaerti* Pic, 1913

(Fig. 12)

Material examined. INDIA: Tamil Nadu: 1 ♂ (ZMHB), 'South India / Madras state / Coimbatore / 1400 F [p]'.

Remarks. This specimen differs from the African *M. bequaerti* only by the non-transparent elytra without lighter whitish coloration in their posterior half.

Distribution. Three *Macrosiagon* species (*M. bipunctata*, *M. ferruginea* and *M. terminata*) are widespread in the Afrotropical Region and go through the southern part of the Arabian Peninsula to the Indian subcontinent or even further to the east and west. All three species show slight morphological or color variability in different areas (probably because of different ecological conditions). One can conclude that the Afrotropical *M. bequaerti* may have the same type of distribution, but there is no record of this species from the Arabian Peninsula so far. Such a disjunct distribution may indicate that the Indian specimen belongs possibly to a new species sister to *M. bequaerti*. More material is necessary to make a sound decision.

Macrosiagon bifasciata (Marseul, 1877)

Emenadia bifasciata Marseul, 1877: 478. Type locality: Japon [= Japan].
Macrosiagon bifasciatum: Csiki (1913): 10 (new combination).
Macrosiagon medana Pic, 1910: 86, **syn. nov.** Type locality: Sumatra, Medan.
For the complete synonymy of *M. bifasciata* see Batelka (2008a).

Type material examined. For *Emenadia bifasciata* see Batelka (2004), for *Macrosiagon medana* see Batelka (2007a).

Material examined. CHINA: Yunnan: 1 ♂ 1 ♀ (JBCP), 'China – W. Yunnan / Sebe / 28.6.-1.7.2002 / Lgt. E. K. [p]'. **INDIA: Darjeeling:** 1 ♀ (JHCP), 'India: West Bengal, 1300m / 2.4.1988, Darjeeling Distr. / Kalimpong: Khangelung / L. Dangal leg. [p]'; 1 ♀ (NHMB), 'Melli / 200m (KPG) / 14.IV.1986 // Indien / Darjeeling D. / Ch. J. Rai [p]'. **Himachal Pradesh:** 1 ♀ (BMNH), 'Punjab. / Kangra Valley. / 1903 – 37 [p] // Kangra Valley / 4500 ft. / July 1899 / Dudgeon. [p]'. **Uttar Pradesh:** 2 ♀♀ (BMNH), 'C. Almora / Kumaon / India H.G.C. // H.G. Champion Coll. / B.M. 1953-156. [p]'; 1 ♂ 3 ♀♀ (BMNH), 'C. Almora Du. / Kumaon U. P. / July'20 H.G.C. // H.G. Champion Coll. / B.M. 1953-156. [p]'; 1 ♂ 1 ♀ (BMNH), 'C. Almora Diva / Kumaon U. P. / July [respective June] 1918 H.G.C. // H.G. Champion Coll. / B.M. 1953-156. [p]' [all 'Kumaon' specimens are provided by *M. bifasciata* identification labels by Z.H. Falin]; 1 ♀

(NHMB), 'Bhimtal [p] 7.vii 78 [hw] / 400m [p] // India, U. P. / F. Smetacek [p]'. **INDONESIA: Java:** 1 ♀ (BMNH), 'G. Papandajan / West. Java. [hw] // Brit. Mus. / 1951 [p] – 348 [hw] // Macrosiagon / bifasciatum Mars. (?) [hw] / det. K.G. Blair [p]'. **Sumatra:** 6 ♀♀ (JHCP), 'Indonesia / W. Sumatra / 7.1991 [p]'; 2 ♀♀ (JHCP, JBCP), 'W. Sumatra / Padang / 7.1994 [p]'. **LAOS:** 1 ♂ (JHCP), 'Laos / Huaphanh prov. / Ban Sulei env. / 30km S of Xam Neua // Phou Pan mts. 1500m / 6.-17.5.2004 / 103°59′33″E / 20°13′39″N, P. Kresl leg. [p]'. **NEPAL:** 1 ♂ (JHCP), 'W-Nepal, Buri Gandaki, / Sudi-Labubesi, 1300- / 1650m, 27. Mai 1990 / leg. Probst [p]'. **PHILIPPINES: Negros:** 1 ♀ (ZMHB), 'Philippinen: Isl. Negros / Prov. Negros Oriental / Mt. Talinis – Valencia / N of Dumaguet, 1986/87 / leg. J. Settele & R. Vendiola [p, yellow label]'. **VIETNAM:** 1 ♀ (JBCP), 'Vietnam North / Sa Pa / 6.-25.5.1990 / O. Šauša lgt. [p]'.

Remarks. *Macrosiagon medana* was provisionally regarded as a valid species closely related to *M. bifasciata* by Batelka (2007a). Additional material from Java, Sumatra and Vietnam shows that the color variability of the pronotum and the more robust female specimens have no taxonomic value. The typical *M. bifasciata* occurs (probably syntopically) with *M. medana* in Sumatra and some intermediate forms occur there as well. Unusual color variability associated with the pronotum (only females are known from Sumatra) seems to represent just a local divergence of the southernmost population. Such regional color variability is also exhibited by *M. bimaculata* (Fabricius, 1787), wherein some specimens of the westernmost population in Spain and the easternmost population in Iran have an entirely black pronotum. They occur sympatrically or even syntopically with typically colored specimens with an orange pronotum (Batelka 2008b) while throughout the remainder of the distribution specimens with a black pronotum are missing.

Distribution. Palaearctic and Oriental species. China (Beijing, Fujian, Sichuan, Yunnan), Indonesia (Sumatra), Japan, Nepal, North and South Korea (Batelka 2008a). It is recorded here from West Bengal (Darjeeling district), Himachal Pradesh and Uttar Pradesh (all India), Java (Indonesia), Laos, Philippines, and Vietnam for the first time.

Macrosiagon biguttata (Blanchard, 1846)

(Figs. 13–15)

Rhipiphorus bi-guttatus Blanchard, 1846: plate 12. Type locality: [Indonesia, Maluku], Ternate.
Rhipiphorus bi-guttatus Blanchard, 1853: 187, **syn. nov.** Type locality: [Indonesia, Maluku], Ternate, Banda Is.
Macrosiagon biguttatum: Csiki (1913): 10 (new combination).

Type material examined. Syntype: 1 ex. (antennae are missing) (MNHN), '174 / 41 [hw, pink round label] // Rhipiphorus / biguttatus Bl. [Blanchard's hw, (Fig. 13)]'.
Additional material examined. AUSTRALIA: Queensland: 1 ♂ 5 ♀♀ (BMNH): 'Kuranda / N. Queensland / G. E. Bryant. [p] / F.P.D. 1904 [hw] // G. Bryant Coll. / 1919 – 147 [p]'; 1 ex. (MNHN – general coll.), 'Museum Paris / Australie orien / V. Mueller 2 96 [1896] [p]'; 1 ♀ (MNHN – general coll.), 'Queensland / F. P. Dodd [p]'; 1 ♀ (MNHN – general coll.), 'Myola / Sep. – 92 [hw] // Dawson distr. / (Bernard. Coll.) [p]'; 1 ♂ 1 ♀ (Figs. 14–15) (NHRS): 'Austr. Qld. / Cairns / I. 1978 [hw, pencil] // 1651 / KAP + [p]'. **INDONESIA: Maluku:** 2 ♀♀ (JBCP, JHCP), 'Indonesia / Bacan Is. centr. / Labuha region / Makian env. 150 m / St. Jákl leg. [p]'; 1 ♀ (NMPC), 'Maluku, Seram / Solea 12 km SE Wabai / 17.1.-6.2.1997 / S. Bílý leg. [p]'; 1 ♀ (MNHN – general coll.), 'Moluques / Halmaheira / Coll. Bruin 1877 [p]'; 1 ♂ (MNHN – general coll.), 'Moluques / Lorquin [hw] // Ex Musaeo / Mniszech [p]'. **Papua:** 1 ♀ (NHMB), 'NEW GUINEA centr. / Baliem Tal – 1700 m / MARCH 1992 / leg. Jiří KOLIBÁČ [p]'. **NEW GUINEA:** 2 ♀♀ (BMNH), 'New Guinea [p] / 4-02 [1902] Ms. C. [hw] // New Guinea / ex. H.J. Carter. / 1920 – 444 [p]'; 1 ex. (ZMHB), '29212 [p] // Nov. Guin. M. Vrat. [= Museum Vratislav, collected before 1867, hw]'. **PHILIPPINES: Luzon:** 1 ♂ (ZMHB), 'Mt. Banahao / ii. 1914, Boettcher // Luzon [p]'.

Variability. Color variations include black specimens, with one or two brown, poorly visible spots on each elytron, or those with the elytra entirely black (Bacan Isl. and Seram Isl.).

However, some specimens from New Guinea are mostly ferrugineous-brown with only a few irregular black markings. *Macrosiagon biguttata* differs from all other Oriental species of *Macrosiagon bifasciata* species group by the following combination of characters: medial lobe of pronotal disc with shallow elevation without cavity, elytra strongly acute apically, MT 2 robust, shortened, flattened dorsally.

Remarks. The publication date of Blanchard's 'Voyage au Pôle Sud' has been traditionally misinterpreted. Plates of the work were published earlier than the text; for the full explanation see Clark & Crosnier (2000). The plate 'Insectes coléoptères 12' which contains a binominally named figure of *Rhipiphorus biguttatus* was published in 1846 and must be regarded as a valid description by indication. *Rhipiphorus biguttatus* Blanchard, 1853 thus must be considered a junior homonym and synonym of *R. biguttatus* Blanchard, 1846.

Type of *M. biguttata* has been found in a red box labeled 'Types de Bosc / Mordell. / Rhipiph.' together with types of another two species depicted on the same plate: *Pelecotoides murinus* Blanchard, 1846 (=1853) (Ripiphoridae) and *Mordella plurinotata* Blanchard, 1846 (=1853) (Mordellidae).

Specimens from Sulawesi, Australia and Solomon Islands identified by Batelka & Hoehn (2007) as *Macrosiagon punctulaticeps* (Blackburn, 1899) (based on Duffy's incorrect determination of one specimen from Solomon Islands) were misidentified. The specimens are not related to either the Australian *M. punctulaticeps* or to *M. tricolor* species groups (which contain species with convex elytra and with absence of a short elevated process at the apex of the medial lobe of pronotal disc (Batelka & Turco, unpubl. data)), but they do all belong to *M. biguttata*.

Distribution. Australasian species. Australia (Queensland), Indonesia (Sulawesi, Moluccas), New Guinea, Philippines and Solomon Islands. The species is recorded here for the first time from all these areas except the Ternate island (type locality).

Macrosiagon bimaculata (Fabricius, 1787)

(Figs. 16–17)

Mordella bimaculata Fabricius, 1787: 218. Type locality: Hungaria [= Hungary].
Macrosiagon bimaculata: Bedel (1895): 189 (new combination).
Ripiphorus dubius Motschulsky, 1849: 128, **syn. nov.** Type locality: Espagne [= Spain].
For the complete synonymy of *M. bimaculata* see Batelka (2008a).

Type material examined. *Ripiphorus dubius*. Syntypes: 1 ex. (Fig. 16) (much damaged, head and abdomen are missing) (ZMUM), 'Ripiphorus / dubius m. / var. / Hisp. m. [hw]'; 1 ♂ (Fig. 17) (ZMUM), 'Hisp. m. [hw]'.
Additional material examined. GREECE: 2 ♀♀ (BMNH), 'Greece: Thassos / Crisso Akroyiali / nr. Potamia [p] / 23.vii.1972 [hw] / M. I. Russel [p]'; 1 ♀ (BMNH), 'Thasso / Is. [p] // Emenadia bimaculata [hw] // G.C. Champion coll. / B.M. 1927 – 409 [p]'; 1 ♂ 2 ♀♀ (SMNS), 'Graecia 6.75 / Mesolongion / Folwaczny [p, blue label] // ♂ [respective ♀, p]'. **TUNISIA:** 1 ex. (NMPC), 'C-TUNISIA- Kasserine pr. / N.P.Chembi env. (Mts. / Chembi) 35°11′N 8° 44′E / S. Kadlec lgt. 31.V.2005 [p]'.

Remarks. *Ripiphorus dubius* was a forgotten name: after it was published by Motschulsky (1849), it was forgotten until being listed by Batelka (2008b) in 'Ripiphoridae, nomina dubia'. Both syntypes of *R. dubius* are in all respects identical with *Macrosiagon bimaculata* and therefore *Ripiphorus dubius* is placed in synonymy with the latter.

Distribution. Palaearctic species. From Spain and North Africa to Kazakhstan. From Greece it was reported only from Peloponnese Peninsula (Batelka 2007b), recorded here for the first time from Thassos Island and continental Greece. From the North Africa it is known from Morocco, Algeria and Egypt. From Tunisia it is recorded here for the first time.

Macrosiagon bipunctata (Fabricius, 1801)

Ripiphorus bipunctatus Fabricius, 1801: 120. Type locality: [India, Tamil Nadu], Tranquebariae.
Macrosiagon bipunctatum: Csiki (1913): 11 (new combination).
Ripiphorus Buquetii Dejean: Dejean (1837: 240) (nomen nudum).
For synonymy see Batelka (2008a).

Material examined. CHAD: 1 ♀ (MRAC), 'COLL. MUS. CONGO / Tchad: Mao, distr. de / Kanem, X/XI – 1957 / P. Renaud [p]'. **INDIA: Uttar Pradesh:** 1 ♂ (BMNH), 'C. Almora Diva / Kumaon U. P. / July 1918 H.G.C. // H.G. Champion Coll. / B.M. 1953-156. [p]'; 1 ♂ (BMNH), 'C. Almora Diva / Kumaon U. P. / Sept.'19 H.G.C. // H.G. Champion Coll. / B.M. 1953-156. [p]' [both 'Kumaon' specimens are provided by *M. bipunctata* identification labels by Z.H. Falin]. **PAKISTAN:** 1 ♀ (SMNS), 'Pakistan: Shogan, / Kagan Valley, 28.-30.vii. / 1998, leg. J. Rejsek [p]'. **SENEGAL:** 1 ♀ (IRSNB), 'Coll. J. Thomson [p] / R. [Ripiphorus] / Trimaculatus / Buq. [unpublished name] / Senegal [hw, round pink label] // bipunctata / var [Pic hw] // Determin. / M. Pic [p]'; 1 ♂ (IRSNB), 'Coll. J. Thomson / 193 [p] / R. [Ripiphorus] / Buquetii / Dej. [nomen nudum from Dejean (1837)] / Senegal [hw, round pink label] // Determin. / M. Pic [p] // dimidiatta / probabl [Pic hw]'; 1 ♂ (IRSNB), 'Coll. J. Thomson / 189 [p] / R. [Ripiphorus] / 6. Signatus / Buq. [unpublished name] / Senegal [hw, round pink label] // Emenadia / dimidiata F. [Pic hw] / dét. M. Pic 1913 [p] prob. [hw]'; 5 ex. (MRAC), 'Senegal: Konkoyo / 22Km W. Kébémer [p] / 4.8. [hw] 1979 / A. Pauly rec [p] 10 [hw, on *Spermacoce* (= *Borreria*) *verticillata* L. (Rubiaceae: Spermacoceae) (for details of habitat see Pauly 1984)]'; 3 ex. (MRAC), 'Senegal: Konkoyo / 22Km W. Kébémer [p] / 4.8. [hw] 1979 / A. Pauly réc [p] // FL 10 [p, on *Spermacoce verticillata* L. (Rubiaceae: Spermacoceae)]'; 6 ex. (MRAC), 'Senegal: Konkoyo / 22Km W. Kébémer [p] / 1.IX. [hw] 1979 / A. Pauly rec [p] 10 [hw, on *Spermacoce verticillata* L. (Rubiaceae: Spermacoceae)]'; 1 ex. (MRAC), 'Senegal / Tiougoune [p] / 27.7. [hw] 1979 / A. Pauly rec [p] fl 11 [hw, on *Mikania cordata* (Asteraceae) (for details of habitat see Pauly 1984)]'; 1 ex. (MRAC), 'Senegal / Thiès / vii.24. 1979 / A. Pauly réc [p] // FL 4 [p, on *Spermacoce* (= *Borreria*) *verticillata* L. (Rubiaceae: Spermacoceae) (for details of habitat see Pauly 1984)]'.

Biology. Plant associations of the specimens mentioned in the Additional material are discussed in Discussion: Visited plants.
Distribution. This species was described from Tamil Nadu (= Tranquebariae). It is widely distributed in the Indian subcontinent, represented in the Arabian Peninsula (Yemen) and in continental Africa. *Macrosiagon bipunctata* occurs syntopically with *M. bifasciata* on the locality Kumaon (India, Uttar Pradesh, circa 29°36′N 79°39′E). It is recorded here from Chad, Pakistan and Senegal for the first time.

Unresolved taxa of the *M. bifasciata* species group. For the reason mentioned below under *M. caffra* I will not synonymize these species with *M. bipunctata* until more material is available.

***Macrosiagon dentaticolle* Pic, 1950b:** 149. Type locality: Niger, Air, Dabaga. **Type material examined.** Holotype: 1 ♀ (MNHN – coll. Pic, box no. 6), 'Dabaga / Air sud / 600 m 13-16-viii [hw] // IFAN 1947 / L. Chopard / A. Villiers [hw] // type [p, red label] // Macrosiagon / denticolle/ n. sp. [Pic's hw]'.
Remarks. An elevated process at the apex of the medial lobe of the pronotal disc is strongly pronounced, MTs 2 and 3 are shortened (possibly due to allometry), elytra are orange with a black isolated central spot, humeral regions, and apices. This species is most probably a synonym of *M. bipunctata*.

***Macrosiagon natalense* Pic, 1950a:** 11. Type locality: [Republic of South Africa], Natal [= Durban]. **Type material examined.** Syntype: 1 ♂ (MNHN – coll. Pic, box no. 6), 'Port Natal [p] // type [Pic's hw, orange label] // type [p, red label] // natalense / n. sp. [Pic's hw] // [label with differential diagnosis, see (Fig. 18), Pic's hw]'.
Remarks. Black species with brown elytra, medial lobe of pronotal disc with elevation at the apex, hind legs are missing. This species is most probably a synonym of *M. bipunctata*.

***Macrosiagon rieli* Pic, 1949:** 11. Type locality: Senegal. **Type material examined.** Syntype: 1 ♂ (MNHN – coll. Pic, box no. 6), 'Sénegal / G. Melou [hw] // 14 [hw] // type [Pic's hw] // type [p, red label] // Rieli n. sp. / prés Marcelli [Pic's hw]'.
Remarks. Dark brown antennae with black apices, medial lobe of pronotal disc with elevation at the apex, MT 2 shortened. The specimen is completely covered by fungus. It is most probably a synonym of *M. bipunctata*.

***Macrosiagon rufoapicale* Pic, 1951a:** 14. Type locality: [Tanzania], Zanzibar. **Type material examined.** SYNTYPES: 1 ♂ (MNHN – coll. Pic, box no. 6), 'Zanzibar [hw] // type [Pic's hw] // type [p, red label] // rubroapicale [sic!] / n. sp. // ? Marcelli / All var. [Pic's hw]'; 1 ♂ (MNHN – coll. Pic, box no. 6), 'Zanzibar [hw]'.

Remarks. Dark brown antennae with black apices, medial lobe of pronotal disc with elevation at the apex, MT 2 shortened, elytra with coloration typical in *M. bipunctata*. It is most probably a synonym of *M. bipunctata*.

Confusion of the handwritten name on the identification label versus the name given in the description apparently happened in this case.

I consider the second specimen to be a syntype because of its original position next to the type, the same locality label, and because nothing is indicated contrary in the original description.

Macrosiagon caffra (Fåhraeus, 1870)

(Figs. 19–24)

Emenadia caffra Fåhraeus, 1870: 340. Type locality: [Republic of South Africa], Caffraria.

Macrosiagon caffrum: CSIKI (1913): 11 (new combination).

Macrosiagon caffrum var. *fahraeusi* Pic, 1953: 497, **syn. nov.** Type locality: [Republic of South Africa], Natal [= Kwazulu Natal prov.], Howick [29°29′S 30°13′E].

Type material examined. *Emenadia caffra*. SYNTYPES: 1 ♂ (Figs. 22–24) (NHRS), 'Caffra- / ria [p] // J. Wahlb [p] // ♂ // Typus [p, red label with black margin] // Emenadia / caffra / n. sp. [hw]'; 1 ♀ (Figs. 19–21) (NHRS), 'Caffra- / ria [p] // J. Wahlb [p] // ♀ // Var. [hw]'.

Macrosiagon caffrum var. *fahraeusi*. SYNTYPE: 1 ex. (MNHN – coll. Pic, box no. 9), 'Natal / Howick [p] // IFAN 195. [p] / ex coll: / Oberthur [hw] // désiré [Pic's hw] // type [p, red label] // Macrosiagon / caffra Fahr. / var. [Pic's hw] // v. Fahraeusi / mihi [Pic's hw]'.

Additional material examined. MADAGASCAR: 1 ♂ (NHMW), 'Tamatave / Madagasc. or. [p]'.

Remarks. Both syntypes of *M. caffra* have shortened MT 2 similar to those of *M. bipunctata*, however differing from *M. bipunctata* by having a smooth, not elevated, medial lobe of pronotal disc. In my collection I have some intermediate specimens which vary in the size and shape of this pronotal process. Moreover, there may be two or three additional sister (probably undescribed) species to both taxa from tropical Africa in my collection. I am not able to comment as to their putative validity without examination of more Afrotropical material from the *M. bifasciata* species group. This group is rather speciose in the North Africa, Europe and Asia and I expect the same for continental Africa.

Type of *Macrosiagon caffrum* var. *fahraeusi* should be deposited in 'IFAN' according to the original description but is actually deposited in the MNHN.

An examined syntype of *Macrosiagon caffrum* var. *fahraeusi* is identical with female syntype of *Emenadia caffra* and both taxa are therefore synonymised. It seems that sexual dichroism similar to *M. bifasciata* is developed in this species.

Distribution. Distribution of this species in the Afrotropical Region has yet to be clarified. The specimen from Madagascar represents the first record of the *M. bifasciata* species group from this island (for redefinition of the group see Definition of species groups).

Unresolved taxon of the *M. bifasciata* species group. For the reason mentioned above, I will not synonymize the following species with *M. caffra* until more material is available.

***Macrosiagon angustatum* Pic, 1951a:** 14 (type locality: 'Congo'). **Type material examined.** SYNTYPE: 1 ♂ (MNHN – coll. Pic, box no. 6), 'Congo [Pic's hw] // type [Pic's hw] // type [p, red label] // angustatum / n. sp. [Pic's hw]'.

Remarks. Dull black including extremities, each elytron with two brown spots, MT 2 robust, flattened dorsally, pronotal disc without elevation. This species is possibly a synonym of *M. caffra* but more specimens of this morphotype from central Africa are needed.

Macrosiagon callewaerti Pic, 1950

(Figs. 25–27)

Macrosiagon callewaerti Pic, 1950c: 360. Type locality: [Democratic Republic of the Congo], Luluabourg [= Kananga].

Type material examined. Holotype: 1 ex. (much damaged, antennae and left elytron are missing) (MRAC), 'MUSEÉ DU CONGO / Luluabourg [p] / Don du Musée de Bāle) [hw] / (P. Callewaert) [p] // R. DET [p] / W [HW] / 5626 [p] // Macrosiagon / callewaerti / n. sp. [Pic's hw] // HOLOTYPUS [p] / Callewaerti / Pic [hw, orange label]'.

Remarks. The species is characterised by the unicolorous whitish elytra, long head with a largely elevated vertex, elevated medial lobe of pronotal disc and the flattened and shortened MT 2. Excepting of the shape of MT 2 being similar to males of *M. flavipennis* (Leconte, 1866), in which MT 2 is cylindrical and as long as MT 3. *Macrosiagon flavipennis* is widespread in the New World from the U.S.A. (Rivnay 1929) through Mexico (Champion 1891) to Argentina (Manfrini de Brewer 1966).

Distribution. So far known only from the type specimen from. Democratic Republic of the Congo.

Macrosiagon ferruginea (Fabricius, 1775)

Mordella ferruginea Fabricius, 1775: 262. Type locality: 'India orientali'.
Macrosiagon ferruginea: Bedel (1895): 185 (new combination).
Ripiphorus indicus Hope, 1831: 32 **syn. nov.** Type locality: Nepal.
For the complete synonymy of *M. ferruginea* see Batelka (2008a).

Type material examined. *Ripiphorus indicus*. Syntype: 1 ♀ (much damaged, part of legs and left antenna are missing, right elytron with large pin-hole) (BMNH), 'Type [p, round white label with red margin] // Indicus Hope [hw] // Indicus Hope / 4232. [hw] // Hardwicke / Bequest [p]'.
Additional material examined. BHUTAN: 2 ♀♀ (NHMB), 'Wangdi Phodrang / 1300m [p] 6-9/6 [hw] // Nat.-Hist. Museum / Basel – Bhutan / Expedition 1972 [p]'. **BURKINA FASO:** 1 ♀ (MRAC), 'HAUTE VOLTA / Bobo-Dioulasso [p, for details of habitat see Pauly 1984] / 10.x.1979 [p/hw] / A. Pauly réc [p]'; 1 ♀ (MRAC), 'HAUTE VOLTA / Dingasso nr. Bobo [for details of habitat see Pauly 1984] / 28.9.1979 / A. Pauly réc [p]'. **CAMEROON:** 1 ♀ (MRAC), 'N. CAMEROUN: / Yagoua, 10°21N / 15°14E, 6.viii.1987 / Mitracarpus scaber [Rubiaceae: Spermacoceae] / A. Pauly réc [p]'. **CENTRAL AFRICAN REPUBLIC:** 1 ♂ (ZMHB), 'Umgebiet / Bosum 1.-16.6. / 14 [1914] Tessmann S. [p]'; 1 ♀ (JBCP), 'CENTRAL AFRICAN REP. / Bangui – Binbo, 380 m / N04°20′ E18°32′, 19.-23. / J. Halada lg. 11. 2010 [p]'. **EGYPT:** 1 ♀ (SMNS), 'Egypt: Bitter Lake, 2km N / Fayid *Mentha spicata* / 1.-7.vii.1999 / leg. T. Osten [p]'. **GABON:** 1 ♀ (MRAC), 'GABON: Mandji / 30.xii.1985 / A. Pauly réc [p] // *Borreria* / *verticil* / *-lata* [p] [= *Spermacoce verticillata* L. (Rubiaceae: Spermacoceae)]'; 1 ♀ (MRAC), 'GABON: Okala nr. / Libreville / 13.iii.1985 / A. Pauly réc [p] // Borrerria [sic!] / verticillata [p]'. **INDIA: Kashmir:** 1 ♀ (ZSMC), 'NW-Karakorum / Gilgit Umg. [35°55′N, 74°17′E] / Chalt [p] / 15. VII [hw] 1959 / F. Lobbichler [p]'. **KENYA:** 2 ♀♀ (JBCP), 'Kenya, Eastern / Nguni 30.12. / N of Ngomeni / Lgt. Snížek 2007 [p]' [on *Sericocomopsis* sp., M. Snížek, pers. comm.]; 2 ♀♀ (JBCP), 'Kenya, Eastern / Nguni 27.4. / N of Ngomeni / Lgt. Snížek 2008 [p]' [on *Sericocomopsis* sp., M. Snížek, pers. comm.]. **NAMIBIA:** 9 ♀♀ (SMNS, JBCP), 'S. Namibia, Naukluft Park / East 1500 m, 24,15S / 16,14E, 7.-10.II.2010 / leg. W. Schawaller [p]', [on *Mentha longifolia*, W. Schawaller, pers. comm.]. **SENEGAL:** 1 ex. (MRAC), 'Senegal: / Thiès / 24. vii. 1979 / A. Pauly réc [p] // FL 4 [p, on *Spermacoce* (= *Borreria*) *verticillata* L. (Rubiaceae: Spermacoceae) (for details of habitat see Pauly 1984)]'. **SUDAN: Kordofan:** 1 ♀ (ZSMC), 'Dilling [12°03′N, 29°39′E] / E. Sudan [hw]'. **YEMEN:** 1 ♂ (NMPC), 'E YEMEN, Jabal al Fatk / Hawf NE Al Ghaydah / N16°40′ E53°05′, 729 m / 12.-13.X.05 [2005], lgt. S. Kadlec // ex. coll. S. Kadlec / National Museum / Prague, Czech Republic [p]'.

Remarks. *Ripiphorus indicus* is a forgotten name. After its publication by Hope (1831), the name was lost until Batelka (2008b) included it in 'Ripiphoridae, nomina dubia'. The paper with the description (in PDF format) was discovered through the Google Book Search (Beta

version). The type specimen of *R. indicus* is in all respects identical with *Macrosiagon ferruginea* and therefore it is proposed as a junior synonym of the latter.

Biology. Plant associations of the specimens mentioned in the Additional material are discussed in Discussion: Visited plants.

Distribution. Widely distributed species in the Old World. The record from Japan (Batelka 2008b) is most probably incorrect; it is based only on the publication of Kôno (1936), but there is no particular record from Japan in this paper or in any subsequent papers, therefore the species thus should be removed from the known Japanese fauna. It is recorded here from Bhutan, Burkina Faso, Cameroon, Central African Republic, Gabon, Kashmir (India), Namibia and Sudan for the first time.

Macrosiagon gabonica Pic, 1950

Macrosiagon gabonicum Pic, 1950a: 12 (type locality: 'Gabon').
Macrosiagon senegalense Pic, 1951d: 207 (type locality: 'Sénégal: M'Bambey'), **syn. nov.**

Type material examined. *Macrosiagon gabonicum*. Syntype: 1 ♂ (MNHN – coll. Pic, box no. 6), 'Gabon [Pic's hw] // type [Pic's hw, orange label] // type [p, red label] // gabonicum / n. sp. [Pic's hw]'.
Macrosiagon senegalense. Syntype: 1 ♂ (MNHN – coll. Pic, box no. 9), 'Bambey / Senegal / T. Risbec [hw] // désiré [Pic's hw] // Macrosiagon / senegalense / n. sp. [Pic's hw] // type [p, red label]'.
Additional material examined. SUDAN: Blue Nile: 1 ♂ (BMNH), 'SUDAN: / Wad Medani. / viii 1930. / H. B. Johnston [p]'.

Remarks. Black species, except yellow antennae and primarily yellow elytra, which are black basally and apically; pronotal disc without an elevated process at the apex of the medial lobe, roughly and densely punctured, MT 2 shortened and flattened dorsally. This species is similar in coloration to the single known male-specimen of *M. elegans* (Marseul, 1876) from the Arabian Peninsula (Batelka 2010) from which it differs mainly by the shape of MT 2 and by absence of the elevated process at the apex of pronotal disc. Only males are known. More material of both sexes is needed to prove validity of the species.

According to the original description the 'type' of *Macrosiagon senegalense* should be deposited in 'IFAN' but it is actually deposited in MNHN.

Types of *Macrosiagon gabonicum* and *M. senegalense* are identical and both species are therefore synonymised.

Distribution. Afrotropical species. Described from Gabon and Senegal. It is recorded here from Sudan for the first time.

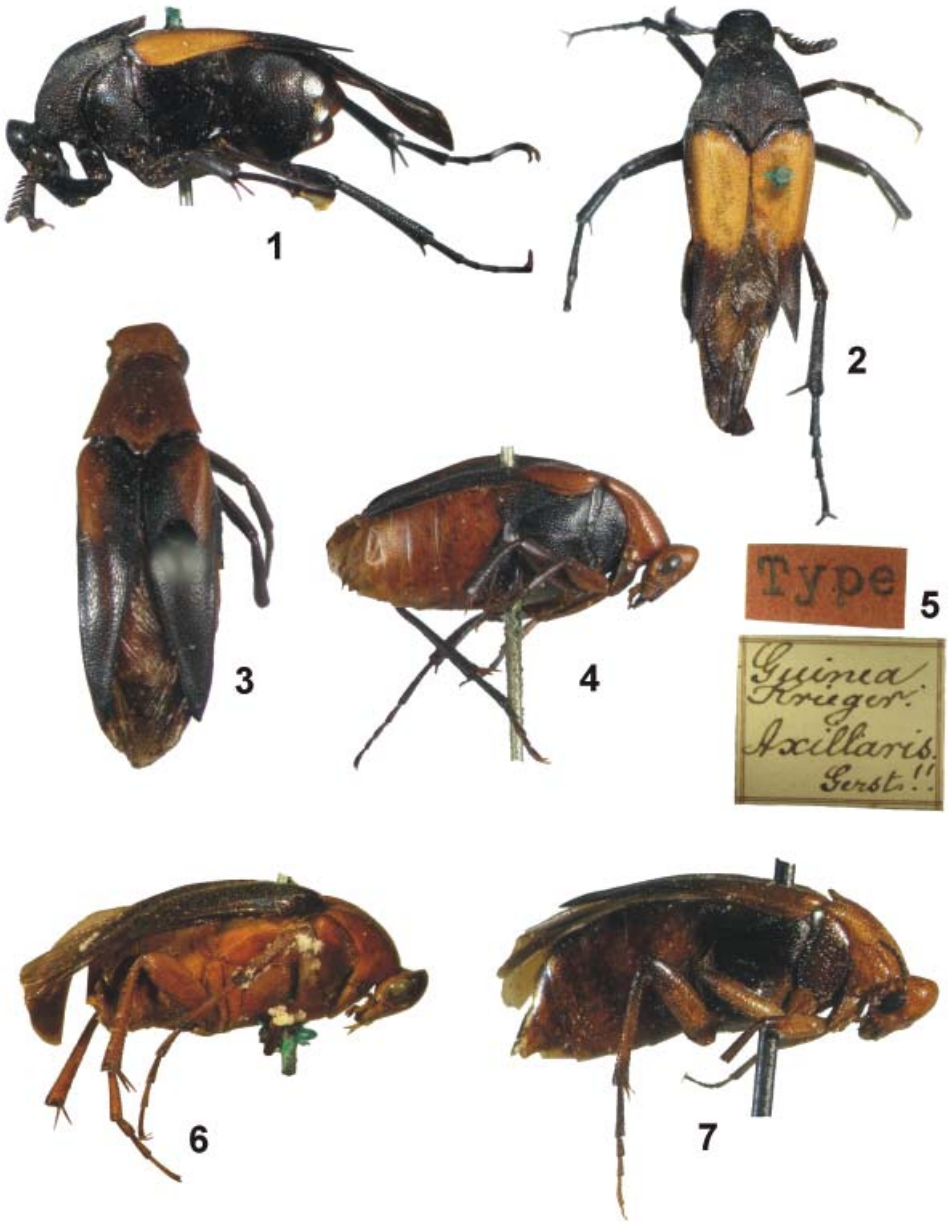
Macrosiagon grombczewskii (Semenov, 1891)

(Figs. 28–30)

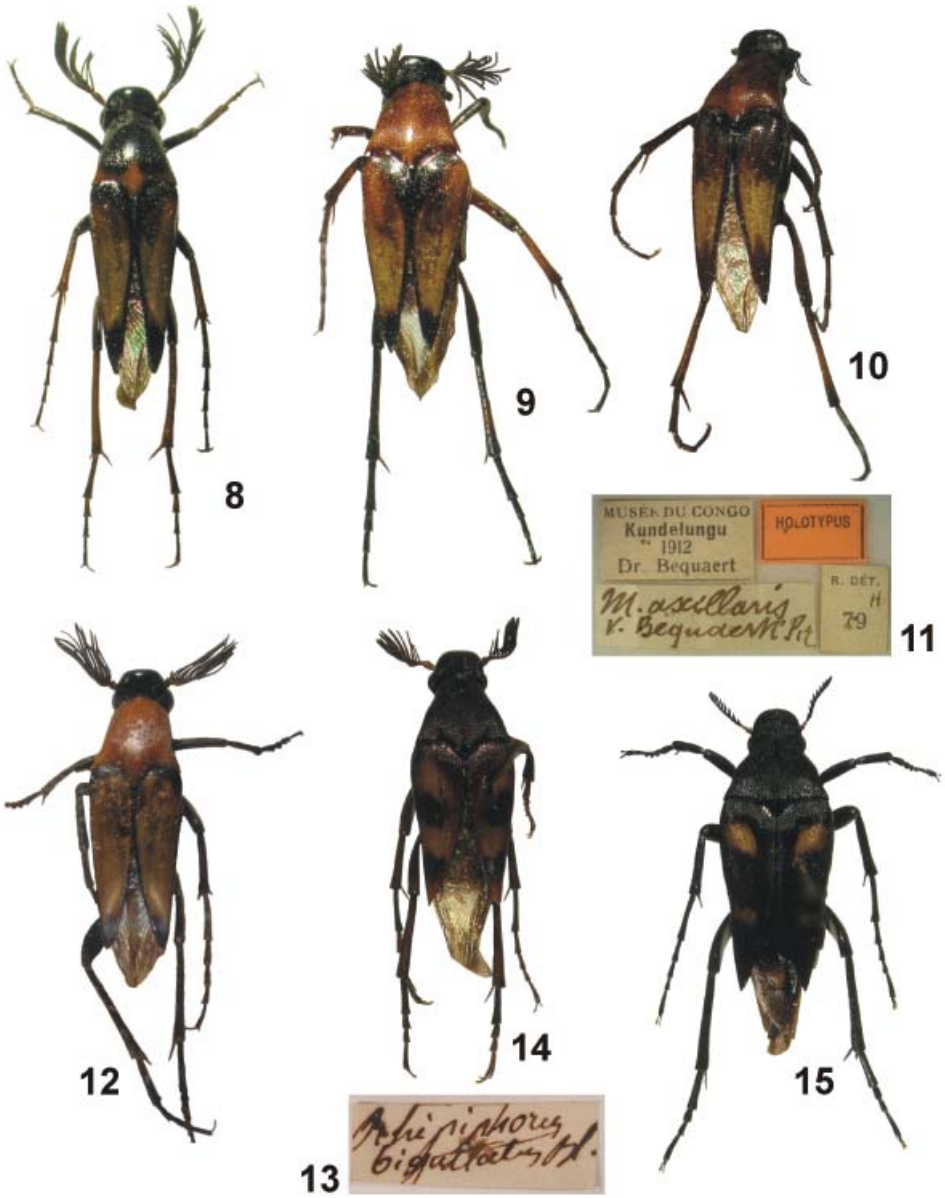
Emenadia grombczewskii Semenov, 1891: 377. Type locality: Turkestan mer. [Tajikistan], Wachia.
Macrosiagon grombczewskii: Bedel (1895): 185 (new combination).

Type material. Holotype: 1 ♀ (depostition see below), 'Vachija. 3075 m / 27. VII. 89 / Grombczewskij [hw] // Type [p] // Emenadia / grombczewskii m. / ♀ un. typ. ex 5.X.89 [hw]'.

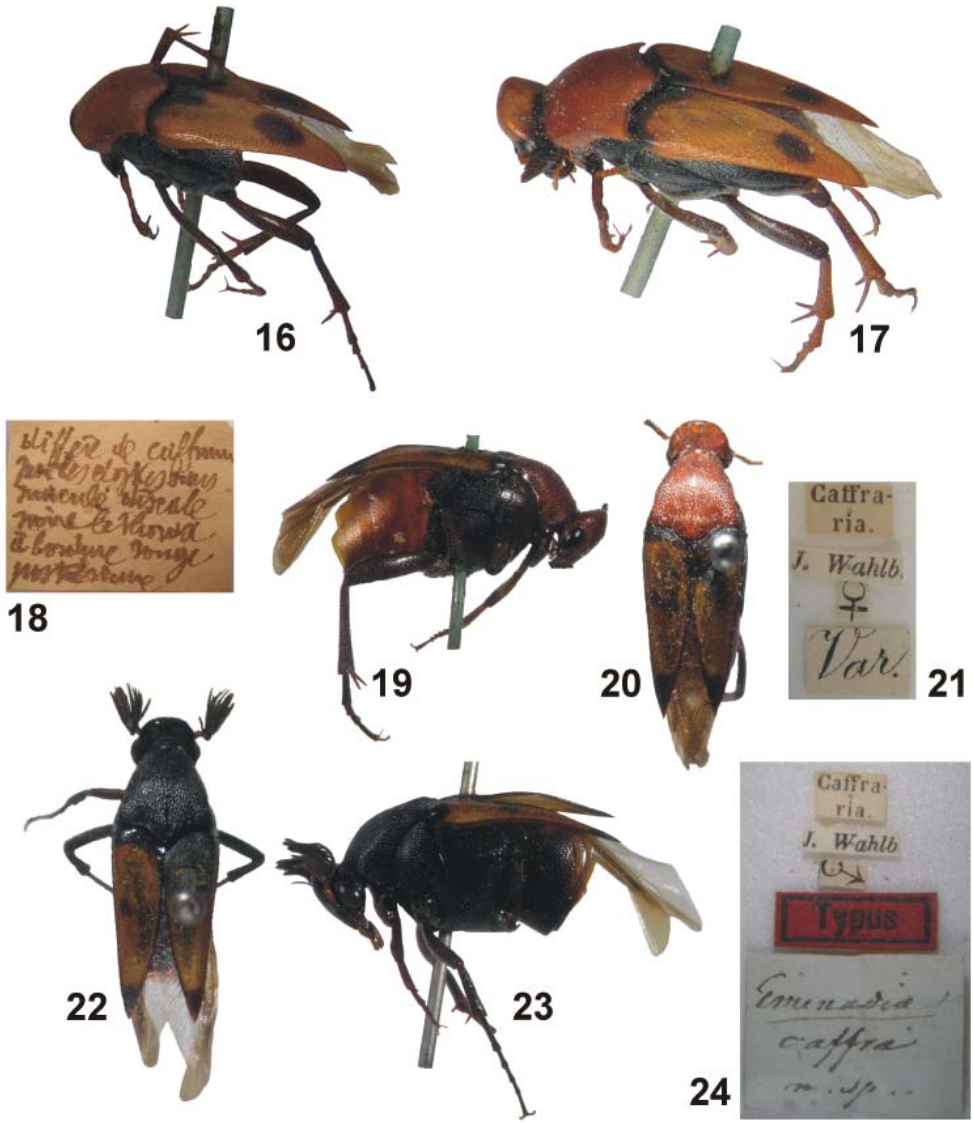
Type deposition. The species is known only from its original desription based on the female holotype. Yablokov-Khnzoryan (1976) mentioned in his key to the Palaearctic *Macrosiagon*



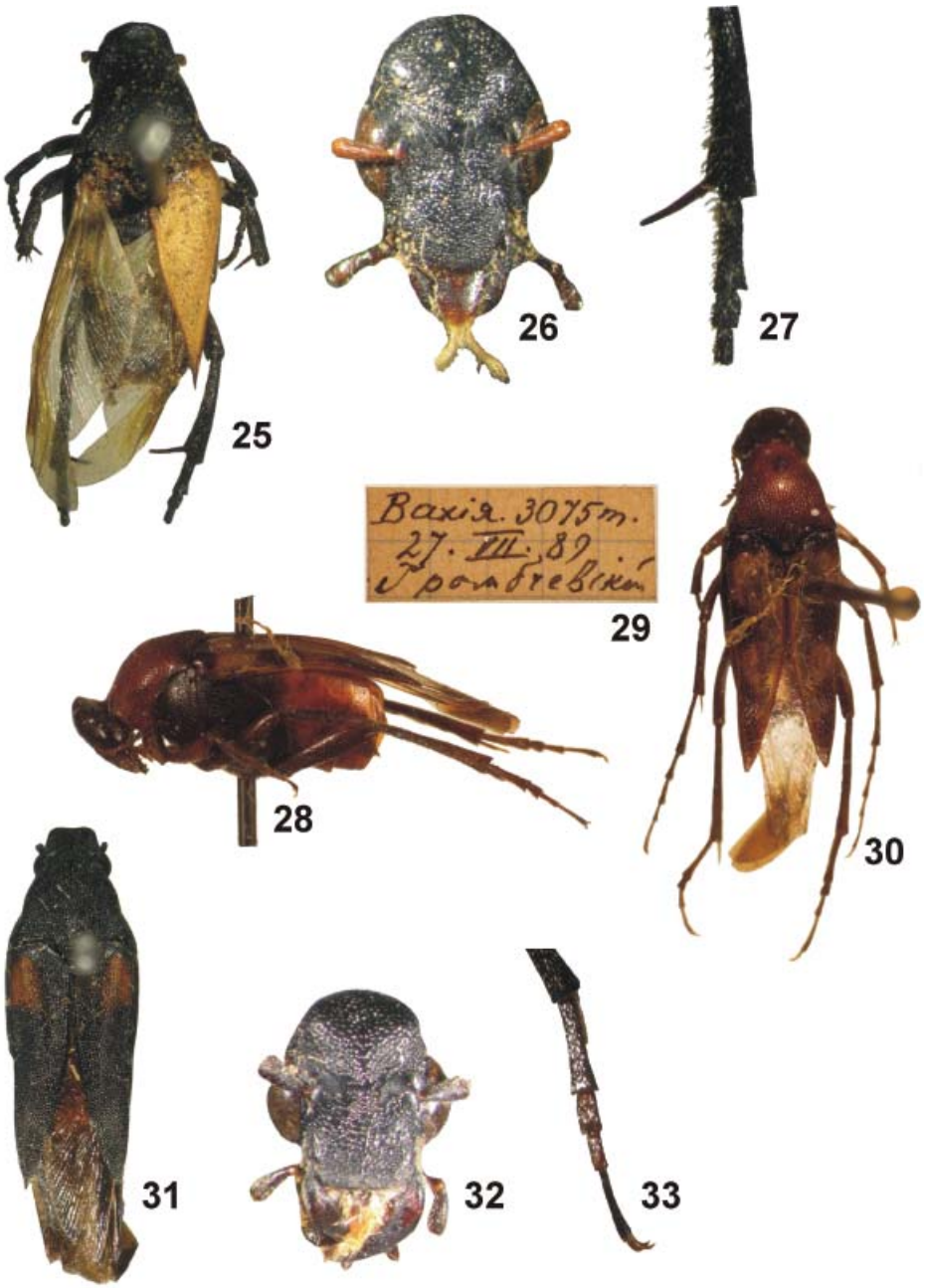
Figs 1–7. 1–2 – *Macrosiagon armata* (Waterhouse, 1883), lectotype. 3–7 – *M. axillaris* (Gerstaecker, 1855) (3–5 – *M. axillaris*, syntype and labels; 6 – *M. maculaticeps* Pic, 1913, holotype; 7 – *M. elongata* Pic, 1950, holotype).



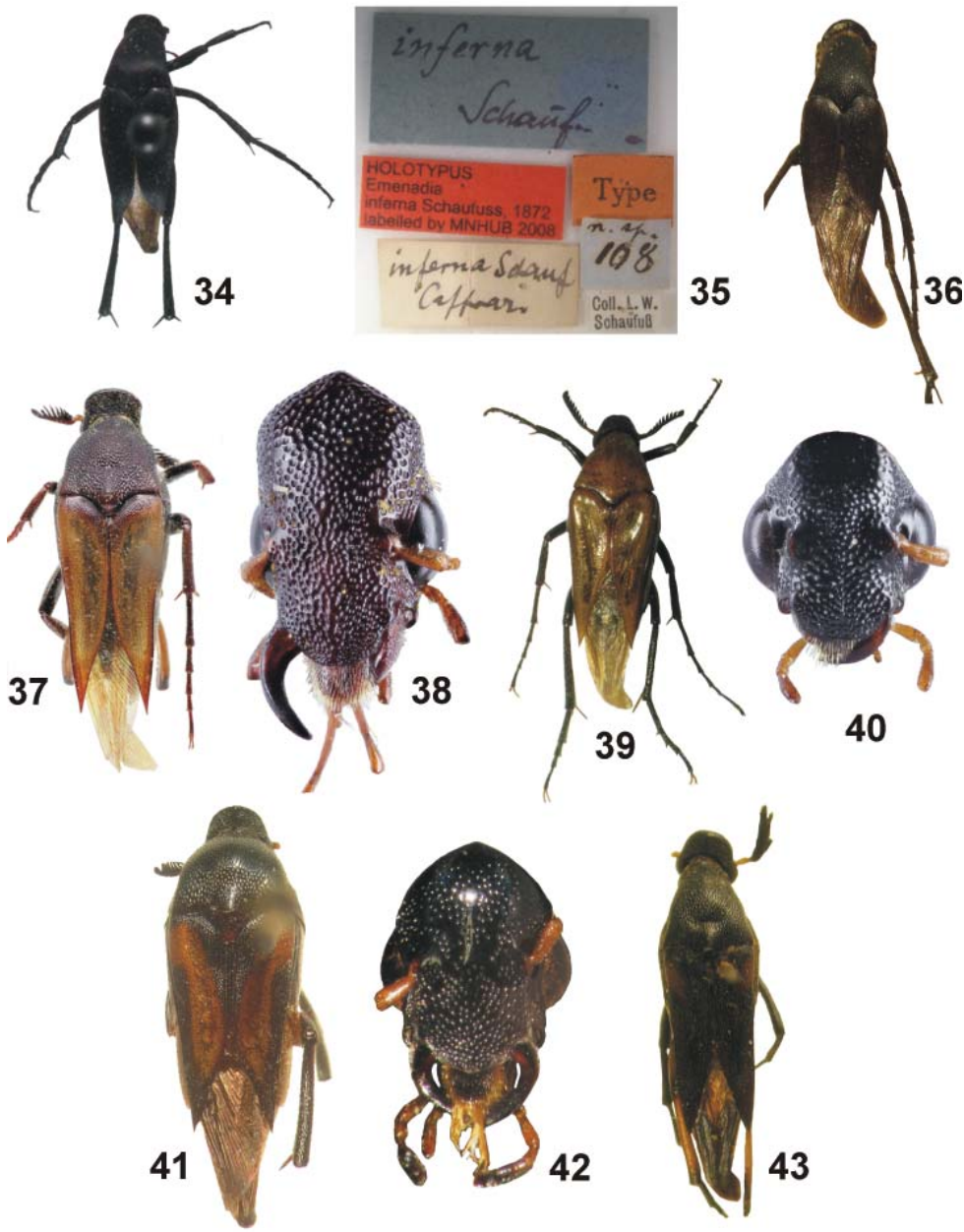
Figs 8–15. 8–11 – *Macrosiagon bequaerti* Pic, 1913. (8 – male from Zambia; 9 – male from Guinea; 10–11 – holotype with labels). 12 – *Macrosiagon* cf. *bequaerti* Pic, 1913, India. 13–15 – *Macrosiagon biguttata* (Blanchard, 1846) (13 – syntype label; 14 – male, Australia, Cairns; 15 – female, Australia, Cairns).



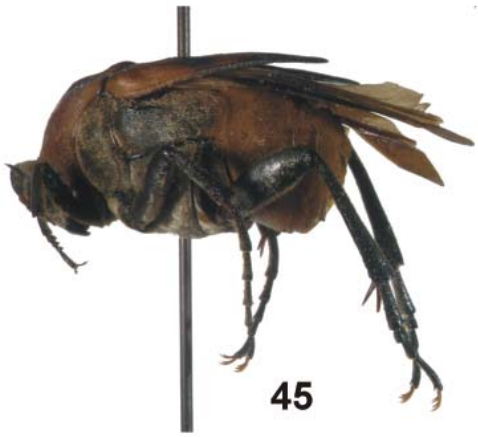
Figs 16–24. 16–17 – *Ripiphorus dubius*, syntypes (syn. of *Macrosiagon bimaculata* (Fabricius, 1787), photos by Aleksey Gusakov 2008). 18 – Pic's handwritten label with differential diagnosis to *Macrosiagon natalense* Pic, 1950 (Verbatim: 'diffère de caffrum / par les élytres sans / macule discale / noire le thorax / á bordure rouge / postèrieuere'). 19–24 – *Macrosiagon caffra* (Fåhraeus, 1870) (19–21 – female syntype with labels; 22–24 – male syntype with labels).



Figs 25–33. 25–27 – *Macrosiagon callewaerti* Pic, 1950; holotype. (25 – habitus dorsally; 26 – head frontally; 27 – metatarsomeres dorsally). 28–30 – *Macrosiagon grombczewskii* (Semenov, 1891), holotype (photos M. Engel 2010). 31–33 – *Macrosiagon humeralis* Pic, 1929. (31 – syntype; 32–33 – male from Tanzania, head frontally and metatarsomeres dorsally).



Figs 34–43. 34–36 – *Macrosiagon inferna* (Schaufuss, 1872) (34–35 – holotype and labels of *Emenadia inferna* Schaufuss, 1872; 36 – *Macrosiagon longipes* Pic, 1929, syntype). 37–38 – *Macrosiagon lyauteyi* Alluaud, 1902, female from Ihosy. 39–40 – *Macrosiagon marcelli* Alluaud, 1902 (39 – female from Zimbabwe; 40 – female from Zambia, Serenje, head frontally). 41–43 – *Macrosiagon trinotata* Pic, 1950 (41 – holotype; 42 – female from Kenya, Tsavo, head frontally; 43 – male from Republic of South Africa, Transwaal).



Figs 44–47. 44–46 – *Macrosiagon ukereweana* Schilder, 1923; syntype from Muansa (44 – habitus dorsally; 45 – habitus laterally; 46 – metatarsomeres dorsally). 47 – *Mentha longifolia*, Namibia, Naukluft Park (photo W. Schawaller 2010).

Figs 48–49. *Sericocomopsis* sp., Kenya, Nguni (photos M. Snížek 2007).

that he failed to find this specimen. It is deposited in Zoological Institute of Russian Academy of Science, St.-Petersburg from where it was borrowed by Zachary Falin (Kansas) in 1999.
Remarks. Because of unavailability of the type, *M. grombczewskii* was listed in '*Macrosiagon* - nomina dubia' in BATELKA (2008a). Thanks to detailed images of the type taken by Michael Engel (Kansas) I am now able to offer several remarks regarding the systematic placement and validity of this peculiar taxon.

Macrosiagon grombczewskii belongs to the *M. bifasciata* species group as it is defined in this paper. MT 2 is shortened and robust, flattened dorsally as in *M. bipunctata*, but the medial lobe of the pronotal disc is smooth and without an elevation. An identical combination of both characters also occurs in the African *M. caffra*, which belongs to the same species group. Males and more females of *M. grombczewskii* are needed to prove the stability of these and other putative specific characters (e.g. carina and black spots on the pronotal disc) mentioned both by SEMENOV (1891) and YABLOKOV-KHNZORYAN (1976). Until then I prefer to consider *M. grombczewskii* as a valid species.
Distribution. This species remains known only from its type locality in Tajikistan.

Macrosiagon humeralis Pic, 1929
(Figs. 31–33)

Macrosiagon humeralis Pic, 1929: 268 (type locality: 'Kundelungus').

Type material examined. SYNTYPE: 1 ex. (Fig. 31) (MRAC), 'MUSEÉ DU CONGO / KUNDELUNGUS / Mme Tinant [p] // R. DÉT [p] / N [hw] / 1541 [p] // Macrosiagon / humerale n. sp. [Pic's hw] // HOLOTYPUS [p, orange label]'.
Additional material examined. DEMOCRATIC REPUBLIC OF THE CONGO: 1 ♀ (MNHN – coll. Pic, box no. 6), 'Musée du Congo / Lalua: source Losoka / 10-II-1932 / G. F. Overlaet [p] // humerale / Pic [Pic's hw]'. **MALAWI:** 4 ♂♂ 4 ♀♀ (Figs 32–33) (BMNH, JBCP), 'Nyasaland / Mlanje / Jan. 29. 1913 [respective Feb. 20., Feb. 24., Mar. 20., Mar. 24., Mar. 26.] / S.A. Neave / 1913-140 [p]'.

Remarks. Black species, with orange abdomen and one humeral spot on each elytron. Roughly and densely punctured, MT 2 shortened and flattened dorsally. From all other *Macrosiagon* species it differs by having the vertex with a deep, longitudinal impression anteriorly.
Distribution. Afrotropical species. Described from Democratic Republic of the Congo. It is recorded here from Malawi for the first time.

Macrosiagon inferna (Schaufuss, 1872)
(Figs. 34–36)

Emenadia inferna Schaufuss, 1872: 277. Type locality: Caffraria [= Republic of South Africa].
Macrosiagon infernum: CSIKI (1913): 13 (new combination).
Rhipiphorus lugubris Fairmaire, 1887: 304, **syn. nov.** Type locality: [Tanzania], Zanzibar.
Macrosiagon longipes Pic, 1929: 269, **syn. nov.** Type locality: [Democratic Republic of the Congo], Haut Uélé, Moto.
Macrosiagon longicolle Pic, 1931: 34, **syn. nov.** Type locality: Uganda.
Macrosiagon longithorax Pic, 1947: 8, **syn. nov.** Type locality: Congo [= Democratic Republic of the Congo].

Type material examined. *Emenadia inferna*. HOLOTYPE: 1 ♀ (Figs 34–35) (both metatarsi are broken-off) (ZMHB), 'Coll L. W. / Schaufuss [p] // n. sp. / 198 [or 108?] [hw] // Type [p, orange label] // inferna Schauf. / Caffrar. [hw] // inferna / Schauf. [hw, blue label] // Holotypus / Emenadia / inferna Schaufuss, 1872 / labeled by ZMHB 2008 [p, red label]'.

Rhipiphorus lugubris. Syntype: 1 ♀ (MNHN – coll. L. Fairmaire), 'Zanzibar / Raffray [p, green label] // Ripiphorus / lugubris / Fairm / Zanzibar [Fairmaire's hw]'.

Macrosiagon longipes. Syntype: 1 ♂ (Fig. 36) (MRAC), 'MUSÉE DU CONGO / Haut Uelé: Moto / 1920 / L. Burgeon [p] // R. DÉT. [p] / P [hw] / 1541 [p] // Macrosiagon / longipes n. sp. [Pic's hw] // Holotypus [p, orange label]'.

Macrosiagon longicolle. Syntype: 1 ♀ (brown, teneral specimen) (BMNH, box U24: 5), 'Type [p, round white label with red margin] // C.C. Goudey / Kampala ?] / 15.ix.05 /No. 420 / Uganda [hw] // Pres. by / Imp. Inst. Ent. /Brit. Mus. / 1931 – 469 [p] // desiré [Pic's hw] // Macrosiagon / longicolle n. sp. [Pic's hw]'.

Macrosiagon longithorax. Syntype: 1 ♀ (brown, teneral specimen) (MNHN – coll. Pic, box no. 6), 'Congo / Belge [hw] // type [hw] // type [p, red label] // longithorax / n. sp. [hw]'.

Additional material examined. BURKINA FASO: 1 ♂ 1 ♀ (MRAC), 'COLL. MUS. TERVUREN / Haute Volta: Bobo-Diou - / lasso VII/VIII. 1964 / R. Siffointe [p]'; 1 ♂ (MRAC), 'HAUTE VOLTA / Soumousso nr. [for details of habitat see Pauly 1984] / Kélesso, 11.x.1979 / A. Pauly réc [p]'. **DEMOCRATIC REPUBLIC OF THE CONGO:** 1 ♀ (MRAC), 'COLL. MUS. CONGO / Tschuapa: Ikela / 1956 / R. Deguide [p]'. **GUINEA:** 1 ♀ (JBCP), 'Irr. Gvineya [p], okr. Kindia [10°03′N, 12°51′W] / okr. Pastorii / 30.VIII. 1984 [hw] S. V. Murzin [p, in Russian]'. **KENYA:** 1 ♀ (BMNH), 'Brit.E.Africa. / Yala R., S. edge / Kakumga Forest. / 4,800-5,300ft. // May 21-28,1911 / S.A. Neave. // 1912-193 [p]'. **MADAGASCAR:** 1 ♂ (JBCP), 'Madagascar c. or / Andasibe-Perinet / 130 km E Antananarivo / 1999 [p]'; 1 ♂ (JHCP), 'E Madagascar / Tamatave distr. / Andasibe, 17.-30.12. / J. Horák leg. 2001 [p]'; 1 ♀ (rather old specimen) (ZMHB), 'Amber Geb. [Amber or Ambohissi Mts., North Madagascar] [hw]'; 1 ♂ (MNHN – general coll.), 'Février [p] // Mt. d'Ambre / Madagascar [p] // Macrosiagon / longipes Pic [Pic's hw]'. **TANZANIA:** 2 ♀♀ (JBCP), 'Tanzania bor. / Aruscha env. / 1.-7.1.1996 / Ing. M. Snížek lgt. [p]'. **REPUBLIC OF SOUTH AFRICA:** 1 ♀ (BMNH), 'Natal [hw] // Pascoe / Coll. / 93-60 [p]'. **UGANDA:** 1 ♀ (JBCP), 'Uganda c. / Mubende env. / 19.-22.11. 2001 / Lgt. M. Snížek [p]'; 1 ♀ (JBCP), 'Uganda cw. / 20 – 50 km NEE of / Fort Portal / 26.11. 2001 / Lgt. M. Snížek [p]'; 1 ♀ (BMNH), 'Entebbe / Uganda [p] / 15.xii.1912 [hw] / No. [p] 452/G.B.Sonday [?, partly illegible] // Pres by / Comm. Inst. Ent / B.M.1981-315 [p] // Macrosiagon / sp. / [illegible] [hw] / Det.G.E.Bryant [p]'.

Remarks. Both Schaufuss (1872) and Fairmaire (1887) correctly compared their species with *Macrosiagon nasuta* (Thunberg, 1784), which occurs in east and south east Asia. *Macrosiagon inferna* differs from the closely related *M. nasuta* by having MT 2 shortened (not preserved in the holotype of *M. inferna*) and slightly shorter elytra in comparison with length of pronotum. Otherwise, both species are of the same habitus and should be regarded as putative sister species.

Examined types of *Rhipiphorus lugubris*, *Macrosiagon longipes*, *M. longicolle* and *M. longithorax* agree with preserved parts of the type of *Emenadia inferna* and all four species are synonymised here with the latter.

Distribution. Afrotropical species. Under various names it was described from Democratic Republic of Congo, Republic of South Africa, Uganda and Zanzibar (Tanzania). It is recorded here from Burkina Faso, Guinea, Kenya, Madagascar and continental Tanzania for the first time.

Macrosiagon lyauteyi Alluaud, 1902

(Figs. 37–38)

Macrosiagon Lyauteyi Alluaud, 1902: 323 (type locality: 'Fianarantsoa').

Type material examined. Holotype: 1 ♂ (MNHN – coll. Alluaud), 'Fianarantsoa / (E. Bensch) [hw] // type [p, red label] // Emenadia / Lyauteyi / Alluaud [hw]'.

Additional material examined. MADAGASCAR: 1 ♂ 1 ♀ (NHMW), 'Madagaskar / Sykora, 1896. [p]'; 1 ♀ (JHCP), 'Madagascar / env. Tananarive / Lavatte lgt. [p]'; 1 ♀ (NMPC), 'Madagascar [p]'; 1 ♂ (MNHN – general coll.), 'Madagascar / Antsianaka / et lac Alaotra / 2e Trimestre 1889 / Perrot Frères [lgt.] [p]'; 1 ♂ (MNHN – coll. Pic, box no. 6), 'Madagascar [hw] // Macrosiagon / Lyauteyi Alluaud [Pic's hw]'; 1 ♂ (MNHN – coll. Pic, box no. 6), 'Janvier [p] // Mt. d'Ambre, / Madagascar [p] // Lyauteyi / All. [Pic's hw]'; 1 ♂ (MNHN – coll. Pic, box no. 6),

'Février [p] // Mt. d'Ambre, / Madagascar [p]'; 1 ♂ (MNHN – general coll.), 'Février [p] // Mt. d'Ambre, / Madagascar [p] // Macrosiagon / Lyauteyi All. ♂ [Pic's hw]'; 1 ♀ (MNHN – coll. Pic, box no. 6), 'Madagascar / Betroka [p] // Muséum Paris / A. Seyrig [p, blue label] // Macrosiagon / Lyauteyi All. / var. (desiré) [Pic's hw]'; 1 ♀ (MNHN – general coll.), 'Museum Paris / Madagascar / Humblot 1885 [p]'; 1 ♂ (MNHN – general coll.), 'Décembre [p] // Madagascar / Mt. d'Ambre [p] // Macrosiagon / Liauteyi [sic!] / C.T. All. [hw]'; 1 ex. (MNHN – general coll.), 'Museum Paris / Madagascar N. O. / Prov. d'Analalava / Distr. d'Antsohihy / Basse-Anjingo et Basse-Maevarano / J. Descarpentries 1908 [p]'; 1 ex. (torso without head and all extremities) (BMNH), 'S. Madag. / 90 – 23 [p]'; 2 ♀♀ (Figs 37–38) (NHMB), 'MADAGASCAR Fia. / Ihosy / 2.II.58 F. KEISER [p]'; 1 ♀ (MRAC), 'COLL. MUS. TERVUREN / Madagascar: Tananarive / (lampe U. V.) 15.III.1962 / J. Dubois [p]'.

Remarks. *Macrosiagon lyauteyi* is similar to *M. trinotata* by the shape of body and elytra and by having the transversal linear impression in the posterior half of the pronotal disc (rarely indistinct in some specimens). However, it differs from it by the shape of the vertex (Fig. 38) and by the lighter coloration.

Distribution. Described and known so far only from Madagascar.

Macrosiagon marcelli Alluaud, 1902

(Figs. 39–40)

Macrosiagon marcelli Alluaud, 1902: 324. Type locality: Côte d'Ivoire [= Ivory Coast], Assinie.
Macrosiagon lemoulti Pic, 1930: 31, **syn. nov.** Type locality: Abissinie [= Ethiopia].
Macrosiagon theresae Pic, 1950e: 16, **syn. nov.** Type locality: Congo français [= Republic of the Congo].
Macrosiagon auberti Pic, 1951b: 16, **syn. nov.** Type locality: Gabon.

Type material examined. *Macrosiagon marcelli*. Holotype: 1 ♂ (MNHN – coll. Alluaud), 'Assinie / Côte occi. L'Afrique / Ch. Alluaud 1886 [p] // Type [p, red letters] // Emenadia / Marcelli / Alluaud [Alluaud's hw]';
Macrosiagon lemoulti. Syntype: 1 ♂ (MNHN – coll. Pic), 'Maraco [?] / Abyssinie [= Ethiopia] / Juni 1914 // Type [Pic's hw] // Type [p, red label] // Le Moulti / n. sp. [Pic's hw]'.
Macrosiagon theresae. Syntype: 1 ♂ (MNHN – coll. Pic, box no. 6), 'Congo Francais [Pic's hw] // Type [Pic's hw] // Type [p, red label] // theresae / n. sp. [Pic's hw]'.
Macrosiagon auberti. Syntype: 1 ♂ (MNHN – coll. Pic, box no. 6), '202.0. [hw] // Coll. Aubert [hw] // Type [Pic's hw] // Type [p, red label] // auberti / n. sp. [Pic's hw]'.
Additional material examined. CÔTE D'IVOIRE: 1 ♂ (MNHN – general coll.), 'Côte d'Ivoire / G. Melou [p]'; 1 ex. (MNHN – general coll.), 'Côte d'Ivoire / Adiopodoumé / mois [p] 12 [hw] 1947 [p] / Coll. Ch. Primot [p] // Macrosiagon / bipunctatum / var. [Pic's hw]'. **DEMOCRATIC REPUBLIC OF THE CONGO:** 3 ♂♂ (MNHN, coll. Pic), 'Coll. Mus. Congo / Mayidi [100 km S of Kinshasa] / - 1942 / Rév. P. van Eyen [p]'; 1 ♀ (NMPC), 'Oubangui – Chari / Belg. Congo / Coll. Škulina [p]'; 1 ♂ (MRAC), 'COLL. MUS. CONGO [p] / Yangambi (Stan.) / VII.1960 / J. Decelle [hw]'; 1 ♂ (MRAC), ' MUSÉE DU CONGO / Wombali [3°16'S, 17°20'E] / IX. 1913 / P. Vanderijst [p]'. **GABON:** 2 ex. (MNHN – general coll.), 'Gabon / Ex Musaeo / Gambey / 1882 [p]'; 1 ♂ (MNHN – general coll.), 'Gabon / Naubert [hw]'. **GUINEA:** 1 ♂ (JBCP), 'Irr. Gvineya [p], okr. Kindia [10°03′N, 12°51′W] / okr. Pastorii / 15.IX. 1984 [hw] S. V. Murzin [p, in Russian]'. **KENYA:** 1 ♂ 1 ♀ (BMNH), 'Kenya Colony / Kabete / iv [iii in ♂] 1922 / H.E. Box. [p] // Brit. Mus / 1922 – 357 [p] // Macrosiagon / marcelli / Alluaud 1902 / Det. ZHFalin '05 [p]'; 1 ex. (BMNH), 'van Someren. / Nairobi 4. 37 [p] // V.G.L. van Someren / Collection / Brit. Mus. 1959-468. [p]'; 1 ♂ (JBCP), 'Kenya – Nkubu (Meru) / mt. 1500 1/10.IV.87 / R. Mourglia legit. [p]'. **REPUBLIC OF SOUTH AFRICA:** 1 ♂ (JBCP), 'RSA, O.F.S. / Fouriesburg / env. 18.1.2003 / Lgt. M. Snížek [p]'. **TANZANIA:** 1 ♂ (MNHN – coll. Alluaud), 'Deutsch-Ost-Afrika / Kilimandscharo / [illegible] [p] // Macrosiagon Chagga / n. sp. [Alluaud's hw]'; 1 ♀ (MNHN – coll. Alluaud), 'Afrique ORle Allemande / Kilimandjaro / (zone des cultures) / Ch. Alluaud I-IV 1904 [p]'; 1 ♂ (JBCP), 'Tanzania 8.xii.[19]94 / 30 km W Songes / Werner leg. [p]'; 1 ♂ (JHCP), 'Tanzania, Arusha distr. / Mt. Meru, 1800-2000m / 5.-7.4.1997 / J. Rolčík lgt. [p]'; 1 ♀ (BMNH), 'Nyasaland / Mlanje / Feb. 20. 1913 / S.A. Neave / 1913-140 [p]' // Macrosiagon / marcelli / Alluaud 1902 / Det. ZHFalin '05 [p]'; 1 ex. (BMNH), 'G.E.Africa. / Usangu Dist. / Nov. 29 to Dec. 15, / 1910. 3,500-4,500 ft. / S.A. Neave. [p] // 1911 – 177 [p] // Macrosiagon / marcelli / Alluaud 1902 / Det. ZHFalin '05 [p]'. **UGANDA:** 1 ♀ (BMNH), 'Uganda Prot. / N. Ruwenzori. / 6,000-8,500 ft. / 1-2 Nov. 1911 / S.A. Neave [p] // 1912 – 193. [p] // Macrosiagon / marcelli / Alluaud 1902 / Det. ZHFalin '05 [p]'; 1 ex. (BMNH), 'van Someren / Jinja / July, 1931 [p] // Macrosiagon / marcelli / Alluaud 1902 / Det. ZHFalin '05

[p]'. **ZAMBIA:** 1 ♀ (BMNH), 'N. W. Rhodesia: / Kashitu / N of Broken Hill [p] / i. 1915 [hw] / H.C. Dollman [p] // H.C. Dollman / Coll. 1919 - 79 [p] // Macrosiagon / marcelli / Alluaud 1902 / Det. ZHFalin '05 [p]'; 1 ♂ (ZMHB), 'S – Afr., S. Sambia / Kasungula 26.3.91 / leg. C. Bayer [hw]'; 1 ♀ (Fig. 40) (JBCP), 'Zambia NE 2005 / 140 km NE Kapiri Mposhi / 62 km SW Serenje / 22. xi. Snížek lgt. [p]'. **ZIMBABWE:** 1 ♀ (Fig. 39) (JBCP), 'C. Zimbabwe, / Chivhu, Bulhera env. / 29.xi.1998 / M. Snížek leg. [p]'; 1 ♂ (BMNH), 'S. RHODESIA / Umtali / Vumba / v.1932 // Mrs. L. Ogilvie // Macrosiagon / marcelli / Alluaud 1902 / Det. ZHFalin '05 [p]'.

Remarks. One male from MNHN labeled by Alluaud as '*Macrosiagon Chagga* n. sp.' is listed here in the additional material examined, as no description of this species is known to me and the name has never been referred to in literature. Moreover, in Alluaud's bibliography (Jeannel 1952), there is no paper listed that could contain such a description.

Macrosiagon lemoulti, *M. theresae* and *M. auberti* fall within variability of *M. marcelli* and they are therefore proposed as junior synonyms.

Species may be diagnosed as follows: vertex shortened, flattened anterio-posteriorly, medial lobe of pronotal disc without elevation, elytra flattened, strongly acute apically, each elytron with one shallow longitudinal depression. Head always black, pronotal disc and elytra usually unicolorous orange (with black markings in the male from Guinea), legs completely black, abdomen bicolor, first abdominal segment orange basaly, the rest is black, the remaining visible ventrites are orange ventrally, while the rest is black. The male from Republic of South Africa has the pronotal disc with a transversal linear impression in its posterior half, in which it resembles *M. lyauteyi* and *M. trinotata*.

Distribution. An Afrotropical species. Described under various names from Ethiopia, Gabon, Ivory Coast, and the Republic of the Congo. The species has been further reported by Pic (1955) from Ruanda-Urundi, Ruhengeri [= Rwanda]. It is recorded here from Democratic Republic of the Congo, Guinea, Kenya, Republic of South Africa, Tanzania, Zambia and Zimbabwe for the first time.

Macrosiagon nasuta (Thunberg, 1784)

Mordella nasuta Thunberg, 1784: 66. Type locality: Japonia [= Japan].
Macrosiagon nasutum: Csiki (1913): 14 (new combination).
For synonymy see Batelka (2008a).

Material examined. LAOS: 1 ♀ (NHMB), 'Laos, Bolikhaxai pr., / 18°16'N 103°11'E, / 70 km NEE Vientiane / 2.-3.vi.1997, 150m, / Vít Kubáň leg. [p]'. **MALAYSIA:** 1 ♂ (BMNH), 'Sarawak [p] / Paya Paloh / Wei-pachi / 24-iii-1965 [hw] / Coll. G.H.L. Rothschild [p] // 5505 [hw] // Pres by / Com Inst Ent / B.M. 1971-1 [p]'. **'THIBET':** 1 ♀ (MNHN – general coll.), 'Thibet / Chápá / Mgr. F. Biet [p]'.

Distribution. The species is a widely distributed in east and southeast Asia: China, 'Borneo', Indonesia (Sumatra, Sulawesi), Japan, Korean Peninsula, Nicobar Islands, Philippines, Taiwan (Batelka 2004). It is recorded here from Laos and 'Thibet' for the first time.

Macrosiagon pusilla (Gerstaecker, 1855)

Rhipiphorus pusillus Gerstaecker, 1855: 32. Type locality: India orientali (for details on this Gerstaecker's locality see Batelka 2007a).
Macrosiagon pusillum: Csiki (1913): 15 (new combination).
For synonymy see Batelka (2008a).

Material examined. BHUTAN: 1 ♂ (NHMB), 'Phuntsholina [p] 87km [hw] / Thimphu [p] 1680m 22.5. [hw] // Nat.-Hist. Museum / Basel – Bhutan / Expedition 1972 [p]'; 1 ♂ (NHMB), 'Nobding 41 km O / Wangdi Ph. 2800m [p] // Nat.-Hist. Museum / Basel – Bhutan / Expedition 1972 [p]'; 1 ♀ (NHMB), 'Karsumphe u. Vag. // vii.77 2730m

[hw] // Bhutan / F. Maurer [p]'. **CHINA: Guizhou:** 1 ♂ 1 ♀ (NHMB), 'China, E Guizhou prov. / Fodingshan, Ganshi, 25km S of Shiquian, 1300m / 5-9 Jun 1997, Bolm lgt. [p]'. **INDIA: Darjeeling:** 2 ♀♀ (BMNH), 'Sikkim / Gopaldhara / Rungbong Vall. / H. Stevens // H. Stevens / Brit. Mus. / 1922-307. [p]'; 1 ex. (BMNH), 'Gopaldhara / Darjiling / H. Stevens, 1918 [p]'; 4 ex. (BMNH), 'Gopaldhara / Nepal-Sikhim Frontier / H. Stevens, [p] 1919 [2 ex.] [respective 1920, pencil] [p]'; 1 ♀ (BMNH), 'Namsoo / Darjeeling / 2,100 ft [p] / 21-vi.18 [pen] / H. Stevens [p]'; 1 ♀ (BMNH), 'from foliage // Gopaldhara / Darjeeling / 3,440-4,720 ft / H. Stevens [p] / 8-vii [pencil]-14 [p]'; 1 ♀ (BMNH), 'Gopaldhara Bw./ Darjeeling / 4,720 ft [p] 20.7. / H. Stevens [p]'; 1 ♀ (NHMB), 'Gangae Thora / 1000m (Kalimp. / 25.iv.1986 // Indien / Darjeeling D. / Bhakta B. [p]'; 1 ♀ (NHMB), 'Darjeeling D. / India Bhakta B. [p]'; 1 ♀ (NHMB), 'Ralle / 16.iv.1987 // Indien / Darjeeling D. / Bhakta B. [p]'. **Himachal Pradesh:** 2 ♂♂ 2 ♀♀ (BMNH), 'Punjab. / Kangra Valley. / 1903 – 37 [p] // Kangra Valley / 4500 ft. / July 1899 / Dudgeon. [p]'. **Kerala:** 1 ♂ (JBCP), 'India – Kerala / Themala, 5.5.2005 / 08°58,0′N, 77°03,5′E / leg. M. H., 100m [p]'. **Tamil Nadu:** 1 ex. (antennae missing) (BMNH), 'Nilgiri Hills [p] // H. E. Andrewes / Bequest. / B.M. 1922 – 221 [p]'; 1 ♂ (BMNH), 'Nilgiri Hills [p] // H. L. Andrewes [p] / 6000 ft [hw]/ H. E. Andrewes / Bequest. / B.M. 1922 – 221 [p]'; 1 ♂ (BMNH), 'Nilgiri Hills / A.K. Weld Downing // H. E. Andrewes / Bequest. / B.M. 1922 – 221 [p]'. **Uttar Pradesh:** 1 ♂ 1 ♀ (BMNH), 'C. Almora Du. [respective Diva] / Kumaon U. P. / July'20 [respective July'19] H.G.C. // H.G. Champion Coll. / B.M. 1953-156. [p]'. **INDONESIA: Kalimantan:** 1 ♂ (JHCP), 'Indonesia / Kalimantan W. / Nanga Ela env. 4.-10.8. / Nanga Nyuruh 700m / J. Schneider lgt. 1993 [p]'. **NEPAL:** 1 ♀ (BMNH), 'NEPAL / Chilime Kharka / 28°15′N; 85°14′E [W of Langtang Nat. Park] // 27.vii.1949 / O. Polunin // B.M. Nepal Exp. / 1949 / B.M.1949-637. [p]'. **PHILIPPINES: Mindanao:** 1 ♂ (BMNH), 'Kolambugan / Mindanao / Baker [p] // Macrosiagon / nasutum Thunb. [hw] / det. K.G. Blair [p]'; 1 ♂ (BMNH), 'Iligan / Mindanao / Baker [p]'; 2 ♂♂ (ZMHB), 'Philippinen [p] / Mindanao / ?illegible [hw]'; 1 ♀ (ZMHB), 'Philippinen / Mindanao, Momun- / gan n. Lamao / leg. Böttcher [p]'; **Luzon:** 1 ♀ (ZMHB), 'Philippinen / Luzon [p] / Butac [hw]'. **SRI LANKA:** 1 ♂ (BMNH), 'Ceylon [hw, grey rounded label]'.

Distribution. A widely distributed species known from the east, south and southeast of Asia. So far reported from China (Fujian, Guandong, Hebei, Hunan, Sichuan, Xizang, Yunnan), India (Assam, 'Bengale: Barway', Meghalaya, Uttaranchal), Indonesia (Sumatra, Sulawesi), Japan (Hokkaidō, Honshū, Shikoku), Korean Peninsula (including Cheju Do Island), Laos, Malaysia, Nepal, Russia (Far East), Thailand and Vietnam (Batelka 2007a). It is recorded here from Bhutan, Guizhou (China), Indian states West Bengal (Darjeeling), Himachal Pradesh, Kerala and Tamil Nadu, Philippines, Kalimantan (Indonesia) and Sri Lanka for the first time.

Macrosiagon praeusta (Gebler, 1829)

Rhipiphorus praeustus Gebler, 1829: 133. Type locality: [Kazakhstan], Ustkamenogorsk.
Macrosiagon praeusta: Bedel (1895): 185 (new combination).
For synonymy see Batelka (2008a).

Material examined. FRANCE: 1 ♀ (MSNC), 'CORSICA 1999 / I. Liamone 21-VIII / 42.05′N-8.44′E / le. [leg.] F. Strumia [p] // Museo di Storia / Naturalle e del / Territorio / Universita di Pisa / Calci (Pisa) – Italy [p]'; 1 ♀ (MNHN – coll. Jablokoff), 'S. Guilhelm-le-Désert / Combe du Corps al. 130 / Hérault 12.6.1953 [hw] // Paliurus / australis R. et S. / en fleur sr. fleur [hw] // 8½ L/S r-29/22 / H – 59% p. 751 / tp. beau, c-2 [hw]'; 1 ♀ (MNHN – coll. Jablokoff), 'S. Guilhelm-le-Désert / St. Hérault, 3e barrage, al. 80 / Hérault 8.6.1968 [hw] // Berberis vulgaris L. / on fleur, au soleil / sr. fleur [hw] // 9½ L/S r 37/21 / H - 57% p. 756 / tp. superbe, c-3 stratus et cumulus [hw]'. **IRAN: Gilan:** 1 ♀ (SMNS), 'Iran (Resht) / Tahergourabe / 26.v.1955 / F. Schäuffele leg. [p, green label]'; 1 ♂ 1 ♀ (SMNS), 'Iran (Gilan) / Tahergourab / iv.-vi.1955 / F. Schäuffele leg. [p, green labels]'. **TURKEY:** 1 ♀ (BMNH), 'TURKEY: Erzincan / Refahiye-Erzincan / 10.vii.1960. 3,000' / Guichard & Harvey / B.M.1960-364 [p] // Macrosiagon / praeusta / (Gebler, 1829) / Det. ZHFalin 08 [p]'; 1 ♀ (MNHN – coll. Pic), 'Anatolien / Konia / 1899 Korb [p] // 298 [p] // M. praeusta / Gebl [Pic's hw]'.

Distribution. This is a Palaearctic species ranging from Spain to Kazakhstan. A complete distribution is presented in Batelka (2008a). Until now, only a single specimen of the species

was known from Turkey, and its occurrence in Corse was only reported by Schaefer (1964). The species is recorded here from Iran for the first time.

Macrosiagon signaticollis Pic, 1907

Macrosiagon signaticollis Pic, 1907: 183. Type locality: Dahomey [= Benin].
Macrosiagon signaticollis var. *usambarensis* Pic, 1909: 147, **syn. nov.** Type locality: Afr. Orientale Allem [= Tanzania], Usambara.

Type material examined. *Macrosiagon signaticollis*. Syntype: 1 ♀ (MNHN – coll. Pic, box no. 6), 'Dahomey [hw] // pas ..... / Gerst. [Pic's hw, partly illegible] // type [Pic's hw] // type [p, red label] // Em. [= Emenadia] signaticollis / Pic [hw]'.
Macrosiagon signaticollis var. *usambarensis*. Syntype: 1 ♀ (MNHN – coll. Pic, box no. 6), 'Usambara / Nguelo [p] // type [Pic's hw] // type [p, red label] // signaticollis / v. usambarensis / Pic [Pic's hw]'.
Additional material examined. BURUNDI (label data communicated by Marc de Meyer): 1 ex. (MRAC), 'MUSÉE DU CONGO / Lac Tanganyka: Nyanza [Makamba prov.] [p] / fin [hw] XII.1932 / L. Burgeon [p]'. **DEMOCRATIC REPUBLIC OF THE CONGO** (label data communicated by Marc de Meyer): 4 ex. (MRAC), 'MUSÉE DU CONGO [p] / Eala [part of Mbandaka] / (Verlaine) [hw]'; 1 ex. (MRAC), 'MUSÉE DU CONGO / Luluabourg / P. Callewaert [p]'; 1 ex. (MRAC), 'MUSÉE DU CONGO / Equateur: Flandria [cca 100 km from Mbandaka] [p] / fin 1928 [hw] / R.P.Hulsteaert [p]'; 1 ex. (MRAC), 'MUSÉE DU CONGO / Lulua: Kapanga [p] / XI.1932 [p/hw] / G.F.Overlaet [p]'; 1 ex. (MRAC), 'MUSÉE DU CONGO / Lulua: Kapanga [p] /IV.1933 [p/hw] / F.G.Overlaet [p]'; 1 ex. (MRAC), 'MUSÉE DU CONGO / Lulua: Kapanga [p] / III.1933 [p/hw] / G.F.Overlaet [p]'; 1 ex. (MRAC), 'MUSÉE DU CONGO / Lulua: Kapanga [p] / V.1933 [p/hw] / F.G.Overlaet [p]'; 1 ex. (MRAC), 'MUSÉE DU CONGO / Tanganyka-Moero: Nyunzu [p] / I-II.1934 [p/hw] / De Saeger [p]'; 1 ex. (MRAC), 'MUS. ROY. AFR. CENTR. / Lualaba: Zilo [p] / 26.III.1960 [p/hw] / V. Allard [p]'; 1 ex. (MRAC), 'MUSÉE DU CONGO / Eala [p] / XI.1936 [p/hw] / J. Ghesquière [p] / 3248 [hw, written on side of label]'; 1 ex. (MRAC), 'COLL. MUS. CONGO / Bambesa [p] / 28.I.1937 [p/hw] / J. Vrydagh [p]'; 1 ex. (MRAC), 'COLL. MUS. CONGO / Mayidi / 1945 / Rév. P Van Eyen [p]'. **GUINEA:** 1 ♀ (JBCP), 'Irr. Gvineya [p], okr. Kindia [10°03′ N, 12°51′W] / les Tabuna [Tabouna forest] / 21.xi. 1982 [hw] S. V. Murzin [p, in Russian]'; 1 ♀ (JBCP), 'Irr. Gvineya [p], / les Tabuna [Tabouna forest] / okr. Kindia [10°03′N, 12°51′W] / 26.iv. 1983 [hw] S. V. Murzin [p, in Russian]'. **TANZANIA:** 1 ♀ (JBCP), 'Tanzania IV.1997 / Uluguru Mts. / Werner & Lizler leg. [p]'. **UGANDA:** 1 ♀ (NHRS), 'Entebbe / Lovén [p]'.

Remarks. The examined type of *Macrosiagon signaticollis* var. *usambarensis* is identical with the type of *Macrosiagon signaticollis* and both taxa are synonymised. *Macrosiagon signaticollis* is, however, very similar to *M. ferruginea* and may represent only its variety (pronotal disc black or orange with black longitudinal stripes, elytra shorter in comparison with the pronotum; possible allometry).
Distribution. An Afrotropical species described from Benin and Tanzania. It is recorded here from Burundi, Democratic Republic of the Congo, Guinea and Uganda for the first time.

Macrosiagon spinicollis (Fairmaire, 1893)

Rhipiphorus spinicollis Fairmaire, 1893: 38. Type locality: [Vietnam], Saigon [= Ho Chi Minh City].
Macrosiagon spinicolle: Csiki (1913): 16 (new combination).
For synonymy see Batelka (2008a).

Material examined. CHINA: Gansu: 1 ♀ (JHCP), 'China – Gansu / Bikou – 32°32′N 104°38′E / 3.7.-7.7.97 / lgt. E. K. [p]'. **Hainan:** 1 ♂ (BMNH), 'Hainan Is. / Fooi Iu Aug. 16 / N. W. of Nodoa // Lingnan / University / 5th. Hainan Is. / Exped. 1929. [p] // Macrosiagon / bipartitum Fairm. (var.) [hw] / det. K.G. Blair [p]'. **INDIA: Darjeeling:** 3 ex. (BMNH), 'Nurbong, / Mahanuddi Vy., / Darjiling. / H. Stevens [p]'. **Karnataka:** 1 ♂ (BMNH), 'Canara [p] // 1673 [hw] // Macrosiagon / bipartita / (Fairmaire, 1894) / Det. ZHFalin '08 [p]'. **NEPAL:** 1 ♂ 1 ♀ (JBCP, JHCP), 'C-Nepal, Janakpur, 1987 / Tamba – Koshi – Khola / SE Charikot, 900-1200 m / leg. C. Holzschuh, 5.-10.VI. [p]'.

Variability. One specimen from West Bengal (Darjeeling) lacks the characteristic middle black spot on the pronotal disc.

Distribution. This mainly Oriental species is also distributed in the southeastern part of the Palaearctic Region. In India, it has so far only been reported from the Uttar Pradesh state (Batelka 2004) and in China it is only known from the eastern Kwangtung province (Gressitt 1941). It is recorded here from West Bengal (Darjeeling) and Karnataka (both India), Gansu and Hainan Island (both China) and Nepal for the first time.

Macrosiagon terminata (Laporte, 1840)

Emenadia terminata Laporte, 1840: 262. Type locality: Sénégal.
Macrosiagon terminata: Bedel (1895): 184 (new combination).
Ripiphorus nigripennis Dejean: Dejean (1837: 240) (nomen nudum).
Ripiphorus Leprieurii Buquet: Dejean (1837: 240) (nomen nudum).
For synonymy see Batelka (2008a).

Material examined. BURKINA FASO: 2 ex. (MRAC), 'HAUTE VOLTA / Dingasso nr. Bobo [for details of habitat see Pauly 1984] / 28.9.1979 / A. Pauly réc [p]'. **KENYA:** 1 ♂ 4 ♀♀ (JBCP), 'Kenya, Eastern / Nguni 30.12. / N of Ngomeni / Lgt. Snížek 2007 [p]' [on *Sericocomopsis* sp., M. Snížek, pers. comm.]; 3 ♀♀ (JBCP), 'Kenya, Eastern / Nguni 27.4. / N of Ngomeni / Lgt. Snížek 2008 [p]' [on *Sericocomopsis* sp., M. Snížek, pers. comm.]. **SENEGAL:** 1 ex. (IRSNB), 'Coll. J. Thomson [p] // 1414 [hw] // Determin. / M. Pic [p] // R. [Ripiphorus] / Nigripennis / Dej. [nomen nudum from Dejean (1837)] / Senegal [hw, round pink label] // nigripennis Dej. [hw]'; 1 ex. (IRSNB), 'Coll. J. Thomson // Determin. / M. Pic [p] // R. [Ripiphorus] / Leprieurii / Buq. [nomen nudum from Dejean (1837)] / Senegal [hw, round pink label]'. **SUDAN: Kordofan:** 1 ♀ (BMNH), 'Um Darag / R. C. M. Darling / 29.8.32 / on sheiba [hw] / Soudan gov. // Pres. by / Imp. Inst. Ent. / B. M. / 1933 – 330 [p] // Africa / 1: 250.000 Map [p] 55 E [hw] // Ent. Coll [p] C 11 9 63 [hw] // Macrosiagon / nigripennis / Gerst. / [hw] G. E. Bryant det. [p] // Macrosiagon terminatum / (Laporte de Castelnau, / 1840) / J. Batelka det. [p] 2005 [hw]'.

Biology. Plant associations of the examined specimens are discussed below in Discussion: Visited plants.

Distribution. Algeria, Djibouti, Egypt, Ethiopia, India, Kenya, Mauritania, Senegal, Yemen and the United Arab Emirates (Batelka 2007a, 2008b,c, 2010). It is recorded here from Burkina Faso and Sudan for the first time.

Macrosiagon trinotata Pic, 1950

(Figs. 41–43)

Macrosiagon trinotatum Pic, 1950c: 360. Type locality: [Democratic Republic of the Congo], Coquilhatville.

Type material examined. Holotype: 1 ♀ (Fig. 41) (MRAC), 'MUSÉE DU CONGO [p] / Coquilhatville / 1929 [hw] / Ex coll. [p] J. Müller [hw] // sp. pres / Rieli Pic [Pic's hw] // Macrosiagon / trinotatum n.sp. [Pic's hw] // Coquilhatville / Congo 1929 [hw] // R. DET. [p] / Z. [hw] / 5626 [p] // HOLOTYPUS [p] / trinotatum / Pic [hw, orange label]'.
Additional material examined. KENYA: 1 ♂ (BMNH), 'Brit.E.Africa. / Mumias / 4,200 ft. / June 15, 1911. / S.A. Neave [p] // 1912-193 [p]'; 1 ♀ (Fig. 42) (JBCP), 'Kenya (Tsavo) / 19-21. xi. 1996, Taita / Hills, Wundanyi / M. Snížek leg. [p]'. **REPUBLIC OF SOUTH AFRICA:** 1 ♂ (Fig. 43) (BMNH), 'P. B. Spei / Transwaal [p] // Fry Coll. / 1905.100 [p] // 70511 [hw]'; 1 ♀ (JBCP), 'Bell – Marley, / Durban / Natal [p]'; 1 ♂ (BMNH), 'PT Natal [hw, blue rounded label]'. **ZAMBIA:** 1 ♀ (NMPC), 'Zambia NW / Solwezi env. / 1.-3.XII. 2002 / J. Halada leg. [p]'.

Diagnosis. Habitus typical for *Macrosiagon*, head with elevated and round vertex, moderately acuminate apically, pronotal disc with transversal linear impression in the posterior

half (absent in the holotype and the female from Zambia), medial lobe of pronotal disc with distinct elevation before the apex, posterior edge of metepimeron simple, inner margin of elytra only moderately divergent at apex, elytra strongly acuminate, each elytron with one shallow longitudinal depression, tibial spur formula 1–2–2, MT 2 similar to other metatarsomeres, neither shortened nor flattened dorsally. Body length (from head to elytral apices) 6–7 mm.

Redescription. Head compressed antero-posteriorly. Vertex upraised, convex, glabrous and shining with scattered shallow punctures, spaces between punctures bigger than punctures in diameter. Clypeus densely punctured, spaces between punctures smaller than punctures in diameter, frontoclypeal margin slightly convex. Antennae 11-segmented, antennomere I long, slender and subcylindrical, antennomere II lenticular. Antennomeres III–X in males cylindrical, with two long rami, antennomere XI simple, in length similar to the previous rami, compressed longitudinally. Antennomeres III–X in females cylindrical, each with distinct projection, acute apically, antennomere XI suboval, compressed longitudinally.

Thorax shining, pronotal disc densely and deeply punctured, punctures with short golden setae. Meso- and metathorax glabrous, densely punctured, posterior margin of metepimeron straight. Hind wings dark violet.

Abdomen wedge-shaped with five visible ventrites (= sternites III-VII), sternites IV-VII telescopically fit under sternite III, making sternite III appear to be the longest.

Legs long and slender, roughly punctate, densely setose. Claws long, slender, compressed longitudinally, bifid apically.

Variation. Black species, excepting of yellowish-brown posterior edge of metepimeron and metacoxa, hind femur and tibia (excepting of their apices), all visible abdominal sternites, antennomeres I and II, and one humeral spot on each elytron (male, P.B. Spei; female, Durban; male, Natal); or as the previous South African specimens but elytra are completely black (male, Mumias), or as South African specimens but the hind tibia is completely black, metepimeron is yellowish-brown except of black strip along the suture with metanepisternum, and elytra are black with medial longitudinal yellowish-brown strip (female, Zambia; female, Tsavo) or identical with preceding two specimens but metepimeron as in South African specimens (holotype).

The holotype is more robust than the remaining available specimens, and bears shorter elytra and more convex pronotal disc (possible allometry). No other parts of the metathoracic legs but the right femur and tibia are preserved, and MTs cannot be examined. Because the species is described after a rather atypical and damaged single specimen, I decided to provide its redescription and notes on its colour variability (see above).

Remarks. *Macrosiagon trinotata* is similar to *M. lyauteyi* and *M. marcelli* by the shape of the body and elytra, and by having the transversal linear impression in the posterior half of the pronotal disc in some specimens. It differs from these species by the shape of the vertex and by the darker elytra. In coloration (particularly of the South African specimens), it resembles *M. humeralis*, which differs from *M. trinotata* as follows: on average being a bigger species (about 10 mm long), with the vertex with a deep, longitudinal impression anteriorly, the punctuation of the head and pronotum are rough, spaces between punctures are smaller than punctures in diameter, the pronotal disc without a transversal linear impression, and the hind legs and antennomeres I and II always being completely black.

Distribution. Known so far only from the type locality of Coquilhatville (now Mbandaka), which is situated in the Democratic Republic of the Congo. It is recorded here from Kenya, Republic of South Africa and Zambia for the first time.

Macrosiagon ukereweana Schilder, 1923

(Figs. 44–46)

Macrosiagon ukereweana Schilder, 1923: 333. Type locality: [Tanzania], Gebiet des Ukerewe-Sees [environs of Ukerewe Lake], Neuwied; [Tanzania], Munsa [sic!]; [Tanzania], Ngoroine, Mukenge.

Type material examined. Syntypes: 1 ♀ (Figs 44–46) (ZMHB), 'S.Victoria-Njansa / ? Muansa [sic!] / Stuhlmann S. [p, blue label] // COTYPUS [p, orange label] // ukerewe - / ana m. [hw] / Schilder det. [p] // SYNTYPUS / Macrosiagon ukerewana [sic!] / Schilder, 1923, / labelled by ZMHB 2008 [p, red label]'; 1 ♀ (ZMHB), 'COTYPUS [p, orange label] // D. O. Afr. / Neuwied Ukerewe / A. Conrads S. G. [p, blue label] // 2/496 / u r. V. // ukerewe - / ana m. [hw] / Schilder det. [p] // SYNTYPUS / Macrosiagon ukerewana [sic!] / Schilder, 1923, / labelled by ZMHB 2008 [p, red label]'; 1 ♀ (MNHN – coll. Pic, box no. 6), 'COTYPUS [p, orange label] // O. Victoria-Njansa / Ngoraine u. Mukenge / Anf. II. 94 / O. Neumann S. [p, blue label] // ukerewe - / ana m. [hw] / Schilder det. [p] // type [Pic's hw] // type [p, red label] / Macrosiagon / ukereweana / Schilder [hw] // en échange [hw]'. The fourth syntype is deposited in Deutsches Entomologisches Institut (Münchenberg, Germany); it has been examined by myself several years ago, however it is not corroborated here.

Additional material examined. ANGOLA: 1 ♀ (NHMB), 'Vila de Ponte / Angola 1935 / Coll. Monard // Macrosiagon / nov. spec? [hw]'. **BOTSWANA:** 1 ♀ (JBCP), 'Botswana bor. / Maun / Island Safari Lodge / 15.1.-29.1.1997 / Ltg. [sic!] M. Snizek [p]'. **DEMOCRATIC REPUBLIC OF THE CONGO** [label data communicated by Marc de Meyer]: 1 ex. (MRAC), 'MUSÉE DU CONGO / Nyangwe [env. Kasongo] / III.-IV.1918 / R. Mayné [p]'; 6 ex. (MRAC), 'MUSÉE DU CONGO / Lulua: Kapanga [p] / 18-XI-1932 [p/hw] / G.F. Overlaet [p]'; 1 ex. (MRAC), 'COLL MUS. CONGO / Luluabourg [p] / 15.-IV-1939 [p/hw] / J.J. Deheyn [p]'; 1 ex. (MRAC), 'COLL MUS. CONGO / Lusambo et env / 1950 / P. HOSTIE [p]'. **MALAWI:** 1 ♀ (BMNH), 'Nyasaland / Mlanje / Jan. 26. 1913 / S.A. Neave / 1913-140 [p]' [+ another 24 specimens with the same labels but different dates: January, February, March, April, May, June, December 1912–1914]. **MOZAMBIQUE:** 1 ♀ (BMNH), 'Port. E. Africa. / Valley of Kola R. / nr. E. Mt. Chiperone / 1.500-2000 ft. // 7 Apl. 1913 / S.A. Neave / 1913-140 [p]'; 1 ♂ (BMNH), 'Port. E. Africa. / Ruo Valley / 2,000 ft. 9.4.13 / S.A. Neave / 1913-140 [p]'; 1 ex. (BMNH), 'Port. E. Africa. / Kola Valley E. of / Mt. Chiperone // 1.700 ft. 21.11.13 / S.A. Neave / 1914-156 [p]'. **REPUBLIC OF SOUTH AFRICA:** 1 ♀ (BMNH), 'Tugela R. / Natal / G.A.K. Marshall. // Brit. Mus. / 1922-431 [p]'; 1 ♂ (JHCP), 'RSA / near Thabazimbi, N.P. / 10.11.2000 / Werner leg. [p]'. **TANZANIA:** 1 ♀ (JBCP), 'Tanzania 9/13.XII.1997 / near Songes, Rvuma Pr. / Werner & Lizler leg. [p]'; 1 ♀ (ZMHB), 'D. O. Afrika / Victoria-Nyansa / Insel Ukerewe / Conrads S. G. [p, blue label]'; 2 ♀♀ (BMNH), 'Taken with ex. of / Agathisanthemum sp. [family Rubiaceae: Spermacoceae] [hw] // Tanzania / nr. road 36 miles N. / of Churya / 20.3.1965 / Mrs. M. Richards, 19778 [hw] // Brit. Mus. / 1966 – 156 [p]'. **UGANDA:** 2 ♀♀ (BMNH), 'Uganda Prot. / Valley of Kafu R. / Unyoro. 3,400 ft. / 23-28 Dec.1911 / S.A. Neave. // 1912 – 193 [p]'. **ZIMBABWE:** 1 ♂ (BMNH), 'Salisbury [= Harare] / Mashonaland / G.A.K. Marshall [p] / [reverse side:] 23.iv.1894 [hw] // Brit. Mus. /1922-431 [p]'; 1 ♂ 1 ♀ (JBCP), 'C. Zimbabwe / 70 km N of Chivhu / Featherstone env. 22.xi. 1998 / M. Snížek leg. [p]'.

Remarks. I regard *Macrosiagon ukereweana* as the putative sister species of *M. octomaculata* (Gerstaecker, 1855), which is widespread in the New World. Both species are of the same habitus and coloration and differ only by the elevated process at the apex of the pronotal disc, which is present in *M. octomaculata* (15 specimens from Argentina, French Guyana and Paraguay in JBCP were examined), but absent in *M. ukereweana*.

Biology. Plant association of the specimens mentioned in the Additional material are discussed in Discussion: Visited plants.

Distribution. This Afrotropical species was described from Tanzania and is known up to now only from the type series. It is recorded here from Angola, Botswana, Democratic Republic

of the Congo, Malawi, Mozambique, Republic of South Africa, Uganda and Zimbabwe for the first time.

Definition of species groups

Some *Macrosiagon* species form natural species groups definable by a combination of several external characters. Members of each species group given below are of identical habitus, particularly in the shape of the head, pronotum and elytra, and usually of a similar ground plan in terms of the colour pattern. Five of nine species groups mentioned below are represented both in the Old and New World – the significance of this pattern has to be evaluated in future studies.

In addition to the below defined species groups, a further five African species seem to form a group or groups of closely related species, probably sister to the *M. bifasciata* species group: these are *M. abyssinica*, *M. humeralis*, *M. lyauteyi*, *M. marcelli* and *M. trinotata*. They have flattened elytra, each elytron with one shallow longitudinal depression (similar to the *M. bifasciata* species group but the elytra are more narrow and acute apically), the colour pattern seems to be species-specific, the shape of the vertex is different in the each species, and the pronotal disc sometimes bears impressions.

Macrosiagon bifasciata species group

Included species. Batelka (2004: 12, 2008b: 150, 2010: 159) and Batelka & Hoehn (2007: 147) established and continuously complemented the composition of the *bifasciata* species group in the Old World. The present study revealed that more species should be included in this group. Even though additional Australian and New World species will be added into the group later, the group at present requires redefinition. At least the following species should be included, although the validity of some of these needs still to be revisited: *Macrosiagon bifasciata*, *M. biguttata*, *M. bipunctata*, *M. caffra*, *M. dohertyi* Pic, 1949, *M. elegans* (Marseul, 1876), *M. fortieri* (Chobaut, 1893), *M. gabonica*, *M. grombczewskii*, *M. medvedevi* Iablokoff-Khnzorian, 1973, *M. meridionalis* (Costa, 1859) and five unresolved Pic's taxa listed in this study under *M. bipunctata* and *M. caffra*.

Diagnosis. Elytra black basally (with the exception of *M. elegans* 'form A' *sensu* Batelka (2010)) and apically, with an isolated black spot in the middle of each elytron (the spot is missing in males of *M. elegans* and *M. gabonica* (Batelka 2010, present study)) or this spot is partially fused through the external and/or internal elytral margin with apical and basal markings so the two light spots remain on each elytron (completely black or brown specimens of *M. biguttata* exist). Sexual dichroism in some of its members is developed. Elytra flat, each elytron with one shallow longitudinal depression, moderately acute apically (strongly acute in *M. biguttata*).

Macrosiagon bimaculata species group

Included species. *Macrosiagon bimaculata*, *M. terminata* and *M. oberthurii* (Fairmaire, 1879).

Diagnosis. All three species share an elevated medial lobe of the pronotal disc, a slightly elevated base of the elytra and similar orange-black colour pattern.

Macrosiagon ferruginea species group

Included species. *M. ferruginea*, *M. signaticollis*, *M. carinicollis* Fauvel, 1905 (New Caledonia: Ile des Pins) and *M. baeri* Pic, 1906 (Argentina).
Diagnosis. All four species possess a narrow evagination in the posterior edge of the metepimeron, an apomorphy possibly developed to accomodate or support the apical edge of the metafemur. All four species are of the same morphotype but are distinguishable by their coloration.
Remarks. As far as I know, this peculiar modification of the metepimeron is developed only in two other *Macrosiagon* species: *M. cruenta* (Germar, 1824) (North and Central America) and *M. multinotata* Pic, 1906 (South America). My identification of *M. multinotata* is based on its type specimen, examined by myself in MNHN. However, in some collections, this species is labeled as *M. gayi* (Gerstaecker, 1855) so these names may be synonymous. The relationship of *M. cruenta* and *M. multinotata* with the *M. ferruginea* species group is unclear. They are of a similar shape with elytra typical for the *M. ferruginea* species group, and *M. cruenta* shares the same host group with *M. ferruginea* (which is the only representative of *M. ferruginea* species group for which the biology is known). In all cases *M. ferruginea* was reported to develop in the nests of wasps of the subfamily Eumeninae (Bequaert 1918, Bétis 1912, Chobaut 1891, Falin 2004b, Grandi 1936, Horne & Smith 1870, Longair 2004, Roubaud 1916). *Macrosiagon cruenta* was also twice reared from eumenid nests (Genaro 1996, Snelling 1963). Some of the other *Macrosiagon* species in which this evagination is missing are also known to be exclusive parasitoids of Eumeninae, e.g. *M. nasuta* (Batelka & Hoehn 2007), therefore the evagination in the posterior edge of metepimeron might be of phylogenetic rather than of ecological origin. It is possible that *M. cruenta* and *M. multinotata* also belong to *M. ferruginea* species group.

Macrosiagon flavipennis species group

Included species. *M. flavipennis* and *M. callewaerti*.
Diagnosis. The group is definable by the combination of unicolorous whitish elytra in males, a long head with a largely elevated vertex and the elevated medial lobe of the pronotal disc.

Macrosiagon limbata species group

Included species. Four extant species, *M. axillaris*, *M. limbata* (Fabricius, 1781), *M. linearis* (Leconte, 1866) and *M. pusilla,* and one fossil species *M. deuvei* Batelka, Collomb et Nel, 2006 (Eocene, France).
Diagnosis. Species from this group are definable by having long, parallel sided and slender elytra, being convex along the elytral suture, medial lobe of the pronotal disc without an elevation and very long thread-like antennal rami in males (in *M. deuvei* only two female specimens are known).

Macrosiagon nasuta species group

Included species. *Macrosiagon nasuta* and *M. inferna*.
Diagnosis. Both species are of similar habitus, however, they slightly differ in the length of the elytra and the shape of MT 2. Always completely black species including all of the

appendages (with the exception of teneral brown specimens). Elytra are of a similar shape typical for the *M. ferruginea* species group.

Macrosiagon octomaculata species group

Included species. *Macrosiagon octomaculata* and *M. ukereweana*.
Diagnosis. The whole body and the posterior part of the head are covered by short appressed golden setae, pronotal disc and elytra orange with black markings (although completely black specimens occur rarely). Elytra in shape similar to those of *M. bifasciata* species group. Both species are of the same habitus and similar colour pattern.

Macrosiagon sodalis species group

Included species. Four taxa from the Malagasy region were included in this group by Batelka & Straka (2011): *M. sodalis* (Waterhouse, 1883), *M. benschi benschi* Alluaud, 1902, *M. benschi seyrigi* Pic, 1952 (all from Madagascar) and *M. benschi insularis* Schilder, 1923 (Comoros). The group is, however, in need of revision as all mentioned taxa may be conspecific.
Diagnosis. Representatives of this group are characterized by the presence of a flattened spiny process at the apex of antennomere 1 (Batelka & Straka 2011).

Macrosiagon vittata species group

Included species. *M. gracilis* Manfrini de Brewer, 1966, *M. mutilata* (Gerstaecker, 1855) and *M. vittata* (Erichson, 1847) (Falin 2004a).
Diagnosis. This group is defined by the presence of two protibial spurs, a transversely flattened vertex not elevated above the dorsal margin of the eyes, and thread-like antennal rami in males (Falin 2004a).

Discussion

Fauna of Madagascar

Besides the representatives of the *Macrosiagon* '*sodalis*' species-group and the endemic *M. lyauteyi*, the Malagasy fauna contains a further three *Macrosiagon* species also known from continental Africa (*M. axilaris*, *M. caffra*, *M. inferna*). The distribution pattern of these three species is of particular interest in regards to the geological history of Madagascar and Africa. Until the beginning of the Cretaceous, both land masses were integrated within the Gondwanan supercontinent. Although several fragmentation models concerning Gondwana during the Cretaceous period are currently debated (Briggs 2003, Serreno & Brusatte 2008, Smith et al. 2008), it is agreed that Madagascar occurred as a former part of the India + Madagascar subunit in virtual isolation surrounded by an oceanic barrier for at least the last 80 million years (MY). Therefore, Madagascar, although of continental origin, has stood isolated from Africa since the Early Cretaceous and in the complete isolation from other parts of the former Gondwana since the Late Cretaceous and almost in the same position it is presently (but see Poux et al. 2005).

Because of its Gondwanan history, a vicariant origin for a substantial portion of its biota could be presumed. However, studies addressing the origin of extant Malagasy groups of vertebrates published in the last decade have shown that multi-directional trans-oceanic dispersals (sometimes with multiple events), to and from Africa and Madagascar, have been a common phenomenon in their post-Cretaceous colonisation history (e.g. Nagy et al. 2003; Rocha et al. 2005, 2006; Sound et al. 2006; Vences et al. 2003). Similarly, evidence for multiple trans-oceanic dispersals of insects to and/or from Madagascar, has been corroborated in the satyrine butterfly subtribe Mycalesina (Torres et al. 2001), swallowtail butterflies (Papilionidae) (Zakharov et al. 2004) and small minnow mayflies (Baetidae) (Monaghan et al. 2005).

If we hypothetically assume a traditional vicariance concept for all three *Macrosiagon* species, i.e. that they might exist unchanged on both land masses simultaneously for more than 80 MY (and supposing they are much older and that their host group(s) already existed at that time), then it would be difficult to explain their absence on both the Indian subcontinent and Australia, both of which also belonged to this part of Gondwana in the Early Cretaceous and both of which currently harbour different assemblages of extant *Macrosiagon* species.

Another significant argument against a vicariant origin of these three *Macrosiagon* species is the maximum known durration for insect species. Longevity of insect species-rank taxa is a rarely discussed issue (Nel & Prokop 2009). Recently, Hörnschemeyer et al. (2010) published a review of the records of conspecific fossil and extant species. They assumed that particular insect species may survive up to several tens of millions of years ranging from 20 MY (Dominican amber) up to 45 MY (Baltic amber). Palaentological records of *Macrosiagon* are, however, not very helpful due to the absence of definitive Mesozoic records. The oldest *Macrosiagon* reported is *M. ebboi* Perrichot, Nel et Néraudeau, 2004 (French Late Cretaceous amber) but its placement within the tribe Macrosiagonini is doubtful (Batelka & Hájek 2009). The only true fossil member of the genus – although almost indistinguishable from extant *M. axillaris* and *M. pusilla* – is thus *M. deuvei* (French Eocene amber, 53 MY) (Batelka et al. 2006). In any case, no example of extant insect species with a Mesozoic origin is known and their existence seems to be improbable.

Taking into consideration all the factors mentioned above along with the current African-Madagascan distribution of *M. axillaris*, *M. caffra* and *M. inferna* the plausible colonisation scenario within a current paradigm seems to be three trans-oceanic dispersal events rather than a vicariance model.

Fauna of continental Africa

In addition to the unresolved taxonomic problems mentioned in this paper, the following types of species-rank taxa remain to be examined: *Macrosiagon bilineaticollis* Pic, 1951c: 34 (type locality: 'Caschei'); *M. testaceonotata* Pic, 1951a: 14 (type locality: 'Tanganyka'); *M. theresae* var. *madoni* Pic, 1951b: 16 (type locality: 'Gabon') and *M. zavattarii* Pic, 1951c: 34 (type locality: 'Gondaraba, Lago Stefania'). My current studies do not reveal any undescribed species in the material examined, so if there exist any, they are either indistinguishable at the moment from the currently recognised species (e.g., see remarks under *M. caffra*), or some special collecting methods (like fogging or trap-nests) have to be used to discover them. Faunistic data are still insufficient and more material has to be examined before any detailed

analysis of the distribution of the majority of the African species can be provided. However, at least *M. axillaris*, *M. bequaerti*, *M. gabonica*, *M. inferna*, *M. marcelli*, *M. signaticollis*, *M. trinotata* and *M. ukereweana* are widespread Afrotropical species.

Visited plants

Macrosiagon ferruginea was repeatedly collected together with *M. terminata* on the flowers of *Sericocomopsis* sp. (*S. hildebrandtii* Schinz or *S. pallida* (S. Moore) Schinz) (Amaranthaceae: Aervinae) at Ngomeni, Kenya, (Figs. 48–49) (also see the material examined of both species listed above). One specimen of *M. ferruginea* from Oman (Batelka 2010) was collected on *Aerva javanica* (Burm.f.) Juss. (also Amaranthaceae: Aervinae). In the United Arab Emirates, *Macrosiagon ferruginea* was collected on *Ochradenus* sp. (Resedaceae) (Batelka 2008c) while in the Mediterranean region and South Africa, this ripiphorid seems to prefer *Mentha* spp. (Lamiaceae). Sánchez Rodríguez (2001) reported *Mentha suaveolens* from Spain as the visited plant; in Italy (Gobbi 2002) and France (Caillol 1914) it was observed on *Mentha* sp. In Egypt (see material examined of *M. ferruginea*) it was collected on *Mentha spicata*. All nine Namibian specimens recorded in the material examined were collected on flowering *Mentha longifolia* (Fig. 47). Occasionally, other visited plants have been reported from the Mediterranean: *Eryngium campestre* (Caillol 1914), *Euphorbia* sp. (Tanenbaum 1915) and some others. However, these observations were not recorded from more than one locality and they therefore may represent only accidental visits.

Wording "on sheiba" given on the locality label of the Sudanese specimen of *M. terminata* (see the material examined) undoubtedly referes to the plant on which it was collected. According to ALUKA (2008) it is one of the Arabic vernacular names for *Aerva javanica* (Amaranthaceae). Eight specimens of *M. terminata* were collected on the same plant species in the United Arab Emirates (Batelka 2008c).

It seems that records of *M. ferruginea* and *M. terminata* specimens from Oman, United Arab Emirates, Kenya and Sudan collected on *Aerva* and *Sericocomopsis* are not accidental and that the plant subfamily Aervinae plays an important role in the biology of these two *Macrosiagon* species in the Arabian Peninsula and eastern Africa. I assume that this is possibly caused by the popularity of these plants with aculeate hymenopterans (pers. observ. in *Aerva*), i.e. *Macrosiagon* putative host-species, and simultaneously the capability of these plants to colonize semiarid, arid, and even disturbed habitats prevailing in the area. Similarly, inflorescences of different species of *Mentha* seem to be visited by the adults of *M. ferruginea* for the same reason. And last but not least, noteworthy are also Afrotropical records of *Macrosiagon bipunctata* (from Senegal), *M. ferruginea* (from Cameroon, Gabon and Senegal) and *M. ukereweana* (from Tanzania) taken on different representatives of the tribe Spermacoceae of the Rubiaceae (tribal classification follows that of Bremer & Manen (2000)).

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