

SYNONYMIC REVISION OF THE AFRICAN GENUS *XELOMA* (Coleoptera, Scarabaeidae, Cetoniinae)

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Abstract

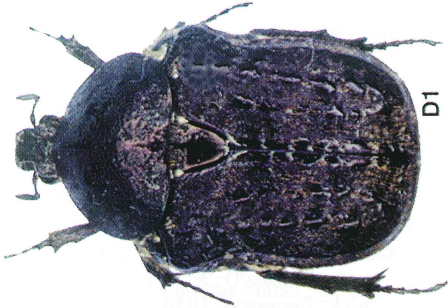
1. Two new species of the Genus *Xeloma* from Tanzania, *Xeloma antoinei* sp. n. and *Xeloma werneri* sp. n. are described and figured. *Xeloma burmeisteri* (Arrow, 1941) is downgraded to subspecies status; *Xeloma pilicollis burmeisteri* (Arrow, 1941) stat. nov. is proposed. *Sisyraphora angolensis* Valck Lucassen 1936 (= *Xeloma tomentosa* G. & P) is upgraded to subspecies status: *Xeloma tomentosa angolensis* (Valck Lucassen 1936) stat. nov. is proposed.
2. Figures to all known species and subspecies of the Genus *Xeloma* are given.
3. The representative characters for Genus *Xeloma* Kraatz are given.
4. A key to the species and subspecies of the Genus *Xeloma* Kraatz is presented.
5. The distribution of the species and subspecies of the Genus *Xeloma* Kraatz is shown, including all synonyms.

Introduction

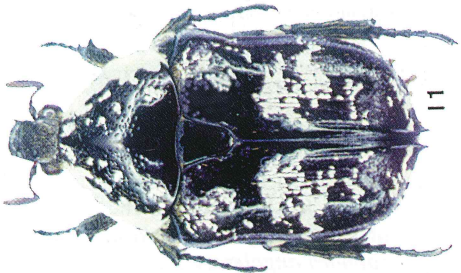
Within a sample of *Cetoniinae*, collected by Karl Werner (Peiting, Germany) during his trips to Tanzania (East Africa), a new species of the Genus *Xeloma* was included. Within another series of undetermined *Cetoniinae*, sent by Gerd Bentz (Neunkirchen, Germany), a new species of the Genus *Xeloma* was also included.

Characters of the Genus *Xeloma* Kraatz.

1. Male abdominal sternites without median depression.
2. Parameres of the adocoagus narrower at the base than the pars basalis; semi-detached anterodistal plates; apical pubescens inside parameres; anterodistal lobes of parameres rounded.
3. Scutellum elongate, rounded at the apex; complete lateral grooves which may be exposed or covered.
4. Elytra with a deep subhumeral emargination; second costa depressed in the apical half of length.
5. Clypeus with anterior margin laminately upturned, mildly bilobate to bidentate near middle. Posterior pronotal margin roundedly incised anteriorly of scutellum.
6. Protibiae tridentate in both sexes, denticels more or less equidistant; mesotibiae with bidentate median transverse blade on the outside; metatibiae with entire median transverse blade on the outside. Profemur unarmed.
7. Tarsomeres unmodified, or with only basal tarsomere of hindleg with a spinose extension distally.
8. Metatibial spurs simple, wider in the female; metatibia distally normal, tripinose.
9. Mesometasternal process rounded, setose at least on anterior declivity; post-mesocoxal sulci meeting on middle line posterior of middle of mesocoxa.



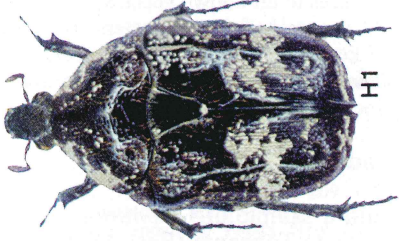
D1



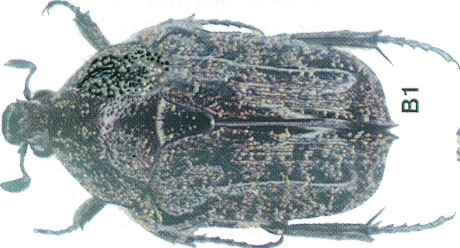
I1



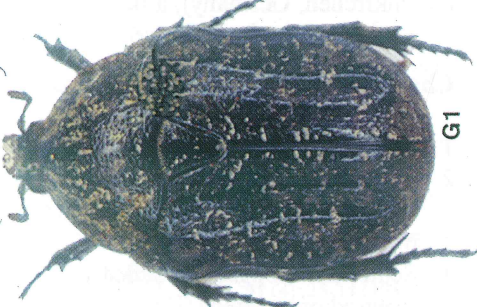
C1



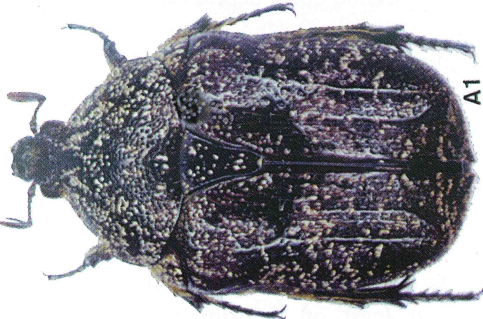
H1



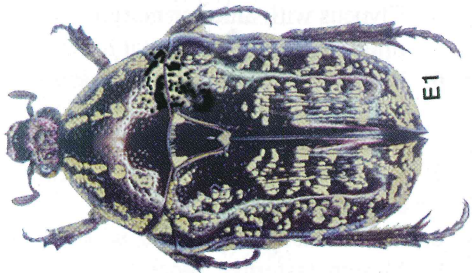
B1



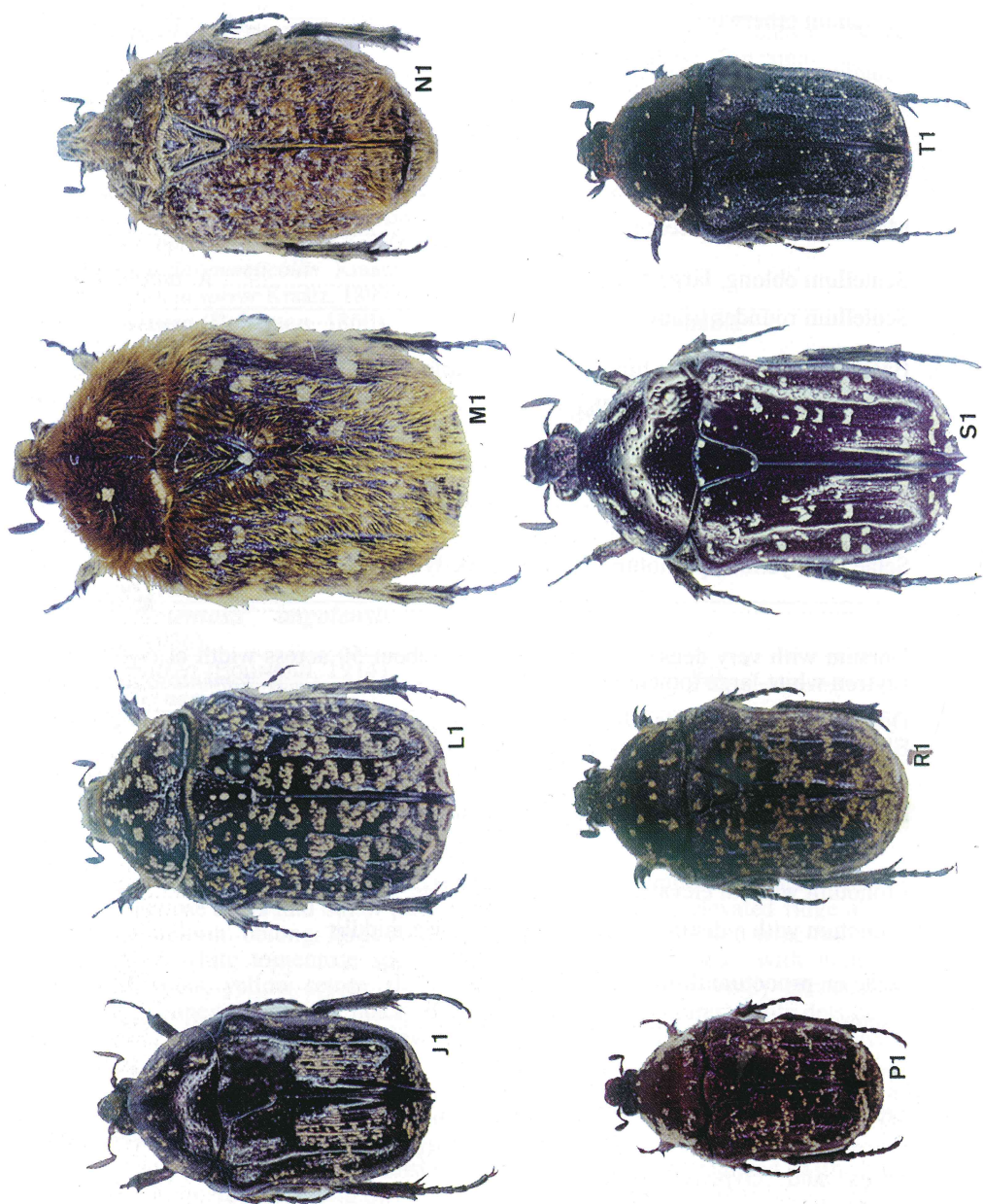
G1



A1



E1



Key to the species and subspecies of the Genus *Xeloma* Kraatz

1. Scutellum bulbous, glabrous, rounded posteriorly. *X. cicatricosa*
- Scutellum otherwise 2
2. Scutellum densely and evenly punctured with transverse grooves. Pronotum with transverse grooves. *X. vuilleti*
- Scutellar and pronotal sculpture otherwise..... 3
3. Mesometasternal process disc-like, glabrous ventrally. 4
- Mesometasternal process densely setose. 5
4. Scutellum oblong, large rounded at apex *X. antoinei* sp. n.
- Scutellum rounded triangle-form 8
5. Basal tarsomere of male hindleg extended into a long spine posterodistally. 6
- Basal tarsomere of male hindleg simple. 7
6. Setae on dorsum short, on average less than one quarter of eye-diameter. *X. maura*
- Setae on dorsum long, thick, black to brown, at least one half of eye-diameter.
- *X. atra*
- Setae thin, yellow; pronotum with a distinctly elevated ridge along middle;
- *X. seticollis*
7. Dorsum with very dense, long golden setae (about 50 across width of elytron); Elytron white large tomentose spots. *X. tomentosa tomentosa*
- Dorsum with very dense, short golden setae..... (about 50 across width of elytron). Elytron without or with some small, white, tomentose spots.....
- *X. tomentosa angolensis* stat. n.
- Dorsum with much sparser pale brown setae (about 12 across width of elytron).
- *X. aspersa*
8. Pronotum without elevated ridge along middle 9
- Pronotum with a distinctly elevated ridge along middle 10
9. Setae on pronotum thin *X. leprosa*
- Asetose pronotum *X. weneri* sp. n.
10. Frons and clypeus evenly densely setose *X. pilicollis pilicollis*
- Frons and clypeus asetose except for a dense setal brush between eyes
- *X. pilicollis burmeisteri* stat.n.
- Frons and clypeus asetose *X. pilicollis somalica*

Distribution of the species and subspecies of the Genus *Xeloma* Kraatz, including all synonyms

<i>Xeloma antoinei</i> sp. n	Tanzania
<i>Xeloma aspersa</i> (Peringuey, 1896)	South Africa , Zimbabwe, Namibia, Botswana, Malawi, Tanzania.
<i>Xeloma atra</i> (Tunberg, 1818) Syn. : <i>Cetonia adiosa</i> Gory & Percheron, 1833 ; <i>Anoplochilus setosus</i> Mac Leay, 1838.	South Africa
<i>Xeloma cicatricosa</i> (Burmeister, 1842)	Senegal, Burkina Faso
<i>Xeloma leprosa</i> (Burmeister, 1842 syn. : <i>Cetonia (Protaetia) amakosa</i> Boheman, 1857 ; <i>Pseudoprottaecia stictica</i> Kraatz, 1882 ; <i>Pseudoprottaecia puncticollis</i> Kraatz, 1899 ; <i>Pseudoprottaecia sorror</i> Kraatz, 1899.	South of the African Continent
<i>Xeloma maura</i> (Boheman, 1860) syn. : <i>Anoplochilus coenosa</i> Westwood, 1849	South Africa, Namibia
<i>Xeloma pilicollis pilicollis</i> (Kraatz, 1892)	Kenya, Ethiopia
<i>Xeloma pilicollis burmeisteri</i> (Arrow, 1941) syn. : <i>Cetonia estolee</i> var. Olivier, 1789 ; <i>Protaetia stolata</i> (Olivier) Burmeister, 1842.	West of the African Continent
<i>Xeloma pilicollis somalica</i> Müller, 1841	Somalia
<i>Xeloma seticollis</i> (Kraatz, 1880)	Kenya, Tanzania
<i>Xeloma tomentosa tomentosa</i> (Gory & Percheron, 1833)	South Africa
<i>Xeloma tomentosa angolensis</i> (Valck Lucassen, 1936)	Angola, Congo
<i>Xeloma vuilleti</i> (Bourgoin, 1914)	Senegal, Niger, Togo
<i>Xeloma werneri</i> sp. n.	Tanzania

Descriptions

Xeloma antoinei sp. n .

Measurements: Length 14 - 17 mm, width 8 - 10 mm. Pronotum: black, shiny, with white tomentose spots and small punctures; with a distinctly elevated ridge along the middle. Scutellum: oblong, large rounded at apex, asetose, black to wine-red, shows a reduction of white tomentose spots .Elytrae: black to wine-red, with many white tomentose spots, yellow setose, the sutural elytral costa is strongly elevated, small radius at the apex. Pygidium: black, shiny with densely punctures, white dots or dotted lines. Tibiae and Tarsi: black, yellow setose. Mesotibia: mesotibial denticle developed with dense covering of golden setae. Venter: golden setae, middle of venter black to brown, covered with long, golden setae. Sides of venter white with black maculation. Mesometasternal process: disc-like, glabrous ventrally. Mesosternal lobe: elyptoise form lateral with small radius. Clypeus: anterior margin bilobed upturned, lateral margin flat. Aedoeagus: anterodistal lobes of parameres rounded with bilateral denticles, parameres for a long distance narrower at middle than pars basalis. Habitate: unknown.

Holotype: 1 M, Tanzania (in Coll. Zoologische Staatssammlung München)

Paratypes: 2 M, 7 F, Tanzania (in Coll. Beinhundner), 1 M, Tanzania (in Coll. Ph. Antoine), 1 F, Tanzania (in Coll. R. Alexis).

Derivatio nominis

The new species is dedicated to the wellknown specialist of world *Cetonidae*, Mr. Ph. Antoine from Roubaix (France).

***Xeloma weneri* sp. n.**

Measurements: Length 13 -14.5 mm, width 6.5 - 7.5 mm. Pronotum: dark-red to black, shiny with only some white spots. Interrupted white bilateral margin. Surface almost without puncturation, asetose. Scutellum: asetose, dark-red to black, shiny, with a white spot in each angle, large rounded apically. Elytrae: dark-red to black, shiny with only some white spots, asetose, surface almost without puncturation, sutural costa is strongly elevated and spinose at the apex. Pygidium: lateral white with two white spots, sutural black. Tibiae: black, sparsely setose. Venter: sparsely setose, middle of venter black, shiny, sides of venter white. Mesometasternal process densely setose. Clypeus: anterior margin upturned. Aedoeagus: parameres with elongated anterodistal plates are strongly angular in posterolateral hook-shaped corners. Habitate: bushy areas at the edges of secondary and primary forests on the slopes of the Uluguru Mountains in Central Tanzania (Werner, pers. comm.).

Holotype: 1 M, Tanzania Uluguru Mountains, 4.1991, K. Werner leg. (in Coll. G. Zoologische Staatssammlung München); Paratypes: 1 M, Tanzania, Tanganjika, Lukuledi (in Coll. G. Beinhundner) and 1 F, Tanzania, Uluguru Mountains, 4.1991, K. Werner leg. and 1 F, Tanzania Uluguru Mountains K. Werner leg., 4.1992, and 1 F, Tanzania, Uluguru Mountains, near Morogoro, 3.1992, K. Werner leg. (all in Coll. G. Beinhundner)

Derivatio nominis

The new species is dedicated to the discoverer of this new species, my friend Karl Werner (Germany).

Differential diagnosis to the closely related *Xeloma leprosa****Xeloma weneri* sp. n.**

Dorsum: asetose, redish reflections, reduced white maculation. Frons and Clypeus asetose. Venter: extrem, sparsely setose, sutural of venter wider black. Aedoeagus: parameres with elongated anterodistal plates that are strongly angular in posterolateral hook-shaped corners.

***Xeloma leprosa* (Burmeister, 1842)**

Dorsum: sparse asetose, from copper-bronze to black, extended yellow maculation, sometimes reduced. Frons and Clypeus asetose except for a dense setal brush between the eyes. Venter: sparsely setose, sutural of venter with narrow black margin. Aedoeagus: parameres with elongated anterodistal plates that are strongly angular in posterolateral rounded corners.

Differential diagnosis to the closely related species *Xeloma aspersa*, *atra*, and *maura*.***Xeloma antoinei* sp. n.**

Elytrae: the sutural elytral costa is strongly elevated, rounded elytral apices. Sternites: sides of sternite extensively covered with white toment. Mesosternal lobe: elysoide form lateral with small radius. Aedoeagus: the Aedoeagus is quite distinct, see figures.

***Xeloma aspersa* (Peringuey, 1896)**

Elytrae: the sutural elytral costa is strongly elevated, spinose elytral apices. Sternites: sides of sternite extensively covered with white toment. Mesosternal lobe: disc form. Aedoeagus: quite distinct, see figures.

***Xeloma atra* (Thunberg, 1818)**

Elytrae: the sutural elytral costa is not elevated, pointed elytral apices. Sternites: sides of sternite covered with white toment. Mesosternal lobe: disc form. Aedoeagus: is quite distinct, see figures.

***Xeloma maura* (Boheman, 1860)**

Elytrae: the sutural elytral costa is less elevated, pointed elytral apices. Sternites: sides of sternite nearly without white toment. Mesosternal lobe: disc form. Aedoeagus: quite distinct, see figures.

Differential diagnosis for *Xeloma pilicollis* and its subspecies***Xeloma pilicollis* ssp. *burmeisteri* stat. n. (Arrow, 1941)**

I could not examine the type of *Xeloma burmeisteri* (Arrow, 1941), but based on specimens of my collection, which are well fitting the description's characters, *Xeloma burmeisteri* has a nearly identical aedoeagus with *Xeloma pilicollis*, and therefore consequently downgraded to subspecies status. Clypeus: asetose except for a dense setal brush between eyes. Pronotum: bilateral wide, white margin, asetose. Elytrae: with extended white central maculation, asetose. Mesofemur: dense covering of golden setae. Aedoeagus: the parameres are in general the same as in *Xeloma pilicollis* ssp. *pilicollis*.

***Xeloma pilicollis* ssp. *pilicollis* (Kraatz, 1892)**

Clypeus: evenly densely setose. pronotum: bilateral medium, white margin mostly interrupted. densely golden setose. Elytrae: white central maculation, densely golden setose. Mesofemur: dense covering of golden setae.

***Xeloma pilicollis* ssp. *somalica* Müller, 1941**

Clypeus: asetose trapezoid. Elytrae: with white central maculation. Pronotum: bilateral medium, white margin mostly interrupted, asetose. Mesofemur: sparse golden setose. Aedoeagus: the parameres are in general the same as in *Xeloma pilicollis* ssp. *pilicollis*

Differential diagnosis for *Xeloma tomentosa* s. str. and *X. tomentosa angolensis* stat. n.***Xeloma tomentosa* ssp. *tomentosa* (Gory & Percheron, 1833)**

This species is easily recognizable by its extremely dense cover with long golden setae. Metatibia: with an extrem reduction of the spine on the basal tasomere. Elytrae: white large tomentose spots. Sternites: covered with white toment, except a narrow sutural band, with long golden setae.

***Xeloma tomentosa* ssp. *angolensis* stat. nov. (Valck Lucassen, 1936) (fig. K 5, K 6)**

This subspecies has shorter golden setae. Elytrae: the white tomentose spots are much smaller or complet absent. Aedoeagus: The basal parts of parameres slightly wider. Sternites: only sides of sternites covered with white toment with shorter golden setae.

Figures

- Xeloma antoini* sp. n. Holotype, ZSMC, fig. A 1, A 2, A 3, A 4.
Xeloma aspersa (Peringuey, 1896), fig. B 1, B 2, B 3, B 4.
Xeloma atra (Thunberg, 1818), fig. C 1, C 2, C 3, C 4.
Xeloma catricicosa (Burmeister, 1842), fig. D 1, D 2, D 3, D 4.
Xeloma leprosa (Burmeister, 1842), fig. E 1, E 2, E 3, E 4.
Xeloma maura (Boheman, 1860), fig. G 1, G 2, G3, G4.
Xeloma pilicollis pilicollis (Kraatz, 1892), fig. H 1, H 2, H 3, H 4.
Xeloma pilicollis burmeisteri Arrow, 1941 stat. n., fig. I 1, I 2, I 3, I 4.
Xeloma pilicollis somalica Müller, 1841), Paratype, fig. J 5, J 6, J 3, J 4.
Xeloma seticollis (Kraatz, 1880), fig. L 1, L 2, L 3, L 4.
Xeoma tomentosa tomentosa (Gory & Percheron, 1833), fig. M 1, M 2, M 3, M 4.
Xeloma tomentosa angolensis, stat. n. (Valck Lucassen, 1936) Cotype (Lectotype Holm, 1987), fig. N 1, N 2.
Xeloma vuilleti (Bourgoin, 1914) Type, fig. P 1, P 2, P 3, P 4.
Xeloma vuilleti (Bourgoin, 1914), (Type *Jothochilus tessmanni* Kraatz i. I.), fig. R 1, R 2, R 3, R 4.
Xeloma vuilleti (Bourgoin, 1914), fig. T 1, T 2.
Xeloma werneri sp. n. Holotype, ZSMC, fig. S 1, S 2, S 3, S 4.

Missinterpreted species

The type series of *Sisyrophora carinicollis* Moser definitely does not belong to *Xeloma*, because the abdominal sternites of the male are concave, the elytral costae interruptedly and strongly raised, the aedeagus is of different type, the scutellum is pointed at the apex. The Genus of this species is *Jotochilus* Kolbe 1892. The following species are wrongly stated to be in the Genus *Xeloma*:

- Xeloma carinicollis* (Moser, 1918), in Sakai K. & Nagai, S., 1998, p. 306. (*Jotochilus carinicollis* Moser 1918).
Xeloma carinicollis (Moser, 1918), in Krajcik M., 1998, p. 61. (*Jotochilus carinicollis* Moser 1918).

The following species are wrongly stated to be in the Genus *Pseudoprottaetia*

- Pseudoprottaetia leprosa* (Burmeister, 1842) in Sakai K. & Nagai, S., 1998, p. 306.
Pseudoprottaetia amakosa (Boheman, 1857) in Sakai K. & Nagai, S., 1998, p. 306. (= *leprosa* (Burmeister, 1842))
Pseudoprottaetia pilicollis Kraatz, 1892, in Sakai K. & Nagai, S., 1998, p. 306
Pseudoprottaetia burmeisteri Arrow, 1941, in Sakai K. & Nagai, S., 1998, p. 306.

The following subspecies is wrongly stated to be a synonym

- Xeloma tomentosa angolensis* (Valck Lucassen, 1936), in Krajcik M., 1998, p. 61.

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