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A short review of the genus *Chilotomina* REITTER, 1912
(Coleoptera: Chrysomelidae: Clytrinae)

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ABSTRACT. A short review of all hitherto known species of the genus *Chilotomina*, and a key to their determination (with figures) are given. Three new species are described: *Chilotomina erberi* n. sp. from Morocco, *Ch. bergeali* n. sp. from Algeria and *Ch. regalini* from Morocco. *Clythra nigritarsis* LACORDAIRE, 1848 is designated as type species of the genus *Chilotomina*. *Chilotomina djebellina* (LEFÈVRE) is placed in the genus *Smaragdina* CHEVR.

Key words: entomology, taxonomy, review, *Coleoptera*, *Chrysomelidae*, *Chilotomina*, Palearctic Region.

The genus *Chilotomina* was established by REITTER (1912: 84) to accommodate *nigritaris* (LACORDAIRE), *korbi* (WEISE), *baetica* (WEISE), and *djebellina* (LEFÈVRE). Originally, the generic diagnostic characters were the following: male mandibulae hypertrophic, much broader than in female; posterior angles of pronotum rounded but elevated over the level of humeral part of elytra; pronotum uniformly red, strongly punctate; anterior margin of elytra present near humerus only. Actually only the first two characters and the colour of pronotum are stable and sufficient to separate *Chilotomina* from the remaining Western-palaeartic genera of *Clytrinae*.

***Chilotomina* REITTER, 1912**

Chilotomina REITTER, 1912: 84.

Type species: *Clythra (Gynandrophtalma) nigratarsis* LACORDAIRE, 1848: 297, by present designation.

DIAGNOSIS

Male mandibulae hypertrophic, much broader than in female; posterior angles of pronotum rounded but elevated over the level of humeral part of elytra; pronotum uniformly red.

KEY TO SPECIES

1. Male mandibulae much asymmetrical, apex of left mandibula long, spine-like, dorsal tooth on its inner side small or almost absent (figs 1, 2, 4, 5). N African species 2.
- Male mandibulae unequal, but not so much asymmetrical, apex of left mandibula shorter, dorsal tooth on its inner margin great and usually sharp (fig. 3). European species 4.
2. Mid and hind legs entirely dark, often blue-black. Fore legs almost entirely orange-yellow; trochanter and basis of femur blackish, tarsus sometimes slightly darkened. Sides of apical part of aedeagus rounded (fig. 8). Distributed in Morocco.
..... *erberi* n. sp.
- All tibia orange-yellow 3.
3. All legs orange-yellow, hind femora blackened basally, claw tarsomeres very slightly darkened. In male first tarsomere of fore legs about 2.5 times longer than broad (fig. 6). Swellings on mandibulae well-developed, strongly convex (fig. 1). Pronotum on all the surface sparsely, moderately strongly and rather irregularly punctate. Length 4.5-5.3 mm. Sides of apical part of aedeagus very feebly rounded (fig. 9). Female unknown. Distributed in northern Algeria.
..... *bergeali* n. sp.
- Legs orange-yellow, hind femora mostly blackish, in all legs last two or three tarsomeres blackish. In male first tarsomere of fore legs distinctly elongate, 3.5-4 times longer than broad (fig. 7). Swellings on right mandibula slightly flattened, on left mandibula feebly developed or limited to a more or less narrow ridge (fig. 4, 5). Pronotum on anterior half very sparsely and moderately strongly punctate, in posterior half smooth. Length 4.1-4.7 mm. Sides of the apical part of aedeagus almost straight (fig. 10). Distributed in Middle Atlas.
..... *regalini* n. sp.
4. Legs orange-yellow, tarsi black. Pronotum strongly or (in anterior part) coarsely punctate 5.
- Legs darkened: fore tibiae dorsally, mid and hind tibiae almost entirely blackish or black. Pronotum finely or (in anterior part) moderately strongly punctate 6.

5. Pronotum at least anteriorly coarsely punctate. Length 4.5-7.5 mm. Sides of apical part of aedeagus very feebly rounded or straight (fig. 10). Distributed in southern part of Spain.
 *oberthuri* (LEFÈVRE, 1872).
- Pronotum rather strongly, but not coarsely punctate. Length 4.9-6.8 mm. Sides of apical part of aedeagus very feebly rounded or straight (fig. 10). Distributed in northern part of Spain and southern part of France.
 *nigritarsis* (LACORDAIRE, 1848).
6. In male swelling on right mandibula usually flattened. Length 4.5-6.0 mm. Sides of apical part of aedeagus rounded (fig. 8). Distributed in western Spain.
 *korbi* (WEISE, 1895).
- In male swelling on right mandibula very convex. Length 5.0-6.2 mm. Sides of apical part of aedeagus rounded (fig. 8). Distributed in southern Spain.
 *moroderi* (COBOS, 1961).

REVIEW OF SPECIES

ABBREVIATIONS

- (AW) –author’s collection (Wrocław);
 (DE) –collection of Dieter ERBER (Giessen-Lahn);
 (HK) –collection of Horst KIPPENBERG (Herzogenaurach);
 (MB) –collection of Michel BERGEAL (Versailles).

Chilotomina bergeali n. sp.

ETYMOLOGY

Dedicated to Dr. Michel BERGEAL (Versailles).

Type locality

Maghnia, dept. Tilimsân (Tlemcen), Algeria.

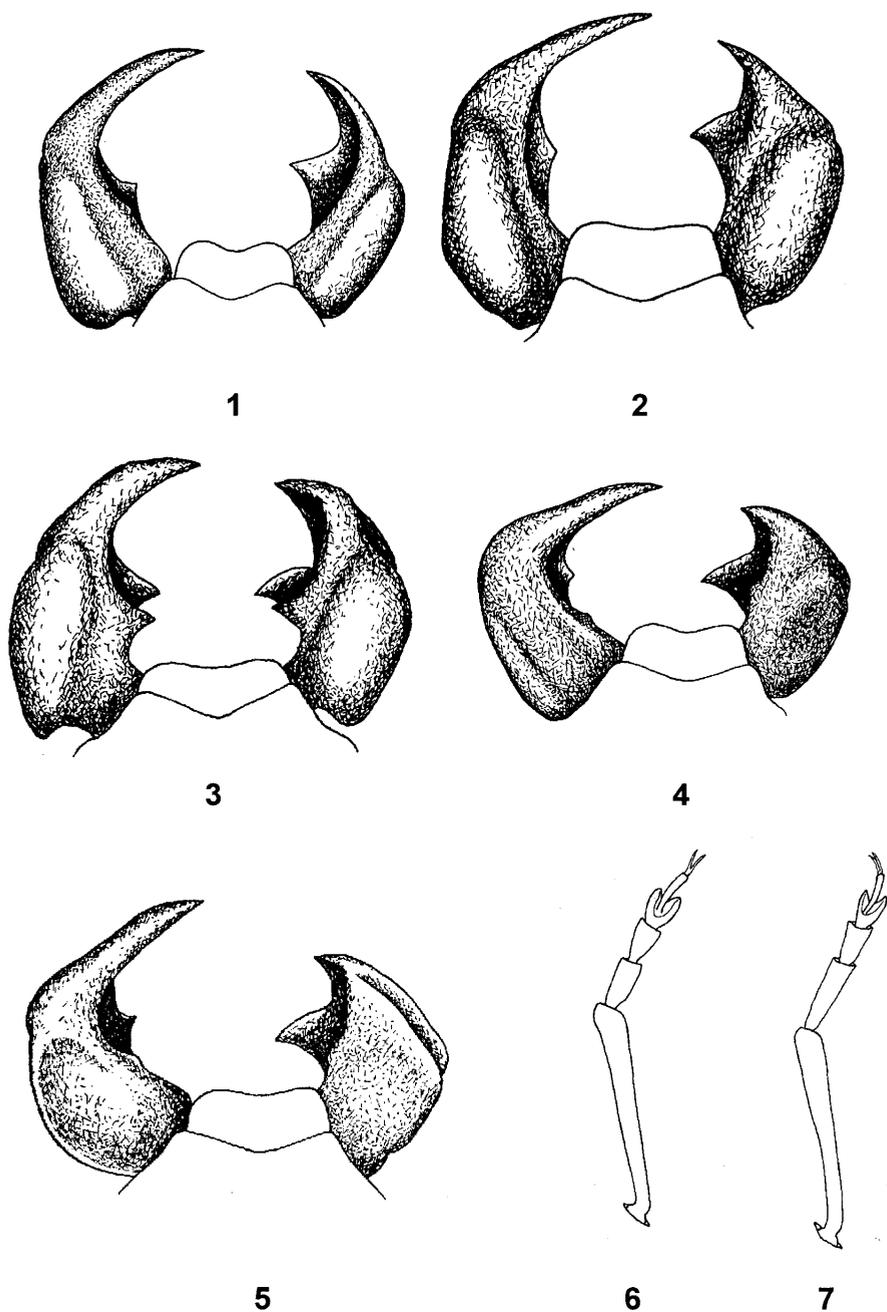
DIAGNOSIS

Male. Mandibulae very much asymmetrical, apex of left mandibula long, spine-like, dorsal tooth on its inner side small or almost absent. Swellings on mandibulae well-developped, strongly convex (fig. 1). All legs orange-yellow, hind femora blackened basally, claw tarsomeres very slightly darkened. First tarsomere of fore legs about 2.5 times longer than broad (fig. 6).

Female. Unknown.

DESCRIPTION

Male. Length 4.1 mm (holotype) and 4.7 mm (paratype). Head black with very feeble blue metallic reflex or almost pure black. Third antennomere very



1-5. Mandibulae: 1 - *Chilotomina bergeali*, 2 - *Ch. erberi*, 3 - *Ch. moroderi*, 4 - *Ch. regalini* (holotype), 5 - *Ch. regalini* (paratype); 6, 7. Fore tibia with tarsus: 6 - *Ch. bergeali*, 7 - *Ch. regalini*

short, second and fourth somewhat longer, subequal. Mandibles as in fig. 9. Pronotum orange yellow, shining, extremely finely and sparsely punctate, almost smooth. Elytra black with blue or violet metallic sheen, uniformly, densely and strongly punctate, interstices about as broad as puncture diameter. Underside entirely black. Colouration of legs as in diagnosis.

LABELLING OF HOLOTYPE

1. (PRINTED): „ORANAIS L. MAGHRNIA”.
2. (handwriting): „Gynandrophth. thoracica”.
3. (printed): „ex Musaeo A. Carret 1908”.
4. (printed): „Chilotomina bergeali mihi det. A. Warchałowski”.
5. (printed on red paper): „Holotypus”.

MATERIAL EXAMINED

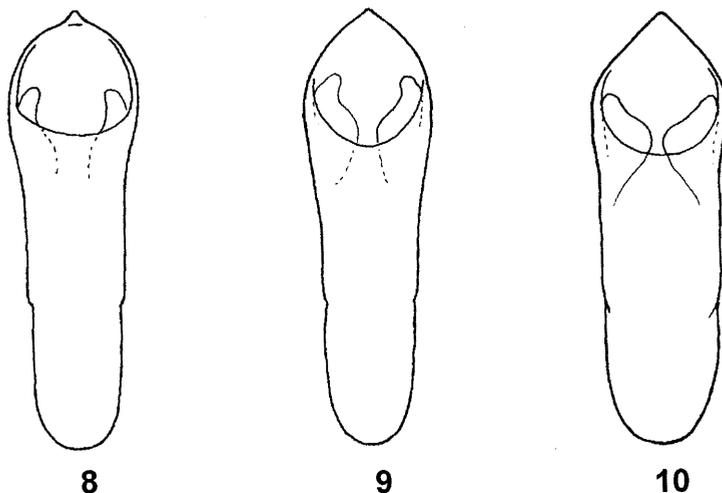
Algeria (Tilimsân), Maghnia, 1male (holotype) leg.? (MB).

Algeria (Konstantina), Konstantina, 1male (paratype) leg.? (MB).

Chilotomina erberi n. sp.

ETYMOLOGY

Dedicated to Dr. Dieter ERBER (Giessen-Lahn).



8-10. Outlines of aedeagus in dorsal view: 8 – with rounded apical sides (*Chilotomina erberi*, *Ch. korbi*, *Ch. moroderi*), 9 – with feebly rounded apical sides (*Ch. bergeali*), 10 – with almost straight apical sides (*Ch. nigritarsis*, *Ch. oberthuri*, *Ch. regalini*)

TYPE LOCALITY

Forêt de la Mamora near Dar-Bel-Amri, prov. Rharb, Morocco.

DIAGNOSIS

Male. Mandibulae very much asymmetrical, apex of left mandibula long, spine-like, dorsal tooth on its inner side small or almost absent. Mid and hind legs dorsally entirely dark, often partly blue-black. Fore legs almost entirely orange-yellow; trochanter and basis of femur blackish, tarsus sometimes slightly darkened.

Female. only generic characters established.

DESCRIPTION

Male. Larger (length 5.0-5.7 mm). Head black with very feeble blue metallic reflex or almost pure black. Third antennomere very short, second and fourth slightly longer, subequal. Mandibles as in fig. 2. Pronotum orange yellow, shining, extremely finely and sparsely punctate, almost smooth. Elytra black with blue or violet metallic sheen, uniformly, densely and strongly punctate, interstices about as broad as puncture diameter. Underside entirely black. Fore legs orange yellow, trochanters and basis of femora black, tarsi and apical part of tibiae sometimes very slightly darkened. Mid legs dorsally dark brown, ventrally partly dark orange. Hind legs entirely dark brown or blackish, knees usually lighter, femora mostly with metallic reflex. Aedeagus as in fig. 8.

Female. Smaller (length 4.1-5.0 mm). Body colouring and puncturation as in male, mandibles not hypertrophic.

LABELLING OF HOLOTYPE

1. (photographic): „Maroc, prov. Rharb, forêt de la Mamora, 18 Aprilis 1965, leg. A. Warchałowski”.

2. (printed): „Chilotomina erberi mihi, det. A. Warchałowski”.

MATERIAL EXAMINED:

Morocco (Rharb), Forêt de la Mamora, 18.IV.1965, 2 males (holotype + paratype) leg. A. WARCHAŁOWSKI, (AW), ibidem 1 female (paratype) (AW), ibidem 1 male (paratype) (DE).

Morocco, 1908, 1 female (paratype), leg. VAUCHER, (MB).

Morocco (Tanger), Tanger, V.1894, 2 males (paratypes), leg.?, (MB).

Morocco (Tanger), Tanger, V. 1897, 1 male, 1 female (paratypes), leg.? (MB).

***Chilotomina korbi* (WEISE, 1895)**

Gynandrophthalma Korbi WEISE, 1895: 216.

TYPE LOCALITY

Molinico, Sierra de Segura, prov. Jaén, Spain.

DIAGNOSIS

Male. Mandibulae unequal but not very asymmetrical, dorsal tooth on inner margin of left mandibula large and usually sharp, like in *moroderi* (fig. 3), swelling on right mandibula not very convex. Pronotum distinctly but finely, sometimes (in anterior part) moderately strongly punctate. Fore tibiae dorsally darkened, mid and hind tibiae almost entirely blackish or black.

Female. On average smaller, mandibulae not hypertrophic, remaining characters as in male.

DESCRIPTION

Length 5.2-5.8 (male) respectively 4.2-5.8 mm (female). Colouration of upperside and puncturation of elytra as in the remaining species (see *erberi*). Pronotum rather sparsely, finely or moderately strongly punctate. Fore legs bicolorous: femora orange, blackened basally, tibiae dorsally blackish, often with bluish reflex, ventrally dark orange, tarsi blackish. Mid and hind legs dark, dorsally blackish, ventrally brownish red, knees lighter, tarsi blackish. Aedeagus as in fig. 8.

MATERIAL EXAMINED

Spain (Valencia), Porta Coeli, 1 male, 1 female, leg. F. MORODER (AW)

Spain (Valencia), Pla, 1 male, 1 female, leg. F. MORODER (AW)

Spain (Valencia), Alcira, 1 male, 1 female, leg. F. MORODER (AW)

Spain (Valencia), Bétera, 1 male, 1 female, leg. ? (AW)

***Chilotomina moroderi* (COBOS, 1961)**

Gynandrophthalma moroderi bacarescensis COBOS, 1961: 30.

Gynandrophthalma moroderi [REITTER] COBOS, 1961: 31.

TYPE LOCALITY

Area of Valencia, Spain.

DIAGNOSIS

Male. Mandibulae unequal but not very asymmetrical, dorsal tooth on inner margin of left mandibula large and usually sharp (fig. 3), swelling on right mandibula very convex.. Fore tibiae dorsally darkened, mid and hind tibiae almost entirely blackish or black.

Female. Mandibulae not hypertrophic, the remaining characters as in male.

DESCRIPTION

Length 5.1-6.1 (male) and 5.0-6.0 (female). The remaining characters as in *korbi*. Differences between *moroderi* and *korbi* are not always distinct, which involves also the form of aedeagus. Probably (southern-Spanish?) *moroderi* is a form of (western-Spanish?) *korbi*.

MATERIAL EXAMINED

Spain (Almeria), Sierra de Filabres, Tetica de Bacares, 1 male, 1 female (paratypes of *bacarescensis*), leg. A. COBOS, (AW).

Spain (Almeria), Felix, 1 male, leg. A. COBOS, (AW).

Spain (Almeria), ad Velez Rubio, 1000 m, 14.V.1985, 2 males, 2 females, leg. A. WARCHAŁOWSKI, (AW).

***Chilotomina nigratarsis* (LACORDAIRE, 1848)**

Clythra (*Gynandrophthalma*) *nigrataris* LACORDAIRE, 1848: 297.

Type locality

France and Spain.

DIAGNOSIS

Male. Mandibulae unequal but not very asymmetrical, dorsal tooth on inner margin of left mandibula large and usually sharp, like in *moroderi* (fig. 3). Pronotum rather strongly punctate. Legs orange yellow with blackish tarsi, femora blackened in basal section only.

Female. Mandibulae not hypertrophic, the remaining characters as in male.

DESCRIPTION

Length 4.9-5.0 (male) and c. 4.7 mm (female). Colouring of upperside and punctuation of elytra as in the remaining species (see *erberi*). Punctuation of pronotum and colouration of legs as in diagnosis.

MATERIAL EXAMINED

Spain (Zaragoza), ad Pina de Ebro, 22-23.IV.1991, 2 males, 1 female, leg. J. BLASCO (AW).

***Chilotomina oberthuri* (LEFÈVRE, 1961)**

Gynandrophthalma Oberthuri LEFÈVRE, 1876: 73.

Gynandrophthalma baetica WEISE, 1882: 123.

baetica = ?*oberthuri*: CLAVAREAU, 1913: 63.

TYPE LOCALITY

Area of Granada, Spain.

DIAGNOSIS

Male. Mandibulae unequal but not very asymmetrical, dorsal tooth on inner margin of left mandibula large and usually sharp, like in *moroderi* (fig. 3). Pronotum strongly, in anterior part usually coarsely punctate. Legs orange yellow with blackish tarsi, femora blackened in basal section only.

Female. Mandibulae not hypertrophic, the remaining characters as in male.

DESCRIPTION

Length 6.0-6.6 mm (male) and 5.5-5.8 mm (female). Colouration of upperside and punctuation of elytra as in the remaining species (see *erberi*). Punctuation of pronotum and colouration of legs as in diagnosis.

Differences between *oberthuri* and *nigritarsis* are often indistinct, which involves also the form of aedeagus. It is not excluded that (southern-Spanish?) *oberthuri* is a form of (northern-Spanish and southern-French?) *nigritarsis*.

MATERIAL EXAMINED

France (southern), 1 male, leg. ?, (an old, uncertain specimen) (AW).

Spain (Málaga), Villanueva del Trabuco, 200 m, 14.V.1988, 4 males, 1 female, leg. A. WARCHAŁOWSKI (AW).

Spain (Granada), Alagüara, 4V.1991, 1 female, leg. J.-M. VELA (AW).

Portugal (Lissabon), ad Lissabon, IV/V.1910, 1 male, leg. A. SCHATZMAYR (AW).

***Chilotomina regalini* n. sp.**

ETYMOLOGY

Dedicated to Dr. Renato REGALIN (Istituto di Entomologia Agraria, Milano).

TYPE LOCALITY

Marmoucha, prov. Fes, Morocco.

DIAGNOSIS

Male. Mandibulae very much asymmetrical, apex of left mandibula long, spine-like, dorsal tooth on its inner side small or almost absent (figs 4, 5). Legs orange-yellow, hind femora for the most part blackish, in all legs last two or three tarsomeres blackish. In male first tarsomere of fore legs distinctly longer, 3.5-4 times longer than broad (fig. 7). Swellings on right mandibula slightly flattened, on left mandibula feebly developed or reduced to a more or less narrow ridge (figs 4, 5).

Female. Unknown.

DESCRIPTION

Male. Length 4.1 mm (holotype) and 4.7 mm (paratype). Head black with very feeble blue metallic reflex or almost pure black. Third antennomere very short, second and fourth somewhat longer, subequal. Mandibles as in figs 4, 5. Pronotum orange yellow, shining, extremely finely and sparsely punctate, almost smooth. Elytra black with blue or violet metallic sheen, uniformly, densely and strongly punctate, interstices about as broad as puncture diameter. Underside entirely black. Colouration of legs as in diagnosis. Aedeagus as in fig. 10.

MATERIAL EXAMINED

Morocco (Middle Atlas, prov. Fes), Marmoucha, 1850 m, V.1952, 1 male (holotype) leg. L. KOCHER, (AW).

Morocco (Middle Atlas, prov. Taza), Reggou, 1400 m, V. 1952, 1 male (paratype) leg. L. KOCHER, (AW).

Morocco (High Atlas, prov. Marrakech), Oukaïmeden, 2600 m, 26.V.1995, 1 male (paratype), leg. H. KIPPENBERG (HK).

LABELLING OF HOLOTYPE

1. (printed): „Moyen-Atlas Kocher coll.”, (handwriting): „1850, 5.52”.
2. (printed): „*Chilotomina regalini* mihi, det. A. Warchałowski”.
3. (printed on red paper): „Holotypus”.

DISCUSSION

The great similarity of all *Chilotomina*-females to each other and the scarcity of material in collections make it impossible to find conspecific males and females for comparative studies. For this reason in the present paper females are not discussed. It is noteworthy, that the females of *Chilotomina* in various collections are determined mostly as *Smaragdina rufimana* LACORDAIRE.

External characters (form of mandibles, colouration of legs, length of tarsomeres) well-correlated to each other, appear adequate for determining *Chilotomina*-males, while the structure of aedeagus, rather feebly differentiated and to some extent variable, seems to have a low diagnostic value only. The only difference consists in the form of apical margins, feebly rounded in *bergeali*, almost straight or straight in *nigritarsis*, *oberthuri*, and *regalini*, more distinctly rounded in *erberi*, *korbi* and *moroderi*.

Four European species may be divided in two pairs of very similar species: *korbi-moroderi* and *nigritarsis-oberthuri*; moreover their unambiguous separation is often impracticable; it is even possible, that in both cases the mentioned species pairs are conspecific.

ACKNOWLEDGEMENTS

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