

THE FIRST ATTEMPT ON SUBGENERIC COMPOSITION OF *CHLOROPHORUS* CHEVROLAT, 1863 WITH FOUR NEW SUBGENERA (COL.: CERAMBYCIDAE: CERAMBYCINAE)

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ABSTRACT: The paper gives the first attempt on subgeneric composition of *Chlorophorus* Chevrolat, 1863. As a result of this, a total of 5 subgenera (including the nominotypical subgenus) are described for the world fauna as *Chlorophorus* (s. str.) Chevrolat, 1863; *Chlorophorus* (*Immaculatus*) subgen. n.; *Chlorophorus* (*Perderomaculatus*) subgen. n.; *Chlorophorus* (*Humeromaculatus*) subgen. n. and *Chlorophorus* (*Crassofasciatus*) subgen. n.. The type species of new taxa are figured. A key for subgenera is also given in the text.

KEY WORDS: *Chlorophorus*, new subgenera, world fauna.

Genus *CHLOROPHORUS* Chevrolat, 1863: 290

[Type species: *Callidium annulare* Fabricius, 1787]

Body length is small generally. It is approximately between 10 and 15 mm.

Head very feebly elevated between antennal insertion; antennal insertion close approximate, distinctively narrower in width than lower eye lobe; Frons comparatively broad, flat, without carinae, with longitudinal smooth line or groove in middle part of posterior half, and produced tubercle near antennal base. Antennae shorter than the body, thicken slightly toward apex, rarely longer than body, thin, contiguous at base; space between antennae less than distance between upper lobes of eyes. Antennae not extended beyond half of elytra in both sexes. Pronotum laterally rounded, barely oblong or even transverse, disk uniformly convex, with dense punctuation, and dense adherent and setaceous erect hairs. Elytra truncate at apex or with truncate sharp outer angle, as an exception rarely rounded, with dark brown and light-colored adherent hairy coat forming characteristic pattern for each species, consisting of spots and transverse bands. Legs with femora gradually thickened towards apex. Mid femora are carinate along its length, sometimes the hind femora as well (Cherepanov, 1990).

Larval and pupal developments are in broadleaf trees (e.g. in Europe, *Prunus*, *Crateagus*, *Quercus*, *Ficus*, *Morus*, *Alnus*, *Fraxinus*, *Pistacia*, *Juglans*, *Ceratonia*, *Platanus*, *Fagus*, *Castanea*, *Tilia*, *Ulmus*, *Salix*, *Populus*, *Pistacia*, *Robinia*, *Malus*, *Pyrus*, *Vitis*, *Acer*, *Betula*, *Carpinus*, *Acacia*, *Eleagnus*, *Paliurus* etc. and e.g. in Turkey, *Ostrya*, *Carpinus*, *Crateagus*, *Quercus*, *Fagus*, *Castanea*, *Tilia*, *Ulmus*, *Pistacia*, *Pyrus* etc.), in herbaceous plants (*Salicornia*, *Achillea*, *Spartium*) and in woody legumes (*Ononis*, *Dorycnium*). Pupation is in the wood generally. Life cycle is about 2-3 years (Bense, 1995; Vives, 2000; Sama, 2002; Hoskovec & Rejzek, 2009).

The genus has about 200 species in the world fauna. It is a subcosmopolit or almost cosmopolit genus. In the Holarctic region (in America) and Neotropic region (in SE Brasil), however, the genus is represented by only one species as

Chlorophorus annularis (Fabricius, 1787) that is the type species of the genus. For example, Monné & Bezark (2009) stated the species, *Chlorophorus annularis* (Fabricius, 1787) introduced in USA and SE Brasil. So, the genus *Chlorophorus* has the Palaearctic, Ethiopic and Oriental chorotypes in real. Distribution of the known species of this genus is not wide spread in the world generally (Özdikmen & Turgut, 2009).

The original description of the genus *Chlorophorus* Chevrolat, 1863 as follows:

CHLOROPHORUS gen. nov.

Genre proposé pour le Clytus annularis Fab., et qui ne diffère des Anthoboscus qu'en ce que les antennes sont plus grêles et le prothorax très-arrondi.

CARACTÈRES GÉNÉRAUX:

Corps ailé, allongé, convexe, d'un beau jaune doré. Tête un peu plus longue que large, inclinée vers le bas, élevée sur la base même des antennes et formant en dessus une échancrure anguleuse, sillonnée au milieu, présentant sur chaque côté delà face une soudure latérale en forme de carène, appuyée au bord interne de chaque oeil. Palpes labiaux de 3 articles: 1^{er} subtriangulaire, coudé à sa base, 2^e pas plus large que haut, 3^e renflé, plus grand, subconique. Lèvre en carré transverse. Chaperon large, eintré sur le dedans. Mandibules triangulaires, arquées et aiguës au sommet. Yeux oblongs, profondément lunulés au-dessus du milieu interne. Antennes grêles, de onze articles, n'atteignant que le milieu des élytres: 2^e article plus grand que le 1^{er} et que les 3^e et 4^e. Prothorax brièvement arrondi, amineï, coupé droit et étroitement rebordé aux extrémités, Écusson grand, semi-arrondi.Élytres longitudinalement convexes, terminées par une épine marginale. Pattes de moyenne longueur; cuisses effilées, un peu courbées à leur naissance, les postérieures limitées au sommet des étuis, à peine bidentées sur les genoux. Sternum étroit, allongé, tronqué en arrière. Hanches antérieures globuleuses, déprimées en dessus; cavités cotyloïdes circulaires, anguleuses en dehors.

CHLOROPHORUS s. str.

Diagnosis: Apex of each elytron truncate and extended into an angle on the outer edge; elytra with distinctly contrasting thick spots or stripes.

Type species of subgenus: *Callidium annulare* Fabricius, 1787: 156 (Fig. 1.1)

Original description of *Chlorophorus* (s.str.) *annularis* (Fabricius, 1787) as follows:

annulare.

C. thorace rotundato nigro maculato, elytris bidentacis subvirescencibus: fasciis cribris nigris; prima annulari.
Habitat in Siam.

IMMACULATUS subgen. n.

Diagnosis: Apex of each elytron truncate and extended into an angle on the outer edge; elytra uniform without any contrasting spot or stripe.

Type species of subgenus: *Chlorophorus kanoi* Hayashi, 1963: 134 (Fig. 1.2)

Original description of *Chlorophorus (Immaculatus) kanoi* Hayashi, 1963 as follows:

***Chlorophorus kanoi*, sp. nov.**

Body black, covered with light olive green pubescence throughout, especially densely on body and finely on appendages.

Vertex narrow, one-fifth as broad as the width of head (incl. eyes); antennae (δ) reaching the apex of basal two-fifths of elytra; 3rd joint as long as 4th and shorter than scape. Prothorax 1.1 times as long as broad, broadest just before middle, the base being a little broader than the apex (ratio, 8: 7). Elytra broader than prothorax (ratio, 10: 12) at the maximum width, and 2.4 times as long as the basal width, fairly rounded at humeri, straightly narrowed posteriorly and not fully covering abdomen, the apex obliquely truncate with acute external angles. Hind femora comparatively short, slightly surpassing elytral apex and not reaching at abdominal apex; 1st hind tarsal joint 1.25 times as long as the following two united together (ratio, 5 : 4). Length, 10-11 mm., width, 2.5-3 mm.

From Japan (Ryukyus).

***PERDEROMACULATUS* subgen. n.**

Diagnosis: Apex of each elytron truncate; elytra with distinctly contrasting thin stripes; each elytron without a distinct spot at the shoulder.

Type species of subgenus: *Cerambyx sartor* Müller, 1766: 188 (Fig. 1.3)

Original description of *Chlorophorus (Perderomaculatus) sartor* (Müller, 1766) as follows:

***Cerambyx sartor*, niger, thorace mutico subgloboso: elytris fuscis, lineolis, punctoque albis.**

Minor: nigra sunt caput, thorax, oculi, antennae, pedes; elytra fusca; apice, lineaque media obliqua curva, ac basi puncto, lineolisque duabus albis, minimis.

***HUMEROMACULATUS* subgen. n.**

Diagnosis: Apex of each elytron truncate; elytra with distinctly contrasting thin stripes; each elytron with a distinct spot at the shoulder.

Type species of subgenus: *Cerambyx figuratus* Scopoli, 1763: 55 (Fig. 1.4)

Original description of *Chlorophorus (Humeromaculatus) figuratus* (Scopoli, 1763) as follows:

***Cerambyx figuratus*.**

El. long. lin. 3 1/3 lat. 3/4.

Diagn. Niger; elytri fascia, linea obliqua clavata curva, punctoque ad basim, albis.

In floribus plantarum Umbellatarum.

Thorax ovatus, villiosus. Elytra apice truncata. Abdominis segmenta tria prima margine albo. Si ab uno angulo externo lineae obliquae elytri duceretur alia recta, tunc in elytris unitis resultaret rudis figura vultus. Elytri etiam apex albidus est.

CRASSOFASCIATUS subgen. n.

Diagnosis: Apex of each elytron rounded; elytra with distinctly contrasting thick strips (or rarely like spots).

Type species of subgenus: *Callidium trifasciatum* Fabricius, 1781: 244 (Fig. 1.5)

Original description of *Chlorophorus (Crassofasciatus) trifasciatus* (Fabricius, 1781) as follows:

trifascitum.

C. thorace globoso ferrugineo, elytris nigris, fasciis tribus atris, prima annulari.

Habitat in Lusitania.

A key for subgenera of *Chlorophorus*

1. Apex of each elytron truncate or truncate and extended into an angle on the outer edge..... **2**
-. Apex of each elytron rounded..... **Crassofasciatus subgen. n.**
2. Apex of each elytron truncate..... **3**
-. Apex of each elytron extended into an angle on the outer edge..... **4**
3. Each elytron without a distinct spot at the shoulder.....
..... **Perderomaculatus subgen. n.**
-. Each elytron with a distinct spot at the shoulder.....
..... **Humeromaculatus subgen. n.**
4. Elytra with distinctly contrasting thick spots or stripes..... **s. str.**
-. Elytra uniform without spot or stripe..... **Immaculatus subgen. n.**

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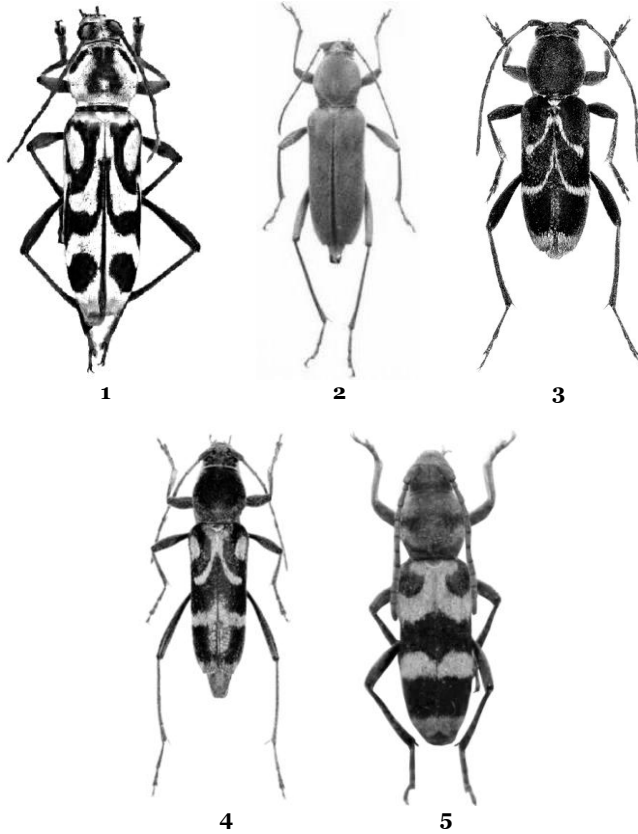


Figure 1. Dorsal view of type species of subgenera: 1. *Chlorophorus* (s.str.) *annularis* (Fabricius, 1787), 2. *Chlorophorus* (*Immaculatus*) *kanoi* Hayashi, 1963, 3. *Chlorophorus* (*Perderomaculatus*) *sartor* (Müller, 1766), 4. *Chlorophorus* (*Humeromaculatus*) *figuratus* (Scopoli, 1763), 5. *Chlorophorus* (*Crassofasciatus*) *trifasciatus* (Fabricius, 1781).