

***Cryptocephalus cantabricus* FRANZ,
a poorly known endemic species
from the northwest of the Iberian Peninsula
(Coleoptera: Chrysomelidae)**

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Abstract

The description of *Cryptocephalus cantabricus* FRANZ, 1958 (Coleoptera: Chrysomelidae) is based upon only two specimens collected by Franz in Peña Ubiña (Asturias) and Sierra de Ancares (León-Lugo). No later records are known. In this paper citations from many localities from A Coruña, Lugo, Ourense and Pontevedra are reported. Taxonomic relations with *Cryptocephalus hypochaeridis* (LINNÉ, 1758) are discussed and interesting morphological characters are illustrated for the first time. A key including *Cryptocephalus aureolus* SUFFRIAN, 1848, *C. hypochaeridis* and *C. cantabricus* is given.

Key words: Coleoptera, Chrysomelidae, *Cryptocephalus cantabricus*, taxonomy, distribution, Galicia, Spain, Iberian Peninsula.

Introduction

FRANZ (1958) based his description of *Cryptocephalus cantabricus* on two specimens (male and female) collected in Peña Ubiña (South Asturias) and Sierra de Ancares (León and Lugo boundary). There were no later records of this species. In the original description FRANZ (1958) pointed out a close relationship between *Cryptocephalus cantabricus* and *Cryptocephalus hypochaeridis* LINNÉ, 1758, and also provided some diagnostic characters distinguishing both species.

In this paper 15 localities of *C. cantabricus* are reported from Galicia, increasing its previously known distribution. We review the diagnostic characters suggested by FRANZ (1958) using 36 specimens. The most significant characters are illustrated, including a new one not indicated by the cited author. All the material is deposited in the Departamento de Biología Animal, Universidad de Santiago de Compostela, excluding those specimens collected by L. Iglesias (Museo de Historia Natural Luis Iglesias de la Universidad de Santiago) and A. Gayoso (private collection).

***Cryptocephalus cantabricus* FRANZ, 1958**

MATERIAL EXAMINED: SPAIN: **A Coruña:** Piladaleña-Monfero, 29TNJ7900, 14-VII-1999, 1 ♂ and 1 ♀ (A. Baselga); Santiago de Compostela, 29TNH3749, 15-VI-1991, 1 ♂ (A. Gayoso); Vilarromariz-Oroso, 29TNH4959, 12-VI-1992, 9 ♂♂ and 8 ♀♀ (J.F. Abelleira); **Lugo:** Os Cabaniños-Sierra de Ancares, 29TPH7344, 8-VI-1997, 1 ♀ (A. Baselga); Piornedo-Sierra de Ancares, 29TPH7446, 27-VI-1993, 1 ♂ (G. Cerviño); Pousada-Baleira, 29TPH4460, 17-VI-1999, 1 ♂ (A. Baselga); Taboi-Outeiro de Rei, 29TPH1273, 28-VI-1992, 1 ♀ (J.F. Abelleira); Vilaragonte-Vilalba, 29TPH1206, 20-VI-1999, 1 ♂ and 1 ♀ (A. Baselga); **Ourense:** Baltar, 29TPG0644, 22-V-1999, 1 ♂ (A. Baselga); Celanova, 29TNG8678, VII-1921, 1 ♀ (L. Iglesias); Celeiros-O Bolo, 29TPG5679, 29-V-

1999, 1 ♀ (A. Baselga); Progo-Riós, 29TPG4145, 12-VI-1999, 1 ♂ and 1 ♀ (A. Baselga); Vilanova-A Veiga, 29TPG7481, 29-V-1999, 1 ♂ (A. Baselga); **Pontevedra**: A Estrada, 29TNH4227, 12-VI-1998, 1 ♀; 16-VI-1998, 1 ♂; 26-VI-1998, 1 ♂ (J. Palacios); Carballedo-Cotobade, 29TNH4202, 28-VII-1998, 1 ♀ (J. Palacios).

DIAGNOSIS: Very closely related to *C. hypochaeridis* but clearly differentiated by the following features: antennomeres in both sexes (Figs. 1 - 4) shorter and wider than in *C. hypochaeridis* (Figs. 5 - 6); last abdominal sternite in males (seventh sternite after DE MONTE (1948) or fifth free sternite after FRANZ (1958)) with posterior edge simple or narrowly bordered in the middle (Fig. 7), whereas in *C. hypochaeridis* the last sternite bears an arcuate carina bordering the middle depression (Fig. 8); aedeagus (Figs. 9 - 10) in lateral view with apex clearly sinuated and shorter than in *C. hypochaeridis* (Fig. 11); aedeagus in dorsal view wider towards apex and ended in a much shorter triangle than in *C. hypochaeridis* (Fig. 12).

Following BURLINI (1955) *C. cantabricus* is similar to *C. aureolus*, *C. barii* BURLINI, 1948 and *C. hypochaeridis*. The four species share completely metallic body, pronotum with lateral edge widely bordered and prosternum with posterior margin truncate or slightly sinuate. *Cryptocephalus aureolus* and *C. hypochaeridis* live in the Iberian Peninsula and may be differentiated from *C. cantabricus* by the following characters:

- | | | |
|---|--|-------------------------|
| 1 | Length 5.5 - 7.5 mm; last abdominal sternite in males feebly depressed in the middle; aedeagus as in Figs. 13 - 14 | <i>C. aureolus</i> |
| - | Length 4.0 - 5.5 mm; last abdominal sternite in males with a depression clearly limited | 2 |
| 2 | Antennomeres short and wide in both sexes (Figs. 1 - 4); last abdominal sternite in males with posterior edge simple or narrowly bordered in the middle (Fig. 7); aedeagus as in Figs. 9 - 10..... | <i>C. cantabricus</i> |
| - | Antennomeres long and narrow in both sexes (Figs. 1 - 4); last abdominal sternite in males with posterior edge bearing an arcuate carina (Fig. 8); aedeagus as in Figs. 11 - 12..... | <i>C. hypochaeridis</i> |

BIOLOGY: Adults were collected from May to July, on yellow flowers of Asteraceae and Ranunculaceae located in meadows and other habitats with low growing vegetation. Specimens were collected at elevations from 200 m to 1300 m.

DISTRIBUTION: In accordance with the type localities, PETITPIERRE & GÓMEZ-ZURITA (1998) consider *C. cantabricus* to be a Cantabrian endemic species associated with Cantabrian-Pyrenean elements. Records here reported suggest that the type localities given by FRANZ (1958) represent the eastern boundary of its known range. We consider the studied species a Galician-Cantabrian element according to the chorotypes of Iberian endemic species proposed by NOVOA et al. (1989). Known records include localities from the following Spanish provinces: A Coruña, Lugo, Ourense, Pontevedra, Asturias and León (Fig. 15). In addition the citation of *C. hypochaeridis* in Serra do Gerez (North Portugal) by OLIVEIRA (1893) may be referred to *C. cantabricus*. Therefore, further studies are needed to clarify its actual range in the Cantabrian Mountains and its probable presence in Zamora and North Portugal.

DISCUSSION: The study of 19 males and 17 females of *C. cantabricus* allows us to reassess the diagnostic characters of this species. All these features, except the posterior edge of last sternite in males, were reported by FRANZ (1958) in the original description. This author also employed elytral punctures around the scutellum and punctures located at the depression of last sternite in males as diagnostic features but we consider that these are variable, not sufficiently different from *C. hypochaeridis* and not useful for determination. We conclude that only the antennomere shapes may be used for determination of *C. cantabricus* females. This character is not variable but, as in other species of this group (FRANZ 1949), males are needed for correct identification.

We considered the possibility that *C. cantabricus* may be a subspecies of *C. hypochaeridis*. However, there are more differences between both taxa than between the subspecies of *C. hypo-*

chaeridis stated by FRANZ (1949). In addition, no geographical isolation exists between both taxa; PETITPIERRE & GÓMEZ-ZURITA (1998) recorded *C. hypochaeridis* from Puerto de Piedrafita (León), located only at 30 km from Peña Ubiña (the type locality of *C. cantabricus*). For these two reasons, we consider a specific rank for *C. cantabricus* more appropriate.

***Cryptocephalus hypochaeridis* ssp. *therondi* FRANZ, 1949**

MATERIAL EXAMINED: SPAIN: **Huesca**: Bielsa, 31TBH5629, 28-VII-1991, 1 ♀ (A. Baselga); **León**: Puerto de Panderruedas, 30TUN3976, 24-VII-1992, 2 ♂♂ and 1 ♀ (J.F. Abelleira).

***Cryptocephalus aureolus* SUFFRIAN, 1848**

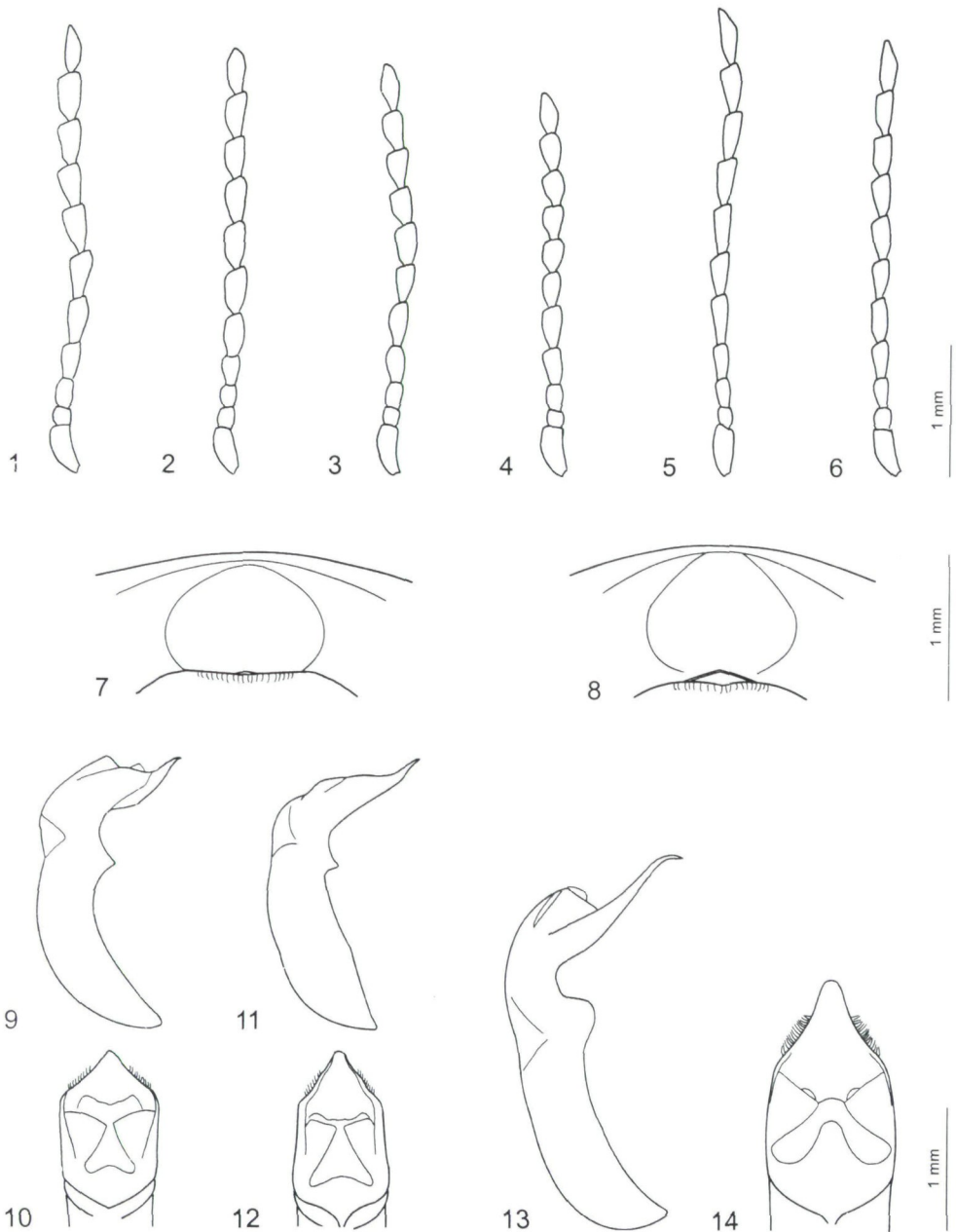
MATERIAL EXAMINED: SPAIN: **A Coruña**: Crendes-Abegondo, 29TNH5990, 1-V-1997, 1 ♂ (A. Baselga); Vilarromariz-Oroso, 29TNH4959, 12-VI-1992, 2 ♂♂ (J.F. Abelleira); **León**: Burbia-Sierra de Ancares, 29TPH8042, 13-VI-1998, 2 ♀♀ (A. Baselga); Tejedo-Sierra de Ancares, 29TPH8146, 14-VI-1998, 1 ♂ and 1 ♀ (A. Baselga); **Lugo**: Cadramón, 29TPJ2127, 15-VI-1984, 1 ♀ (F. Novoa); Ferraria-O Incio, 29TPH4022, 15-VI-1991, 1 ♀ (J.P. Valcarcel); Os Cabaniños-Sierra de Ancares, 29TPH7344, 8-VIII-1998, 2 ♀♀ (A. Baselga); Penarrubia-Sierra de Ancares, 29TPH7237, 16-VII-1992, 5 ♂♂ and 5 ♀♀ (G. Cerviño and J.P. Valcarcel); Taboi-Outeiro de Rei, 29TPH1273, 30-VI-1991, 1 ♀ (J.F. Abelleira); Vilaragonte-Vilalba, 29TPH1206, 20-VI-1999, 3 ♂♂ (A. Baselga); **Pontevedra**: Barra-Cangas, 29TNG1279, 11-VI-1982, 1 ♀ (E. Eiroa); Carballedo, 29TNH4303, 23-V-1998, 1 ♂ (J. Palacios); Rodeiro, 29TNH8422, 17-VII-1998, 1 ♂ (A. Baselga).

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References

- BURLINI, M. 1955: Revisione dei *Cryptocephalus* italiani e della maggior parte delle specie di Europa. - Memorie della Società entomologica italiana 34: 5-287.
- DE MONTE, T. 1948: Caratteri specifici e razziali nel *Cryptocephalus sericeus* L. (Col. Chrysomelidae). - Eos 24(4): 459-476.
- FRANZ, H. 1949: Zur Kenntniss der Rassenbildung bei einigen Arten der Gattung *Cryptocephalus* (Coleopt. Chrysom.). - Portugaliae Acta Biologica (Serie B), vol. "J. Henriques": 166-195.
- FRANZ, H. 1958: Neue und ungenügend bekannte Coleopterenarten aus Spanien. - Eos 34: 117-130.
- NOVOA, F., SÁEZ, M., EIROA, E. & GONZÁLEZ, J. 1989: Los Carabidae (Coleoptera) de la Sierra de Ancares (Noroeste de la Península Ibérica). - Boletín de la Real Sociedad Española de Historia Natural (Sección Biología) 84(3-4): 287-305.
- OLIVEIRA, M.P. 1893: Catalogue des insectes du Portugal. Coléoptères. - Universidade de Coimbra, 387 pp.
- PETITPIERRE, E. & GÓMEZ-ZURITA, J. 1998: Los Chrysomelidae de León; NO de España (Coleoptera). - Nouvelle Revue d'Entomologie (N.S.) 15(1): 13-26.



Figs. 1 - 6: Antenna of *Cryptocephalus* spp.: 1 - 2) *C. cantabricus*, male; 3 - 4) *C. cantabricus*, female; 5) *C. hypochaeridis*, male; 6) *C. hypochaeridis*, female.

Figs. 7 - 8: Last abdominal sternite of *Cryptocephalus* spp.: 7) *C. cantabricus*, male; 8) *C. hypochaeridis*, male.

Figs. 9 - 14: Aedeagus of *Cryptocephalus* spp.: 9 - 10) *C. cantabricus*; 11 - 12) *C. hypochaeridis*; 13 - 14) *C. aureolus*. (Figs. 9, 11, 13: lateral view; Figs. 10, 12, 14: dorsal view).

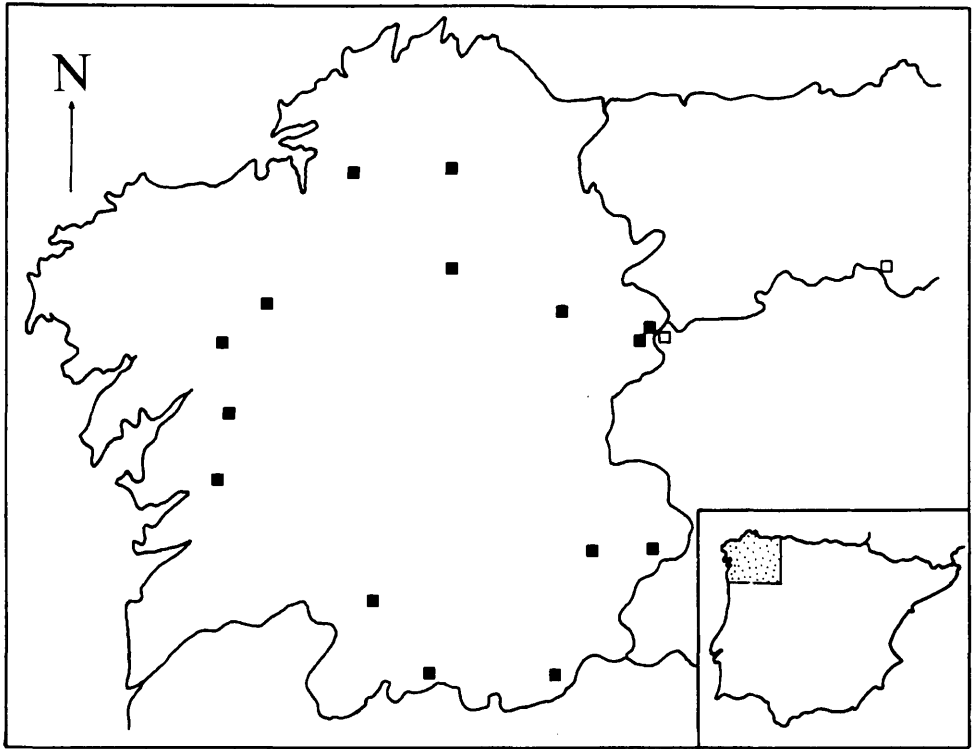


Fig. 15: Geographical position of records of *Cryptocephalus cantabricus*. (White squares: type localities; black squares: new records).

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