Genus	Vol. **18**(4): 571-574	Wrocław, 28 XII 2007

Papers Celebrating the 80th Birthday of Professor Andrzej Warchałowski

Cryptocephalus (*Burlinius*) *chafarinensis* n. sp. from the Mediterranean northwest Africa (Coleoptera: Chrysomelidae: Cryptocephalinae)

Eduard Petitpierre
Laboratori de Genètica, Departament de Biologia, Universitat de les Illes Balears, 07122 Palma de Mallorca (Spain) and Departament de Recursos Naturals, Institut Mediterrani d'Estudis Avançats (IMEDEA), 07190 Esporles (Spain), email:dbaepv@uib.es

Abstract. *Cryptocephalus (Burlinius) chafarinensis* n. sp. from the Chafarinas Archipelago, close to the Mediterranean coast of Morocco, is described and illustrated. It is clearly separated from most other Moroccan species of *Burlinius* by the male genitalia, while its trophic affiliation on *Pistacia lentiscus* (Anacardiaceae) is also shared by two Balearic species of this subgenus.

Key words: entomology, taxonomy, *Cryptocephalus* (*Burlinius*) *chafarinensis* n. sp., Coleoptera Chrysomelidae, Cryptocephalinae, faunistics, chorology.

INTRODUCTION

The Chafarinas Archipelago consists of three small main islands located in the Western Mediterranean (35º 11' 00'' N-2º 25' 35'' W), very close to the Cape of Ras el Ma, 4 km off the eastern coast of Mediterranean Morocco. Some years after the publication of a preliminary study on their biodiversity (Yus and Cabo 1986), a small group of Spanish naturalists from the IMEDEA made two collecting trips to these islands in spring and autumn 1998 with the aim to obtain more data on invertebrate faunistics that have been the subject of two papers, one devoted to Insecta, Coleoptera (Palmer et al. 1999), and another on Crustacea, Isopoda (Pons *et al.* 1999). The specimens captured on the island of Congreso, the largest one (25.6 ha.) of the Archipelago, included seven individuals of a species of *Cryptocephalus*, that after careful study, proved to be a new species (Palmer et al. 1999), whose description is given below.

Cryptocephalus **(***Burlinus***)** *chafarinensis* **n. sp.**

Etymology

From its geographic source in the Isles Chafarinas (Spain), where this species has been found

Description

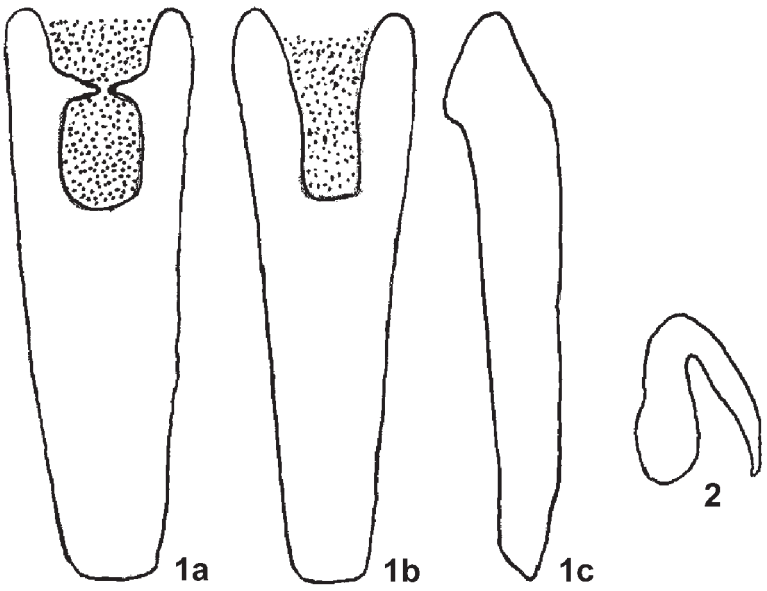
Length: 2.25 mm. Width: 1.15 mm. Body cylindrical and subparallel, patched in brown and yellow, with black basal margins of pronotum and elytra, and yellow epipleura.

Head vertical, clypeus and frons punctured and covered with sparse recumbent white setae; eyes slightly emarginate internally; vertex with two large round yellow spots; antennae yellow in the basal half, testaceous apically.

Pronotum transverse and highly convex, glabrous and shinning, lateral margins not entirely visible simultaneously from above, surface punctured very finely and sparsely; scutellum yellow with black margins.

Legs long and robust, uniformly yellow-testaceous; some of last tarsomeres slightly darkened.

Elytra convex, subparallel and glabrous, humeri distinct, each elytron with nine longitudinal rows of regular punctures plus a shorter presutural pair; elytral epipleura narrowed and disappearing towards half elytron length, only visible from lateral view.



1, 2. *Cryptocephalus chafarinensis*: 1 – aedeagus in dorsal (1a), ventral (1b), and lateral views (1c); 2 – spermatheca

Ventral surfaces dark brown, the abdomen covered with long, recumbent, and quite densely distributed white setae.

Aedeagus (figs. 1a, 1b, and 1c) almost straight, slightly expanded towards the apex, with two instead of three apical processes, lacking the central lobe characteristically present in most other Mediterranean *Burlinius*.

Spermatheca (fig. 2) triangular shaped with the distal part longer and narrower than the basal part.

Species variability

This species has a remarkable chromatic polymorphism of the pronotum and elytra. One studied specimen has the elytra almost completely yellow except for diffuse brown basal marks, another has both the pronotum and the elytra almost black, the remaining four individuals display a variable pattern of brown spots on the elytral yellow background and a less heterogeneous pattern of brown pronotum, with an apical yellow transversal band and a mid narrow longitudinal line of the same colour.

Type material

HOLOTYPE ♂: Spain, Islas Chafarinas, Isla del Congreso, 8-X-1998 (leg. M. Palmer), at Museo Nacional de Ciencias Naturales in Madrid, 6 PARATYPES: 1 ♂ *ibid*, at Musée National d'Histoire Naturelle in Paris, 1 ♀ *ibid,* at British Museum of Natural History in London, 1 ♀ *ibid,* at coll. Warchalowski, 1 ♀ *ibid,* at coll. Daccordi, and 1 ♂ and 1 ♀ *ibid,* at coll. Petitpierre.

Differential diagnosis and biology

Warchałowski (1999, 2003) has listed eleven species of the subgenus *Burlinius* from the Mediterranean part of North Africa, but their male genitalia show three apical processes clearly differentiating them from *C. chafarinensis* with two processes. From this geographical region only *C. saucius* Truqui, a species widely distributed in western Mediterranean, shares this characteristic. However, the latter can be distinguished from *C. chafarinensis* by its blue metallic sheen (also showing a remarkable chromatic polymorphism), white scutellum, strikingly different aedeagus and its much larger size (3.00-3.75 mm.).

The host-plant of *C. chafarinensis* is the Anacardiaceae, *Pistacia lentiscus* (L.) (Palmer et al. 1999), a trophic affiliation which is also shared at least by two other species of *Cryptocephalus* (*Burlinius*) in Balearic Islands (Petitpierre 2000). Finally, although *C. chafarinensis* should be presently considered as an endemic species, the geographic closeness of the Chafarinas Archipelago to the Morocco coast makes it very feasible to be found in the neighbouring mainland when further faunistics data become available.

Acknowledgements

I am greatly indebted to Prof. A. Warchałowski, not only for his excellent contributions to the knowledge of Palaearctic leaf-beetles spanning almost 40 years and indeed for honouring my person with his friendship, but also for notifying me some years ago

that the present *Cryptocephalus* was a new species. In addition, my sincere thanks to Miquel Palmer and Guillem X. Pons who collected and later generously donated the present material, to the second also for his valuable help to send me bibliography on the faunistics of Chafarinas, and to J. Gómez-Zurita and D.G. Furth for critically reviewing and improving a first draft of the MS. This paper has benefited from the funds given to the projects REN2003-03667 and CGL2006-08810, Ministry of Science and Technology of Spain, and a FEDER aid from the European Union.

REFERENCES

Palmer, M., Pons, G.X., Alonso-Zarazaga, M.A., Bellés, X., De Ferrer, J., Ferrer, J., Outerelo, R., Petitpierre, E., Plata, P., Ruiz, J.L., Sánchez-Ruiz, M., Vázquez, X.A., Vives, E., Vives, J., 1999. Coleópteros de las Islas Chafarinas (N. Africa): catálogo faunístico e implicaciones biogeográficas. Boll. Soc. Hist. Nat. Balears, **42**: 147-166.

Petitpierre, E. 2000. Coleoptera: Chrysomelidae I. In: Fauna Ibérica, vol. 13. (Ramos M.A. *et* al.). Museo Nacional de Ciencias Naturales – CSIC, Madrid, 521 pp. + 6 plates

Pons, G.X.; Palmer, M. and García, L. 1999. Isópodos terrestres (Isopoda, Oniscidea) de las Islas Chafarinas (N Africa, Mediterráneo Occidental). Boll. Soc. Hist. Nat. Balears, **42**: 139-146.

Warchałowski, A. 1999. Übersicht der westpaläarktischen Arten der Untergattung *Burlinius* Lopatin, 1965 (Coleoptera: Chrysomelidae: Cryptocephalus). Genus, Wrocław, **10**: 529-627.

—, 2003. Chrysomelidae. The leaf-beetles of Europe and the *Mediterranean area*. Natura optima dux Foundation, Warszawa, 600 pp. + 56 plates.

Yus, R. and Cabo, J.M. 1986. Guia de la naturaleza de la región de Melilla. Ayuntamiento de Melilla, Melilla (Málaga).