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A new semi-subterranean diving beetle of the *Hydroporus normandi*-complex from south-eastern France, with notes on other taxa of the complex (Coleoptera: Dytiscidae)

MICHAEL MANUEL

UPMC Univ Paris 06, UMR 7138 “Systématique, Adaptation, Evolution” CNRS UPMC IRD MNHN, Case 05, 7 quai St Bernard, 75 005 Paris, France. E-mail: michael.manuel@snv.jussieu.fr

Abstract

Hydroporus galloprovincialis **sp. n.** is described from Jouques, north-east of Aix-en-Provence in south-eastern France (Provence). The new species belongs to the *Hydroporus memnonius*-group, within which it is the only ascertained *normandi*-complex species of the French fauna. The habitat (small springs) and morphological features of the species suggest a semi-subterranean life style. It can be separated from the other species of the complex notably by its more elongated and parallel-sided habitus, by its wider pronotum and flatter dorsal surface, and furthermore differs from *H. normandi* Régimbart, 1903 by a different shape of the gonocoxa. Illustrations are provided for other described *normandi*-complex species and subspecies for comparison. Analyses of partial cox1 sequences indicate that the three sampled *H. normandi*-complex species (*H. galloprovincialis* **sp. n.**, *H. normandi* and *H. lluci* Fery, 1999) diverged recently; their relationships are unresolved. *H. galloprovincialis* **sp. n.** is for the moment the only species of the genus *Hydroporus* Clairville, 1806 endemic to continental France.

Key words: Coleoptera, Dytiscidae, Hydroporini, *Hydroporus*, new species, semi-subterranean, France, phylogeny.

Introduction

The French dytiscid fauna is well known thanks to the intensive activity of numerous past entomologists, among which stands apart Felix Guignot (Fery *et al.* 2006), who notably published two influential masterworks inventorying and describing all species of Hydradephaga recorded from France at his time (Guignot 1931–1933, 1947). The diving beetle fauna of France is rich and comprises several distinct contingents of species (West European, Central European, Lusitanian, Boreo-Arctic, Alpine, Mediterranean) owing to the situation of the country as a biogeographical crossroad and to its diversity of altitudes, landscapes and habitats. On the other hand, very few dytiscid species are endemic to continental France (a situation contrasting with that of neighbouring countries like Spain or Italy): besides the two species of the subterranean genus *Sieltitia* Abeille de Perrin, 1904, the only other French endemic diving beetle is *Boreonectes inexpectatus* (Dutton & Angus, 2007), one of several sibling species recently delimited among a widespread boreo-alpine complex previously treated as a single species *Boreonectes griseostriatus* (De Geer, 1774). Recent contributions to the knowledge of the French dytiscid fauna mainly consist in reports of new localities for rare species, some previously not recorded from France (e.g. Bameul 1989a, 1994, 1996, 1997, 2000, Queney 1999, 2005, 2006, Elder 2000, 2009, Angus 2010). The checklist of French Dytiscidae currently comprises 176 species (Corsica excluded) (Queney 2004, 2011), including 37 species of the genus *Hydroporus* Clairville, 1806, one of the largest dytiscid genera with 182 described species (Nilsson 2013).

In May 2009, I was collecting diving beetles in a small marsh in Jouques, a locality of south-eastern France (Provence) about 17 km north-east of Aix-en-Provence, and found several individuals of a *Hydroporus* which I immediately recognised as being exceptionally elongated and parallel. They were restricted to a very small spring on the edge of the marsh. Examination of the specimens revealed that if they were to be assigned to a described species, it was to *Hydroporus normandi* Régimbart, 1903, until now recorded from France based on only two old