

Description of the pupa and observations on the distribution, ecology, and life history of *Quedius spelaeus spelaeus* Horn (Coleoptera: Staphylinidae) in Nova Scotia, Canada

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Abstract

The troglomorphic staphylinid beetle *Quedius spelaeus spelaeus* Horn 1871, has been found in a number of porcupine dung caves in Nova Scotia where it appears to be the dominant predator on other invertebrates. In culture, late-instar larvae were observed to excavate and remain in cavities excavated in dung, and to pupate in these cavities. The pupa is described for the first time and compared with other pupae in the genus *Quedius* Stephens. The apparently disjunct distribution of the species in Nova Scotia is discussed and it is suggested that it may have colonized the province from Atlantic glacial refugia.

Key words: Coleoptera, Staphylinidae, *Quedius spelaeus*, Canada, Nova Scotia, description of pupa, life history, cavernicole, troglophile, glacial refugia

Introduction

The Staphylinidae (rove beetles) is the largest or second-largest family of beetles, with over 47,744 species in some 3,200 genera worldwide (Newton *et al.* 2000, Thayer 2005). In Canada there are at least 1,374 nominal species of rove beetles classified into some 274 genera and 23 subfamilies (Klimaszewski 2000). However, few troglobites (obligate cavernicoles) and relatively few troglophiles (facultative cavernicoles) are known from the family (Peck & Thayer 2003). The cavernicolous rove beetles include only a handful of troglobitic species. Sixty-six species of staphylinid beetles (excluding Aleocharinae and Pselaphinae) were listed from caves in the continental United States by Peck & Thayer