



**First record of *Abax carinatus* in Flanders and
notes on an inventory of ground beetles
in the forest reserve Jagersborg (Maaseik)**

Konjev DESENDER¹, Wouter DEKONINCK¹ & Koen SMETS²

1 Royal Belgian Institute of Natural Sciences, Department of Entomology, Vautierstraat 29, B-1000 Brussels
(e-mail: Konjev.Desender@naturalsciences.be).

2 Research Institute for Nature and Forest, Gaverstraat 4, B-9500 Geraardsbergen.

Summary

During recent short-term ground beetle sampling campaigns in the forest reserve Jagersborg (Maaseik, prov. Limburg, Flanders, Belgium), 34 carabid species were observed. One of these species, *Abax carinatus* (DUFTSCHMID, 1812), considered extinct before in Belgium, was found for the first time in Flanders. All available data on this species from Belgium and adjacent parts of the Netherlands, Germany and Luxemburg are summarized in this contribution, along with a detailed account on the area and site where a population of this species was discovered. The presence of this population in the Jagersborg forest reserve is of high scientific and conservation interest.

Keywords: Carabidae, *Abax carinatus*, rediscovery in Belgium, ecology, life cycle, forest reserve, forest history, Jagersborg, conservation

Introduction

Within the framework of biodiversity monitoring of forest reserves in Flanders (VANDEKERKHOVE, 1998), each of the selected and designated reserves is actually being documented by compiling history as well as all available former knowledge of biological values of each site. One of the main goals is also to establish accurate management plans for these sites in view of maintaining and, if possible, increasing biological values. Several of our forest reserves, unfortunately, have not yet been well studied before, especially for invertebrates, and are therefore urgently in need of basic inventories and future ecological and genetic monitoring.

A recent study of the forest reserve Jagersborg, located near Maaseik in the province of Limburg (Belgium), in this respect stimulated to perform a preliminary sampling in order to obtain a first inventory of the ground beetles of the area. At the onset of this study practically no such data

were available from this area. Pitfall trapping as well as some hand-collecting were therefore performed on different occasions during 2006. These samplings revealed some highly interesting species, including the carabid *Abax carinatus*, recorded for the first time for Flanders and recently considered extinct in Belgium.

The following paper summarizes the results of the mentioned samplings, after a brief account on the history and location of this forest reserve, and with special emphasis on *Abax carinatus*, a very rare carabid beetle in Belgium and surrounding countries. All present and former data on the detailed occurrence of *Abax carinatus* in our country and adjacent regions have also been compiled.

Material and methods

The forest reserve Jagersborg

The domanian forest Jagersborg covers about 300 hectares, of which 100 hectares is forest