

Revision of *Multiquaestia* Karisch (Lepidoptera: Tortricidae: Grapholitini)

LEIF AARVIK¹ & TIMM KARISCH²

¹Natural History Museum, University of Oslo, P.O. Box 1172 Blindern, NO-0318 Oslo, Norway. E-mail: leif.aarvik@nhm.uio.no

²Museum für Naturkunde und Vorgeschichte Dessau, Askanische Strasse 32, DE-06842 Dessau, Germany.

E-mail: timm.karisch@naturkunde.dessau.de

Abstract

Eight species of *Multiquaestia* Karisch are described and illustrated. Two additional species known from single females are figured but not described. A key to the known species is given.

Key words: Lepidoptera, Tortricidae, Grapholitini, *Multiquaestia*, new species, Africa

Introduction

Multiquaestia was proposed by Karisch (2005) to accommodate a new Angolan tortricid, *Multiquaestia albimaculana* Karisch, 2005. Recent field work in Africa, augmented by the examination of several collections, has led to the discovery of ten additional species. Two of these are represented by both sexes, six are known only from males, and two are known only from females. All species represented by males are described as new. The description of *M. albimaculana* was based on a female only, and the discovery of *Multiquaestia* males confirms the validity of the genus, allows a more detailed description, and sheds light on its taxonomic position.

Material and methods

The material upon which the present study is based was collected by various lepidopterists in Kenya, Malawi, and Tanzania between 1989 and 2005. Adults of *Multiquaestia* are nocturnal and were obtained by light-collecting. In most cases only a single specimen was found at any one locality, and this specimen usually differed from all other known species. One exception occurred in Kigogo Forest in Tanzania in 2005, where two species were found together in reasonable numbers with both sexes present.

Genitalia were prepared using standard methods. The abdomen was macerated in 10% KOH and dissected under a stereoscopic microscope. The genitalia and abdomen were separated and mounted in euparal on a glass slide. Photos of the genitalia were taken using a Leica DFC 420 digital camera. Adults were photographed using a Microptics photographic system. The digital images were manipulated with Adobe Photoshop CS. Terminology for genitalia and other morphological structures follows Horak (2006).

Abbreviations

BMNH	The Natural History Museum, London, United Kingdom
LAA	Leif Aarvik, personal collection, Ås, Norway
NHMO	Natural History Museum, University of Oslo, Norway