

Substituting time-consuming pencil drawings in arthropod taxonomy using stacks of digital photographs

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Abstract

The most time-consuming part of a taxonomic description is making the illustrations. This contribution shows how to save time by omitting the pencil drawings of arthropod appendages and replacing them by stacks of microphotographs. These are imported into a drawing software package on a computer in order to make a publication-ready line drawing, a technique described in detail in Coleman (2003). The photographic method requires a special treatment of the appendages which is also shown.

Keywords: method, drawing, taxonomy, arthropods, microphotography

Introduction

The high number of undescribed species and the limited time available for research brings the taxonomist on the horn of a dilemma: describe fewer species in great detail or describe more species, but in a not so detailed way. Of course most taxonomists would prefer to deliver high-quality work that will be still useful even in the distant future, as some of our predecessors showed in an exemplary manner (e.g. Stebbing, 1888; Sars, 1889).

The only way out of this dilemma is to speed up the descriptive process. One possibility is the use of DELTA software (Dallwitz *et al.*, 1993; Dallwitz *et al.*, 1998) to quickly generate text descriptions, diagnoses and keys.

However, the most time-consuming aspect of taxonomy is making the illustrations.

Drawing in taxonomy is a two step process, both very time-consuming. First, a pencil drawing is made often using a camera lucida. Then these drawings are traced another time on plates for publication. This inking stage can be sped up by using digital drawing methods (Coleman, 2003).

The idea of this paper is to combine the rapid process of microphotography and the