



## Considerations on the genus *Gordius* (Nematomorpha, horsehair worms), with the description of seven new species

ANDREAS SCHMIDT-RHAESA

Zoological Museum, University Hamburg, Martin-Luther-King-Platz 3, 20146 Hamburg, Germany.

E-Mail: andreas.schmidt-rhaesa@uni-hamburg.de

### Table of contents

Abstract .....	1
Introduction .....	2
1. Discussion of diagnostic characters .....	2
2. Summary of descriptions of <i>Gordius</i> species .....	10
3. A review of descriptions of <i>Gordius aquaticus</i> and <i>G. villoti</i> .....	12
4. New records and description of new species .....	21
<i>Gordius balcanicus</i> <b>sp. nov.</b> .....	22
<i>Gordius digitatus</i> <b>sp. nov.</b> .....	22
<i>Gordius helveticus</i> <b>sp. nov.</b> .....	24
<i>Gordius karwendeli</i> <b>sp. nov.</b> .....	24
<i>Gordius pesici</i> <b>sp. nov.</b> .....	26
<i>Gordius serratus</i> <b>sp. nov.</b> .....	26
<i>Gordius zwicki</i> <b>sp. nov.</b> .....	28
<i>Gordius</i> cf. <i>tatrensis</i> Janda, 1894 .....	29
<i>Gordius</i> cf. <i>plicatissimus</i> Heinze, 1952 .....	30
Acknowledgements .....	32
References .....	32

### Abstract

Specimens belonging to the genus *Gordius* (horsehair worms, Nematomorpha) are comparatively poor in diagnostic characters and determination of species is difficult. The characters important for determination (coloration, size, shape of anterior and posterior end, structures in the male posterior end, cuticular structure) are discussed. From the 119 species of the genus, 40 are regarded as invalid. The remaining 79 species and their characters are summarized in a table. The species *Gordius aquaticus* is the best known name among nematomorphs, but its diagnostic characters are critically reviewed. Recent methods such as SEM reveal characters such as the presence of fine bristles in the posterior end or different fine structures of the cuticular surface. Such characters were not included in older descriptions and their value for taxonomy will become apparent as more data is available. Despite such problems some specimens show unique and new characters or character combinations and the following seven species are described as new: *G. balcanicus* **sp. nov.** from Serbia, *G. digitatus* **sp. nov.** from Croatia, *G. helveticus* **sp. nov.** from Switzerland, *G. karwendeli* **sp. nov.** from Germany, *G. pesici* **sp. nov.** from Montenegro, *G. serratus* **sp. nov.** from Papua New Guinea and *G. zwicki* **sp. nov.** from Russia.

**Key words:** Nematomorpha, horsehair worms, *Gordius*, taxonomy, determination, SEM