CRYPTOGRAMMA BITHYNICA SPEC. NOV. (PTERIDACEAE, PTERIDOPHYTA) – A NEW FERN SPECIES FROM NORTHWESTERN ANATOLIA / TURKEY

S. JESSEN[1], L. LEHMANN[1] & W. BUJNOCH[2]

[1] Walter-Meusel-Stiftung, Arktisch-Alpiner-Garten, Schmidt-Rottluff-Straße 90, 09114 CHEMNITZ, GERMANY; jessen.walter-meusel-stiftung@gmx.de

[2] Trier University, Department of Biogeography, Universitätsring 15, 54296 TRIER, GERMANY; bujnoch@uni-trier.de, wrbujnoch@onlinehome.de

Keywords: *Cryptogramma*, Pteridaceae, Pteridophyta, Anatolia, Turkey, cytology, flow-cytometry

ABSTRACT

An octoploid taxon of *Cryptogramma* from the Uludağ Mts. in northwestern Turkey is described as a new species, *Cryptogramma bithynica* S. Jess., L. Lehm. & Bujnoch. An overview of the genus is given.

ZUSAMMENFASSUNG

Ein octoploides Taxon von *Cryptogramma* vom Uludağ in der nordwestlichen Türkei wird als neue Art, *Cryptogramma bithynica* S. Jess., L. Lehm. & Bujnoch beschrieben. Ein Überblick über die Gattung wird vorangestellt.

INTRODUCTION

The taxonomy within the genus *Cryptogramma* has been in dispute for a long time. In most cases (Meusel et al. 1965, Dostál 1984, Kramer & Green 1990), the only distinction which has been made is that between the boreal Asian and North American *Cryptogramma stelleri* and the more widespread *C. crispa*, a species distributed in circumpolar regions and in southern Central and East Asia as well as in southern parts of South America. A subdivision of the latter into several taxa was made on the level of subspecies or varieties (Meusel et al. 1965, Dostál 1984). Cytological studies revealed that the different taxa are of different ploidy level: diploid, or tetraploid. The origin of polyploids is mostly unresolved. However, allopolyploidy seems to be important for speciation; apparently, the North American tetraploid *Cryptogramma sitchensis* has been derived by hybridization from *C. acrostichoides* and a second, now allopatric species, possibly *C. raddeana* of East Asia (Alverson 1993).

At present, eight to eleven species are distinguished (Alverson 1993). Most of them have been cytologically examined, are morphologically distinguishable and their ranges are known (Jeßen 2008):

• *C. acrostichoides* R. Br.: 2n = 60, diploid; central to north-western North America as well as outermost north-eastern East Asia

• *C. brunoniana* Wall. ex Hook. & Grev.: 2n = 60, diploid; southern Central Asia, eastwards as far as Taiwan.