





Neverita delessertiana (Récluz in Chenu, 1843): a naticid species (Gastropoda: Caenogastropoda) distinct from Neverita duplicata (Say, 1822) based on molecular data, morphological characters, and geographical distribution

THOMAS HÜLSKEN, MARINA CLEMMENSEN & MICHAEL HOLLMANN

Thomas Hülsken, Ruhr University Bochum, Universitätsstrasse 150, D-44780 Bochum, Germany, thomas.huelsken@rub.de

Marina Clemmensen, Ruhr University Bochum, Universitätsstrasse 150, D-44780 Bochum, Germany Michael Hollmann, Ruhr University Bochum, Universitätsstrasse 150, D-44780 Bochum, Germany, michael.hollmann@rub.de

Abstract

The members of the caenogastropod family Naticidae show highly conserved morphological characters, which in many cases complicate species separation. In such cases DNA sequence analysis may help to distinguish between species. In this work partial sequences from the small mitochondrial ribosomal RNA (16S rRNA) gene, the small nuclear ribosomal RNA (18S rRNA) gene, a short intron of the nuclear calmodulin (Cal) gene, and the mitochondrial cytochrome oxidase subunit I (COI) gene are shown to differ significantly between the genomes of what generally had been considered to be merely two morphological variants of the common Western Atlantic naticid *Neverita duplicata* (Say, 1822). Sequence differences between the two forms of *Neverita duplicata* are similar to differences between either of these two forms and the Eastern Pacific *Neverita reclusiana* (Deshayes, 1839), the Indopacific *Neverita didyma* (Röding, 1798), and the Mediterranean *Neverita josephinia* (Risso, 1826). The COI sequences divergence between the two forms of *Neverita duplicata* is in the range of the average COI sequences divergence reported for congeneric species of Mollusca (Hebert 2003). We conclude that in addition to *Neverita duplicata* a second shallow water species of *Neverita* exists along the US Atlantic and Gulf coasts for which the name *Neverita delessertiana* (Récluz, 1843) is available.

Key words: *Neverita duplicata*, *Neverita delessertiana*, 18S rRNA, 16S rRNA, COI, calmodulin intron, molecular phylogeny, Naticidae, Polinicinae

Introduction

In current compilations of Western Atlantic gastropod species (Abbott 1974; Camp 1998; Rosenberg 2005) a single shallow water representative of the naticid genus *Neverita* is