

Liu H-P, Hershler R, Rossel CS (2015) Taxonomic status of the Columbia duskysnail (Truncatelloidea, Amnicolidae, Colligyrus). ZooKeys 514: 1-13. doi: 10.3897/zookeys.514.9919

Abstract

Undescribed freshwater snails (Amnicolidae: Colligyrus) from the Mount Hood region (northwestern United States) identified as a new species (commonly known as the Columbia duskysnail) in grey literature have been provided federal protection under the “survey and manage” provisions of the Northwest Forest Plan and have been placed on conservation watch lists. However, there are no published studies of the identity of these snails aside from a molecular phylogenetic analysis which delineated a close relationship between the single sampled population and *C. greggi*, which is distributed more than 750 km to the east of the Mount Hood area. Here we examine the taxonomic status of the Columbia duskysnail based on additional molecular sampling of mitochondrial DNA sequences (COI) and morphological evidence. We found that the Columbia duskysnail is not a monophyletic group and forms a strongly supported clade with *C. greggi*. The COI divergence between these broadly disjunct groups (2.1%) was somewhat larger than that within *C. greggi* (1.0%) but considerably less than that among the three currently recognized species of *Colligyrus* (8.7–12.1%). Additionally we found that the Columbia duskysnail and *C. greggi* cannot be consistently differentiated by previously reported diagnostic characters (size and shape of shell spire, pigmentation of body and penis) and are closely similar in other aspects of morphology. Based on these results we conclude that the Columbia duskysnail is conspecific with *C. greggi*.

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