A redescription of the carinate pillsnail, *Euchemotrema hubrichti* (Pilsbry, 1940) (Pulmonata: Polygyridae), with notes on habitat and genetics

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ABSTRACT

_Euchemotrema hubrichti_ (Pilsbry, 1940) was initially described as _Stenotrema hubrichti_ by Pilsbry (1940). The species was known only from shell material, and it was originally thought to be extinct. Live specimens have since been found, but the soft-part anatomy, radula and jaws of _E. hubrichti_ have never been described. This species is of substantial conservation concern, primarily due to our lack of knowledge about the species and its highly restricted distribution. We redescribe _E. hubrichti_ based on material freshly collected from the type locality. _Euchemotrema hubrichti_ is found at several sites in the Larue–Pine Hills Research Natural Area in Union County, Illinois, U.S.A., and is often abundant under loose slabs on the tops of relatively dry limestone outcrops. The shell of _E. hubrichti_ differs from those of _E. fraternum_ (Say, 1824) by its acute keel and low number of whorls. The genitalia of _E. hubrichti_ are similar to those of _S. stenotrema_ (Pfeiffer, 1842), but show a diagnostic penile inflation and lumenal twisting of the free oviduct. Partial mitochondrial cytochrome c oxidase subunit I nucleotide sequences generated from four _E. hubrichti_ individuals are identical, and show high similarity to available stylommatophoran sequences.

**Key words:** Euchemotrema, Polygyridae, Polygyrinae, Stenotremini, redescription, cytochrome c oxidase subunit I, DNA taxonomy

INTRODUCTION

_Euchemotrema hubrichti_ (Pilsbry, 1940) (also known as the carinate pillsnail) was described as _Stenotrema hubrichti_ by Pilsbry (1940, pg. 687–688, Figure 423) based on shells collected by Leslie Hubricht from Pleistocene talus at the base of a large limestone bluff in the Larue–Pine Hills region of Union County, southwestern Illinois. Pilsbry