

Redescription of neopolystoma liewi Du Preez and Lim, 2000 (Monogenea: Polystomatidae) from Cuora amboinensis (Testudines: Geomydidae) with notes on specimen preparation.

ABSTRACT

Neopolystoma liewi Du Preez and Lim, 2000, is redescribed on the basis of specimens collected from the type host, Cuora amboinensis, in Malaysia during 2008. Morphometric comparison of the new specimens with the original description revealed significant differences because of differences in specimen preparation. The current material was killed in hot formalin without coverglass pressure, whereas the specimens from the original description were killed and fixed with coverglass pressure. Coverglass pressure resulted in increases of 30%–70% in most measurements of body organs. Sclerotized structures (genital and haptor al hooks and eggs) or structures with sclerotized supports (haptor al suckers) were not affected by coverglass pressure. The coefficient of variation of measurements from worms killed with hot formalin was low (,10%) for most structures. The authors recommend discontinuing the use of flattening in the preparation of monogenetic trematodes, with the exception of a small number of specimens necessary to accurately view structures not easily seen in unflattened material. Measurements from flattened specimens should not be used in species descriptions.

Keyword: Cuora amboinensis; Geomydidae; Malayan box turtle; Malaysia; Monogenea; Neopolystoma liewi; Polystomatidae; Redescription; Specimen preparation; Testudines.