



An evaluation of the genus *Kincaidiana* Altman, 1936, with the designation of *Altmanella* n. gen. (Annelida, Clitellata, Lumbriculidae)

STEVEN. V. FEND

U.S. Geological Survey, 345 Middlefield Rd., Mailstop 496, Menlo Park, California, USA 94025. E-mail: svfend@usgs.gov

Abstract

A review of morphological characters for the western Nearctic genus *Kincaidiana* indicated that the two described species should be assigned to separate genera. *Kincaidiana freidris* Cook was transferred to a new genus, *Altmanella*. New material resembling *A. freidris* was obtained from many sites throughout western North America. Morphology of the male reproductive structures varied among populations, and the most distinctive morphological differences were accounted for by splitting the taxon into two species, which roughly corresponded to large scale regional patterns. Typical *A. freidris* occurred in several Pacific Coast drainages. *Altmanella idahoensis* n. sp., mostly associated with the Snake River drainage, was distinguished from *A. freidris* by shorter and less muscular atria and penial structures. A second new lumbriculid species with the same basic arrangement of reproductive organs was collected in southeastern North America, and was provisionally assigned to *Altmanella*. However, in contrast to the petiolate atria and large penial structures of *A. freidris* and *A. idahoensis*, *Altmanella lenati* n. sp. has tubular atria and simple male porophores.

Key words: Clitellata, Oligochaeta, Lumbriculidae, *Kincaidiana*, taxonomy

Introduction

The genus *Kincaidiana* was designated by Altman (1936) for a large and striking lumbriculid species endemic to northwestern North America. *Kincaidiana hexatheca* had a number of unusual characters, which in combination distinguished it from all other Lumbriculidae: a very long, annulated proboscis, anterior chaetae broadly bifid, three spermathecal segments (starting with the atrial segment), atria in IX (instead of the more common X), branched lateral blood vessels, and prosoporous male ducts having a single vas deferens per atrium. The definition of *Kincaidiana* was subsequently greatly broadened by the inclusion of *Kincaidiana freidris* Cook, 1966, a small worm which had spermathecae in the post-atrial segment (but not the atrial or second postatrial), and otherwise resembled *K. hexatheca* only in having prosoporous male ducts.

Recent collections from several sites in western North America have produced a large number of specimens attributable to *K. freidris*. This material, in combination with new collections of *K. hexatheca*, permits a reevaluation of the genus, and the placement of *K. freidris* in a separate genus, *Altmanella* n. gen. Additionally, morphological variation among populations of related western worms prompts the description of a new species. Recent collections from southeastern North America include yet another undescribed species having a similar arrangement of reproductive organs; that species is also described herein and provisionally assigned to *Altmanella*.

Methods

Most *Altmanella* collections were obtained using a D-frame net (Merritt & Cummins 1996) in gravel