



Contribution to a revision of the genus *Pratylenchoides* Winslow, 1958 (Nematoda: Merliniidae), with redescription of *P. erzurumensis* Yüksel, 1977 from Iran

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Abstract

Morphological and morphometric studies were conducted on the populations and paratypes of 14 species of the genus *Pratylenchoides*, including *P. alkani*, *P. acuticauda*, *P. arenarius*, *P. arenicola*, *P. bacilisemenus*, *P. crenicauda*, *P. erzurumensis*, *P. heathi*, *P. laticauda*, *P. ritteri*, *P. rivalis*, *P. sheri*, *P. utahensis* and *P. variabilis*. In addition, *P. erzurumensis* was redescribed based on a bisexual population from western Iran. The conoid head of males is an additional diagnostic character of this species distinguishing it from the closely related *P. laticauda* and *P. camachoi*. Based on detailed study of the main characters, synonymies of *P. arenarius* with *P. bacilisemenus* and *P. variabilis* with *P. crenicauda* are proposed. Synonymy of *P. alkani* with *P. ritteri* is supported also by morphological and biological evidence. Some taxonomic notes are made on some other species of the genus. Finally, a diagnostic compendium and key is provided for species identification.

Key words: Pratylenchoidea, Merliniidae, paratypes, synonymy, identification, compendium, key

Introduction

Sher (1970) revised *Pratylenchoides* Winslow, 1958, describing four new species and redescribing three known species, included an identification key and discussed morphology, geographical distribution and biology of *Pratylenchoides* in relation to the genus *Radopholus* Thorne, 1949. Baldwin *et al.* (1983) described two new species, transferred *Amplimerlinius magnicauda* (Thorne, 1935) Siddiqi, 1976 to *Pratylenchoides* and discussed comparative morphology of the pharynx and lip region in the genus.

Transfer of *Pratylenchoides* to Merliniidae Siddiqi, 1971 was first proposed by Ryss (1993) primarily based on the structures of the “lateral complex”-amphids, phasmids, deirids, phasmid-like structures in postmedian body part, lateral fields and head sensory organs. Ryss (2007) presented a list of species, diagnostic characters, an updated taxonomic standard for description of species, tabular and dichotomous keys, hosts, geographic distribution, preferred soil-climatic conditions and evolution of *Pratylenchoides*. He used 30 morphological, morphometrical and biological features as diagnostic characters.

Sturhan (2011) contributed detailed comparative studies on lateral fields, the number of incisures in juveniles and presence/absence of deirids as well as their position in representatives of the six genera of Merliniidae including *Pratylenchoides*. He noted that the genus *Pratylenchoides* is the only genus with deirids in Pratylenchidae and superfamily Hoplolaimoidea Filipjev, 1934 and supported placing the genus with those of Merliniidae in the family Merliniidae, as proposed by Ryss (1993). In subsequent work, Sturhan (2012) established the subfamily Pratylenchoidea in the family Merliniidae, with *Pratylenchoides* as the type genus. He compared this genus with others in Merliniidae taking into consideration characters including presence/absence of the deirids, lateral incisures at the level of the deirids, lateral incisures in J4, cephalic framework, presence of a perioral disc, cephalic radial grooves and features related to the tail such as a refractive inner cuticular layer at the terminus, tail shape and presence/absence of annuli at the terminus. Molecular studies (Bert *et al.* 2008, Holterman *et al.* 2009, van Megen *et al.* 2009, Panahandeh *et al.* 2014, Ghaderi *et al.* 2014) strongly support placement of *Pratylenchoides* within Merliniidae.

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