S N Description of *Pratylenchus hispaniensis* n. sp. from Spain and considerations on the phylogenetic relationship among selected genera in the family Pratylenchidae

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Abstract:

A new amphimictic species, *Pratylenchus hispaniensis* n. sp., parasitising the roots of gum cistus in Andújar (Jaén), southern Spain, is described. The new species is characterised by the presence of numerous males and by the female having a lip region with three annuli, a divided face, a robust stylet (14.5-17.0 μ m) with rounded knobs, lateral fields with four lines, V = 80-84, a round spermatheca full of sperm, well developed post-vulval uterine sac and an obliquely truncate tail with irregularly annulated terminus. Morphologically this species is related to *P. bhatti*, *P. kralli*, *P. mediterraneus*, *P. pseudofallax* and *P. thornei*. A phenetic study of the 25 most useful diagnostic morphological and allometric characters for *Pratylenchus* species was done using multivariate factor and linear discriminant analyses. In the factor analysis the first seven factors accounted for 71.1% of the total variance of the characters selected. These factors were related to female tail, pharyngeal overlap, reproductive behaviour, stylet length, L/post-vulval uterine sac ratio, body length and number of lip annuli. Discriminant analysis differentiated *Pratylenchus* spp. from the three valid species of *Zygotylenchus*. The results of the phylogenetic analysis based on sequences of the D2-D3 expansion regions of 28S, partial 18S and ITS rRNA genes confirmed the

close relationship of *P. hispaniensis* n. sp. with *P. mediterraneus* and inferred molecular affinity with *P. brzeskii*, *P. neglectus* and *P. thornei*, in spite of variation in the position of *P. hispaniensis* n. sp. in the clades. Additional phylogenetic analyses based on the same sets of sequences for *P. hispaniensis* n. sp., *Zygotylenchus guevarai* and other Pratylenchidae indicated that *Pratylenchus* includes several paraphyletic lineages; however, likelihood tests did not reject monophyly of the genus. The inclusion of *Pratylenchus*, *Zygotylenchus*, *Hirschmanniella*, *Nacobbus* and *Apratylenchus* in Pratylenchidae was supported.

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