

Abstracts of papers presented at the twentieth annual meeting of the Society of Nematologists

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FORTUNER, R. *Identification of Helicotylenchus spp.*

Forty characters have been used in the diagnosis of new *Helicotylenchus* spp. Among these characters, some have no value whatsoever (e.g., absence of hemizonid), some are artifacts (e.g., punctuation in lateral field), some are very variable (e.g., number of annules from phasmid to anus), and some are very difficult to observe (e.g., position of spermatheca). Only 10 characters were acceptable for identification purposes (body length, stylet length, V-value, broad shape of tail, habitus, position of phasmids, shape of lips, relative length of tail, presence of males, and presence of intestinal canals). Using these 10 characters, it was not possible to arrange the known species of *Helicotylenchus* into well-defined groups that would fit in a dichotomous or tabular key. However, any of the species is characterized by specific values for each of the 10 characters. Gower's coefficient of similarity gives an estimate of the relationships existing between two species or populations on the basis of the 10 diagnostic characters. By comparing coefficients, the species of *Helicotylenchus* which are morphologically most similar to an unknown population can be inferred.—California Department of Food and Agriculture, Laboratory Services, Nematology, 1220 N Street, Sacramento, CA 95814.