

339 The cellular structure of the female reproductive system of *Meloidogyne* spp. compared with other nematode species

Wim BERT^{1,*}, Ruben VAN GANSBEKE¹,
Gerrit KARSSSEN², Gaetan BORGONIE¹
and Etienne GERAERT¹

¹ Department of Biology, Ghent University, Ledeganckstraat 35, B-9000 Gent, Belgium

² Plant Protection Service, Nematology Section, P.O. Box 9102, 6700 HC Wageningen, The Netherlands

*wim.bert@rug.ac.be

Gonads from living young females, belonging to 15 *Meloidogyne* species and 80 other species, were extruded to study the cellular structure of the female genital structure. Within the genus *Meloidogyne*, the spermatheca is always spherical and formed by a variable number of thick, lobe-like cells, which makes it different from any other known nematode genus. Members of this genus are strongly unified by this characteristic anatomical feature. Nevertheless a remarkable intrageneric variability is demonstrated; most species have 16 to 18 spermatheca

cells with interlaced cell boundaries while *M. microtyla* and *M. ichinohei* have more spermatheca cells with atypical cell boundaries and the spermatheca cells of the *M. fallax* specimens are clustered together forming lobes. While most species were studied with light microscopy, the gonads of *M. incognita* were studied thoroughly using scanning and transmission electron microscopy. This allowed us to determine exactly the structural separate gonoduct components and have a better insight in their action and function.