15. A EUROPE-WIDE SURVEY OF NEMATODE TAXA OCCURRING IN COAST SAND DUNES

N. Maher[1], S. Bouamer[1], H. Duyts[2], W. Van der Putten[2], M. Fargette[1] and T. Mateille[1]

[1]IRD – UMR 1062 – CBGP (Centre de Biologie et de Gestion des Populations), 34988 Montferrier sur Lez Cedex, France
[2]NIOO – CTO (Netherlands Institute of Ecology, Center for Terrestrial Ecology), Heteren, The Netherlands
neil.maher@mpl.ird.fr

As part of the EU-funded EcoTrain project, investigating the ecology of plant parasitic nematodes, their antagonists and host plant species (*Ammophila arenaria*), the aim of this project is to understand the multi-trophic below-ground interactions that do occur. A variety of control mechanisms are thought to occur in sand dunes, responsible for regulating nematode communities therein, horizontal control (nematode-nematode competition), top-down (control by fungal or bacterial antagonists) or bottom-up (control by the host-plant). Coastal sand dunes represent a habitat that is less affected by human disturbance and that supports diverse nematode communities. This work was done to investigate the structure of those communities and their distributions at different geographical locations and environmental conditions. Foredunes on the Mediterranean and Atlantic coastlines have been surveyed in 6 European countries (France, Portugal, Belgium, England, Wales and The Netherlands), using standard methods. Thus far, 34 genera have been observed (including *Heterodera, Meloidogyne, Tylenchorhynchus, Xiphinema, Aphelenchus, Criconemoides, Ditylenchus, Helicotylenchus, Longidorus* and *Hemicycliophora*) parasitising *Ammophila arenaria*. As an example of such rich diversity, as many as 14 different genera were observed in a single sample. Many of the genera identified exhibited low frequency and abundance indices, a characteristic of nematode communities that are observed in natural, undisturbed habitats. Twenty genera observed in this study were not previously reported as occurring in sand dunes. Future work will focus on describing the intra- and inter-population structures of selected genera and/or species of nematodes observed in these dunes, and on temporal and spatial distributions according to environmental characteristics.