

ABSTRACTS OF SPECIAL SESSIONS

NEMATODE COMMUNITIES IN A PINE FOREST SUCCESSION. A. Y. Ryss, Zoological Institute RAS, Universitetskaya emb. 1, St. Petersburg, 199034, Russia.—Differences in nematode communities between 2 succession stages, a 60-year meadow grassland (MG) and 15-year *Pinus sylvestris* forest (PF), were investigated. Absence of significant differences between MG and PF for the main indices [Shannon's, Pielou's, Bongers' (MI, PPI), Simpson's (diversity)] indicated both successional stages were relatively mature. Differences were found (averages for MG and PF, respectively, for 100 ml soil at 0-10 cm depth) in total individuals (D) 3 930, 1 490; total biomass (W) 1.43, 0.39 mg, total assimilated energy (A) 2.25, 0.28 cal/day; average individual biomass 0.386, 0.262 µg; and average individual assimilated energy 754, 200 cal *10⁶/day. Higher D, W, A values correspond to the higher grassland productivity, which decreases during succession to forest. Trophic groups demonstrate a significant increase in the role of mycophages and decrease in that of omnivores during the transformation from MG to PF. The following genera have significantly greater D, W and A in grassland—*Enchodelus*, *Eudorylaimus*, *Dorylaimellus*, *Merlinius*, *Macroposthonia*; forest values are higher for *Tylencholaimus*, *Mononchus*, *Mylonchulus*, *Iotonchus*, *Rotylenchus*, *Helicotylenchus*, *Bastiania*; these genera are considered to be indicators of succession stages. New methods of individual nematode mass determination and of significant differences in nematode density are proposed.

BASIC AND APPLIED INVESTIGATIONS OF ENTOMOPATHOGENIC NEMATODES IN RUSSIA: HISTORY AND CONTEMPORARY SITUATION. S. E. Spiridonov, Institute of Parasitology, Russian Academy of Sciences, Leninskii prospect 33, 117071, Moscow, Russia.—Entomopathogenic nematode (EPN) research started in Russia in the late 1800s when Metchnikov reported the development of numerous giant female and smaller male rhabditoid nematodes in the cadavers of *Anisoplia* beetles. Several steinernematid species were described from Russia, though only *S. feltiae* and *S. anomali* are now considered valid. Reisolation of *S. arenaria*, described in the 1960s by Artyukhovskiy from Central Russia, now allows us to reconsider the validity of this species. Studies of geographical distribution of EPN in the territory of the former USSR revealed the widespread presence of steinernematids which have been discovered in nearly all ecosystems of Central Russia, habitats within the Arctic Circle, as well as mountain and sea-shore habitats. Heterorhabditids have been reported only from the Central and Southern regions (Lithuania, Moldavia, Primorskii region, Voronezh region, etc.). Despite the initial interest in the use of EPN in USSR agriculture, no progress in their application was observed under the centralized economy. Recent changes in Russian society including, high prices of mushrooms, fresh berries, and vegetables, and also a new ecological awareness by the Russian population has created favorable economic conditions for EPN use in insect pest control. Clinical testing of antibiotic compounds, produced by *Xenorhabdus* and *Photorhabdus* bacteria associated with EPN, were recently initiated.

OCCURRENCE AND MORPHOLOGY OF SOME HETERODERA SPECIES IN THE EUROPEAN PART OF THE FORMER SOVIET UNION. S. A. Subbotin, Institute of Parasitology, Leninskii prospect 33, Moscow, 117071, Russia.—Distribution and themorphological peculiarities of some cyst-forming nematodes from the genus *Heterodera* are given on the basis of our own investigations, data from the literature, and surveys conducted by regional plant protection stations. In the European part of the former Soviet Union, the sexually reproducing species, *H. filipjevi* and *H. schachtii*, are considered as agricultures most widespread and important nematode pests. The parthenogenetic species, *H. trifolii*, is also widespread in grasslands and pastures in this region. *H. humuli* is found in hop fields of the Ukraine and Bashkirija and natural habitats. *H. medicaginis* occurs in lucerne fields of the south and south-west regions of Russia and in the natural grasslands of the north Caucasus. *Heterodera fici* was reported in Abkhazia for the first time in the roots of fig trees in the forests of the west Caucasus. Reports of *H. avenae* and *H. urticae* as common species in the European part of the former Soviet Union have not been further supported and are considered doubtful.