

THE USDA NEMATODE COLLECTION AND ITS DATABASE: VITAL ASSETS FOR SYSTEMATICS RESEARCH AND IDENTIFICATION. **Handoo, Zafar, J.D. Mowery, D.J. Chitwood, and L.K. Carta.** USDA ARS Nematology Laboratory, Beltsville, MD, 20705.

The USDA Nematode Collection, one of the largest and most comprehensive nematode repositories in the world, continues to serve as a vitally important resource for nematode research and identifications. The Collection, assembled from 466 Journal of Nematology, Volume 44, No. 4, December 2012 worldwide sources, includes several constituent divisions that collectively consist of over 44,400 slides and vials stored in fire-proof safes. This resource serves as a major asset for taxonomic research and is used for a wide variety of scientific and regulatory purposes. Established in 1960 by Dr. A. Morgan Golden, the Collection includes many free-living, insectparasitic, marine and freshwater nematodes, although plant-parasitic nematodes are the most heavily represented. The oldest slide in the Collection was prepared by Nathan A. Cobb in 1890; the thousands of specimens collected from other pioneers include potentially extinct species isolated from the former Arlington Farm in Virginia. The constituent divisions of the Collection are the Type Collection with 6,709 slides and 613 vials, the General Collection with 18,551 slides and 7,095 vials, the Thorne Collection with 6,600 slides, the Steiner Mermithid Collection with 2,303 slides, the Mass Collection with 1,035 slides and 1,095 vials, the Gates Collection with 356 slides, and a Demonstration Collection of 87 museum jars. All depositions are entered into a database in which over 38,500 entries are searchable and available to the public at <http://nt.ars-grin.gov/nematodes/search.cfm>. Essential data on nematode host and distribution are recorded for each species, and by thoroughly studying database records important information and relationships between these nematodes and their environment can be gained. This database is regularly visited by scientists and regulatory agencies around the world and in the first three months of 2012 there were more than 1200 visits to the website. The unique specimens and data in the Collection have been used to resolve billion-dollar issues involving agricultural trade. Scientists around the world have regularly incorporated specimens in the Collection into their research. Along with the publicly available database records, many specimens are available for loan for limited periods to scientists in trusted organizations. Depositions made by scientists and other workers around the world are always welcomed and encouraged. The overall outcomes of Collection activities include the facilitation of agricultural trade, the continued protection of agriculture against economically dangerous invasive species, and the advancement of nematode taxonomy and scientific research.