

# 1. PaDIL Species Factsheet



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## Scientific Name:

*Xiphinema americanum* (Cobb, 1913) Micoletzky, 1922  
(Nematoda: Dorylaimida: Longidoridae)

## Common Name

Dagger Nematode

Live link: <http://www.padil.gov.au/maf-border/Pest/Main/141265>

## Image Library

New Zealand Biosecurity

Live link: <http://www.padil.gov.au/maf-border/>

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Landcare Research — Manaaki Whenua

<http://www.landcareresearch.co.nz/>

**Biosecurity New Zealand**

Tiakitanga Pūtaiao Aotearoa

MPI (Ministry for Primary Industries)

<http://www.biosecurity.govt.nz/>

## 2. Species Information

### 2.1. Details

**Specimen Contact:** MAF Plant Health & Environment Laboratory (Nematode collection held by Zeng Zhao at Landcare Research) - PHEL\_Entomology@maf.govt.nz

**Author:** Zhao, Z. Q. & Crosby, T. K.

**Citation:** Zhao, Z. Q. & Crosby, T. K. (2011) Dagger Nematode (*Xiphinema americanum*) Updated on 7/7/2011  
Available online: PaDIL - <http://www.padil.gov.au>

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### 2.2. URL

Live link: <http://www.padil.gov.au/maf-border/Pest/Main/141265>

### 2.3. Facets

**Commodity Overview:** Field Crops and Pastures, Forestry, Horticulture

**Commodity Type:** 1 Other, Basil and Mint, Citrus produce, Coconut, Coffee beans & Kape, Fabaceous produce, Figs & Breadfruit, Mango, Nuts, Rosaceous produce, Tomato, Tamarillo & Egg plant

**Groups:** Nematodes / Roundworms

**Status:** NZ - Exotic

**Pest Status:** 0 Unknown

**Distribution:** Afrotropic, Australasia, Indo-Malaya, Nearctic, Neotropic, Palearctic

**Host Family:** Anacardiaceae, Apiaceae, Apocynaceae, Arecaceae, Asteraceae, Caryophyllaceae, Cornaceae, Cucurbitaceae, Ericaceae, Euphorbiaceae, Fabaceae, Fagaceae, Lamiaceae, Malvaceae, Moraceae, Myrtaceae, Oleaceae, Pinaceae, Pittosporaceae, Poaceae, Rosaceae, Rubiaceae, Rutaceae, Salicaceae, Sapindaceae, Sapotaceae, Solanaceae, Ulmaceae, Verbenaceae, Vitaceae, Aceraceae, Chenopodiaceae, Dipterocarpaceae, Linaceae, Plantaginaceae, Tiliaceae

### 2.4. Other Names

*American Dagger Nematode*

*Tobacco Ring Spot Nematode*

*Tylencholaimus americanus* (Cobb, 1913) Micoletzky, 1922

*Xiphinema californicum* Lamberti & Bleve-Zaches, 1979

*Xiphinema taylori* Lamberti et al., 1991

### 2.5. Diagnostic Notes

\*\*Diagnostic characters: (Dr Zeng Qi Zhao, Landcare Research, Auckland, New Zealand).\*\*

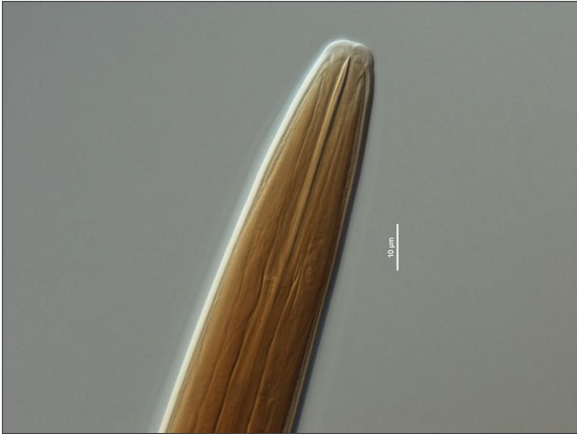
These nematodes are minute (the largest species of the group being 2.2 mm in length), soft-bodied, vermiform, nearly transparent animals. They have a hard, needle-like 'stylet' (odontostyle and odontophore) at the mouth-end of the body which is capable of being extruded to puncture plant cells. The member species of the *X. americanum* group can be readily distinguished from other *Xiphinema* spp. by the following characteristics: small body length, relatively short (usually <150 µm) stylet (odontostyle + odontophore), thick cuticular lining of the *Xiphinema americanum* sensu lato pharynx, males usually absent, female genital branches equally developed, uterus short and without Z-organ, presence of symbiotic bacteria in the oocytes

and in the intestines of juveniles, short conoid tail with rounded terminus, females without sperm, males with posteriormost medioventral supplement close to the paired precloacal papillae.

The separation of the individual species within the group is difficult and still subject to controversy among specialists. Lamberti & Bleve-Zacheo (1979) provide details of many of the species, and Ebsary et al. (1989) provide a key to the species occurring in North America.

Plants whose roots are being attacked by *X. americanum* sensu lato, in the absence of virus, generally show no clear characteristic symptoms in the aerial parts. With high populations, a general reduction in vigour is observed and this appears in characteristic patches in the crop corresponding to the highest concentration of nematodes. Under heavy attack, the roots show swellings close to the root tips. When nematode feeding results in virus transmission, the characteristic symptoms of the particular virus in the crop concerned develop. These usually first appear in the aerial parts of the plant in the growing season after transmission to the roots has occurred.

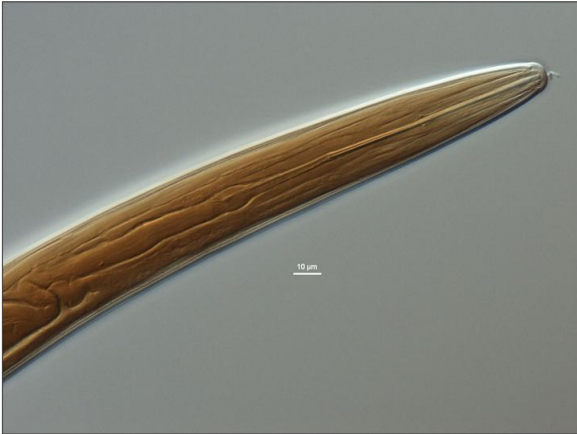
### 3. Diagnostic Images



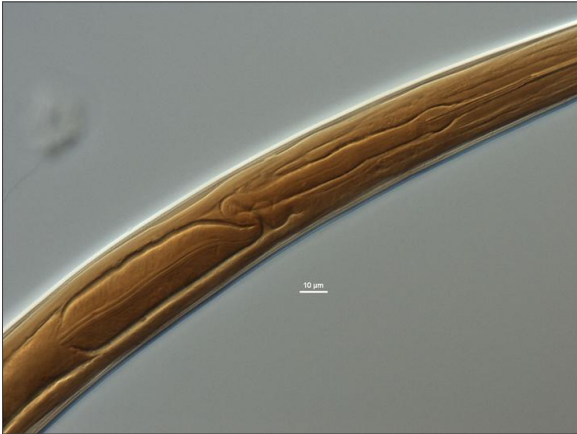
Slide mounted  
**Anterior - Female:** Zeng Zhao Landcare Research



Slide mounted  
**Full Body Image - Female:** Zeng Zhao Landcare Research



Slide mounted  
**Pharyngeal Region - Female:** Zeng Zhao Landcare Research



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**Pharyngeal Region - Female:** Zeng Zhao Landcare Research



Slide mounted  
**Pharyngeal Region - Female:** Zeng Zhao Landcare Research



Slide mounted  
**Reproductive Region Vulva - Female:** Zeng Zhao Landcare Research

Results Generated:

Saturday, November 27, 2021

