

Omemea maxbassiensis n. gen., n. sp. (Nematoda: Aphelenchoididae)
from Galleries of the Bark Beetle *Lepersinus californicus* Sw.
(Coleoptera: Scolytidae) in North Dakota

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Abstract: *Omemea maxbassiensis* n. gen., n. sp. was found inhabiting galleries of a bark beetle, *Lepersinus californicus* Sw., in green ash, *Fraxinus pennsylvanica* Marsh. The genus differs from all other genera in the subfamily in its uniquely shaped umbrella-like head, distinctive stylet, and location of excretory pore.

Most multiple-row shelterbelts in the northern Great Plains contain at least one row of green ash, *Fraxinus pennsylvanica* Marsh. The bark beetle, *Lepersinus californicus* Sw., a serious pest of this tree species, attacks the larger limbs of apparently healthy trees and even the boles of smaller diameter trees weakened by environmental stress. Attacks by this beetle may radically limit the vigor or survival of green ash in this area.

A survey was conducted in July of 1970 to determine the nematode parasites and associates of the insect in northern North Dakota. Bark was peeled from infested limb sections in the laboratory, and soaked in water for 24 hr. The water was then passed through a 325-mesh sieve, and the screenings Baermann-extracted 24 hr for nematode extraction. One of the nematode species recovered in the study is described and illustrated here.

Omemea NEW GENUS

Aphelenchoidinae: Lip region heavily sclerotized, umbrella-like in a lateral view, cephalic framework refractive, distinct. Stylet exceedingly long with very prominent basal knobs, subulate shaft longer than the

shaft. Metacarpus oblong, ovate, the anterior portion glandular. Dorsal esophageal gland robust, relatively short. Excretory pore obscure, anterior to metacarpus. Ovary outstretched, post-uterine branch several body widths in length. Female anal opening obscure. Male tail usually arcuate with sclerotized terminal membrane. Spicules paired with prominent ventral rostra.

Diagnosis.—Differs from all other genera of the subfamily in the shape of the lip region, large spear, and position of excretory pore.

Omemea maxbassiensis N. SP.

Measurements (5 ♀♀ topotypes): L = 0.64–0.77 mm; a = 31.4–34.6; b = 8.8–9.7; c = 22.6–23; V = 77–79%.

(5 ♂♂): L = 0.63–0.75 mm; a = 32.0–35.8; b = 8.6–9.0; c = 19.5–19.7.

Female.—Body straight, cylindroid. Cuticle with faint transverse striae and marked with 3 lateral incisures. Lip region sclerotized, set off with angular overhang in some specimens, appearing umbrella-like in lateral view. Cephalic framework with six heavily sclerotized sectors (Fig. 1A, B). Amphids not discerned. Spear exceedingly long, 23–26 microns, the subulate shaft longer than the shaft, the knobs prominent and strongly sclerotized at point of muscle attachment (Fig. 1A, D). Vestibule and its extension very distinct and geometrically formed. Met-

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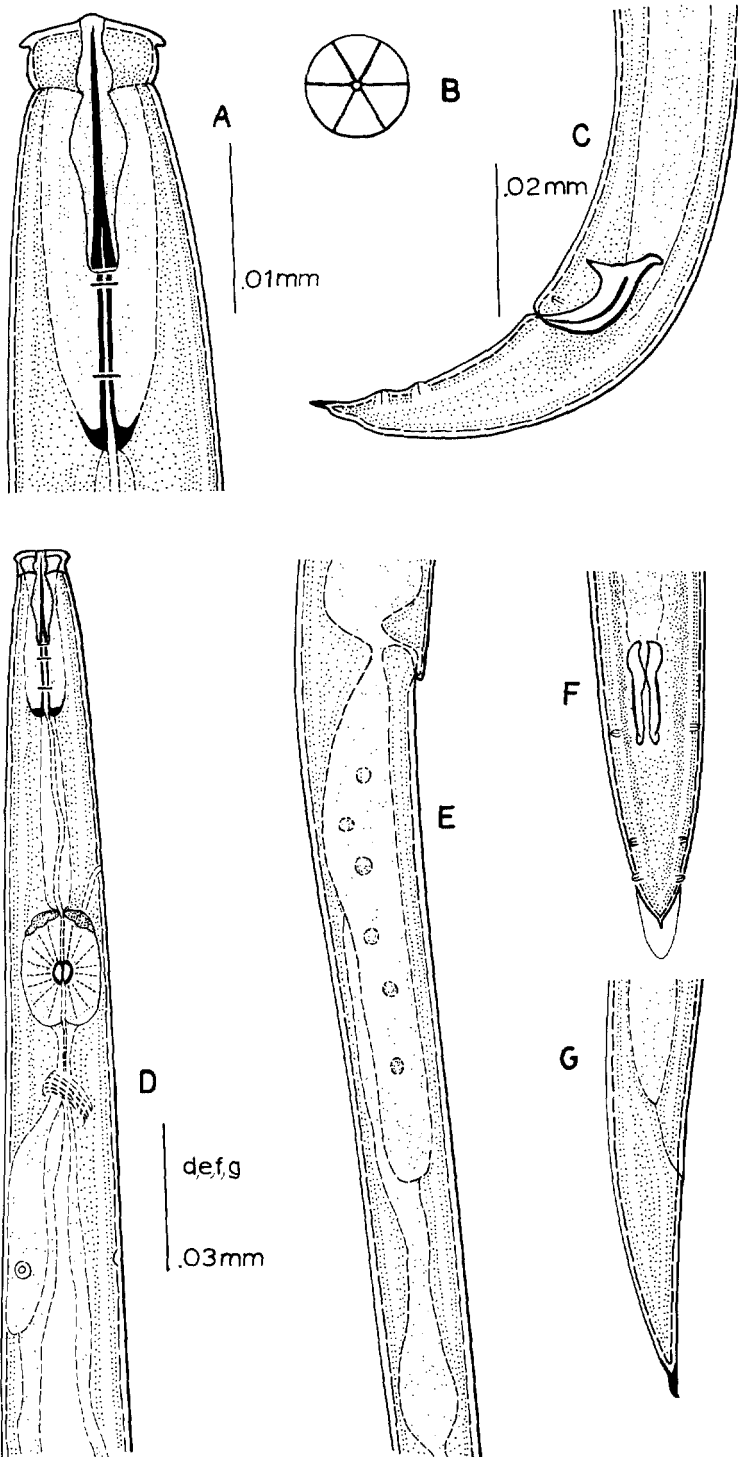


FIG. 1. *Omemea maxbassiensis* n. gen., n. sp. A. head; B. face view; C. male tail, lateral view; D. head and neck; E. female, portion of body showing vulva and posterior uterine branch; F. ventral view, male tail; G. female tail.

acorpous oblong ovate, the anterior portion glandular (Fig. 1D). Dorsal esophageal gland 2–3 body widths in length. Nerve ring two-thirds of a body width posterior to metacarpus. Excretory pore obscure, located anterior to metacarpus (Fig. 1D), more readily visible on immature specimens. Hemizonid two body widths posterior to metacarpus. Ovary single, outstretched. Posterior uterine branch four to five body widths in length, usually containing sperm (Fig. 1E). Prominent vulval flap present. Anal opening obscure. Tail conoid to a sharp, heavily sclerotized terminus (Fig. 1G).

Male.—With head and neck characteristics

similar to females. Testis outstretched or reflexed, spicules paired with a prominent sharply pointed ventral rostrum (Fig. 1C). Tail arcuate with terminal flap (Fig. 1C, F). There are three pair of caudal papillae, one pair preanal, obscure, two pair slightly anterior to the terminus (Fig. 1C, F).

Type Locality.—Omemea, North Dakota.

Type Habitat.—From galleries of *Leperinus californicus* infesting green ash, *Fraxinus pennsylvanica*.

Type Specimens.—In the nematode collection of the Rocky Mountain Forest and Range Experiment Station at Albuquerque, New Mexico. Catalogue No. 78X.