

## Variation of Tail Shape of *Cylindrocorpus curzii* (Nematoda: Cylindrocorporidae)

D. A. CHIN<sup>1</sup>

Populations of *Cylindrocorpus curzii* (T. Goodey, 1935) T. Goodey, 1939 (1, 2) isolated from filter effluent of the sewage treatment plant Urbana, Illinois, were propagated on *Aerobacter aerogenes* (Kruse) Beijerinck. A single gravid female was transferred to sterile distilled water containing .01  $\mu\text{g}/\text{ml}$  sodium hypochlorite. After 20 min, during which time several eggs were deposited, the female was removed. The sodium hypochlorite solution, containing eggs, was changed after 4 h and replaced with two changes of sterile distilled water. Larvae that hatched were immersed briefly in .01  $\mu\text{g}/\text{ml}$  actidione, rinsed in sterile distilled water and transferred to fresh *A. aerogenes* cultures. Thus, the resulting nematode population, derived from a single female to ensure genetic uniformity, was established monoxenically on *A. aerogenes*. Over a 3-year period during which monoxenic cultures of *C. curzii* were studied, adult males and females occasionally exhibited considerable variation in tail shape. These aberrant forms were only seen in old stock cultures stored at room temperature. Normally, the female tail was long and finely pointed (Fig. 1-A), whereas the male tail was ventrally curved and tapered rapidly to a terminus which had a comparatively short narrow process (Fig. 1-E). The variation in females ranged from short, bluntly rounded tails, terminating the body just behind the anus, to short conical and apiculate forms (Fig. 1-B to D). Occasionally, males were seen without the terminal process on the tail (Fig. 1-F).

In subsequent mating tests, involving virgin female variants, mated with normal males or male variants, or normal virgin females mated with male variants, the resulting progeny possessed normal tail shape, indicating that the observed variations were probably due to environmental rather than genetic factors. Undoubtedly, the occurrence of these variants

in laboratory cultures should be of interest to individuals concerned with the taxonomy of naturally occurring populations of *Cylindrocorpus* spp.

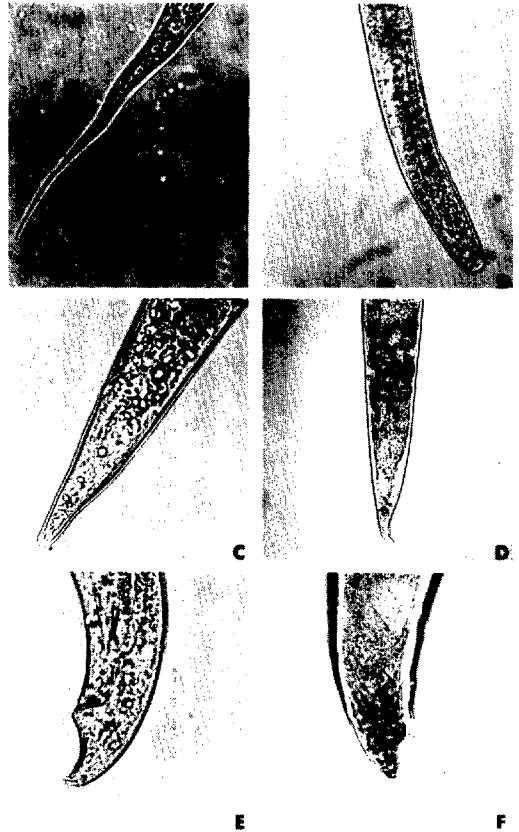


FIG 1-(A to F). Variation in tail shape of adult *Cylindrocorpus curzii*. A) Normal filiform female tail ( $\times 116$ ). B) Hemispherical female tail ( $\times 116$ ). C) Conoid female tail ( $\times 145$ ). D) Apiculate female tail ( $\times 116$ ). E) Normal male tail with terminal process ( $\times 232$ ). F) Variant male tail without terminal process ( $\times 232$ ).

1. GOODEY, T. 1935. On *Cylindrogaster curzii*, n. sp., a saprophagous nematode. J. Helminthol. 13:19-24.
2. GOODEY, T. 1939. *Cylindrocorpus* nom. nov. for *Cylindrogaster* Goodey, 1927 (Nematoda). J. Helminthol. 17:149-150.

Received for publication 23 January 1975.

<sup>1</sup>Assistant Professor, Department of Biology, Nassau College (SUNY), Garden City, New York 11510.