

## Morphological and molecular characterization of a new isolate of *Steinernema feltiae* (Filipjev, 1934) from Vancouver, Canada, with morphometrical comparison with the topotype population from Russia

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### Abstract

*Steinernema feltiae*, strain British Columbia (BC) was collected from Vancouver, Canada. SEM, morphometrical and molecular studies were conducted and the results reported. This article presents the SEM study of different stages of *S. feltiae*. The significant characteristic found in this study is that the formula of the lateral field of *S. feltiae* is 2, 7, 8, 7, 4, 2. Morphometric comparison of the new isolate and the topotype population (strain RU from Russia) showed that the body length, distance from anterior end to excretory pore, tail length, and hyaline length are significantly different. Molecular studies of rDNA ITS regions showed that the strain BC is closely related to the topotype of *S. feltiae* (strain RU) from Russia. Sequence length of strain RU is 980 base pairs compared to 977 base pairs for strain BC. Intraspecific relationships among strains of *S. feltiae* showed that geographic distribution is associated with the genetic differences, but the differences are not sufficient to delimit new species.

**Key words:** Canada, *Steinernema feltiae*, entomopathogenic nematodes, morphology, molecular characterization, Greater Vancouver

### Introduction

*Steinernema feltiae* (Filipjev, 1934) Wouts, Mráček, Gerdin & Bedding, 1982 has been found from many places all over the world (Hominick, 2002). This species was originally described from a larva of *Agrotis* (syn. *Feltia*) *segetum* from Russia (Filipjev, 1934). Later,