

159 A simple molecular diagnostic of marine Enoplida

L. ROUSSINE^{1,*}, P. DE LEY², V.V. ALESHIN¹
and N.B. PETROV¹

¹*Belozersky Institute of Physico-Chemical Biology, Department of Evolutionary Biochemistry, Moscow State University, 119899 Moscow, Russia*

²*Department of Nematology, University of California, Riverside, CA 92521, USA*

**roussine@yandex.ru*

Marine Enoplida constitute a group of free-living marine nematodes, which do not share any known morphological synapomorphy. On SSU rRNA phylogenies the group also lacks solid statistical support. In recent studies it was found that an enoplid nematode *Trefusia zostericola* possesses a rare nucleotide substitution within the region of hairpin 35 of the SSU rRNA secondary structure. The same substitution is common for all 17 Enoplida species studied to date, including *Trefusia* and *Xenella* (Trefusiidae), but is absent from other nematode lineages includ-

ing Triplonchida and Dorylaimia. Thus, the substitution can be considered a molecular synapomorphy of Enoplida and Trefusiidae. Apart from this substitution, Enoplida are found to share a rare transversion in the loop of hairpin 48. This substitution is not strictly specific for Enoplida, as it is also known from Mesorhabditoidea and selected non-nematode taxa. These signatures may be used in designing specific primers and be considered as markers of the divergent sequences of marine Enoplida.