

DIVERSE ROLES / UTILITY OF NEMATODES IN NATURE- DO WE UNDERSTAND THEM ALL?

R. AZMAT* AND Y. AKHTER**

*Department of Chemistry, Jinnah University for Women,
5C Nazimabad-74600, Karachi*

*Corresponding Author's email: rafiasaeed200@yahoo.com

Abstract

Presence of nematodes in various ecosystems and mediums such as soil, water, plants, humans, animals, fishes and other aquatic resources etc., is of great importance and concern. In every ecosystem, the nematodes like any other organisms must be playing a role. So far, nematodes associated with plants, insects and animals as harmful or useful organisms have been studied reasonably well and are known with their specific characteristics and host associations; whereas, some are referred to as "free living". Up till now, the function of nematode parasites is well known as pathogens of plants and / or parasites of animal or fish but the role of the so-called "free living nematodes" is somewhat less defined and needs to be ascertained. Literature review shows that role and use of free living nematodes as a bio-indicator, bio-remediator or bio-transformer organisms is being expedited in recent past. A well known utility of some nematode species as a bio-remediator of marine life is already being established with the fish host where nematode are found reducing the site disturbance by concentrating more contaminants in their soft body tissues and hence providing help for survival of fish in polluted environment. Similarly free living nematodes may also serve to transform toxic compounds into nontoxic, either by concentrating or secreting or excreting or by their movement just like earthworms do in the soil. Some researchers in Pakistan are now studying chemical processes taking place in nematodes using advanced molecular techniques. Furthermore, studies on the effects of climatic changes on nematode behavior, survival strategies in harsh conditions and roles in bio-remediation of polluted environments may open up new vistas on the beneficial role of these millions of years old creatures for the benefit of mankind.