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Parasites are ubiquitous in marine ecosystems, are sensitive to a range of environmental conditions, share characteristics of traditional bioindicators, and can be indicators of environmental stress. To investigate the role of environmental stressors on parasite communities, specifically trematodes, parasitological surveys of marine invertebrates were conducted across spatial and temporal scales on the coast of Ireland.

The response of parasite communities and trematodes to environmental stressors varied in relation to habitat, stressor, host and parasite taxa surveyed. Parasite communities of the common periwinkle *Littorina littorea*, the dogwhelk *Nucella lapillus* and the common limpet *Patella vulgata*, were sampled on three shores of differing water classifications, defined by the Water Framework Directive, and Lough Hyne Marine Reserve, Co. Cork. Large variation in parasite richness and abundance was observed between gastropod species, months and sites sampled. The Ragworm, *Hediste diversicolor*, and green shore crab *Carcinus maenas* were surveyed in three estuaries of differing enrichment levels. The increased abundance of trematodes was recorded in tandem with higher concentrations of nutrient parameters and larger bird communities.

The potential of statutory protection, to encourage parasite communities was assessed by a yearlong survey of subtidal *Mytilus* spp. populations and a short survey (one month) of intertidal *P. vulgata* populations in and around Lough Hyne. Parasite communities of both invertebrate taxa were similar in abundance and composition within and outside of Lough Hyne marine reserve. The limited exchange between outer waters and Lough Hyne, suggested that the reserve is unlikely to facilitate parasite taxa abundance. To investigate the observed low prevalence of trematodes in subtidal *Mytilus* spp., a series of laboratory trials was undertaken to assess the role of host stress on susceptibility to trematodes.