



International Symposium

10-14 March 2014, NIOZ, Netherlands

Abstracts of talks & posters presented during the symposium

Talks (pages 2-47)

First evening - groundbreaker talk

Talks sorted into theme sessions

- Local adaptation and co-evolutionary dynamics
- Biogeography and macroecology
- Linking parasite detection, disease monitoring and ecology & evolution
- Direct and indirect effects of diseases on marine populations and communities
- Drivers of epidemics and emerging diseases: from climate change to species invasions
- Parasites in marine food webs and effects on ecosystem functioning
- Environmental parasitology

Posters (pages 48 - 67)

Not sorted into theme sessions.

Notocotylidae (Trematoda) species differentiated by morphological, molecular and behavioural features of cercariae

Notocotylid trematodes are common pathogenic parasites of birds in marine coastal ecosystems. The research of this group has, however, been limited, partly due to serious difficulties in species identification. We studied notocotylids in the coastal communities of Northern European seas. Here we present a part of this study where notocotylids from *Hydrobia ventrosa* snails at the White Sea, previously considered uniform, were differentiated by means of morphological, molecular and behavioural data.

The cercariae were first distinguished morphologically. We applied the approach suggested by Rotschild (1938). It is based on assessing the structure of merged main collecting ducts. The groups similar to those described by Deblock (1980) were discovered. In order to estimate how does the observed variance refer to the species boundaries we carried out molecular analysis involving ITS1, 28S rDNA D2 domain and Cox1 markers. The results suggest that cercariae morphotypes *Yenchingensis*, *Imbricata* and *Monostomi* correspond to three distinct species.

Two-host life cycle is characteristic for Notocotylidae, metacercariae being formed (encysted) on the surface of various living and non-living underwater objects. To test substrate preferences of cercariae we used *Monostomi* and *Imbricata* types that were common in *H. ventrosa* snails. We experimentally estimated the proportions of cysts formed by these cercariae on vegetation and snails' shells over a 24-hours period in standardized conditions. The two species were shown to differ in the pattern of cysts distribution. While *Imbricata* cercariae randomly encysted on both substrate types, *Monostomi* cysts were found almost exclusively on vegetation. Apparently such differences serve to increase the success of cysts' transmission to the definitive bird hosts. The complete life cycles are yet to be determined, so no certain data supporting this assumption can be provided to date.