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Myxidium finnmarchicum n. sp. (Myxosporea: Myxidiidae) from the gall bladder of whiting *Merlangius merlangus* (L.) (Pisces: Teleostei) in North Norway

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Abstract

A new species of myxosporean is described from the gall bladder of whiting *Merlangius merlangus* (L.) (Pisces: Teleostei) caught at the northernmost extremity of the range of this fish off the northwest coast of Finnmark county, North Norway. The new species, *Myxidium finnmarchicum,* is described morphologically and genetically and compared with other similar species of *Myxidium* reported from the gall bladders of gadid fish in the North Atlantic - *M. sphaericum, M. gadi* and *M. bergense*. Both the morphological and molecular descriptions support the status of *Myxidium finnmarchicum* as a new species. *Myxidium sphaericum* is a parasite of whiting in the North Sea, but the two species are separated geographically by an intervening area in the northern North Sea north of 58° N where no whiting has been found infected with any species of *Myxidium.* Based upon 18S rRNA analysis, *M. finnmarchicum* shows closest sequence identity to *M. gadi*. The confusion in the literature regarding the validity and host specificities of *M. sphaericum, M. gadi, M. bergense* and *M. incurvatum* is highlighted and discussed. We suggest that a more detailed investigation of the range of morphological and molecular variation in these parasites from their various reported host species is required.

Key words: *Myxidium finnmarchicum* **n. sp.**, *Merlangius merlangus,* North Norway

Introduction

Whiting, *Merlangius merlangus* (L.), is a gadid fish with a geographical distribution in the northeast Atlantic from the southern Barents Sea and Iceland to Portugal, and in the Black, Adriatic and Aegean Seas (Froese & Pauly, 2009). During a cruise of the University of Tromsø research vessel *Jan Mayen* along the coast of Finnmark in North Norway in 1999, we had the opportunity to examine whiting caught at the northern extremity of the range of the species. We found the gall bladders to be infected with a myxosporean parasite of the genus *Myxidium,* which came as a surprise because MacKenzie & Kalavati (1995) and MacKenzie *et al.* (2005) had reported that the common *Myxidium* species infecting the gall bladders of whiting, *Myxidium sphaericum* Thélohan 1895, was found only in whiting caught south of 58º N in the North Sea and did not appear in any of the North Sea samples taken north of this latitude. Closer examination revealed that the *Myxidium* from Finnmark showed consistent morphological differences when compared to *M. sphaericum* and to *Myxidium bergense* Auerbach, 1909, another species infecting cod *Gadus morhua* L. and haddock *Melanogrammus aeglefinus* (L.) off Finnmark. These differences suggested the presence of a different, possibly new, species. In November 2008 and October 2009 we returned to the coast of Finnmark and collected further material. In this paper the new species is described morphologically and genetically and compared with other species of *Myxidium* infecting gadid fish in the North Atlantic—*M. sphaericum*, *M. bergense* and *Myxidium gadi* Georgèvitch, 1916.

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