

Migration to the sea of river spawning whitefish (*Coregonus lavaretus* L.) fry in the northern Baltic Sea

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with 5 figures and 1 table

Abstract: The migration of river spawning whitefish was studied in the Simojoki and Tornionjoki Rivers in spring 2005–2008 using a rotary smolt screw. In the Simojoki River, the study started well before the whitefish fry migrated, but it had to be stopped soon after the peak of migration. In the Tornionjoki River, the fry migration started before the screw was in place, but it was possible to follow the latter part of the migration. Dipnetting showed that whitefish larvae were present on the shores of both rivers soon after hatching, but the migrations did not start until after mid-June, when the fry were about 30 mm long. The migrations peaked in late June–early July and the number of fry decreased rapidly thereafter. In the Tornionjoki River, they were caught daily until early September, when the screw was removed. The growth of whitefish fry seemed to be similar in both rivers.

Keywords: Anadromus whitefish, *Coregonus lavaretus*, reproduction, fry, migration, smolt trap.

Introduction

In the Gulf of Bothnia there exist two forms of whitefish: the river spawning whitefish (*Coregonus lavaretus* L.) and the sea-spawning whitefish, *Coregonus lavaretus widegreni* (Malmgren) (HIMBERG & Lehtonen 1995). The river spawning whitefish migrate upstream in autumn to spawn and the fry hatch in spring. The fry then migrate downstream to the sea where they feed and grow until reaching reproductive size. This form of whitefish is stocked in large numbers and has been studied considerably because of its ecological and economic value (JOKIKOKKO et al. 2002, LESKELÄ et al. 2004, Leskelä 2006, LEHTONEN 1981). The adult sea-migration is well understood (see studies cited in LEHTONEN & HIMBERG 1992) and several studies of the timing and duration of downstream migration of fry after hatching have been published, however, the methods and results of these studies have varied (LINDROTH 1957,

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