

NOBLE CRAYFISH (*ASTACUS ASTACUS*) REINTRODUCTION PROJECT IN RIVER PYHÄJOKI,
WESTERN FINLAND - A CASE STUDY

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ABSTRACT

The crayfish plague (*Aphanomyces astaci*) and watercourse construction have devastated once productive noble crayfish (*Astacus astacus*) stocks from the large river systems in Western Finland during the first half of the 1900's. Since then, there have been several attempts to reintroduce noble crayfish to rivers as well as resources have been used to improve the aquatic habitat to suit better the general requirements of crayfish. River Pyhäjoki has been hit by crayfish plague twice (1960 and 1979), and once (1988) the reason for mortality was unknown. The most recent reintroduction program was initiated at the turn of the millennium, year 2000, when a carefully planned project was funded by fisheries administration from EU and by other financiers from national and private sources. After two years of introductions a complicated lesson was learnt, since, amongst other coincidences, also crayfish plague was introduced to the river system. The recent spread of the plague has been sporadic in the river system and quite amazingly it did not affect all the stocks even in the main channel of the river. The plague also wiped out one of the source stocks 50 km from the river Pyhäjoki. Later it was discovered, that the plague fungus could have originated from a signal crayfish (*Pacifastacus leniusculus*), either directly or indirectly. There are no known occurrences of signal crayfish in this area. Furthermore, the stockings were more successful in the small rivers upstream than in the main channel of the river Pyhäjoki itself. Due to severe lack of rainfall and resulting drought some of the small river populations were also lost. The dynamics of the crayfish plague and experiences from the river Pyhäjoki crayfish introduction project are discussed in detail.

KEYWORDS: noble crayfish, introductions, crayfish plague, river system