River Tornionjoki water system has an abundant and stable \textit{G. salaris} infection.

- River Tornionjoki water system is the best wild salmon river of the Baltic Sea catchment area. The salmon stock is on the rise with ca. 100 000 broodstock counted on their spawning migration in 2014 and 2016, ca. 60 000 in 2013, small run of 2016 ca. 2-3 million smolt.
- \textit{G. salaris} infection most common in the upper tributaries (Fig. 1, Ref. 1). The occurrence pattern has remained like that for over a decade 2000-2012 (Table 1). There are no obstacles for the downstream spread of the parasites and smolt are heavily infected (Ref. 4). In spite of this, she (all \textit{G. salaris} females) is most prevalent in the north.
- Water quality parameters maybe explanatory (aqueous aluminium concentrations during floods?)

River Tornionjoki water system has two endemic and differentiated subpopulations of \textit{G. salaris}.

- Salmon parr in Rivers Lätäseno, Künkämäeno and upper Muonionjoki are mainly infected with genetic subpopulation (ADNAM1 type S2) and the other one in lower Muonionjoki and Tornionjoki (Tables 2 and 3, Ref. 4).
- Again she is refusing the ticket to ride, the partition to the subpopulations remained same for ten years 2000-2009 (Ref 4).
- Possibility of local co-adaptation of the host-parasite subpopulations.

**References**


\textcopyright{} Finnish Food Safety Authority Evira, Oulu, Finland

\textcopyright{} Perttu Koski

\textcopyright{} Jaakko Lumme

\textcopyright{} University of Oulu, Department of Biology

\textcopyright{} perttu.koski@evira.fi

\textcopyright{} http://dx.doi.org/10.1016/j.meegid.2016.08.006