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Physiological condition of cod infected with the parasitic nematode *Contracaecum osculatum* - causalities and the chicken or the egg

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Parasitism is one of the most common animal lifestyles, yet the potential effects of parasites on ecosystem food-web stability, interaction strength and energy flow often remains ignored. At the level of the individual, parasites can have adverse effects on the performance of the host. For trophically transmitted parasites, such effects on transport hosts can make the host more vulnerable to predators, increasing the probability of the parasite to reach its final host. Yet, disentangling effects of parasites in wild animals from effects of other drivers is challenging. For nutritional status of infected hosts, the conundrum arises: Does high parasite load reduce nutritional condition? Or does poor nutritional status increase susceptibility to parasites? The chicken or the egg. Combining results from laboratory experiments, field investigations and historical data on the parasite–host system between cods liver worm *Contracaecum osculatum* and the Eastern Baltic cod G*adus morhua*, I elucidate how parasite load may relate to the physiological performance and nutritional condition of a transport host. The Eastern Baltic cod is in distress, with historically low nutritional condition, disappearance of the larger fish, high natural mortality and no signs of recovery of the population, and a heated debate exists amongst scientists, NGOs, fishers and managers on which factors drive this misery. Åland cod in adjacent waters are large and in good nutritional state – but do they have liver worm? Is it possible to monitor liver worm load at a broad spatio-temporal scale? I will present a parasite-monitoring program, which is at its infancy.