

# Differential infectivity of *Caligus flexispina* (Copepoda, Caligidae) in three farmed salmonids in Chile

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## Abstract

The ectoparasitic copepod, *Caligus flexispina*, is causing increasing problems in farmed salmonids in southern Chile. Field and experimental approaches were used to assess whether any of the three host species, rainbow trout *Oncorhynchus mykiss*, Atlantic salmon *Salmo salar* and coho salmon *Oncorhynchus kisutch*, is preferentially colonized. Prevalence, abundance, density and developmental stages attained by the parasite in three host species were compared. Results clearly revealed that rainbow trout is the most susceptible species: under field conditions, *C. flexispina* is more prevalent and abundant and there is a higher proportion of adult stages. No ovigerous females were found in coho salmon. In experimental infestations, rainbow trout were more heavily colonized by infective copepodids, and these were more likely to reach the adult stage. A mixture of factors inherent to each host-parasite relationship is considered to play a role in these observations because coho salmon is also colonized by copepodids but a low proportion of the parasites reach the adult stage. However, Atlantic salmon is resistant to the infective copepodid larva. © 2000 Elsevier Science B.V. All rights reserved.

**Keywords:** Sea lice; *Caligus flexispina*; Farmed salmonids; Host susceptibility; Copepodid settlement

## 1. Introduction

Chilean sea lice, *Caligus flexispina*, ectoparasitic copepods belonging to the Caligidae family, have a life cycle consisting of the following stages: two nauplius, one infectious copepodid, four attached chalimus stages, one pre-adult and the adult (unpub

