

Short Communication #1

# Strong positive effect of fresh water in bath treatments (“*in vitro*”) against *Caligus rogercresseyi*



March 2019

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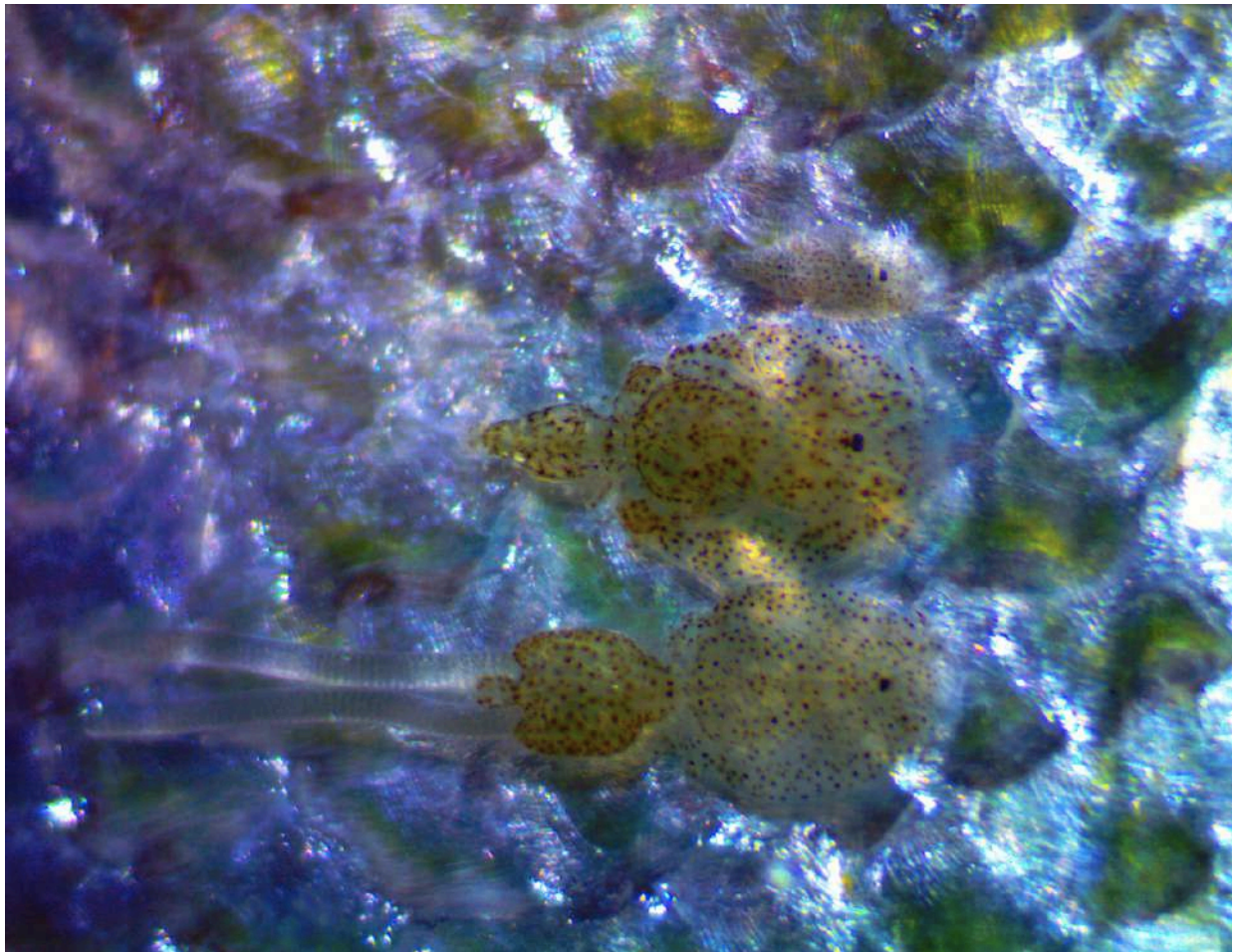


Foto: J.P. Cumillaf

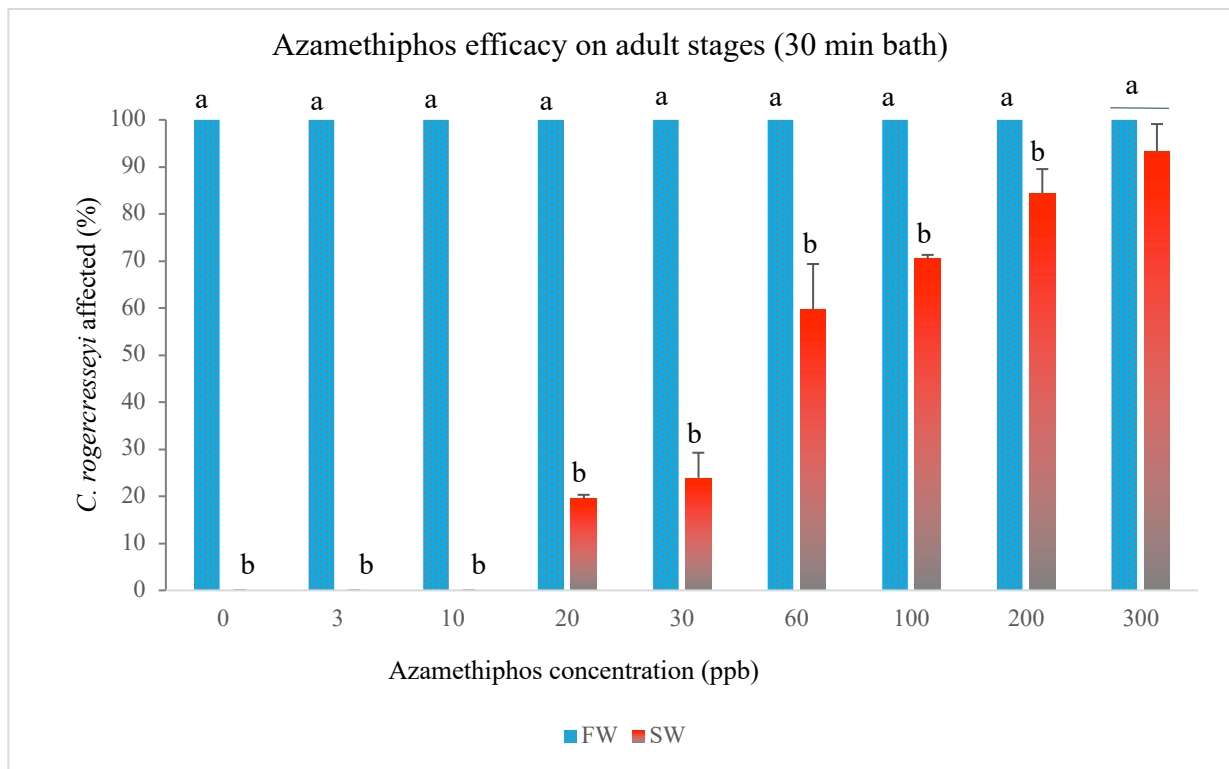
# Effect of fresh water, azamethiphos and hydrogen peroxide on adult stages of *Caligus rogercresseyi*

We tested the efficacy of the common therapeutic treatments used to control adult *C. rogercresseyi* in traditional saltwater bath and also in combination with freshwater.

The tests were performed “*in vitro*” in 2018 at the Laboratory for Crustacean Ecophysiology of Universidad Austral de Chile in Pelluco, Puerto Montt, supervised by Dr. (C) J.P Cumillaf<sup>1</sup>.

## **“In vitro” trials (*C. rogercresseyi* adult stages)**

⇒ *A 30 min pure freshwater bath has the same effect as a 30 min saltwater bath with 300 ppb of azamethiphos on adults of C. rogercresseyi.*

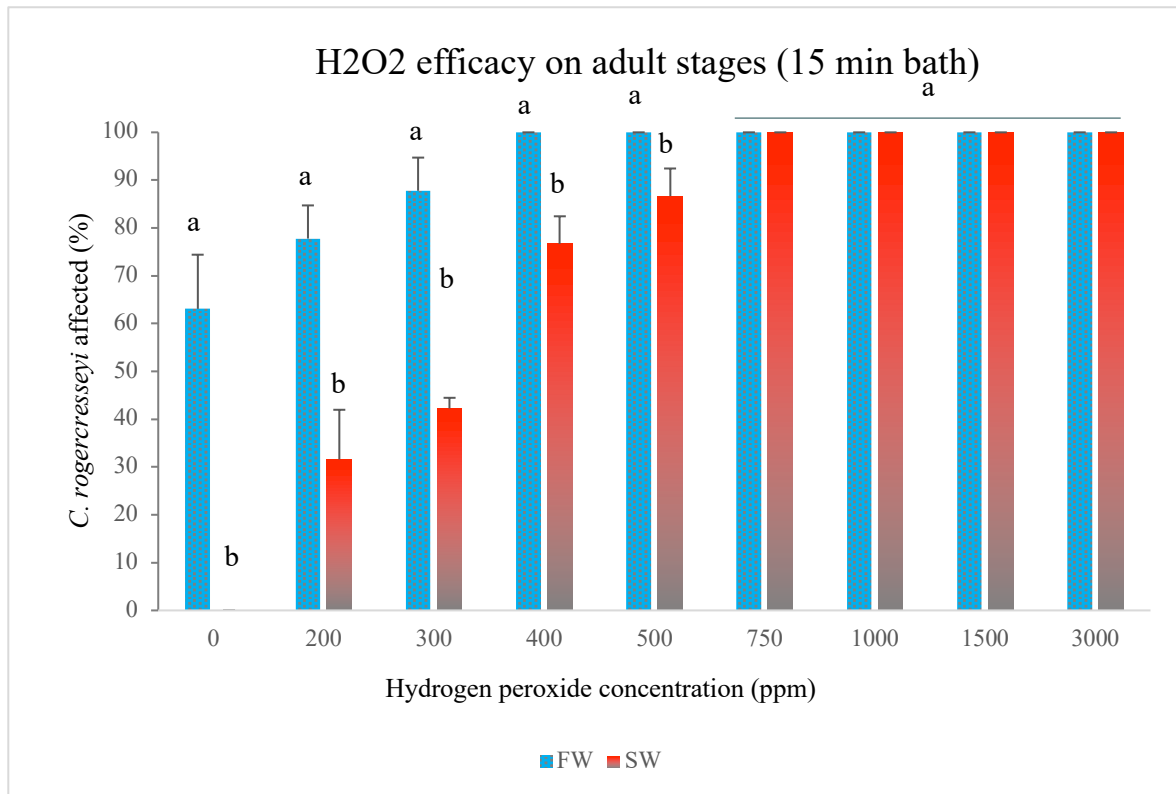


**Figure 1:** Effect of a 30 min bath of azamethiphos at different concentrations prepared with freshwater (FW) or saltwater (SW) on adult stages of *C. rogercresseyi*. Graph shows average percentage and standard deviation of affected<sup>2</sup> sea lice immediately after the bath treatment. Different letters above each bar show significant differences ( $p < 0,05$ ) between SW and FW treatment for each concentration of azamethiphos (“t” – test).

<sup>1</sup> For full details of the study contact us at [info@salmoclinic.cl](mailto:info@salmoclinic.cl)

<sup>2</sup> Affected corresponds to the sum of dead (no movement of appendices or internal organs when touched) and moribund (showing abnormal swimming behavior and/or difficulties to attach to the walls of the experimental container).

⇒ *A 15 min freshwater treatment with 400 ppm of hydrogen peroxide has the same effect as a 15 min saltwater bath with 750 ppm of hydrogen peroxide adults of C. rogercresseyi.*



**Figure 2:** Effect of a 15 min bath of hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) at different concentrations prepared with freshwater (FW) or saltwater (SW) on adult stages of *C. rogercresseyi*. Graph shows average percentage and standard deviation of affected<sup>3</sup> sea lice immediately after the bath treatment. Different letters above each bar show significant differences ( $p < 0,05$ ) between SW and FW treatment for each concentration of H<sub>2</sub>O<sub>2</sub> (“t” – test).

**At SalmoClinic we are working on innovative, cost effective and sustainable alternatives to control parasitic diseases affecting salmon, with special attention to fish welfare and reduced environmental impact.**

- ⇒ Reduction of 70% or more in use of therapeutics
- ⇒ Freshwater or saltwater bath treatments (FW produced on board)
- ⇒ Precise therapeutics dose control (concentration and exposure time)
- ⇒ Released parasites retained/destroyed using several filtering stages

Contact us to know more about how SalmoClinic can improve your salmon health management strategies ([info@salmoclinic.cl](mailto:info@salmoclinic.cl)).

<sup>3</sup> Affected corresponds to the sum of dead (no movement of appendices or internal organs when touched) and moribund (showing abnormal swimming behavior and/or difficulties to attach to the walls of the experimental container).