EVENT ABSTRACT

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Optimizing sealed transports of small ornamental fish

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This is a report on multiple simulated long-term transports of small ornamental fish inside plastic bags. The species involved were *Diplodus sargus, Gobius paganellus, Gobiusculus flavescens, Lepadogaster lepadogaster* and *Lipophrys pholis*. The objective of such simulations was moving the maximum bioload possible while ensuring 100% survivorship, ultimately resulting in savings for the end-receiver. Transports were simulated over 24, 48 and 72 hours, with increasing animal bioloads per bag.
Half of the trials were performed with “regular” saltwater while the other half involved seawater buffered with Amquel ®, sodium carbonate and sodium bicarbonate, with the objective of keeping ammonia low and pH similar to initial baseline values. At the end of each trial, temperature, dissolved oxygen, pH and ammonia were analized and the survival rate calculated and recorded. *L. lepadogaster* endured the highest bioloads at 100% survivorship (i.e. up to 30 g / L), which is not surprising given the intertidal nature of this species. *D. sargus* exhibited mortalities with bioloads as low as 3,23 g / L, which echoes its predominantly pelagic nature and relatively lesser ability to endure confinement. The three remaining species showed varying degrees of tolerance to increasing bioloads in transport: *L. pholis*, also an intertidal species, handled up to 20 g/L over 72 hours, while *G. paganellus* handled up to 7 g/L over 72 hours, and *G. flavescens* (a predominantly pelagic species) could deal with no more than 6 g/L up to 72 hours.

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