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## Swimming performance of juvenile temperate fish in response to climate change

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Climate change is predicted to affect populations of marine fish through effects on swimming behavior. Warming causes impairment of oxygen consumption and locomotion in ectotherms. We used generalized linear mixed model (GLMM) to determine the influence of four different temperatures (16, 19, 22 and 25°C) and two different levels of salinity (30ppt and 40ppt) on critical swimming performance ( $U_{crit}$ ) of juvenile King George whiting (*Sillaginodes punctatus*), a commercially and recreationally important temperate fish in southern Australia. When estimated the critical swimming performance ( $U_{crit}$ ) of the juveniles. Differences in  $U_{crit}$  were largely explained by Salinity and increased by increasing salinity from 30 to 40ppt. Findings from the present study demonstrated that, despite of no meaningful relationship between the  $U_{crit}$  and temperature at salinity 30ppt,  $U_{crit}$  was higher in 22°C, at salinity 40ppt in compare with other temperatures. Evaluating physiological responses of juvenile fish to climate change is beneficial for understanding a thermal niche of individuals and estimating their adaptation to warming.

### Biography

Nastaran Mazloumi was the University of Adelaide International Scholarship (ASI) holder since 2012 started the PhD at the age of 24. Graduated in bachelor of Fisheries engineering (Aquatics Ecology) and master of "Aquaculture" with experience in aquaculture engineering and fish physiology. Researched different aspects of marine and fresh water fish biology, ecology and physiology including, fish stocking and husbandry (from small to large sizes), working with different sizes of "Swim chamber respirometer" and metabolic rate measurements by "Lab chart" and "Auto-Resp" software, otolith chronology and modelling with 'R'. She served as an expert in charge of research and process of warm water fish reproduction and culture from March 21, 2008 to June, 2011 in "Pisciculture Production Cooperative No.12 in Rasht, Iran. Authored and co-authored different articles and presented papers at domestic and international conferences.

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