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## The Optomoter Response method and response time in differently selected populations of Guppies (*Poecilia reticulata*)

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> Testing vision in fish; The Optomoter Response As our oceans are heating up, due to thermal expansion and ice melting, the water is able to hold less oxygen. How will different species of fish adapt to these environmental changes? As a part of a bigger project, looking at vision in coral reef fish under hypoxia, this experiment is an experimental trail of the Optomotor Response

Will positively, negatively or randomly selected lines affect vision? Different population lines of Guppies (Poecilia reticulata) have each been positively, negatively or randomly selected in labs at the University in Bergen. For this experiment I wanted to see if being selected differently, through time and generations, has affected a line of Guppies vision and response time.

method.



Using the Optomoter response: The Optomotor response is a response to a wide-field stimulation that can be called forth by placing a fish in a rotating drum surrounded by a stimulus (Caves, Troscikano, Kelly, 2020, p. 1320), which in our test was thin, black and white stripes. As the drum rotates, a responsive fish will reflexively turn or move

it's head, body or eyes to track the stripes

rotating.





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Referance: Caves, E. M., Troscianko J., Kelly, L. R., (2020) "A customizable, low-cost optomotor apparatus: A powerful tool for behaviorally measuring visual capability", Methods in Ecology and Evolution. Hentet: 04.09.23

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