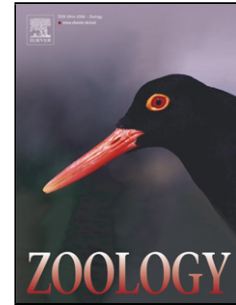


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The Ebbinghaus illusion in the gray bamboo shark (*Chiloscyllium griseum*) in comparison to the teleost damselfish (*Chromis chromis*)

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Highlights

- We tested the visual perception of Ebbinghaus circles in an elasmobranch and a teleost.
- *C. chromis* succumbed to the illusion, similar to humans or dolphins (contrast effect).
- In contrast, sharks were not deceived by the illusion (assimilation effect).
- These contrasting responses point towards potential differences in perceptual processing mechanisms.

Abstract

This is the first study to comparatively assess the perception of the Ebbinghaus-Titchener circles and variations of the Delboeuf illusion in four juvenile bamboo sharks (*Chiloscyllium griseum*) and five damselfish (*Chromis chromis*) using identical training paradigms. We aimed to investigate whether these two species show similarities in the perceptual integration of local elements into the global context. The Ebbinghaus-Titchener circles consist of two equally sized central test circles surrounded by smaller

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