

# Why fish talk: Clownfish communication establishes status in social groups (w/ Video)

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This is a clownfish. Credit: Orphal Colleye

Clownfish produce sounds to establish and defend their breeding status in social groups, but not to attract mates, according to research published November 7 in the open access journal *PLOS ONE* by Orphal Colleye and colleagues from the University of Liege, Belgium.

Previous studies showed that clownfish live in unique [social groups](#), where the largest fish develops as a female, the second-largest is male, and the rest of the group remains gender neutral. If the largest fish dies,

the rest of the group moves up a rank to replace the female and male.

This new research studies the importance of sounds made by the fish in this social structure, and finds that clownfish sounds are of two main kinds: aggressive calls made by charging and chasing fish, and sounds made by submissive fish. The authors also found that smaller fish produced shorter, higher frequency pulses of sound than larger fish.

According to the authors, these [acoustic signals](#) are especially significant for clownfish given the size-based hierarchy of their social structure.

**More information:** Colley O, Parmentier E (2012) Overview on the Diversity of Sounds Produced by Clownfishes (Pomacentridae): Importance of Acoustic Signals in Their Peculiar Way of Life. PLoS ONE 7(11): e49179. [doi:10.1371/journal.pone.0049179](https://doi.org/10.1371/journal.pone.0049179)

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