

## Acoustic discrimination in *Dascyllus trimaculatus* courtship behavior

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Playback experiments have been a valuable method for investigating the role of sounds and the importance of specific acoustic features in signal recognition across various vertebrate species. Nonetheless, such experiments have been rarely conducted in studies involving sound-producing fish, and only a few investigations have explored how sound characteristics contribute to encoding specific information. Here, we assessed the ability of males *Dascyllus trimaculatus* to discriminate between species-specific sounds by comparing their responses to conspecific and heterospecific sounds within the *Dascyllus* genus through playback experiments. We focused on wild males exhibiting courtship behavior, characterized by the “signal jump”, a display that combines visual and acoustic cues and can be triggered by displays from nearby males. Playback experiments were conducted in the natural habitat of the Temae lagoon in Moorea, where conspecifics and heterospecifics signal jump sounds from *D. trimaculatus*, *D. albisella*, *D. aruanus*, and *D. emamo* were broadcast to focal males. We hypothesized that *D. trimaculatus* males would exhibit stronger courtship responses to conspecific sounds. Additionally, we tested responses to *D. trimaculatus* sounds that were modified regarding sound duration, number of pulses, pulse duration, and pulse period, hypothesizing that the pulse period is the most important characteristic in communication.

