

# Travel with your kin ship! Insights from genetic sibship among settlers of a coral damselfish

Vanessa Robitzch<sup>1</sup>, Pablo Saenz-Agudelo<sup>2</sup>, and Michael Berumen<sup>3</sup>

<sup>1</sup>Universidad Austral de Chile

<sup>2</sup>El Instituto de Ciencias Ambientales y Evolutivas

<sup>3</sup>King Abdullah University of Science and Technology

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## Abstract

Coral reef fish larvae are tiny, exceedingly numerous, and hard to track. They are also highly capable, equipped with swimming and sensory abilities that may influence their dispersal trajectories. Despite the importance of larval input to the dynamics of a population, we remain reliant on indirect insights to the processes influencing larval behaviour and transport. Here, we used genetic data (300 independent single nucleotide polymorphisms) derived from a light trap sample of a single recruitment event of *Dascyllus abudafur* in the Red Sea (N=168 settlers). We analysed the genetic composition of the larvae and assessed whether kinship among these was significantly different from random as evidence for cohesive dispersal during the larval phase. We simulated many iterations of similar-sized recruitment cohorts to compare the expected kinship composition relative to our empirical data. The high number of siblings within the empirical cohort strongly suggests cohesive dispersal among larvae. This work highlights the utility of kinship analysis as a means of inferring dynamics during the pelagic larval phase.

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