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Abstract

Mating Territory Location Drives Mating Success by Male Wrasses (Labridae) at a Resident Spawning Aggregation Site †

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Abstract: An increasing number of reef fish species have been shown to form spawning aggregations. These aggregations occur at predictable times and places, with participants utilizing single or mixed mating systems. In a lek-like mating system, males establish temporary courtship territories that they defend against rival males while attracting females to spawn. The location of these territories often contributes to differential mating success. The males holding territories deemed "desirable" by females because of the physical attributes of their location attract more females and secure greater mating opportunities compared to those males that defend territories elsewhere within the spawning aggregation site. Presumably, females favor locations where newly spawned eggs may be carried away from potential predators more effectively. Thus, males holding territories located at the outer edge of the site in an area exposed to water currents running parallel to the reef face have far greater mating success than those males that hold territories found on inner or middle sections of the site where currents are less pronounced. This pattern is consistent across a range of taxa within the family Labridae, co-occurring at a multispecies spawning aggregation site on a coral reef in Guam, Western Pacific.

Keywords: courtship behavior; lek-like mating; reproduction; territoriality

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