

FEMALE MATING BEHAVIOR IN THE CONTEXT OF SEXUAL COERCION AND FEMALE RANGING BEHAVIOR OF BOTTLENOSE DOLPHINS (*Tursiops* Sp.) IN SHARK BAY, WESTERN AUSTRALIA

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ABSTRACT

In Shark Bay, alliances of two to three male bottlenose dolphins (*Tursiops* sp.) guard single females of consortships, sometimes involving aggression toward the female. Despite 20 years of research on adult male mating strategies, the female's perspective has been largely ignored. I added further evidence that some consortships fit the definition of sexual coercion and that females incur a cost of being consorted. In addition, I investigated how ecological factors influence dolphin ranging, considered important in female social evolution. Anthropogenic effects on female dolphin movement were also investigated. Behavioral data on adult females were collected during follows of individuals from small boats during the breeding season (2001-2003). A summary of the results from each chapter are presented below:

- Chapter 1) A review of recent changes in sexual selection theory placed sexual coercion, an extreme response to sexual conflict, alongside traditional female choice as a type of mating bias.
- Chapter 2) Females experienced more aggression from males when they were in a consortship than when they were with adult males otherwise. During consortships females socialized predominantly with consorting males, even though other males were present.
- Chapter 3) Females experienced increased risk of injury and altered depth use when in consortships. Additionally, foraging time decreased when females were in consortships where they received aggression.
- Chapter 4) Female home ranges were not related to the ecological variables studied in our small sample: female reproductive state, population density, water temperature, water depth, or body length. However, core ranges were larger over seagrass beds and provisioned animals had smaller home ranges than those that were not handled by humans.
- Chapter 5) Female dolphins used a pearl oyster farm area less than surrounding waters and were less likely to enter a pearl farm than they were to swim around it.

This study explains how adult female bottlenose dolphin behavior is affected by a coercive male mating strategy. Further research involving other factors is needed to explain how home range size is determined. The results also offer several points useful for broader comparison regarding sexual coercion, sexual conflict, and individual animal movement.