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Title : Bottlenose Dolphin Social Strategies: Constrasts by Habitat

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Abstract : Movements of prey, physical characteristics of habitat, and interactions with other animals affect the behavior and habitat use of marine mammals. Inherent variations in coastal environments and delphinid population structures lead to a wide variety of social strategies in coastal-living dolphins. To delve into behavioral, social, and habitat questions, I described the behavioral activity of a small community of 35-40 "resident" bottlenose dolphins (Tursiops truncatus) that display a high degree of site fidelity to a protected but industrialized bay system off Galveston Island, Texas, and compared this to behavior of "gulf animals" that live adjacent to this community but in open waters just outside of the Galveston Bay system. My research was initiated to determine if the partial geographic isolation of this resident group has led to behavioral isolation, and how behavior may be influenced by age class, sex, or other social factors. I recorded the activity state of each group encountered by instantaneous sampling to create a time budget of behavior for the resident group, as well as for any nearshore gulf animals encountered outside the bay system. These behaviors were compared across all areas where they occurred to determine habitat use. I also photo-identified dolphins to describe association patterns among the residents. Preliminary results indicate that while the resident and gulf dolphins largely occupy different habitat types, the proportions of their behaviors differ both in overlapping and in non-overlapping areas. Nevertheless, they interact socially when they encounter each other. Strong long-term associations exist among same-sex resident animals. Ongoing but not yet completed genetic work may determine if associations are based on kinship, and if this small population of individuals with differing proportions of behaviors from gulf animals is genetically isolated.