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Comparisons of the Behavioral Ecology of Risso's (*Grampus griseus*) and Common Dolphins (*Delphinus delphis* and *D. capensis*): Risks and Rewards of Group Living

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Behavioral ecology of pelagic Risso's and short- and long-beaked common dolphins is poorly known. The comparative approach was used to predict group size and behavior relative to risks/rewards of group living in the same eco-region. Risso's were predicted to occur in smaller, less-cohesive groups and mill less/rest more during daytime than common dolphins based on distribution of prey and predation risk. Video and scan sampling documented first-observed group size, behavior state, and individual spacing (in body lengths [BL]) during aerial surveys (72,467 km) off southern California in January-November 2008-2012 for 290 Risso's and 564 common dolphin groups (commons were combined due to small confirmed *D. capensis sample* size). Behavior was significantly influenced by species, calf presence, time of day, and water depth. Group size was significantly smaller for Risso's (18.4) vs. commons (277.1), and higher with calf presence (Risso's: 25 with calf vs. 15 without) (commons: 485 with calf vs. 205 without). Mean spacing was significantly less for commons (5.1 BL) vs. Risso's (6.7) and decreased significantly across the day for both. Risso's were 13 times more likely to rest than commons. Risso's rest increased significantly across the day and over deep water/steep slopes. Both species associated with deep underwater slopes. Smaller group size, looser group spacing, and more daytime resting of Risso's are adapted to nocturnal foraging. Larger group size, tighter cohesion, and frequent daytime foraging of commons matches clumped, high-density daytime distribution of schooling fish and presumed higher predation risk. Larger group size likely benefits calf survival through dilution effects. Results suggest the species have diverged ecologically in the same habitat in response to differences in food resources and

predation pressure as predicted by group-living patterns documented for well-studied terrestrial mammal species. Data lend insight into ecological triggers influencing behavior.

ABSTRACT BOOK

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