

PROXIMATE MECHANISMS AFFECTING DIETARY SWITCHES IN BREEDING GULLS

CYNTHIA ANNETT¹

ABSTRACT.—The diet of Western Gulls (*Larus occidentalis*) nesting on Alcatraz Island (San Francisco County) was followed for the breeding seasons of 1983, 1984, and 1985. Individual nests were surveyed two to four times per week throughout the breeding seasons, and data were collected on breeding biology, food remains, pellets, and regurgitations. Adults fed heavily on garbage early in the season, but switched to small fish (anchovy) when chicks hatched. This pattern was significant in all years (125–150 nests checked each year). The strong correlation of the timing of the switch with hatching of the eggs was supported by detailed data on the diet of individual pairs immediately before and after their eggs hatched. Experiments in which eggs were switched between nests in order to alter the timing of hatching also supported the hypothesis. Hatching alters many aspects of parental behavior, and appears to strongly influence prey choice behavior. Several hypotheses on the mechanism of prey switching as well as the evolutionary basis of prey choice by breeding gulls are discussed.

¹ Department of Zoology and Museum of Vertebrate Zoology, University of California, Berkeley, California 94720.