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Abstracts

FEATURE ARTICLES

CLAM DENSITY AND SCAUP FEEDING BEHAVIOR IN SAN PABLO BAY, CALIFORNIA

VICTORIA K. POULTON[1,3], JAMES R. LOVVORN[1,4] AND JOHN Y TAKEKAWA[2]
[1]*Department of Zoology, University of Wyoming, Laramie, WY 82071*
[2]*U.S. Geological Survey, Western Ecological Research Center, San Francisco Bay Estuary Field Station, P.O. Box 2012, Vallejo, CA 94592*
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[3]Present address: Estuarine and Coastal Sciences Laboratory, South Slough National Estuarine Research Reserve, P.O. Box 5417, Charleston, OR 97420.
[4]Corresponding author. E-mail: lovvorn@uwyo.edu

Abstract. San Pablo Bay, in northern San Francisco Bay, California, is an important wintering area for Greater (*Aythya marila*) and Lesser Scaup (*A. affinis*). We investigated variation in foraging behavior of scaup among five sites in San Pablo Bay, and whether such variation was related to densities of their main potential prey, the clams *Potamocorbula amurensis* and *Macoma balthica*. Time-activity budgets showed that scaup spent most of their time sleeping at some sites, and both sleeping and feeding at other sites, with females feeding more than males. In the first half of the observation period (12 January–5 February 2000), percent time spent feeding increased with increasing density of *P. amurensis*, but decreased with increasing density of *M. balthica* (diet studies have shown that scaup ate mostly *P. amurensis* and little or no *M. balthica*). Densities of *M. balthica* stayed about the same between fall and spring benthic samples, while densities of *P. amurensis* declined dramatically at most sites. In the second half of the observation period (7 February–3 March 2000), percent time feeding was no longer strongly related to *P. amurensis* densities, and dive durations increased by 14%. These changes probably reflected declines of *P. amurensis*, perhaps as affected by scaup predation. The large area of potential feeding habitat, and alternative prey elsewhere in the estuary, might have resulted in the low correlations between scaup behavior and prey densities in San Pablo Bay. These low correlations made it difficult to identify specific areas of prey concentrations important to scaup.

Key words: Aythya affinis, Aythya marila, *clam densities*, Macoma balthica, Potamocorbula amurensis, *San Francisco Bay, scaup feeding behavior.*