

WILSON, JR., W. H. 1989. Predation and the mediation of intraspecific competition in an infaunal community in the Bay of Fundy. *J. Exp. Mar. Biol. Ecol.* 132:221-245.

WILSON, JR., W. H. 1990. Relationship between prey abundance and foraging site selection by Semi-

palmated Sandpipers on a Bay of Fundy mudflat. *J. Field Ornithol.* 61:9-19.

ZACH, R., AND J. B. FALLS. 1977. Influences of capturing prey on subsequent search in the Ovenbird (Aves: Parulidae). *Can. J. Zool.* 55:1958-1969.

*The Condor* 99:210-213  
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## AQUATIC COMMUNITY CHARACTERISTICS INFLUENCE THE FORAGING PATTERNS OF TREE SWALLOWS<sup>1</sup>

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**Abstract:** During periods of inclement spring weather, Tree Swallows (*Tachycineta bicolor*) were observed foraging along the surface of a series of food sources such as emerging aquatic insects (Dence 1946, Cohen and Dymerski 1986). The ability to exploit such local concentrations of available insects

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TABLE 1. Insect emergence from experimental ponds. Mean numbers of insects per pond per day ( $\pm$ SE) are given for each treatment. Emergence is  $\frac{\text{pond}}{100}$

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ponds also affects foraging. It is clear that the swallows are responding to differences in insect emergence, but the mechanism causing the increased insect emergence has not been studied. Although addition of nutrients increases insect production as expected, the presence of fish also increases primary production (Morin et al 1991) but has a negative effect on insect production (Table 1). Therefore, fish must be having a direct, negative

LITERATURE CITED

BECKER, G. C. 1983. Fishes of Wisconsin. Univ. Wisconsin Press, Madison, WI.  
BENT, A. C. 1942. Life histories of North American flycatchers, larks, swallows, and their allies. U. S. Government Printing Office, Washington, DC.  
BLANCHER, P. J., AND D. K. McNICOL. 1988. Breed-

Diogenes, A. P. and F. W. C. 1992. *Living off the land*. Cornell, N.Y. 1977. *Red-wings and the Tree Swallow*

wax of the land: bayberries and Yellow-rumped  
Warblers. *Auk* 100:224-245

low, *Iridoprocne bicolor*, and its implications for  
the evolution of coloniality. *B. D. J. Cornell*

ROBERTSON, R. J., B. J. STUTCHBURY, AND R. R. COHEN. 1992. Tree Swallow. In A. Poole, P. Stettenheim, and F. Gill [eds.], *The birds of North America*, No. 11. The Academy of Natural Sciences, Philadelphia and The American Ornithologists' Union, Washington, DC.

Univ., Ithaca, NY.  
STUTCHBURY, B. J. AND R. J. ROBERTSON. 1990. Do Tree Swallows use nest cavities as night roosts during territory establishment? *J. Field Ornithol.* 61:26-33.  
TURNER, A., AND C. ROSE. 1989. Swallows and martins: an identification guide and handbook.