

Made in United States of America
Reprinted from THE AUK
Vol. 105, No. 4, October 1988
Copyright © 1988 by The American Ornithologists' Union

**Food Supplement Effects on Breeding Time and Harem Size
in the Red-winged Blackbird (*Agelaius phoeniceus*)**

PETER H. WIMBERGER¹

Washington State Museum, University of Washington, Seattle, Washington 98195 USA

Some bird species (e.g. *Parus major*, Källander 1974; *Corvus corone*, Yom-Tov 1974; *Falco tinnunculus*, Cavé 1968; and *Melospiza melodius*, Smith et al. 1980) advance the onset of breeding in response to increased food resources during the pre-laying season, whereas others (e.g. *Pica pica*, Högstedt 1981) do not. Ewald and Rohwer (1982) report advancing the onset of

breeding in Red-winged Blackbirds (*Agelaius phoeniceus*) by feeding. Their study, however, used whole lakes as experimental units, as opposed to territories or groups of territories within lakes. Ponds differ in surrounding vegetation, topography, substrate and productivity (Orians 1980), factors that may affect upland foraging success during the early breeding season, and relative timing of insect emergence later in the season. These latter factors may affect timing of breeding. One could therefore argue that the advancement that Ewald and Rohwer observed was due to intrinsic differences between marshes rather than

¹ Present address: Section of Ecology and Systematics, Cornell University, Ithaca, New York 14853-2701 USA.