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Abstracts

**SPECIAL SECTION: CHOICES AND CONSEQUENCES OF AVIAN HABITAT SELECTION**

**EXPECTED EFFECTS OF CORRELATED HABITAT VARIABLES ON HABITAT QUALITY AND BIRD DISTRIBUTION**

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*Abstract.* Habitats are composed of multiple variables, each of which may affect one or more population demographic rates. The patterns of correlation among habitat variables can introduce correlations among demographic rates, even if any single habitat variable affects only a single demographic rate and is independent of others. I present a simple model in which habitat is composed of two continuous habitat variables, one of which affects fecundity but not survival, and the other of which affects survival but not fecundity, such that correlations between survival and fecundity are due exclusively to correlations between the habitat variables. When individuals are able to select habitat with complete information about habitat quality, habitat selection always leads to higher growth rates at small population sizes. With complete information about habitat quality, patterns of distribution and population growth rates are strongly affected by the correlation between habitat variables. In contrast, when individuals have information about only fecundity or survival but not both, distributions become insensitive to correlations among habitat variables, which can lead to an ecological trap. This simple model demonstrates why explicitly distinguishing between habitat choices and the consequences of choices will be necessary if the complex interplay between habitat structure, habitat choice, and habitat quality is to be fully understood.

*Key words:* *habitat ecology, habitat selection, population model.*