

*The Condor*  
Volume 105, No. 1  
February 2003 C.E.  
Abstracts

## SHORT COMMUNICATIONS

### GIVING-UP DENSITIES AND HABITAT PREFERENCES OF EUROPEAN STARLINGS AND AMERICAN ROBINS

JOSEPH O. OYUGI<sup>1,2,3</sup> AND JOEL S. BROWN<sup>1</sup>

<sup>1</sup>*Department of Biological Sciences, University of Illinois at Chicago, 845 West Taylor Street, Chicago, IL 60607*

<sup>2</sup>*National Museums of Kenya, Department of Ornithology, P.O. Box 40658, Nairobi, Kenya*

Manuscript received 6 August 2001; accepted 11 September 2002.

<sup>3</sup>Present address: Department of Biological Sciences, University of Illinois at Chicago, 845 West Taylor Street, Chicago, IL 60607. E-mail: [joyugil@uic.edu](mailto:joyugil@uic.edu)

*Abstract.* In a field experiment, we measured the giving-up densities and activity of co-occurring American Robins (*Turdus migratorius*) and European Starlings (*Sturnus vulgaris*). Across six distances from cover, both species had lower giving-up densities near cover (safe) than away (risky). In terms of activity, both species were more active near than away from cover. Preference for cover was more pronounced for robins. Both species foraged more in the morning than in the afternoon. This pattern was more pronounced for starlings. Relative to the background environment (mowed grass), robins favored the food patches more than starlings. For starlings and robins, respectively, it took 72.6 m<sup>2</sup> and 382.3 m<sup>2</sup> of background environment to generate the same feeding activity in a 1-m<sup>2</sup> food patch filled with 210 mealworms (*Tenebrio molitor*). The greater degree of herbivory by starlings may explain the robins' greater affinity for food patches (invertebrates only) relative to the background environment (both invertebrates and plants).

*Key words:* American Robin, European Starling, foraging theory, giving-up density, habitat preference, patch use, predation risk.