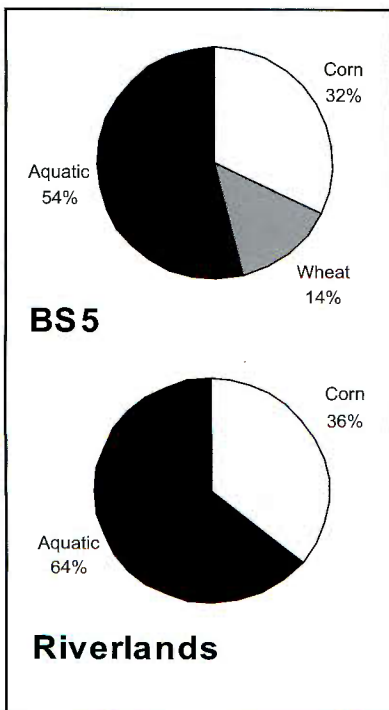


(Bellrose 1980, Baldassarre and Bolen 1994). Food availability during winter is probably not limited for populations that use agricultural resources (Gates et al. 2001). Traditionally the swan's diet consisted solely of aquatic plants, however, about 30 years ago swans began foraging in grain and produce fields (McKelvey 1981). In southern Illinois, groups of wintering Trumpeter Swans have been observed foraging in agricultural fields (Babineau 2004). It is currently unknown if those agricultural foods meet the energetic and nutritional requirements of Trumpeter Swans.

Research

During the winters of 2001-02 and 2002-03, Faye Babineau, a graduate student in the Cooperative Wildlife Research Lab (CWRL) at Southern Illinois University-Carbondale, conducted a study of Trumpeter Swans wintering in Southern Illinois. She focused on a

Figure 1. Percent of daylight hours spent in various habitat types by Trumpeter Swans at two study sites during the winter of 2005-06.



Trumpeter Swans rest in cornfields in Illinois during winter.

Photo by Dana Varner

population wintering at Burning Star #5 (BS5), a reclaimed surface coal mine located approximately 6 miles east of Desoto, Illinois. Swans were first seen at BS5 in 1994 and the population has increased steadily since. The goals of the project were to determine the size, behavior, and habitat use of the population as well as the timing of migration. She noted that the swans arrived in late November or early December and had all departed by mid-March. She counted 71 trumpeters during the first winter of her study and 77 during the second. She found that the swans were using corn, soybean, and winter wheat fields for feeding. Winter wheat fields seemed to be preferred and were used more than would be expected, according to availability, during both winters. The results of the study suggested that agricultural habitat is able to meet the needs of wintering Trumpeter Swans in southern Illinois (Babineau 2004).

To further test this hypothesis, a second study, funded by the Illinois Department of Natural Resources, was initiated through the CWRL at Southern Illinois University-Carbondale in 2005. The goal is to determine the winter habitat conditions that support maximum population growth for IP Trumpeter Swans by estimating survival rates for migratory and non-migratory swans and among swans using different wintering areas. The methods include Trumpeter Swan flock surveys and activity time budgets to establish habitat use patterns and re-sighting neck-collars and leg bands to determine survival rates.

Currently, there are three large groups of trumpeters that winter in, or very near, Illinois that totaled over 380 individuals during the winter of 2005-06. More than 100 trumpeters stayed on or near BS5 during the winter of 2005-06. About 140 trumpeters wintered at the U. S. Army Corps of Engineers Riverlands Migratory Bird Sanctuary (Riverlands) on the Mississippi River between West Alton, Missouri, and Alton, Illinois. More than 130 trumpeters were seen

Figure 2. Percent of time spent foraging while in various habitat types by Trumpeter Swans at two study sites during the winter of 2005-06.

