Philadelphia Urban Conservation Treaty for Migratory Birds

On August 13, 2009, Region 5 announced a $70,000 Urban Conservation Treaty for Migratory Birds grant to the City of Philadelphia. The announcement occurred at "Zoo Night" an event at the American Ornithologists Union annual meeting. Michael DiBerardinis, Commissioner of the Philadelphia Department of Parks and Recreation (to whom the grant was awarded) noted that "Philadelphia lies along the Atlantic Flyway and is an essential urban sanctuary for migrating birds that fly through Philadelphia every spring and fall. This agreement is a testament to the high quality of natural areas in Philadelphia's parks."

This award marks a milestone in the Delaware Bay Estuary Project Office's decade old collaboration with several City of Philadelphia land and water resource management departments as well as numerous private sector organizations involved in conservation of Philadelphia's natural resources. And as Marvin Moriarty, Fish and Wildlife Service Northeast Regional Director, points out the treaty partnership "is not only good for the birds – it is also good for the citizens of Philadelphia. Wildlife watching contributes to people's enjoyment of the outdoors, and generates over $112 billion to state and national economies."

Philadelphia is a city of contrasts. One of the oldest cities in the U.S. (settlement began in 1681) it is a mix of urban and rural landscapes - there are 17th century homesteads, 21st century skyscrapers and the John Heinz National Wildlife Refuge at Tinicum. Philadelphia is the 5th largest city in population and ranks 59th in land area. Within Philadelphia there are more than 10,000 acres of parks and undeveloped lands. Thirteen percent of Philadelphia's land mass is managed by the Philadelphia Department of Parks and Recreation. Those areas within the Fairmount Park system have been designated by Audubon Pennsylvania as an Important Bird Area (IBA), the only urban area in the Commonwealth to receive IBA designation. Philadelphia's presence in the Atlantic Flyway and its' large expanses of natural areas coupled with the City's commitment to excellence in natural resource management resulted in Philadelphia becoming one of the pilot Urban Treaty cities.

Treaty projects currently being implemented vary in size from less than an acre to 15 acres. The smallest project involved removal of large areas of impervious surfaces to create bird and pollinator habitat at a downtown school. This schoolyard habitat is part of an overall school greening project for which Greenfield School and its many partners raised over $150,000.

Several years ago Philadelphia Academy of Natural Sciences ornithologists described the loss of early successional habitats as the most important threat to bird populations in Philadelphia. This threat is common to many natural areas in the eastern U.S. Treaty funds will assist Fairmount Park in reclaiming fifteen acres of degraded grassland and shrub habitat in the Wissahickon section of the Park. It represents the beginning phase of reclaiming 45 acres of an area known as Houston Meadows, which was a 70-acre grassland as recently as 1970. Keith Russell, Audubon Pennsylvania Outreach Coordinator supports the Houston Meadows project by conducting seasonal bird inventories for Fairmount Park. Keith, who grew up in Philadelphia and did some of his first birding "in the Wissahickon" laments the loss of species that used to breed in Houston Meadows and which no longer breed there.

Because the major flight path of birds using the Atlantic Flyway overlaps one of the most urbanized regions of the U.S., urban parks and even smaller vegetated areas within cities often represent the only stopover habitat available along the East Coast. Philadelphia is positioned at the intersection of numerous migration routes, making it a particularly important city in terms of the large number of migrants passing through. The need to ensure the availability of habitat where birds can quickly restore depleted energy is critical. Treaty funds are being used to provide support to the Migrant Stopover Ecology Study. This project designed to assess the ecological value of habitat in the West Park section of Fairmount Park is a collaborative effort involving the Philadelphia Zoo, Audubon Pennsylvania, Fairmount Park and researchers at the Wildlife Conservation Society/Bronx Zoo Department of Ornithology.

During the three year study, in accordance with appropriate protocols, birds were captured in mist nets, aged and sexed, weighed and measured, examined for signs of wing and body molt and banded with federal serial numbered bands. Visible subcutaneous fat was measured and assigned to fat classes by the same observer. These data are being analyzed at the Bronx Zoo and will be used to correlate the nutritional condition of migratory birds with habitat in the West Park section. The results will inform future habitat restoration in West Park.

But outright habitat loss and degraded habitat quality are not the only threat to the birds of Philadelphia. As early as 1900, bird kills at Philadelphia's City hall were reported in the "Proceedings of the Delaware Valley Ornithological Club." At that tine City Hall was the tallest building in the Philadelphia and the only one that had outside lights to highlight the building at night. References that describe bird kills in Philadelphia during the first half of the 20th century suggest that the kills wee caused by lights.

At this point the skyline is crowded with tall buildings, which are lit at night. In addition many buildings have large expanses of plate glass which reflect sky and vegetation and birds fly into windows that that they perceive as sky and trees. Now both night lights and plate glass are implicated in bird kills. Toronto, Chicago and New York have initiated studies to examine the nature and extent of bird-building collisions.
Dr. Daniel Klem, Mulenberg College ornithology professor has studied bird-building collisions for three decades. Dr. Klem estimated that within the 4-month spring and fall migration an of 520 birds crash into buildings and die in an average 10-square block urban area. Thus there could be as many as 40,000 bird collisions in Philadelphia as birds migrate along the Atlantic Flyway.

Urban Treaty funds are supporting a Bird Collision Study in Philadelphia. Audubon Pennsylvania, the Philadelphia Zoo, the Philadelphia Academy of Natural Sciences and Temple University are collaborating in a monitoring program that focuses on two areas: Center City and Temple University, where the front of the Student Center is a wall of glass. In Center City 11 buildings were monitored and 12 buildings were monitored on Temple's campus. The monitoring was conducted by a combination of volunteers and one paid staff. Having a paid monitor provider greater consistency to the effort and resulted in making contact with maintenance and security personnel at all of the high rise buildings in within the Center City study area. Through these contacts access to the sub-roofs of the 3 tallest buildings in Philadelphia was allowed. Regrettably dead birds were found on the sub-roof of all of these buildings, indicating that bird- building collisions occur high up as well as closer to the ground. Audubon Pennsylvania notes that this is new information as bird collision studies in other cities have involved looking for dead or injured birds on the ground only.

The monitoring at Temple's North Philadelphia campus was carried out by University students. A larger number and variety of dead and injured birds were found on the University campus than within the Center City study area during the same time period. The University has requested technical assistance from Audubon regarding actions to reduce or prevent bird-building collisions. .