

Materials and Methods

We compared daily abundance data from all three census methods for each day during the month of May for the years 2006 and 2007. We excluded all non-migratory species, all non-passerines, and several species whose migration through the Chicago region is almost entirely completed before May. Specific sampling structures for the three techniques are described below.

Mist-netting: All mist-netting data for this study came from the Shaw Woods Avian Monitoring Project (SWAMP), a mist-netting station operated each day during May at the Skokie River Nature Preserve in Lake County, Illinois. The study site and methodology of SWAMP are described in Gordon et al. (2002), and Bueter et al. (2006). We used SWAMP mist-net capture data for the 2006 and 2007 seasons, during which 1614, and 2250 net x hours of mist-netting were conducted on 27, and 30 days, respectively.

Nocturnal Flight Call Recordings: Calls were recorded from a single location in north suburban Zion, IL, one block west of Sheridan Road, and roughly 2 km west of the Lake Michigan lakefront. The surrounding habitat is residential, with scattered large ornamental and remnant, native deciduous hardwoods. Recordings were made each night between the hours of 8 p.m. and 7 a.m. from 30 April to 30 May 2006 and 2007, with an Audio-technica ATR20 (2006) or ATR30 (2007) microphone, mounted at the focal point of a 24-inch aluminum parabolic reflector. The whole assembly sat approximately 4m above ground, pointing approximately northeast at 30 degrees above the horizon. The microphone was hooked into a VIA AC'97 Audio sound card running in a PC with an AMD Athlon 1800™ processor. Using the program, Syrinx version 2.5q, sampling was performed at a rate of 22050 Hz, and a sonogram file was produced



In this study, Ovenbird nocturnal flight calls could not be confidently identified, but mist-nets and window collisions recorded similar levels of abundance for this species. Emil Martinec took this photo of a migratory Ovenbird at Montrose Harbor, Cook County on 16 May 2006.



In this study, Wood Thrushes were recorded in roughly equal abundance in both mist-nets and window collisions, but thrushes in the genus, Catharus were recorded in much higher abundance with mist-nets than with window collisions. Photo courtesy of Dan Sudia, Florida Museum of Natural History.

for any sound with a minimum trigger event duration of 10 ms, minimum sound duration of 30 ms, a maximum gap between trigger events of 100 ms, and a minimum intensity of 40% above ambient sound levels for the frequency range of 2000 to 3800 Hz, or 30% above ambient for the frequency range of 5500 to 12000 Hz. We excluded the 3800 to 5500 Hz frequency range because it was dominated by the calls of fall field crickets (*Gryllus pennsylvanicus*). The only songbird species that appear to be restricted to this range are Least Flycatcher (*Empidonax minimus*) and Eastern Phoebe (*Sayornis phoebe*) (Evans and O'Brien 2002). Both of these species are thought to call in nocturnal flight only rarely (Evans & O'Brien 2002).

The sonograms of all recorded flight calls were identified subsequently by Paul Sweet based on the duration, pitch, and modulation characters described in Evans and O'Brien (2002), and occasionally with the aid of listening directly to the recordings.

Window Collisions:

We used window collision data for 2006 and 2007 for the month of May from Chicago Bird Collision Monitor and Rescue Project's (CBCMRP) main survey territory, located in downtown Chicago from 700 West to the lakefront East; and from 1000 North to 500 South. Through this program, volunteers patrol accessible areas of ground around buildings and other structures each day to rescue stunned birds and collect birds killed by colliding with windows. The majority (>90%) of active patrols were focused on buildings south of 500 North. Volunteers did not have consistent designated routes but were given maps that indicated the majority of main buildings within this geographic area that they could patrol as often as time, availability, and access allowed.

Birds were retrieved by volunteers with varying degrees of skill in the spotting of dead and injured birds, and the capture of injured birds. Additional birds were picked up by the public or building staff.