Leslie Ota, Fordham University. Avian Perception: Mist Net Visibility in a Flight Tunnel. Mentors: William Haffey, Dr. J. Alan Clark, and Dr. Christine Sheppard

Abstract: Hundreds of millions to a billion birds die every year in the United States due to collisions with windows. These collisions are a consequence of two characteristics of most window glass: transparency and reflection. Either the birds do not recognize the window because it is transparent and physically not visible, or they see a reflection of the sky or green environments and fly mistakenly into these reflections. To reduce avian window collision fatalities, patterns that disrupt the deadly transparency and reflection of glass windows are needed. One approach to testing the effectiveness of patterns on glass that have the potential to reduce avian collisions is to use a flight tunnel. A flight tunnel is an elongated container in which birds are released at one end and fly toward a patterned window and a control (unpatterned) window. An effective pattern will cause the bird to recognize a barrier is present and fly towards the control window. A mist net is placed in front of the windows to prevent the birds from being injured during the experiment. The goal of this research was to determine whether the presence of the mist net itself affects the flight path of birds released into a new prototype flight tunnel. To test mist net visibility, we covered half of the tunnel with a mist net and removed the windows. Wild birds were captured and their physical information recorded then they were released into the flight tunnel. The net was rotated from one side to the other between experimental trials to remove possible bias. The flight path of the birds was unaffected by the location of the mist net regardless of age or species. I concluded that the presence of the mist net did not affect birds being tested in the new prototype flight tunnel. The information gained in these flight tunnel studies will contribute to the reduction of the devastating impact windows have on birds.