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Abstracts

FEATURE ARTICLES

APPARENT EFFECTS OF LIGHT POLLUTION ON SINGING BEHAVIOR OF AMERICAN ROBINS

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Abstract. Astronomers consider light pollution to be a growing problem, however few studies have addressed potential effects of light pollution on wildlife. Sunlight is believed to initiate song in many bird species. If light initiates song, then light pollution may be influencing avian song behavior at a population level. This hypothesis predicts that birds breeding in areas with large amounts of artificial light will begin singing earlier in the day than birds in areas with little artificial light. Birds in highly illuminated areas might begin singing earlier than did birds in those same areas in previous years when artificial light levels were known to be, or were presumably, lower. Also, birds should begin singing earlier within a site on brightly lit nights. In 2002 and 2003 I documented initiation of morning song by breeding American Robins (*Turdus migratorius*) in areas with differing intensity of artificial nocturnal light. I compared my observations among sites and against historical studies. Robin populations in areas with large amounts of artificial light frequently began their morning chorus during true night. Chorus initiation time, relative to civil twilight, was positively correlated with amount of artificial light present during true night. Robin choruses in areas with little, or presumably little, artificial light have almost never begun during true night, instead appearing to track the onset of civil twilight. Proliferation of artificial nocturnal light may be strongly affecting singing behavior of American Robins at a population level.

Key words: American Robin, light pollution, morning chorus, song, *Turdus migratorius*.