

### Snowy Owl (*Bubo scandiacus*) Morbidity and Mortality Investigation in the DOS Region in the Winters of 2013 – 2014 and 2014 – 2015

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#### Abstract

This report presents a portion of the work done by veterinary team members from Project SNOWstorm during the Snowy Owl (*Bubo scandiacus*) irruption in the winter of 2013 – 2014 and the following winter of 2014 – 2015. The veterinary team conducted gross necropsies and morphometrics on 68 birds collected from seven states during these two seasons. This report focuses on the findings from three mid-Atlantic states (New Jersey, Maryland, Pennsylvania) between December 2013 and March 2014 only, as no dead owls were reported in these states in the winter of 2015 and no dead birds were collected from Delaware in either year. Specific diagnostics included radiographs, liver toxicology screens for heavy metals and second generation anti-coagulant rodenticides, histopathology, and parasite collection and identification. Authors also collected blood samples from live birds presenting to wildlife rehabilitators or captured in banding efforts during this time period. Findings include a compilation of the general causes of morbidity and mortality, body condition of the presenting animals, ante-mortem blood values, gross post-mortem and histopathology findings, and exposure levels to heavy metals and anti-coagulant rodenticides.

#### Background

Snowy Owl (*Bubo scandiacus*) population increases are usually tied to increased prey (mostly lemming) availability in the arctic – such as was observed in the summer of 2013 (Pataпов & Sale 2012; Sutton & Sutton 2014). Snowy Owl irruptions into areas south of the boreal forest are rare with the last large irruption in the mid-Atlantic region occurring in the winter of 1926 – 1927 (Sutton & Sutton 2014). In late

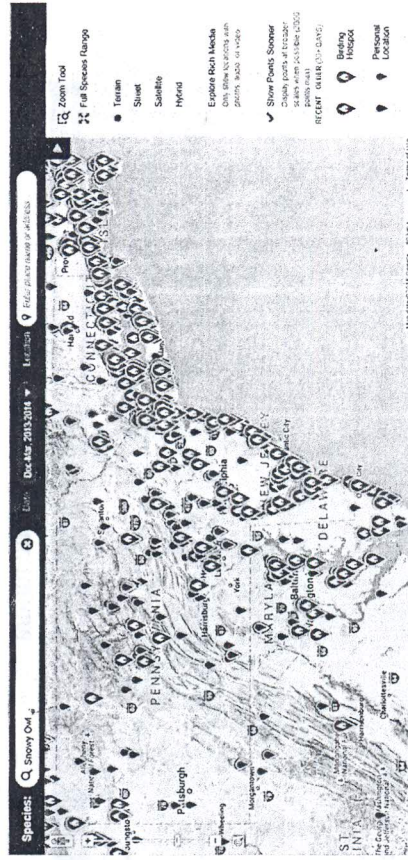


Figure 1. Sightings of Snowy Owls in winter 2013 – 2014. Image provided by eBird ([www.ebird.org](http://www.ebird.org)) and created 24 August 2015.

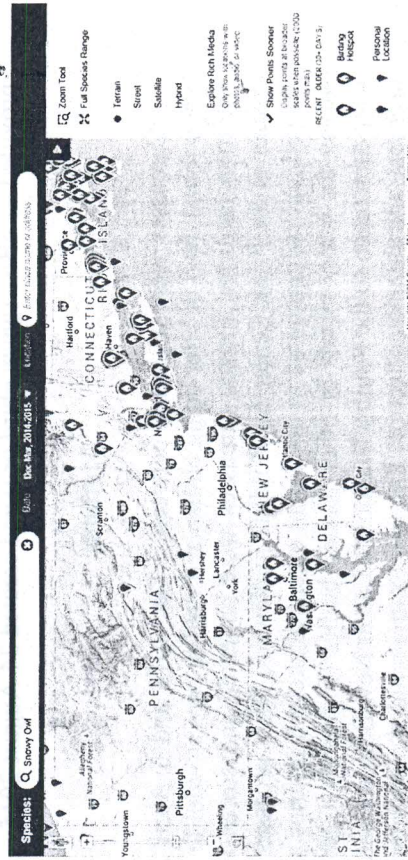


Figure 2. Sightings of Snowy Owls in winter 2014 – 2015. Notably fewer sightings occurred in the MD-PA-NJ area than in the previous winter. Image provided by eBird ([www.ebird.org](http://www.ebird.org)) and created 24 August 2015.

