

## LANDFIRE Product Application Summary

### The relative importance of multiscale factors in the distribution of Bachman's Sparrow and the implications for ecosystem conservation

**Citation:** Paul J. Taillie, M. Nils Peterson, and Christopher E. Moorman. 2015. The relative importance of multiscale factors in the distribution of Bachman's Sparrow and the implications for ecosystem conservation. *The Condor* 117(2): 137-146.

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**Application Location:** The Onslow Bight Region of North Carolina, USA 34.711439, -77.059142

#### ***Objectives***

Our objective was to quantify the relative influence of factors affecting the distribution of Bachman's Sparrows at multiple scales.

#### ***Project description***

In order to quantify the landscape in terms of suitability for Bachman's Sparrows, we used a combination of vegetation cover type (LANDFIRE) and vegetation structure (LiDAR). In doing this, we were able to identify areas with conditions thought to support Bachman's Sparrows, which allowed us to calculate metrics of landscape characteristics such as patch size, connectivity, and more.

#### ***LANDFIRE products used***

We used the 2010 version of the EVC layer to categorize various habitat types. We combined this with the 2006 NLCD to attempt to better distinguish between loblolly pine plantation and longleaf pine woodland, a distinction that is important for Bachman's Sparrow habitat suitability, but difficult to differentiate using a Geographic Information System.

#### ***Value of the work to the natural resource management/conservation community***

As conservation efforts continue to emphasize the importance of a holistic approach to ecosystem restoration, it is necessary to consider the scales relevant to the target ecosystem. Our work helps to inform this process as we illustrate that species may respond to a broad spectrum of spatial scales.

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