



## *Patuxent Science Meeting 2004 Poster Abstract*

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### **A Hierarchical Model for Analysis of Christmas Bird Count Data**

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Patuxent scientists have pioneered the development of analysis methods for Christmas Bird Count (CBC) data, and presently have the only complete analysis of CBC results available over the Internet. The results are in need of revision to incorporate new data and analysis approaches. In collaboration with a visiting scientist from the National Audubon Society, Patuxent staff are developing and implementing new analysis methods based on hierarchical models that permit stratum-specific effort adjustments. After methods are evaluated and peer-reviewed, estimates of population change for a variety of species of management interest will be calculated at the scale of Bird Conservation Regions. The CBC is controversial as a source of information on bird population change, and this effort will enhance the credibility of the estimates of change from the survey by incorporating reasonable effort adjustments at appropriate geographic scales.