



***Caterpillars Count!* helps researchers link insect food availability to songbird health and survival**

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Last summer, the Highlands Biological Station (HBS) partnered with the Blue Ridge Bird Observatory (formerly Southern Appalachian Raptor Research) to initiate a long-term MAPS (Monitoring Avian Productivity and Survivorship) bird banding station on our campus. MAPS is a continent-wide research program aimed at better understanding songbird demographic trends, which is important given recent research findings showing that bird populations in North America have plummeted nearly 30% since the 1970s.

This summer, a former Highlands Field Site student named Lauren Whitenack will be returning to HBS to lead our MAPS bird banding station. In addition to bird banding, Whitenack will be implementing *Caterpillars Count!* at HBS and three other banding stations run by the Blue Ridge Bird Observatory. *Caterpillars Count!* is a **citizen science project** developed by Dr. Allen Hurlbert, an ecology professor at UNC-Chapel Hill, to better understand how plants, insects, and birds are responding to climate change. In particular, we know that insects, especially larval insects like caterpillars, are critical food items for both adult songbirds and their young; a shortage of caterpillars means lower survivorship of nestlings. Are insects abundant when birds are nesting, or has climate change altered this?

We will use *Caterpillars Count!* to quantify the abundance and biomass of insects from trees on our campus. Researchers will then correlate the *Caterpillars Count!* data on insect abundance and biomass with data collected from birds that we capture and band, such as songbird body fat index and the number of fledglings and juvenile birds captured. This will help address the question of whether climate change has affected the number of caterpillars available during nesting and fledging. If caterpillars emerge before chicks hatch due to increased temperatures in early spring, for example, their decreased availability could be contributing to songbird population declines. We hope to have our Nature Center summer campers assist with *Caterpillars Count!*, and you can contribute to this **citizen science project** as well. Review the information in the box below to learn how to get started.

HBS's MAPS bird banding and *Caterpillars Count!* projects are made possible thanks to funding from the Highlands Biological Foundation. This is one of the many ways your donations contribute to local, relevant scientific research and education. For more information about HBS's MAPS bird banding station, visit www.highlandsbiological.org/data/.



How does Caterpillars Count! work?

Anyone can participate in *Caterpillars Count!* Visit caterpillarscount.unc.edu to get started.

Select a leafy branch of a tree and identify the insects found on that branch to Order (e.g. moth, beetle, fly), estimate the length of each insect, and count the number of insects on the branch. You can also place a white cloth or "beat sheet" below the branch, shake the branch, and collect data on the insects that fall on the sheet.