

## EXECUTIVE SUMMARY

The Southern Blue Ridge (SBR) Ecoregion's forested landscape (portions of Georgia, North Carolina, South Carolina, Tennessee, and Virginia) is comprised of intact temperate forest over a diversity of landforms, elevation zones, and bedrock geologies, making it one of the most biologically-diverse areas in North America. This region contains several of the few remaining mega-blocks of relatively unfragmented forest in the eastern United States, supporting the highest diversity of salamanders in the world, a tremendous diversity of tree and herbaceous species, and very high densities of forest breeding birds. These large contiguous forests provide fundamental ecosystem services that sustain underlying natural processes, ensuring the continued persistence of plant and animal populations as well as the provisioning, regulating, and cultural ecosystem services on which humans depend (e.g., quality drinking water, flood control). From a global perspective, the Southern Blue Ridge forested landscape is a huge and irreplaceable ecosystem recovering from regional-scale deforestation. These reestablished forests are facing compounding and interacting threats due to increased human population, forest fragmentation, pests and pathogens, soil acidification and global climate change.

Previous efforts by The Nature Conservancy (TNC) and its partners identified priority SBR conservation locations, focusing largely on occurrences of rare species and communities at the scale of individual patches; however, the scope and magnitude of today's conservation challenges mean that we must expand our focus to include landscapes and strategies beyond a protected network of preserves. The Conservancy's approach to the long-term conservation of the Southern Blue Ridge critical forest resource envisions the conservation of a connected, representative, well managed, **matrix forests**, embedded with large areas of **core forest(s)**. The matrix forest blocks sustain natural cover through multiple-use working forests, while the core forests are protected and managed for natural ecological function that promotes biodiversity and natural disturbance regimes (i.e., a dynamic mosaic of stands in different age and seral classes).

This report summarizes the process and results of the Southern Blue Ridge Matrix Forest Analysis, completed in 2011, which identified a representative network of matrix forest blocks, large and contiguous enough to maintain key ecosystem processes and services, resilience, and movement of organisms, and to provide for accommodation of catastrophic disturbances and the breeding needs of forest interior species. In 2011, TNC staff from Eastern North America Division Science and five state operating units (with significant contributions from several state and regional partners) completed a four-step analysis process to identify priority SBR matrix forests, involving (1) delineating matrix forest blocks (discrete blocks of contiguous forest, using roads and other fragmenting features in GIS), (2) screening each matrix forest block for size and condition using land cover and size criteria, related to disturbance and species' needs, (3) classifying the matrix forest blocks into representative forest landscape types, using elevation, geology and landforms (Ecological Land Units), and (4) evaluating and prioritizing a network of functional matrix forest blocks representative of the diversity of ecoregional forest landscape types, using additional data and expert review.

The results give us a much clearer understanding of the status, distribution, and spatial context of large, contiguous matrix forests in the Southern Blue Ridge, and will provide a clearer direction for near-term conservation priorities and foster a more focused set of conservation actions around which TNC and partners can organize and cooperate. The Nature Conservancy's vision for the conservation of these identified priority SBR matrix forest blocks is to work with partners to (1) ensure adequate long-term

protection and ecologically-compatible management practices, (2) retain connectedness of forest cover among and between them, and 3) work to abate region-wide forest threats.