

El Grupo Cerúleo: Cooperation for Non-breeding Season Conservation of the Cerulean Warbler

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Without collaboration, conservation is impossible for long-distance migrants such as the Cerulean Warbler, a declining forest breeding bird in North America that overwinters in the Andes Mountains of South America. The Cerulean Warbler, one of the fastest declining woodland birds of eastern North America, is considered Vulnerable by BirdLife international, in the Yellow category on the National Audubon/American Bird Conservancy WatchList, and on the U.S. Fish and Wildlife Service's (USFWS) national Birds of Conservation Concern list. Given the conservation status of the Cerulean and the number of partners interested in its research and conservation, the Cerulean Warbler Technical Group coalesced in 2002 at the first Cerulean Warbler Summit in Shepherdstown, West Virginia. During this meeting, working groups were established to coordinate the assessment of critically important parts of the species' biology for conservation purposes. One of these working groups addressed the non-breeding season and named itself "El Grupo Cerúleo."



Female Cerulean Warbler, with radio transmitter and color bands, captured for research in Colombia, 2009. /Edwin Munera

Membership in El Grupo Cerúleo has always been informal and open to all, and began by compiling names of potential collaborators and establishing e-mail communication. An initial organizing and planning meeting was held in 2003 in Ecuador, at which time a draft list of priority strategies was developed for non-breeding conservation and information needs, and country-specific threats and opportunities were identified. El Grupo, under the leadership of Paul Hamel and David Mehlman, then set out to accomplish these priorities by finding resources and appropriate partners to do them. In 2005 through 2008, El Grupo regularly gathered its members in meetings both large and small in the United States, Ecuador, and Colombia.

to address non-breeding season concerns. The group has held regular meetings to increase communication and coordination, developed a plan of action, and implemented a variety of research and conservation activities. The group's success is the direct result of the dedicated participation of its various partners, coordination by Paul Hamel of the USDA Forest Service, and the availability of financial and other resources provided by various funders. The variety of work spawned directly and indirectly by El Grupo Cerúleo is vast and some key successes are summarized below. Numerous other activities by partners at local, regional, national, and international scales have been central to this effort, however, space prohibits listing each of them here.

A critical early action was the implementation of field surveys to find new and confirm old localities for winter resident Cerulean Warblers in South America. Numerous partners carried out surveys in Bolivia, Peru, Ecuador, Colombia, and Venezuela over three different "winter" field seasons. Almost 50 new localities for the warbler were found and numerous historic localities were checked. A second important priority strategy, which depended on this field research, was the development of a predictive model for the Cerulean Warbler in its non-breeding resident range.

The model was developed by El Grupo partners with skills in GIS and modeling. A previously compiled database of Cerulean Warbler occurrences, both current and historic, was combined with climatic, physical, and vegetation data using five different modeling techniques to produce a presence-absence prediction map

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for South America. A sophisticated model verification methodology was then developed in order to test the model's accuracy. This methodology involved sampling random points where the model predicted the warbler to occur, along with nearby randomly selected points where the model predicted a lack of occurrence. Field crews were then sent to the random points to survey for Cerulean Warblers and to measure vegetation.

A parallel effort was initiated in 2004, and subsequent years, by ornithologist Melinda Welton and colleagues, to survey for Cerulean Warbler during spring migration in Central America. This work followed up on Ted Parker's intriguing observation of numerous migrating Cerulean Warblers in the Maya Mountains of Belize in April 1992. In a four-year period, field crews sampled for migrating Cerulean Warblers in early April in Belize, Guatemala, Mexico (Chiapas), and Honduras. Ceruleans were found in all four countries, apparently indicating heavy use of the coastal mountains of northern Central America in spring migration—an important finding with numerous implications for conservation.

El Grupo Cerúleo has also sponsored demographic and ecological research on non-breeding resident Cerulean Warblers to help fill critical data gaps. Using field surveys, behavioral observations, mist-netting, banding, and radio telemetry, the members of El Grupo have increased the knowledge base of the warbler's ecology and life history. Findings include documentation of intra- and inter-season site fidelity, foraging behavior, habitat use, territory size, and mixed species flock associates, to name a few.



Researcher Gabriel Colorado conducting radio telemetry for Cerulean Warblers in Colombia, 2008. /Jorjany Botero

Conservation and outreach activities have always been priorities of El Grupo Cerúleo, though much of the above-mentioned work was essential to complete before targeted conservation activities could be initiated. Several partners, notably Fundación ProAves in Colombia and Fundación Jocotoco in Ecuador, have established private nature reserves in areas known to harbor wintering Cerulean Warblers. These flagship efforts hopefully presage a new era in private land conservation in Latin America for protecting migratory and resident birds and other biodiversity.

Outreach to the public, land owners, and managers has been a central effort of El Grupo partners over the years. Without effective communication and education, it is doubtful that any serious long-term conservation can be accomplished in this region. As one example of this kind of work, the Conservation Biology Program of the Colombian Coffee Growers Federation has developed numerous educational materials about birds and bird conservation for use by local communities throughout Colombia's coffee-growing region. The Program has also developed an innovative methodology for training local people to do bird surveys in their local areas, and is disseminating information on how to improve coffee and other crops as bird habitat (See article on page 4).

The above is merely a sample of activities undertaken by El Grupo Cerúleo to conserve a migratory species of high conservation concern. By encouraging local initiative and supplying a small amount of coordination and financial resources, the partnership has accomplished great things. Perhaps most exciting, a comprehensive non-breeding season conservation plan is now under preparation, coordinated by El Grupo partner Fundación ProAves. This plan should allow El Grupo Cerúleo to recruit new partners and expand its conservation horizons even further. The plan will complement the existing Conservation Action Plan for the Cerulean Warbler produced by USFWS in 2007.

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Finally, none of this would have been possible without financial support from numerous partners, including the National Council for Air and Stream Improvement, National Fish and Wildlife Foundation, USDA Forest Service Office of International Programs, The Nature Conservancy, and U.S. Fish and Wildlife Service. Read more at <http://www.srs.fs.usda.gov/egc/index.html>.



Coffee farm in Colombia. /Randy Dettmers

For more information
on Neotropical bird conservation
and shade grown coffee production,
watch the following video:

[http://www.fws.gov/northeast/
climatechange/stories/warbler.html](http://www.fws.gov/northeast/climatechange/stories/warbler.html)

Learning to Look at the Farming Environment through the Eyes of Birds: Participatory Census Methodologies

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Birds are a diverse and ecologically important taxonomic group in the mountains of the Colombian Andes—a region of some of the highest biodiversity on the planet. The varied soil and climate of this region—with its three Cordilleras and the Sierra Nevada de Santa Marta range near the Caribbean—support thousands of species of plants and animals. Its climate and soil also make it excellent for growing coffee—the well known and excellent “café de Colombia.” The enormous diversity of birds in coffee-producing areas is considered a natural heritage that ought to be preserved. In the last century, however, natural habitat has given way to agriculture and cattle production in most areas.



Field day with coffee growers of Asprotimaná in Timaná, Huila, learning to use a field guide to identify the birds in their region. /Conservation Biology Program Photo Archive, Cenicafé

Participatory methodologies in research have shown use in biodiversity studies and as a tool to promote conservation. Since 2004, the [National Coffee Research Center](#) (Cenicafé) has been conducting a program of periodic censuses to study birds and promote their conservation in the Colombian coffee growing region. The program is known as “Participatory Bird Census In Coffee-Producing Areas of Colombia” and brings together coffee producers, researchers, extension personnel from Colombia’s Coffee Federation. Birds are beautiful and charismatic and generate interest among human communities.

In Colombia coffee is produced only in the mountains, at elevations that range from about 1000 m to 2000 m. It is an agriculturally productive region with a high population density. Developing and adopting biodiversity-friendly production systems that ensure the conservation of birds, but at the same time provide sustainable economic well-being to the farming communities, is a major challenge for all.

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