



# Biocarta



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## THE CERULEAN WARBLER: A SPECIES SUSPENDED BETWEEN COFFEE AND COAL

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The Cerulean Warbler (*Dendroica cerulea*) is a migratory bird whose fate depends on actions taken towards its conservation in the Andean regions, where coffee is produced, and in the northeastern United States, where coal is extracted. This brings two enormous challenges: first, we need to identify and take measures to adapt coffee-growing and coal-exploiting regions so that instead of threatening this species, they promote its conservation; second, we need cooperation among people working towards its conservation throughout the whole hemisphere.

Even with significant advances in knowledge about its distribution and preferred habitats, information gaps remain regarding migratory behavior and ecology during its stay in South America. In the coming years we need to identify areas with a high conservation priority and high densities of individuals, in order to implement continuous monitoring programs that teach us which habitats and landscapes can be used successfully by these birds. This research must result in tools and strategies to promote compatible productive systems and remnant ecosystems throughout their distribution range, while protecting those plants and animals that share their habitats.

There have also been advances in the formation of alliances and partnerships to work towards their conservation, including representatives from both regions, and a variety of actors interested both in the protection of migrant birds, and in the agricultural produc-

tivity of the regions they inhabit. Because of the economic and social importance of coffee in Colombia, to help the Cerulean Warbler we must find incentives for coffee-growers to take charge of their conservation process, and markets for biodiversity friendly coffee provide such opportunity. Being a migrant and vulnerable species, the Cerulean Warbler helps us get the attention of the international community, and the support to strive for environmental sustainability in Colombia's coffee industry.

These beautiful birds deserve all the attention and care of people living along their migratory routes; in this Biocarta we describe some details of its natural history, what we know about its stay in Colombia's coffee-growing regions, conservation stories and the partnerships needed to achieve its protection in a successful manner.



Andrés M. López 2008



## 1. Natural History of the CERULEAN WARBLER

- **They are migratory birds.** They breed in the NE United States during summer (May-August), travel south during fall (September-October) to spend the winter (November-February) in the Andes of Venezuela, Colombia, Ecuador, Peru and Bolivia, and in spring (March-April) they travel back to complete the cycle. It is likely that they make these journeys over sea, non-stop or with just one stop in Central America.
- **They are forest birds.** In North America, they live in broad areas of various types of broadleaf, deciduous forests, feeding on insects that they capture in the canopy. In South America they are found in mid-elevation mountain forests and in some of the crops that replaced them. They are very selective of habitat characteristics; they prefer sites with arboreal vegetation everywhere.
- **They are vulnerable birds.** According to the International Union for the Conservation of Nature (IUCN), Cerulean Warblers are vulnerable to extinction. Habitat destruction and fragmentation along its residence and transitory grounds have led to a rapid decrease in the species total number of individuals.
- **In South America they like to keep company.** They are frequently observed as part of mixed flocks, or groups made up of several migrant and resident species that get together to gather food and protect each other from predators. This strategy, along with high winter site fidelity, seems to favor their survival.

- **Migration is a continuous process.** The habitat occupied and the resources found by the warblers during their stay in South America, will have a direct effect on their capacity to survive migration, and to reproduce when they get back to North America. For this reason, researchers throughout their range need to work together to understand their complete annual cycles.

- **Their conservation depends on coffee and coal industries.** In South America, their preferred habitats coincide with coffee-growing regions where they concentrate on small forest patches, and coffee crops with diverse and complex amounts of shade that resemble a forest canopy. In North America their preferred woods are affected by coal mining and wood extraction activities. In Central America they are associated with primary forests, and they concentrate during a short season in a very small region.

The Golden-winged Warbler (*Vermivora chrysoptera*). This is another migrant that visits Colombia's coffee-growing regions, and which faces conservation issues similar to those of the Cerulean Warbler. It breeds in the same region, in forest edges and secondary successions, and during winter it prefers to stay in Central America, so few individuals come to South America. It is considered as nearly threatened (IUCN), and even though it is much rarer, during Cenicafe's studies we have recorded it in nine locations along the three mountain ranges and the Sierra Nevada de Santa Marta. As in other countries of Central and South America, we observe them more frequently in forests and riparian vegetation than in shade coffee.

Golden-winged Warbler ♂

## 2. What do we know about CERULEAN WARBLERS in coffee-growing regions?

- **We have more sightings than expected.** Despite their small population size, Cerulean Warbler is a relatively common migrant in the coffee-growing areas, which makes us think that they have a high affinity towards this region.



Cerulean Warbler ♂



- **They like diverse and complex shade.** Most of our observations took place in Santander (San Vicente de Chucurí, San Gil, Pinchote, Páramo, Socorro and Valle de San José), a department characterized by coffee crops grown under dense shade, with a high diversity of native species in the canopy.
- **They like forest remnants.** Other sightings took place in natural vegetation remnants, that are also important for the conservation of watersheds and other endemic and threatened species. This is the case of oak forests in Acevedo (Huila), the Santa Librada forest reserve in Líbano (Tolima), Planalto forest reserve in Manizales (Caldas, headquarters to Cenicafé), and forest fragments in Salento (Quindío).
- **They like landscapes with a high tree cover.** The site where we have more records is Támesis (Antioquia); even though shade in this region is not as dense and diverse, the landscape has a high proportion of tree cover supplied by forest remnants in higher areas, scrub vegetation along creeks, live fences, and pastures with scattered trees.
- **They have a narrow altitudinal range.** Cerulean Warblers prefer mountains: there are records between 800 and 2700 m, although the highest concentration is in the coffee-production belt (1000-2000 m).
- **They may stay with us for long periods of time.** Even though our records go from September to April, in other places of Colombia it has been recorded from August to May, being present for more than 200 days a year.
- **Their habitat is in danger.** Most of the original habitat for forest species is lost or in danger due to deforestation and overexploitation of forests, replacement of diverse shade with shade composed of few or introduced species, and transformation into sun coffee and pastures. These changes in land-use diminish both the quantity and quality of habitat available for these warblers.

### 3. Conservation Stories about the CERULEAN WARBLER

- **The Cerulean Warbler Technical Group: working for their conservation for more than 7 years.** In 2001, three years before it was declared as a vulnerable species, the Cerulean Warbler Technical Group was created. This group met in 2002 and 2007 to assess its status and to develop strategies and alliances for its conservation.
- **El Grupo Cerúleo: working towards conservation in non-breeding grounds.** We still have a lot to find out about this species in our region, this is why in 2002 “El Grupo Cerúleo” was established to promote the conservation of its tropical habitats. This group has expanded its efforts to several endangered migratory species that coexist with the Cerulean Warbler, working with groups such as Alianza Alas Doradas that seeks the conservation of the Golden-winged Warbler.
- **Strength lies in unity: adding institutional efforts towards the conservation of migratory birds.** These are not the only groups working towards the conservation of migrant birds. Ornithologists, government and non-government organizations, industry and academia representatives are continuously joining conservation initiatives; and representation from non-breeding grounds is constantly increasing. Colombia was chosen to host the third Cerulean Warbler summit and the second Golden-winged Warbler summit, which took place in October 2008. In this meeting we shared the knowledge, findings, and perspectives of researchers, conservationists, coffee-farmers, educators and industry representatives from across all the Americas.

Golden-winged Warbler ♀







## Partnerships – Benefits and Challenges in 21<sup>st</sup> Century Conservation

Carol Lively

### On the importance of the Cerulean and Golden-winged Warblers summits in the National Federation of Coffee Growers of Colombia in Bogotá.

Paul B. Hamel

Cerulean Warbler is a bird with problems; this migratory bird lives in environments on which large numbers of people depend for an adequate productive livelihood, energy, high quality wood products, coffee, and cacao. Solving the biological problems of this species in its complex environments poses a difficult challenge. The Cerulean Warbler Technical Group was formed in 2001 to provide a forum to share information about this bird, and to identify and test solutions to the problems it faces. Members of this successful effort are dedicated to developing and sharing information in a spirit of mutual respect, open communication and trust. In October 2008 we visited Bogotá and San Vicente de Chucurí to meet with those colleagues that can better understand the conditions on the non-breeding grounds, seeking to forge partnerships between actors from the North American breeding grounds and actors from South and Central America; addressing the problems faced by the birds in socially responsible, and economically productive ways. We were joined by colleagues with similar aspirations for collaborative solutions to the problems of another migratory bird, the Golden-winged Warbler.

Why have partnerships become so important to conservation in the last few years? Financially and politically it makes sense to combine forces rather than work in isolation. Financial resources are scarce in the conservation world, and only by leveraging funding can we accomplish “on-the-ground” results. Confrontations and regulations by themselves may not provide the best solutions. Collaborative efforts that involve diverse partners result in more long-term and satisfactory conclusions. Partnerships are not always easy, however, and flexibility and compromise must be part of the process. Trust, regular and open communication, innovative thinking and commitment are critical. There are scores of thriving conservation partnerships world wide, that have broadened the impact of their conservation activities by including not only biological factors, but also social and economic factors, and work with private landowners and urban audiences. Collaboration, cooperation and cross border thinking about common conservation goals have become the tools that many people reach out for when beginning new projects. Whether it is for the Cerulean Warbler or other conservation objective, the first decade of the 21st century is seeing the benefits of these new and successful conservation partnerships.

**Sources of information.** Alianza Alas Doradas, Amanda Rodewald, American Bird Conservancy, Audubon Society, Birdlife International, Cornell University’s Ornithology Lab, El Grupo Cerúleo, Fundación ProAves, Gabriel Colorado, Ken Rosenberg, Melinda Welton, Partners in Flight, Paula Caycedo, Paul Hamel, Pete Marra, The Nature Conservancy, Tomás Cuadros, U.S. Fish & Wildlife Service, U.S. Forest Service and all other participants of the summit.

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