

## **Bicknell's Thrush: An Endangered Species**

Bicknell's Thrush, the only endemic bird species in the northeastern United States, is facing a whole series of threats to its short-term and long-term survival. This species, which breeds on restricted "sky-island" habitat at the tops of mountains in New York, Vermont, New Hampshire, and Maine, in addition to a few locations in Canada, will likely be listed under the Endangered Species Act this year.

Climate change is the leading threat facing Bicknell's Thrush. Warming is projected to change the distribution of trees in their montane-forest breeding habitat. Ninety-eight percent of this balsam-fir dominated habitat is projected to disappear with a warm-up of only 3 degrees Celsius. Extirpations of Bicknell's Thrush at low elevations and along the southern edge of their breeding range are already occurring. Other climate related changes include: frequency and severity of natural disturbances; availability of invertebrate prey; timing of breeding and migration; competition from Swainson's Thrush (which may be physiologically restricted from cool summits); and possible infestation of northern balsam-fir from the Balsam Woolly Adelgid.

Swainson's Thrush has already taken advantage of the warmer springs to move upslope over the past decade. During a Mountain Birdwatch survey on the summit of Whiteface Mountain in 2012, I tallied twice as many Swainson's Thrushes as Bicknell's Thrushes – something that would have been inconceivable just a decade ago. Swainson's Thrushes appear to have taken over the prominent singing perches occupied, in prior years, by Bicknell's Thrush. What effect this change may have on Bicknell's Thrush is not fully known.

Climate change is not the only threat to Bicknell's Thrush. Other threats include: acidic precipitation; mercury deposition (high levels have been found in Bicknell's Thrush and in many other species); logging; habitat destruction on the breeding grounds for ski resorts, other recreational development, communications infrastructure, and wind farms; and forested habitat loss on their even more restricted winter grounds on four islands in the Greater Antilles – 98% of which has been destroyed by logging and clear-cutting for subsistence agriculture.

Primarily due to the threat of global warming, the Center for Biological Diversity petitioned the U.S. Fish and Wildlife Service to list Bicknell's Thrush under the Endangered Species Act in 2010. In August 2012, in response to the 2010 petition and a 2011 landmark agreement reached between the Center for Biological Diversity and the U.S. Fish and Wildlife Service that compelled the Service to move forward with the protection process for 757 species including Bicknell's Thrush, the Fish and Wildlife Service announced a "90-day finding" that Bicknell's Thrush, a northeastern songbird threatened by climate change, may warrant protection as an endangered species. A protection decision is due in 2013.

The Endangered Species Act turns 40 this year. It is a powerful and successful legal tool for protecting species at risk of extinction. It provides a legal means for citizens and public interest groups to petition or sue the government to make sure the Act protects species as it was intended to do, and it provides a way to legally protect lands and waters that species need to survive and recover.

While Bicknell's Thrush's winter grounds have been severely lost or degraded, most of its breeding grounds in the United States are already conserved. New York has 24% of Bicknell's Thrush U.S. breeding habitat, and 93% is conserved. Numbers for the other three states: New Hampshire has 45% of the U.S. breeding habitat, with 94% conserved; Vermont has 8%, with 83% conserved; and Maine has 23%, with 41% conserved. The major threat to Bicknell's Thrush breeding habitat, which is mostly conserved, is *climate change*. The question that remains is whether the Endangered Species Act can be used to force the government to address climate change? Can the Act be used to stop CO<sub>2</sub> from being spewed into the atmosphere? (Major sources of human produced atmospheric CO<sub>2</sub> include: electricity generation, transport (cars, busses, planes, trains, & trucks), home heating, agriculture, and the cement industry.) Most feel it is unlikely. For much of the past 40 years, federal agencies have been defending the Endangered Species Act against changes that would weaken it, and certainly not strengthen it.

Listing Bicknell's Thrush under the Endangered Species Act will draw attention, and possibly provide more research dollars, but will it actually help keep the species from going extinct? Climate change is the most serious threat facing life on our planet. By 2014, the carbon dioxide level in our atmosphere will reach 400 parts per million (up from 275 parts per million 200 years ago). Many scientists believe the disastrous "tipping point" is 350 parts per million (which was reached in 1988). We cannot readily undo the amount of carbon dioxide already added to the atmosphere, and the dangerous domino effects taking place in our environment as a result. Humans *can* control future CO<sub>2</sub> emissions, but there needs to be a political will to do so. Unless we give up our need for electricity, grocery stores, flying, driving, heating our homes, and go back to travel by horse, we are all culpable in the demise of species due to human-caused climate change, which may even eventually include ourselves.

The future for Bicknell's Thrush, the mysterious bird of sky-islands with a lovely voice, is most certainly imperiled.

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