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Beak deformities spread in the Pacific Northwest

December 29, 2010
by Project Feederwatch staff

Two recent articles in the scientific journal of the American Ornithologists' Union highlight the ongoing concern about a possible emerging disease in wild bird populations. We've been following developments in the story of Black-capped Chickadees with deformed bills for several years, and FeederWatch reports have contributed to the recent research. Unfortunately, the abnormalities continue to spread throughout Alaska and the Pacific Northwest, and the cause of the deformities remains a mystery.

Researcher Colleen Handel and colleagues report that 2,160 chickadees with overgrown and often crossed beaks have been recorded in Alaska (mostly since the mid-1990s), and lesser numbers of 29 other species have grown abnormal beaks as well. Although chickadees have primarily been affected, large numbers Northwestern Crows are showing signs of what researchers have now labeled "avian keratin disorder." Nearly 17% of 186 crows captured at six sites in Alaska showed deformed bills—the highest rate of deformities ever recorded in a wild bird population. Crows with deformities were recorded as far south as Puget Sound, Washington, with possible geographic clustering of the abnormalities.

Black-capped Chickadee with deformed bill by Amy Morrow, Gilbert, Iowa.

Although birds with deformed beaks are becoming easier to find, the cause of the abnormalities remains elusive. Tests of affected chickadees have yet to reveal any potential bacterial, viral, or environmental cause. Researchers are, however, learning more about the condition. More than 160 chickadees with deformed beaks have been captured, banded, and released back into the wild for long-term studies. Interestingly, eight of these individuals have shown apparently normal beaks upon recapture. Further, apparently normal birds can develop deformities over time. One individual was captured in June 2003 with a beak measuring 7.9 mm (a normal size), and was recaptured in September of the same year with a beak measuring a whopping 21.1 mm! The condition appears to primarily affect birds greater than 6 months of age as very few deformed beaks have been recorded in juvenile birds. Such deformities undoubtedly lead to premature mortality as the unwieldy beaks impair the ability of affected birds to forage and preen.

We'll continue to monitor the situation and provide updates as they become available. If you see any birds with beak deformities, please take a photo, record the date and location, and send that information to Project FeederWatch or Colleen Handel at the USGS Alaska Science Center.

Sources:

Handel, C. et al. 2010. Epizootic of beak deformities among wild birds in Alaska: An emerging disease in North America? *The Auk* 127:882-898.

Van Hermert, C. and C. Handel. 2010. Beak deformities in Northwestern Crows: Evidence of a multispecies epizootic. *The Auk* 127:746-751.

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   They’re appearing as far south as Puget Sound, indeed. A crow with a long, crossed, misshapen bill rules the roost at an intersection near my Puget-Sound-area home–he’s known to us as Edward Scissorbill, and despite his odd bill appears to be thriving; he has a mate, and appeared to have two young of the year with him late this fall, along with his mate. (Yep, reported him to the Alaskan project back in the spring.) It’s fascinating to watch him forage. He’s figured out how to winkle food out of crevices and off flat ground despite his deformity.