News, Notes, Comments

TERTIAL MOLT IN FIRST-YEAR CHESTNUT-BACKED CHICKADEES

Most passerines do not have a complete first prebasic molt (Jenni and Winkler 1994, Pyle 1997a). First prebasic molt often includes the feathers more susceptible to abrasion and wear and with an insulatory, rather than an aerodynamic, function (Mulvihill and Winstead 1997). A partial first prebasic molt is defined as that in which head and body feathers, any number of wing coverts, and sometimes tertials and central rectrices are replaced (Pyle 1997a).

Most chickadees have a partial first prebasic molt during which some birds can replace one or more tertials (secondaries [S] 7-9; Pyle 1997a). Replacement of one or two tertials by hatch year/second year (HY/SY) birds has been documented in Carolina (*Poecile carolinensis),* Black-capped *(P. atricapillus),* and Mountain *(P. gambeli)* chickadees, but not in the Chestnut-backed Chickadee (*P. rufescens,* Pyle 1997a, Dahlsten et al. 2002). Tertial replacement also has been documented in Old World relatives such as Coal (*Parus ater*), Blue (*P. caeruleus*), and Great (*P. major*) tits (Jenni and Winkler 1994).

Between 1997 and 2003, PRBO Conservation Science (formerly Point Reyes Bird Observatory) conducted mist-netting at the Palomarin Field Station (37° 56'N, 122° 45'W) and at Pine Gulch Creek (37° 92'N, 122° 69'W) banding sites, Marin County, CA (located approximately 28 km northwest of San Francisco). During 2002, San Francisco Bay Bird Observatory conducted mist-netting along lower Coyote Creek (37° 20'N, 122° 10'W) at the extreme south end of San Francisco Bay, Santa Clara County, CA.

We determined the age of all HY Chestnut-backed Chickadees by the degree of skull pneumaticization, and one SY bird was aged by plumage and rectrix criteria (Pyle 1997a).

Because examples of tertial replacement were documented at all sites, Cormier and Gardali examined HY/SY specimens (n = 56) of Chestnut-backed Chickadee for tertial replacement at the California Academy of Sciences. Specimens were aged based on criteria outlined by Pyle (1997a).

PRBO biologists documented five examples of tertial replacement in HY/SY Chestnut-backed Chickadees between 1997 and 2003. SFBBO documented an additional three cases. Unfortunately, data on presence/absence of tertial replacement in all captured chickadees usually were not recorded.

Of the eight HY mist-netting captures with tertials that were growing, two were replacing S9, four were replacing S8, and the remaining two birds had replaced both S8 and S9. The SY bird had replaced both S8 and S9. Of the 56 HY/SY specimens examined at California Academy of Sciences, only one bird displayed replacement of all tertials, with a molt limit between S7 and S6.

Pyle (1997a) stated that juvenal tertials in Chestnut-backed Chickadee are not replaced in the first prebasic molt but are retained until the second prebasic molt. Our findings indicate that a few HY/SY birds do replace tertials and such birds can be aged as HY/SY. Because we did not examine and record the presence or absence of tertial molt in all chickadees captured, we have no way of knowing what percent replace tertials.

Molt limits can be helpful for ageing birds in the hand in winter and spring after most first-year birds have completed skull pneumatization (Pyle 1997b, Flannery and Gardali 2000). Since adult Chestnut-backed Chickadees have a complete prebasic molt, the presence of molt limits is indicative of a first year bird (Mulvihill 1993, Jenni and Winkler 1994, Pyle 1997b). Presently, when using molt limits to age Chestnut-backed Chickadees, one would look among the greater coverts and the shape and wear of primary coverts and outer rectrices (Pyle 1997a). Molt limits within the tertials can be added to these criteria for separating HY/SY and AHY/ASY birds, but more study is needed on the frequency of tertial replacement in this species.

ACKNOWLEDGMENTS

We thank Douglas Long at the California Academy of Sciences for allowing us to examine their collection, and Steve Howell, Rita Colwell, and an anonymous reviewer for helpful comments on this manuscript. Funding for the Palomarin Field Station was provided by the Osher Foundation and the members of PRBO. This is PRBO contribution number 1145.

LITERATURE CITED

Dahlsten, D.L., L.A. Brennan, D.A. McCallum, and S.L.L. Gaunt. 2002. Chestnut-backed Chickadee *(Poecile rufescens). In* The birds of North America, No. 689 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Flannery, M.E. and T. Gardali. 2000. Incomplete first prebasic molt in the Wrentit. *Western Birds* 31:249-251.

Jenni, L. and Winkler, R. 1994. Moult and ageing of European passerines. Academic Press, London.

Mulvihill, R.S. 1993. Using wing molt to age passerines. *N. Am. Bird Bander* 18:1-10.

Mulvihill, R.S. and R.L. Winstead. 1997. Variation in the extent of the first prebasic wing molt of Dark-eyed Juncos. *J. of Field Ornith.* 68:183-199.

Pyle, P. 1997a. Identification guide to North American passerines. Slate Creek Press, Bolinas, CA.

Pyle, P. 1997b. Molt limits in North American passerines. *N. Am. Bird Bander* 22:49-89.

Renee L. Cormier[1], Thomas Gardali[1,2], and Sherry Hudson[3]

[1]PRBO Conservation Science
4990 Shoreline Highway
Stinson Beach, CA 94970

[2]Corresponding author
tgardali@prbo.org
(415) 868-0655 ext. 381

[3]San Francisco Bay Bird Observatory
P. O. Box 247
Alviso, CA 95002

ANOMALOUS BLUE JAY

This Blue Jay was feeding at a feeder with other Blue Jays in southeastern Pennsylvania. The behavior of the bird was very cautious; it was very difficult to photograph.

The Blue Jay was not a true albino, as the bird had very faint color; i.e., the collar around the neck was grayish, and the eye was black.

Charis Lindrooth
227 Kunkles Dahl Road
Kempton, PA 19529