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Abstracts

## FEATURE ARTICLES

### VOCAL DEVELOPMENT IS CORRELATED WITH AN INDICATOR OF HATCHING DATE IN BROWN-HEADED COWBIRDS

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*Abstract.* The timing and ecological circumstances under which individual songbirds acquire memorized copies of their species-typical songs can vary significantly within a population. Males that hatch later in the breeding season are likely to hear less conspecific song as juveniles than earlier-hatched individuals. In addition, late-hatched males will experience shorter days and decreasing photoperiods during their song acquisition phase, factors known to affect vocal development. We tested the prediction that yearling Brown-headed Cowbirds (*Molothrus ater*) that hatched earlier the previous season are more advanced in their development of repertoires of local songs than those hatched later. We recorded perched songs from 17 yearling and 20 adult males trapped at two adjacent sites in New York state and found that yearling perched song repertoires were smaller and contained few of the perched song types common to the repertoires of local adults (adult-shared types). As found in previous field studies of cowbirds, yearlings did not alter the content or size of their repertoires during the season. We used underwing juvenal-feather retention as a measure of relative hatching date in a subset of 15 yearlings and found that perched song repertoires of earlier-hatched yearlings contained more local adult-shared types than repertoires of younger, later-hatched birds. We also investigated flight whistles of males from one site and found that only 4 of 10 yearlings produced the flight whistle type typically given by local adults. Evidence linking flight whistle development and the plumage character we used as an indicator of hatching date was inconclusive.

*Key words:* cowbird, dialects, hatching date, learning, song, vocal development.