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Erratum

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Erratum

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MODULATING THE CORTICOSTERONE STRESS RESPONSE: A MECHANISM FOR BALANCING INDIVIDUAL RISK AND REPRODUCTIVE SUCCESS IN ARCTIC-BREEDING SPARROWS?

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Due to an editorial error, incorrect units of measure for corticosterone concentrations were used on pages 1143–1145 in Holberton and Wingfield (Auk 120:1140–1150). The correct units are ng mL^{-1} (nanograms per milliliter), instead of ng μL^{-1} (nanograms per microliter).

The affected paragraphs, with the correct units substituted, are reprinted here.

American Tree Sparrow

Changes in corticosterone secretion and body mass with change in parental activity.—Male tree sparrows showed no significant change in body mass with breeding stage (preparental mean mass = 16.81 ± 0.16 g vs. parental mean mass = 17.37 ± 0.16 g, $P > 0.05$, paired-sample *t*-test). Mean baseline corticosterone concentration in preparental males was 25.74 ± 3.3 ng mL^{-1}, which did not change significantly when measured during the parental stage (parental mean baseline = 17.81 ± 3.6 ng mL^{-1}, $P > 0.05$, paired-sample *t*-test; Fig. 1). However, males significantly reduced their corticosterone stress response during the parental stage when compared to their response during the preparental stage (main effect of BREEDING STAGE: $F = 22.219$, df = 1 and 13, $P = 0.0004$; BREEDING STAGE × STRESS RESPONSE interaction: $F = 7.138$, df = 4 and 52, $P = 0.0001$, one preparental value missing for one bird, Fig. 1). At each sampling interval of the corticosterone stress response (5, 10, 30, and 60 min after capture), males showed significantly lower corticosterone levels during the parental stage than before young were present in the nest ($P < 0.05$ for all sampling times, paired-sample *t*-test; Fig. 1).

Females also showed no change in body mass with breeding stage (preparental mean mass = 17.96 ± 0.32 g vs. parental mean mass = 16.35 ± 0.28 g, $P > 0.05$, paired-sample *t*-test). Similarly, females showed no change in baseline corticosterone levels between the two sampling periods (preparental mean baseline = 17.02 ± 2.3 ng mL^{-1} vs. parental mean baseline = 14.99 ± 2.6 ng mL^{-1}, $P > 0.05$, paired-sample *t*-test; Fig.1). However, unlike males, females showed no significant main effect of BREEDING STAGE ($F = 0.327$, df = 1 and 17, $P = 0.575$; Fig. 1). Although the analysis revealed a significant BREEDING STAGE × STRESS RESPONSE interaction ($F = 3.16$, df = 4 and 69, $P = 0.0192$), *post hoc* analyses revealed a significant difference in corticosterone levels only at 30 min after capture ($P < 0.05$, paired-sample *t*-test; $P > 0.05$, paired sample *t*-test, for 5, 10, and 60 min; Fig. 1).

White-crowned Sparrow

Changes in corticosterone secretion and body mass with change in parental activity.—There was no difference in body mass or baseline corticosterone between preparental and parental males (mean preparental body mass = 24.76 ± 0.57 g, mean parental body mass 25.60 ± 0.76 g; mean preparental baseline = 16.01 ± 1.30 ng mL^{-1}, mean parental baseline = 20.81 ± 5.41 ng mL^{-1}, $P > 0.05$, Mann-Whitney *U*-test for all comparisons; Fig. 2). Although there was no significant main effect of BREEDING STAGE ($F = 3.05$, df = 1 and 14, $P = 0.1025$), there was a significant difference in the shape of the stress response (BREEDING STAGE × STRESS RESPONSE interaction: $F = 3.15$, df = 4 and 56, $P = 0.0208$; Fig. 2) primarily because of the significantly higher corticosterone levels at 30 min and the trend for higher levels at 60 min in the preparental males (5, 10, and 60 min: $P > 0.05$; 30 min: $P < 0.05$, Mann-Whitney *U*-test for all comparisons; Fig. 2).

Female White-crowned Sparrows sampled during the two breeding stages showed no difference in body mass or baseline corticosterone

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(mean preparental mass = 25.90 ± 1.4 g, mean parental mass = 23.17 ± 0.17 g; mean preparental corticosterone = 10.97 ± 3.4 ng mL^{-1}, mean parental corticosterone = 7.39 ± 1.1 ng mL^{-1}, $P > 0.05$, Mann-Whitney *U*-test, for all comparisons; Fig. 2). Similarly, there was no difference in shape of the adrenocortical response between the two breeding stages in females (main effect of BREEDING STAGE: $F = 0.17$, df = 1 and 9, $P = 0.6934$; BREEDING STAGE × STRESS RESPONSE interaction: $F = 0.20$, df = 4 and 36, $P = 0.9394$, corticosterone levels at 5, 10, 30, and 60 min after capture: $P > 0.05$, Mann-Whitney *U*-test, for all comparisons; Fig. 2).

Savannah Sparrow

Sex differences in corticosterone secretion and body mass during the preparental stage.—Male and female Savannah Sparrows did not differ in body mass or in baseline corticosterone during the preparental stage (male mean mass = 17.80 ± 0.30 g, female mean mass = 18.21 ± 0.40 g; male mean baseline = 35.07 ± 5 ng mL^{-1}, female mean baseline = 21.35 ± 5.3 ng mL^{-1}, $P > 0.05$, Mann-Whitney *U*-test, for both comparisons; Fig. 3). There was a significant effect of sex on the corticosterone stress response (SEX: $F = 20.65$, df = 1 and 12, $P = 0.0007$, with two missing values). Males exhibited significantly higher corticosterone values at 5, 10, 30, and 60 min after capture ($P < 0.05$, Mann-Whitney *U*-test; Fig. 3), but the sexes were similar in the shape of the stress response (SEX × STRESS RESPONSE interaction: $F = 0.19$, df = 4 and 48, $P = 0.942$; Fig. 3).

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