Proceedings of the Iowa Academy of Science

Volume 44 | Annual Issue Article 95

1937

Effects of Anterior Pituitary Thyrotropic Hormone in the House Sparrow, Passer domesticus (Linnaeus)

Dorothea Starbuck Miller
State University of Iowa

EFFECTS OF ANTERIOR PITUITARY THYROTROPIC HORMONE IN THE HOUSE SPARROW, PASSER DOMESTICUS (LINNAEUS)

Dorothea Starbuck Miller

Previous studies have shown that thyroxin injections cause definite color changes in the plumage of the male sparrow.

Attempts have been made to induce hyperthyroidism by stimulating the thyroids with injections of thyrotropic hormone extracted from sheep anterior pituitary. Microscopic studies of the thyroid glands and measurement of the metabolic rate indicate that a hyperthyroid condition has been produced. However, no modifications in plumage have been noted following varying doses of thyrotropic hormone or combined injections of thyroxin and thyrotropic hormone.

Department of Zoology,
State University of Iowa,
Iowa City, Iowa.

COMPARATIVE EFFECTS OF LIGHT STIMULATION AND ADMINISTRATION OF GONADOTROPIC HORMONES ON FEMALE SPARROWS

G. M. Riley

Female sparrows (*Passer domesticus*) were subjected to increased daily periods of illumination at different times during the fall and winter. In every instance the effect upon the ovary was very slight. On the other hand, the ovaries respond to injections of gonadotropic hormones at any time during the sex cycle. The development approaches that attained at the height of the breeding season. The results indicate that it is not a refractoriness of the ovary which explains the non-effect of light during the fall and winter, but rather the failure of the anterior pituitary to release the essential hormones. Contrary to the situation in the male sparrow, the pituitary of the female responds little to light stimulation.

Department of Zoology,
State University of Iowa,
Iowa City, Iowa.