Proceedings of the Iowa Academy of Science

Volume 42 | Annual Issue Article 98

1935

Embryology and Anatomy of Iowa Hawks with Special Reference to the Reproductive System

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only in location or size. A few appendages, such as the biramous ones, were entirely unique.

It may be said in general that the appearance of the abnormalities were usually localized. More widespread effects of the irradiation were apparent during the later stages of development when the embryos ceased growing. At the present writing, no embryos possessing such abnormalities have survived as far as hatching.

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EMBRYOLOGY AND ANATOMY OF IOWA HAWKS WITH SPECIAL REFERENCE TO THE REPRODUCTIVE SYSTEM

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A comparative study of the reproductive systems of four species of Iowa hawks shows that the right ovary may be entirely lacking or persistent to a degree which may be functional. The right oviduct is either absent or vestigial.

An embryological examination of Cooper's hawk shows that there is little or no migration of the primordial germ cells from right to left, as has been reported for other species, notably the English sparrow, the red-winged blackbird and the chick — and correspondingly less asymmetry in the reproductive system.

The Falconiformes on this basis are assumed to represent a phylogenetic step between the reptilian stem and the higher birds.

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MODIFICATIONS INDUCED IN THE PLUMAGE OF PASSER DOMESTICUS (LINNAEUS) BY EXPERIMENTAL HYPERTHYROIDISM

Dorothea Starbuck Miller

Experimental hyperthyroidism was induced in normal and castrated male and female sparrows by injection of crystalline