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البحث رقم (٨)

Title:

Micro- and macroanatomical features of the uropygial gland of duck (*Anas platyrhynchos*) and pigeon (*Columba livia*).

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Abstract:

We present our morphological, histological and histochemical description of the uropygial gland of duck (*Anas platyrhynchos*) and pigeon (*Columba livia*). The weight and dimensions of the glands were recorded. The gland openings in ducks were surrounded by double tufts of downy feathers surrounding the papilla; the tufts were held together by an oily secretion. In the pigeon, the gland opening was onto naked skin. Samples for light and transmission electron microscopy were obtained from adult birds. Gland morphometry of the duck showed higher indices of dimensions and relative gland weight than the pigeon. In both species the gland was lined by stratified epithelium, packed with secretary tubules and filled with oil globules that were discharged into a central cavity. In the pigeon, the gland was branched and alveolar with a wide central lumen whereas in the duck it was simple and tubular branched. The ultrastructural analysis of both species showed that the fat globules tended to condense in the peripheral layers of the secretory and degenerative cells where the nuclei underwent some pyknosis which suggest a holocrine nature of the gland. The morphometric and histological analysis of the gland showed that the gland architecture is similar among birds, however, there were some species-specific differences which suggest a functional correlation of the gland with the bird habitat.