

## TECHNIQUES

### CLOACAL EXAMINATION OF ANATIDAE

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Examination of the cloaca is the only accurate way of sexing those waterfowl species which have no visible external dimorphic characteristics. Furthermore, it is useful in determining the sex of juveniles where the adults show some degree of sexual dimorphism. This method was first described by Hochbaum (1942: Trans. N. Am. Wildl. Conf. 7:299-307)."



Fig. 1: Method of holding bird and inserting feather to examine bursa of Fabricius

To examine the bird the handler should hold the bird upside down with the tail pointing away, Fig. 1. The vent is located with the index fingers. The tail is then depressed with the forefingers and the thumbs placed on either side of the vent. By gently separating the thumbs the vent is opened and the cloaca exposed. The penis will protrude if present.

The penis is located on the wall of the cloaca on the left side in adults, and on the anterior side in juveniles. The adult male penis is large and enclosed within a conspicuous sheath, Fig 2. In juveniles it is small and unsheathed, Fig. 3. These two stages are well-defined.

Difficulty can be experienced during the short transition period after the postjuvinal moult. Taber (1963: In Wildlife Investigational Techniques Mosby, H. S., Ed. 119-189) mentions that there is little change in juvenile North American waterfowl between five and ten months of age.



Fig. 2: Adult Male



Fig. 3: Juvenile Male.

In adult females the oviduct opens on the left side of the cloaca, but in juveniles the oviduct is usually covered by a membrane. In living birds the two age classes are more difficult to distinguish, but the size of the cloaca, Figs 4 & 5, gives a general indication. Here the bursa of Fabricius is a good indicator of age.

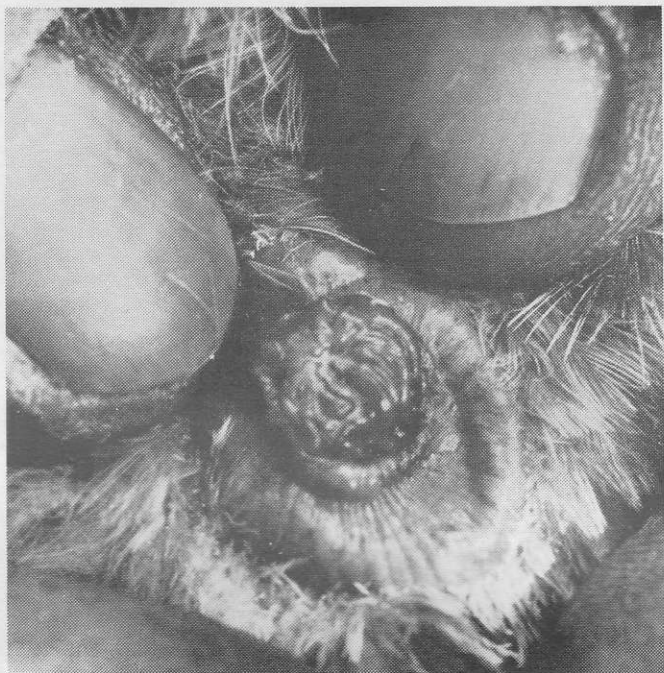


Fig. 4: Adult Female

The bursa of Fabricius is situated anterior to the opening of the digestive tract in both males and females. It may be examined by gently

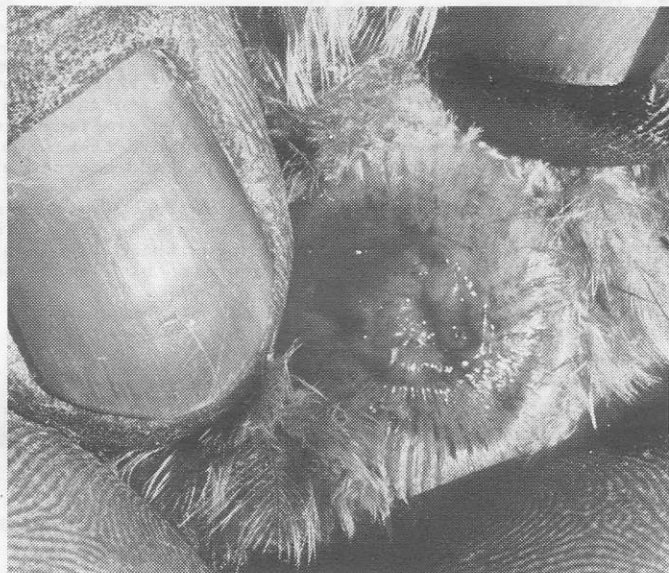


Fig. 5: Juvenile female

inserting the shaft of a tail feather, Fig. 1. A large bursal sac indicates a young bird. The bursa is present in juveniles but absent in adults.