Guide to Sexing Passerines by Cloacal Examination

The males and females of many passerine species share common plumage, bare parts and morphometric characteristics and the sexes cannot be separated. However, during the breeding season the absence or presence of cloacal protuberances, or a brood patch may also be used to identify the sex of an individual. This guide should assist with identifying the sex of some passerines around breeding time by cloacal examination. A separate guide in this series deals with brood patches.

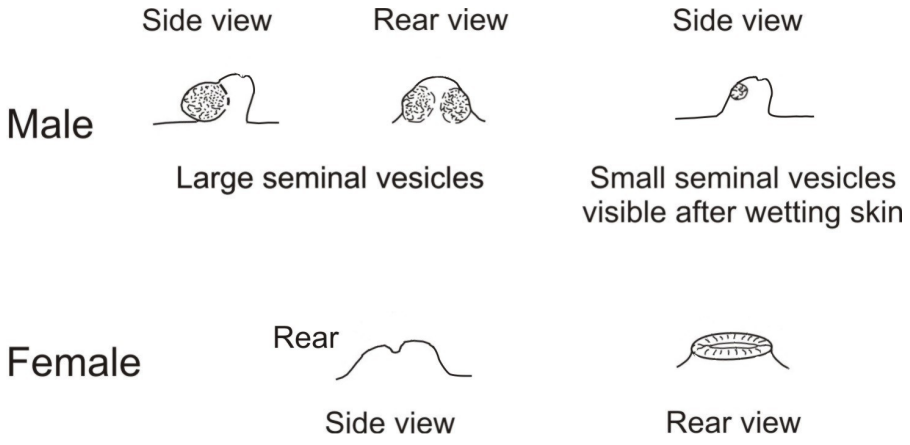
Cloacal protuberances develop in breeding male passerines to store sperm and assist in copulation. They result from the enlargement of the testes, which are located deep in the body cavity near the kidneys, and discharge of semen through the *vas deferens* to be stored in seminiferous vesicles, which can be seen through the skin on the rear of the cloaca as tiny convoluted white tubules. The seminal vesicle enlargement typically forms a right angle to the abdomen. In some species with a dark skin, it may be necessary to wet (with clean water) the rear of the cloaca to see the tubules through the skin. At the same time, some females will have swollen cloacal lips and the opening will enlarge to a transverse slit instead of a round orifice.

The cloaca of males point upwards or forwards and usually show a crease between it and the abdomen. The female cloaca usually points backwards and shows no crease.

The following text and figure (slightly modified) are adapted from Disney (1967):

"Males:
In the non-breeding season the testes of male birds become very small and enlarge greatly during the breeding season. At the same time the seminal vesicles in which the sperm are stored, situated by the cloaca, behave in a similar way. In the breeding season they enlarge and become a mass of convoluted tubules which may become so great that a protuberance or bulge appears at the rear side of the cloaca. The cloaca is pushed forward and stands away from the body wall, its lips forming a rounded orifice. …..

Females:
When females are breeding or have recently laid, the lips of the cloaca are swollen the opening is in the form of a transverse slit, and a brood patch may be present. The cloaca does not stand up away from the body wall as in the male and the body wall seems to merge with no marked angle into the front of the cloaca."



The best way to gain experience in identifying the cloacal changes is to examine birds that can be sexed on plumage or size. When breeding, male fairy-wrens and silvereyes, for example, have very prominent cloacal protuberances and seminiferous tubules and therefore present a fine example from which to learn the differences.

References: Disney, H.J.deS. (1967). Sexing Passerines by Cloacal Examination. The Australian Bird Bander. June 1967.
Serventy, D.L. (1956). A Method of Sexing Petrels in Field Observation. Emu, 56: 213-214.
Wolfson, A. (1952). The cloaca Protuberance – A means for determining Breeding Condition in Live Male Passerines. Bird Banding. 23: 159-165.
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The Australian Bird Bander's Manual, in Chapter 6, has paragraphs relating to cloacal protuberances - sexing code (C) and seminiferous tubules - sexing code (T).

See photographic examples follow:

Male cloaca side view - breeding male Superb Fairywren.
Photo – McKinley Moens

Male cloaca side view – breeding male Eastern Yellow Robin.
Photo – Cees Moens

Female cloaca above-rear view – breeding female New Holland Honeyeater
Photo – Cees Moens

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