

URINOGENITAL SYSTEM OF BIRDS

Like other vertebrates the excretory and the reproductive system are intimately associated with each other and hence called Urinogenital System.

Urinary system :

It includes a pair of metanephric kidneys. Each kidney is flat and divided into three lobes. The uriniferous tubules has a long loop of henle. This is an adaptation for reabsorption of water from the glomerular filtrate.

Ureters arise from the anterior lobe of kidneys these open directly into the prodaeum of cloaca because urinary bladder is absent.

Birds are uricotelic animal as the nitrogen is excreted in the form of uric acid. The cloacal wall reabsorbs water from excretory wastes thus urine is excreted in semisolid state along with faeces. Such product are called guano.

Reproductive System:

Male reproductive System :

Male reproductive system consists of (i) Testes

ii) Vas deferentia iii) Seminal Vesicles.

1) Testes: One pair of white oval shaped testes remain attached to the kidney by a fold of peritoneum called mesorchium. Right testis is smaller than the left testis. Testis consists of seminiferous tubules. It has been suggested that the abdominal air sac may help in keeping the testes cool.

ii) From the inner border of each testis arise a convoluted vas deferentia. It is the wolffian or mesonephric duct. Each vas deferentia open into the prodaeum. As its hind end, it is swollen to form a seminal vesicle (Vesicula seminalis).

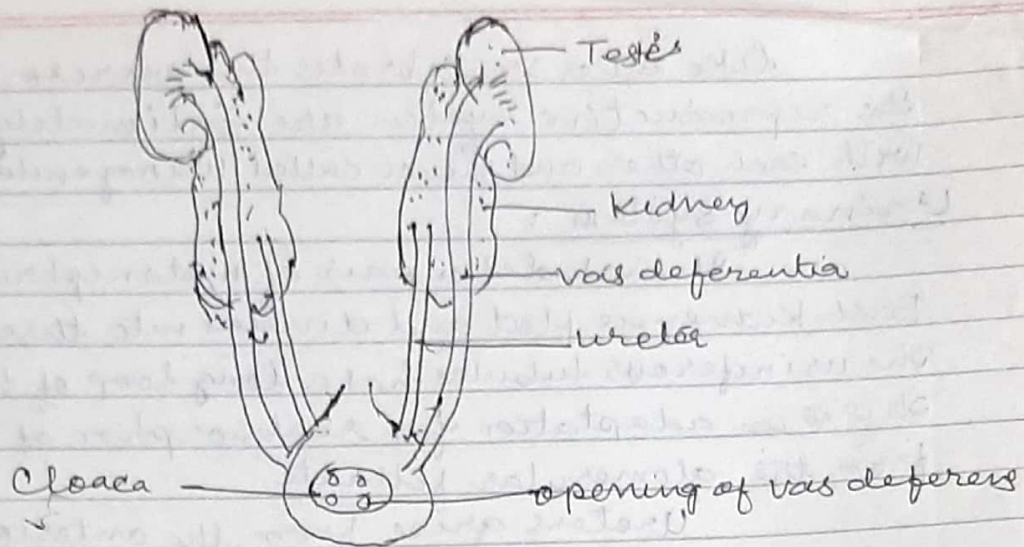


Fig - Male urinogenital system of *Columba*.

Female Reproductive System:

The female reproductive system consists of an ovary and oviduct.

In birds, the ovary and oviduct are found only on the left side, the right ovary and oviduct being atrophied.

a) Ovary: The ovary is a large, irregular structure attached to the ventral side of the left kidney by a fold of peritoneum called the mesovarium.

b) Oviduct: It is a wide, convoluted tube, starting close to the ovary and running behind to open in the proctodaeum. It is differentiated into the following regions:

i) Oviduct funnel or infundibulum: It is the membranous, anterior, wider and funnel-shaped part of the oviduct which opens into the body cavity, from where the egg enters.

ii) Magnum: The part of the oviduct behind the oviduct funnel is called the magnum. It is thick-walled, glandular, and secretes albumin or egg white.

iii) Isthmus: The next part behind the magnum is the isthmus. It secretes the shell membrane.

iv) Uterus : The succeeding part of the oviduct is thin walled uterus and secretes calcareous shell and the albumen.

v) Vagina : Vagina is posterior most, thick walled and muscular part of the oviduct, devoid of glands - It opens into Urodaeum.

A vestigial right oviduct is found attached to the right side of cloaca.

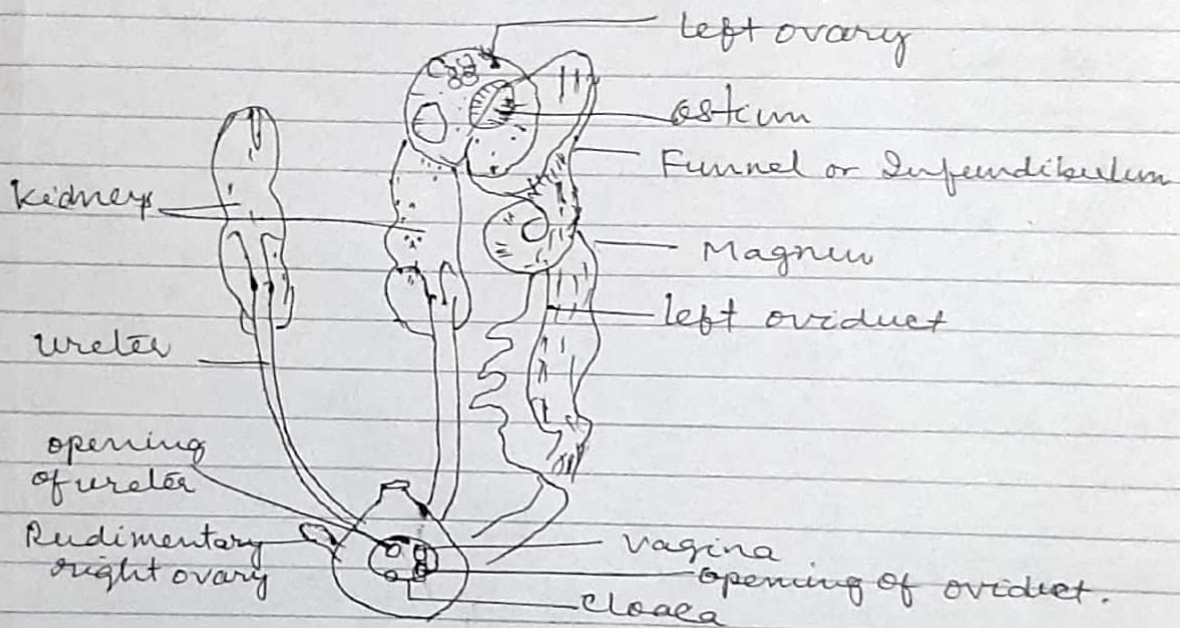


Fig - Female Urinogenital system of Pigeon.