

SEM IV ZOOA

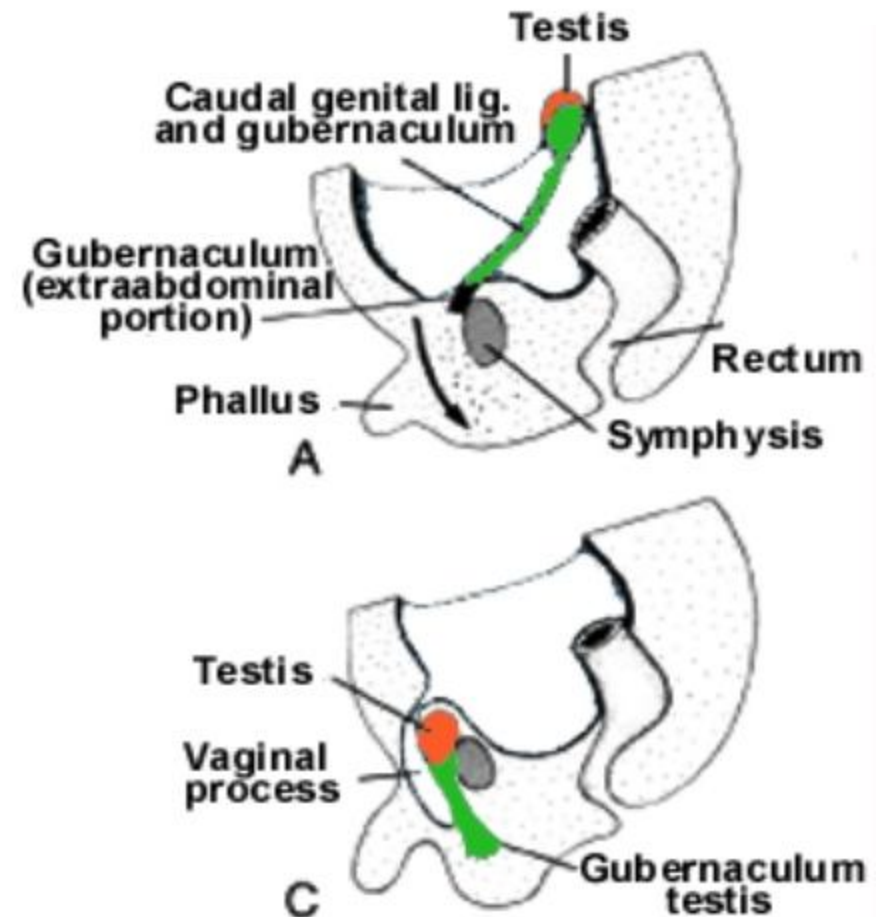
CC8 UNIT 5: URINOGENITAL SYSTEM (Part - 8)

Ruksa Nur

Assistant Professor
Department of Zoology
Dinabandhu Andrews College
Kolkata-700 084

MAMMALIAN TESTES

- Maybe found in the pelvic region or descend into a scrotum
- Some mammals' testes descend into the scrotum only during the breeding season
- inguinal canal - passage between abdominal cavity & scrotum



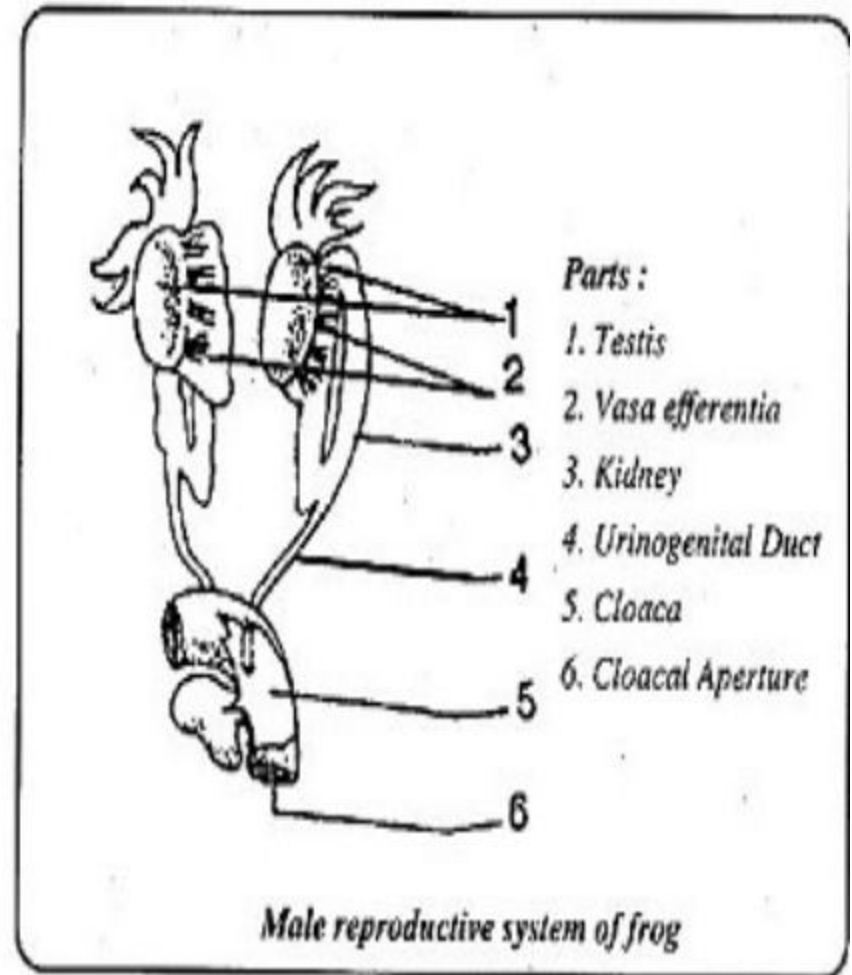
SPERMATOZOA

- Vary in vertebrates and are several times smaller than the ova
- All possess tails for locomotion
- Number produced by the human male is about 4ml or 300 million per ejaculation
- Boar produces about $\frac{1}{2}$ liter



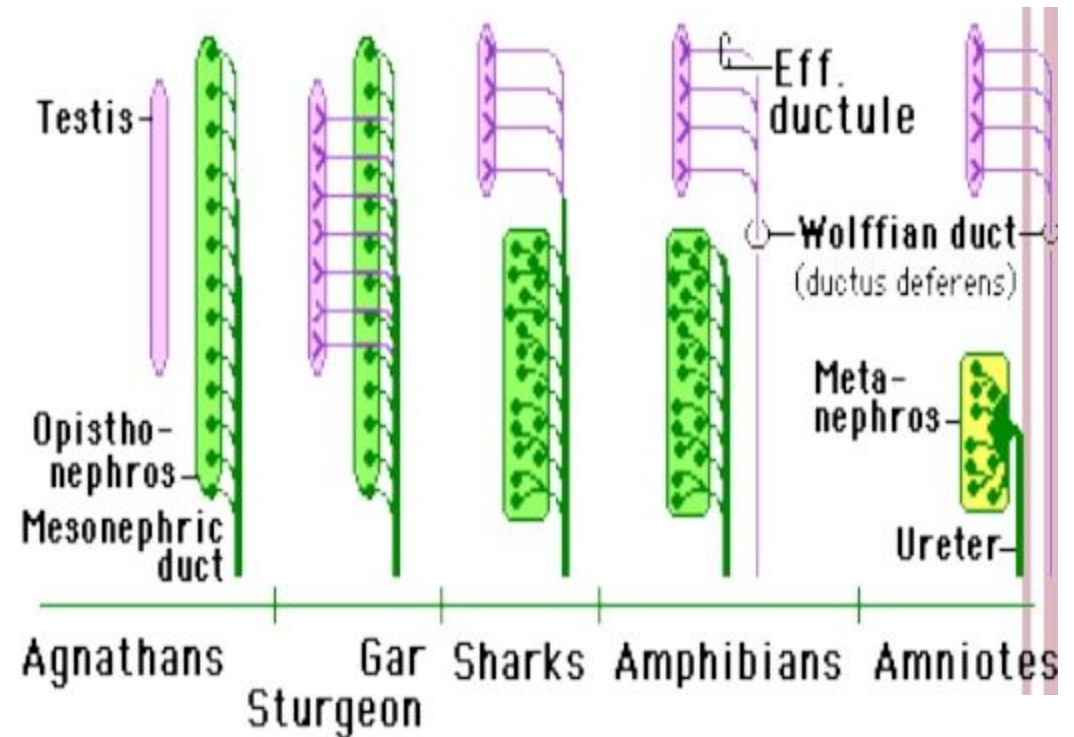
MALE GENITAL DUCTS

- Some fishes (e.g., gar & sturgeon) & amphibians - mesonephric duct transmits sperm & urine
- Some amphibians - mesonephric duct transports only sperm; new accessory urinary duct drains the kidney

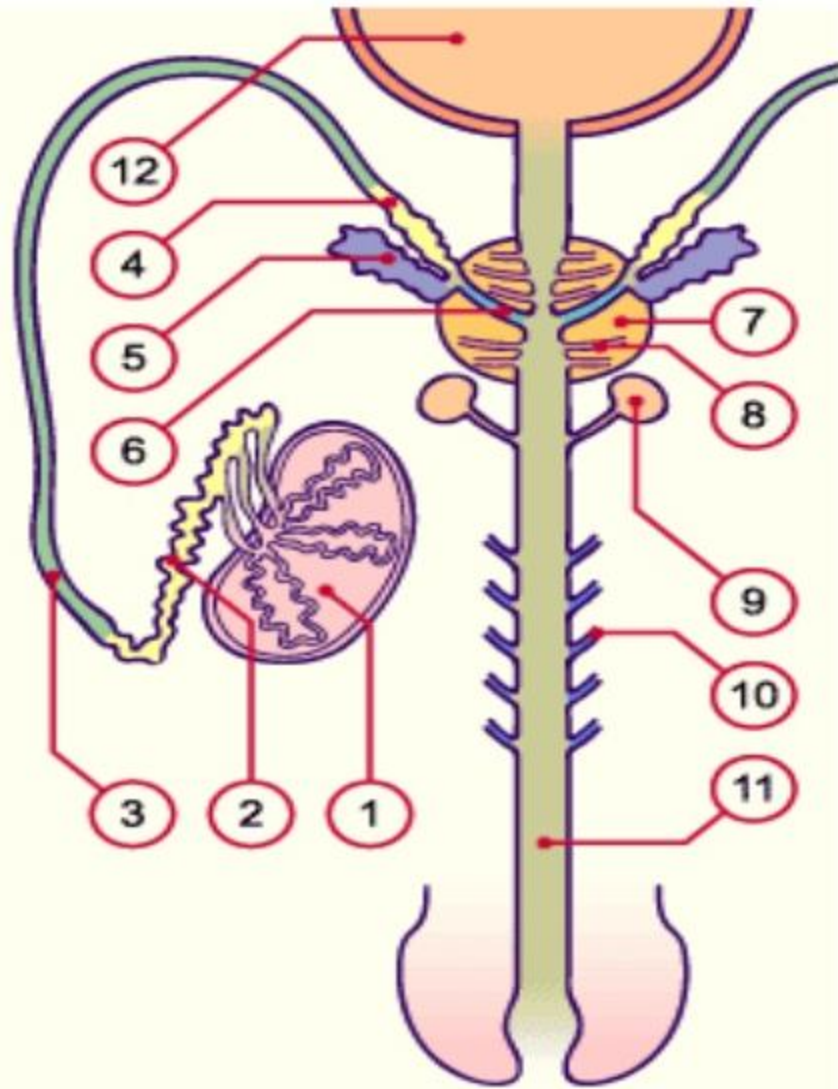


MALE GENITAL DUCTS

- Sharks - mesonephric duct is used primarily for sperm transport; accessory urinary duct develops
- Teleosts - mesonephric duct drains kidney; separate sperm duct develops
- Amniotes - embryonic mesonephric ducts transport sperm in adults



Male Urogenital Relations



1. Testis / testicles (present as a pair)
2. Ductus epididymidis (a pair)
3. Deferent duct / Vas deferens (a pair)
4. Ampulla of the deferent duct (a pair)
5. Glandula vesiculosa / Seminal gland (a pair)
6. Ejaculatory duct (a pair)
7. Prostate (single)
8. excretory duct of the prostate (several present)
9. Bulbourethral gland (Cowper's glands) (a pair)
10. Urethral gland (Littre's gland) (several)
11. Urethra (single)
12. Urinary bladder (single)

COPULATORY ORGANS/INTROMITTENT ORGANS

- Found in vertebrates that practice internal fertilization
- Used for introducing sperm into the female reproductive duct
- cartilaginous fish - appendages of pelvic fins called **claspers** direct sperm into female reproductive tract



COPULATORY ORGANS/INTROMITTENT ORGANS

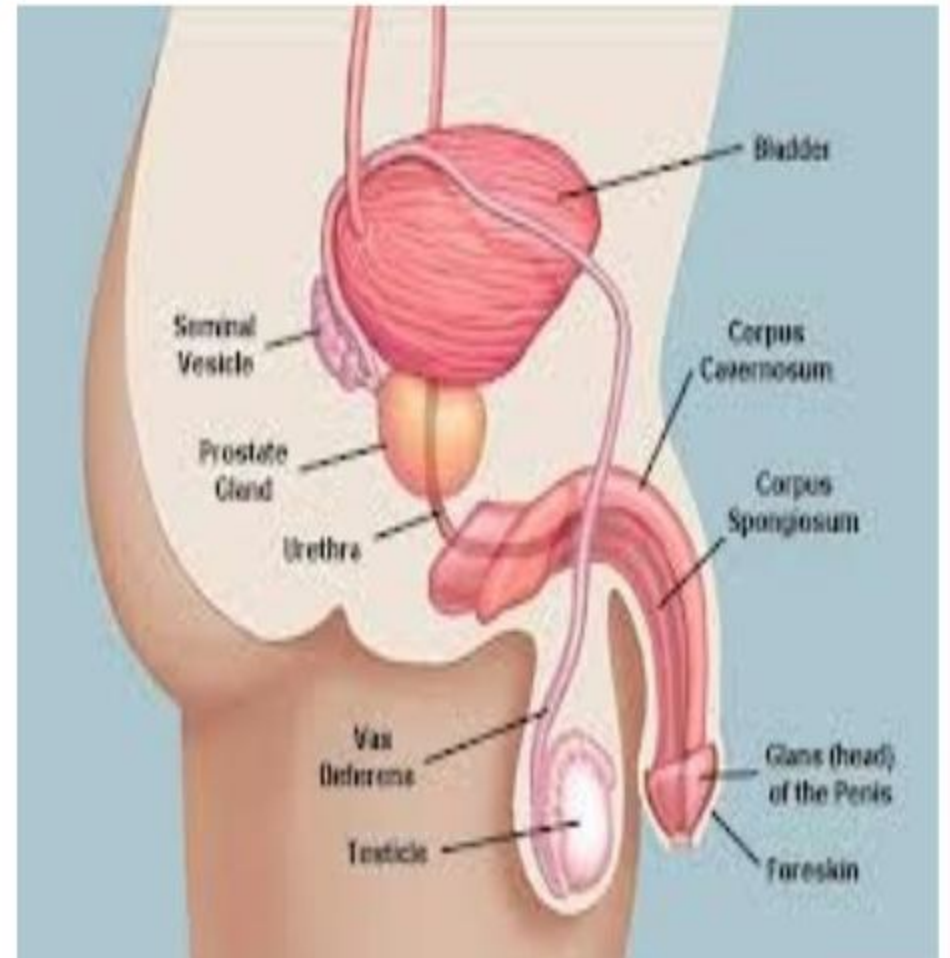
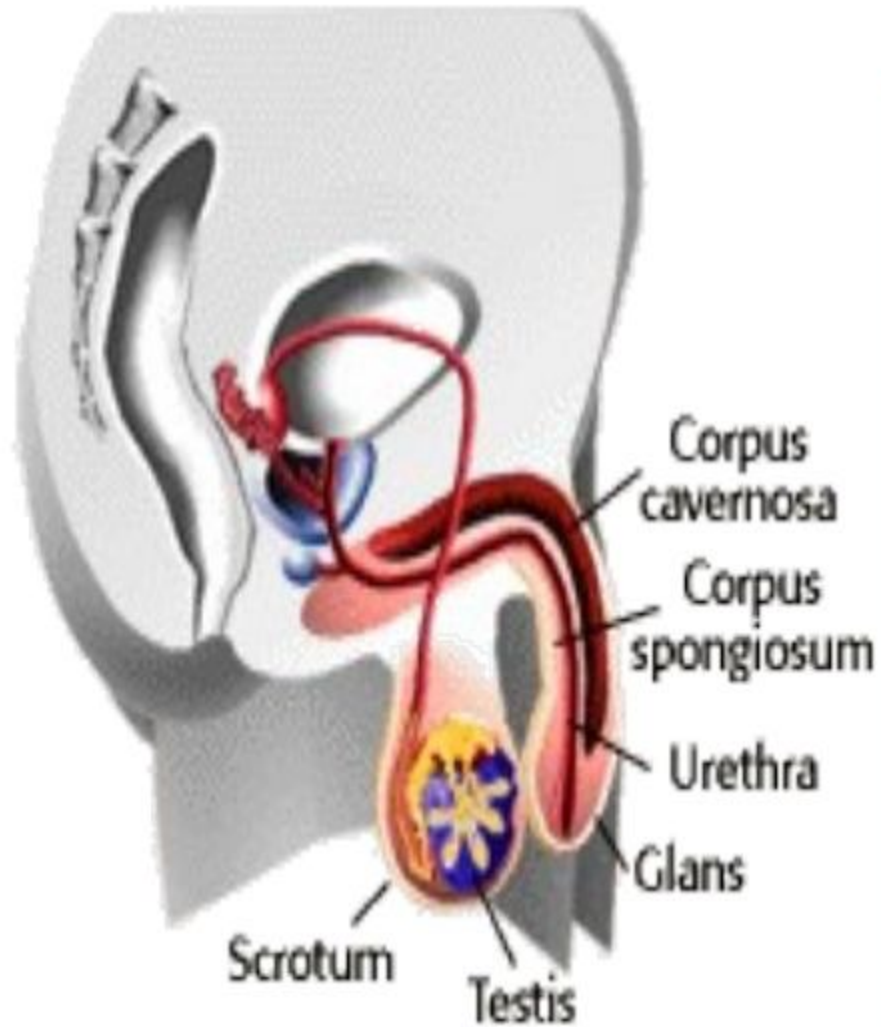
- snakes & lizards -
have pair of
HEMIPENES
(pocketlike diverticula
of wall of cloaca)
- turtles, crocodilians, a
few birds, & mammals
- exhibit an unpaired
erectile penis



COPULATORY ORGANS/INTROMITTENT ORGANS

- **penis** - usually a thickening of floor of cloaca consisting of spongy erectile tissue (**corpus spongiosum**) with grooves to direct sperm & ending in a **glans penis** (sensory endings that reflexly stimulate ejaculation)
- mammals (except monotremes) - penis extends beyond body
- The embryonic corpus spongiosum becomes a tube with urethra inside & 2 additional erectile masses develop (**corpus cavernosa**).

Male reproductive system



REFERENCES:

Kent, George C & Carr, Robert K. Comparative Anatomy of the Vertebrates. *Urinogenital System.*