

Distinctive characters (Aves) : Birds.

- Study of Bird is called Ornithology.
- Dr. Salim Ali, known as Indian Ornithologist.
- Birds constitute a well-defined group of vertebrate animals.
- It is warm blooded, running & flying birds.
- Feather clad, air breathing, disparous, bipedal - animals.
- Body is more or less spindle-shaped & divided into Head, Neck, Torso & a short tail.
- Limbs (Fore-limbs) are modified into wings.
- Hind limbs, large & variously adapted for walking, running, scratching, perching, food capturing, swimming etc. Hind limbs with clawed digits.
- Skin is dry & devoid of glands, except the oil or preen gland at the root of tail.
- Exoskeleton is Epidermal & horny represented by feathers forming a non conducting body covering for warmth. Scales on the legs similar to those of reptiles, claws on the toes and sheath on the beaks.
- It contains complete alimentary canal.
- Jaw without teeth & with horny beaks.
- Respiration by lungs associated with air sacs.
- Bones are light & spongy.
- Some of the skull bones are long fused, reduced or absent.
- Heart with two auricles & two ventricles.
- Nucleated Red Blood Cells.
- Genital opening is not separated from cloacal opening.
- Sexes are separate, Male has generally no copulatory organ except in Ratites (Ostrich, Geese etc).
- Female has well developed left ovary (oviduct).

Larynx (Sound Box) without vocal cords. A-

Sound Box or Grynx (Saxix), producing voice like at or near the junction of Trachea & Bronchi.

- Kidneys - Metanephric 2 & 3 (Three) lobed. Ureter opens in to cloaca. Urinary bladder absent.

- Bile are uricelic. Excretory substances of urates eliminated with faecal matter.

- Brain large but smooth. Cerebrum, Cerebellum & optic lobes greatly developed. Cranial nerve 12 (Twelve) pairs.

- olfactory Organs poorly developed. Middle ear contains a single ossicle. Eyes large & possess nictitating Membrane, Sclerotic plates & a vascular pecten.

- Fertilization internal, preceded by copulation & courtship. Females Oviparous. Eggs large with much yolk & hard calcareous shell.

- Eggs develop by external incubation. cleavage telolecidal, Meroblastic.

- Development - direct -

- Extra embryonic Membrane (Amnion, Chorion, Allantois, & yolk sac) present.

- newly hatched young fully formed (precocial) or immature (Altricial)

- Parental care is well developed.

