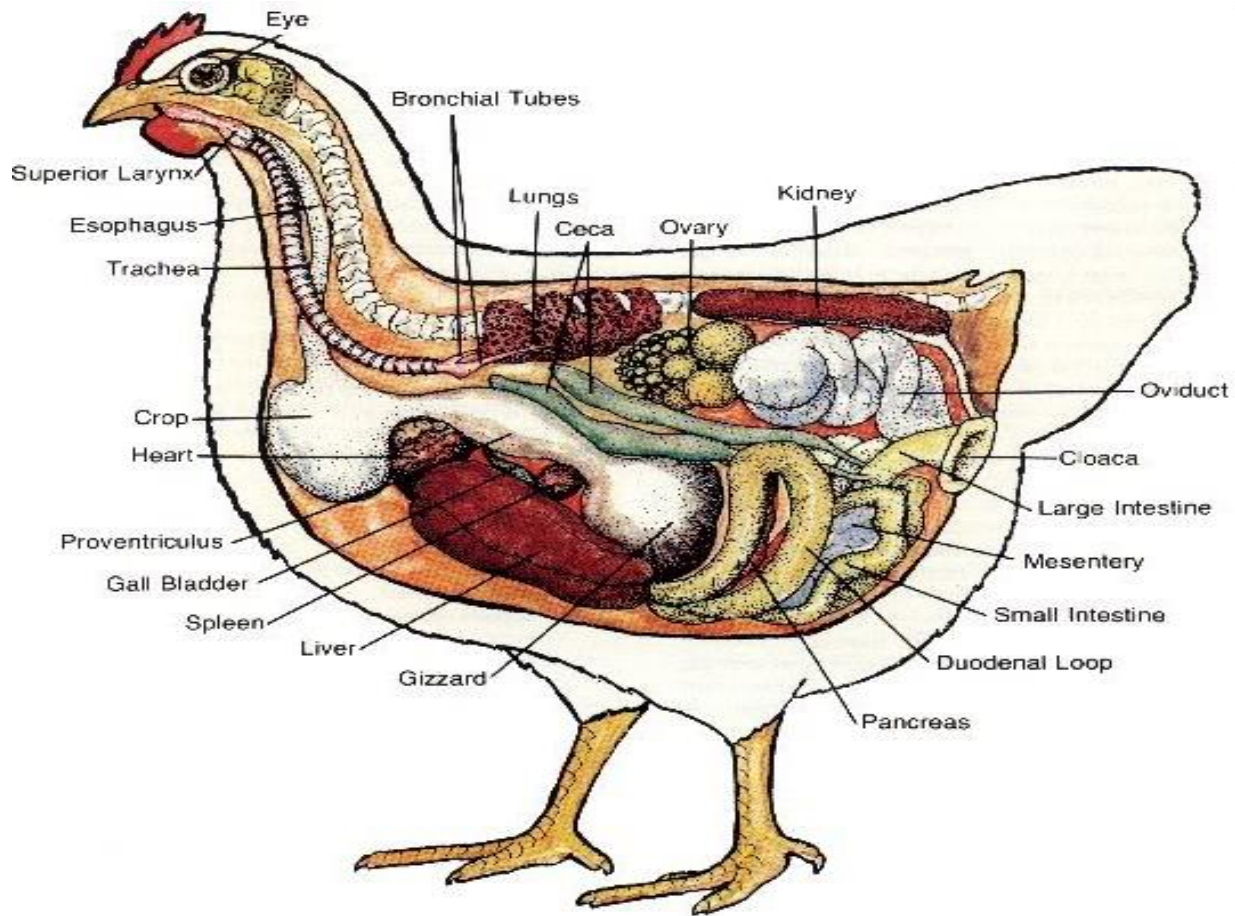


Birds physiology & Integumentary system



Anatomy and Physiology of Poultry

What is different about the bird compared to mammals?

- 1- Birds body covered with feathers.
- 2- Birds mouth lack in teeth.
- 3- Birds lay eggs which is not occur in mammals.
- 4- Birds have float and fly capability.
- 5- Waste excreted from only one orifice.

What is Physiology?

Physiology: the science that deals with the functions of the living organism and its parts.

Integumentary System

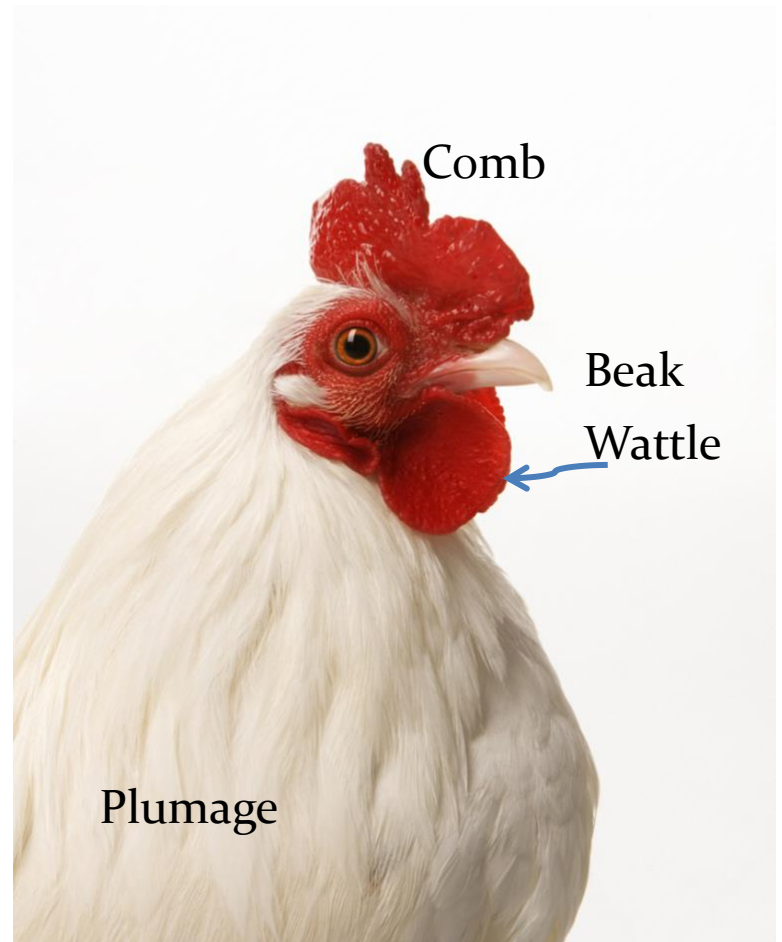
This system includes: skin, plumage with scales, and beak.

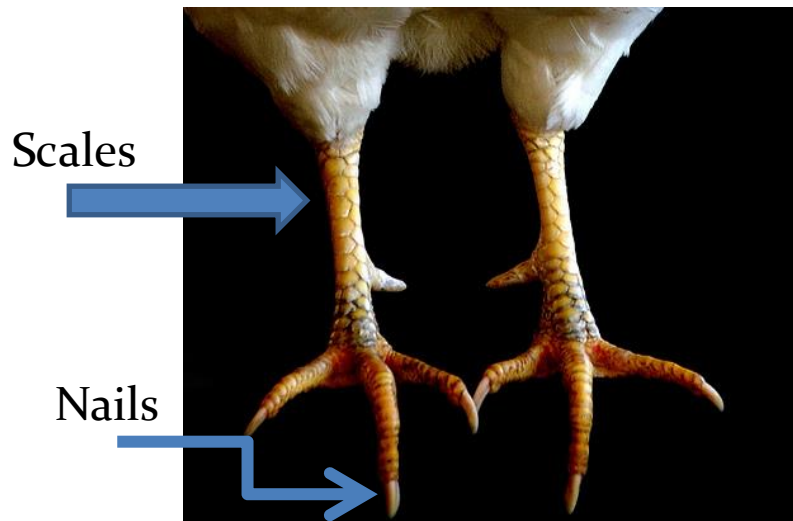
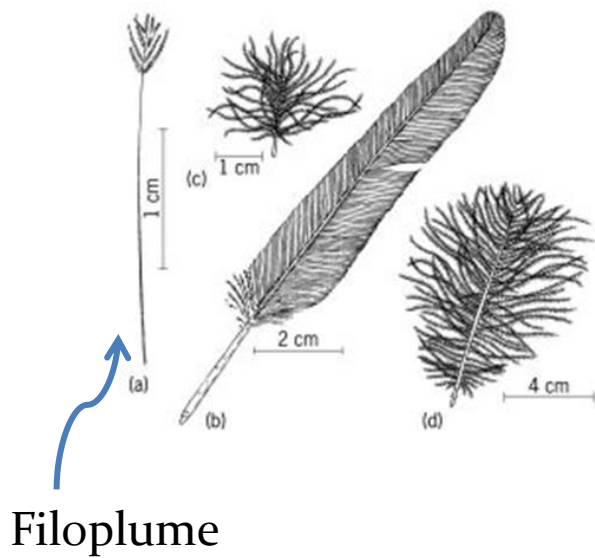
Function of integumentary system: protect the bird from external harm.

1- Skin:

- Much like humans, with the exception of plumage production.
- **Wattle:** a red growth underneath the beak, which works in conjunction with the **comb**, an excess of skin on top of their head.
 - The size of the comb is an indication of the levels of testosterone in the body. If the comb is large, then this means more testosterone is present, often meaning the sex of the bird is male.

Function of the skin: circulation of blood between the two regulate the temperature of the bird.





2- Plumage and Scales:

Scales: scales are located on the legs and feet.

Plumage: the outer covering of a bird's body. Includes: Feathers and filoplumes.

Filoplumes: hair-like structures located at the base of feathers.

Function of plumage:

- Maintenance of body temperature: body cooling and heating. Plumage shape is particularly important for cooling since birds lack sweat glands.
- Protects skin and internal organs against abrasions and bruises when birds are in groups or lying on the ground.
- Although it is not common for production birds to **fly**, plumage type and form is an important determinant in flight for aerial species.

3- Beaks vs. Lips and Teeth:

- Birds have beaks as opposed to lips and teeth.
- The beak is used for eating and drinking, as well as in self-defense and protection from other animals.

