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Topic: - Types of Eggs

TYPES OF EGGS

Different species of animal has different type of eggs. They are classified on the following basis -

1. ON THE BASIS OF AMOUNT OF YOLK

Eggs are grouped into four types on the basis of the amount of yolk present in them.

(a) **Alecithal Egg:** When the egg contains no yolk, it is called alecithal egg. e.g., the eggs of eutherian mammals

(b) **Microlecithal Egg:** When the egg contain. Small or negligible amount of yolk it is said to be microlecithal. e.g., Amphioxus, Tunicates

(c) **Mesolecithal egg:** The amount of yolk present is moderate and is not high Hence these eggs are named as mesolecithal eggs. e.g., Amphibian, Dipnoi Fishes, Petramizon and Annelids worm.

(d). **Macrolecithal or Megalecithal or Polylecithal Egg:** When the egg contains large amount of yolk it is said to be macrolecithal or megalecithal egg. It is also called Polylecithal egg e.g., Reptiles, Birds, Prototheria (Monotremata) Egg laying mammals.

2. On the Basis of the distribution of yolk

(a) **Isolecithal or Homolecithal egg:** In isolecithal eggs, the very little amount of yolk present is uniformly distributed throughout the cytoplasm (e.g., echinoderms, Amphioxus, mammals). This condition is usually observed in eggs with very little amount of yolk.

(b) **Telolecithal egg:** In eggs containing moderate or large quantity of yolk, the distribution of yolk is not uniform. It is concentrated more towards the vegetal pole. Such a type of egg, in which the yolk is concentrated towards one pole, is called telolecithal egg.

(c) **Centrolecithal egg:-**Egg of many arthropods and some coelenterates are described as centrolecithal. They are relatively large and elongate and have a very great amount of yolk.

The nucleus lies at the geometric centre of the yolk mass, surrounded by a small amount of cytoplasm. A thin cytoplasmic layer covers the surface of the yolk. Fine strands of cytoplasm extend from the peripheral layer to the zone occupied by the nucleus.

3. PRESENCE OR ABSENCE OF HARD SHELL

On the basis of presence or absence of shell the eggs are of two types -

(a) **Cleidoic eggs** - Such eggs are covered by hard shell for protection which is permeable for gases. Yolk present in sufficient quantity. e.g., Reptiles and birds.

(b) Non cleidoic egg - They are without shell and these develop in aquatic medium and uterus of female. e.g., amphioxys, mammals, frog and hardmania.

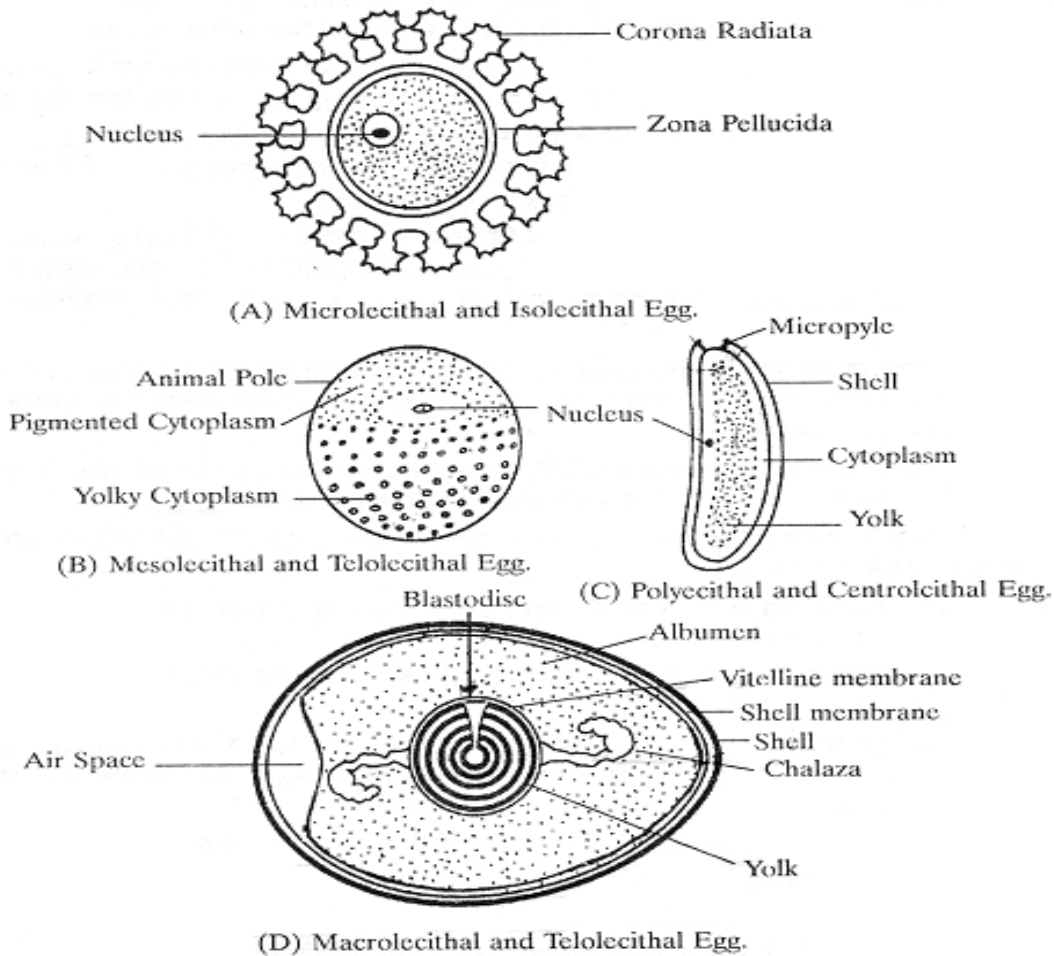


Fig. Different types of egg.

4. ON THE BASIS OF DEVELOPMENT

On the basis of development eggs are of two types -

(a) Determinate or Mosaic eggs

In these types of eggs before fertilization determined the different parts of embryo called the mosaic eggs. If any part remove the eggs the related organs does not

originate in the embryo. After first cleavage both blastomere are separate than develop the half embryo. e.g., Polyclade, Nimertine, Annelidsm, Molluscs etc.

(b) Indeterminate or Regulative eggs

Different parts determined after third cleavage, these eggs are called regulative eggs. If two blastomer are separate after first cleavage both blastomeres developed the complete embryo. In man twins developed due to this region.