

A presentation on
Types of eggs
For B.Sc.-II, Semester-IV
Zoology Paper-I
(Developmental Biology)

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Types of eggs

I. Structure

The fully developed female gamete is called as 'ovum' or 'egg'. It is non motile. The eggs are relatively larger than the male gametes. The egg performs different functions like, it provides haploid set of chromosome to the future embryo, and also it provides cytoplasm and food to the embryo. In egg, contains yolk and albumin. The yolk is yellowish colour and albumin is whitish colour in nature. Yolk is present inside the albumin.

II. Types of eggs

On the basis of amount and distribution of yolk in the eggs, the eggs are classified by the embryologists as follows:

A. Types of eggs based on the amount of yolk:

On the basis of amount of yolk present in the eggs, the eggs are classified into three types:

viz., 1. Microlecithal eggs, 2. Mesolecithal eggs, and
3. Macrolecithal eggs.

1. Microlecithal eggs: The eggs which contains small amount of yolk or reserved food, such eggs are called as 'Microlecithal eggs'. The microlecithal eggs are found in Amphioxus, Cephalochordates, Tunicates and Eutherian mammals.

2. Mesolecithal eggs: The eggs which contains moderate amount of yolk, such eggs are called as 'Mesolecithal eggs'. The mesolecithal eggs are found in Petromyzon, Dipnoi and Amphibia.

3. Macrolecithal eggs: The eggs which contains enormous (large) amount of yolk, such eggs are called as 'Macrolecithal eggs'. The macrolecithal eggs are found in cartilaginous and bony fishes, reptiles, birds, protherian mammals and insects.

B. Types of eggs based on the distribution of yolk:

On the basis of distribution of yolk, the eggs are classified into three types. These are: viz., 1. Homolecithal or isolecithal eggs, 2. Telolecithal eggs and 3. Centrolecithal eggs.

1. Homolecithal or isolecithal eggs: The eggs which contains small amount of yolk and distributed uniformly in the egg cytoplasm, such eggs are called as 'Homolecithal or Isolecithal eggs'. The microlecithal eggs are homolecithal or isolecithal eggs.

2. Telolecithal eggs: The eggs in which the yolk is not distributed evenly. It is present at one side of the egg, may be at animal or vegetal pole. Such eggs are called as 'Telolecithal eggs'. The mesolecithal and macrolecithal eggs are telolecithal eggs.

3. Centrolecithal eggs: The eggs in which the yolk is present in the centre of the egg cytoplasm, such eggs are known as 'Centrolecithal eggs'. The eggs of insects are centrolecithal eggs.

Thank you!