SUBJECT- ZOOLOGY (HONOURS)
FOR THE STUDENTS OF DEGREE II
PAPER- IV (A)
TOPIC-TYPES OF VERTEBRATE EGGS

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TYPES OF EGGS

Eggs are of different types depending upon the amount of yolk and the pattern of distribution of yolk.

TYPES OF EGGS ON THE BASIS OF AMOUNT OF YOLK

ALECITHAL EGGS

Eggs with no yolk or yolkless eggs are called alecithal eggs. Example, eutherian mammals.

MICROLECITHAL/OLIGOLECITHAL EGGS

Eggs that have little amount of yolk in the form of granules are microlecithal eggs. Example, amphioxus.

MESOLECITHAL EGGS

Eggs that have moderate amount of yolk are mesolecithal eggs. Example, tunicates.

MEGALECITHAL EGGS/ MACROLECITHAL EGGS

Eggs that have large amount of yolk are called megalecithal eggs. The yolk fills almost all the space inside the egg except a small disc-shaped area of cytoplasm. Size of such eggs is large. Example, Osteichthyes, reptiles, birds and egg laying mammals.

TYPES OF EGGS ON THE BASIS OF DISTRIBUTION AND ORIENTATION OF YOLK

ISOLECITHAL EGG

When yolk is evenly distributed inside the egg, then it is called isolecithal egg. Example, amphioxus.

TELOLECITHAL EGG

When yolk granules or yolk mass occupy the vegetal hemisphere, it is called telolecithal egg. In some telolecithal eggs, yolk occupies whole of the egg except a small region at animal pole for clear cytoplasm. Example, bony fishes, birds and egg laying mammals.

CENTROLECITHAL EGG

Yolk is centrally situated and a thin layer of cytoplasm surrounds the yolk. At the center of the egg, a small amount of cytoplasm is surrounded by thick layer of yolk.
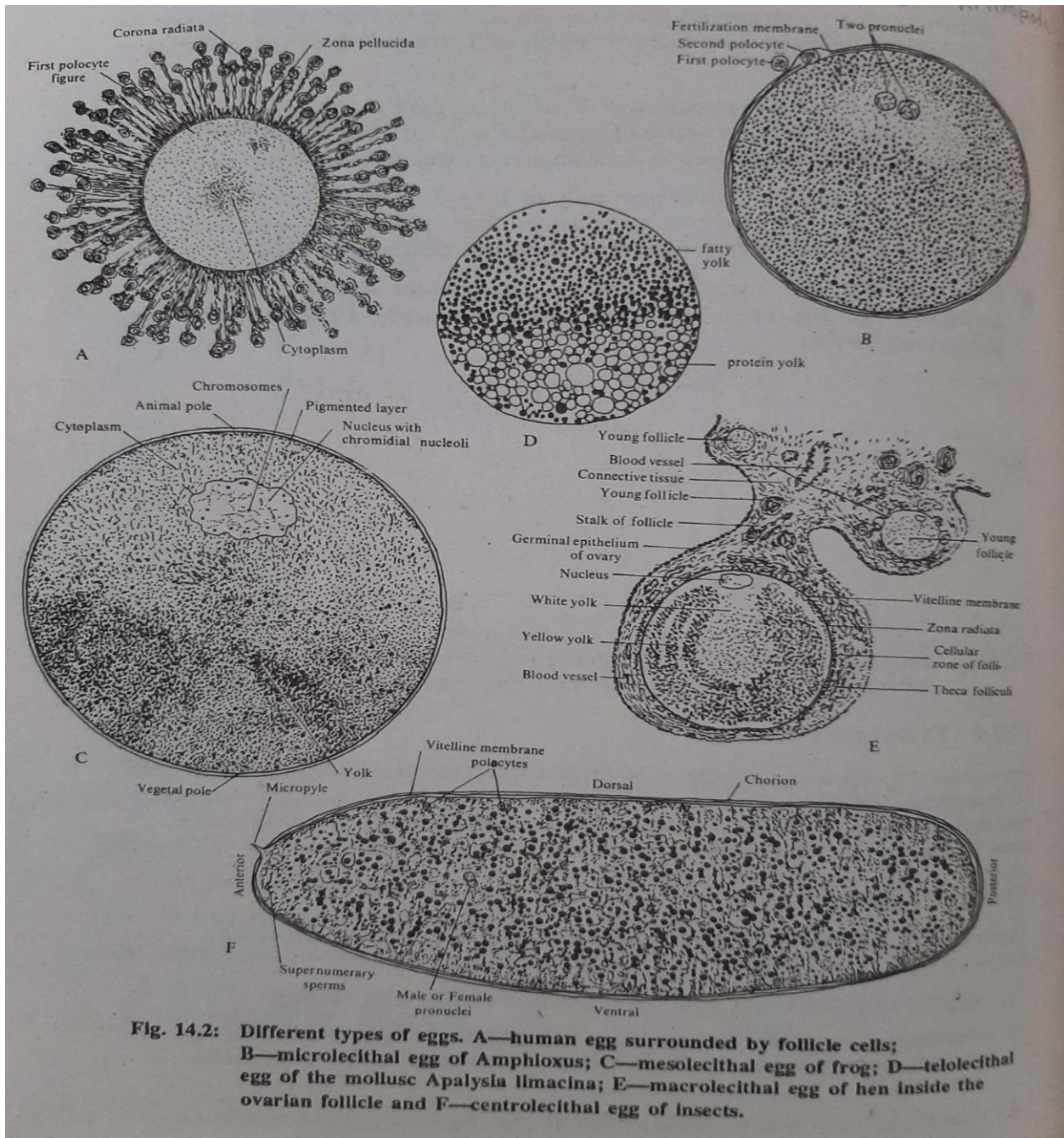
Fig. 14.2: Different types of eggs. A—human egg surrounded by follicle cells; B—microlecithal egg of Amphioxus; C—mesolecithal egg of frog; D—telolecithal egg of the mollusc Apalysia limacina; E—macrolecithal egg of hen inside the ovarian follicle and F—centrolecithal egg of insects.
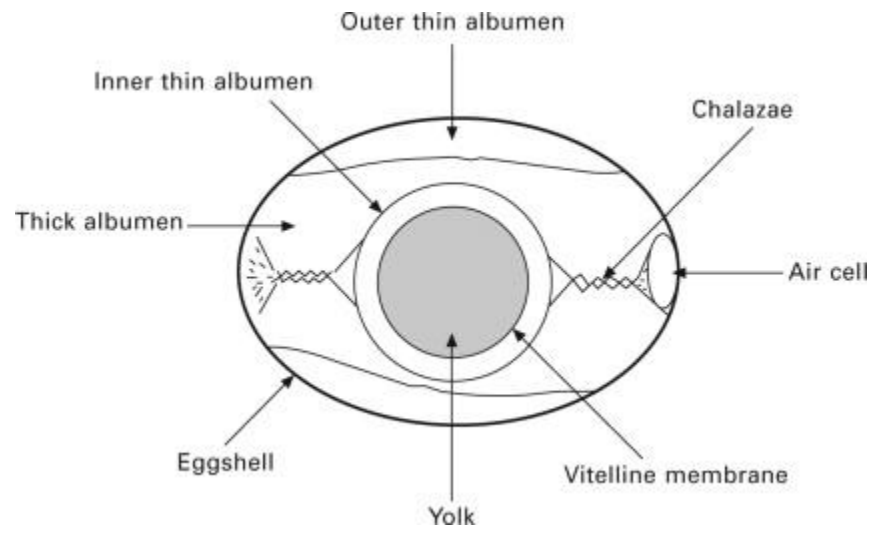
TYPES OF EGGS ON THE BASIS OF OUTER COVERING

<u>NON CLEIDOIC EGG</u>

When egg membranes is soft and sometimes jelly like, then it is called non cleidoic egg. Example, viviparous animals.

<u>CLEIDOIC EGG</u>

When the egg is surrounded by hard, calcareous shell, then it is called cleidoic egg. Example, birds, reptiles and prototherian mammals.

Cleidoic egg