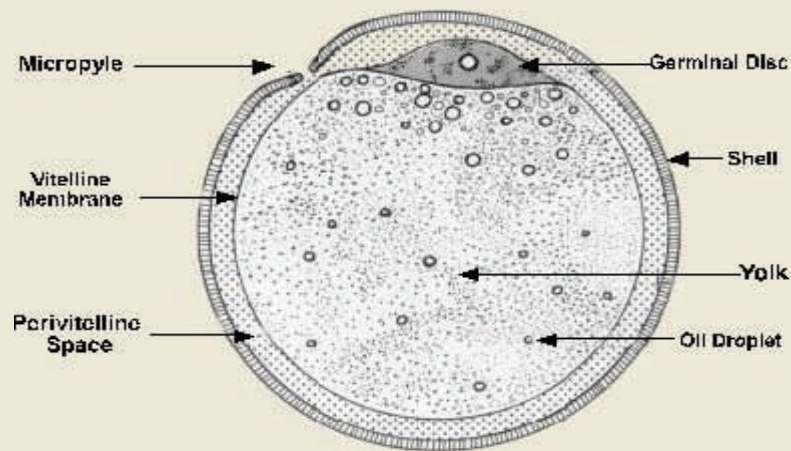
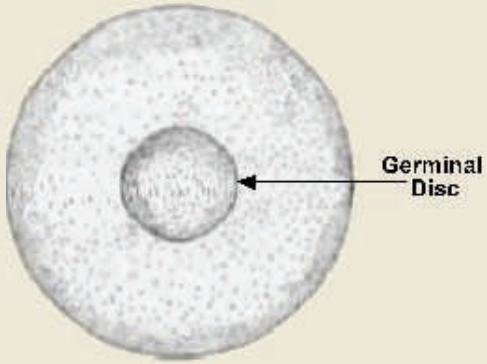


# Trout Egg Development

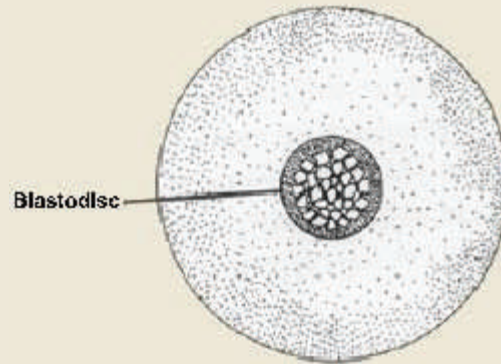


**A Fertilized Trout Egg**

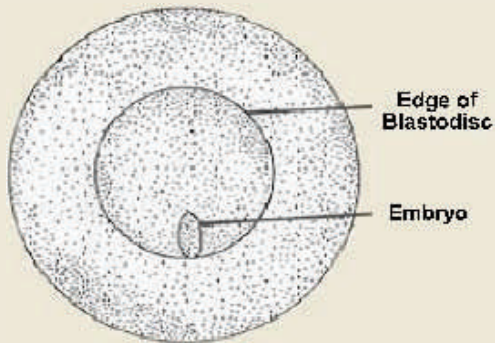
When an egg is being formed in the ovary, the egg's future source of energy is the protein and fat in the yolk. The egg is soft at this stage and is usually very sticky. The ovum is enclosed in a soft shell. This shell encloses a fluid filled area called the perivitelline space. An opening called the micropyle provides an entry way for the sperm. Trout eggs are adhesive when first spawned because of water passing through the porous shell. This is called water hardening and when it is complete the egg is no longer sticky. The egg becomes turgid with water and the shell is separated from the yolk membrane by the perivitelline space filled with fluid. This allows the yolk and germinal disc to rotate freely inside the egg, with the disc always in the upright position. In the hatchery, the eggs are hardened for one hour before being poured into the hatching jar. This also closes the micropyle and inhibits any further sperm from entering. The sperm consists of a head, body and tail and is inactive when it first leaves the male. When it contacts water it becomes very active. When egg and sperm unite, nuclear material of the egg and sperm unite to form a zygote. Within a few hours, the zygote divides repeatedly and forms the embryo. During the first 48 hours, fertilized eggs become more and more fragile. This is an extremely sensitive period. The eggs cannot be moved until blastopore stage is complete. The eggs remain tender until the eyes are pigmented. This is what hatchery managers refer to as the "eyed stage." Once the eggs are eyed, they can be moved and even transferred to another hatchery.



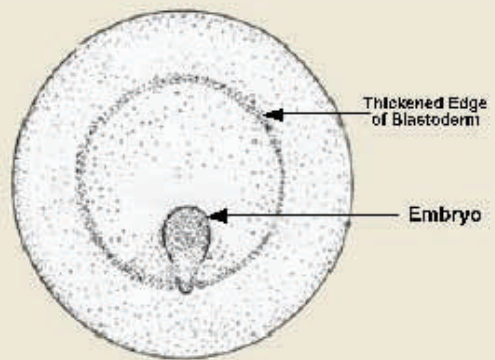
**One day after fertilization at 56 degrees average temperature**



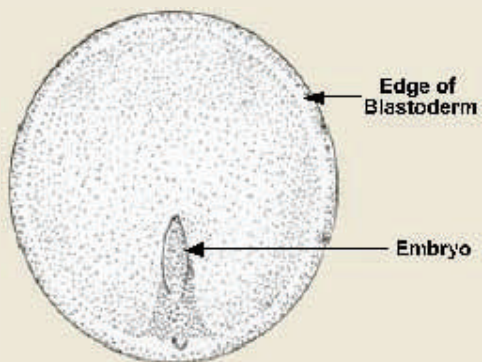
**Two days after fertilization**



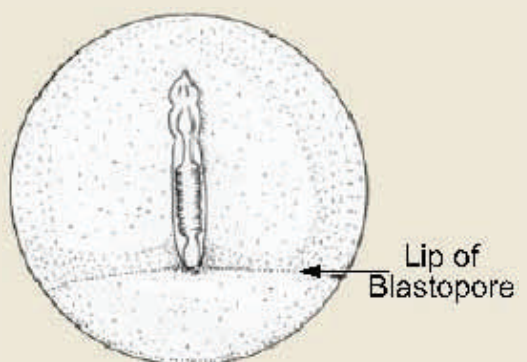
**Five days after fertilization**



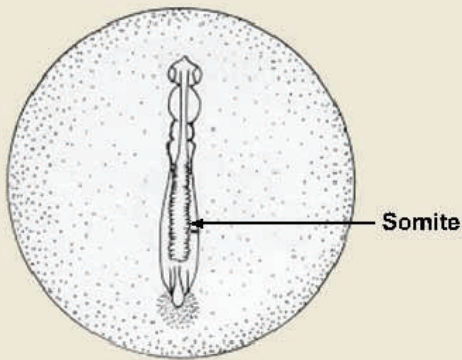
**Six days after fertilization**



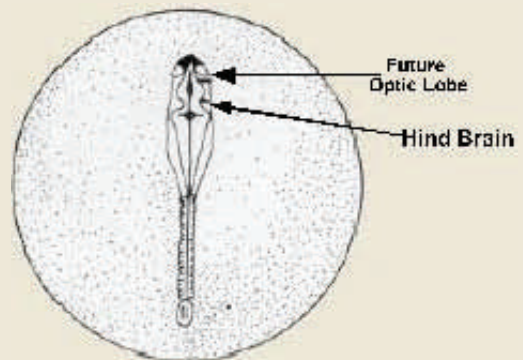
**Seven days after fertilization**



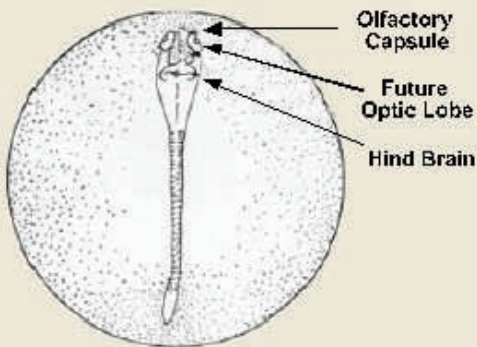
**Eight days after fertilization**



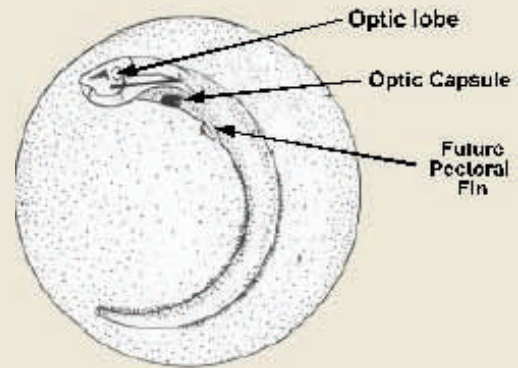
**Nine days after fertilization**



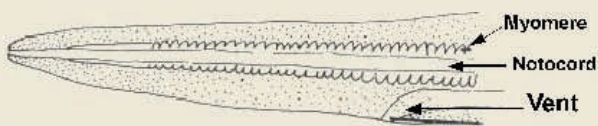
**Ten days after fertilization**



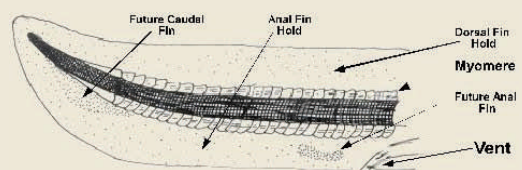
**Eleven days after fertilization**



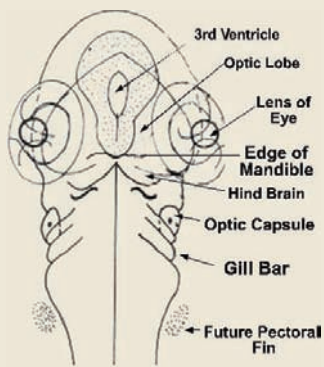
**Thirteen days after fertilization**



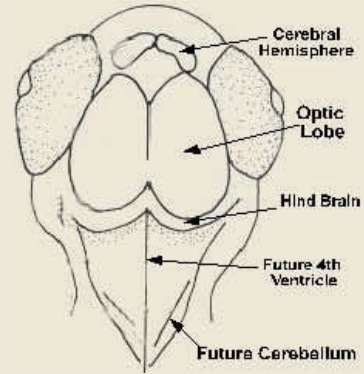
**Fourteen days after fertilization**



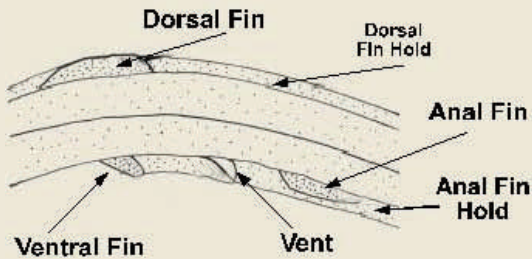
**Sixteen days after fertilization**



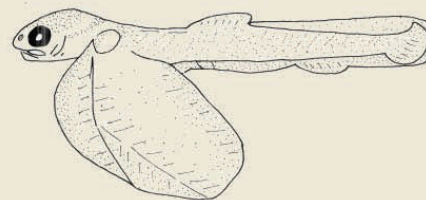
**Head—central view**



**Sixteen days after fertilization**



**Eighteen days after fertilization**



**Twenty six days after fertilization**

At hatching, the weight of the sac-fry increase rapidly. Water content of the fry will increase until approximately 10 weeks after hatching, when it will then be 80 % of the body weight.

Water content will now remain fairly constant from this point on. At hatching, the weight of the sac-fry increase rapidly. Water content of the fry will increase until approximately 10 weeks after hatching, when it will then be 80 % of the body weight. Water content will now remain fairly constant from this point on.