

Aquatic Life

THE SALMON

During the winter salmon gather in pairs on a gravel bed where the water is clear. The female makes a nest or 'redd' in the gravel and lays up to 5,000 eggs called **spawn**. The male fertilises them and the female covers them up with gravel. These eggs begin to develop and about two months later in the spring the young salmon or **alevins** emerge and begin life in a stream.

The young salmon, or **fry** as they are now called (salmon up to 1 year old), feed on small insects and over the next two years the **parr** (salmon aged 1-2 years) move downstream looking for more food and more space to survive. In the spring of the third year the **smolts** (salmon aged 2-3 years) are ready to go to the sea and remain there for a year. The smolts feed on as many small fish as possible and grow very quickly. After a year the salmon are fully grown and are known as **grilse** (salmon aged 3 years and older). At this age they begin their return journey to the river and back into the stream where they were born. On entering the river the salmon are very strong, healthy and fat but on their journey up the river they do not eat, so by the time they reach the spawning site they are weak and tired. After mating and spawning many salmon die from exhaustion or are caught by predators. Only the very strong return to sea and repeat the journey.



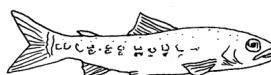
spawn



alevin



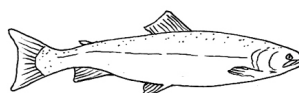
fry



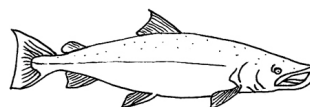
parr



smolt



adult female



adult male

Problems

There are many things that can prevent the salmon from reaching the spawning ground and also the young salmon from reaching the sea.

Pollution - it can kill the fish or kill the organisms they eat.

Predators - salmon are eaten by birds, larger fish and mammals.

Overfishing - if too many fish are caught, not enough will make it back to spawn.

Competition - Salmon will compete with others for food and space.

Dams - these can prevent salmon from reaching their spawning ground.

Erosion - mud eroding in the streams can cover the gravel making it unsuitable for young salmon.

How many survive?

Many things can happen to the eggs and young salmon during their journey. Can you work out how many survive until the end in order to spawn?

A salmon lays 5,000 eggs in its 'redd'.

- 500 of these were not fertilised and therefore died.
- 60 were washed out of the gravel when a tractor crossed the stream.
- Mud from a new building site washed into the stream and suffocated 1,000.
- 300 alevins died because they were weak.
- Once the alevins developed into fry, 500 were eaten by other fish in the stream.
- 41 were eaten by birds.
- Near the ocean, 260 smolts died after they were caught in a pool that was hot and polluted.
- In the ocean, 1,550 were eaten by bigger fish.
- Seals ate 95.
- Fishermen caught 596.
- On returning to their spawning ground 80 were eaten by otters and other land mammals.
- 10 salmon died from exhaustion before they reached their destination.
- 3 were crushed against rocks trying to jump a waterfall.
- The remaining salmon spawned, how many were there?

Answer on page 13.