



MANNINGHAM
UNIVERSITY OF THE THIRD AGE

U3AM at Home

Animals Behaving Strangely

In natural populations Nature does the selecting by favouring the best adapted individuals to survive, reproduce and continue their species line.

Certain animal behaviours may appear strange to us humans, but the aim of their behaviours does make sense in the animal world – to ensure the survival of their species, although often to the detriment of the individual.

Nature selects not only the features but the behaviours that best suit an animal to its environment – behaviours which enhance the survival of its species for the perpetuation of future generations.

In mouth breeders (a kind of fish) the female incubates her eggs in her mouth. After the female releases the eggs for the male fertilizes them. She then sucks them carefully back into her mouth. The female forgoes feeding to make room for the incubation of her eggs. The eggs will remain inside the female's mouth until they hatch into fry. For a period of time after the eggs have hatched, the female allows the fry to enter her mouth for protection. But once the fry reach a certain size, they remain outside the female's mouth.



Mouth breeders sucking her young into her mouth

Pacific salmon brave merciless water currents, arriving upstream in a battered state, to spawn. Not all of them survive, for only the strongest can complete the perilous journey, and when they breed, their genes for fitness are passed on to their offspring.



Pacific salmon swimming upstream

Palolo worms of the South Pacific literally burst themselves in the act of reproduction. The breeding season is always at the same time of year

and at a particular phase of the Moon. During this time the worms break in half; the tail section which holds the reproductive cells, swims to the surface, where it releases eggs and sperm in tens of thousands. They attract predators, but releasing a huge number of sex cells ensures that there is a good chance that some, if not all, of their offspring will survive.



Palolo worm

When a female praying mantis eats the male after mating, it's a good thing for the species. During mating, the female praying mantis bites off the male's head and then devours his corpse for nourishment. The research suggests that when a male mantis is eaten by the female after mating, the male's body material is passed into the female, and in turn, the female appears to lay twice as many eggs after cannibalizing a male than she normally would. This also suggests there are genetic benefits – not for the male mating partner, but for the species, because females select the strongest males for mating, and in this way, the genes of the strongest males are passed down to offspring.



Behaviours that assist in the survival of the young have a strong innate component. This means that these behaviours are already written into their DNA. As soon as they are born young animals must know how to feed instinctively, or they will starve to death. There is also a strong genetic component in mating behaviour. In many animal examples, there is a routine for courtship, followed by the female's choice of the strongest mating partners. The genes of the weaker males are eliminated when they fail to mate. In the end the genes of the fittest are retained and perpetuated through generations of the species.

Shirley Fung

Tutor – Introduction to Genetics