Parenting Behavior

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Parental behavior in nature ranges from the lay it and leave it strategy of most insects and reptiles to animals, like the elephant, that care for their young for many years.

Reproductive investment is the amount of time and energy that an animal devotes to raising their offspring. The optimum investment for each species varies. It is dependent on many things including:

- environmental stability
- lifespan
- predation risks
- clutch size
- frequency of reproduction

As discussed in the population biology section, r selected species such as many insects will lay many eggs and then leave. In many cases, the animals have such short life spans that they often die soon after laying the eggs.

When the eggs hatch, there tends to be a very high death rate among the offspring due to predation, environmental conditions, etc. So, only a few offspring will survive to reproduce.

K selected species such as humans, elephants, and gorillas will have only a single or pair of offspring and then spend several years raising it. This involves a much larger reproductive investment on the part of the parent.

Nesting

When the parent lays eggs, as opposed to live birth, there is the option of caring for and guarding the eggs or leaving them to their fate.

In animals that choose to watch over the eggs, there is some variation in who care for them. Part of the decision to watch over eggs and young can be attributed to the likelihood of being the biological parent.

Some species mate many times and, if the female carries the eggs, then they may have one mother and many potential fathers. She is definitely the mother of the young and it serves her best interests to see them hatch and mature.

For the male, there is less certainty that he is the father of the young. Thus many males opt to fertilize and then leave to fertilize yet another female’s eggs in the hopes that at least some of the offspring in each clutch are his.

In the case of the seahorse, the roles are reversed and it is the male that is impregnated and raises the young while the female takes off soon after conception.

In species that pair up, at least for the mating season, it is more common to see both parents involved in caring for the eggs before and after hatching since they know that the offspring is much more likely to be theirs.

Extended Family

Some animals live in large groups. These animals are often related to one another. They may share parenting duties among all members of the herd.

In elephants, it is very common to see the whole herd involved in parental care of the young. Elephants herds are often formed of a group of related females. In these cases kin selection may be at work.

Kin selection means that the genetic fitness benefit is drawn from the survival of related animals that carry some of the same genes. In these cases the other members of the herd may still reproduce, unlike the case of social insects where only the queen reproduces.

Parasitic Parenting

Some species, such as the cuckoo bird, will lay their eggs in the nest of another species of bird. The victim then raises the unrelated offspring themselves.

Some catfish take it a step further and eat all the eggs in a cichlid nest and then fill it with their own eggs. Not only does the cichlid end up investing resources in raising another animal’s young, it also ends up losing all of its own offspring.

There are many parenting strategies in nature. The one that will optimize an animal’s likelihood of reproductive success depends on many things including:

- the animal’s life span
- number of reproductive opportunities over a lifetime
- survival rates of the young
- stability of the environment

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