

Asexual reproduction and it's types

Asexual reproduction

Asexual reproduction is a mode of reproduction by which offspring arise from a single parent. This mode of reproduction does not involve meiosis or fertilization. Here, no fusion of gametes. Usually, asexual reproduction is the primary form of reproduction for single-celled organisms like bacteria (protists). Many of the plants and Fungi also reproduce asexually. Due to some unclear reasons, it has been observed that in most of the multicellular organisms asexual mode of reproduction is absent. Asexual mode of reproduction does not provide genetic variability among the generations whereas the sexual mode of reproduction offers the advantage of giving rise to variations due to genetic diversity which in turn helps in the process of evolution.

Some characteristics of Asexual reproduction

- It involves only one parent.
- It does not involve meiosis and fertilization.
- The offspring are identical to the parent.
- This mode of reproduction is quite common in lower forms of organisms.
- A large number of offspring are produced quickly, so it is an efficient method.
- It is also known as cloning.
- Asexual reproduction is the variations of the process of mitosis.

Different types of asexual reproduction have been mentioned below-

Budding

Budding is when a new organism, or the offspring, grows off the side of the adult through a part called a bud. The new baby will stay attached to the original adult until it reaches maturity at which point they break off and become its own independent organism. A single adult can have many buds and many offspring at the same time. Both unicellular organisms, like yeast, and multicellular organisms, like a hydra, can undergo budding.

Fission

In this asexual mode of reproduction an individual divides itself into two (binary) and (multiple) new individuals. Example- Amoeba reproduces through binary fission.

Fragmentation

In lower forms of plants, the body is divided into smaller fragments which develop into a new individual being. For example- Spirogyra.

As we know, algae are the simplest green plants. They commonly reproduce through fragmentation.

Spore formation

In this process, the body of the organism develops a special spore-bearing organ which is called sporangioophores like in fungi and algae.

The spores which are the small reproductive bodies germinate to form a new individual. Ferns and mosses are the spores producing plants. Spores can survive extreme temperature.

Vegetative propagation

This process involves the formation of a new plant from the vegetative parts of the parent plant like root, stem, leaf, etc. Some common example you may have seen in your kitchen garden for this.

1. The leaf of bryophyllum produces new plants through its notches.
2. The stem cutting of a rose plant grows a new plant.

Bulb- It is a bulb-shaped structure made up of scaly leaves that store food such as in onion, garlic and lily. These bulbs are able to give rise to leafy shoot from buds which are present inside them.

Rhizome- It is such a stem which grows horizontally through the soil. It is not regular in shape and is swollen with stored food. There are scaly leaves and auxiliary buds present in their bodies. These buds give rise to new plantlets. Ex- Ginger, turmeric, etc.

Corm- It is a short, oval, thick stem, swollen with stored food. It has several buds which give rise to plants, ex- Gladiolus, crocus etc.