

Survivorship Curves

Scientists use a variety of tools to track the sizes of populations. Survivorship curves are one of the tools they use. In this lesson, we will view examples of survivorship curves to determine what they mean.

Types of Survivorship Curves

A **survivorship curve** is a graph that measures the proportion of individuals in a given species that are alive at different ages. Typically, the number of individuals of the population is plotted on the *y*-axis of the graph and the age of survivorship is plotted on the *x*-axis of the graph. There are three types of survivorship curves and they are simply referred to as type I, type II, and type III.

A **type I survivorship curve** shows individuals that have a high probability of surviving through early and middle life but have a rapid decline in the number of individuals surviving into late life. This basically means that most of the individuals will make it to adulthood but the proportion surviving into old age is greatly decreased. A type I survivorship curve is plotted as a convex curve on a graph.

A **type II survivorship curve** shows a roughly constant mortality rate for the species through its entire life. This means that the individual's chance of dying is independent of their age. Type II survivorship curves are plotted as a diagonal line going downward on a graph.

A **type III survivorship curve** depicts species where few individuals will live to adulthood and die as they get older because the greatest mortality for these individuals is experienced early in life. This type of survivorship curve is drawn as a concave curve on a graph.

Examples of Survivorship Curves

A classic example of a Type I survivorship curve is the human population. Advances in medicine and technology have made the chances of surviving through early and middle life highly probable for humans. The highest levels of mortality appear in late life.

