

12/21/2008 The Resurrection Plant

Some plants have evolved amazing mechanisms for survival under very dry conditions. The Arid Dome is filled with many successful examples. The "resurrection" plant has an unusual approach. In dry conditions, it becomes a dried up ball of scaly leaves. When water is available, it quickly greens up and resumes normal plant activities. This can be repeated numerous times. Named for this dramatic recovery, the plant is often given as a symbolic gift of hope and renewal, especially at Christmas or Easter. The pictures show the plant in its dried state and when it is green and growing (images by Stephen Shirley of Victoriana Nursery Gardens, UK, by permission).

There are actually several unrelated plants that have been dubbed "resurrection" plants. This article is about *Selaginella lepidophylla* which is found in desert regions of the Southwest U.S. and Central America. It can be found in rocky outcrops in the Chihuahuan Desert on either side of the U.S.-Mexican border. The plant cannot store water like a succulent, so it curls up into a ball to reduce its surface area and, therefore, water loss.

When green, its leaves (which are really scaly stems) look fernlike because it is a *lycopod*. *Lycopods* are commonly known as ground pines or club mosses. Like ferns and mosses, they reproduce with spores instead of seeds. All of these plants are more commonly found in moist environments, so the resurrection plant is quite unusual. *Lycopods* evolved long before flowering plants and were alive at least 400 million years ago. During the Carboniferous Era (345-280 million years ago), *lycopods* grew as big as trees, to 100 feet tall with trunks 6 feet in diameter. They lived in swamps and, over time, contributed to our coal deposits. Today, *lycopods* are small ground plants.

The resurrection plant grows best in alkaline (high pH) soils and cannot tolerate a hard freeze. It can grow only to 6 to 12 inches. The root ball can be divided into several new plants as it enlarges. Resurrection plants are sometimes available for sale in the Domes Gift Shop if you want to give a message of hope to someone or amaze your children with an interesting winter project.

