

Pokeweed; a plant that can be delicious or deadly  
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Before agriculture, folks had to figure out which plants they could eat and which ones would kill them. They may have watched various animals for clues and sometimes they may have learned the hard way. Whatever their method, without the convenience of available food like we have today, they had to eat whatever the land offered.

Some plants such as pokeweed can be edible, but can also be highly toxic. This robust perennial is native to the eastern United States. Fresh, young leaves and shoots of the plant can be cooked and eaten. However, if not prepared properly, the dish may result in poisoning. All parts of the plant are toxic at some point in its growth. For example, the leaves must be picked when they are very young and before they acquire their characteristic reddish color if they are to be consumed. The berries are toxic when raw, but the cooked juice they produce is edible. Pokeweed is one example of a plant that can kill you if you aren't familiar with its traits.

Throughout history, this plant has been used in many ways. Poke is derived from the Algonquian Indian word "pakon" or "puccoon," which means a plant used for dying or staining. The dark red juice that the berries yield has been used as a substitute for red ink and to enhance the color of wine. The dark red liquid was also used by Native Americans to decorate their horses. The leaves of the plant were worn by supporters of James K. Polk, the 11<sup>th</sup> President during his campaign, which explains why it is sometimes spelled polk rather than poke. As a food source, pokeweed has been used for centuries. It has been considered a staple in the south. There is even a song, popular in the late 60's, entitled "Polk Salad Annie." The juice of the berries has been added to other juices for jelly. Many believe that it has medicinal qualities, such as relief of arthritis pain, acne, tonsillitis and even weight loss. Native Americans used the grated root of the plant as a poultice to treat inflammations and rashes.

Most of the toxins of Pokeweed are located in the roots, berries and seeds. The poisons include and alkaloid (phytolaccine), as resin (phytolaccatoxin), and a saponin (phytolaccigenin). The most serious health hazard from the plant comes from a protein called a lectin. Lectins cause red blood cells to clump together, which may cause abnormal cell division. Other plants, including castor bean, also contain this toxin and are quite deadly. Interestingly, birds are not affected by the toxins of the berries because the small seeds with hard outer shells remain intact in the digestive system and are discarded whole.

However, if humans ingest the poisonous parts of the plant, symptoms may include severe stomach cramping, nausea, diarrhea, vomiting, difficulty breathing, weakness, spasms, hypertension, severe convulsions and even death. If horses ingest the plant they may develop colic, diarrhea, and respiratory failure. Pigs may be unsteady, unable to rise, vomit, jerk their legs and have a below normal temperature. Cattle may also have identical signs and decreased milk production.

Pokeweed is not difficult to identify. It generally grows from 1 to 10 feet tall, with single, alternate leaves. The stems are often a pink or reddish color with greenish-white flowers, which

form in long clusters at the ends of the stems. These blooms develop into a deep reddish, purple berry. It is a very attractive plant and can grow just about anywhere.

### **Pokeweed in Folklore and Culture**

- Native Americans used the bright crimson juice to stain feathers, arrow shafts, and garments, and to decorate their horses.
- Early settlers used the root in poultice form for rheumatism, skin rashes, and inflammations.
- Folk remedies include topical treatments for acne, and jelly that relieves arthritis pain. Taken internally, pokeweed is thought to cure tonsillitis and swollen glands, and stimulate weight loss.
- The United States Declaration of Independence was written in pokeberry juice, and many Civil War letters were penned similarly.
- Pokeweed is the favored food source of the Giant Leopard Moth larvae.
- Poke salad or Polk Sallet are dishes made from young pokeweed leaves that have been boiled three times, though there is no guarantee that all the toxins are gone. Such lore has generated annual festivals in some Appalachian states, and Tony Joe White's song, "Polk Salad Annie," was a hit in 1969. *Iowa State University Extension, Pm-746, 1997*