

## Cave Plants.

**S**OUTHERN KENTUCKY is a cavernous country. All the southern counties, especially Warren, are a network of caves, underground streams, and "sinks" or "sink-holes." A cellar is rarely excavated that a fissure in the limestone-rock is not found, and this often widens out into quite a sink, or at least a crevice, when the water passes from an underground stream.

A different growth of plants is to be found in the cave entrances and large sink-holes from that along the banks of streams. The White Baneberry I have found only in sink-holes, its red stems and white berries being a lively contrast to the deep greens and the shadows at the bottom of the sink. Pale Jewel-weed (*Impatiens pallida*) grows to a large size in the moist depths of these places. The plants are often five and a half feet high and the trunk as large as one's wrist. *Scrophularia nodosa*, *Collinsonia Canadensis*, or Rickweed, are commonly found here. Of the Ferns, *Asplenium angustifolium* is frequently seen in deep shade at the bottom of moist sink-holes. *Cystopteris fragilis* is common in the crevices of moist limestone-rock, while *Asplenium ebeneum* is in the rocks nearer the surface. Cliff Brake, *Pellaea atropurpurea*, is a well-known feature of cave entrances and sinks, growing on the limestone cliffs in crevices where no other plant can find a foothold, and *Aspidium acrostichoides*, a common Fern everywhere, is generally met with in the woods about the top of the sink.

Of the three most interesting sink-holes in Warren County, Kentucky, the largest, near Oakland, is of sufficient size and interest to give it a place on the county map. It is ninety feet deep, and the entrance is about forty feet in diameter. This is called Wolf's Sink, and is a natural wonder well worthy a visit. Oaks and many other large trees are growing from its depths; down the trunk of one of these there is constructed a rude ladder, the only way of reaching the bottom, as a perpendicular wall of limestone extends some thirty feet around the edge. One tradition in the neighborhood is that this is the ladder made and used by the Indians, while another, and more probable one, is that they used a Grape-vine in making the descent. Strange to say, the only Fern found here is *Asplenium angustifolium*. It grows in the greatest profusion and to an unusual size, many of the plants measuring four to five feet in height, and the fertile frond is even taller. The Baneberry gives a needed touch of color to the shady depths of the sink.

Another very interesting sink is "Cave Mill." A small stream that rises above ground several yards beyond, flows into the entrance of this sink and disappears. A mill has been built above, and this mars what would otherwise be a very picturesque spot. It has been also called Lost River, as the stream disappears under the large arched rock of the cave, extends underground a mile or more, and then reappears above ground, forming a creek that flows into Barren River. Hop-trees (*Ptelea trifoliata*) and Pawpaws, with many larger forest-trees, grow along the stream near the entrance, *Hydrangea arborescens* at the entrance, *Pellaea atropurpurea* and *Asplenium cristata* in the crevices of the rock above. Viper's Bugloss, *Echium vulgare*, and Cup-plant, *Silphium perfoliatum*, are near the entrance. Many spring flowers grow here, among others *Anemone*, *Silene Virginica*, *Asarum* and Wild Ginger.

The third sink is not as deep as Wolf's Sink, but the entrance is about as large in diameter. It is by the side of a road leading to the river, in a dense grove of trees, and so is in constant shadow. It is rather a gloomy spot, and has gained the reputation of being haunted among the superstitious negroes living near by. I tried to hire some half-grown negro children to climb down to gather the plants for me, but they refused, saying there were "haunts" there. There was a rank growth of plants about the top, and several species of *Desmodium*, *Melothria pendula* and *Gerardia* among the rocks above the entrance. Mats of Walking-leaf Fern, Baneberry and *Scrophularia* grew at the bottom of the sink. About the entrances of caves in the sandstone part of the county the most common species of Ferns are the Lady Fern, *Aspidium spinulosum*, var. *intermedium*, and *A. marginale*, *Cheilanthes vestita* and *Asplenium pinnatifidum* are also often found at these places.