Northwestern Illinois' unusual, natural ice houses support some of Illinois' rarest life.

Algific Slopes

Photos By Randy Nÿboer

It was a hot July day and walking was tiring and difficult on the steep Jo Daviess County hillside. A small clearing at the base of a limestone cliff was a jumble of shrubs and scattered wildflowers. Walking was treacherous across slippery, moss-covered rocks. Taking a break before crossing the clearing, we felt cold air coming out from around the rocks. Unknowingly, we had stumbled onto an algific slope.

Talus slopes are commonly formed at the base of a cliff from an accumulation of rocks that break off. Sometimes these talus slopes, particularly at the base of north-facing cliffs, retain subsurface ice throughout most or all of the summer. During the growing season the air chilled by the subterranean ice flows between the rocks creating a blanket of cold air a few inches thick over the talus slope—temperatures that hold even during the warmest days of summer. These natural "ice houses" are rare, and support an interesting and equally rare assemblage of plants and animals.

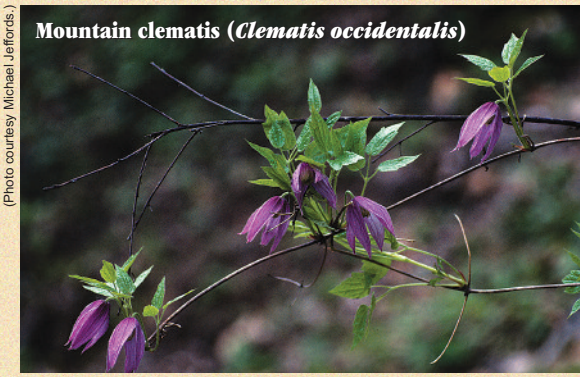
Beaked hazel (*Corylus cornuta*)

In Illinois, algific slopes are confined to the driftless, or unglaciated areas, in the extreme northwestern part of the state, and the region extends into adjacent southwestern Wisconsin and northeastern Iowa. Nine algific slopes have been located in Jo Daviess County, with the largest having a diameter of about 100 feet. Three sites have received protection as Natural Heritage Landmarks, a voluntary landowner designation.

The cool microclimate of the algific slopes supports species normally found in the upper Great Lakes Region, Canada and at higher elevations in the northeastern portion of the Appalachian Mountains. Perhaps the most interesting endangered species restricted to algific slopes is the Iowa Pleistocene snail (*Discus maclintockii*). First described from a fossil in 1928, this tiny, flatland snail was thought to be extinct until living specimens were found in 1955. Currently, this species of snail is known from 18 locations, all algific slopes in Iowa and Illinois.

Three cool-climate plant species are known from Illinois only from algific slopes: beaked hazel (*Corylus cornuta*), a small woody shrub restricted to a single algific slope; bristly rose (*Rosa acicularis*), a small thorny rose known from two algific slopes; and mountain clematis (*Clematis occidentalis*), a semi-woody climbing vine often abundant in this limited habitat.

—**John E. Ebinger**, Emeritus Professor of Botany, Department of Biological Sciences, Eastern Illinois University, and **William E. McClain**, Adjunct Research Associate in Botany, Illinois State Museum



Mountain clematis (*Clematis occidentalis*)

(Photo courtesy Michael Jeffords.)