

Dating Back 9,000 Years

Colchester Bog Awaits Federal Natural Landmarks Designation

By CAROL DUFAULT

COLCHESTER — Long recognized as an outstanding natural area in Vermont, Colchester Bog, a 200-acre land area with unique vegetation, has been nominated for national recognition through the Natural Landmarks Program.

According to Dr. Hubert Vogelmann, botany professor at UVM, Colchester Bog, five miles north of Burlington, is one of the few remaining wild areas along the shore of Lake Champlain. Unlike other forms of wetlands, such as tree-covered swamps and open marshes, the Bog is a highly acid wetland with very little nitrogen. Vogelmann explained, "With such high acidity, everything that dies in the bog is virtually preserved forever."

Colchester Bog has been the site of scientific research for many years and currently is used as a field laboratory for biology classes at UVM. Vogelmann explained that a bog forms under very special conditions and is less common than other forms of wetlands.

Through ecological studies, it was discovered that the bog, as deep as 18 feet in places, is approximately 9,000 years old. Citing the formation of Colchester

Bog, Dr. Vogelmann said, "The bog began shortly after the recession of the Lake Champlain Sea which followed the wasting away of the continental glacier." In Vogelmann's words, "Colchester Bog is one of the very few bogs known to be formed at lake level."

Two years ago, the Vermont Chapter of the Nature Conservancy raised \$27,000 for the purchase of Colchester Bog. Later, the bog was deeded to the University of Vermont for educational work.

According to the Nature Conservancy, a wide range of plants, uncommon to Vermont climatic conditions are found at Colchester Bog. Plants growing on the open quaking mat of sphagnum and sedges include colorful orchids such as rose pogonia, grass-pink, and occasionally arethusa.

Small clumps of hare's tail cotton-grass and tawny cotton-grass speckle the open mat between shrubby clumps of bog-rosemary, leather-leaf, bog-laurel, sheep-laurel, and sweet gale.

Small cranberries may be found in abundance on the hummocks in Colchester Bog, and American arrow grass is common in the wet depressions between the hummocks.

Other unusual plants noted by Vogelmann include several varieties of insectivorous (insect-eating) plants. Although not found in abundance, the round-leaved sundew and pitcher plants are found at the bog. These species, according to Vogelmann, require ample light in order to survive and the increasing amount of shade provided by shrubs and small trees invading the bog mat will eventually endanger their survival.

Another distinguishing feature of the Colchester Bog is the presence of scattered pitch-pine and white pine species. These, according to Vogelmann, ordinarily grow on well-drained soils, and their presence is literally unheard of in bog-type environments.

Dominated by red maple, tamarack, and speckled alder, the bog forest is also scattered with willow, buckthorne and poison sumac. Vogelmann theorizes that Colchester Bog evolved from an oxbow of the Winooski which formed a pond and, later, the present bog.

In the narrow transition zone between the forest and open mat is a bountiful growth of shrubs. Along with Labrador-tea and sheep-laurel, abundant Rhodora may be found.

Blueberries, along with huckleberries, mountain holly, and black alder form the dense thicket along the bog forest border.

Vogelmann explained that near the margin of the bog is a zone of swamp vegetation characterized by such species as cattail, wild calla, marsh-five-finger, three-way sedge, and button bush. Due to decomposition of plant remains in this zone, a black organic ooze has accumulated.

Vogelmann explained that the



MARSH CRANBERRY — With Thanksgiving just around the corner, the Marsh cranberry begins to ripen at Colchester Bog.

(SUNDAY NEWS photo—Dufault)

bog was once covered by Lake Champlain, indicating that the lake was once higher than it is now.

Remnants of sand dunes at one corner of Colchester Bog support colonies of the beach-heath, a

small, rare coastal shrub. Vogelmann describes this species as an ocean plant surviving from the glaciers.

Several black gum trees can be found on a narrow sandy peninsula extending from the western border of the bog. Dr. Vogelmann states that Colchester Bog is the only place in northwestern Vermont where this species is known to occur. Again, indicating a warmer climate, he suggests that the climate in Vermont could have been similar to that of New Jersey or Virginia.

As a candidate for the Natural Landmarks Program, Colchester Bog will be given an opportunity paralleled with the selection of a historic site. The objectives of the Natural Landmarks Program are to encourage the preservation of sites illustrating the geological and ecological character of the United States.

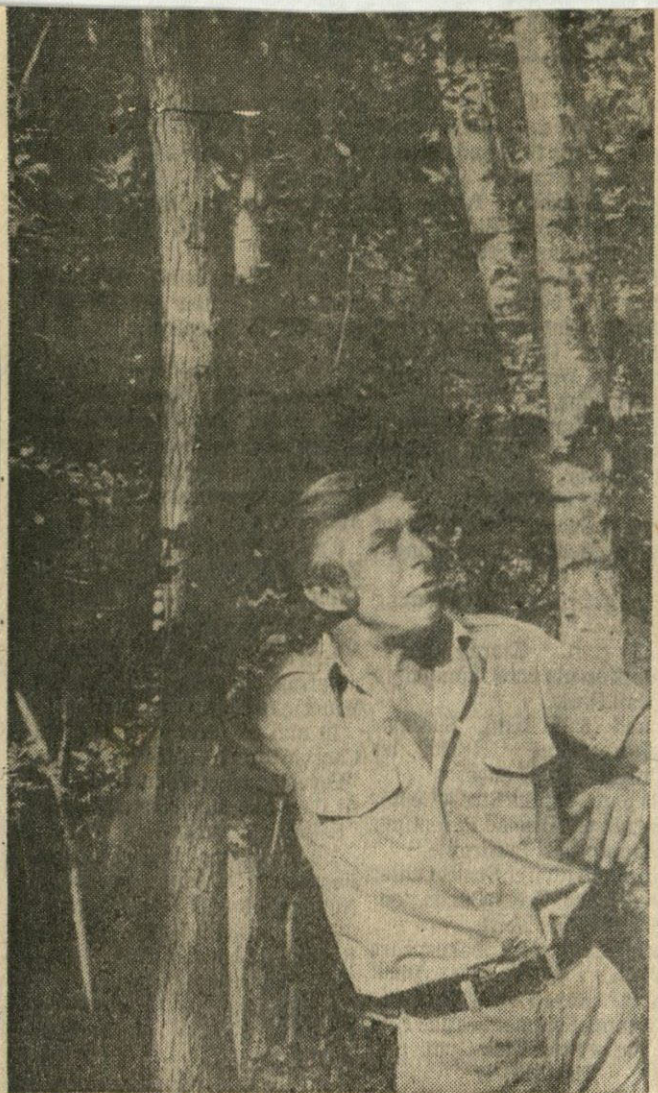
Second, if selected as a Natural Landmark, Colchester Bog will serve to enhance the educational and scientific value of the site through cultural appreciation of natural history and the fostering of greater concern in the conservation of the Nation's natural heritage.

Criteria for selecting Natural Landmarks are many, but it is hoped by area botanists that the day will soon come when Colchester Bog is evaluated as a Natural Landmark.



SUN DEW — Insect-eating sun dew plants may be found at Colchester Bog in back of the Champlain Airport. Through sugar secreted substances, the sun dew, with its sticky hairs, is able to capture insects.

(SUNDAY NEWS photo—Dufault)



THE BLACK GUM — Dr. Hubert Vogelmann scans the top of a black gum tree as he explains that the presence of the tree indicates that Vermont once had a much warmer climate. He estimates that it may have been as warm as northern Virginia.
(SUNDAY NEWS photo—Dufault)



TOUR — Interested Audubon members tour the Colchester Bog under the leadership of Hubert Vogelmann. Because many quicksand deposits

are found at the bog, it is advisable to be acquainted with the area before exploring on your own.

(SUNDAY NEWS photo—Dufault)



INSECTIVOROUS — Dr. Vogelmann illustrates the composition of the insectivorous pitcher plant. He explained that the tubular plant is filled with water and sucks insects into its tubular stem.
(SUNDAY NEWS photo—Dufault)



SPHAGNUM MOSS — Vogelmann explains that the sphagnum moss found in Colchester Bog is the same sterile moss used for surgical purposes during WWII.
(SUNDAY NEWS photo—Dufault)



BAYBERRY — Between the forest and open mat of the Colchester Bog, numerous bayberry plants may be found.
(SUNDAY NEWS photo—Dufault)