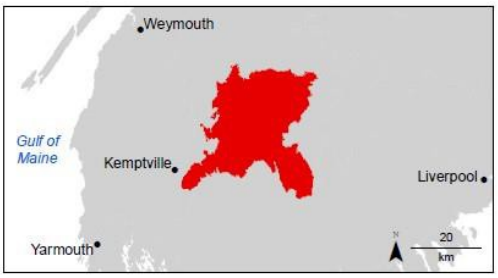
A NOVA SCOTIA DEPARTMENT OF NATURAL RESOURCES PUBLICATION

Ecodistrict Profile

Ecological Landscape Analysis Summary
Ecodistrict 770: **Western Barrens**



An objective of ecosystem-based management is to manage landscapes in as close to a natural state as possible. The intent of this approach is to promote biodiversity, sustain ecological processes, and support the long-term production of goods and services. Each of the province's 38 ecodistricts is an ecological landscape with distinctive patterns of physical features. (Definitions of underlined terms are included in the print and electronic glossary.)

This Ecological Landscape Analysis (ELA) provides detailed information on the forest and timber resources of the various landscape components of Western Barrens Ecodistrict 770. The ELA also provides brief summaries of other land values, such as minerals, energy and geology, water resources, parks and protected areas, wildlife and wildlife habitat.

The 79,600 hectare Western Barrens Ecodistrict has one of the highest percentages of provincial Crown land ownership in Nova Scotia. The province owns 92.4%, or 73,478 hectares. Only 2.3% is in private hands. The remainder of the ecodistrict is federal lands or other uses. The ecodistrict was never extensively settled.

The Tobeatic Wilderness Area covers most of the ecodistrict (59,275 hectares) and is the major contributor to a provincial designation of protected or limited use. The remaining Crown land (14,203 hectares) allows for most uses but has a special management classification due to the existence of a small mainland moose population – an endangered species in Nova Scotia.

The location of the Western Barrens Ecodistrict in the interior of western Nova Scotia, away from the moderating influence of the ocean, means that summers are hotter and drier and winters are cooler than in adjacent ecodistricts.

Repeated fires in this ecodistrict have caused widespread barrens, which have been slow to regenerate tree species due to the frequency of the fires and the coarse, shallow, and infertile soils. Many of the soils have a hardpan layer that limits water movement and significantly restricts rooting depth.

A total of 3.7% of the ecodistrict has exposed bedrock. There is also a significant amount of boulders scattered across the landscape, giving the local name "flintstone theatre" to the area.

Large granite boulders are abundant throughout the ecodistrict and are very evident in the many small lakes.

The near absence of shade-tolerant species, such as red spruce, hemlock, sugar maple, and beech, attest to the poor growing conditions. Open woodlands of white pine, black spruce, red oak, and red maple are dominant. Much of the ecodistrict is carpeted with dense layers of heath-like vegetation, including huckleberry, rhodora, and lambkill on drier sites as well as leatherleaf and Labrador tea on the wetter sites.

The extensive root mat created by these shrubby, acid-loving plants severely restricts root depth and affects regeneration of softwood species. Sparse stands of white pine and black spruce occur, along with red maple and white birch.

Important aquatic and riparian habitat is provided by the major watercourses and their tributaries. The ecodistrict contains the headwaters of several rivers, such as the Tusket, Clyde, Shelburne and Roseway. These headwaters are extremely important in maintaining the health of lakes, rivers, and associated habitat throughout watersheds.

The Tusket River originates in the ecodistrict and provides an important travel corridor for many species of wildlife.

Landscapes are large areas that function as ecological systems and respond to a variety of influences. Landscapes are composed of smaller ecosystems, known as elements. These elements are described by their physical features – such as soil and landform – and ecological features – such as climax forest type. These characteristics help determine vegetation development.

Element descriptions promote an understanding of historical vegetation patterns and the effects of current disturbances. This landscape analysis identified and mapped five key landscape elements – one dominant matrix element, three smaller patch elements and a corridor element – in Western Barrens.

In the **Pine Oak Barrens** matrix element, areas of well-drained and coarse-textured soil were historically thought to support two types of climax communities. The white pine-red oak-red pine species association occurred on about half of the element, while barrens occupied the remainder. In **Spruce Pine Barrens**, a large patch element that functions as basically a co-matrix, the two climax communities are black spruce-white pine and barrens. The other two patch elements are **Wetlands**, usually bogs and fens, and the small **Pine Oak Hills and Hummocks**.

Valley Corridors, a linear element associated with the major watercourses in the ecodistrict, includes riparian corridors along river systems such as the Tusket, Shelburne, Clyde and Roseway, which are important for biodiversity and ecosystem functioning.