

Tunk Lake Area

Franklin, Sullivan, T9 SD, T10 SD, T16 MD

Description:

The mountains and lakes formed by the Tunk Mountain pluton (a broad intrusion of igneous rock) constitute one of the most distinctive landmarks of Maine's Downeast Coast. This focus area includes the picturesque mid-elevation (~1,000 foot) summits of Schoodic Mountain, Tunk Mountain, Black Mountain, Caribou Mountain, and Catherine Mountain, as well as numerous undeveloped or sparsely developed lakes and ponds, including Tunk Lake, Spring River Lake, and Donnell Pond.

The bedrock and surficial geology of the area create a variety of ecological zones that follow gradients of slope, aspect, and moisture and have been modified to varying extents by past land use and fire.



The view from Black Mountain, looking south across Frenchman's Bay

From upper to lower elevations, these mountains include Heath-Krummholz summits and Low-Elevation Summit Balds, intact Spruce-Fir-Broom-moss Forests on steep slopes, drier Oak-Pine forests on south facing slopes, post-burn early successional hardwood forests, and forests regenerating from past harvest. In general, forests at mid and higher elevations show greater evidence of past fire, whereas lower elevation stands have a less apparent fire history but more obvious evidence of recent harvesting. The effects of fire varied with fire intensity – in most areas medium intensity fires appeared to limit shrub and sapling development but did not kill the forest canopy. Other areas, such as the southeastern side of Caribou Mountain, apparently burned at a higher intensity, resulting in an early successional stand dominated by paper birch (*Betula papyrifera*), grey birch (*Betula populifolia*), and red maple (*Acer rubrum*).

Among the more noteworthy ecological features of this area is a small stand of old growth red spruce (*Picea rubens*) around Wizard Pond in a saddle near the summit of Black Mountain. This stand, which has been inaccessible because of surrounding steep terrain, has little to no evidence of human disturbance and numerous trees over 250 years old.

Sizable Low Elevation Summit Balds occur on Schoodic Mountain, Round Mountain, and Black Mountain. The balds were likely created (or at least enhanced) by repeated fire, and they are recreational destinations because they offer stunning views. Two of these locations support the rare smooth sandwort, a plant restricted to acidic outcrops.

The focus area also includes two large peatlands – the 400+ acre Downing Bog and the 135 acre Schoodic Bog. Downing Bog is of sufficient size and diversity to qualify as an Unpatterned Fen Ecosystem of statewide significance.

The focus area also includes undeveloped lands north of the state land in T10 SD and T16 MD and south of the West Branch of the Narraguagus River. Much of this area has been recently harvested, but a description of Tucker Branch Mountain in T10 SD from 1998 describes the general oak and pine-dominated forest types of this area. The lower slopes of this mountain support early to mid- successional oak-pine forest that extends to mid-slope. Red oak (*Quercus rubra*) and eastern white pine (*Pinus strobus*) are co-dominants in the tree canopy and red maple (*Acer rubrum*) is present in the sapling layer. The north side of the summit contains a small red pine (*Pinus resinosa*)/eastern white pine woodland with little soil development. Huckleberry (*Gaylusscia baccata*) and eastern white pine dominate the shrub layer. Notable herbaceous species include poverty oatgrass (*Danthonia spicata*), panic grass (*Panicum* sp) and the sedge *Carex tonsa*. Charred stumps indicated prior fire activity.

The beaches of Donnell Pond offer are a popular recreational asset, and many of the ponds and lakes in the focus area support noteworthy fisheries of native species.

Rare Species and Exemplary Natural Community Table for the Tunk Lake Area

| Common Name | Latin Name | S-RANK | G-RANK | State Status |
|---|---------------------------------|--------|--------|--------------|
| <i>Exemplary Natural Communities</i> | | | | |
| Aspen-Birch Woodland/Forest Complex | | S5 | N/A | N/A |
| Bluejoint Meadow | | S3 | N/A | N/A |
| Heath-Krummholz Summit | | S4 | N/A | N/A |
| Hemlock Forest | | S4 | N/A | N/A |
| Level Bog Ecosystem | | S4 | N/A | N/A |
| Low Elevation Summit Bald | | S3 | N/A | N/A |
| Mixed Graminoid Shrub Marsh | | S5 | N/A | N/A |
| Oak -Birch Talus Woodland | | S3S4 | N/A | N/A |
| Oak-Pine Woodland | | S4 | N/A | N/A |
| Red Pine Woodland | | S3 | N/A | N/A |
| Spruce-Fir-Broom-Moss Forest | | S4 | N/A | N/A |
| <i>Rare Plants</i> | | | | |
| Wiegand Sedge | <i>Carex wiegandii</i> | S3 | G3 | SC |
| Smooth sandwort | <i>Minuartia glabra</i> | S2 | G4 | SC |
| Alga-like pondweed | <i>Potamogeton confervoides</i> | S3 | G3G4 | SC |

| | | | | |
|--------------------------|-------------------------------|----|----|---|
| Small purple bladderwort | <i>Utricularia resupinata</i> | S1 | G4 | E |
|--------------------------|-------------------------------|----|----|---|

Other Habitats Mapped by MDIFW:

Waterfowl / Wading Bird Habitat

Conservation Considerations:

- The southwest side of this area (south of Route 182) coincides with a large "roadless block" that is the second largest such block in the Eastern Coastal region.
- Most of the areas of highest ecological significance are within public ownership. The Maine Bureau of Parks and Lands is currently (December 2003) updating its management plan of the area. The Maine Coast Heritage Trust and Frenchman's Bay Conservancy have been working to protect additional key parcels.
- Inappropriate use of all-terrain vehicles (ATVs) has led to the disturbance of some sensitive habitats, such as the summits of Schoodic Mountain and Round Mountain, as well as access to some of the remote ponds. The state's management planning process is currently evaluating ways to direct appropriate ATV usage.
- More research is needed to determine the natural fire frequency in the region.
- Recent ill-advised introductions of non-native small-mouth bass into Donnell Pond, Long Pond, and Round Pond have led to the reduction or elimination of native fisheries, including landlocked salmon Pond and brook trout.

Current Protection Status:

Over 17,000 acres are permanently protected in the area. The Bureau of Parks and Lands (BPL) owns over 14,221 acres, and BPL holds a conservation easement on 349 acres. The Maine Department of Inland Fisheries and Wildlife holds a conservation easement on 972 acres at Tunk Lake, and MDIFW owns 1,587 acres along the Narraguagus River. In January 2001 two proximal ecological reserves were designated in this area: 1,940 acres east of Donnell Pond and 4,010 acres northeast of Spring River Lake. The Department of Conservation has established a long-term monitoring program for Ecological Reserves.