

**Site:** Beaver Brook - Ledges Connection (#29)

**Location:** Wooded area north of Tulley Rd. and east of Beaver Brook

**Information Sources:** Brett Engstrom May 14, 2014, site visit; historical (1942) aerial photos; Vermont Fish & Wildlife Department

**Land Ownership:** Privately owned lands

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**Site Description:** This site connects The Ledges site (#2 & 3) to the east with The Gully Forest Block site (#27) to the west. The large alluvial wetland complex along Beaver Brook marks the site's west boundary. It is part of largest upland forest block in Cornwall, which is important to a wide variety of forest dwelling animals. It has medium (5) to high (8.5) wildlife suitability rankings.

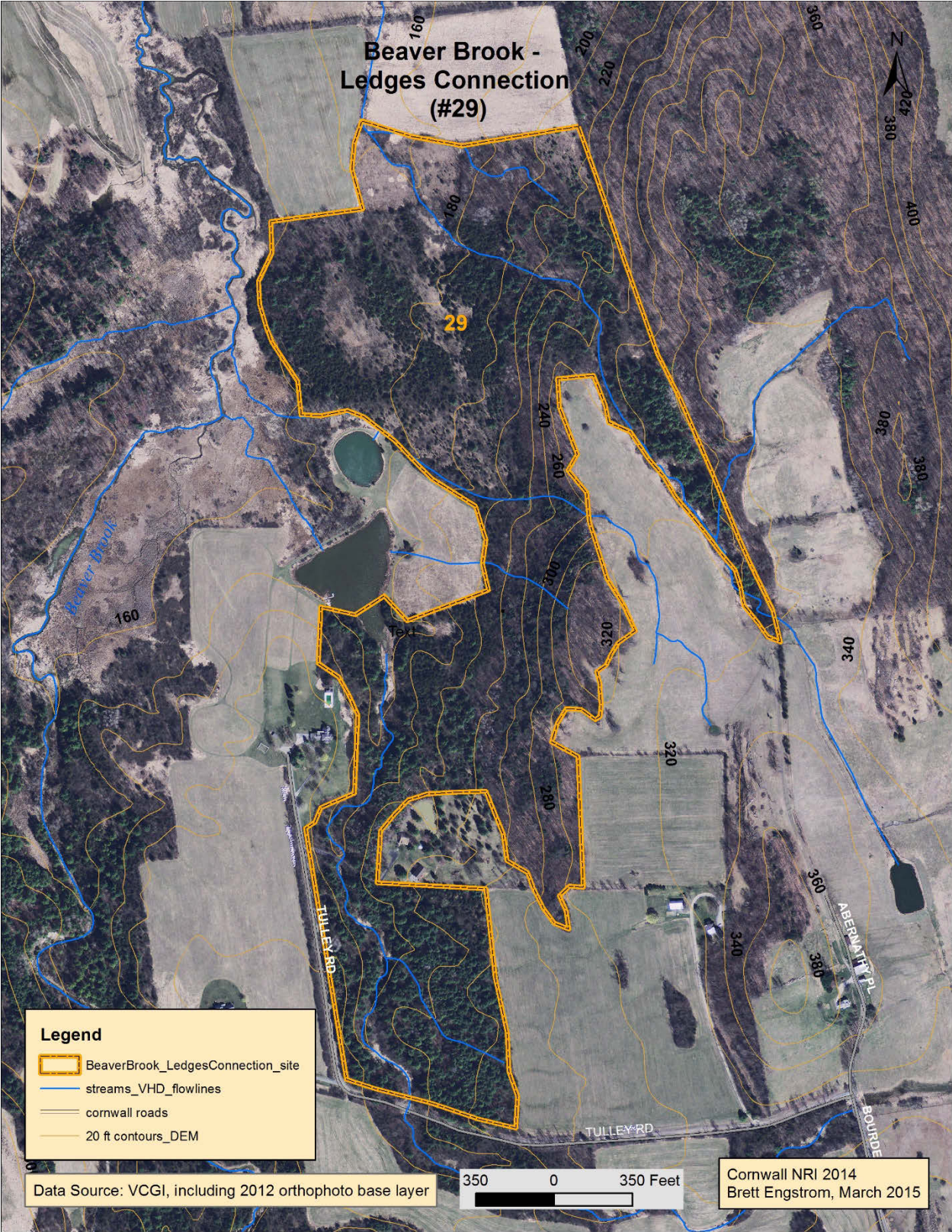
The portion of the forest that is in the most natural condition is the band of transition hardwoods limestone forest and temperate hemlock-hardwood forest associated with the north-south aligned limestone ledge system. This appears as forest in the 1942 aerial photos. In contrast the clay soil woodlands have secondary, that is they are growing up in what was clearly field in the 1942 photos. These successional clayplain forest areas are most below to the west of the ledges. While they contain a fair diversity of native flora and fauna, they are heavily infested by invasive common buckthorn and Morrow's honeysuckle.

Though occurring in only a very narrow band, the limestone forest is in good condition, containing most of the native species typical of these woodlands. The spring ephemeral wildflowers, such as dutchman's breeches, spring beauty, trout lily, and early meadow rue were in full flower during the May visit. Though not common, slippery elm and hackberry added diversity to the more common canopy trees, such as sugar maple, white ash, bitternut hickory, basswood, and hop hornbeam. A few of the less common plants present included snowberry, leatherwood, Minnesota sedge (*Carex albursina*), loose sedge (*C. laxiculmis*), and walking fern. All of these have a strong affinity for the highly fertile soils associated with limestone ledges. The limestone ledges run 10-20 feet high, and for over 150 feet along one stretch of the west-facing slope. A boulder gully associated with an intermittent stream cutting through the ledges occurs in the middle of the forest block.

From a distance, the alluvial meadows along Beaver Brook appeared to be dominated by lake sedge (*Carex lacustris*) and reed canary grass. Tree willows, including both the native black willow and the non-native white willow, are scattered along the edge of the open sedge-grass wetlands.

The animals noted during the field visit included the following: red-backed salamander (in the woods under log), painted turtle (at the pond), turkey, Canada goose, green heron, common crow, and red-winged blackbird.

While no species or natural communities of state-level significance were noted, this site is important wildlife habitat connecting The Ledges forest block to the Beaver Brook forest block.





Photos from Beaver Brook – Ledges Connection (Cornwall inventory site #29), clockwise from upper left:  
successional clayplain forest with trout lily – violet groundcover; transitional hardwoods limestone forest; columbine and early buttercup on limestone cliff; temperate hemlock-hardwood forest



**Site:** Beaver Brook Woods North of Sperry Road (#26)

**Location:** Wooded area along Beaver Brook downstream (north) of Sperry Rd.

**Information Sources:** Brett Engstrom September 16, 2014, site visit; historical (1942) aerial photos; Vermont Fish & Wildlife Department GIS data; local resident interviews

**Land Ownership:** Privately owned lands

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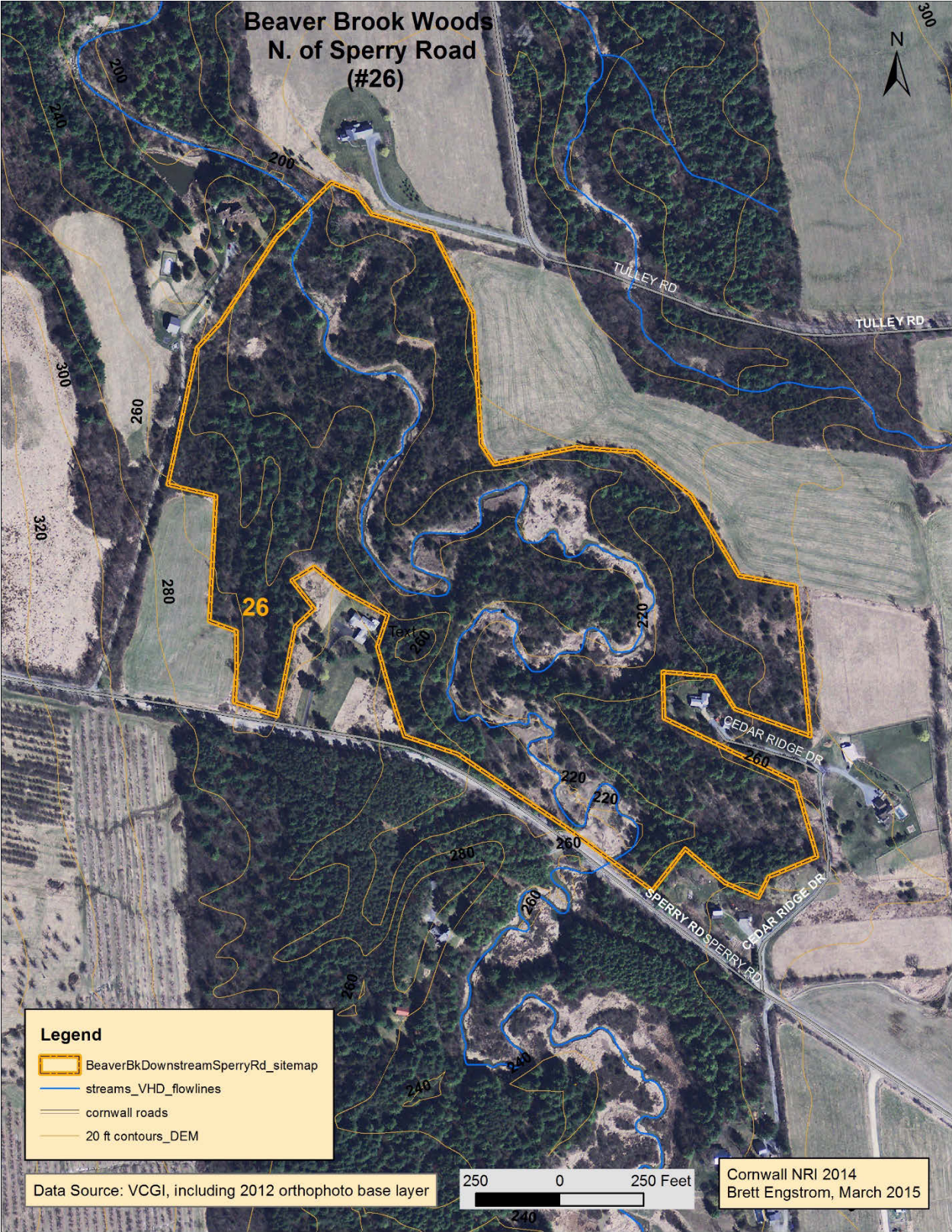
**Site Description:** Cut into deep clay deposits, the lower portion of Beaver Brook winds its way through this site in a series of a major loops. Small ravines of short tributaries feed into the main stream valley. As shown in historical photos, the entire areas was open pasture except for a few very small groves of conifers, which are now small groves of old hemlocks. Excepting these hemlocks, the upland forest is dominated by old field/successional clayplain forest dominated by white pine, plus sugar maple, hop hornbeam, and American elm, and thickets of invasive buckthorn and honeysuckle.

Beaver Brook's alluvial meadows, or floodplain, is the most ecologically interesting and diverse at this site. Though invasives are abundant, especially wild parsnip and reed canary grass, the luxuriant growth of 3-6-foot high herbaceous and grass vegetation is testimony to the high fertility of these flooded soils. Some of the more prominent native species in these meadows include goldenrod (both late and tall), bur-marigold, boneset, joe-pyeweed, panicled aster, and wild rye (*Elymus virginicus*). The abundance of the native wild rye was particularly noteworthy. On the slightly more elevated ground in the valley bottom, great thickets of woody invasives, plus dogwood and eastern redcedar, are common. Sapling to pole-sized American elm, green ash, and basswood are widely scattered in the floodplain. A short length of abandoned channel has marshy vegetation, dominated by lake sedge (*Carex lacustris*) and reed canary grass. While not visited for the inventory, a perfect abandoned oxbow channel is clearly visible on aerial photos at the north end of the site. This oxbow channel is likely dominated by marsh vegetation, and becomes a temporary pond during periods of high water.

The waters of Beaver Brook are an unusual gray-green color, milky with suspended clay. Live freshwater mussels, and shell fragments washed up on bars, evidenced the presence of at least two species of mussels living in the stream, especially where the bottom was a cobble-sandy clay mixture. Two old beaver dams observed show that the stream has an appropriate name. Lots of fresh deer and raccoon tracks likewise of evidence that wildlife frequent this riparian habitat. Local residents report that both bobcat and otter occur along this stretch of Beaver Brook. Marc Ringey also recalls catching small fish (horned dace?) along this reach of Beaver Brook when he was a boy. The Fish & Wildlife Department give this area a high (7-8) wildlife suitability ranking in their GIS analysis for wildlife habitat in Vermont.

This site warrants more field inventory work, particularly to document freshwater mussel populations and fish in the stream, and the vegetation and ecology of the large oxbow channel at the site's north (downstream) end.







Photos from Beaver Brook Woods North of Sperry Rd. (Cornwall inventory site #26)



**Site:** Beaver Brook Woods South of Sperry Road (#25)

**Location:** Wooded area along Beaver Brook upstream (south) of Sperry Rd.

**Information Sources:** Brett Engstrom June 22, 2014, site visit; historical (1942) aerial photos; Vermont Fish & Wildlife Department GIS data; local resident interviews

**Land Ownership:** Privately owned lands

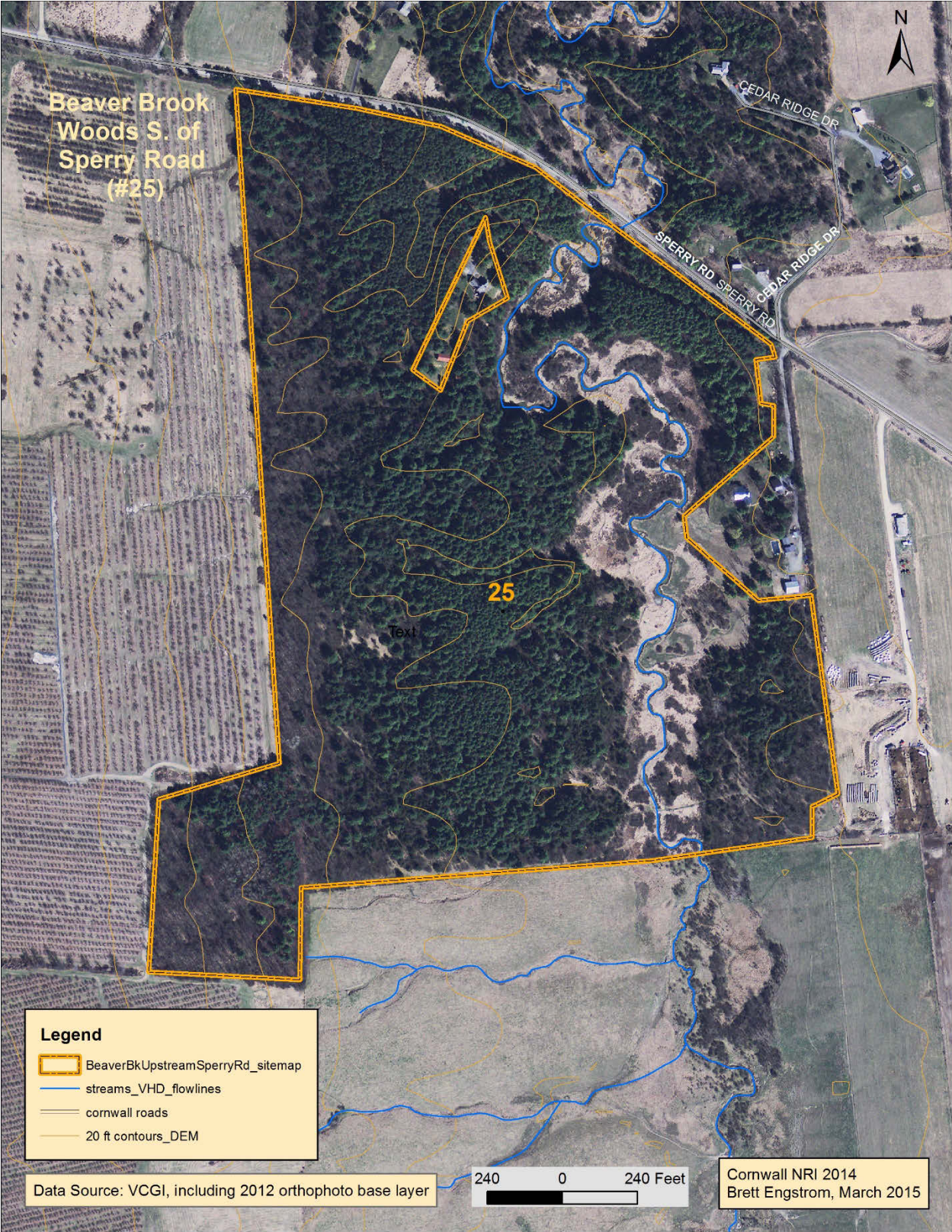
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**Site Description:** Like the Beaver Brook Woods site north (downstream) of Sperry Road, these woods along Beaver Brook south (upstream) from Sperry Rd. occupy abandoned pasture land associated with dissected clay deposits of glacial Lake Champlain. The forest canopy is largely composed of maturing white pine, American elm, and black cherry, plus Scot's pine, planted or seeded in from planted trees, in places. The invasive Morrow's honeysuckle is a constant in the shrub layer, with common buckthorn, eastern redcedar, and dogwood forming nearly impenetrable thickets in flat area. It is a very weedy vegetation, from tree layer to herb layer, including a wide diversity of exotic species. Later successional native trees, such as sugar maple, beech, basswoods, and hickory were rarely observed in these woods, mostly as seedlings or saplings.

Beaver Brook's floodplain at this site is similar to its floodplain downstream of Sperry Rd.: lush reed canary grass-goldenrod meadows with scattered dense dogwood thickets. Lake sedge (*Carex lacustris*), sensitive fern, and other wetland plants dominate low areas. While it did not appear to be as diverse as the downstream floodplain, more inventory is needed to fully describe the vegetation of this site's alluvial bottomlands.

In local resident interviews Marc Ringey noted these woods as a deer yard. Catbird and common yellowthroat were observed in the floodplain at this site, while ovenbird occurred in the upland forest. In their GIS analysis for wildlife habitat in Vermont, the Fish & Wildlife Department give this area a high (7-8) wildlife suitability ranking







Photos from Beaver Brook Woods South of Sperry Rd. (Cornwall inventory site #25):





**Site:** West Cornwall Ridge – Central north woodlot (#36)

**Location:** Between West St. and N. Bingham St., ~0.8 mi. north of Rt. 74

**Information Sources:** Brett Engstrom Sept. 16, 2014, site visit; historical (1942) aerial photos; Vermont Fish & Wildlife Department; information from local residents

**Land Ownership:** Privately owned lands

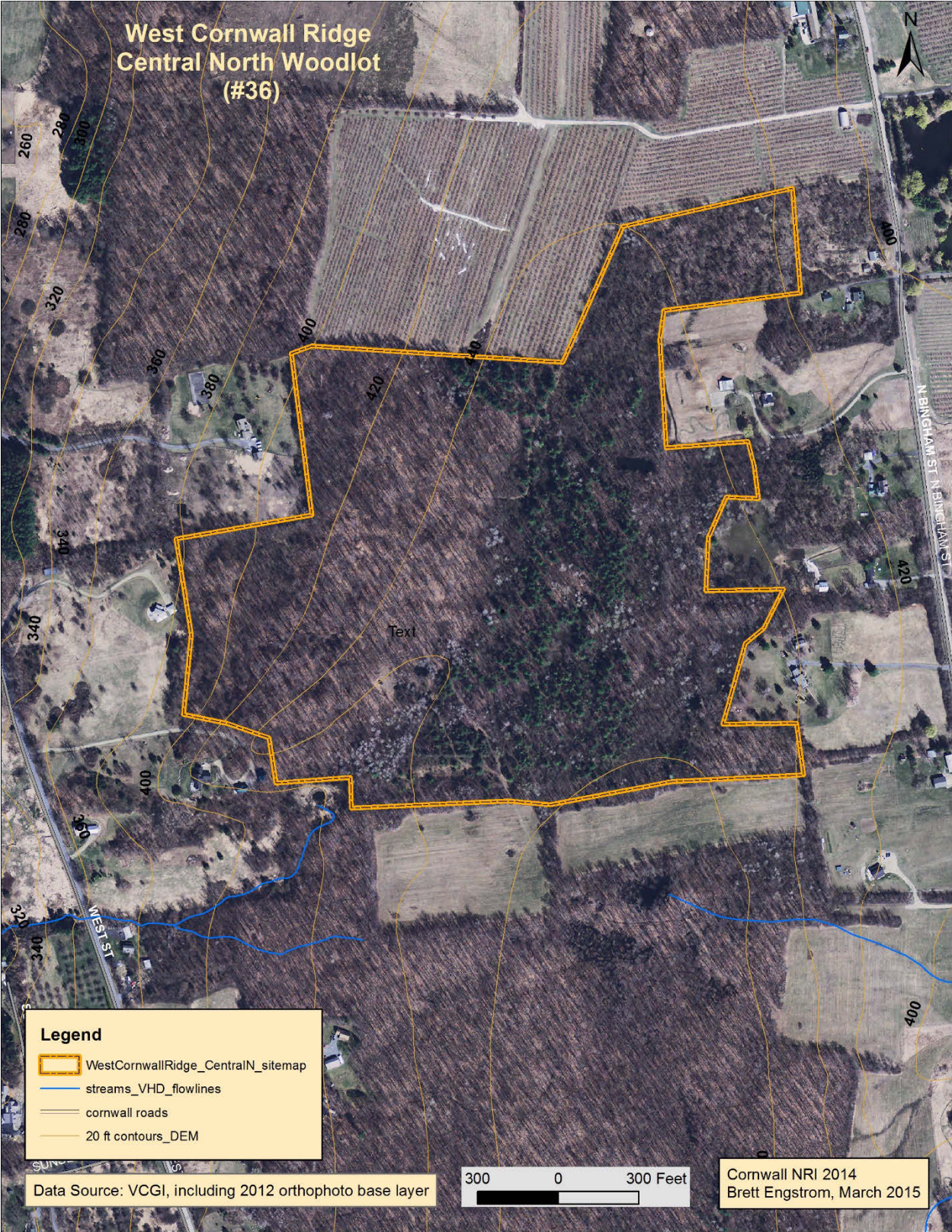
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**Site Description:** This small patch of woods is one of three woodlots present on the 1942 aerial photographs, which suggests that it may never have been cleared for agriculture. It sits on the top of the broad, flat-topped ridge that runs north to south on the west side of Cornwall. The west side of the forest site is mature mesic maple-ash-hickory-oak forest. There are some large sugar maple, basswood, bur oak, and butternut in this continuous forest section. Where the soil is very stony, high soil fertility is evident through the presence of such lime-loving species as Hitchcock's sedge (*Carex hitchcockiana*). While uncommon in Vermont, in Cornwall this sedge was a regular and sometimes abundant species in the forests with abundant limestone outcroppings. Close to two feet in diameter, the discovery of an adult mulberry tree towards the west forest margin came as a complete surprise to me. While unable to do so during the autumn visit, determining this tree's identity as either a native red mulberry (*Morus rubra*), or a non-native white mulberry (*M. alba*), is important because the former is a state-threatened species.

The east half of the site has secondary forest including a variable mix of young, pole-sized red and sugar maples, hop hornbeam, and American elm with supercanopy white pine and quaking aspen in places. There is a wet version of this forest associated with a minor depression east of the ridge height-of-land which appeared to be a young wet clayplain forest, though the soils here are mapped as silt loam. This wet area has dense panicked dogwood thickets with scattered pole green ash. Its small hollows appear to have been water-filled in the spring. The presence of fingernail clams here and in a well-defined pool basin nearby suggest that these might function as vernal pools, which are critical breeding habitat for some woodland amphibians, both salamanders and frogs. An artificial pond in the middle of these woods had adult frogs, probably wood frogs, when visited in mid-September. A small borrow pit associated with a small mapped unit of gravelly, sandy loam soil occurs in the secondary woods section of the forest.

While the Fish & Wildlife Department give this area a medium (5-6) wildlife suitability ranking in their GIS analysis for wildlife habitat in Vermont, town residents Lawrence Pyne said that these woods were good wildlife habitat, and resident Andrew Neakant had a long list of wildlife species known from this area, including turkey, deer, fox, porcupine, bobcat, coyote, opossum, painted turtle, bluebird, and migratory raptors. During my short visit in mid-September, downy and pileated woodpeckers, barred owl, wood frog, and American toad were observed and/or heard.









Photos from West Cornwall Ridge – Central North Woodlot, Cornwall inventory site #36.  
Clockwise from upper left: mulberry tree needing species identification; summer grape climbing trees in forest opening; artificial pool, likely important amphibian breeding habitat; summer grape leaves