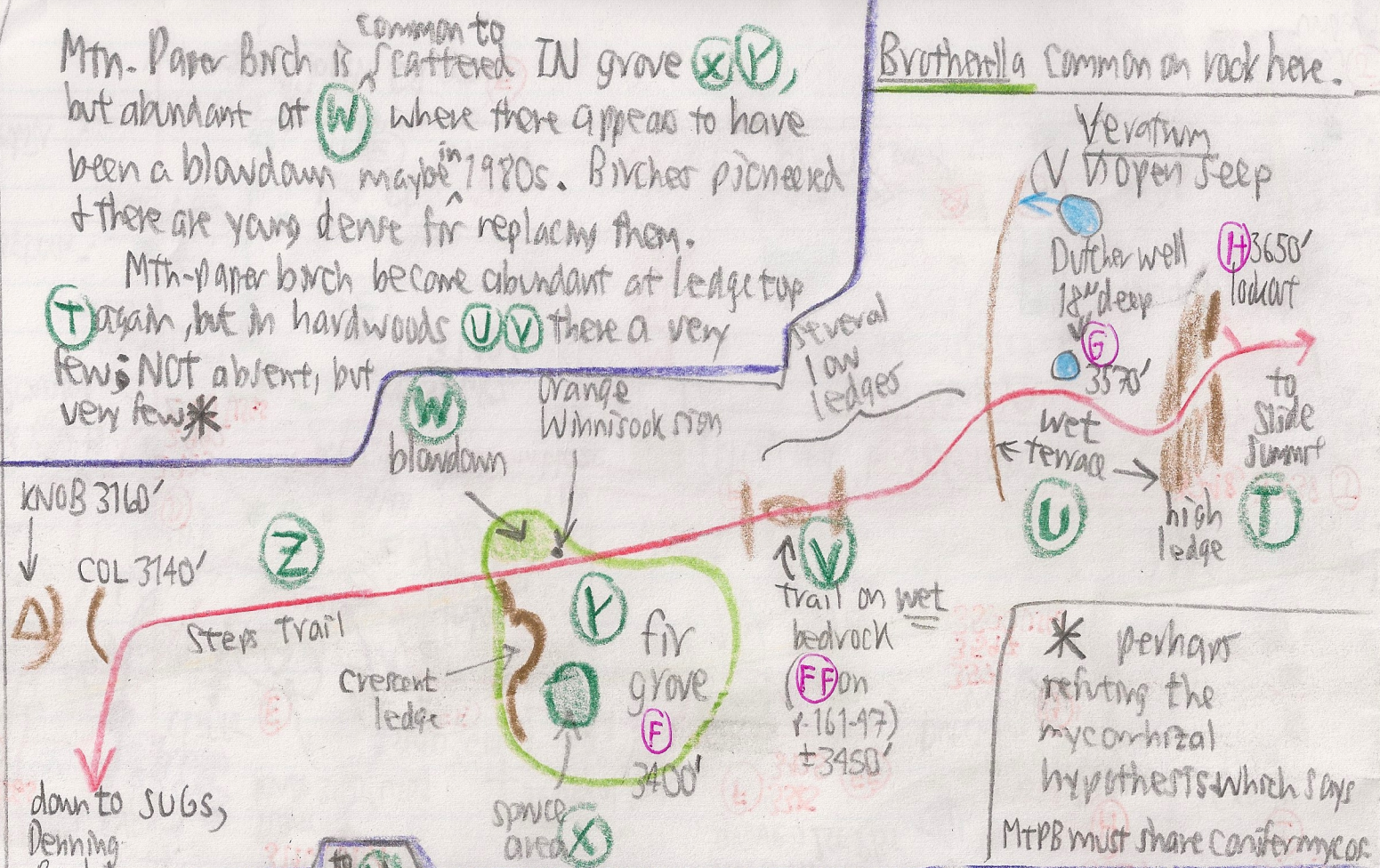


161-48
Spruce-Fir Grove at elev. 3400ft.

5/2/19
along → James Dutcher's Steps Trail with Dave Turan

Site (F) on map on page 161-47 of 11/5/15 hike.



Mtn. Paper Birch is ^{common to} scattered IN grove (X)(Y), but abundant at (W) where there appears to have been a blowdown maybe in 1980s. Birches pioneered & there are young dense fir replacing them.

Mtn-paper birch become abundant at ledge top (T) again, but in hardwoods (U)(V) there a very few; NOT absent, but very few*

Veratrum common on rock here.

* perhaps refuting the mycorrhizal hypothesis which says MTPB must share conifer mycorrhizae.

(Z) + (V) are nearly all hardwoods, dominated by YB+B with scattered BC, pm & FIR. Baldenry, but perhaps not as baldenry as the conifer grove (Y). Next time measure it. (V) has shallow till, ca. 1 foot deep, but there is water running over the bedrock in the trail. (U) is a very wet terrace. There are places between (U) & (V) where ^{well-drained} trail has eroded 18" into till. Below COL, one site has 24" till exposed above →

the SUB grove. No standing water in Conifer grove (X)(Y)(W) & many boulders perched on the Crescent ledge. Till ca. 12" deep or less. At (X), there are several mature spruce with some repro. See field notes of 161-38 for 2 former spruce ^{sapling} noted trails ^{10/11} on 1970. Hylocomium abundant throughout.

More Thoughts on Mtn. Paper Birch Distribution

As a result of the 5/21/19 hike up The Dutcher Steps Trail with Dave Turan (see p. 161-48), two additional thoughts resulted:

① Although mtn-paper birch is concentrated IN the 3400 foot spruce-fir grove, there are a few in the all-hardwood, mostly beech & yellow birch, stands above the grove. Further examination of such hardwood stands between spruce-fir and fir groves is needed on other sites to confirm a few widely-scattered mtn-paper birch in the all-hardwood stands:

- a. Curtis-Ormsbee spur of Slide
- b. NE shoulder of Indian Head
- c. NE shoulder of Blackhead

} Look also in the Fir Brook Corridor & field notes from 1999 (bnc) & 2006.

② Betula papyrifera obviously does NOT require conifers and their mycorrhizae to grow well. Is B. cordifolia that different genetically so that it DOES require conifer mycorrhizae? Seems unlikely.

∴ Therefore, B. cordifolia is distributed around spruce-fir and fir stands because of ^{the} conifers' wind-instability & resulting frequent blowdowns. The NW end of the Dutcher Steps Trail spruce-fir grove, on the N side of the trail is 50% mtn-paper birch dominated, with a fir understory. This was probably the site of a blowdown ca. 30 or 40 years ago.

Western Catskills ridge forests, lacking fir and its frequent blowdown, cannot support mtn-paper birch. But is there B. cordifolia in the Fir Brook Corridor?