

DEPARTMENT OF HORTICULTURAL SCIENCE
NORTH CAROLINA STATE UNIVERSITY

MEMORANDUM

TO Harry

Attached is the detailed summary of the collections in western, N.C. for summer 1986. I hope the seeds from those collections have already reached you, they were shipped by UPS on Thursday of last week.

DATE 9/2/86

____ NOTE AND PASS TO NEXT PERSON.

____ NOTE AND RETURN.

FOR YOUR INFORMATION.

____ HOLD FOR CONFERENCE.

____ SPEAK TO ME CONCERNING.

____ PLEASE HANDLE.

____ PLEASE ANSWER.

____ NOTE OPINION AND RETURN.

____ NEEDS YOUR SIGNATURE.

____ FOR YOUR APPROVAL.

____ PLEASE GIVE ME ALL DATA.

SIGN

Jim Ballinger

TRIP 1, August 4-6, 1986: from Ashville, N.C. to
Northern Georgia and southwestern N.C. - back to
Asheville. Participants: J.R. Ballington, NCSU,
leader; Jerry A. Payne, USDA/ARS, Byron, GA
(Total mileage 390.)

August 4, 1986

Location NC 86-19 - Transylvania Co., N.C. - trail up Mt. Satulah and at the peak, in Highlands, N.C. Open woods and bald, at the top, very dry throughout 1986 at these specific sites. Elevation range 1450 - 1550 m.

NC 86-19-1 poss. Vaccinium constablaei Gray. Clone to 2.5 m tall, appears to be a monostem crown-forming type at present: leaves narrowly elliptic, serrulate at the tip, subglaucous; fruit glaucous, 8-9 mm dia., scarce this year. Elevation approx. 1500 m. Cuttings collected.

NC 86-19-2 Vaccinium constablaei widely scattered stems to 2.5 m tall, growing in dense shade beside a new trail: leaves elliptic, entire, quite glaucous: no fruit this year. Elevation 1500 m; southern aspect. Cuttings collected.

August 5, 1986

Location NC 86-20 Towns Co., GA. Appalachian Trail up Tray Mountain from Tray Gap. The location includes occasional V. stamineum L. clones along the trail and at the peak (fruit still green), along with occasional clones of apparent (2X) and (4X) V. pallidum Ait. with probable V. constablaei near and on the peak. Vaccinium simulatum Small was most common blueberry on the site with individual plants occurring along the trail and on the peak. Several plants of Vaccinium erythrocarpum Michx. Little or no fruit was left on any Vaccinium species other than V. stamineum. Gaylussacia baccata (Wang) K. Koch. occurred on the peak. The Rubus population on this site appeared to consist of Rubus allegheniensis Porter just above the gap, Rubus canadensis L. on the peak and intergrading forms between these two in between.

NC 86-20-1 Rubus allegheniensis. Colony growing in shade on a mesic slope about 34 m up on the trail from the parking area at the gap. Primocanes arching to about 3 m tall, new growth on floricanes quite pubescent, leaflets lanceolate. Colony covers approx. 30 m². Elevation 1200 m; aspect SW, 30° slope. Cuttings and O.P. fruit collected.

NC 86-20-2 Vaccinium simulatum. Popl. collection of O.P. fruit, collected along the trail. On this site the plants are largely blue-fruited, and some also have glaucous leaves. Plant height 1.5 - 3.5 m, all crown-forming.

NC 86-20-3 prob. Vaccinium constablaei. Essentially crown-forming plant to 2.5 m tall, growing at the top of Tray Mountain. Stems pubescent; leaves entire; no fruit remaining. Elevation 1476 m. Cuttings collected.

NC 86-20-4 prob. Vaccinium constablaei. Stoloniferous, stems to 1 m, quite pubescent; no fruit remaining. Growing at the peak. Cuttings collected.

NC 86-20-5 prob. Vaccinium constablaei. Stoloniferous, stems to 1 m, pubescent; leaves elliptic; no fruit remaining. Clone growing along the trail, just before the peak. Cuttings collected.

Location NC 86-21. Towns Co., Ga. Brasstown Bald (highest point in Georgia) Excellent populations of Rubus canadensis occurred on the site, some of which appears introgressed with Rubus argutus Link. Scattered Vaccinium simulatum occurred up the road from the parking area to the peak, along with occasional plants of 2X and 4X V. pallidum. No materials resembling V. constablaei were found. Elevation range 1450 - 1580 m.

NC 86-21-1 Vaccinium simulatum. Popl. collection of O.P. fruit. Plants all crown-forming, 1.6 - 4.5 m tall. Fruit generally glaucous-blue and leaves often also glaucous.

NC 86-21-2 Rubus canadensis. Popl. collection of O.P. fruit.

NC 86-21-3 prob. 4X V. pallidum. Stems suckering to stoloniferous, to approx. 1 m tall. Growing by trail down from peak. No fruit remaining. Elevation 1520 m. Cuttings collected.

NC 86-21-4 prob. 4X V. pallidum. Stems suckering, to 0.6 m tall. Growing by trail down from peak. No fruit remaining. Elevation 1520 m. Cuttings collected.

NC 86-21-5 Rubus canadensis. Vigorous, disease resistant clone covering 500 m². Primocanes thornless; petioles and leaf midribs with small scattered thorns. No fruit remaining. Elevation 1450 m. Growing at far end of parking lot. Cuttings collected.

NC 86-21-6 Rubus canadensis (poss. introgressed with R. argutus). Very erect, vigorous clones, with only a few very small thorns on the primocanes. Growing by the edge of the parking lot near the walk to the restrooms. No fruit remaining. Elevation 1450 m. Cuttings collected.

Location NC 86-22 Macon Co., N.C. top of Wine Spring Bald, west of Franklin, N.C. The site includes scattered V. simulatum, often with large blue fruit, and a few V. pallidum clones. Rubus canadensis, varying in degree of thorniness and possibly introgressed with R. argutus, was fairly abundant around the margins. Fragaria virginiana Duch. was fairly abundant but no fruit was left. Elevation 1815 m.

NC 86-22-1 Vaccinium simulatum. Popl. collection of O.P. fruit. Most with glaucous fruit, and approx. 50% of the plants had both glaucous leaves and fruit.

NC 86-22-2 Rubus canadensis. Popl. collection of O.P. fruit.

NC 86-22-3 prob. 4X V. pallidum. Stoloniferous, stems to 0.5 m; leaves very glaucous. No fruit remaining. Cuttings collected.

August 6, 1986

Location NC 86-23 Haywood County, N.C. Waterrock Knob, off the Blue Ridge Parkway. Vicinity of the parking lot, and trail up to the peak. Elevation range 1930 - 2130 m. Colonies of Rubus canadensis occur throughout the location along with scattered individuals of Vaccinium simulatum. One small colony of Rubus idaeus var. strigosus (collected as NC 85-8-2) occurred near the peak, but fruit was still green. Ribes glandulosum Grauer was fairly abundant above 2000 m elevation. No V. constablaei type materials were found.

NC 86-23-1 Vaccinium simulatum. Popl. sample of O.P. fruit. Fruit and leaves quite variable for degree of glaucescence. All plants strictly crown-forming, often 4 m tall.

NC 86-23-2 Rubus canadensis. Popl. sample of O.P. fruit. Generally primocanes thornfree. Fruit size and drupelet set quite variable, probably due to frost injury and the severe drought this summer.

NC 86-23-3 Ribes glandulosum. Small sample of O.P. fruit (very little remaining), along with several plant samples. Stems somewhat prostrate and rooting in contact with the soil. Fruit red, sparsely glandular pubescent.

Location NC 86-24 Haywood County, N.C. Roy Taylor Forest Overlook on the Blue Ridge Parkway (mileage marker 433, approx.). Slope above the parking area. Elevation 1860 m; aspect NE. The location includes extensive colonies of V. constablaei type materials and R. canadensis.

NC 86-24-1 Vaccinium constablaei. Stoloniferous clone, stems to 1.3 m tall; leaves very glaucous, narrowly elliptic, serrate; fruit glaucous blue, good size. Cuttings collected plus a fruit sample for anthocyanin analysis.

NC 86-24-2 Vaccinium constablaei. Stoloniferous, stems to 1.3 m tall; leaves very glaucous, elliptic, entire; fruit glaucous blue, good size. Cuttings collected plus a fruit sample for anthocyanin analysis.

NC 86-24-3 Vaccinium constablaei. Popl. collection of O.P. fruit. All plants on the site are stoloniferous; stems 0.9 - 1.4 m tall; fruit medium to light blue; quite variable size, often large.

NC 86-24-4 Rubus canadensis. Small popl. collection of O.P. fruit.

Location NC 86-25 Haywood County, N.C. Mileage Marker 419 at the Graveyard Fields Overlook on the Blue Ridge Parkway. The location consists of a bald, parts of which are periodically burned, which covers many hectares. Vaccinium constablaei and V. simulatum are very widespread over the area. Vaccinium erythrocarpum is also fairly common along with scattered Ribes rotundifolium Michaux. Due to time constraints and priorities, only V. constablaei was collected on this date. Elevation 1700 m.

NC 86-25-1 Vaccinium constablaei. Suckering or stoloniferous clone to 1.5 m tall; leaves elliptic; fruit medium blue, good size. Cuttings collected along with fruit sample for anthocyanin analysis.

NC 86-25-2 Vaccinium constablaei. Suckering clone to 1.5 m tall; fruit crop obviously reduced by frost, good blue color. Cuttings collected plus a fruit sample for anthocyanin analysis.

NC 86-25-3 Vaccinium constablaei. Popl. collection of O.P. fruit. Fruit size and crop quite variable this year (pickers had already covered the site). Plants all essentially suckering or stoloniferous, 0.8 - 2.0 m tall.

TRIP 2, August 11-14, 1986: from Morganton, N.C., to the Linville Gorge/Jonas Ridge area - back to Morganton; then to Cherokee, N.C., to the southern end of the Blue Ridge Parkway, and Clingmans Dome on the Tenn./N.C. line - and back to Asheville. Participants: J.R. Ballington (leader); Ulrike Amborn (internee, from West Germany); Faye Ballington; Melissa Ballington; Blair Buckley. (Total mileage 570.)

August 11, 1986

Location NC 86-26 Burke County, N.C. Hwy. 181 from Morganton, N.C. to Jonas Ridge. At Jonas Ridge turn left on Gingercake Rd., which becomes Forest Service Rd. 210 where the pavement ends. Follow FS Rd. 210 for 2.2 km to the trailhead for Devil's Hole Trail to the right. Elevation 1180 m. Scattered plants of V. simulatum occur over the area, along with one or two apparent V. constablaei (no fruit). Rubus canadensis is quite common.

NC 86-26-1 Vaccinium simulatum. Popl. collection of O.P. fruit.
Plants and fruit quite variable for degree of glaucousness.

Location NC 86-27 Burke County, N.C. Trail up and summit of Hawksbill Mtn. The trailhead is 1.6 km down FS Rd. 210 from Location NC 86-26. The location is fairly diverse in Ericaceous species, V. simulatum is scattered along the trail with V. stamineum, apparent 2X V. pallidum Lyonia ligustrina (L.) DC, Kalmia latifolia L., Leucothoe recurva (Buckley) Gray., and Gaylussacia baccata. Along the trail, the principal canopy trees were Quercus prinus L., Nyssa sylvatica Marsh. and Acer rubrum L. Near the summit Leiophyllum buxifolium (Bergius) Ell. and Rhododendron minus Michaux. were fairly abundant and scattered plants of V. constablaei also occurred. On this site, L. buxifolium appeared to be a good indicator for V. constablaei. On the rocky summit there was a substantial V. constablaei population intermixed with G. baccata, L. buxifolium, R. minus, and scattered stunted trees of Pinus pungens Lambert, creating a natural rock garden. No fruit remained on the Vaccinium materials.

NC 86-27-1 through NC 86-27-4 Vaccinium constablaei. Cuttings collected from four clones growing on a south-facing ledge at 1300 m elevation. Plant heights range from (1.0) 1.6 - 2.1 m in this popl. All are suckering widely. Clones 86-27-1 and 86-27-2 were especially nice 2 m clones with very glaucous leaves.

NC 86-27-5 through NC 86-27-10 Vaccinium constablaei. Cuttings from representative clones on the summit. Elevation 1350 m. Stems 1.0 - 1.6 m tall, all suckering to stoloniferous.

Location NC 86-28 Burke County, N.C. Trail up Table Rock Mtn. from the end of FS Rd. 210 at the Table Rock picnic ground. Vaccinium simulatum and V. stamineum (fruit still green) were scattered along the trail, with K. latifolia, R. minus, and G. baccata. The canopy species were essentially the same as on Hawksbill. Starting at about 1250 m elevation L. buxifolium began to appear and scattered clones of apparent V. constablaei at 1260 m where the canopy was fairly open. No fruit remained on any plants except V. stamineum. Collections made in a heavy thunderstorm.

NC 86-28-1 through NC 86-28-6 Vaccinium constablaei. Cuttings from representative plants; suckering generally; stems 1.2 - 1.8 m tall; leaves varying in degree of glaucousness (clones 86-28-5 and 86-28-6 had quite glaucous leaves).

August 12, 1986

Location NC 86-29 Burke County, N.C. Jonas Ridge. Take RD 1264 left off Hwy 181 for 0.3 km, then right on Rd. 1266 for 1.6 km. The location consists of disturbed roadsides with extensive Rubus canadensis and occasional Vaccinium plants. Elevation 1380 m.

NC 86-29-1 Vaccinium constablaei. O.P. fruit from the only clone with any fruit remaining.

NC 86-29-2 Rubus canadensis. Popl. collection of O.P. fruit. Primocanes varying in degree of thorniness. Population appears introgressed with R. allegheniensis.

NC 86-29-3 Vaccinium simulatum O.P. fruit from two clones occurring on the site.

NC 86-29-4 Vaccinium constablaei. Cuttings from one glaucous leaved cutback plant; stems to 1.2 m now; no fruit remaining.

Location NC 86-30 Avery County, N.C. Roseborough Ridge Rd. below Bald Mtn. Roadsides in fairly open, rocky upland woods, with scattered V. constablaei and occasional V. simulatum. Elevation 1400 m.

NC 86-30-1 Vaccinium constablaei. Popl. collection of O.P. fruit. Plants suckering to stoloniferous, 1.5 - 2.2 m tall.

NC 86-30-2 Vaccinium constablaei. Select clone, widely suckering, 2.2 m tall; fairly large size blue fruit. Cuttings along with a fruit sample for anthocyanin analysis collected.

Location NC 86-31 Avery County, N.C. Trail up Grandmother Mtn. from the Blue Ridge Parkway and on the rocky summit. Vaccinium simulatum was scattered along the trail up the mountain, often growing in dense shade and still bearing fruit, and V. constablaei type materials started appearing in more open areas near the peak and consisted of a large population on the summit. Gaylussacia baccata was the most common associate of V. constablaei on the rocky summit. Elevation on the summit 1480 m.

NC 86-31-1 Vaccinium simulatum. Popl. collection of O.P. fruit collected along the trail. Typical variation for fruit glaucousness, little apparent leaf glaucousness.

NC 86-31-2 Vaccinium constablaei. Popl. collection of O.P. fruit collected on the summit. Extreme drought conditions have damaged a significant portion of the popl., fruit was only scattered and often already shriveled.

Location NC 86-32 Yancey County, N.C. Vicinity of the peak on Mt. Mitchell. The location consists of roadsides from 2100 - 2130 m elevation where an extensive population of Rubus idaeus var. strigosus was sampled. This species started occurring around 2050 m. Ribes glandulosum, Ribes rotundifolium, Rubus canadensis, and Vaccinium erythrocarpum were common shrubby associates. The major canopy species was Abies fraseri (Pursh) Poir. Extensive Fragaria virginiana also occurred but the fruit was already gone. Vaccinium simulatum occurred along the road at 2000 m and below, but no V. constablaei was found.

NC 86-32-1 Rubus idaeus var. strigosus. Popl. sample of O.P. fruit. Quite variable for fruit size and degree of bloom on the fruit. Fruit size of the best primary fruit closely approached commercial acceptability.

Location NC 86-33 Buncombe County, N.C. Craggy Dome View parking area on the Blue Ridge Parkway. The location is a high elevation bald with Vaccinium simulatum and generally low-stoloniferous V. constablaei clones scattered over the area along with Rhododendron catawbiense Michaux and occasional Ribes rotundifolium (no fruit). This is reported to be a Rubus idaeus var. strigosus location but none was found on this date.

NC 86-33-1 Vaccinium constablaei. Popl. collection of O.P. fruit.

All clones essentially stoloniferous, mostly glaucous blue fruited, 0.5 - 1.5 m tall.

NC 86-33-2 Vaccinium constablaei. Cuttings from one 1.6 m plant which had no fruit remaining.

NC 86-33-3 Vaccinium simulatum. Popl. collection of O.P. fruit.

All plants crown-forming but quite variable for leaf and fruit glaucousness.

NC 86-33-4 Rubus canadensis. Popl. collection of O.P. fruit. Primocanes generally completely thornfree on this location.

NC 86-33-5 Vaccinium constablaei. Stoloniferous clone to about 1 m tall with large medium blue fruit. Cuttings collected plus a fruit sample for anthocyanin analysis.

NC 86-33-6 Vaccinium constablaei. O.P. fruit from one stoloniferous clone with stems to about 0.8 m and very large fruit.

August 13, 1986

Location NC 86-34 Haywood County, N.C. Fork Ridge Overlook on the Blue Ridge Parkway (8.6 km south of Hwy 19A/23 intersection). The collection area consisted of both roadsides in the vicinity of the overlook. Vaccinium simulatum was fairly common, typically with blue fruit, and often with large fruit size, along with Rubus canadensis. Prunus pennsylvanica L. was scattered on the site, with some clones quite fruitful this year. No V. constablaei was found.

NC 86-34-1 Vaccinium simulatum. Popl. collection of O.P. fruit. An outstanding popl. for fruit size. All plants crown-forming, 1.2 - 4.0 m tall.

NC 86-34-2 Rubus canadensis. Popl. collection of O.P. fruit. Primocanes generally thornless, typical variation for fruit size.

NC 86-34-3 Prunus pennsylvanica. Popl. collection of O.P. fruit.

Location NC 86-35 Swain County, N.C. Heintooga Ridge Spur Rd. off Blue Ridge Parkway (now called Balsam Mtn. Rd.), 1.8 km below the Heintooga Parking Area. The location consists of roadsides with a general western aspect. Vaccinium simulatum and Rubus canadensis were quite abundant. Only one clone of possible V. constablaei was found, along with several adjacent V. pallidum plants. Elevation 1730 m.

NC 86-35-1 Vaccinium simulatum. Popl. collection of O.P. fruit.

All crown-forming (up to 4 in tall) quite variable fruit size and color (often with very large fruit).

NC 86-35-2 Rubus canadensis. Popl. sample of O.P. fruit. Quite variable fruit size, some very nice.

NC 86-35-3 Prunus pennsylvanica. Small sample of O.P. fruit from one 15 m tree.

NC 86-35-4 poss. Vaccinium constablaei. Dwarf (0.6 m stems) and stoloniferous (20 m²), with scattered blue fruit. Cuttings collected plus a fruit sample for anthocyanin analysis.

NC 86-35-5 Vaccinium pallidum (prob. 2X) stoloniferous, stems to 0.3 m. Clone growing by 86-35-4. O.P. fruit collected.

Location NC 86-36 Swain County, N.C. Maggie Valley Overlook on Heintooga Spur Rd. off the Blue Ridge Parkway (1.3 km below location 86-35). The collection area consists of dry road cuts and woods edge across the road from the overlook. Scattered V. constablaei and occasional V. simulatum occur on the site.

NC 86-36-1 Vaccinium constablaei. Popl. collection of O.P. fruit. Plants stoloniferous, 0.5 - 1.6 m tall. Extreme variability for fruit size.

NC 86-36-2 Vaccinium constablaei. Cuttings from one select clone. Stoloniferous, stems to 0.7 m, growing in full sun on roadcut; good size blue fruit.

NC 86-36-3 Vaccinium simulatum. Popl. collection of O.P. fruit.
Good variation for fruit size and color.

NC 86-36-4 Vaccinium constablaei. Select clone; fairly young plant
to 0.4 m tall, with very large medium blue fruit. Cuttings
collected along with a fruit sample for anthocyanin analysis.

Location NC 86-37 Haywood County, N.C. Cranberry Ridge Overlook on the
Blue Ridge Parkway (5.4 km north of Soco Gap). Steep slope across from
the overlook with a red raspberry population. Elevation 1825 m.

NC 86-37-1 Rubus idaeus var. strigosus. Popl. collection of O.P.
fruit. Variable size, with primary fruit approaching commercial
fruit size. Scattered stems over an area about 10 x 15 m.

August 14, 1986

Location NC 86-38 Swain County, N.C. 10.3 km up Clingman's Dome Rd. off
Hwy 441. Roadsides with Rubus canadensis, Rubus idaeus var. strigosus,
scattered Ribes rotundifolium, and occasional V. simulatum. No V. constab-
laei found. Elevation 2065 m.

NC 86-38-1 Rubus idaeus var. strigosus. Popl. collection of O.P. fruit;
generally quite good fruit size.

NC 86-38-2 Rubus canadensis. Popl. collection of O.P. fruit; generally
thornless primocanes and typical variation for fruit size.

NC 86-38-3 Ribes rotundifolium. Small popl. collection of O.P. fruit.

Location NC 86-39 Swain County, N.C. Along the trail from the Clingman's
Dome parking lot to Andrews Bald. Popl. samples of O.P. fruit collected
along the trail and on the bald. Elevation range 1900 - 2200 m.

NC 86-39-1 Vaccinium simulatum. Crown-forming plants to over 5.0 m.

NC 86-39-2 Rubus canadensis. Quite variable fruit size.

NC 86-39-3 Rubus idaeus var. strigosus. Small sample.

NC 86-39-4 Vaccinium erythrocarpum

NC 86-39-5 Ribes rotundifolium

Location NC 86-40 Haywood County, N.C. Doubletop Mtn. Overlook on the Blue Ridge Parkway. Scattered V. constablaei occurred on road cuts and in the edge of the woods on both sides of the road with a generally west aspect. Elevation 1780 m.

NC 86-40-1 Vaccinium constablaei. Popl. collection of O.P. fruit; plants from 0.2 (in open) to 2.0 m tall (in woods edge); quite variable fruit size, all glaucous blue, generally good quality.

NC 86-40-2 Vaccinium constablaei. Select clone, stems to 1.5 m, stoloniferous; vigorous; good fruit size. Cuttings collected.

Location NC 86-41 Haywood Co., N.C. Haywood/Jackson Overlook on the Blue Ridge Parkway (mileage marker 431), and the trail up Richland Balsam Mtn. from the overlook. Elevation ranges from 2000 m at the parking area to 2130 m at the peak. The overstory of Abies fraseri is dying out along the trail and is largely being replaced by Rubus canadensis. Scattered plants of V. simulatum, V. erythrocarpum, and Ribes rotundifolium occur along the trail and above the overlook. No V. constablaei or Rubus idaeus var. strigosus found.

NC 86-41-1 Vaccinium simulatum. Popl. collection of O.P. fruit. Fruit size variable, often very large, plants up to 4.0 m.

NC 86-41-2 Rubus canadensis. Popl. collection of O.P. fruit. Quite variable for fruit size, fruitfulness. Some variation in degree of thorniness.

NC 86-41-3 Vaccinium erythrocarpum. Popl. collection of O.P. fruit. Typical.

NC 86-41-4 Ribes rotundifolium. O.P. fruit from the single plant with fruit remaining.

NC 86-41-5 Vaccinium simulatum. Cuttings from one large-fruited clone growing by the overlook. Stems 3.5 m tall; fine, high acid flavor also.

TRIP 3, August 18 -20, 1986: from Raleigh, N.C. to Boone, then Roan Mtn. and Mt. Jefferson, back to Boone and then to Raleigh. Participants: J. R. Ballington (Total mileage 600.)

August 18, 1986

General location Richardson property NW of Boone. Turn right off Hwy 421 onto Rd. 194 in east Boone and follow 194 for 16 km to Rd. 1346. Turn left on 1346 for 1.8 km to the road entering the property on the right.

Location NC 86-42 Watauga County, N.C. Richardson property. Open to light wooded area below approx. 8-year-old Christmas tree planting into the edge of a bog. This location includes numerous and extremely variable clones of V. simulatum and Ribes rotundifolium (no fruit), scattered erect Rubus, several V. constablaei clones, and abundant fruiting Rubus hispidus L. Elevation 1530 m.

NC 86-42-1 Vaccinium simulatum. Popl. collection of O.P. fruit.

Clones extremely variable, many with fine fruit size. Some plants over 4.0 m tall, others appear introgressed with V. pallidum. (or V. constablaei).

NC 86-42-2 Vaccinium simulatum. Select clone with good size blue fruit and very little leaf disease; 2.6 m tall. Cuttings collected, plus O.P. fruit and a fruit sample for anthocyanin analysis.

NC 86-42-3 Vaccinium simulatum. Apparent introgressant with V. pallidum. Plant crown-forming to 2.8 m tall; leaves glaucous, elliptic; fruit glaucous blue. Cuttings collected plus a fruit sample for anthocyanin analysis.

NC 86-42-4 Rubus hispidus. Small popl. collection of O.P. fruit plus cuttings from several plants.

NC 86-42-5 Vaccinium simulatum. Select clone to 2.5 m tall with very large fruit. Cuttings and O.P. fruit collected.

NC 86-42-6 Vaccinium constablaei. Cuttings and a sample of fruit for anthocyanin analysis collected. Stems to 0.6 m tall, stoloniferous, good fruit size and color.

NC 86-42-7 Vaccinium constablaei. Popl. sample of O.P. fruit from the two plants found on the site.

Location NC 86-43 Watauga County, N.C. Richardson Property. Bald area in a saddle about 1.2 km beyond the N.C. State Christmas tree research plots. The site includes abundant Corylus americana Walter (nuts still immature), Rubus sp., and scattered Crataegus and Vaccinium species including V. erythrocarpum, and Ribes rotundifolium. The area has been grazed. Little fruit on any species this year. Elevation 1500 m.

NC 86-43-1 Vaccinium simulatum. Popl. collection of O.P. fruit.
Variable for degree of glaucousness of leaves and fruit.

NC 86-43-2 Vaccinium constablaei. Small popl. collection of O.P. fruit from the scattered plants. Stems generally 0.2 - 0.3 (0.8) m tall, stoloniferous.

NC 86-43-3 Rubus canadensis. Small popl. collection of O.P. fruit from the scattered colonies; almost thornfree primocanes.

NC 86-43-4 Rubus sp. (or hybrid). Popl. collection of O.P. fruit from this abundant phenotype. Canes erect, generally to 1.0 m tall, thorny, fruit slightly elongate, fairly large seeds. (At lower elevations, this phenotype would appear to be derived from R. argutus x cuneifolius.)

NC 86-43-5 Ribes rotundifolium. O.P. fruit from a single plant with fruit remaining. Mildew on the fruits.

August 19, 1986

Location NC 86-44 Mitchell County, N.C. Along Roan Mtn. Gardens Rd. to left off Rd. 261 at Roan Mtn. on then Tenn./N.C. border. The location includes balds with scattered R. catawbiense, Rubus canadensis, low stoloniferous probable V. constablaei, Ribes rotundifolium, and scattered V. simulatum, and V. erythrocarpum. Abies fraseri is encroaching on the area. Elevation 2050 m approx.

NC 86-44-1 Vaccinium constablaei. Popl. collection of O.P. fruit.
Quite variable fruit size, color, and firmness. Very few plants over 1.0 m tall.

- NC 86-44-2 Vaccinium constablaei. Representative clone, stoloniferous to about 0.7 m. Cuttings collected plus fruit for anthocyanin analysis.
- NC 86-44-3 poss. 4X Vaccinium pallidum (V. alto-montanum sensu Camp, 1945) or very dwarf V. constablaei. Plant widely stoloniferous (20 m²), stems 0.3 - 0.5 m tall; leaves very small, glaucous. Cuttings, O.P. fruit and a fruit sample for anthocyanin analysis collected.
- NC 86-44-4 Vaccinium erythrocarpum. Small popl. collection of O.P. fruit.
- NC 86-44-5 Rubus canadensis. Popl. collection of O.P. fruit. Quite variable fruitfulness and fruit size.
- NC 86-44-6 Rubus canadensis. Select clone. primocanes to 2.5 m, almost thornless. Cuttings and O.P. fruit collected.
- NC 86-44-7 Ribes rotundifolium. Small popl. sample of O.P. fruit from the few with fruit remaining. Flavor pleasant.

Location NC 86-45 Ashe County, N.C. East prong on Mtn. Jefferson at Luther Rock Overlook in Mt. Jefferson State Park. Environment essentially the same as on top of Hawkshill Mtn. Vaccinium simulatum is scattered along the trail up the mountain, usually in shade. A number of crown-forming plants on the peak and in the open at Luther Rock have somewhat atypical leaves and may represent introgressants with V. constablaei. Vaccinium constablaei only occurred in the immediate vicinity of Luther Rock and by the trail just before reaching it. Low, probable 2X, V. pallidum occurred in the woods just prior to reaching the rock. Vaccinium stamineum occurred at the rock and just below in the woods, and Gaylussacia baccata was quite common in the same area. Elevation approx. 1350 m; aspect N, NE.

- NC 86-45-1 Vaccinium constablaei. Plant suckering widely, stems to 2.0 m; leaves glaucous, narrowly-elliptic. Fruit already gone. Cuttings collected.

- NC 86-45-2 Vaccinium constablaei. Representative plant, stems suckering widely, to about 1.7 m tall; leaves glaucous, narrowly-elliptic. Fruit already gone. Cuttings collected.
- NC 86-45-3 Vaccinium constablaei. Stems stoloniferous, to about 1.2 m tall; leaves glaucous. Fruit already gone. Cuttings collected.
- NC 86-45-4 ess. Vaccinium simulatum. Appears crown-forming; stems approx. 1.3 m tall; leaves essentially elliptic. No fruit remaining. Plant growing at the highest point on Luther Rock. Cuttings collected.

August 20, 1986

Returned to Raleigh