Calvert Orchid Project 2021 Report

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Lead Volunteers: Gordon Burton and Mary Burton

Total Volunteer Hours: 61

The Calvert County Natural Resources Division is partnering with the Smithsonian Environmental Research Center and the North American Orchid Conservation Center (NAOCC) to document orchid species found in Calvert County for the purpose of conserving native orchids found in the U.S. and Canada. The Calvert Stewards volunteers will obtain photographs and identify locations of orchids so that trained collectors can collect viable seeds, fruits, leaf samples, and root samples with the aim of conserving North American orchid species. In special situations whole plants will be collected for voucher specimens to be stored in the Botany Department of the National Museum of Natural History in Washington, D.C.

While NAOCC activities focus on establishing collections of seeds and orchid mycorrhizal fungi, Calvert Stewards primarily identify and map orchid populations throughout Calvert County..

SKILLS NEEDED

- Ability to work independently
- Ability to identify the common orchid species
- Hike across uneven and overgrown terrain, including off established trails, to get to orchid locations

Optional, but Preferred, Skills

• Access to a smart phone with iNaturalist app installed (or a digital camera with date and location stamp)

VOLUNTEER DUTIES

- Explore publicly accessible properties to find and identify orchids
- Map locations accurately on paper maps or through online mapping via iNaturalist. (See attached data sheet)
- Photograph the orchids at the different stages (leaf, flower, and fruit).
- Identify the habitat characteristics of each population.

REQUIREMENTS & EXPECTATIONS

- Hike independently or in teams
- Maintain confidential and sensitive information about locations of orchids
- Be exposed to ticks, chiggers, mosquitoes, bees/wasps, poison ivy, bad weather, and other wild life

TRAININGS

- Orientation through a workshop, in-person, or via phone to understand the project.
- Orientation and training on mapping via paper and online.
- On-going opportunities to join scheduled orchid searches

PROJECT DATES

- Winter: Locate species with overwintering leaves such as *Tipularia discolor* (Cranefly Orchid), *Aplectrum hymenale* (Puttyroot) and *Goodyera pubescens* (Downy Rattlesnake Plantain).
- **Spring**: Locate spring flowering species such as *Galearis spectabilis* (Showy Orchid) or *Cypripedium acule* (Pink Lady's Slipper)
- Summer: Locate summer flowering species such as the *Platanthera* species
- Fall: Compile location maps for all species.

• **Throughout the year:** Collaborate with researchers from the Smithsonian Environmental Research Center and NAOCC on individual locations and collection protocols.

Attached:

1. A spreadsheet summary of orchid findings at the different public natural habitats in Calvert County in 2018-2021.

2. Maps of trails taken at Battle Creek (Keim Forest); Flag Ponds: Hall Creek; and Smoky Road

3. Map of Kings Landing (Huntingtown Area) NRMA (Smoky Road)

Note: No new species have been found in 2021 so one should refer to the 2020 Report for a listing of found species of orchids and a list of potential species.

Summary of Field Work (Mary and Gordon Burton)

Searches for orchids in 2021 were confined to five new locations: A Southern section of Smoky Road NRMA, the North section of Smoky Road, Keim Forest area of Battle Creek, the area of lowlands that parallel the trail at Hall Creek NRMA and the lowlands paralleling the boardwalk near the Bay at Flag Ponds. Unfortunately very little was found at any of the sites, and no new species were discovered. Maps of trails in each area are attached. A summary for each of the areas surveyed in 2021 follows:

ACLT (American Chestnut Land Trust): No visits were made.

Flag Ponds Nature Park: 2 visits were made, one in September and one in October

1. 1 visit (September 3) was made to the *Spiranthes* Duncan Pond site found in 2018 by Statz. 22 *Spiranthes ovalis* plants were found, 11 were in bud.

Microstegium continues to be a problem as it competes with the *Spiranthes*. Two bags of the stilt grass immediately around the orchids was removed. This area is also popular with folks searching for pawpaw and thus is easily trampled. A request was made that the area be corded off to protect the plants.

1a. At the same time we searched for the *Aplectrum hyemale* on Duncan Pond Trail which has been monitored for many years. It was not found.

2. On October 8, we searched for orchids along the boardwalk paralleling the Bay as far as the pier. Then we searched the area interior to the boardwalk. We had hoped to be able to cross the swamp, but could not do so. We found no orchids. (See Oct. 8 map.)

Hall's Creek NRMA: 2 visits were made. One in May, and one in July.

1. On May 5th we checked on the status of the *Cypripedium* that had logs stacked on them in 2020. Amazingly, the majority of the plants survived and were thriving. We attempted to check on the *Neottia bifolia* that was found in the flood plain off the west side of the trail. There were at least 50 plants in a 40'X40' area on April 12, 2020. We were unable to reach the area due to high water and unstable flood plain area which had to be crossed.

2. On July 5 we searched for orchids in the lowland area paralleling the main trail to the west. The area was dense with *Microstigeum*. No orchids were found.

Smoky Road (King's Landing NRMA): 5 visits.

1. Near Road

a. The *Corallorhiza odontorhiza* that was seen in 2018 and believed to have been destroyed by additional road work was found on September 24, 2019 in flower. However, on September 10, 2021 no sign of the *Corallorhiza* could be found.
b. The *Aplectrum hyemale* was found on September 10, even though it was not found

at the same time last year.

2. South and West

May 19, we searched a trail from the west side of the Dog Training Area to the south end of the South pond (see map). The trail is mostly covered with invasive plants to the east, but opens as one nears Pond and Cocktown Creek. We found no orchids. 3. Dog Training Area

May 26, we followed a mapped trail south to the edge of the NRMA property within the Dog Training Area. We found one group of 6 *Cypripedium acaule* near the property line.

4. North East

a. On June 17, we hiked a loop trail near the east border of the NRMA property. Open forest with few invasive plants, but found only two *Goodyera pubescens* sightings, one with only one plant and one with 8 plants in proximity to each other.

b. On July 4 we hiked a loop in the southern and central section of the NW area where we found two sites. A grouping of a half dozen *Goodyera pubescens* in leaf and a second site of a single *Galearis spectablis* in leaf.

c. On September 10 we hiked a ravine leading to Chew Creek wetlands. It was in the southwest part of the NW area. Our goal was to explore the wetlands, but they were so flooded and heavy in *Microstigeum* that we were unable to complete the trip. We only found about 10 *Galearis spectablis* in leaf about half way up the ravine slope.

Battle Creek/ Keim Forest: 3 visits were made to Keim Forest.

a. On April 22 the area near Battle Creek was explored, but no orchids were found.b. On May 2 a loop of the central area from the parking lot to the Northeastern corner was covered. No orchids were found.

c. On July 31 a hike was made upland to, but paralleling Battle Creek. Two Galearis sites were found.

Gatewood Preserve: No visit

Biscoe-Gray Farm: No visit

Ward Farm: No visit

<u>Searches and volunteer hours</u>: There was a total of 12 searches done in 2021 at 4 public areas in the County. Hours of volunteer work have been previously submitted.

Follow-up to 2020 Recommendations

1. As discussed in the 2020 Report, the *Spiranthes ovalis* found by Jim Statz in 2019 at Flag Ponds is only the second finding of this plant in Maryland. It is also an unusual site in Calvert County where the orchid has spread extensively despite its nearness to a well used trail and road. As mentioned, the 25 plants have been marked with 8" nails so that they can be monitored. It is also hoped that samples can be taken from these plants for submission to North American Orchid Conservation Center (Contact: Dennis Whigham). It is also important that we continue to try to control the invasive plants that are growing in the area of the *Spiranthes*.

Follow-up: 1. Samples have not been taken to NAOCC due to the covid pandemic. 2. It has been requested that the Management at Flag Ponds install a simple barricade to keep foot traffic off the area of the *Spiranthes*.

2. The logs on top of the *Cypripedium* at Hall Creek need to be removed. I have attempted to reach Cedarville State Forest regarding this issue, but have not been successful.

Follow-up: The logs have not been removed, but as mentioned earlier, the *Cypripedium* is thriving despite the loss of some of the plants.

3. There needs to be a concerted effort to explore the wetland areas which are good habitat for most terrestrial orchids which might be found on the Coastal Plain. These searches should be concentrated in the months from the end of April through the end of June and repeated in the months of July through September. Reviewing the literature on the internet (GoOrchid, Maryland Plant Atlas, and Maryland Biodiversity Project) we have 24 orchids that have been

seen on the Coastal Plain of Maryland and thus possibly could be found in Calvert County. Of those 10 have been documented with Calvert Orchids. The remaining 14 species have been included as being "possibilities" due to their occurrence at some time on the Western Coastal Plain of Maryland. (See "14 Orchids that Might be Found in Calvert County") It is therefore recommended that searches be made at least twice during the spring and summer at the following locations:

1. The wetland plains of Hall Creek NRMA south of the feeder creek could use further exploration in the summer. The floodplains on the east side have been searched several times in spring and summer. (In 2020 we found a new route across the stream. As a result the *Neottia bifolia* was found in a floodplain beyond the stream in April 2020.)

Follow-up: Due to washouts and heavy flooding of the feeder creek, it has been impossible to access areas beyond the feeder creek. An exploration of northern area of the feeder creek proved to be non-productive.

2. Battle Creek including the upper reaches of the Creek and Biscoe Gray should be explored. (Again, accessibility is a concern.)

Follow-up: Biscoe Gray was not explored. The Keim Forest area north of Battle Creek Sanctuary was explored in three visits.

3. The floodplains of Flag Ponds should be explored in the early spring.

Follow-up: This was not done.

4. The streams of Smoky Road/ Huntingtown NRMA should be explored. This might be accessible in late April and early May, but may be overgrown in summer.

Follow-up: One attempt was made to access Chew Creek but as described above the terrain on September 9 resulted in high water and heavy undergrowth. And it must be added that just finding an accessible path to the streams is challenging. This might be better attempted in early spring.

5. The North South Trail at ACLT should be explored. This might be done in cooperation with the Master Naturalists Program at ACLT.

Follow-up: This was not attempted due to Covid. However we did reach out to Melissa McCormick who is working on plant identifications with ACLT regarding identifying any found orchids. However, we received no reply.

Recommendations for 2021

The current Calvert Orchid Conservation Program is largely dependent on two volunteers who are both advanced in age. Even though Calvert County is the smallest county in Maryland, and among the smallest in the nation, it still contains a great deal of public land that is suitable for orchid habitation. And due to the deep ravine topography of the county, much of the public lands are not easily accessible, despite the fact that it is located on the Atlantic Coastal Plain. For the program to continue to produce a viable long term collection of data it is necessary that more volunteers commit to the study. It would be best practices if one or two individuals were assigned to a public area or a section of a public area where they could commit to 6 to 8 searches in the three designated orchid growing seasons (April-May; June-July; August-October).

The following requirements would be necessary for a viable program:

- 1. A yearly orientation program for volunteers in March.
- 2. A setting of priority areas to be surveyed based either on
 - a. Concentration on Calvert County Public Lands or
 - b. Most suitable habitat for orchids as determined by present findings.

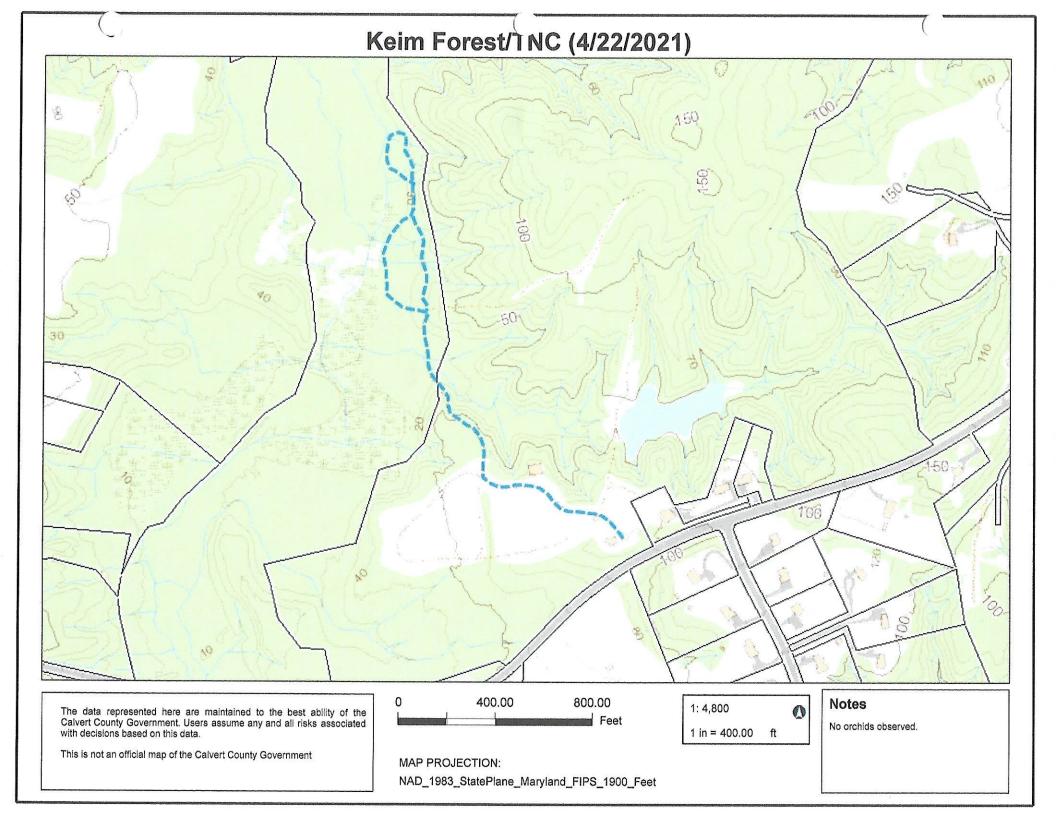
3. A standardization of reporting and numbering/ labeling plants that can be shared by all participants.

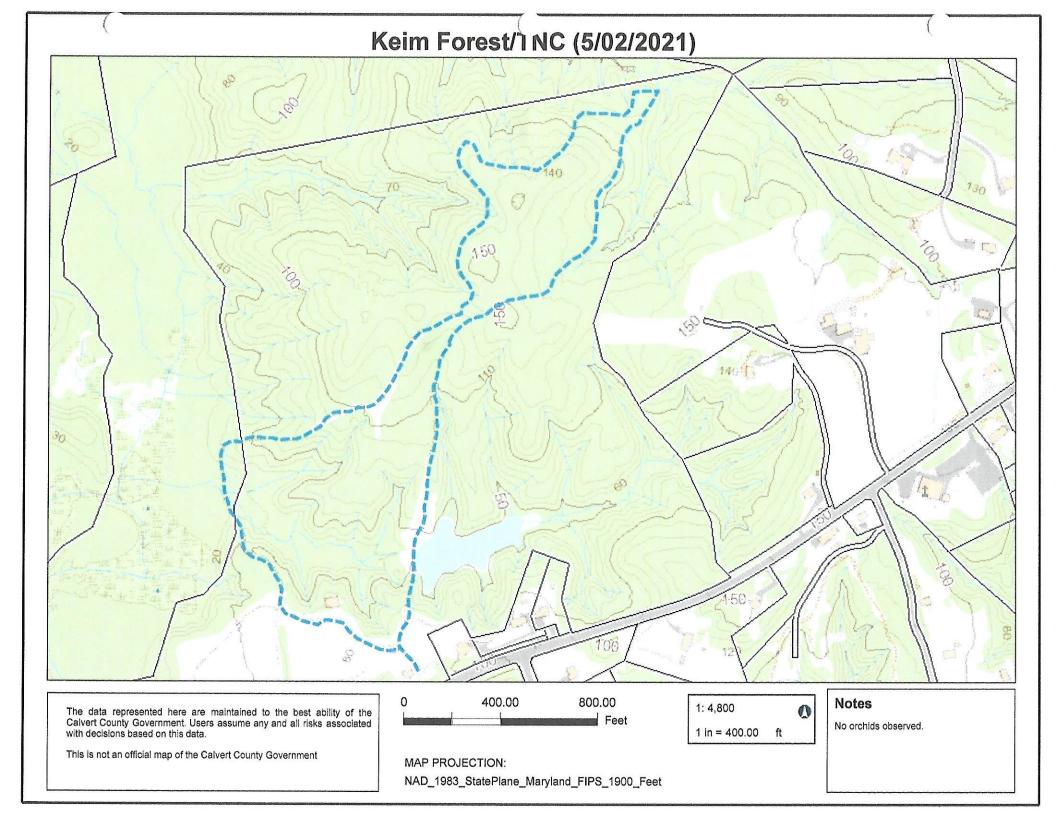
4. Participants should have access to the tools they need for trail documentation as well as access to INaturalist.

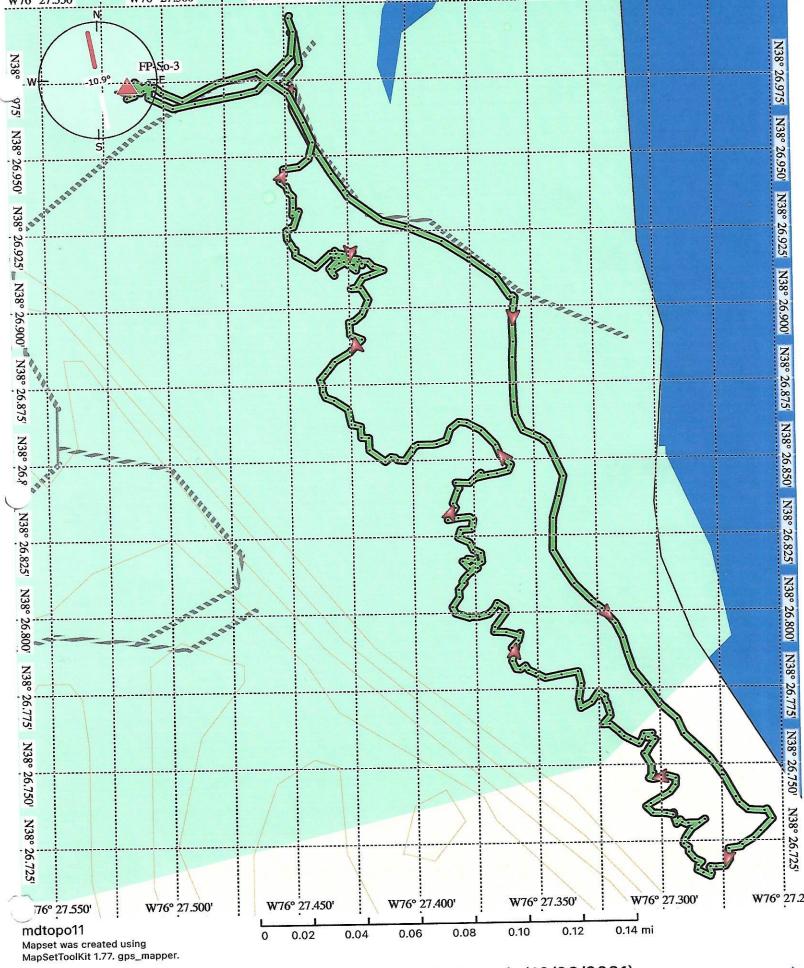
5. There should be one person and a second follow-up person that volunteers report to with their data and as a resource for questions and directions. This person would also collate the data at the end of each year.

6. Tipularia should not be included in the study as it has been widely found throughout the County.

It was suggested that Calvert Orchid Conservation work with the County Department of Mapping to make a map of the orchids found between 2018 and 2021. We would suggest that Tipularia not be included in this mapping as it is so abundant. A display of this map might prove to be a help in recruiting volunteers for the program.

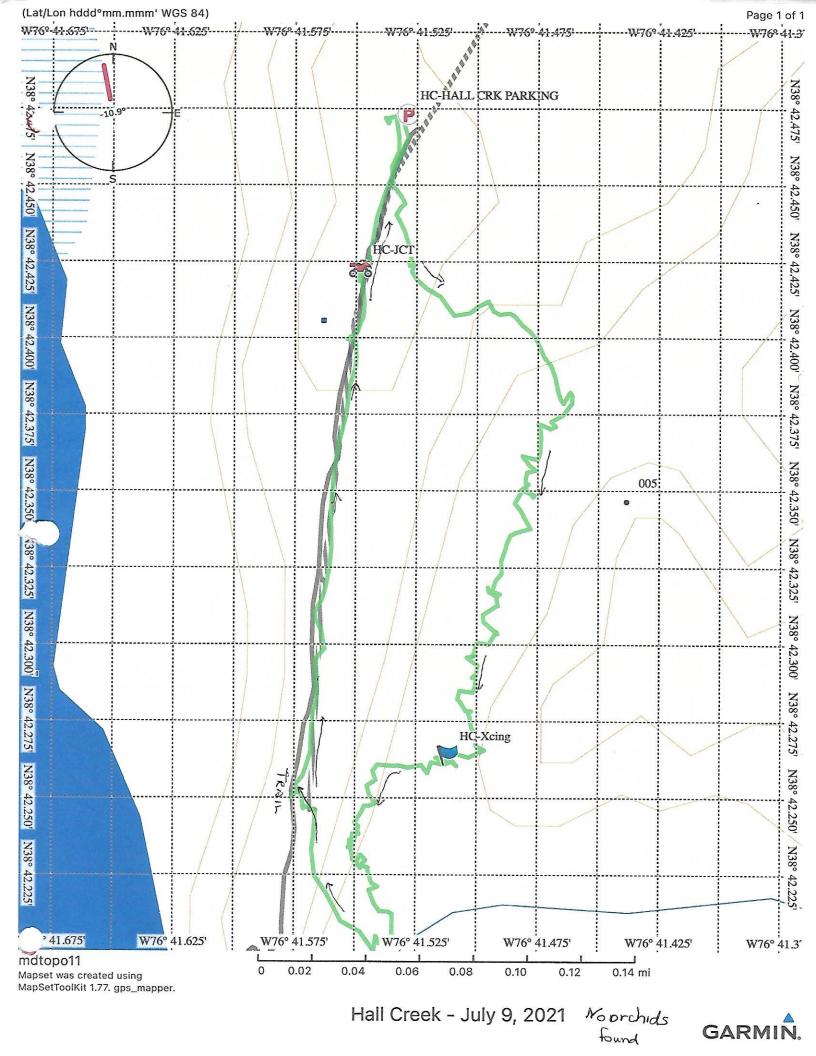


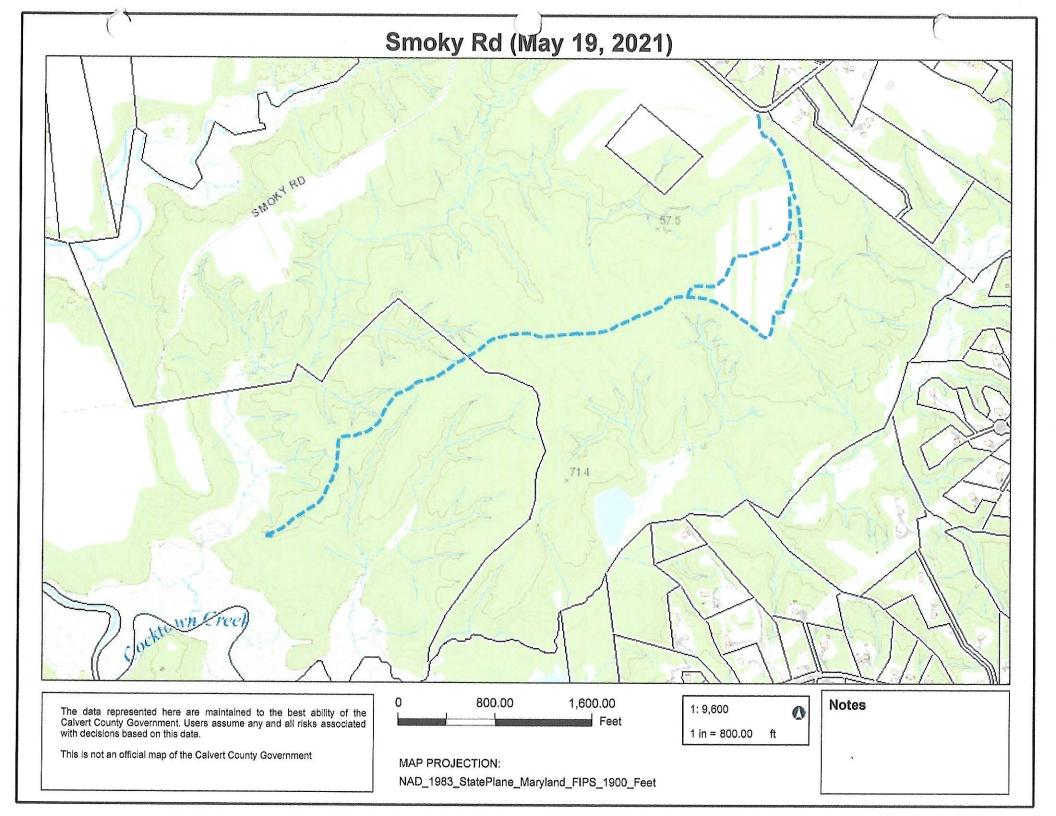


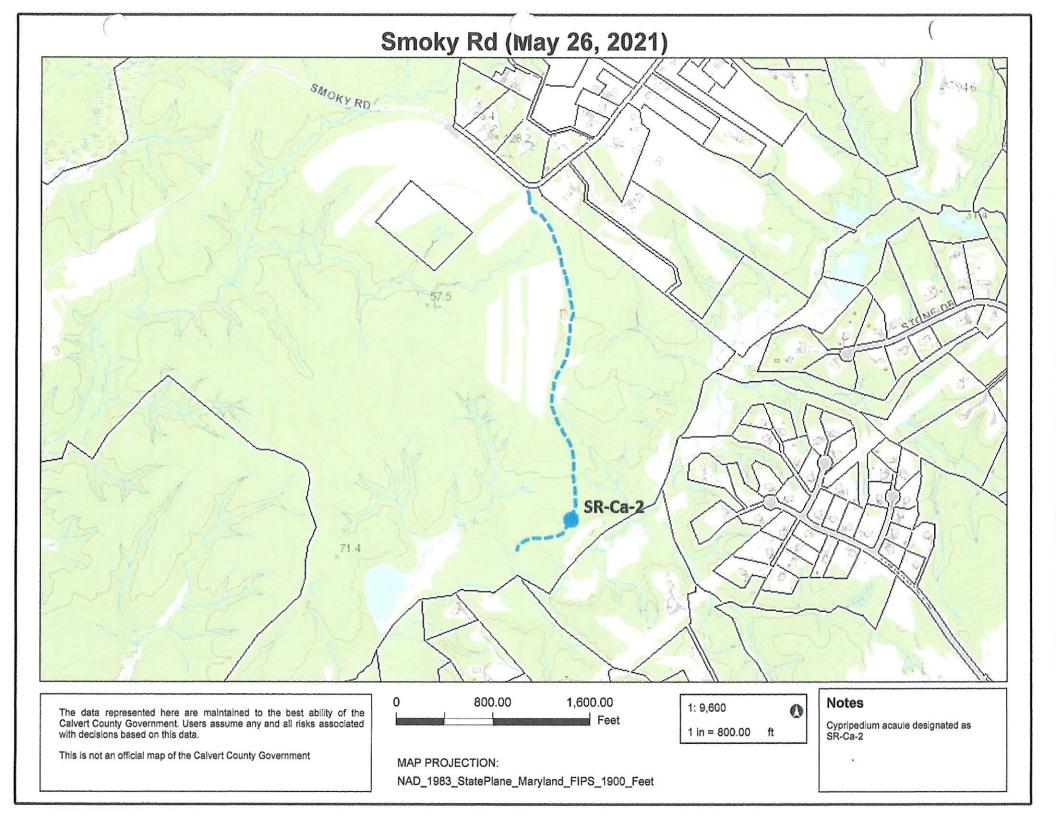


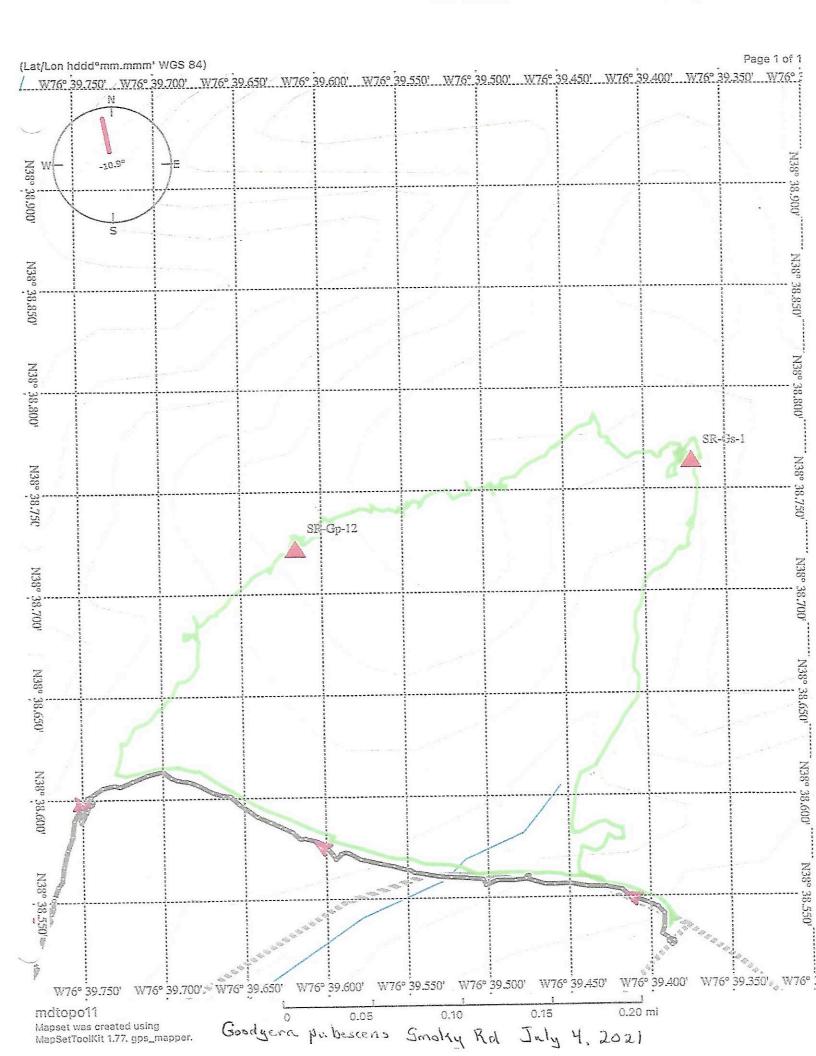
Flag Ponds Orchid Search (10/08/2021)

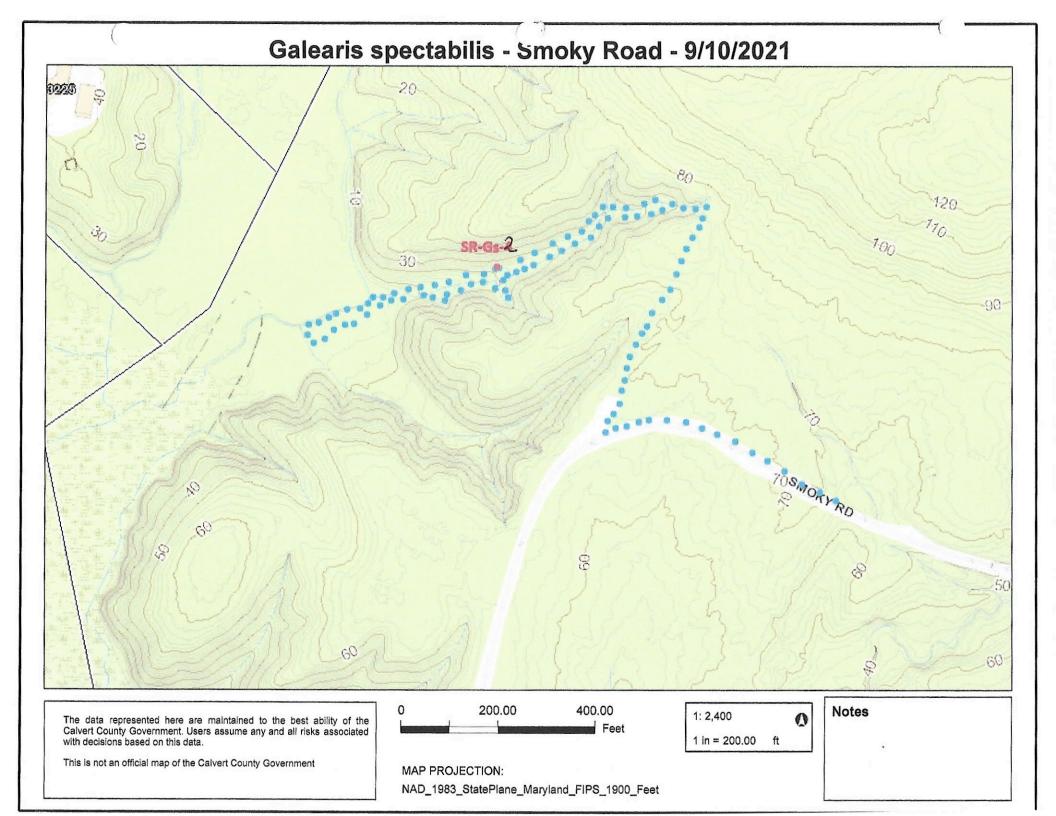
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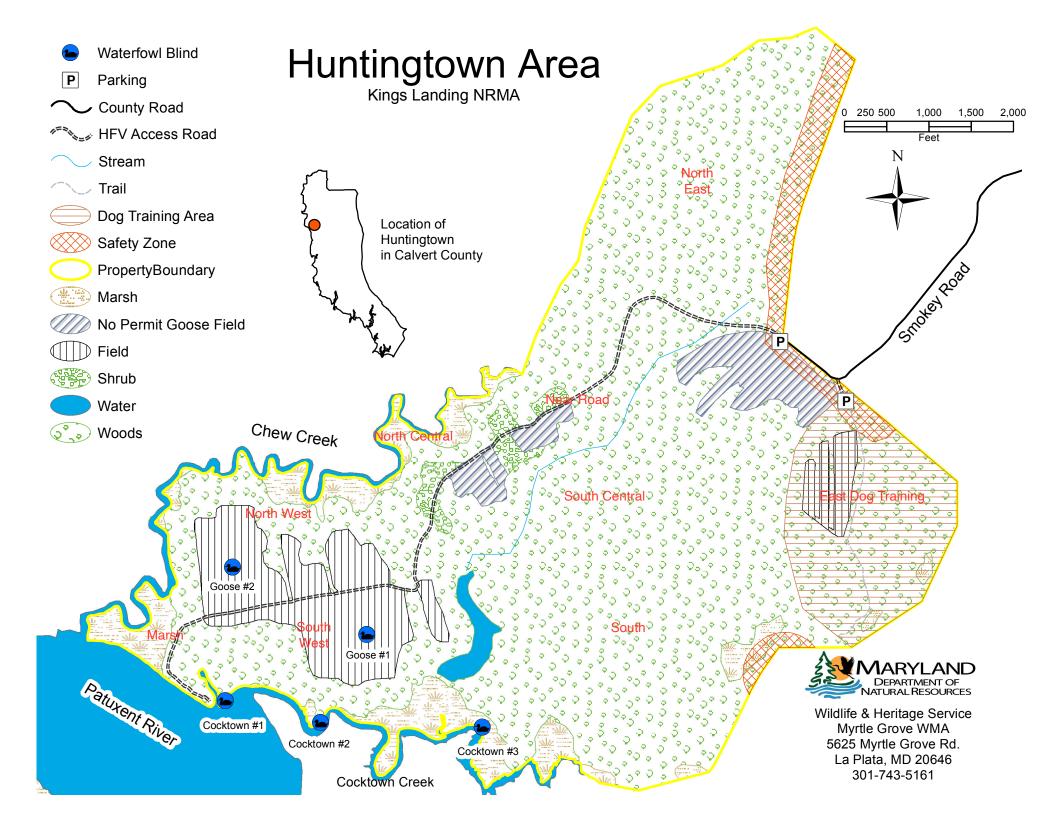












Calvert Orchid Project Running Tally 2018-2021

	SPECIES:2018 2019 2020				Leaf, Flower, Seed,	
OCATION	2021	PLANT ID	COORDINATES	DATE	Number of Plants	Comments
CLTN 2019	Galearis spectabilis	ACLT-Gs-1	N38° 31.001'W76° 31.137'	6/30/19	leaf	Our first discovery of Galearis at ACLT (Chestnut Trail)
CLTN 2019	Galearis spectabilis	ACLT-Gs-2	N38° 30.996'W76° 31.139'	6/30/19	leaf	Our first discovery of Galearis at ACLT (Chestnut Trail)
LTN 2018	Goodyera pubescens	ACLT-Gp-1	N38° 33.183'W76° 32.812'	4/20/18	leaf, 7	Double Oak Rd; co-located with ACLT-Td-1
LTN 2018	Goodyera pubescens	ACLT-Gp-2	N38° 33.188'W76° 32.827'	4/20/18	leaf,4	Double Oak Rd
LTN 2018 LTN 2018	Goodyera pubescens Goodyera pubescens	ACLT-Gp-3 ACLT-Gp-4	N38° 33.175'W76° 32.793' N38° 33.173'W76° 32.788'	4/20/18 4/20/18	leaf, several leaf	Double Oak Rd Double Oak Rd
LTN 2018	Tipularia discolor	ACLT-Td-1	N38° 33.183'W76° 32.812'	4/20/18	icui	Double Oak Rd; co-located with ACLT-Gp-1
LTN 2018	Tipularia discolor	ACLT-Td-2	N38° 33.173'W76° 32.786'	4/20/18		Double Oak Rd
LTN 2018	Tipularia discolor	ACLT-Td-3	N38° 33.192'W76° 32.830'	4/15/18		Double Oak Rd; many in vicinity
LTS 2019	Aplectrum hyemale	ACLTS-Ah-1	N38° 30.224'W76° 31.055'	1/6/19	leaf 3	East Loop Trail
LTS 2018	Tipularia discolor	ACLTS-Td-05	5 N38° 31.102'W76° 31.462'	12/29/18	leaf 5	Ridge Loop Trail
LTS 2018	Tipularia discolor		5 N38° 31.117'W76° 31.498'	12/29/18	leaf 12	Ridge Loop Trail
LTS 2018	Tipularia discolor		7 N38° 31.113'W76° 31.515'	12/29/18	leaf 1	Ridge Loop Trail
LTS 2018	Tipularia discolor		B N38° 31.029'W76° 31.522'	12/29/18	leaf 8	Ridge Loop Trail
LTS 2018	Tipularia discolor		9 N38° 30.930'W76° 31.458'	12/29/18 12/29/18	leaf 1	Ridge Loop Trail
CLTS 2018	Tipularia discolor Tipularia discolor		0 N38° 30.790'W76° 31.315' 1 N38° 30.648'W76° 31.150'	1/27/19	leaf leaf 3	Ridge Loop Trail Laurel Trail
CLTS 2019	Tipularia discolor		2 N38° 30.669'W76° 31.138	1/27/19	leaf 1	Laurel Trail
CLTS 2019	Tipularia discolor		3 N38° 30.664'W76° 31.374'	1/27/19	leaf 10+	Laurel Trail
LTS 2019	Tipularia discolor		4 N38° 30.665'W76° 31.383'	1/27/19	leaf several	Laurel Trail
CLTS 2019	Tipularia discolor		5 N38° 30.704'W76° 31.432'	1/27/19	leaf 20+	Laurel Trail; large group
LTS 2019	Tipularia discolor		5 N38° 30.691'W76° 31.446'	1/27/19	leaf 20+	Laurel Trail; at base of Beech
CLTS 2019	Tipularia discolor	ACLTS-Td-1	7 N38° 30.541'W76° 31.342'	1/27/19	leaf 13	Laurel Trail
CLTS 2019	Tipularia discolor	ACLTS-Td-18	8 N38° 30.561'W76° 31.270'	1/27/19	leaf 10?	Laurel Trail
CLTS 2019	Tipularia discolor	ACLTS-Td-19	9 N38° 30.546'W76° 31.276'	1/27/19	leaf 13	Laurel Trail
LTS 2019	Tipularia discolor		0 N38° 30.580'W76° 31.559'	2/3/19	leaf 1	Karen's Trail; single small leaf
LTS 2019	Tipularia discolor		1 N38° 30.466'W76° 31.751'	2/3/19	leaf 5	Karen's Trail
CLTS 2019	Tipularia discolor		2 N38° 30.442'W76° 31.768'	2/3/19	leaf 2	Karen's Trail
CLTS 2019	Tipularia discolor		3 N38° 30.403'W76° 31.709'	2/3/19	leaf 85+	Karen's Trail, largest group (85 contiguous at bae of tree)
LTS 2019	Tipularia discolor		4 N38° 30.391'W76° 31.648'	2/3/19	leaf 1	Karen's Trail
CLTS 2019	Tipularia discolor		5 N38° 30.311'W76° 31.458'	2/3/19	leaf 5	East Loop Trail
CLTS 2019 CLTS 2019	Tipularia discolor Tipularia discolor		5 N38° 30.332'W76° 31.451' 7 N38° 30.444'W76° 31.376'	2/3/19	leaf 3	East Loop Trail
LTS 2019 CLTS 2019	Tipularia discolor Tipularia discolor		7 N38° 30.444'W76° 31.376' 8 N38° 30.449'W76° 31.301'	2/3/19 2/3/19	leaf 3 leaf 7+	East Loop Trail East Loop Trail
CLTS 2019	Tipularia discolor Tipularia discolor		9 N38° 30.859'W76° 31.512'	2/3/19	leaf 7+ leaf 6, 1 seed	Flint Trail
CLTS 2019	Tipularia discolor		0 N38° 30.893'W76° 31.604'	2/15/19	leaf 6	Flint Trail
CLTS 2019	Tipularia discolor		1 N38° 31.054'W76° 31.538'	2/15/19	leaf	Flint Trail
CLTS 2019	Tipularia discolor		2 N38° 30.859'W76° 31.512'	2/15/19	leaf	Flint Trail
CLTS 2019	Tipularia discolor		3 N38° 30.893'W76° 31.604'	2/15/19	leaf	Flint Trail
CLTS 2019	Tipularia discolor		4 N38° 31.054'W76° 31.538'	2/15/19	leaf 7	Flint Trail
CCCS 2021	Galearis spectabilis	BC-Gs-1	N38° 38.018′ 1076° 35.446	7/31/21	1 plant in leaf	Keim Forest near creek base of Tulip tree
CCCS 2021	Galearis spectabilis	BC-Gs-2	N38° 30.06' 1076° 35.469'	7/31/21	3 plants +1 in leaf 8	k Keim Forest North of Gs-1
GHF 2020	Aplectrum hyemale	BG-Ah-1	N38° 48587'W76° 5863'	12/13/20	68 in leaf	Forest Trail
DP 2018	Tipularia discolor	DDP Td 1	N38° 43.430'W76° 39.940'	4/20/18	leaf 60	Near stream
DP 2018	Tipularia discolor	DDP Td 2	N38° 43.448'W76° 39.967'	4/20/18	leaf	Near stream, Td-2 through Td-11 are one site on iNaturalist
DP 2018	Tipularia discolor	DDP Td 3	N38° 43.444'W76° 39.960'	4/20/18	leaf	Near stream, Td-2 through Td-11 are one site on iNaturalist
DP 2018	Tipularia discolor	DDP Td 4	N38° 43.447'W76° 39.958'	4/20/18	leaf	Near stream, Td-2 through Td-11 are one site on iNaturalist
DP 2018 DP 2018	Tipularia discolor	DDP Td 5 DDP Td 6	N38° 43.448'W76° 39.965'	4/20/18 4/20/18	leaf leaf	Near stream, Td-2 through Td-11 are one site on iNaturalist
DP 2018 DP 2018	Tipularia discolor Tipularia discolor	DDP Td 8 DDP Td 7	N38° 43.442'W76° 39.960' N38° 43.442'W76° 39.956'	4/20/18	leaf	Near stream, Td-2 through Td-11 are one site on iNaturalist Near stream, Td-2 through Td-11 are one site on iNaturalist
DP 2018	Tipularia discolor	DDP Td 8	N38° 43.441'W76° 39.958'	4/20/18	leaf	Near stream, Td-2 through Td-11 are one site on iNaturalist
DP 2018	Tipularia discolor	DDP Td 9	N38° 43.439'W76° 39.960'	4/20/18	leaf	Near stream, Td-2 through Td-11 are one site on Naturalist
DP 2018	Tipularia discolor	DDP Td 10	N38° 43.440'W76° 39.951'	4/20/18	leaf	Near stream, Td-2 through Td-11 are one site on Naturalist
DP 2018	Tipularia discolor	DDP Td 11	N38° 43.425'W76° 39.948'	4/20/18	leaf	Near stream, Td-2 through Td-11 are one site on iNaturalist
PNP 2018	Apletrum hyemale	FP-Ah-1	N38° 27.008'W76° 27.642'	3/12/18	leaf 2	Lower North Ridge Trail
PNP 2018	Goodyera pubescens	FP-Gp-1	N38° 27.166'W76° 27.771'	8/5/18	leaf	Lower North Ridge Trail
PNP 2019	Galearis spectabilis	FP-Gs-01	N38° 26.691'W76° 27.326'	4/28/19	leaf	South Ridge Trail
NP 2019	Galearis spectabilis	FP-Gs-02	N38° 26.690'W76° 27.357'	4/28/19	leaf	South Ridge Trail
PNP 2019	Galearis spectabilis	FP-Gs-03	N38° 26.681'W76° 27.381'	4/28/19	leaf	South Ridge Trail
PNP 2019	Galearis spectabilis	FP-Gs-04	N38° 26.675'W76° 27.410'	4/28/19	leaf	South Ridge Trail
NP 2019	Galearis spectabilis	FP-Gs-05	N38° 26.680'W76° 27.418'	4/28/19	leaf	South Ridge Trail
NP 2019	Galearis spectabilis	FP-Gs-06	N38° 26.673'W76° 27.443'	4/28/19	leaf	South Ridge Trail
NP 2019	Galearis spectabilis	FP-Gs-07	N38° 26.670'W76° 27.451'	4/28/19	leaf	South Ridge Trail
NP 2019	Galearis spectabilis	FP-Gs-08	N38° 26.665'W76° 27.581'	4/28/19	leaf	South Ridge Trail
PNP 2019 PNP 2019	Galearis spectabilis	FP-Gs-09	N38° 26.667'W76° 27.585'	4/28/19	leaf	South Ridge Trail
NP 2019 NP 2019	Galearis spectabilis Galearis spectabilis	FP-Gs-10 FP-Gs-11	N38° 26.676'W76° 27.592' N38° 26.670'W76° 27.587'	4/28/19 4/28/19	leaf leaf	South Ridge Trail
NP 2019 NP 2019	Galearis spectabilis Galearis spectabilis	FP-Gs-11 FP-Gs-12	N38° 26.670'W76° 27.587' N38° 27.045'W76° 27.684'	4/28/19 5/17/19	leaf	South Ridge Trail Lower North Ridge Trail; additional plants to the south, but
NP 2019	Galearis spectabilis	FP-GS-12 FP-GS-13	N38 27.045 W76 27.684 N38° 27.041'W76° 27.684	5/17/19	leaf	Lower North Ridge Trail; additional plants to the south, but
NP 2018	Platanthera clavellata	FP-Pc-1	N38° 27.241'W76° 28.159'	10/6/18	seed 3	Floodplain
NP 2018	Platanthera clavellata	FP-Pc-2	N38° 27.155'W76° 28.215'	10/6/18	leaf 4, seed 1	Floodplain
NP 2019	Platanthera clavellata	FP-Pc-3	N38° 27.241'W76° 28.159'	7/24/19	leaf	Floodplain
NP 2019	Platanthera clavellata	FP-Pc-4	N38° 27.184'W76° 28.201'	7/24/19	leaf	Floodplain
NP 2018	Spiranthes ovalis	FP-So-1	N38° 26.969'W76° 27.511'	10/6/18	Flower 2	Duncan Pond near trail head. Not in iNaturalist, but in MD PlantAtlas; not found in 2019
PNP 2019	Spiranthes ovalis	FP-So-2	N38° 26.974'W76° 27.510'	9/21/19	Flower	Original 2018 finding next to Duncan Pond Trail
NP 2020	Spiranthes ovalis	FP-So	Same site extended		o Flower, leaf	3 groupings with a total of 25 -30 plants, marked with 8" nails
NP 2018	Tipularia discolor	FP-Td-1	N38° 27.042'W76° 27.762'	8/5/18	Flower	Upper North Ridge Trail
NP 2018	Tipularia discolor	FP-Td-2	N38° 26.905'W76° 27.750'	8/5/18	Flower 3	Upper North Ridge Trail
NP 2018	Tipularia discolor	FP-Td-3	N38° 26.850'W76° 27.709'	8/5/18	Flower 2	Upper North Ridge Trail Spur
NP 2018	Tipularia discolor	FP-Td-4	N38° 27.264'W76° 28.126'	10/6/18	leaf 3	Off trail, North Loop Trail
NP 2018 2018	Tipularia discolor Tipularia discolor	FP-Td-5 GP-Td-1	N38° 27.356'W76° 28.080'	10/14/18	leaf 1 leaf	Off trail, North Ridge Trail South side of driveway 6 groups in 10'X 30'
NRMA 2019	Cypripedium acaule	GP-Td-1 HC-Ca-1	N38° 29.158'W76° 35.341' N38° 42.397'W76° 41.561'	11/14/18 4/25/2019		South side of driveway 6 groups in 10'X 30' c Ca-1, Ca-2, Ca-3 are grouped together on iNaturalist. In dyingV. pine area. 4/25/19 in bud (white)
NRMA 2019	Cypripedium acaule	HC-Ca-1 HC-Ca-2	N38° 42.397'W76° 41.563'	4/25/2019		c Ca-1, Ca-2, Ca-3 are grouped together on iNaturalist. In dying v. pine area. 4/25/19 in bud (white) c Ca-1, Ca-2, Ca-3 are grouped together on iNaturalist. In dying V. pine area.
CNRMA 2019	Cypripedium acaule	HC-Ca-3	N38° 42.396'W76° 41.559'	4/25/2019		c Ca-1, Ca-2, Ca-3 are grouped together on iNaturalist. In dying V. pine area.
CNRMA 2019	Cypripedium acaule	HC-Ca-1	N38° 42.397'W76° 41.561'	4/25/2019		c Ca-1, Ca-2, Ca-3 are grouped together on iNaturalist. In dyingv. pine area. 4/25/19 in bud (white)
CNRMA 2019	Cypripedium acaule	HC-Ca-2	N38° 42.397'W76° 41.563'	4/25/2019		c Ca-1, Ca-2, Ca-3 are grouped together on iNaturalist. In dyingv. pine area.
CNRMA 2019	Cypripedium acaule	HC-Ca-3	N38° 42.396'W76° 41.559'	4/25/2019		c Ca-1, Ca-2, Ca-3 are grouped together on iNaturalist. In dying theme area.
NRMA 2020	Cypripedium acaule	HC-Ca-1-3	3 sites above	11/23/20	No plants seen	Dead pines that had fallen were cut and stacked on area where orchids were growing
NRMA 2018	Cypripedium acaule	HC-Ca-4	N38° 42.326'W76° 41.564'	5/6/18	leaf 2	Main Trail to River
CNRMA 2018		HC-Gp-1	N38° 41.802'W76° 41.307'	3/18/18	leaf	Off Trail in Hunting Area with Lycopodium
	Goodyera pubescens	HC-Gp-2	N38° 41.734'W76° 41.245'	3/18/18	leaf > 50	Off Trail in Hunting Area with Lycopodium . Includes Gp-3
CNRMA 2018		HC-Gp-3	N38° 41.714'W76° 41.245'	3/18/18		Off Trail in Hunting Area with Lycopodium . Includes Gp-3
	doouyera pubescens			3/18/18		Off Trail in Hunting Area with Lycopodium . Includes Gp-3
CNRMA 2018 CNRMA 2018	Goodyera pubescens	HC-Gp-4	N38° 41.714'W76° 41.251'	5/10/10		
CNRMA 2018 CNRMA 2018 CNRMA 2018	Goodyera pubescens	HC-Gp-5	N38° 41.714'W76° 41.251 N38° 41.714'W76° 41.240'	3/18/18		Off Trail in Hunting Area with Lycopodium . Includes Gp-3
CNRMA 2018 CNRMA 2018 CNRMA 2018 CNRMA 2018	Goodyera pubescens Goodyera pubescens Goodyera pubescens	HC-Gp-5 HC-Gp-6	N38° 41.714'W76° 41.240' N38° 41.704'W76° 41.234'	3/18/18 3/18/18		Off Trail in Hunting Area with Lycopodium . Includes Gp-3
CNRMA 2018 CNRMA 2018 CNRMA 2018 CNRMA 2018 CNRMA 2018 CNRMA 2018 CNRMA 2018	Goodyera pubescens Goodyera pubescens Goodyera pubescens Goodyera pubescens	HC-Gp-5	N38° 41.714'W76° 41.240'	3/18/18		

Calvert Orchid Project Running Tally 2018-2021

	SPECIES:2018 2019 2020				Leaf, Flower, Seed,	
LOCATION	2021	PLANT ID	COORDINATES	DATE	Number of Plants	Comments
HCNRMA 2019	Liparis lilifolia	HC-LI-1	N38° 41.805'W76° 41.246'	5/6/19	leaf, bud	East side at edge of trail at top of berm. Additional plants at edge of trail about 5 p south.
HCNRMA 2019	Liparis lilifolia	HC-LI-2	N38° 41.806'W76° 41.243'	5/6/19	leaf, bud	19 p east of trail at top of berm
HCNRMA 2019		HC-LI-2	N38° 41.806'W76° 41.243'	5/6/19	leaf, bud	19 p east of trail at top of berm
HCNRMA 2020 HCNRMA 2018	Neotti a bifolia	HC-Nb-1	N38°.7009533' W76.6924! N38° 42.023'W76° 41.544'	4/12/20	Flower, leaf	50 plants scattered over 40'X40' floodplain
HCNRMA 2018		HC-Td-1 HC-Td-2	N38 42.023 W76 41.544 N38° 42.284'W76° 41.652'	3/18/18 5/6/18	leaf 1 leaf 5-6	Blue Blaze Trail in Hunting area Side trail to river
HCNRMA 2018		HC-Td-3	N38° 42.297'W76° 41.568'	10/8/18	leaf 3	Main Trail to River
HCNRMA 2018		HC-Td-4	N38° 42.285'W76° 41.567'	10/12/18	leaf 33, seed10	Main trail to River
HCNRMA 2018	Tipularia discolor	HC-Td-5	N38° 42.244'W76° 41.582'	10/8/18	leaf 3	Main Trail to River
ICNRMA 2018		HC-Td-6	N38° 42.295'W76° 41.568'	10/8/18	leaf 3	Main Trail to River
HCNRMA 2018		HC-Td-7	N38° 42.556'W76° 41.677'	10/8/18	leaf and seed	Marsh near Kaylorite Mine
ICNRMA 2018		HC-Td-8	N38° 42.484'W76° 41.640'	10/8/18	leaf 15, seed5	Trail to Kaylorite Mine
ICNRMA 2019	Tipularia discolor Tipularia discolor	HC-Td-9 HF-Td-1	N38° 41.947'W76° 41.471' N38° 34.284'W76° 34.432'	2/22/19 4/3/18	leaf 30+	no picture/ not in iNaturalist Before main intersection. Includes Td-1, Td-2, Td-3 in iNaturalist.
ITF 2018	Tipularia discolor	HF-Td-2	N38° 34.279'W76° 34.431	4/3/18	ieai 30+	Before main intersection. Includes Td-1, Td-2, Td-3 in INaturalist. Before main intersection. Includes Td-1, Td-2, Td-3
ITF 2018	Tipularia discolor	HF-Td-3	N38° 34.272'W76° 34.417'	4/3/18		Before main intersection. Includes Td-1, Td-2, Td-3 in iNaturalist.
ITF 2018	Tipularia discolor	HF-Td-4	N38° 34.126'W76° 34.697'	4/3/18	leaf	Road to Pond
ITF 2018	Tipularia discolor	HF-Td-5	N38° 34.199'W76° 34.604'	4/3/18	leaf 1	
ITF 2018	Tipularia discolor	HF-Td-6	N38° 34.262'W76° 34.438'	4/3/18	leaf	Trail to Cat Station. Includes Td-6. Td-7, Td-8 in iNaturalist.
ITF 2018	Tipularia discolor	HF-Td-7	N38° 34.226'W76° 34.458'	4/3/18	leaf	Trail to Cat Station. Includes Td-6. Td-7, Td-8 in iNaturalist.
ITF 2018	Tipularia discolor	HF-Td-8	N38° 34.239'W76° 34.450'	4/3/18	leaf	Trail to Cat Station. Includes Td-6. Td-7, Td-8 in iNaturalist.
LP 2018	Tipularia discolor	KL-Td-1	N38° 37.457'W76° 40.075'	4/22/18	leaf 4	Trail to Amphitheater
LP 2018	Tipularia discolor Tipularia discolor	KL-Td-2 KL-Td-3	N38° 37.448'W76° 40.081'	4/22/18	leaf 9	Trail to Amphitheater
LP 2018 LP 2018	Tipularia discolor Tipularia discolor	KL-Td-3 KL-Td-4	N38° 37.451'W76° 40.110' N38° 37.453'W76° 40.118'	4/22/18 4/22/18		Around cinderblock bldg on road to Amphitheatre. Includes Td-4 and Td-5
LP 2018 LP 2018	Tipularia discolor	KL-Td-4 KL-Td-5	N38° 37.453 W76° 40.118 N38° 37.442'W76° 40.110'	4/22/18		Around cinderblock bldg on road to Amphitheatre. Includes Td-4 and Td-5 Around cinderblock bldg on road to Amphitheatre. Includes Td-4 and Td-5
LP 2018 LP 2018	Tipularia discolor	KL-Td-5 KL-Td-6	N38 37.442 W76 40.110 N38° 37.625'W76° 40.385'	4/22/18	leaf	Wetlands Trail
LP 2018 LP 2018	Tipularia discolor	KL-Td-0 KL-Td-7	N38° 37.662'W76° 40.375'	4/29/18	leaf	Several groups at Observation Blind
LP 2018	Tipularia discolor	KL-Td-8	N38° 37.647'W76° 40.397'	4/29/18	leaf	Wetland Trail Boardwalk
LP 2018	Tipularia discolor	KL-Td-9	N38° 37.617'W76° 40.459'	4/29/18	leaf many	Wetland Trail extended 24' X 10'
LP 2018	Tipularia discolor	KL-Td-10	N38° 37.665'W76° 40.365'	9/30/18	No data	
F2Bay 2018	Cypripedium acaule	PF2B-Ca-1	N38° 32.801'W76° 32.918'	6/8/18	leaf, seed	East of gate near Power line; 1 plant on nouth side of Trail
F2Bay 2018	Cypripedium acaule	PF2B-Ca-2	N38° 32.809'W76° 32.914'	6/8/18	leaf, seed	East of gate near Power line; 2 plants on south side of Trail
F2Bay 2018	Galearis spectablis	PF2B-Gs-1	N38° 32.665'W76° 32.568'	6/8/18	leaf, seed 4	On trail and down slope
F2Bay 2018	Galearis spectablis	PF2B-Gs-2	N38° 32.661'W76° 32.569'	6/8/18		multiple plants - includes photos labeled Gs-2 to Gs-6; approx. 10' S
F2Bay 2018	Galearis spectablis	PF2B-Gs-7	N38° 32.684'W76° 32.630'	6/8/18	Leaf 15, stem1	
F2Bay 2018 F2Bay 2018	Galearis spectablis Galearis spectablis	PF2B-Gs-8 PF2B-Gs-13	N38° 32.724'W76° 32.717'	6/8/18 6/8/18	Leaf Single Leaf	10 plants in vacinity. Photos labeled Gs-8 to Gs-12 No data
RNRMA 2018	Aplectrum hyemale	SR-Ah-1	N38° 32.733'W76° 32.722' N38° 38.541'W76° 39.774'	5/5/2018	Single Leaf	Main road in ditch. Revisit. Revisit to see if plants survived aper road work.
RNRMA 2019	Aplectrum hyemale	SR-Ah-1	N38° 38.541 W76° 39.774	5/14/2019		Main road in ditch. Revisit: Revisit to see if plants survived aper road work.
RNRMA 2020	Aplectrum hyemale	SR-Ah-1	N38° 38.541'W76° 39.774'	9/24/2020		Main road in ditch. Revisit. Revisit to see if plants survived aper road work.
RNRMA 2018	Corallorhiza odontorhiza		N38° 38.560'W76° 39.460'	10/3/18		Bill Hubick found. Does not want location public. Found in roadside ditch.
RNRMA 2019	Corallorhiza odontorhiza	SR-Co-2	N38° 38.560'W76° 39.460'	10/1/19	2 clumps	Revisit on 10/1/19 to verify plant survival
SRNRMA 2020	Corallorhiza odontorhiza	SR-Co 1-2	See above sites	9/24/20	2 clumps	Revisit to verify plants. Small plants in bloom despite road work disturbance
SRNRMA 2018	Cypripedium acaule	SR-Ca-1	N38° 38.606'W76° 39.683'	6/4/18	plants 3, stem1	Side of Road; same location as SR- Gp-2
SRNRMA 2021	Cypripedium acaule	SR-Ca-2	N38° 37.987′ N76° 39.171	5/26/21	6+ plants	South edge of East Dog Training
SRNRIVIA 2021	Galearis spectabilis	SR-Gs-1 SR-Gs-2	N38° 38.689′ 1076° 39.371° N38° 38.689′ 1076° 39.768′	7/4/21 9/10/21	1 plant in leat	North East washed area North Central in ravine
RNRMA 2018	Goodyera pubescens	SR-Gp-1	N38° 38.460'W76° 39.745'	6/4/18	leaf 1, seed 1	Off trail. SE end of several occurrences extending NW
RNRMA 2018	Goodyera pubescens	SR-Gp-2	N38° 38.606'W76° 39.683'	6/4/18	leaf 5;7-29-18	Off trail; same location as SR-Ca-1.
RNRMA 2018	Goodyera pubescens	SR-Gp-3	N38° 38.512'W76° 39.643'	7/29/18	leaf 13	Off trail on upper W slope of stream bank
RNRMA 2018	Goodyera pubescens	SR-Gp-4	N38° 38.467'W76° 39.758'	7/29/18	leaf 18+; 1 old flowe	Off trail. Many groups along old trail to NW and SE to SR-Gp-1
RNRMA 2018	Goodyera pubescens	SR-Gp-5	N38° 38.489'W76° 39.761'	7/29/18	leaf	Off trail; 2 groups.
RNRMA 2018	Goodyera pubescens	SR-Gp-6	N38° 38.494'W76° 39.767'	7/29/18	leaf	Off trail; 2 plants.
RNRMA 2018	Goodyera pubescens	SR-Gp-7	N38° 38.552'W76° 39.433'	7/29/18	Flower 3	Near gate on bank; 3 p west of SR- Td-9
RNRMA 2018	Goodyera pubescens	SR-Gp-8	N38° 38.509'W76° 39.779'	7/30/18	leaf 4	Off trail
RNRMA 2018	Goodyera pubescens	SR-Gp-9	N38° 38.568'W76° 39.457'	10/3/18	leaf, stem	Off trail near stream
RNRMA 2021	Goodyera pubescens	SR-Gp-10	N38° 38.904'8/76° 39.403'	6/17/21	I plant Leaf & bud	North East on trail under log
RNRMA 2021	Goodyera pubescens	SR-Gp-12	N38° 38 871'8/76° 39.433	7/4/21	Several plants Leaf & DUG	North East on deer trail with Lycopodeum between River River
RNRMA 2018	Tipularia discolor	SR-Td-1	N38° 38.438'W76° 39.855'	5/5/18	leaf	Near road 10'
RNRMA 2018	Tipularia discolor	SR-Td-2	N38° 38.346'W76° 40.070'	5/5/18	leaf	South of road
RNRMA 2018	Tipularia discolor	SR-Td-3	N38° 38.584'W76° 39.599'	7/29/18	Flower	North of road
RNRMA 2018	Tipularia discolor	SR-Td-4	N38° 38.579'W76° 39.614'	7/29/18	Flower 3	South side of road 3' To Southern Red Oak ; 30 p. N of a second
RNRMA 2018	Tipularia discolor	SR-Td-5	N38° 38.552'W76° 39.633'	7/29/18		Off trail SW top of 3' deep@rainage ditch; larger group to east at jct with 2nd ditch at base
RNRMA 2018	Tipularia discolor	SR-Td-6	N38° 38.466'W76° 39.709'	7/29/18	Flower 1	South of Old Smoky Rd on lower flood plain S of stream with Xmas
RNRMA 2018	Tipularia discolor	SR-Td-7	N38° 38.117'W76° 40.232'	7/29/18	Flower	South side of Road in woods E of fields at upper slope above pond
				7/29/18	Flower 1	South side of road near entrance gate
RNRMA 2018	Tipularia discolor	SR-Td-9	N38° 38.552'W76° 39.433'			Off trails A larger many is larger at 4/ to 1/
RNRMA 2018 RNRMA 2018	Tipularia discolor Tipularia discolor	SR-Td-9 SR-Td-10	N38° 38.560'W76° 39.457'	10/3/18	leaf 8, stem 2	Off trail; A larger group is located 4' to the west.
RNRMA 2018 RNRMA 2018 RNRMA 2018	Tipularia discolor Tipularia discolor Tipularia discolor	SR-Td-9 SR-Td-10 SR-Td-11	N38° 38.560'W76° 39.457' N38° 38.548'W76° 39.528'	10/3/18 10/3/18	leaf 8, stem 2 leaf 24, some with s	Off trail
RNRMA 2018 RNRMA 2018 RNRMA 2018 VFNP 2018	Tipularia discolor Tipularia discolor Tipularia discolor Goodyera pubescens	SR-Td-9 SR-Td-10 SR-Td-11 WF-GP-1	N38° 38.560'W76° 39.457' N38° 38.548'W76° 39.528' N38° 42.919'W76° 38.857'	10/3/18 10/3/18 3/28/18	leaf 8, stem 2 leaf 24, some with s leaf	Off trail SW corner of park
RNRMA 2018 RNRMA 2018 RNRMA 2018 /FNP 2018 /FNP 2018	Tipularia discolor Tipularia discolor Tipularia discolor	SR-Td-9 SR-Td-10 SR-Td-11 WF-GP-1 WF-Gp-2	N38° 38.560'W76° 39.457' N38° 38.548'W76° 39.528' N38° 42.919'W76° 38.857' N38° 42.933'W76° 38.822'	10/3/18 10/3/18 3/28/18 3/29/18	leaf 8, stem 2 leaf 24, some with s	Off trail
RNRMA 2018 RNRMA 2018 RNRMA 2018 VFNP 2018 VFNP 2018 VFNP 2018	Tipularia discolor Tipularia discolor Tipularia discolor Goodyera pubescens Goodyera pubescens	SR-Td-9 SR-Td-10 SR-Td-11 WF-GP-1	N38° 38.560'W76° 39.457' N38° 38.548'W76° 39.528' N38° 42.919'W76° 38.857'	10/3/18 10/3/18 3/28/18	leaf 8, stem 2 leaf 24, some with s leaf leaf 4	Off trail SW corner of park Intersection of 3 trails
RNRMA 2018 RNRMA 2018 RNRMA 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018	Tipularia discolor Tipularia discolor Tipularia discolor Goodyera pubescens Goodyera pubescens Goodyera pubescens	SR-Td-9 SR-Td-10 SR-Td-11 WF-GP-1 WF-Gp-2 WF-Gp-3	N38° 38.560'W76° 39.457' N38° 38.548'W76° 39.528' N38° 42.919'W76° 38.857' N38° 42.933'W76° 38.822' N38° 43.043'W76° 38.295'	10/3/18 10/3/18 3/28/18 3/29/18 6/10/18	leaf 8, stem 2 leaf 24, some with s leaf leaf 4 leaf	Off trail SW corner of park Intersection of 3 trails Abandoned trail
RNRMA 2018 RNRMA 2018 RNRMA 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018	Tipularia discolor Tipularia discolor Tipularia discolor Goodyera pubescens Goodyera pubescens Goodyera pubescens Tipularia discolor	SR-Td-9 SR-Td-10 SR-Td-11 WF-GP-1 WF-Gp-2 WF-Gp-3 WF-Td-1 WF-Td-2 WF-TD-3	N38° 38.560'W76° 39.457' N38° 38.548'W76° 39.528' N38° 42.919'W76° 38.857' N38° 42.933'W76° 38.822' N38° 43.043'W76° 38.295' N38° 43.078'W76° 38.321'	10/3/18 10/3/18 3/28/18 3/29/18 6/10/18 2/27/18 3/10/18 3/29/18	leaf 8, stem 2 leaf 24, some with s leaf leaf 4 leaf leaf leaf 9 leaf	Off trail SW corner of park Intersection of 3 trails Abandoned trail unnamed trail over bridge
RNRMA 2018 RNRMA 2018 RNRMA 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018	Tipularia discolor Tipularia discolor Tipularia discolor Goodyera pubescens Goodyera pubescens Goodyera pubescens Tipularia discolor Tipularia discolor	SR-Td-9 SR-Td-10 SR-Td-11 WF-GP-1 WF-Gp-2 WF-Gp-3 WF-Td-1 WF-Td-2 WF-TD-3 WF-TD-4	N38° 38.560'W76° 39.457' N38° 38.548'W76° 39.528' N38° 42.919'W76° 38.857' N38° 42.933'W76° 38.825' N38° 43.043'W76° 38.295' N38° 43.078'W76° 38.321' N38° 43.095'W76° 38.191'	10/3/18 10/3/18 3/28/18 3/29/18 6/10/18 2/27/18 3/10/18 3/29/18 3/29/18	leaf 8, stem 2 leaf 24, some with s leaf leaf 4 leaf leaf 9 leaf leaf	Off trail SW corner of park Intersection of 3 trails Abandoned trail unnamed trail over bridge Off trail at edge of park Unnamed trail Unnamed trail
RNRMA 2018 RNRMA 2018 RNRMA 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018	Tipularia discolor Tipularia discolor Tipularia discolor Goodyera pubescens Goodyera pubescens Tipularia discolor Tipularia discolor Tipularia discolor Tipularia discolor Tipularia discolor	SR-Td-9 SR-Td-10 SR-Td-11 WF-GP-1 WF-Gp-2 WF-Td-1 WF-Td-1 WF-Td-2 WF-TD-3 WF-TD-4 WF-TD-5	N38" 38.560 W76" 39.457 N38" 38.548 W76" 39.528 N38" 42.939 W76" 38.857 N38" 42.933 W76" 38.857 N38" 42.933 W76" 38.822' N38" 43.043 W76" 38.221' N38" 43.045 W76" 38.191' N38" 43.046' W76" 38.756' N38" 43.060' W76" 38.797'	10/3/18 10/3/18 3/28/18 3/29/18 6/10/18 2/27/18 3/10/18 3/29/18 3/29/18 3/29/18	leaf 8, stem 2 leaf 24, some with s leaf leaf 4 leaf leaf leaf leaf leaf leaf	Off trail SW corner of park Intersection of 3 trails Abandoned trail unnamed trail over bridge Off trail at deg of park Unnamed trail
RNRMA 2018 RNRMA 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018	Tipularia discolor Tipularia discolor Tipularia discolor Goodyera pubescens Goodyera pubescens Tipularia discolor Tipularia discolor Tipularia discolor Tipularia discolor Tipularia discolor Tipularia discolor Tipularia discolor	SR-Td-9 SR-Td-10 SR-Td-11 WF-GP-1 WF-Gp-2 WF-Gp-3 WF-TD-3 WF-TD-5 WF-TD-6	N38" 38.560 W76" 39.457 N38" 38.548 W76" 39.528 N38" 42.933 W76" 38.857 N38" 42.933 W76" 38.857 N38" 43.043 W76" 38.3221 N38" 43.043 W76" 38.321 N38" 43.095 W76" 38.321 N38" 43.046 W76" 38.791 N38" 43.060 W76" 38.797 N38" 42.997 W76" 38.591	10/3/18 10/3/18 3/28/18 3/29/18 6/10/18 2/27/18 3/10/18 3/29/18 3/29/18 3/29/18 3/29/18	leaf 8, stem 2 leaf 24, some with s leaf leaf leaf leaf leaf leaf leaf leaf	Off trail SW corner of park Intersection of 3 trails Abandoned trail unnamed trail over bridge Off trail at deg of park Unnamed trail Unnamed trail Unnamed trail
RNRMA 2018 RNRMA 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 VFNP 2018 BR 2018	Tipularia discolor Tipularia discolor Tipularia discolor Goodyera pubescens Goodyera pubescens Tipularia discolor Tipularia discolor Tipularia discolor Tipularia discolor Tipularia discolor Tipularia discolor Galearis spectablis	SR-Td-9 SR-Td-10 SR-Td-11 WF-GP-1 WF-Gp-2 WF-Td-1 WF-Td-1 WF-Td-2 WF-TD-3 WF-TD-4 WF-TD-5 WF-TD-6 YB-Gs-1	N38° 38.560°W76° 39.457° N38° 38.548°W76° 39.528° N38° 42.919°W76° 38.852° N38° 43.043°W76° 38.822° N38° 43.043°W76° 38.329° N38° 43.008°W76° 38.3291° N38° 43.006°W76° 38.351° N38° 43.046°W76° 38.756° N38° 43.060°W76° 38.751° N38° 43.090°W76° 38.591° N38° 43.897°W76° 40.275°	10/3/18 10/3/18 3/28/18 3/29/18 6/10/18 2/27/18 3/10/18 3/29/18 3/29/18 3/29/18 3/29/18 3/29/18	leaf 8, stem 2 leaf 24, some with s leaf leaf leaf leaf leaf leaf leaf leaf	Off trail SW corner of park Intersection of 3 trails Abandoned trail unnamed trail over bridge Off trail at edge of park Unnamed trail Unnamed trail Unnamed trail Private gravel road off Yellow Bank
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Ten Orchids Documented in Calvert Orchids Project

Aplectrum hyemale Adam and Eve: Found in late May and early June. Leaf found in winter and early spring. Found at ACLTS, ACLTN. Kings Landing NRMA-Smoky Road, Biscoe Gray Farm?



Corallorhiza odontorhiza Autumn Coral Root: Found in October. Found in forests and wetlands. Found at Kings Landing-Smoky Road. Only one site.



Cypripedium acaule Moccasin Flower or Lady Slipper: Found late April or early May. Found in forests associated with pine. Found at PF2Bay, Hall Creek NRMA, Kings Landing-Smoky Road.



Galearis spectablis Showy orchid: Found in late April and May. Find in forests. Found at ACLTN, Flag Ponds, PF2Bay.



Goodyera pubescens Downy Rattlesnake Plantain: Found in July and early August. Leaf found in winter and early spring. Found in forests. Found at ACLTN, Flag Ponds, Hall Creek NRMA, Kings Landing-Smoky Road, Ward Farm.



Liparis lillifolia Large Twayblade: Found in May and June. Found in forests. Found at Hall Creek NRMA.



Neottia bifolia Southern Twayblade: Blooms in March, April and May. Found in fens, hummocks, bogs, marshes. Needs full to part sun. Found in Cove Point Quad in April, 2019 by Wayne Longbottom.



Platanthera clavellata Large Club Spur Bog Orchid: Found in September and October. Found at Flag Ponds.



Spiranthes ovalis Lesser Ladies' Tresses: Found in early October. Found in moist woodlands. Found at Flag Ponds. Only one site.



Tipularia discolor Cranefly orchid: Found in late July and early August. Leaf is found in winter and early spring. Found in ACLT N & S, Dunkirk District Park, Flag Ponds, Gatewood Preserve, Hall Creek, Hughes Farm, Kings Landing Park, Kings Landing-Huntingtown NRMA-Smoky Road, Ward Farm and Biscoe Gray. This orchid is so abundant that we are no longer documenting it.



Fourteen Orchids of the Maryland Coastal Plain that Might be seen in Calvert County

Epipactis helleborine Broad Leaved Helleborine: Found in late summer (August/ September) in disturbed areas such as sidewalks, forests and swamps. This is a non-native orchid! It has been found in Prince George County.



Isotria verticilliata Large Whorled Pogonia: It blooms in May and June. It likes mesic to dry woodlands and bogs and acid soil and disturbed areas. It was seen in Cove Point Quad in 1998 and also in St. Mary's County.



Malaxis unifolia Green Adder's Mouth: Blooms in June and July. Found in bogs, forests, swamps, and woodlands. S2 Found in St Mary's County.



Platanthera blephariglottis White Fringed Bog Orchid; Found late July and August. Found in fens, marshes, and wetlands. S2 Mostly found in Worcester and Wicomico counties, but there was one site in Anne Arundel in 1981.



Platanthera ciliaris Orange Fringed Bog Orchid: Found in July and August. Found in moist meadows, marshes, bogs and woodlands. S2 Seen in Anne Arundel County by Wayne Longbottom in 1991.



Platanthera cristata Crested Orange Bog Orchid: Found in July and early August. Found in moist meadows, marshes and prairies. S3 Mostly found in Worcester and Wicomico counties, but historically found in Anne Arundel and St Mary's counties.



Platanthera flava Northern Tubercled Bog Orchid Palegreen orchid: Found in June and July. Found in moist meadows, floodplains and sunny areas. S2S3 Maryland Biodiversity Project lists it as being in Calvert County. Seen by Kerry Wixted in Anne Arundel County, Bristol Quad, 6-25-2009



Platanthera lacera Ragged Fringed Orchid: Found in late June and early July. Found in wetlands and riverbanks. It is listed in Maryland Biodiversity Project as being in Calvert County, but there is no documentation in the Maryland Plant Atlas. It is found on the coastal plain and throughout Maryland



Pogonia ophioglossoides Rose Pogonia: Found in early June. Found in boggy habitat, riverbanks and swamps. Watch list for state. Found in Prince George, Wicomico and Anne Arundel counties.



Spiranthes cernua Nodding Ladies' Tresses; Found in September and early October. Found in moist fields, woodlands, bogs and marshes. It is listed in the Maryland Biodiversity Project as being in Calvert County. The Maryland Plant Atlas shows one site in Calvert County, but is listed as Bristol Quad September 16,1904.



Spiranthes lacera Slender Ladies' Tresses: Found in August and early September. Found in moist to dry meadows, fields and open woods. Found in Calvert in 1919, but seen in Deale, Anne Arundel County in 2019.



Spiranthes tuberosa Little Ladies' Tresses: Found in late August, blooms later than *S. lacera*. Found in dry to moist prairies, meadows and forests. Listed asS1. Only modern siting was in Upper Marlboro Quad in 1990 by Wayne Longbottom. Very unlikely to be in Calvert, only 3 sitings in Maryland Plant Atlas and 4 in Maryland Biodiversity Project.



Spiranthes vernalis Spring Ladies' Tresses: Found in late June and early July. Found in dry to moist meadows and prairies. Common on Coastal Plain including being found in Calvert County Cove Point by Brent Steury in 1996.



Triphora trianthophoros Three Birds Orchid: Found in August and September. Found in mesic forests and woodlands. Llisted S1. Only found in Queen Anne County. Probably not in Calvert. Flowers for only 1 day.



Supporting Calvert County's nature parks and natural spaces



A partnership between Calvert Nature Society and Calvert County Natural Resources Division

2021 Annual Report

Date of Issue March 2022

CALVERT STEWARDS VOLUNTEER PROGRAM c/o Natural Resources Division 2880 Grays Road Prince Frederick, MD 20678 (410) 535-5327 Volunteer Portal: https://calvertstewards.galaxydigital.com/ Calvert Nature Society: www.calvertparks.org Calvert County Natural Resources Division: <u>www.calvertcountymd.gov/NaturalResources</u>

