Calvert Orchid Conservation 2023 Annual Report

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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. 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.

NAOCC activities focus on establishing collections of seeds and orchid mycorrhizal fungi, developing protocols to propagate and restore all native orchid species and developing an interactive website to provide the public with a mechanism to identify and learn everything that is known about our native orchids.

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 County-owned property 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

VOLUNTEER RECOGNITION AND APPRECIATION

The efforts of volunteers will be recognized at our volunteer appreciation picnic.

SUMMARY OF FIELD WORK

There were two major components to the Orchid Conservation Project during the 2023 season. First was a continuation of field work which included both looking for new orchids and checking on previously found orchid sites. Exploratory field work was confined to three public areas: Flag Ponds, Smoky Road, and Keim Forest. Second was the attempt to establish a more workable and expandable program and data collection. This involved attempting to establish contact with individuals who had reported finding orchids in Calvert County.

Flag Ponds: Three exploratory visits were made at Flag Ponds. On May 7 a new *Goodyera pubescens* was found on the east side of the Lower North Ridge Trail. *Goodyera pubescens* 1 previously located in 2018 to the north was not found. There were also five new *Galerais spectablis* found on the west side of the trail. On May 8 the *Aplectrum hyemale* on the Lower North Ridge Trail, which has been monitored for years was seen in both flower and leaf.

On June 7 five sites of *Galerais spectablis* were found on the new Woodland Trail. Most of these were one or two plants, but there was one site with nine plants clustered along the trail. That makes a total of 26 documented sites of this species scattered around the Park. On July 14, one *Spiranthes vernalis* was found on the land spit that has built up since 2012 near the pier. (A new plant for Flag Ponds.) On August 19 one site consisting of three *Platanthera clavellata* was found in the Woodland Branch floodplain. All three were new plants. Unfortunately, none of the three *P. clavellata* found in 2021 in the immediate area were located. Stiltgrass and other invasive plants were weeded from around the *Spiranthes ovalis* on Duncan Pond Trail on May 15, June 25 and October 1. On the spring inspections there were very few young plants and those were very small and unhealthy. In October there were only 8 plants in flower. It is believed that the lack of flowers was largely due to the heat and the lack of rain in the spring.

Keim Forest: Three exploratory visits were made to Keim Forest on April 9, 16, and 26. Eight *Galearis spectablis* were found, some in flower and others just in leaf. On each visit an unknown plant in leaf was observed. We were not even sure that it was an orchid. Multiple visits were made to observe this plant from April through July. When we returned in August, the plant had disappeared. We have the site well documented with pictures and coordinates. It was noted that Kerry Wixsted found a *Platanthera lacera* in 2010 near Battle Creek south of where the unknown plant was seen.

<u>Smoky Road (Huntingtown/ Kings Landing NRMA)</u>: Two sites of *Goodyera pubescens* were found on a random hike on the north side of Smoky Road on September 21, one site with only 1 plant, and the second site with a group of 7 plants.

Follow-up Visits

Smoky Road: A check was also made on the former site of the *Corallorhiza odontorhiza* on Smoky Road. No signs of it were present.

Biscoe-Gray: Only one *Aplectrum hyemale* in flower was seen on May 5 where 18 plants in leaf were seen in 2020. None were found only in leaf.

Anne Marie Gardens: On June 14 no sign of any *Spiranthes vernalis* where 8 plants were seen in 2022. On June 25 contacted neighbors and gave them information on recognizing plants and whom to contact. It is believed that again the lack of rain and high spring temperatures were factors in the lack of plants.

Yellow Bank Road: *Epipactis helleborine* was seen on Yellow Bank Road in July. It was first seen in 2022. It is not documented as it is a non-native orchid.

FOLLOW-UP TO 2022 RECOMMENDATIONS

As recommended, search visits were made to the above listed public lands. The TNC area at Battle Creek was difficult to assess, but explorations were made along the border between TNC and Keim Forest and up stream on Battle Creek. Regarding oversight and monitoring earlier sites, follow-up and maintenance was done at Flag Ponds on the *Spiranthes ovalis* site as well as the *Spiranthes vernalis* site at Anne Marie. As mentioned above, various sites were checked to account for the viability of sites at Flag Ponds, Biscoe Gray, and Smoky Road.

The utilization of *iNaturalist* has proven to be a vital resource as well as a frustrating challenge. We have attempted to do regular searches of orchids in Calvert County under Explore in *iNaturalist*. It was via such a search that the single *S. vernalis* at Flag Ponds was found. However, because most orchid entries are set as "obscured" we have not been able to locate and systematically document them. We are currently attempting to set up a pattern of communication which will make it possible for us to access obscured sites that have been submitted to Calvert Orchid Conservation. And we will continue to reach out to iNaturalist contributors whose orchids have not been submitted to COC.

The brochure work and educational display at Flag Ponds is currently on hold.

RECOMMENDATIONS FOR 2024

In 2024, we plan to focus on more in-depth trainings on the best practices for documenting the orchids. Due to how common Tipularia discolor is throughout the county, we will develop specific protocols for this species.

Schedule at least one training (May 2, 2024) and one field outing (Summer 2024)

Continue to search public areas for new sites of orchids and to search iNaturalist findings for additional orchid site listings. This would include follow-up on iNaturalist sightings of uncommon orchids not documented from 2023 (i.e, *L. lilifolia* at CCSP {S3} and *S. vernalis* at Flag Ponds). Search iNaturalist and COC on a monthly basis to connect with contributors and document new entries.

Continue to collect data for Calvert Orchid Conservation (COC), but add a searchable data base which only includes documented and numbered plant sites (Calvert Orchid Research Project- CORP).

ATTACHMENT 1: SUMMARY OF FINDINGS OF SPECIES BY SITE FROM 2018 TO 2023

The following is a listing of the distribution of orchids as documented in the Calvert County Orchid Conservation Project. It does not include all the entries from iNaturalist, only those that have been documented and named for this study (i.e., FP-Gp-004 {Flag Ponds- *Goodyear pubescens*- 4th find}). This assures that we have not counted any specie site twice.

Group I: Frequently found and widespread

*Tipularia discolor*¹: ACLT, Biscoe Gray, PF2Bay,, Flag Ponds,, Hall Creek, Smoky Road, Ward Farm, Calvert Cliffs—Dunkirk**, Gatewood**, Hughes Farm** and Kings Landing**² *Galearis spectablis*: ACLT, PF2Bay, Flag Ponds, Smoky Road, Battle Creek (Keim)³

Group 2: Uncommon

Cypripedium acaule: PF2Bay, Hall Creek, Smoky Road, Calvert Cliffs SP⁴ *Aplectrum hyemale*: ACLT, Biscoe Gray, Flag Ponds, Smoky Road⁵ *Goodyera pubescens*: ACLT, Flag Ponds, Smoky Road. Ward Farm

Group 3: Rarely found

Corallorhiza odontorhiza: Calvert Cliffs SP, Smoky Road⁶ Liparis lilifolia: Hall Creek Neottia bifolia: Hall Creek, Calvert Cliffs SP Platanthera clavellata: Flag Ponds, Calvert Cliffs SP Spiranthes ovalis: Flag Ponds Spiranthes vernalis: Anne Marie Gardens, Flag Ponds⁷

¹After 2021 Tipularia was no longer included in the documented survey as it was so abundant.

²**Only Tipularia has been seen at these 4 parks as of 2023

³ All of these sites have an abundance of *G. spectablis* except Smoky Road where only 2 plants have been documented.

⁴ Large display of *C. acaule* at Calvert Cliffs. At least 50 plants.

⁵ Large display of *A. hyemale* at Biscoe Gray

⁶ Site at Smoky Road has not been seen since 2020. One plant at CCSP

⁷ No plants seen at Anne Marie in 2023, one plant at Flag Ponds

ATTACHMENT 2: RUNNING SPREADSHEET OF ORCHIDS FOUND FROM 2018 TO 2023

			Running		2018-2023	
	SPECIES:2018 2019 2020 2021 2022			DATE	Leaf, Flower, Seed, Number of	0
LOCATION	2023	PLANT ID	COORDINATES	DATE	Plants	Comments
ACLT - American						
Chestnut Land Trust						
(ACLTN = north of						
Parker's Crk; ACLTS =	Galearis		N38° 31.001'			Our first discovery of Galearis at
south of Parker's Crk)	spectabilis	ACLT-Gs-001	W76° 31.137'	6/30/2019	leaf	ACLT (Chestnut Trail)
	Galearis		N38° 30.996'			Our first discovery of Galearis at
ACLTN	spectabilis	ACLT-Gs-002	W76° 31.139'	6/30/2019	leaf	ACLT (Chestnut Trail)
	Goodyera		N38° 33.183' W76°			Double Oak Rd; co-located with ACLT-Td-
ACLTN	pubescens	ACLT-Gp-001	32.812'	4/20/2018	leaf, 7	1
	Goodyera		N38° 33.188' W76°			
ACLTN	pubescens	ACLT-Gp-002	32.827'	4/20/2018	leaf,4	Double Oak Rd
	Goodyera		N38° 33.175' W76°			
ACLTN	pubescens	ACLT-Gp-003	32.793'	4/20/2018	leaf, several	Double Oak Rd
	Goodyera		N38° 33.173' W76°			
ACLTN	pubescens	ACLT-Gp-004	32.788'	4/20/2018	leaf	Double Oak Rd
	Aplectrum	ACLTS-Ah-	N38° 30.224'			
ACLTS	hyemale	001	W76° 31.055'	1/6/2019	leaf 3	East Loop Trail
	Spiranthes	AM-Sv-	N38°20.817'			Near John's Creek. 8 plants in 4
Anne Marie Gardens	vernalis	001abcd	W76°27.034'	6/26/2022	Flower	sites 4 sets of coordinates
	Galearis		N38° 38.018'			Keim Forest near creek base of
Battle Creek	spectabilis	BC-Gs-001	W76° 35.446'	7/31/2021		Tulip tree
	Galearis		N38° 30.06'		3 plants +1 in	
Battle Creek	spectabilis	BC-Gs-002	W76° 35.469'	7/31/2021	leaf & seed	Keim Forest North of Gs-1
	Galearis		N38°30.054′			
Battle Creek	specablis	BC-Gs-003	W76°35.4858′	4/9/2023	leaf 1	Keim Forest Battle Creek floodplair
	Galearis		N38°30.0378′			
Battle Creek	spectablis	BC-Gs-004	W76°35.46′	4/9/2023	leaf 1	Keim Forest Battle Creek floodplair
	Galearis		N38°30.006'			Keim Forest Battle Creek floodplair
Battle Creek	spectablis	BC-Gs-005	W76°35.4378′	4/16/2023	Flower 1	near stream
	Galearis		N38°30.06′			
Battle Creek	spectablis	BC-Gs-006	W76°35.475′	4/16/2023	Flower 1	Near Gs-7. Keim Forest
	Galearis		N38°30.06'			Near Gs-6 Among Lizard tails Keim
Battle Creek	spectablis	BC-Gs-007	W76°35.4678′	4/16/2023	Leaf	Forest
	Galearis		N38°30.006'			running N-S about 300' near TNC
Battle Creek	spectablis	BC-Gs-008	W76°35.4378′	4/26/2023	Leaf	border
	Galearis		N38°30.06'			running N-S about 300' near TNC
Battle Creek	spectablis	BC-Gs-009	W76°35.472′	4/26/2023	Leaf	border
	Galearis		N38°30.0042′			running N-S about 300' near TNC
Battle Creek	spectablis	BC-Gs-010	W76°35.4462′	4/26/2023	Leaf	border
	Aplectrum		N38° 48587'			
Biscoe Gray	hyemale	BG-Ah-001	W76° 5863'	########	68 in leaf	Forest Trail
Calvert Cliffs State	Corallorhiza		N38°24.279'			
Park	odontorhiza	CC-Co-001	W76°25.493	########	1 in seed	Joint White/ Orange Trail
Calvert Cliffs State	Cypripedium		N38°23.649'			
Park	acaule	CC-Ca-001	W76°26.101′	6/24/2022	50+ leaf	Blue Trail
Calvert Cliffs State		CC-Nb-001 &	W76°25.590'		1 at each site	Red Trail (previously seen 9 plants
Park	Neottia bifolia	002	N38°23.749'	6/24/2022	in leaf	at site 1 by Rick Smith)

Aplectrum hyemale Goodyera pubescens Goodyear pubescens Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis	FP-Ah-001 FP-Gp-001 FP-Gp-002 FP-Gs-001 FP-Gs-002 FP-Gs-003 FP-Gs-004	N38° 27.008' W76° 27.642' N38° 27.166' W76° 27.771' N38° 27.112998 W76° 27.744 N38° 26.691' W76° 27.326' N38° 26.690' W76° 27.357' N38° 26.681'	5/8/2023 8/5/2018 5/7/2023 4/28/2019 4/28/2019	Flower, leaf leaf Leaf leaf	Revisit of one plant Lower North Ridge Trail East side of Lower North Ridge Trail South Ridge Trail
Goodyera pubescens Goodyear pubescens Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis Galearis	FP-Gp-001 FP-Gp-002 FP-Gs-001 FP-Gs-002 FP-Gs-002 FP-Gs-003	N38° 27.166' W76° 27.771' N38° 27.112998 W76° 27.744 N38° 26.691' W76° 27.326' N38° 26.690' W76° 27.357' N38° 26.681'	8/5/2018 5/7/2023 4/28/2019	leaf Leaf	Lower North Ridge Trail East side of Lower North Ridge Trail
pubescens Goodyear pubescens Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis	FP-Gp-002 FP-Gs-001 FP-Gs-002 FP-Gs-003	27.771' N38°27.112998 W76°27.744 N38° 26.691' W76° 27.326' N38° 26.690' W76° 27.357' N38° 26.681'	5/7/2023 4/28/2019	Leaf	East side of Lower North Ridge Trail
Goodyear pubescens Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis Galearis	FP-Gp-002 FP-Gs-001 FP-Gs-002 FP-Gs-003	N38°27.112998 W76°27.744 N38° 26.691' W76° 27.326' N38° 26.690' W76° 27.357' N38° 26.681'	5/7/2023 4/28/2019	Leaf	East side of Lower North Ridge Trail
pubescens Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis	FP-Gs-001 FP-Gs-002 FP-Gs-003	W76°27.744 N38° 26.691' W76° 27.326' N38° 26.690' W76° 27.357' N38° 26.681'	4/28/2019		Trail
Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis	FP-Gs-001 FP-Gs-002 FP-Gs-003	N38° 26.691' W76° 27.326' N38° 26.690' W76° 27.357' N38° 26.681'	4/28/2019		
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Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis	FP-Gs-002 FP-Gs-003	N38° 26.690' W76° 27.357' N38° 26.681'		leaf	South Ridge Trail
spectabilis Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis	FP-Gs-003	W76° 27.357' N38° 26.681'	4/28/2019		
Galearis spectabilis Galearis spectabilis Galearis spectabilis Galearis	FP-Gs-003	N38° 26.681'	4/28/2019		
spectabilis Galearis spectabilis Galearis spectabilis Galearis			., 20, 2015	leaf	South Ridge Trail
Galearis spectabilis Galearis spectabilis Galearis					
spectabilis Galearis spectabilis Galearis	FP-Gs-004	W76° 27.381'	4/28/2019	leaf	South Ridge Trail
Galearis spectabilis Galearis	FP-Gs-004				
spectabilis Galearis		W	4/28/2019	leaf	South Ridge Trail
Galearis		N38° 26.680'			
	FP-Gs-005	W76° 27.418'	4/28/2019	leaf	South Ridge Trail
		N38° 26.673'			
spectabilis	FP-Gs-006	W76° 27.443'	4/28/2019	leaf	South Ridge Trail
Galearis		N38° 26.670'			
spectabilis	FP-Gs-007	W76° 27.451'	4/28/2019	leaf	South Ridge Trail
Galearis		N38° 26.665'			
spectabilis	FP-Gs-008	W76° 27.581'	4/28/2019	leaf	South Ridge Trail
Galearis		N38° 26.667'			
spectabilis	FP-Gs-009	W76° 27.585'	4/28/2019	leaf	South Ridge Trail
Galearis		N38° 26.676'			
spectabilis	FP-Gs-010	W76° 27.592'	4/28/2019	leaf	South Ridge Trail
Galearis		N38° 26.670'			
spectabilis	FP-Gs-011	W76° 27.587'	4/28/2019	leaf	South Ridge Trail
Galearis		N38° 27.045'			plants to the south, but still west of
spectabilis	FP-Gs-012	W76° 27.684'	5/17/2019	leaf	the trail
Galearis		N38° 27.041'			plants to the south, but still west of
spectabilis	FP-Gs-013	W76° 27.684'	5/17/2019	leaf	the trail
Gallearis		N38° 26.684'			
spectablis	FP-Gs-014	W76° 27.440'	4/29/2022	Flower	Off trail base of cliff
Galearis					
spectabilis	FP-Gs-015		4/29/2022	Flower	Off trail at base of cliff near swamp
Galearis					Lower North Ridge Trail. 021
spectablis	021		4/7/2023	Flower, leaf	northern extent.
Galearis				,	5 plants in 4'X4' area Woodland
spectablis	FP-Gs-022		6/7/2023	Leaf	Trail
	FP-Gs-023		6/7/2023	Leaf 1	East side of Woodland Trail
			-, -, -,,,,,,,,		
	FP-Gs-024		6/7/2023	leaf 1	West side of Woodland Trail
			5, 7, 2025	1001 1	continue to point 25a on north side
			6/7/2023	leaf 9+	of Woodland Trail. A few plants on
			5, , , 2023	icui o i	West side of Upper North Ridge
	FP-Gs-026		6/7/2023	leaf 1	Trail
	11 03-020		5/ / 2023		
Platanthera		N38° 27.241' W76°			
		100 4 5 01	10/0/0000		Flandalain
clavellata Platanthera	FP-Pc-001	28.159' N38° 27.155' W76°	10/6/2018	seed 3	Floodplain
	alearis pectabilis alearis pectabilis alearis pectabilis alearis pectabilis alearis pectabilis alearis pectabilis alearis pectablis alearis pectablis alearis pectablis alearis pectablis alearis pectablis alearis pectablis alearis pectablis alearis pectablis alearis pectablis alearis pectablis alearis pectablis alearis	alearis poectabilisFP-Gs-011alearis poectabilisFP-Gs-012alearis poectabilisFP-Gs-013allearis poectabilisFP-Gs-013allearis poectabilisFP-Gs-014alearis poectabilisFP-Gs-015alearis poectabilisFP-Gs-015alearis poectabilisFP-Gs-016-poectabilisFP-Gs-016-poectabilisFP-Gs-022alearis poectabilisFP-Gs-022alearis poectabilisFP-Gs-023alearis poectabilisFP-Gs-024alearis poectabilisFP-Gs-025-poectabilisFP-Gs-026alearis poectabilisFP-Gs-026	alearis poectabilisFP-Gs-011N38° 26.670' W76° 27.587'alearis poectabilisFP-Gs-011W76° 27.587'alearis poectabilisFP-Gs-012W76° 27.684'alearis poectabilisFP-Gs-013W76° 27.684'alearis poectabilisFP-Gs-013W76° 27.684'allearis poectabilisFP-Gs-014W76° 27.440'alearis poectabilisFP-Gs-014W76° 27.440'alearis poectabilisFP-Gs-015W76° 410alearis poectabilisFP-Gs-016-N38°26.8800'v76° 210W76° 27.08999W76° 27.08999alearis poectabilisFP-Gs-016-N38°26.85099'v76° 27.08999W76° 27.70998'W76° 27.70998'alearis poectabilisFP-Gs-023W76° 27.963'alearis poectabilisFP-Gs-024W76° 27.93199'alearis poectabilisFP-Gs-025-N38° 27.08799'poectabilisFP-Gs-025-N38° 27.08799'poectabilisFP-Gs-026W76° 28.035' toalearis poectabilisFP-Gs-026W76° 27.81996'	alearis bectabilis FP-Gs-011 N38° 26.670' W76° 27.587' 4/28/2019 alearis bectabilis FP-Gs-012 N38° 27.045' 5/17/2019 alearis bectabilis FP-Gs-012 W76° 27.684' 5/17/2019 alearis bectabilis FP-Gs-013 W76° 27.684' 5/17/2019 alearis bectabilis FP-Gs-013 W76° 27.684' 5/17/2019 allearis bectabilis FP-Gs-014 W76° 27.440' 4/29/2022 alearis bectabilis FP-Gs-015 W76° 410 4/29/2022 alearis bectabilis FP-Gs-016- N38°27.06199' 4/7/2023 alearis bectabilis FP-Gs-016- N38°27.06199' 4/7/2023 alearis bectabilis FP-Gs-022 W76°27.70998' 6/7/2023 alearis bectabilis FP-Gs-023 W76°27.963' 6/7/2023 alearis bectabilis FP-Gs-024 W76°27.93199' 6/7/2023 alearis bectabilis FP-Gs-025- N38°27.08799' 6/7/2023 alearis bectabilis FP-Gs-026 W76°27.81996' 6/7/2023 alearis bectabilis FP-Gs-026 W76	alearis bectabilis FP-Gs-011 N38° 26.670' W76° 27.587' 4/28/2019 leaf alearis bectabilis FP-Gs-012 W76° 27.587' 4/28/2019 leaf alearis bectabilis FP-Gs-012 W76° 27.684' 5/17/2019 leaf alearis bectabilis FP-Gs-013 N38° 27.041' 5/17/2019 leaf alearis bectabilis FP-Gs-013 W76° 27.684' 5/17/2019 leaf allearis bectabilis FP-Gs-014 W76° 27.684' 4/29/2022 Flower alearis bectabilis FP-Gs-014 W76° 27.440' 4/29/2022 Flower alearis bectabilis FP-Gs-015 W76° 410 4/29/2022 Flower alearis bectabilis FP-Gs-016- N38° 27.06199' 4/7/2023 Flower, leaf alearis bectabilis FP-Gs-022 W76° 27.70998' 6/7/2023 Leaf 1 alearis bectabilis FP-Gs-023 N38° 27.0099' 6/7/2023 leaf 1 alearis bectabilis FP-Gs-025- N38° 27.099' 6/7/2023 leaf 1 alearis bectabilis FP-Gs-026

clavellata	FP-Pc-003		7/24/2019	leaf	Floodplain
Platanthera					
clavellata	FP-Pc-004	W76° 28.201'	7/24/2019	leaf	Floodplain
Platanthera		N38°26.758'			Western section of Woodland
clavellata	FP-Pc-005	W76°27.989'	5/18-19/22	Leaf	Branch
Platanthera		N38°26.761'			Western section of Woodland
clavellata	FP-Pc-006	W76°27.993'	5/19/2022	Leaf	Branch 10+ plants
Platanthera		N38°26.754'			but these not seen. Woodland
clavellata	FP-Pc-007abc	W76°27.99799'	8/19/2023	Leaf, seed	Branch floodplain 3 plants
<u> ·</u>	FP-So-001	N38° 26.969' W76° 27.511'	10/6/2018	Flower 2	in iNaturalist, but in MD Plant Atlas; not found in 2019 (probably destroyed)
· ·	FD 5- 002		0/21/2010	Flower	Original 2018 finding next to
ovalis	FP-S0-002	W/6°27.510°	9/21/2019	Flower	Duncan Pond Trail
Spiranthes ovalis	FP-So	Same site extended	10/24/20 to 11/09/20	Flower, leaf	3 groupings with a total of 25 -30 plants, marked with 8" nails
Spiranthes					Probably impacted by dry spring and
ovalls	Fp-So	Same site	10/1/2023	Flower 8	heat
Spiranthes vernalis	FP-Sv-001	N38°26.72778' W76°27.22782'	7/14/2023	Flower-1	Sand spit formed after 2013 south side of old boardwalk beyond pier
Cypripedium	U.S. C. 404	N38° 42.397' W76°	5/6/2018,	8 flower groups, each with 1-3 plants. 10 to 20	Ca-1, Ca-2, Ca-3 are grouped together on iNaturalist. In dying V.
acaule	HC-Ca-001	41.561'	4/25/19	flowers	pine area. 4/25/19 in bud (white)
Cypripedium acaule	HC-Ca-002	N38° 42.397' W76° 41.563'		8 flower groups, each with 1-3 plants. 10 to 20 flowers	Ca-1, Ca-2, Ca-3 are grouped together on iNaturalist. In dying V. pine area.
Cypripedium			5/6/2019	8 flower groups, each with 1-3	Ca-1, Ca-2, Ca-3 are grouped together
acaule	HC-Ca-003	N38° 42.396' W76° 41.559'		flowers	on iNaturalist. In dying V. pine area.
acaule	HC-Ca-003			l.	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut
	HC-Ca-003 HC-Ca-1-3			flowers	on iNaturalist. In dying V. pine area.
acaule Cypripedium acaule		41.559' 3 sites above	4/25/19	flowers No plants	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut and stacked on area where orchids
acaule Cypripedium acaule Cypripedium	HC-Ca-1-3	41.559' 3 sites above N38° 42.326' W76°	4/25/19 #########	flowers No plants seen	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut and stacked on area where orchids were growing
acaule Cypripedium acaule Cypripedium acaule		41.559' 3 sites above N38° 42.326' W76° 41.564'	4/25/19	flowers No plants seen	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut and stacked on area where orchids were growing Main Trail to River
acaule Cypripedium acaule Cypripedium acaule Goodyera	HC-Ca-1-3 HC-Ca-004	41.559' 3 sites above N38° 42.326' W76° 41.564' N38° 41.802' W76°	4/25/19 ######### 5/6/2018	flowers No plants seen leaf 2	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut and stacked on area where orchids were growing Main Trail to River Off Trail in Hunting Area with
acaule Cypripedium acaule Cypripedium acaule Goodyera pubescens	HC-Ca-1-3	41.559' 3 sites above N38° 42.326' W76° 41.564' N38° 41.802' W76° 41.307'	4/25/19 #########	flowers No plants seen leaf 2	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut and stacked on area where orchids were growing Main Trail to River Off Trail in Hunting Area with Lycopodium
acaule Cypripedium acaule Cypripedium acaule Goodyera pubescens Goodyera	HC-Ca-1-3 HC-Ca-004 HC-Gp-001	41.559' 3 sites above N38° 42.326' W76° 41.564' N38° 41.802' W76° 41.307' N38° 41.734' W76°	4/25/19 ######### 5/6/2018 3/18/2018	flowers No plants seen leaf 2 leaf	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut and stacked on area where orchids were growing Main Trail to River Off Trail in Hunting Area with Lycopodium Lycopodium . Includes Gp-3 through Gp-
acaule Cypripedium acaule Cypripedium acaule Goodyera pubescens Goodyera pubescens	HC-Ca-1-3 HC-Ca-004	41.559' 3 sites above N38° 42.326' W76° 41.564' N38° 41.802' W76° 41.307' N38° 41.734' W76° 41.245'	4/25/19 ######### 5/6/2018	flowers No plants seen leaf 2 leaf	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut and stacked on area where orchids were growing Main Trail to River Off Trail in Hunting Area with Lycopodium Lycopodium . Includes Gp-3 through Gp- 7 on iNaturalist.
acaule Cypripedium acaule Cypripedium acaule Goodyera pubescens Goodyera	HC-Ca-1-3 HC-Ca-004 HC-Gp-001	41.559' 3 sites above N38° 42.326' W76° 41.564' N38° 41.802' W76° 41.307' N38° 41.734' W76°	4/25/19 ######### 5/6/2018 3/18/2018	flowers No plants seen leaf 2 leaf leaf > 50	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut and stacked on area where orchids were growing Main Trail to River Off Trail in Hunting Area with Lycopodium Lycopodium . Includes Gp-3 through Gp- 7 on iNaturalist.
acaule Cypripedium acaule Cypripedium acaule Goodyera pubescens Goodyera pubescens Goodyera	HC-Ca-1-3 HC-Ca-004 HC-Gp-001 HC-Gp-002	41.559' 3 sites above N38° 42.326' W76° 41.564' N38° 41.802' W76° 41.307' N38° 41.734' W76° 41.245' N38° 41.714' W76°	4/25/19 ######### 5/6/2018 3/18/2018 3/18/2018	flowers No plants seen leaf 2 leaf leaf > 50	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut and stacked on area where orchids were growing Main Trail to River Off Trail in Hunting Area with Lycopodium Lycopodium . Includes Gp-3 through Gp- 7 on iNaturalist. Lycopodium . Includes Gp-3 through Gp- 7 on iNaturalist.
acaule Cypripedium acaule Cypripedium acaule Goodyera pubescens Goodyera pubescens Goodyera pubescens	HC-Ca-1-3 HC-Ca-004 HC-Gp-001 HC-Gp-002	41.559' 3 sites above N38° 42.326' W76° 41.564' N38° 41.802' W76° 41.307' N38° 41.734' W76° 41.245' N38° 41.714' W76° 41.245'	4/25/19 ######### 5/6/2018 3/18/2018 3/18/2018	flowers No plants seen leaf 2 leaf leaf > 50 leaf	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut and stacked on area where orchids were growing Main Trail to River Off Trail in Hunting Area with Lycopodium Lycopodium . Includes Gp-3 through Gp- 7 on iNaturalist.
acaule Cypripedium acaule Cypripedium acaule Goodyera pubescens Goodyera pubescens Goodyera pubescens Goodyera pubescens Goodyera pubescens Goodyera	HC-Ca-1-3 HC-Ca-004 HC-Gp-001 HC-Gp-002 HC-Gp-003	41.559' 3 sites above N38° 42.326' W76° 41.564' N38° 41.802' W76° 41.307' N38° 41.734' W76° 41.245' N38° 41.714' W76° 41.245' N38° 41.714' W76°	4/25/19 ######## 5/6/2018 3/18/2018 3/18/2018 3/18/2018	flowers No plants seen leaf 2 leaf leaf > 50 leaf leaf	on iNaturalist. In dying V. pine area. Dead pines that had fallen were cut and stacked on area where orchids were growing Main Trail to River Off Trail in Hunting Area with Lycopodium Lycopodium . Includes Gp-3 through Gp- 7 on iNaturalist. Lycopodium . Includes Gp-3 through Gp- 7 on iNaturalist. Lycopodium . Includes Gp-3 through Gp- 7 on iNaturalist.
	clavellata Platanthera clavellata Platanthera clavellata Platanthera clavellata Platanthera clavellata Spiranthes ovalis Spiranthes ovalis Spiranthes ovalis Spiranthes ovalis Spiranthes ovalis Spiranthes ovalis Spiranthes cypripedium acaule Cypripedium acaule	ClavellataFP-Pc-003PlatantheraFP-Pc-004ClavellataFP-Pc-004PlatantheraFP-Pc-005PlatantheraFP-Pc-006PlatantheraFP-Pc-006PlatantheraFP-Pc-007abcSpiranthes ovalisFP-So-001SpiranthesFP-So-002SpiranthesFP-SoovalisFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-SoSpiranthesFP-So-001Cypripedium acauleHC-Ca-001Cypripedium acauleHC-Ca-002	ClavellataFP-Pc-003W76° 28.159'PlatantheraN38° 27.184'ClavellataFP-Pc-004W76° 28.201'PlatantheraN38°26.758'clavellataFP-Pc-005W76°27.989'PlatantheraN38°26.761'clavellataFP-Pc-006W76°27.993'PlatantheraN38°26.754'clavellataFP-Pc-007abcW76°27.9979'SpiranthesFP-So-001X76°27.99799'Spiranthes ovalisFP-So-002W76°27.510'SpiranthesFP-So-002W76° 27.510'SpiranthesFP-SoSame siteovalisFP-SoSame siteovalisFP-SoSame siteSpiranthesFP-SoSame siteovalisFP-SoSame siteCypripediumHC-Ca-001N38° 42.397' W76°acauleHC-Ca-002N38° 42.397' W76°LipipoliumHC-Ca-002N38° 42.397' W76°CypripediumHC-Ca-002N38° 42.397' W76°	clavellata FP-Pc-003 W76° 28.159' 7/24/2019 Platanthera N38° 27.184' W76° 28.201' 7/24/2019 Platanthera N38° 27.184' W76° 28.201' 7/24/2019 Platanthera N38° 26.758' Sylashiet Sylashiet clavellata FP-Pc-005 W76° 27.989' Sylashiet Sylashiet Platanthera FP-Pc-006 W76° 27.993' Sylashiet Sylashiet clavellata FP-Pc-006 W76° 27.993' Sylashiet Sylashiet clavellata FP-Pc-007abc W76° 27.9979' 8/19/2023 Platanthera FP-Pc-007abc W76° 27.510' 9/21/2019 Spiranthes FP-So-001 27.511' 10/6/2018 Spiranthes FP-So Same site 10/24/20 to ovalis FP-So Same site 10/1/2023 Spiranthes Fp-So Same site 10/1/2023 Spiranthes FP-Sv-001 N38° 42.397' W76° 5/6/2018, ovalis FP-Sv-001 N38° 42.397' W76° 5/6/2018,	clavellata FP-Pc-003 W76° 28.159' 7/24/2019 leaf Platanthera clavellata FP-Pc-004 N38° 27.184' W76° 28.201' 7/24/2019 leaf Platanthera clavellata FP-Pc-005 N38° 26.758' W76° 27.989' 5/18-19/22 Leaf Platanthera clavellata FP-Pc-006 N38° 26.761' W76° 27.993' 5/19/2022 Leaf Platanthera clavellata FP-Pc-006 N38° 26.754' W76° 27.9979' 8/19/2023 Leaf, seed Platanthera clavellata FP-Pc-007abc W76° 27.9979' 8/19/2023 Leaf, seed Spiranthes ovalis FP-So-001 27.511' 10/6/2018 Flower 2 Spiranthes ovalis FP-So-002 W76° 27.510' 9/21/2019 Flower Spiranthes ovalis FP-So Same site 10/24/20 to 11/09/20 Flower, leaf Spiranthes ovalis Fp-So Same site 10/1/2023 Flower 8 Spiranthes ovalis Fp-Sv-001 N38° 42.397' W76° 5/6/2018, 4/25/19 8 flower groups, each with 1-3 plants. 10 to 20 flowers Cypripedium acaule HC-Ca-002 N38° 42.397' W76° 5/6

нс	Goodyera pubescens	HC-Gp-007	N38° 41.704' W76° 41.238'	8/22/2018	leaf	Lycopodium . Includes Gp-3 through Gp- 7 on iNaturalist.
нс	Goodyera pubescens	HC-Gp-008	N38° 41.696' W76° 41.230'	3/18/2018	leaf	Southeren limit of Gp group.
						East side at edge of trail at top of
			N38° 41.805'			berm. Additional plants at edge of
НС	Liparis lilifolia	HC-LI-001	W76° 41.246'	5/6/2019	leaf, bud	trail about 5 ft south.
			N38° 41.806'			
НС	Liparis lilifolia	HC-LI-002	W76° 41.243'	5/6/2019	leaf, bud	19 ft east of trail at top of berm
						60 ft East of trail along top of
			N38° 41.809'		leaf, bud,	berm, with 8 other locations
НС	Liparis lilifolia	HC-LI-003	W76° 41.235'	5/6/2019	flower	extending westward to HC-Li-1.
			N38°.42.055998'			50 plants scattered over 40'X40'
НС	Neottia bifolia	HC-Nb-001	W76°41.547'	4/12/2020	Flower, leaf	floodplain
PF2Bay - Prince Frederick to Bay Trail	Cypripedium acaule	PF2B-Ca-001	N38° 32.801' W76° 32.918'	6/8/2018	leaf, seed	East of gate near Power line; 1 plant on nouth side of Trail
PF2Bay	Cypripedium acaule	PF2B-Ca-002	N38° 32.809' W76° 32.914'		leaf, seed	East of gate near Power line; 2 plants on south side of Trail
	Galearis		N38° 32.665' W76°	-,-,	,	
PF2Bay	spectablis	PF2B-Gs-001	32.568'	6/8/2018	leaf, seed 4	On trail and down slope
	Galearis		N38° 32.661' W76°			multiple plants - includes photos labeled
PF2Bay	spectablis	PF2B-Gs-002	32.569'	6/8/2018		Gs-2 to Gs-6; approx. 10' S of PF2B-Gs-1
PF2Bay	Galearis spectablis	PF2B-Gs-007	N38° 32.684' W76° 32.630'	6/8/2018	Leaf 15, stem 1	
PF2Bay	Galearis spectablis	PF2B-Gs-008	N38° 32.724' W76° 32.717'	6/8/2018	Leaf	10 plants in vacinity. Photos labeled Gs- 8 to Gs-12
	Galearis		N38° 32.733' W76°			
PF2Bay	spectablis	PF2B-Gs-013	32.722'	6/8/2018	Single Leaf	No data
				5/5/2018,	flower No	to see if plants survived after road
SR - Huntingtown NRMA	Aplectrum		N38° 38.541' W76°	5/14/2019	seeds, leaves	work. 11/3/22 About 10 leaves
(Smoky Road)	hyemale	SR-Ah-001	39.774'	9/24/20	or stalks seen	seen
			N208 20 5501 M/758		2 clumps with 15 stems and 4 flowers and 4	
SR	Corallorhiza odontorhiza	SR-Co-001	N38° 38.560' W76° 39.460'	10/3/2018	stems and 2 flowers	Bill Hubick found. Does not want location public. Found in roadside ditch.
	Corallorhiza	0.1 00 001	N38° 38.560'	10, 5, 2010		Revisit on 10/1/19 to verify plant
SR	odontorhiza	SR-Co-002	W76° 39.460'	10/1/19	2 clumps	survival
	Corallorhiza			0 10 - 10		Revisit to see if plants survived.
SR	odontorhiza	SR-Co 1-2	See above sites	9/24/2020	2 clumps	Small plants in bloom
	Corallorhiza					Nie ole de la colo
SR	odontorhiza	SR-Co 1-2	See above sites	11'3/22	0	No plants seen.
SR	Cypripedium acaule	SR-Ca-001	N38° 38.606' W76° 39.683'	6/4/2018	plants 3, stem 1	Side of Road; same location as SR-Gp-2
	Cypripedium		N38° 37.987'			
SR	acaule	SR-Ca-002	W76° 39.171'	5/26/2021	6+ plants	South edge of East Dog Training
	Galearis		N38° 38.765′	- 1 - 1 -		
SR	spectabilis	SR-Gs-001	W76° 39.371'	7/4/2021	1 plant in leaf	North East washed area
CD	Galearis spectabilis	SP. Cc. 002	N38° 38.689' W76° 39.768'	0/10/2021	5 plants & 5 10' upstream	North Central in ravine
SR		SR-Gs-002		9/10/2021	TO UNSUEGU	
SR	Goodyera pubescens	SR-Gp-001	N38° 38.460' W76° 39.745'	6/4/2018	leaf 1, seed 1	Off trail. SE end of several occurrences extending NW beyond SR-Gp-4.

	1					
	Goodyera		N38° 38.606' W76°		leaf 5; 7-29-18	
SR	pubescens	SR-Gp-002	39.683'	6/4/2018	flowers 2	Off trail; same location as SR-Ca-1.
	Goodyera		N38° 38.512' W76°			Off trail on upper W slope of stream
SR	pubescens	SR-Gp-003	39.643'	7/29/2018	leaf 13	bank
	Goodyera		N38° 38.467' W76°		leaf 18+; 1 old	Off trail. Many groups along old trail to
SR	pubescens	SR-Gp-004	39.758'	7/29/2018	flower stalk	NW and SE to SR-Gp-1
	Goodyera		N38° 38.489' W76°			
SR	pubescens	SR-Gp-005	39.761'	7/29/2018	leaf	Off trail; 2 groups.
	Goodyera		N38° 38.494' W76°			
SR	pubescens	SR-Gp-006	39.767'	7/29/2018	leaf	Off trail; 2 plants.
	Goodyera		N38° 38.552' W76°			
SR	pubescens	SR-Gp-007	39.433'	7/29/2018	Flower 3	Near gate on bank; 3 ft west of SR-Td-9
	Goodyera		N38° 38.509' W76°			
SR	pubescens	SR-Gp-008	39.779'	7/30/2018	leaf 4	Off trail
	Goodyera		N38° 38.568' W76°			
SR	pubescens	SR-Gp-009	39.457'	10/3/2018	leaf, stem	Off trail near stream
	Goodyera		N38° 38.904'		1 plant Leaf &	
SR	pubescens	SR-Gp-010	W76° 39.403'	6/17/2021	bud	North East on trail under log
	Goodyera		N38° 38.871'		8 plants Leaf	North East on deer trail with
SR	pubescens	SR-Gp-011	W76° 39.433′	6/17/2021	& bud	Lycopodeum
	Goodyera		N38° 38.871'		Several plants	North East on deer trail with
SR	pubescens	SR-Gp-012	W76° 39.433'	7/4/2021	Leaf & bud	Lycopodeum between River Birch
	Goodyear		N38°38.717'			Unmarked trail on north side of
SR	pubescens	SR-Gp-013	W76°39.472′	9/21/2023	Leaf	Smoky Road
	Goodyear		N38*38.731'			7 small plants on unmarked trail
SR	pubescens	SR-Gp-014	W76°39.593'	9/21/2023	Leaf	north side of Smoky Road
Pocreational and Nature	Goodyora		N38° 42.919' W76°			
Recreational and Nature Park	Goodyera pubescens	WF-GP-001	38.857'	3/28/2018	leaf	SW corner of park
				572072010		
WF	Goodyera pubescens	WF-Gp-002	N38° 42.933' W76° 38.822'	3/29/2018	leaf 4	Intersection of 3 trails
				572572010		
WF	Goodyera pubescens	WF-Gp-003	N38° 43.043' W76° 38.295'	6/10/2018	loaf	Abandoned trail
vvi	pubescens	W1-0p-005	58.255	0/10/2018		
YB - Yellow Bank Rd (back road to the Burtons)	Galearis spectabilis	YB-Gs-001	N38° 43.897' W76° 40.275'	2/30/18	3 clusters of 3 to 7 plants Flower	Private gravel road off Yellow Bank
	spectabilis	18-05-001	40.275	2/30/10	7 plants Flower	Private graver road off fellow bark
VD	Galearis	VD C 000	N38° 43.933' W76°	4/20/2010	3 plants in 1	
YB	spectablis	YB-Gs-002	40.375'	4/30/2018	cluster Flower	Private gravel road off Yellow Bank
ND.	Galearis		N38° 43.906' W76°	F / 100	2 clusters bloom	
YB	spectablis	YB-Gs-003a	40.286'	5/4/2018	beginning	Private gravel road off Yellow Bank
	Galearis		N38° 43.907' W76°			
YB	spectablis	YB-Gs-003b	40.286'	5/4/2018	Same as Gp-3a	Private gravel road off Yellow Bank
VD	Epipactic			C /24 /2022	1 plant in	
YB	helleborine	YB-Eh-001		6/21/2022	flower	Non native.

ATTACHMENT 3: ORCHID OBSERVATIONS FROM INATURALIST

See separate CSV spreadsheet

https://www.calvertparks.org/resources/Documents/Volunteer/2023Reports/2023Orchid-Conservation-Attachment3.csv

Supporting Calvert County's nature parks and natural spaces



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

2023 Annual Report

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





