

14 Northwoods Road, Radnor, PA 19087

Chapter's Website: www.ValleyForgeARS.org

NEWSLETTER

May / June 2021

Unless specified otherwise, meetings are at Jenkins Arboretum in Devon

Calendar at a Glance

May 1: Deadline to register for ARS Virtual Convention in Nova Scotia.

May 1-2, Sat./Sun: 8AM-2PM, GP ARS/Tyler Plant Sale, 515 Painter Road, Media, PA 19063

No Truss Show

June 20 (Sun.): 1 PM, VF/GP Picnic at Fort Washington State Park

President's Message

I hope everyone is doing well, enjoying the Spring Season and has received or is scheduled to receive their Covid vaccines. I'm pleased to report that we were finally able to schedule our March and April Chapter meetings virtually thanks to Jenkins Arboretum. At our March meeting, Tom Smarr, Executive Director of Jenkins Arboretum, presented a very informative talk on the Jenkins Master plan and how the Staff managed through Covid and the severe storms of 2020. And in April, Steve Wright, Director of Horticulture/Curator of Plants at Jenkins and VFARS Chapter Board Member, discussed the very exciting and important native rhododendron germplasm repository project he and the Jenkins Staff are working on. Thanks to both Tom and Steve for your excellent and informative presentations and to Jenkins Arboretum for setting up the well-attended Zoom/Webinar meetings.

Unfortunately, as everyone is aware, we decided

not to schedule our Plant Sale this year. And just last week, we also decided not to schedule our Truss Show this year. However, the Greater Philadelphia Chapter has teamed up with Tyler Arboretum for their spring Plant Sale (see details on page 2).

The GP ARS Chapter has also reserved a picnic pavilion at Fort Washington State Park on June 20th for our annual joint VF/GP ARS picnic (see page 2). This is the occasion we always use to elect Chapter Officers and Directors for the upcoming year. Hopefully, by that time members will be able to safely attend. I'm looking forward to seeing the Valley Forge Chapter ARS members together in one location in the near future.

Until then, please stay safe.

Sincerely,
Jerry O'Dell, (610) 608-2018,
westdell@verizon.net

VF ARS website: www.ValleyForgeARS.org

GP ARS & Tyler Joint Plant Sale

The Greater Philadelphia Chapter, American Rhododendron Society, is most happy to resume their long tradition of a spring plant sale. This year it is in a new location, and a bit earlier in the season.

**Sat. & Sun., May 1 & 2; 8 a.m.-2 p.m.
Tyler Arboretum, 515 Painter Road,
Media, PA 19063**

The ARS sale will be fully integrated into the Tyler sale -- get choice rhododendrons and azaleas from the ARS sector and shift over to all the desirable plants Tyler is offering. All sales will go through a combined cashier operation. Knowledgeable ARS members, led by Karel Bernady, will be on hand to assist and advise shoppers.

The Greater Philadelphia chapter website, <http://www.gpchapterars.org/plant-sale>, has a list of rhododendrons with descriptions. Many are 3-gallon plants propagated and grown-on by the Greater Philadelphia chapter, which means a good choice and varieties never to be found at a typical nursery.

You may also preview Tyler's selections at <https://tylerarboretum.org/plant-sale>.

This is the Greater Philadelphia ARS Chapter's first in-person sale at Tyler, and some details are different from their sales in the past. Tyler members receive a 5% discount, but that's *only for Tyler members*. Likewise, the Tyler members' day is for Tyler members only, and is by timed reservation only. Of course, you can become a member of Tyler yourself: there's a "Join Now" click-on at the above-mentioned Tyler web address.)

All the perennial and woody plants will be organized alphabetically by scientific name. Once you enter the sale, you'll find Edible plants and Herbs along the path leading into the Historic Core from our Visitor Center. The rest of the sections will be spread across

the Library Lawn to allow for safe socially distant shopping.

The plant sale includes:

Trees, shrubs, perennials, ferns, vines, annuals, fruit and vegetable plants, and herbs. They are collecting donations of hard to find plants from our partner gardens and plant societies. Rhododendrons provided by the GP ARS will feature a wide variety of elepidotes, evergreen azaleas and deciduous azaleas.

No Truss Show This Year

Alas, the pandemic is not over, and the Truss Show Committee has concluded that we must forgo the cut-flower competition (truss show) another year.

June Joint GP/VF ARS Picnic & Annual Meetings

**Sunday, June 20 @ 1:00 PM
Fort Washington State Park**

It will be in an open-air pavilion with enough picnic tables for 200 people so social distancing will not be a problem.

Each chapter will have its annual meeting with the election of officers.

In light of concerns about shared food and as a modest substitute for not having a banquet, GP ARS is arranging box lunches which can be ordered. The price is expected to be between \$15-\$20 per person. Everyone will bring their own beverages. Alcoholic beverages are not allowed in state parks.

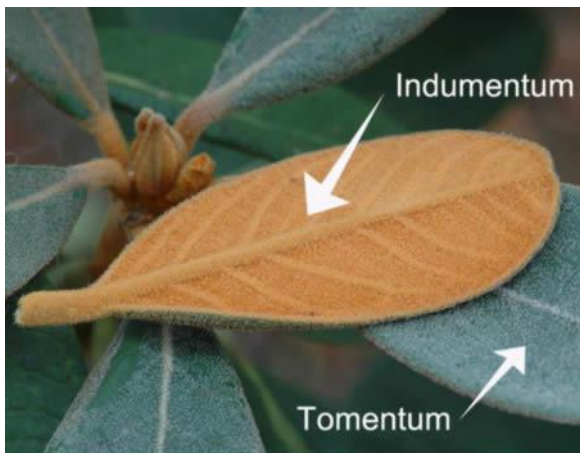
Everyone is invited to bring cut flowers to show off and create a festive atmosphere at the picnic.

Details will be provided later.

The Rhododendron Leaf – Indumentum & Tomentum

Rhododendrons including azaleas are categorized by the structure of their leaf. Those having scales are called lepidotes, and those without scales are called elepidotes. In the last newsletter we explored what the “scales” are and what they look like.

Most of us recognize lepidotes as usually being smaller plants and having small, more azalea-like leaves while the elepidotes are usually larger plants and have larger leaves, including some with very large leaves. Here is where it gets messy. Though azaleas are smaller plants and have smaller leaves, they are elepidotes. However, most of us recognize azaleas when we see them. On the other hand, vireya rhododendrons are all lepidotes which is to be expected since they are smaller plants with smaller leaves. Now the definition of elepidotes is easy. All of the other rhododendrons including azaleas are elepidotes by definition.



Indumentum on rhododendrons

Indumentum or What’s this fungus growing on the leaves of my rhododendron?

When I visit garden clubs to talk about rhododendrons, they usually ask me to look at a rhododendron that has a fungus that is growing on the underside of the leaves. But when I see what they are talking about, it is indumentum, not a fungus. I have to explain that it is a highly desirable attribute of certain

varieties of rhododendrons, most commonly seen on the yaks, yakushmanum hybrids.

Indumentum (pl. indumenta) on rhododendrons is a microscopic epidermal hair that grows on the lower surface of the leaves of some species. It is sometimes so dense that it forms a soft to wooly undersurface.

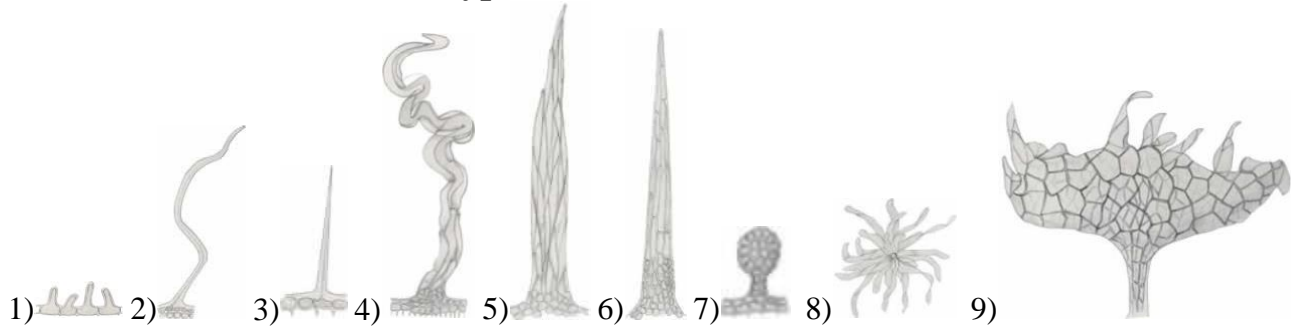
Technically, the epidermal hairs are leaf appendages similar to glandular leaf scales, however they occur almost exclusively on elepidote rhododendrons, the ones without scales. Indumentum only occurs on some elepidotes. Indumentum does occur on at least one lepidote, *R. edgeworthii*. In fact the indumentum on *R. edgeworthii* is so dense that it is difficult to see the scales.

Tomentum is a similar structure on the top surface of rhododendron leaves. It usually contains a waxy material and is fragile. It seems to be there to protect the tender top surface of young leaves but wears off in time.

Indumentum and tomentum are much finer than human hair with some of the larger types being approximately 1/10 the size of human hair. The hairs are so small, they can’t be seen individually, but often they are so numerous, they dominate the appearance of the underside of a leaf. Indumentum ranges in color from pale tan to reddish brown to dark brown. Often it is called fawn colored.



The different types of Indumentum and where found



From left to right: 1) Papillae, 2) Foliform, 3) Acicular, 4) Loriform, 5) Strigose, 6) Setose, 7) Simple, 8) Rosulate, 9) Cup-Shaped. (All illustrations are to the same scale.)

Papillae: Members of the Boothii, Glaucum, and Maddenii Series and some members of the Fortunei and Thomsonii Series. (i.e., *R. pubescens*)

Filiform Hairs: Some members of the Triflorum and Scabrifolium Series have silky filiform hairs. (i.e., *R. yunnanense* & *augustinii*)

Acicular Hairs: Some members of the Scabrifolium and Stamineum Series. (i.e., *R. spiciferum*, *scabrifolium championae*, and *tutcheriae*)

Loriform Hairs: Some members of the Maddenii, Boothii, Glaucum, Scabrifolium, and Edgeworthii Series. (i.e., *R. moupinense*)

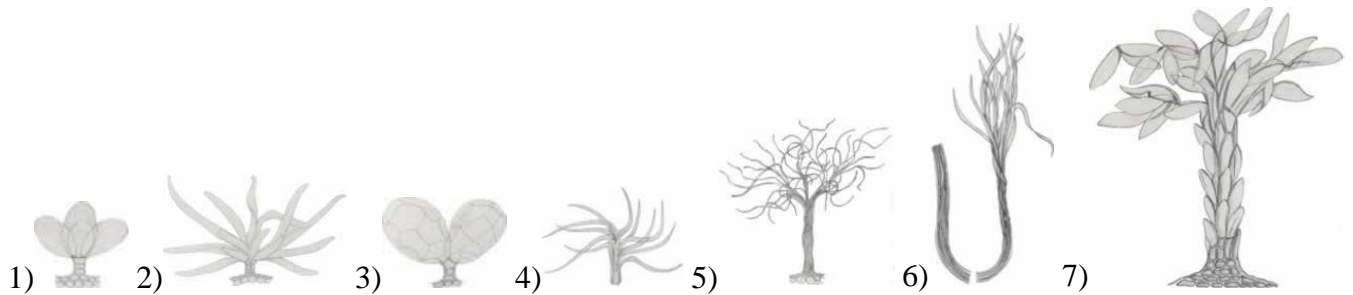
Strigose Hairs: These are common on members of the Azalea, Albiflorum, Camtschaticum, Ovatum, and Semibaratum Series.

Setose Hairs: Some members of the Barabatum and Stamineum Series. (i.e., *R. glischrum*, *auriculatum*, *championae*, & *tutcheriae*)

Simple Glands: On many species. (*R. coryanum*, *griersonianum*, *mucronatum*, *smithii*, *planetum*, *agapetum*, *hemidartum*, & *degronianum*)

Rosulate Hairs: On many members of the Grande, Argyrophyllum, Sanguineum, Arboreum, and Haematodes Series. (i.e., *R. sinogrande*, *giganteum*)

Cup-Shaped Hairs: On some members of the Falconeri Series.



From left to right: 1) Radiate, 2) Long-Rayed, 3) Vesticular, 4) Stellate, 5) Dendroid, 6) Flagellate, 7) Folioliferous (All illustrations are to the same scale.)

Radiate Hairs: Some members of the Ponticum and Lacteum Series. (i.e., *R. lacteum*, *beesianum*, *colletum*, *traillianum*, *aberrans*, & *brachycarpum*)

Long-Rayed Hairs: Some members of the Lacteum and Taliense Series. (i.e., *R. wightii*, *mimetes*, *pratii*, *russotinctum*, *tritifolium* & *wasonii*)

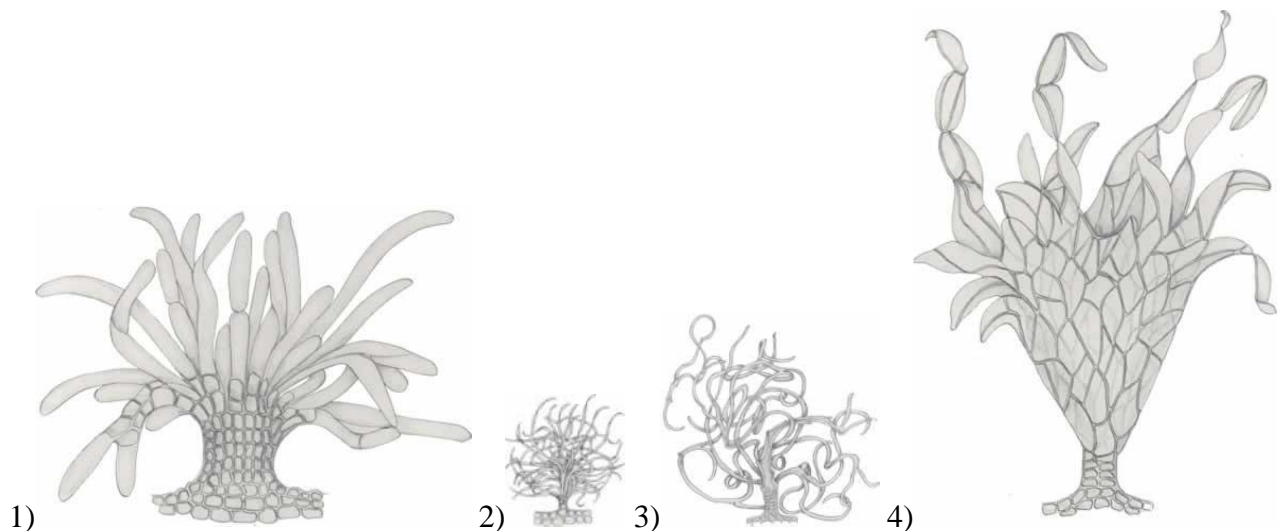
Vesticular Hairs: Some members of the Barbatum Series. (i.e., *R. vesiculiferum*)

Stellate Hairs: Some members of the Irroratum Series. (i.e., *R. venator*, *facetum*, & *agapetum*)

Dendroid Hairs: In all members of the Arboreum Series and some members of the Campanulatum, Grande, Neriiflorum, Ponticum, and Fulvum Series.

Flagellate Hairs: In the species *R. longesquatum*.

Folioliferous Hairs: In members of the Barbatum and Fortunei Series. (i.e., *R. maculiferum*, *pachytrichum*, & *sutchuenense*)



From left to right: 1) Fasciculate, 2) Capitellate, 3) Ramiform, 4) Funnel-Shaped (All illustrations are to the same scale.)

Fasciculate Hairs: Members of the Campanulatum, Taliense, and Thompsonii Series. (i.e., *R. fulgens*, *wallichii*, *paradoxum*, *wiltonii*, & *hookeri*)

Capitellate Hairs: Form a suede-like indumentum on the species *R. fulvum*.

Ramiform Hairs: On some members of the Taliense, Barbatum, Caucasicum, and Neriiflorum Series. (i.e., *R. bureavii*, *taliense*, & *smirnowii*)

Funnel-Shaped Hairs: On some members of the Falconeri Series.

Examples of rhododendrons with tomentum & indumentum

To many people, a perfect rhododendron is one with very large leaves and indumentum. Such a plant doesn't even need to bloom, and, in fact, many have a bloom that is so high you can't see the flowers. The photos below show examples of the broad range of how tomentum and indumentum vary from species to species. It also varies considerably during the life of a leaf:

Examples of Tomentum



R. falconeri ssp. eximium



R. pseudochrysanthum



R. pachysanthum



R. roxieanum



R. proteoides



R. degronianum ssp. yakushmanum



Rcv. Golfer



Rcv. Silver Skies

Examples of Indumentum



R. arboretum ssp cinnamoneum



R. fulvum



R. bureavii



R. hodgsonii



R. neriiflorum 'Wine & Roses'



R. tsariense:



R. roxieanum



R. degonianum ssp *yakushmanum*

References:

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- Spady, H., & Averill, S. J. (1984). Scanning electron microscopy of trichomes. *Rhododendron Notes and Records (J. RSF)*, 1, 65–72.
- Philp, Eleanor (1998). Tips for Beginners: Leaf Scales, Papillae, and Indumentum. *Journal American Rhododendron Society* 52(4)
- Dome, Arthur (1999-2000). Those Exciting Rhododendron Epidermal Appendages. *Journal American Rhododendron Society* 53(4) 198-9, 54(1) 42-3, 54(2) 78-9, & 54(3) 138-9.
- Morsink, Willem (2009). Digital Photography of Upper Leaf Surface Hairs on Unfolding Leaves of Hymenanthes Rhododendrons. *Journal American Rhododendron Society* 63(1)

ARS 2021 Virtual and Live Convention

Rhodos Down East: Exploring the North Atlantic Region

June 3-6, 2021; Registration Closes May 1, 2021; ARS2021.org

The 2021 ARS Convention will be held in Wolfville, Nova Scotia, from June 3-6, 2021. Many people may still face travel restrictions due to the pandemic, so the organizers are planning an option to participate via video conferencing. Virtual registration will open January 15 and for a fee of \$60 US (\$80 Canadian), people will be able to participate remotely, hear the many outstanding speakers and go on garden tours virtually.

Take advantage of an exciting opportunity to learn about growing, breeding and gardening with rhododendrons. Due to the travel restrictions caused by the COVID-19 pandemic, the 2021 American Rhododendron Society Convention will be offering all the presentations, garden tours and networking opportunities available on line, to anyone who can access the internet! For those who can travel to Nova Scotia (novascotia.ca/coronavirus.travel) there will also be an in-person sessions and garden tours as well as a plant sale featuring rare and unusual rhododendrons propagated especially for this event.

Speakers include Ken Cox, famed Scottish rhododendron breeder from Glendoick Nursery in Scotland; Joe Brusco, rhododendron breeder from Massachusetts; and Todd Boland from Newfoundland's Memorial University Botanical Garden. The Convention will start with the program, "Introduction to Mi'kma'ki" by Gerald Glode, a Mi'kmaw naturalist and educator who will tell the stories of the first people that explain the natural history since the area was covered by ice. Garden tours, both virtual and in-person, will include the Kentville Research Centre, Annapolis Valley Historic Gardens and Peggy's



Cove barrens as well as private gardens. Networking opportunities will include the Breeder's Roundtable where you can hear about the latest trends in rhododendron breeding, and the ARS Next Generation Project which will show how to involve the next generation in your local ARS club. Those attending in-person can enjoy social events that feature the seafood, cider and wine from our local producers.

Registration for the virtual convention will open

January 15! Registration for the in-person convention will open on February 15, if permitted by Public Health restrictions.

Registration Information and Fees

Virtual registration opens January 15, 2021.
Late virtual registration fee starts April 1, 2021
Registration Closes May 1, 2021

Virtual Convention Registration Fee:

\$60 US / \$80 Canadian before April 1, 2021.

\$75 US / \$100 Canadian after April 1, 2021

In-Person Registration Opens February 15, 2021, if permitted by Public Health restrictions.

ARS Convention 2021 Fee:

\$190 Canadian (incl. convention fee, Thur. reception/ Fri. dinner/Sunday, plant sale, workshops and lunch) before April 1.

Late Fee \$210 Canadian after April 1

Tours prices in Canadian dollars:

| | |
|--|------|
| Friday bus tour to Annapolis Royal gardens | \$80 |
| Saturday bus tour to Peggy's Cove barrens | \$80 |
| Saturday evening Lobster banquet | \$75 |

Steve Henning, editor
 103 Acer Place
 Lancaster, PA 17601



NEWSLETTER
May / June 2021

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| Page 7 Examples of Indumentum | Bob Horton ('20-'23) (610) 430-0196 |
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| ARS websites: | Steve Wright ('19-'22) (267) 481-0175 |
| rhododendron.org ARSStore.org | Darlene Henning ('19-'22) (717) 735-7116 |
| ARSOoffice.org https://ars75.org/ | Perc Moser ('18-'21) (610) 525-3651 |
| Use http://arsstore.org/ | Kathy Woehl ('18-'21) (610) 688 9173 |
| | Membership: Darlene Henning (717) 735-7116 |
| | Newsletter Editor: Steve Henning (717) 735-7116 |
| | Plant Sale: Alice Horton (610) 430-0196 |
| | Plants-for-Members with Greater Philadelphia Chapter |
| | Truss Show (VF): Debby Schmidt (610) 388-8573 |
| | Webmaster: Steve Henning (717) 735-7116 |
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