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PLANT PROFILE: BALSAM FIR  
(\textit{Abies balsamea})  
by Dr. Matthew Wallhead
That summer we went to Bar Harbour, taking Mrs. Cadwalader Jones’ house, “Reef Point”. It was [one] of the ... first “summer cottages” of the original Philadelphia settlement, long before the large and elaborate later houses. It was close to the town, ... a pleasant house packed full of all the books one could possibly want to read, and a rambling garden which was an enchantment, full of bloom the whole summer long apparently springing up wild. This was art masquerading as nature and none of us knew enough about gardening to appreciate it properly, but we loved it just the same (Mrs. Jones’ daughter, Beatrix, later Mrs. Max Farrand, was probably the first woman landscape architect in America, and became very famous). I read and read, and spent hours dreaming away on the warm grass by a little pool, listening to the splash of the waves and the warning bell on the sand bar.... There were some girls I had known at school in Philadelphia, and Mother knew some people and made calls (there was a good deal of formality in Bar Harbour; horses with jingling harness, footmen running out to ring the bells, butlers coming out with trays for the cards etc.).... Reef Point was the ideal house for us, and we loved it, and I read more books than I can remember, and after tea ... such amusing talks! People who came then were always charmed, if they had any intelligence, but some were not at ease, like the imposing matron who told Mother she had once rented Reef Point, but had not again as “it was not possible to get four footmen in the dining room, it is so small”!!

Time did not dim Mary Senni’s memories of the summer of 1902, when she, a shy and precocious seventeen-year-old, first visited Reef Point with her mother and her sisters. Even as a teenager, Mary recognized what made her stay at Reef Point exceptional: the profusion of books at her disposal, the allure of the landscape, and the time to savor both. Only later, when she became an acclaimed amateur plantswoman and an avid hybridizer of roses and irises, did Mary begin to understand the subtle sophistication with which Minnie Cadwalader Jones and her daughter Beatrix Farrand had endowed their beloved Reef Point home and gardens.
Mary Gayley Senni was the eldest daughter of Julia Gardiner Gayley of St. Louis and James Gayley, a Pennsylvania steelman in the inner circle of Andrew Carnegie and, as of 1901, the first vice president of the newly formed U. S. Steel Corporation. Mary had two sisters—Agnes (later Milliken) and Folly (later Montgomery). With James’s new position came a move for the Gayley family from Pittsburgh to New York City, a difficult transition for Mary—but not so for her gregarious mother, Julie.

Julie orchestrated her entrée into New York society with characteristic confidence and aplomb. Before long, she was keeping company with a wide circle of new friends, among them Minnie Cadwalader Jones, the long-estranged and ultimately divorced wife of Freddy Jones, the brother of Edith Wharton. Minnie, a social activist and author, was the doyenne of a longstanding salon at the townhouse she shared with her daughter Beatrix on East Eleventh Street. Among the guests at her weekly Sunday luncheons were such luminaries as Henry James, Marion Crawford, John La Farge and Nikola Tesla.

Fourteen years Julie’s senior, Minnie took her new friend under her all-encompassing and protective wing. Promoting the benefits—social and otherwise—of escaping from the heat and humidity of New York summers, Minnie offered Julie her home at Reef Point for the month of August 1902, while she and Beatrix were in Europe. That brief visit to Reef Point marked the beginning, not only of a close bond between Minnie, Beatrix and the four Gayley women, but also the start of a lifelong connection to Mt. Desert Island for Julie, Agnes and Folly. For Mary, however, life followed a different course.

Shortly after the Gayleys returned home from Reef Point in September, Julie focused her attention on Mary. Expected to make her debut into society the following year, she had yet to find a comfortable social niche in New York. Julie, to “finish” her daughter, entrusted her to the care of Agnes Repplier, a noted essayist from Philadelphia and a well-seasoned chaperone. Together Mary and her older companion embarked on a yearlong Grand Tour of Italy. For Mary, the highlight of her self-proclaimed annus mirabilis, was Rome—not for its art, architecture and culture, which she deeply appreciated, but because in Rome Mary fell in love with her future husband, the kind and dashingly handsome Count Giulio Senni.

Giulio and Mary were married in New York in December 1907. In January, the newlyweds set sail for Italy, where they raised a brood of seven children and lived happily together for the rest of their lives. They divided their time between Villa Senni, a gracious ancestral estate near Grottaferrata, on the outskirts of Rome, and their summer retreat, high in the tiny Tuscan hilltown of Vetriceta.

Exactly how and when Mary’s interest in gardening became a serious and passionate pursuit remains unclear. Certainly the grounds of Villa Senni offered abundant opportunity. By 1915, her sister Florence wrote to Mary reproaching her for gardening while she was pregnant. And in 1921, four years before Beatrix designed the magnificent gardens at The Haven, the cottage of Mary’s sister Agnes and her husband Gerrish Milliken at Northeast Harbor, Gerry wrote to Mary that he and Agnes “continue to long for your help in the Rose Gardens.”

Certainly by the early 1920s Mary had become fascinated with roses. She visited the eighteenth-century Parc de Bagatelle in Paris and its gardens, redesigned in 1905. Of particular interest to her, however, was the rose garden. Thanks to the establishment in 1907 of the Concours International de Roses Nouvelles de Bagatelle, the first competition to assess new roses, the rose garden featured a wide variety of hybrids. Surely it occurred to Mary that, if Paris could so successfully promote the hybridizing and display of roses, so could her adopted city of Rome.

In 1924, Mary gave a collection of rosebushes from her garden at Grottaferrata to the city of Rome. The roses were planted along the strolling paths on the Pincian Hill, but they were neglected by the municipal garden commission, and they withered. Discouraged, disappointed and exasperated, Mary asked that her precious rosebushes be returned to her—or burned. But she continued to nurse her dream of establishing a proper public rose garden in Rome.

Eight years later, in 1932, Mary became actively involved in plans for establishing a municipal rose garden on the Oppian Hill and, once again, she donated a collection of her own favorite rosebushes. This time they flourished, and the garden was a success. The following year, she established the Concorso Internazionale Premio Roma per le Nuove Varietà di Rose, a competition for new hybrids, to rival the prestigious Bagatelle prize. Mary, representing the American Rose Society, served on the jury from the competition’s inception until 1954. But although the competition is still held today, the original garden, abandoned in the 1940s, was a casualty of the Second World War.
A new rose garden was constructed after the war on the Aventine Hill, at a site whose history shaped its future character. A Jewish cemetery had occupied the land from 1645 until its appropriation and subsequent desecration under Mussolini in 1934. Then, planted with vegetables, it became a makeshift “war garden” to feed Rome’s war-torn residents. Eventually destroyed, it grew wild—until the new rose garden was installed in 1950. Tablets of the Law of Moses were set up at the entrance at the request of the Jewish community and, to honor the dead who had once been buried there, the paths in the new Roseto Comunale were laid out in the shape of a menorah.

Mary’s interest and expertise in flowers, however, were not limited to roses; she was equally enthusiastic about irises. In the late 1930s, Mary devoted her energy to hybridizing more than 400 varieties of tall bearded irises. Although many of their names and dates have been carefully recorded for posterity, sadly, only three varieties have been positively identified. Mary gave most of her irises the names of Italian towns and cities—Bologna, Fiesole, Lucca, Pisa and Siena irises are just a few examples. She also honored members of her family and her friends with eponymous irises—her children and grandchildren, her daughter-in-law Giulianella, her friends Camilla Pasolini and Iris Origo all had irises named after them. The only one that has been identified, however, is the Giannandrea iris, named after her fifth child. Mary bred her irises in Tuscany and brought them back to Grottaferrata. In her generosity, she gave rhizomes liberally to her family and her friends.

When Villa Senni, ransacked during the war—first by the Germans, then by the Allies—was rendered uninhabitable, Mary and Giulio built a new house nearby and settled there in 1948. New Villa Senni, as it was called, presented an opportunity for Mary to try her hand at landscape design. Mindful of what Beatrix had accomplished at Reef Point so many years before, Mary produced her own version of “art masquerading as nature.” The trees she planted—among them olive, Japanese quince, a Canadian maple—seemed to spring from the soil of their own accord. Amid the Tuscan rosemary, asters, lilacs and Korean chrysanthemums that grew in her garden, her myriad varieties of roses and irises flourished as well. The landscape and gardens of New Villa Senni were Mary’s silent tribute to Beatrix Farrand. Today, several varieties of her irises, though nameless—their identifying cards lost long ago—still adorn the grounds.

During the 1950s, while Mary was engaged in planning and cultivating her new garden, Beatrix was experiencing challenging times at Reef Point. She and her husband, Max Farrand, a professor of history at Yale, had long nourished the hope of converting their home and gardens into a school of horticulture and landscape design. After Max’s death in 1945, Beatrix, unable to obtain tax-exempt status for the endeavor, struggled for the next decade to attract both students and institutional sponsorship. In 1955, when neither materialized, rather than let her life’s work fall to ruin, Beatrix had the house razed and the gardens destroyed. She salvaged and dispersed what she could. Taking architectural elements and her favorite plants with her, Beatrix moved to nearby Garland Farm, the family home of her caretaker and chauffeur, Lewis Garland, and his wife Amy, who had supervised her gardens. Beatrix lived at Garland Farm with Lewis, Amy and Clementine Walters, her maid and companion, until her death in 1959, at the age of eighty-six.

Garland Farm changed hands twice after Beatrix’s death, in 1970 and in 1993. In 2004, the newly formed Beatrix Farrand Society purchased the house and the remaining acreage at Garland Farm. Today the society continues to carry on its mission: “restoring Garland Farm to its Farrand-era design and condition and instituting a design and horticultural study center there.”

Several years ago, Brenda Les, a member of the Board of Advisors of the Beatrix Farrand Society and a botanist by training and practice, discovered irises in the then overgrown Holding Garden at Garland Farm. In June 2018, while she was having lunch with a member of Mary Senni’s family, Brenda was encouraged to take good care of the irises she was tending at the farm because they were a gift from Mary Senni. When Brenda mentioned this to Beatrix Farrand Society President Scott Konieko, he made the connection between Mary Senni and her granddaughter, Vittoria McIlhenny, a longtime resident of Northeast Harbor. Scott invited Vittoria to Garland Farm when the irises were in full bloom. Brenda and Vittoria admired the eight varieties of tall bearded irises in the Holding Garden, a rainbow of colors. Since then, Vittoria has taken several other descendants of Mary to see the irises.

As the various pieces of the puzzle fell into place, I was astonished at the journey these hardy irises would have taken—from Tuscany in the 1930s or 1940s, to Grottaferrata, to Northeast Harbor, to Reef Point, and finally coming to rest in the mid-1950s in the Holding Garden at Garland Farm.

We know the names of more than 400 irises that Mary created; we can only imagine the flowers. At Garland Farm, we can admire eight spectacular, but nameless, varieties of iris. Are they Mary’s? I like to think so.
NOTES:

1 I am grateful to Scott Konieko and Brenda Les at Garland Farm for their help in writing this article. Vittoria Mellhenny, Mary Senni’s granddaughter, deserves my special thanks—for her many kindnesses and for suggesting the idea of writing this article to me.

2 This excerpt is from the unpublished memoir of Mary Gayley Senni.

3 The two quotations are from surviving letters to Mary Senni. The first, from her sister Folly, is dated October 21, 1915; the second, from her brother-in-law Gerrish Milliken, is dated June 11, 1921.

4 For additional information about the history of Rome’s Municipal Rose Garden and Mary’s role in establishing both the garden and the international competition, see Valentina Filippi, “Mary Gayley Senni e il Giardino delle Rose,” Vivavoce: Rivista d’area dei Castelli Romani, Personaggi, No. 74, September 2008, http://www.vivavoceonline.it/articoli.php?id_articolo=933

5 See the list of Mary Senni’s irises at Iris Paradise, http://www.irisparadies.de/Seiten/historscheZuechter/AndereLaender/Senni.htm

6 Filippi. Mary’s gifts of rhizomes to friends have also been attested to by Martha Specht Corsi, who recalls Mary giving rhizomes to her mother, Flaminia Specht, and teaching her to cultivate irises.


JOIN US AT BEATRIX FARRAND’S
LAST HOME AND GARDEN
GARLAND FARM

Open Days: Thursdays, 1:00 to 4:00, June 25 - September 24, suggested donation $5.00
Office Landline at Garland Farm: 207-288-0237 visit@beatrixfarrandsociety.org

Garland Farm is located on Route 3, 2.4 miles from the bridge onto Mount Desert Island from Trenton. Cross the bridge and go left at the traffic light. When you cross the Mount Desert Narrows (a beautiful creek flowing into the bay) keep an eye out on the left for Garland Farm’s 1029 mail box at the gravel driveway.

For our seasonal visitor grass parking lot, continue on Route 3 about 500 feet past the 1029 mail box and turn left onto Bay View Drive, then make your first left into the grass lot.

Garland Farm is located 8 miles from the town center of Bar Harbor. Coming from Bar Harbor you will pass Hadley Point Road on your right, about 2/3 of a mile before Bay View Drive.

Please use our 1029 Route 3 address to visit Garland Farm in the off season, as the the grass parking lot is not accessible until the thaw is complete.
The Beatrix Farrand Society is pleased to present its 2020 Achievement Award to Piet Oudolf, Dutch nurseryman and designer of gardens and landscapes noted for their celebration of the texture, structure, color and seasonal change of herbaceous perennials. Oudolf will accept his award and present “The work and gardens of Piet Oudolf” at 4:00 on Monday, August 17th at the Holy Family Chapel in Seal Harbor.

Most landscape designers rely on trees and shrubs as the plants that contribute most heavily to the symmetry, balance and form of landscapes, and then incorporate limited amounts of herbaceous perennials into that context for color and texture. Oudolf’s designs rely much more on herbaceous perennials, and his focus is not solely color and texture; he emphasizes perennials’ structure and form, and revels in their visual interactions. He allows perennials to complete their annual cycle in place, to surprise the visitor with change through all seasons, and to contribute to the winter landscape. His design ideas derive from his deep knowledge of plants, evolving over time through his experimentation in his private garden and nursery at Hummelo, The Netherlands.

The images here provide glimpses of Oudolf’s designs. Note the extensive use of grasses and herbaceous perennials, use of both native and exotic species, appreciation of all parts of plants’ life cycles, year-round interest, and long-term ecological sustainability of plantings. Some of these designs are expansive, but Oudolf’s reliance on perennials makes them inviting, personal and intimate.

Oudolf is most recognized in the U.S. for his planting design of The High Line and several parts of Battery Park in New York City, and his collaborative design of the Lurie Garden at Chicago’s Millennium Park. He has also designed many public gardens and urban parks throughout Europe.

Please join us for this celebration of the lifetime achievements of Piet Oudolf.

Go to beatrixfarrandsociety.org to register for this event.
BEATRIX FARRAND’S HEATHS AND HEATHERS
by Jan McIntyre

When Beatrix Farrand moved from Reef Point to Garland Farm, both of which are located on Mount Desert Island, Maine, she brought many of her most treasured plants. Among those were heaths and heathers that were planted in her new home’s Terrace Garden. Since there is no detailed plan of which exact plantings became part of that area of the garden, we can only speculate by using the heaths and heathers mentioned in The Bulletins of Reef Point Gardens and the specimens that became part of the Reef Point Gardens Herbarium.

Heaths and heathers are part of the Ericaceae, or the Heather Family, and because of their many shared characteristics, both are often referred to as “heathers.” *Calluna vulgaris*, with well over 700 varieties, is considered the true heather, and is the only species in that genus. On the other hand, heaths (members of the genus *Erica*), have in excess of 850 species. Another Ericaceae member that is closely related to *Calluna* and *Erica* is *Daboecia*.

At Reef Point there were 25 varieties of *Calluna* and approximately 10 *Erica* species, some of which were brought to Garland Farm. Only *Calluna vulgaris* and *Erica carnea* have survived in the Terrace Garden. None of Reef Point’s *Daboecia*, if brought to the Farm, survived.

Heathers are shrubby evergreen alpine plants that are not native to North America. *Calluna* leaves are leathery and triangular and feel softer than the leaves of *Erica*, which are narrow and needle-like. Both can have copious amounts of flowers above the leaves.

The prominent light pink heather in the foreground is *Calluna vulgaris ‘H.E.Beale’*

The Calluna variety ‘Tenuis’ flowers in the Terrace Garden in July, but the rest of the Calluna varieties don’t flower until August and September. Some *Erica* have buds or flowers present when the winter covering is removed in April, and continue to flower through May and into June. *Erica carnea* ‘Springwood White’ may even flower in March and, if accessible on a sunny day, bumble bees may gather nectar.

* Calluna varieties require full sun for optimum growth, but most heathers can tolerate at least half a day of sun. Some, such as *Erica vagans*, can tolerate more shade.

* Heathers require excellent drainage. Planting them on a slope is the perfect solution. If that is not possible, soil preparation allowing for good drainage is essential. Heathers cannot tolerate clay, so if clay is present, using either a raised bed, replacing 12 inches or more of the clay with soil, or amending the clay with compost and sand are the best options.

* Soil on the acidic side, with a pH of between 5.5 - 6.5, is best for heathers. Some *Erica* varieties, such as *Erica vagans*, will tolerate even more alkaline soils. Always do soil tests to determine the pH of the planting site, repeating tests approximately every 2 years.
• Newly planted heathers need to be kept constantly moist for the first year after planting. Once established, they are very drought tolerant, and it is only necessary to water them during very dry periods.

• Fertilizer is generally not needed for heather. If the pH is correct, the heather will do fine without it. Adding a small amount of bone meal, however, is recommended at the time of planting. Sprinkle some in the bottom of the planting hole, add water, and then place in the plant.

• NEVER slice into the edge of a new heather’s root ball, as a lot of gardeners do when planting a new annual, perennial or shrub. Cutting a heather’s root ball could kill it.

• Heathers in Zone 5 or colder need winter protection, such as spruce boughs or camouflage netting, applied after the ground starts to freeze. If using boughs, remove them slowly over a few days to a week in April or May, once the snow has melted. Slow removal will help prevent the plants from getting shocked by suddenly receiving too much sun. Camouflage netting, however, can be removed all at once, since sunlight can more easily reach the plants as the snow melts.

• Mulching around the heather plants helps retain moisture. At Garland Farm, a new layer of pine needles is added annually. (Garland Farm welcomes donations of clean, leaf-free pine needles each fall! Place the needles in plastic or paper bag and leave them in front of the garage. They will be stored over the winter and used for mulch after the plants are pruned.) Mulching with composted cow manure is not recommended.

• When and how to prune heathers confuses many heather enthusiasts. At Garland Farm, the Calluna cultivars are pruned in May, after the chance of extreme cold has passed and before aggressive growth kicks in. The stem should be cut just below the flower. Fall pruning is not recommended since the new growth and flowers that were produced on these plants during the summer help to protect the plant over the winter.

• An annual spring pruning prevents heathers from getting too leggy and woody. Depending on the Erica species, some are pruned in May, such as Erica vagans, since they flower in August and September. But Erica carnea, which flowers in May, should be pruned after the flowers have passed. Annual pruning is not necessary for the Erica carnea varieties but can be helpful to control size.

In the spring of 2018, following removal of the spruce boughs that were placed on the heather bed in late fall 2017, it was obvious that a new approach to heather care and maintenance was needed. Unfortunately, many of the plants had severe winter dieback or were dead. Now, instead of a thick layer of boughs which holds in moisture and prevents snow from accumulating around the plants and insulating them, camouflage netting is being used. This netting is easily stored over the ‘off season’ and can be reused for many years. On the other hand, spruce boughs require fall harvesting, placement over the heather bed, and then spring disposal, all of which are physically demanding.

Every spring the plants are judiciously pruned, minimally watered, and pine needles are applied as mulch. The dead plants are removed and noticeably weakened plants are aggressively pruned if it is a recommended practice for those species. New plants are added, with the emphasis on those that have been successful over the years at Garland Farm, especially Calluna vulgaris and Erica carnea.

We need to remain flexible in the future as the challenges of climate change affect Garland Farm’s heaths and heathers.
“Native Ferns for the Garden and Woodlot”

Dr. Alison Dibble

Thursday, June 25th at 4:00 pm

Ferns bring unique qualities to a Maine garden, and can be featured prominently or serve as a foil for more colorful flowering plants. We will consider five best native ferns, based on aesthetics and ease of culture, and give tips on using them in unusual ways.

“How to Arrange Cut Flowers from your Garden”

Emily Henry

Tuesday, July 21st at 4:00 pm

Emily Henry, from Chickadee Hill Flowers in Bar Harbor, will be giving a lecture and demonstration about cut flowers. The talk will describe how you can use flowers commonly found in Maine gardens in cut flower arrangements. She will bring some lovely arrangements from Chickadee Hill that will be available for silent auction.

“Unearthing Mabel Cabot Sedgwick’s Garden Month by Month”

Lucinda Brockway

Thursday, July 23rd at 4:00 pm

Nestled on a Beverly MA drumlin sits a garden legacy ripe for rejuvenation. Started in 1919 and cultivated by two passionate horticulturists, Long Hill’s wild garden needed a polish. Not the work of a famous landscape architect nor the artifact of a carefully documented writer, this garden sprang from personal passions for the careful blending of the wild and the cultivated. But how to uncover its details? How to understand its creator’s values and vision? How to reveal its very special genius and inspire new gardeners with its stories? Come on the journey of two lifetimes.

The Beatrix Farrand Society Annual Lecture

“Mary Cadwalader Jones: A Friend in Need”

Dr. Margaret Brucia

Saturday, August 1st at 4:00 pm

Gates Auditorium, College of the Atlantic

No Admission Fee / Preregistration Required

This talk, enhanced by images, highlights the personality and accomplishments of Mary (“Minnie”) Cadwalader Jones, a woman who has remained too long in the shadow of her celebrated relatives—Beatrix Farrand, and Edith Wharton. In 1902, Minnie befriended Julia (“Julie”) Gardiner Gayley, then a young New York socialite and later a longtime summer resident of Sutton Island and Northeast Harbor. A close look at the relationship between these two women enables us to see why Minnie was so greatly admired and relied upon as a friend, not only by Julie, but by a host of Gilded-Age luminaries, including Henry James, John LaFarge, Marion Crawford and John Lambert Cadwalader.
Jennifer Jewell, the host of the gardening podcast, ‘Cultivating Place’, will be discussing her new book. ‘The Earth in Her Hands: 75 Extraordinary Women Working in the World of Plants’ highlights women from around the world working in fields including botany, floriculture, agriculture, landscape design and architecture, plant breeding, garden writing, environmental science, and social justice.

The Beatrix Farrand Society Achievement Award & Lecture
Piet Oudolf
Monday, August 17th at 4:00 pm
‘The Work and Gardens of Piet Oudolf’
Holy Family Chapel, Main St., Seal Harbor
No Admission Fee / Preregistration Required

We are delighted to award Piet Oudolf the Beatrix Farrand Society Achievement Award this year. Please see the enclosed article about his work to anticipate hearing more about his perspective on landscape architecture during the award lecture this summer.

“Managing Wild Spaces: Examples from Little Long Pond Preserve”
Tate Bushell
Thursday, September 17th at 4:00 pm

Join Tate Bushell, Natural Lands Director for the Land & Garden Preserve, to learn about ongoing and future management at Little Long Pond Preserve. Since the late David Rockefeller gifted Little Long Pond to the Land & Garden Preserve in 2015 management has expanded to include ecological restoration and research. Tate will present the underlying principles of natural areas management and demonstrate how you can incorporate the principles on your own property, no matter the size.
MAINE’S CLIMATE IS CHANGING: HOW YOU CAN MAKE A DIFFERENCE
by Esperanza Stancioff,
UMaine Cooperative Extension and Maine Sea Grant

Background on Climate Change
In 2019, Americans witnessed a burst of climate activism and communication. Students and concerned citizens participated in climate strikes organized in cities across the nation and around the world, with an unprecedented level of media coverage.

The United Nations Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) recently confirmed that one million plant and animal species are now vanishing or are threatened with extinction due to human activities. Climate change is one of the major drivers.

Twenty-four major new reports were released, underlining the urgency of meeting the challenge of climate change and offering recommendations for ways to meet that challenge. Yale Climate Connections provides information and access to these reports.

These recent reports on climate change have consistently provided information that shows:

- atmospheric greenhouse gas concentrations are increasing because of human actions, and are influencing the climate in unprecedented ways,

- evidence that these changes are accelerating,

- we have not begun to implement sufficient actions to alter our climate trajectory, and

- we are heading for a planetary condition no humans have ever experienced.

Increasing climate change literacy among families and communities is one of the most imperative aspects in leading meaningful progress in Maine.

Writing legislators to heighten their engagement in curbing greenhouse gas emissions, voting for pro-active policy makers, and making it a personal priority to decrease our carbon footprint are each important steps towards climate solutions. In Maine, there are remarkable opportunities to engage in local and state climate councils and climate change oriented citizen science programs.

The Role of Phenology in Addressing Climate Change
Observing and documenting changes in our outdoor environment is essential for our communities to make better decisions. For centuries, farmers, fishers, foresters, hunters, and gardeners have observed the seasons and life cycles of the natural world to optimize their planting, harvesting, and hunting. Historical records of these observations can be found in drawers, attics, and museums throughout the state, and even today, most professionals who work in the outdoor environment keep such records. Maine’s Maple Sunday and blueberry festivals, for example, are scheduled based on this knowledge. Now, these crowdsourced observations also assist public health management including tracking the spread of tick-borne illnesses. This information tells the story of our changing climate.
Phenology is the term that describes nature’s calendar, keeping the timing of life stages, such as leaf-out, flowering, reproduction, migration and hibernation. Signs of the Seasons (SOS) is a citizen science–driven phenology monitoring program across northern New England that observes 23 upland and coastal species as indicators of our changing climate. SOS connects people with the outdoors and puts in focus the effects of climate change in our local environment. The program was developed in 2010 by the University of Maine Cooperative Extension, Maine Sea Grant, and partnering research scientists. SOS data addresses two objectives:

1. to characterize the biological effects of climate change, and

2. to empower citizens to become part of our response to climate change by increasing their climate literacy, engaging in participatory research, and sharing their knowledge and experiences with others.

Learn more about Signs of the Seasons at: https://extension.umaine.edu/signs-of-the-seasons/

Three Examples of How Phenology Can Inform Us

- **Henry David Thoreau** recorded the flowering times of over 500 species of wildflowers in Concord, MA over 160 years ago to create a Nature’s Calendar for Concord. This research was more recently repeated by Boston University researchers, Primack and Miller-Rushing, finding a dramatic decline in the number of species. Approximately 25 percent of wildflowers that Thoreau observed are now locally extinct, and another 33 percent are now rare. Among the factors that could be responsible, including loss of habitat, deer herbivory, and issues with pollination, it became clear that phenology best explained the difference between Thoreau’s records and contemporary observations. Species with flowering times that adjust to changes in temperature (i.e., flowered earlier in warm springs and later in cool springs) tended to do well, while those that cannot track changes in temperature declined or disappeared. Non-native and invasive species have spread, and some species that have declined or disappeared from Concord are among New England’s most charismatic wildflowers--lilies, orchids, and buttercups.

- In 1981, the **Tour of Flanders**, an exhilarating Belgian bicycle race, was recorded on video through weaving roads between forests. By taking advantage of archived television footage of these races over time, researchers were able to document the compilation of individual tree and shrub species found along the roadside race route. Using this new method, the study found “surprisingly strong shifts,” in which species had leafed and flowered at the race-time in 1981 when compared with 2016 data. Researcher De Frenne found that plants were 67 percent more likely to have flowered before race-time in 2016 than in 1981, and 19 percent more likely to have leafed. The researchers were also able to connect higher winter temperatures with earlier flowering and leaf-out.

- **Research findings closer to home** uncovered ecological journals from Aroostook County hunting guide, L.S. Quackenbush which provided ecological records from the mid-1900s. Daily entries show evidence that the arrival date of migratory birds in rural Oxbow, Maine may not be shifting fast enough to keep up with advancing leaf-out and flowering life cycles of the 15 plant species recorded. A trophic mismatch happens when the availability of food isn’t in sync with local demand. For birds that visit Maine’s forests, meadows and coasts the mismatch caused by climate change could be problematic. “Leaf out and flowering are creeping earlier in warmer springs across the region but the rate of advance seems to be slower in northern New England,” says researcher McDonough MacKenzie, who has been studying phenology in Maine since 2011. Dr. MacKenzie has also intensively studied phenology in Acadia National Park.

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The collegial sharing of horticultural design and literature between Beatrix Jones Farrand and Edith Jones Wharton was a common thread throughout their lives. Niece and aunt, respectively, they were a mere ten years apart. Originally drawn together by virtue of their family ties and closeness in age, they became good friends with their shared, creative excellence, one on paper and the other in the landscape.

The phrase “Keeping up with the Joneses” is often attributed to these two famous women of the Jones clan. In the 1800’s, the family was equivalent to the Astors in New York or the Lowells in Boston. The Joneses kept a low, yet elegant profile in New York society, and traveled and read widely. Producing two famous women, Beatrix and Edith, was unusual for their social class which mainly reared females to marry well and act as good hostesses.

Beatrix Farrand, one of eleven founding members (and the only woman) of the American Society of Landscape Architects, combined horticulture knowledge with design skill, propelling her to a successful career. Her mother, Minnie Jones, regretted her own lack of education, and when she met Mary Sargent, wife of noted horticulturist Charles Sargent, she encouraged Beatrix to go live and study with the Sargents. Beatrix spent months in 1894 with Charles Sargent, using the Arnold Arboretum at Harvard University as her training ground.

Her aunt, Edith Wharton, spent her childhood and part of her teenage years living in Europe. A hugely successful author, she was the first woman to receive the Pulitzer Prize, which was for her book, *The Age of Innocence*. Italy was one of her first loves, and she fondly wrote of playing in Roman gardens as a young girl: “dodging in and out among old stone benches, racing, rolling hoops, whirling through skipping ropes, or pausing out of breath.” Wharton learned several languages well, and she and her husband Teddy were well travelled. In 1895, the couple welcomed Beatrix and her mother to Rome, which was a stop on Beatrix’s five-month “Grand Tour” to Italy, France, Germany, and England.

As family members, their paths had crossed many times before. Both women spent childhoods in Newport in the Pencairg garden of Lucretia Jones, Edith’s mother and Beatrix’s grandmother. Across the road, and still existing today, is Pencairg Cottage which was first given to Beatrix’s parents, and then later to Edith and Teddy Wharton. When Edith was eighteen and a debutante, she spent part of her summer in Bar Harbor, where Beatrix’s parents were setting up their “cottage,” Reef Point. Both women were influenced by Andrew Jackson Downing, an early landscape designer and horticulturist who wrote about “…the social purpose of landscape gardening.” Wharton, well-read on history, architecture and horticulture, also admired the English garden designer Gertrude Jekyll, as did her niece.
We can imagine they had lots to discuss during their 1895 visit to Rome and other parts of Italy. Edith suggested gardens in and north of Rome⁹, and Beatrix kept a detailed notebook of her Grand Tour. In addition to recommendations and introductions for Beatrix, Wharton described many of the same gardens for a series of Century Magazine articles, which eventually became her well-known book, *Italian Villas and their Gardens* (1904). Included is a detailed visit to Palazzo Colonna, seen by both Farrand and Wharton. While they both may have toured Villa Doria Pamphili, the Vatican Gardens with its charming Casino del Papa, Villa Lante, Villa d’Este, and Gamberaia separately, they both had strong and occasionally differing opinions of the iconic Renaissance and Baroque gardens. For instance, Farrand was not as keen as her aunt on the Vatican gardens:

“…It is not a whole, it is a collection of gardens put together inside a wall, that there are no axes visible anywhere, & in many places, such as the surrounding of the Casino del Papa the approaches have been destroyed to make way for an English garden, which is of course, a maze of tortuous paths leading nowhere.”¹⁰

And while Wharton waxed poetic about the extraordinary success of the small garden Gamberaia (“Almost every typical excellence of the old Italian garden” ¹¹), just outside of Florence, Farrand was dismissive, claiming “[I]t was interesting to see this villa as it proved to me that formal gardens need have space and a great deal of money is needed to carry them out.”¹² But they both were of like mind when it came to the horrors of the “new” naturalistic style of gardening in the 18th century (blisteringly dismissed by Wharton who referred to it as “anglicization”), which befell Villa Doria Pamphili.

By the time Wharton built her house, The Mount in Lenox, MA in 1902, Beatrix Farrand was a successful landscape practitioner with many commissions. Having an aunt as well-connected as Edith was not at all unhelpful to her practice. Farrand designed The Mount’s formal gated entrance, the long, meandering drive, and the vegetable garden, but she did not do any drawings for the formal garden; they were a result of Wharton’s extensive travel and knowledge of Italian, French, and English gardens. Wharton wrote frequently to many friends, including George Dorr, gardener and conservationist, about various plant material. But alas, her design skills at the Mount did not match her literary genius; the formal gardens at her Massachusetts house were forced onto the landscape and do not respond to the topography nor the view from the house to the lake and forests beyond.
While Farrand and Wharton remained in contact until Wharton’s death, their busy lives on separate continents (Wharton lived in France after her divorce from Teddy in 1911 until her death, and Farrand moved to California) kept them from close contact. And we do not have many letters between the two women, which limits our understanding of their mature friendship. We do know, however, that they continued to exchange horticulture knowledge, with Farrand sending Wharton seeds and plants for her house in the south of France, Ste. Claire. In 1935, Wharton stepped in for Farrand when Minnie, Beatrix’s mother died in England as Beatrix was unable to organize the funeral. Even more sadly, when Wharton was on her deathbed and her niece came to France to visit her aunt, the executor of the estate, Elsina Tyler, prevented their meeting. Farrand arrived 21 June, but Elsina did not want her there, claiming that Beatrix’s presence would make Edith more anxious.

Because of their family ties, shared interests and successful careers, we are left with a legacy of excellence in each of their respective fields. While the social status of the Joneses allowed them entrée into many houses, garden and social events, it was their common belief that women should also think critically which created an enduring bond.

NOTES
2. Zaitzevsky, 17
6. Lee, 59
7. Lee, 121
8. Lee, 122-3
9. Tankard, 18-19
12. Farrand, 42-3
13. Lee, 560
14. Lee, 742

BEATRIX FARRAND’S MASTERPIECE: DUMBARTON OAKS
An Introduction to the 2020 Herbarium Exhibition at Garland Farm
by Dr. Lois Berg Stack

The Beatrix Farrand Society’s seventh annual Herbarium Exhibition will be on display in summer 2020 at Garland Farm, 475 Bay View Drive, Bar Harbor ME. The exhibition, “Beatrix Farrand’s Masterpiece: Dumbarton Oaks,” can be viewed during Open Days at Garland Farm, 1:00-4:00pm Thursday afternoons from June 25 through September 24. The exhibition can also be seen on days of summer programs at Garland Farm; check www.beatrixfarrandsociety.org for times and dates.

The 2020 Herbarium Exhibition celebrates the plants of Dumbarton Oaks. Mildred and Robert Woods Bliss bought the Dumbarton Oaks property in the Georgetown neighborhood of Washington D.C. 100 years ago, in 1920. The property consisted of an old-fashioned house surrounded by 53 acres of rather neglected farm fields. The Blisses engaged Beatrix Farrand to design the landscape. Mrs. Bliss wanted to include aspects of French, Italian and English gardens, but she also wanted to create a landscape that would be original and unique. She collaborated closely with Farrand from 1921 to 1947 to transform the property into one of the most beautiful landscaped gardens in the country. Farrand designed more than one hundred private and public landscapes, and Dumbarton Oaks was widely regarded as her masterpiece.

The property’s formal gardens near the house serve as outdoor rooms. A series of descending walled terraces present less formal gardens, leading to walkways through tree plantings, orchards and finally a naturalistic park that is now Dumbarton Oaks Park, managed by the National Park Service.
Dumbarton Oaks is a large and complex landscape, with significant grade changes and an overall asymmetric design. Farrand skillfully used both hardscape features and plants to connect the various parts of the landscape. By the time she started her work at Dumbarton Oaks, Farrand had developed a deep knowledge of plants, through childhood explorations of Reef Point, early study at the Arnold Arboretum, extensive travel in the US and Europe, and practice as a landscape and garden designer. Her tree and shrub lists for Dumbarton Oaks are lengthy, but she used limited types of groundcovers and vines, repeating them from one part of the landscape to the next.

The 2020 Herbarium Exhibition features some of plants found at Dumbarton Oaks, by displaying 80 mounted plant specimens of those same trees, shrubs, vines, groundcovers and bulbs from Farrand’s Reef Point Gardens in Bar Harbor. These specimens were collected, dried and mounted at Reef Point Gardens from 1949 to 1954, as part of the herbarium that Farrand developed for use by students of horticulture and landscape design. The remaining 938 vouchers of her herbarium are now part of the University of California’s herbaria. The Beatrix Farrand Society partnered with the university to digitize this collection, making it publicly available online at:

https://ucjeps.cspace.berkeley.edu/ucjeps_project/public/publicsearch

Each year, some of the digitized vouchers are printed for the annual themed exhibitions at Garland Farm.

The 2020 Herbarium Exhibition is free and open to the public.

These plants represent the five groups of plants in the 2020 Herbarium Exhibition, left to right: *Clematis x jackmanii* (Jackman hybrid clematis, a vine); *Hosta* species (hosta, a groundcover); *Tulipa* species (tulip, a spring bulb); *Quercus rubra* (red oak, a tree); and *Kalmia latifolia* (mountain laurel, a shrub). Farrand planted these at Reef Point Gardens in Bar Harbor, and also used them in the landscape of Dumbarton Oaks in Georgetown, Washington D.C.

The Reef Point Gardens Herbarium was part of Beatrix Farrand’s vision of Reef Point Gardens as a place where students could study gardening and plants. Plant specimens were collected and preserved in 1949-1954. The herbarium remained at Reef Point Gardens until Farrand donated it to the University of California, Berkeley.

The Beatrix Farrand Society and UC Berkeley’s Herbarium collaborated to produce a set of high-quality digitized images of the Reef Point Gardens Herbarium, making possible the annual herbarium exhibitions at Garland Farm.

For information about the Beatrix Farrand Society’s summer events, online copies of newsletters and other information related to Beatrix Farrand and Garland Farm, visit:

www.beatrixfarrandsociety.org
On a lovely day in June, there was a jolly luncheon party at Garland Farm to celebrate Tom McIntyre’s time as Grounds Manager. For six years he’d been on the job and was retiring in June 2019. Friends, colleagues, and current and former board members turned up to take note. The luncheon party was organized by Michaeleen Ward and Brenda Les.

Tom never was seen without a smile as he managed everything as he worked with outside contractors, committee chairs and volunteers. In addition to the usual tasks associated with gardens and lawns, he knew which plants to encourage and which to discourage and how to go about each. His tasks ranged from mowing the meadow to maintaining the equipment and to using power tools while keeping visitors from dangers of falling limbs, etc. A major accomplishment was the re-glazing and resealing of the glass of Beatrix Farrand’s charming greenhouse so it is once again usable at Garland Farm. Tom spent time coaxing our irrigation system to work as needed and when Mother Nature sent excess water, he closed off part of our parking area so that visitors would not be mired in mud.

One item not on his job description was something of an archeological nature. While replacing a winter-killed shrub in the entrance garden, Tom unearthed a large stone under layers of soil. Raising the stone it turned out to be not one of Maine’s usual boulders but a stone marked Reef Point which Beatrix would have brought to her Garland Farm home but had been long buried and forgotten. Forgotten no more, it can be viewed by visitors as Beatrix was able to gaze upon it at will, a touching reminder of her beloved Bar Harbor estate.

The many attendees at the luncheon were a testament to Tom’s success at the myriad tasks he accomplished. Many stories were told and the laughter drowned out the traffic noise from Route 3. It was a fitting tribute to one who had done so much so well. Just writing about it makes us tired.

Thank you, Tom.
Balsam fir (*Abies balsamea*) belongs to the Pinaceae family of plants, which also includes cedars, hemlocks, larches, pines, and spruces. There are nine fir species native to the United States.

Balsam fir has a wide range in northeastern North America, extending from northern Alberta to Newfoundland in Canada, southward into the United States from Minnesota through Pennsylvania into New England. Canaan fir (*Abies balsamea* var. *phanerolepis*) is a variety of balsam fir, and is thought to be a hybrid between balsam fir and Fraser fir (*Abies fraseri*), which is a more southern variety. Canaan fir’s range extends from Newfoundland to Ontario and Maine. It is also found in the mountains of New Hampshire, Vermont, New York, Virginia and West Virginia.

Native to the northeast, balsam fir is a small to medium evergreen conifer. The tree’s maximum height is in the 40-90 feet range, with trunk diameters in the 12 to 30-inch range slightly below shoulder height. Needles are flat with a notched tip and have two white bands on the underside. Needles appear to be in two horizontal rows along stems. The balsam fir’s form is normally a dense, narrow pyramid ending in an elongated pointed crown.

A unique feature of balsam firs are the erect cones that occur on the upper sides of 1-year old branches in the upper canopy of the trees. Production of viable seed occurs when trees are about 20-years old or 15-feet tall. Seeds are wind dispersed in autumn. Every 2 to 4-years balsam firs will produce a heavy crop of seed. Balsam fir can be found growing from sea-level up to 6,200 feet in New Hampshire’s White Mountains.

Balsam fir thrives in cooler climates, and requires moist soils along with high humidity and is commonly found in swamps, flats, hardwood slopes and mountain tops. In New England, balsam fir is more commonly found in mixed stands, especially in forests dominated by black spruce, red spruce, white spruce, eastern hemlock, northern white-cedar, paper birch, aspen, and red maple. In Maine, balsam firs form pure stands in flats between swamps and upland areas. Balsam fir is one of the most cold-hardy trees known and grows best in areas where the mean annual temperature is 40°F. Bar Harbor’s mean annual temperature is 49.59°F.

Deer, moose and grouse eat balsam fir needles. Chickadees, nutcrackers, red squirrels and porcupines eat seeds of balsam fir. In addition to serving as a food source, balsam fir is an important habitat for wildlife. White-tailed deer, moose, bears, martens, fishers, hares, grouse and songbirds rely on balsam fir stands for shade, cover or shelter.

Balsam fir is the most popular Christmas tree in New England and is grown on tree farms for this purpose. The branches are used to make Christmas wreaths and are ground up and used to make incense. Balsam fir is used in landscaping, and can be used in screenings, mass plantings, and windbreaks.

Ensuring that abundant soil moisture is available is an especially important consideration when the tree is used for ornamental plantings. Balsam fir grows on all soil textures and tolerates a wide range of soil acidity levels. Roots rarely penetrate more than 30 inches below the surface of the soil. Balsam fir should be planted in full sun in a sheltered location. Balsam fir seedlings are tolerant of shade and will grow and develop under a variety of conditions. Once established balsam fir is capable of living up to 200 years.
The Beatrix Farrand Society (founded 2003) is located at Garland Farm, on Mount Desert Island in Maine. Garland Farm was the landscape architect and gardener Beatrix Farrand’s last home and garden. It is the mission of the society to foster the art and science of horticulture and landscape design, with emphasis on the life and work of Beatrix Farrand.