Eloise Butler Selected Writings

The Wild Botanic Garden in Glenwood Park

The Eloise Butler Wildflower Garden and Bird Sanctuary

Selected Writings of Eloise Butler
During her years as Garden Curator 1907 - 1933

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Gary D. Bebeau, editor
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Friends of the Wild Flower Garden, Inc.
P O Box 3793
Minneapolis MN 55403

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Minneapolis Tribune Weekly Articles - 1911

Introduction

Once the Garden was established in 1907, Eloise began writing about it. Some of her essays were published in various periodicals, newspapers and many were included in the bulletins of the Gray Memorial Botanical Chapter, division D, of the Agassiz Association of which she was a member from 1908 until her death. Those bulletins were circulated among members by postal round-robin circulation and may be the principal reason why, as a newspaper article stated, that she was more well known elsewhere than locally. Details about the association are included in this volume. Many times the text of an article indicates if it had been sent to the chapter for publication. If so, that is noted in the notes at the end of the article. Many others may have been sent but the text provides no clue. None of the associations circulars are available for review. A history of the Chapter is included at the end of this book.

These essays begin with a short autobiography and progress to describing events that occurred in the Garden or on plant hunting excursions; some are observations on the characteristics of plants. Particularly memorable is her recounting of finding the Walking Fern and the White Lady's-slippers and what happened when her hat caught fire. Her intent was to group them into several series under titles such as *"Annals of the Wild Life Reserve."*

Butler also included much information in *The Annual Reports of the Board of Park Commissioners.* Over the years she wrote a number of columns for the local newspapers including a series of 22 in 1911, published in the *Minneapolis Sunday Tribune*, that described various plants in the Wild Botanic Garden. All 22 articles are included in this volume.

Garden Name: The Garden was first named the "Wild Botanic Garden" but as Eloise Butler later explained *"It was soon found that the term 'Wild Botanic Garden' was misleading to the popular fancy, so the name was changed to 'Native Plant Reserve.' "* (Eloise Butler 1926 - *The Wild Botanic Garden - Early History*). Even though the name was changed, the sign on the Curator's little office building still said "Wild Botanic Garden" until well after the Park Board officially re-named the Garden "The Eloise Butler Wild Flower Garden" in 1929. For 40 years thereafter "Wild Flower" was written as two words, but beginning in 1969 and almost continuously after 1972 the Park Board used "Wildflower" as one word in the Garden Name and made that official in 1986. Eloise continued to refer to it as "The Wild Garden" or "the Preserve." Later, Martha Crone and Ken Avery preferred to use the term "Native Plant Reserve."

Introduction

The Photos:
The articles from the "Annals" never had photos but a few photos have been added to most articles for visual interest. The 1911 *Sunday Tribune* articles all had black and white photos taken by Mary Meeker, whom Eloise referred to as "the photographer of the Garden." At the end of each article are listed the photos Meeker provided. Contemporary versions of those have been included in the articles.

The Cover:
The three photos of Eloise Butler are - left - ca 1890 as a young teacher in Minneapolis. photo from Branch's Studio; middle - ca. 1910-20 with Eloise in front of one of the large birch tree boles that were on the east hillside of the Garden, photo courtesy Minneapolis Public Library; right - ca. 1930 as she nears the end of her career, photo courtesy Minnesota Historical Society. The textured background of the cover is of her beloved giant White Oak - Monarch.

The governing body of the Garden during this time period was the Minneapolis Board of Park Commissioners, hereafter referred to simply as "the Park Board." This body was renamed the "Minneapolis Park & Recreation Board" in 1970. Glenwood Park was renamed "Theodore Wirth Park" in 1938 in honor of the former Superintendent of Parks.

Acknowledgment

The majority of the articles comprising the Annals of the Wild Life Reserve were retrieved from obscurity in library archives and brought to the general public notice by Martha Hellander when she researched her biography of Eloise Butler, The Wild Gardener, published in 1992. Without Hellander's work, few contemporary people would ever come to know Eloise Butler, to know some of the historical details of the early Garden or to savor Eloise Butler's style of writing. Hellander also covered the entire series of 1911 *Sunday Tribune* articles, which any individual can retrieve from the various newspaper archives but who might not ever had the foresight to look them up. A summary of Hellander's association with the Friends and some of her photos from her east coast research is included at the end of this book.

Gary Bebeau, Minneapolis MN 2022.

Eloise Butler and the Wild Flower Garden

"Being a great lover of nature, an especially of wild flowers and plant life, it was her desire that one part of our park system should be left in its natural condition and devoted to the wild flowers and birds of our state. Under her loving care for many years, this garden has become famous and given pleasure to many." Alfred Pillsbury, President, Board of Park Commissioners, May 5, 1933.

Section I

From Maine to Minnesota

She was born in rural Maine, near Appleton, on August 3, 1851. An interest in botany may have been aroused at an early age by her family's herbal remedies, made at home from their knowledge of local plants. After high school graduation in 1870, she took a position as a teacher in West Appleton, Maine, near the Butler farm, but soon she was enrolled in a Teachers College, the Eastern State Normal School in Castine, Maine, from which she graduated in 1873. After graduation she moved with her parents to Indiana where other relatives were already established. That resettlement was not to last long for her, for in September 1874 we find her in Minneapolis. Here she began a long teaching career, principally in Botany, that was to last until retirement in 1911.

Eloise as a young woman, ca 1890s. Blanche's Studio, Minneapolis.

During those years in Minneapolis, she pursued her interest in botany by attending classes at the University of Minnesota, collecting, editing and working for certain professors, botany trips to Jamaica, Woods Hole, and the University's new research station on Vancouver Island. She was a member of the Gray Memorial Botanical Chapter, (Division D) of the Agassiz Association and frequently submitted articles for circulation to chapter members. Some of those articles are referenced in this text.

Origins of the Wild Flower Garden

As early as the 1880s observant people realized that the development of the city of Minneapolis was incompatible with the retention of native habitat. West of the city in the Saratoga Springs Addition, residents successfully petitioned the new Minneapolis Board of Park Commissioners (the "Park Board") to obtain a segment of that area to preserve for future generations. Named "Glenwood Park" and with adjustments in size over the years, this became what is now Theodore Wirth Park. A small section of this new park was particularly attractive to Eloise and her teacher colleagues. They were

having great difficulties familiarizing their students with plants growing in their natural surroundings, as development was wiping out these areas.

A 1907 newspaper reporter wrote:

> "There was a time, and not so long ago, that some Minneapolis families could pluck these rare wild flowers almost from their back doors, but when too many people took a hand in the culling and the plucking became a massacre, the plants grew discouraged and disappeared."

This spot in Glenwood Park would be accessible and attractive for that purpose.

Eloise Butler (center) with a Mr. Simmons and unidentified woman studying a natural tree graft near Glenwood Springs, ca. 1900.

As the Park Board had done little with the entire park due to lack of funds, this small group decided that something must be done to protect the unique native flora of the small area they had selected. That area included a swampy bog, fern glens, hillsides, upland hills and trees and nearby, the Great Medicine Spring. In April 1907, after a petition from a group of teachers and other citizens the Park Board was moved to set aside a portion of this area as a *Natural Botanical Garden* but soon it was known as the *Wild Botanic Garden* (as the partially visible sign in the photo below states). The initial area designated was only about 3 acres. Eloise Butler became the most prominent guardian and promoter of this natural space or as an April 3, 1910 *Tribune* article put it "practically the mother of the garden," but it was not a paying position nor were the 3 acres considered a permanent set-aside as there was no permanent care arrangements. After 1909, she spent each growing season in the Garden, living with friend Jessie Polley in south Minneapolis from 1912 to 1915 and then she took up lodging just north of the Garden at the J. W. Babcock house at 227 Xerxes Avenue near the Garden where she could walk to her domain. Mr. Babcock owned a photo engraving business at 416 4th Ave. So., Minneapolis. She would room at Babcocks until her death in 1933. In the fall, the garden closed on September 30th and each year after 1910 Eloise, in mid-October, returned East to 20 Murray Hill Road in Malden, Massachusetts, to stay with her sister Cora. Prior to 1910, while still teaching, she had returned to Malden in July and August each year.

It was originally believed that the Garden, with its naturalist approach, was the first of its kind in North America, but soon after its creation there was an account in the *Boston Transcript* of a similar garden near St. John, New Brunswick, in Canada that was established in 1899 by botanist Dr. George Upram Hay. It was a two acre "wild garden" on his summer property at Ingleside near Westfield, where he maintained more than 500 species of flowering plants. These were for the benefit of students and those who study plants. It was not a public garden, but the concept was the same. Martha Hellander's research indicates that the Wild Botanic Garden in Glenwood Park was certainly the first natural wild flower garden in the United States and as a public garden, probably the first in North America. Eloise and Cora visited Dr. Hay in 1908.

A document in the archives of the Minneapolis Park & Recreation Board (MPRB), the successor to the Board of Park Commissioners, titled "Our Native Plant Reserve" by Mrs. John Jepson, gives more detail on the origins of the Garden. Most of the detail in this short history appears to be taken from the notes of Eloise Butler that are preserved in her written documents "Annals of the Wild Life Reserve." This

document itself was subsequently published in June 1933 following her death, in *The Minnesota Clubwoman*.

Eloise - the First Curator

After her retirement from teaching in the spring of 1911, a pivotable moment occurred. On retirement Eloise was going to return to the East Coast unless some permanent arrangement could be made for her to care for the Garden.(1) Were it not for what followed next, this history would not have happened.

Above: ca. 1917. Eloise (on the left) with Clara Leavitt (former fellow teacher), just outside the curator's office. Eloise had the building constructed to her design in 1915. Photo courtesy Minneapolis Public Library, Minneapolis Collection M2632H

On April 5, 1911 the Garden Club of Minneapolis, meeting in the mayor's reception room at city hall, passed a resolution recommending to the Park Board that Eloise Butler be appointed curator of the Garden and that the space be set aside as a permanent wild flower garden.(2) They were joined on June 5th by the Woman's Club in presenting a petition to the Park Board signed by several hundred persons. They stated that Miss Butler was prepared to begin introducing a number of plants to the space to make it representative of the plants native to the state. The Board did not have any opposition to the proposal but required it to go through the committee process.(1)

On June 9 both groups appeared before the Finance and Improvement Committee.(3) The committee approved as did the full Park Board when it met, but her salary was to be paid by the Woman's Club until 1912 with the understanding that the position was to be permanent. In February of 1912, the Park Board took over the payment of $60 per month for seven months each year as previously agreed and thus Eloise Butler remained in Minneapolis to make history.(4) 1911 would prove to be a busy year for Eloise.

Promotion: As part of her crusade to raise public awareness of the Garden, Eloise began to write more extensively for publication. As early as 1909 we know she gave talks about the Garden to groups such as one at the Minneapolis Central Library on March 27, 1909. (5) In 1910 she contributed an article to *School Science and Mathematics*, Vol. 10, 1910, in which she advocated for "The Wild Botanic Garden". Between 1910 and 1918 she put on an exhibit about the Wild Botanic Garden in the horticulture building at the State Fair. It was a large exhibit consisting of 54 species of trees, 84 shrubs and 400 herbs. Over 100 photographs taken by Mary Meeker, many colored by hand, were on display including several large photos of Garden scenes. The exhibit of correctly named wild flowers won the first premium. The photos then went to the public library for display. (6)

In August of 1913 Minneapolis hosted a convention for the American Florists and Ornamental Horticulturists. Eloise supplied a display of native wild flowers - whichever ones nature deemed to provide at meeting time. Her January 1914 letter to Parks Superintendent Theodore Wirth - summarizes why the Garden is so important and so enjoyable.

From 1911 onwards Eloise wrote occasional articles for the newspapers about what plants to see in the Garden. She would note in her text that tours could be had by contacting her during the season. Eloise preferred to not have people come to the Garden and wander around, the paths were narrow, precious plants would stepped on, water holes could be stepped into so she had a number of signs erected of the "do not" variety. More frequently newspaper staff reporters would write about the Garden and what could be found there. Fletcher Wilson wrote in 1926 that "the native plant reserve is under the scrupulous care of a little old woman, Miss Eloise Butler. Except for fences and signs it looks like a particularly beautiful spot in the wilds that has remained undisfigured by the encroachment of civilization." (7)

The Plant Collection and Protecting it.

Eloise Butler's governing idea for design of the Garden was as follows:

> "My wild garden is run on the political principle of laissez-faire. A paramount idea is to perpetuate in the garden it's primeval wildness. All artificial appearances are avoided and plants are to be allowed to grow as they will and without any check except what may be necessary for healthful living."

This was soon modified. Martha Crone wrote in her brief 1951 *"History of the Eloise Butler Wild Flower Garden":* "The original plan of allowing plants to grow at will after they were once established, and without restraint, soon proved disastrous. Several easy-growing varieties spread very rapidly and soon shaded out some of the more desirable plants. An attempt was made to check them, but with limited help, this proved to be a problem."

In those early years the Garden was relatively secluded. Prof. D. Lange, wrote about the extermination of wild flowers in the cities, in the *Minnesota Horticulturist* of Jan. 1912. He said:

> "The writer knows of one such glen where there are now growing on the space of about three or four acres about twenty-five different kinds of trees, shrubs and vines, half a dozen kinds of ferns and about half of all the species of the wild flowers found in the country. A little stream and a bit of Indian history make the place still more interesting. What a boon this little place would be to the city twenty-five or fifty years hence!"

What Eloise was thinking of if the space could be made permanent was explained in a long article in the newspaper about the Wild Flower Garden.(8) This may have been a bit of preemptive lobbying for what she wanted. The article highlighted the natural features of the place, and stated that there were already 452 species of herbaceous plants and 51 shrubs in the Garden. The way the area was maintained was explained in the same manner as Eloise wrote about later in September. She was developing the following ideas:

1. There was no reason to limit the plant selection to Minnesota plants. Everything that could grow here should be tried. While this was not the intent of the original petition creating the space, she considered instead that it should be like an arboretum rivaling if not exceeding those famous ones in the east.
2. There should be a building nearby where visitors could rest, find reference books and photographs. In 1915 she would have her own building built right within the Garden.
3. A herbarium should be established. Years later Martha Crone started one.
4. The space needs to be enlarged. It was already seven acres at this time due to requests from the teachers to add more to their care. Eloise was ready to ask for more acreage to be appropriated and that was done when the space for the Garden was made permanent - eventually reaching 25 acres in the 1920s.

The enhancement of the garden with the planting of additional native species then gathered full steam in the hands of Eloise Butler after 1910. Eloise rescued plants from development areas and sourced them from nearby sources such as the Quaking Bog and local street sides. The Quaking Bog is also located in Theodore Wirth Park, on the west side of Theodore Wirth Parkway, opposite the Garden. It is a hidden five acre acidic bog with mature tamaracks shading an under story of sphagnum moss much like the Garden bog was when the Garden was set aside as a preserve.

It became her practice to import plants not growing in the area that she thought would grow there, even if they were not native to Minnesota. She sourced many plants from nurseries in other states, particularly nurseries she was familiar with from her families home states of Maine and Massachusetts. With her plan to include all plants native to the area plus those not native that might grow here, Eloise set about the task with gusto. The years 1912 to 1916 in particular were devoted to the expansion of the plant collection. In those years alone 262 new species were introduced plus the numerous additions and replantings of species already present. The introduction of species never abated. Even in 1932, her last full year as Curator, 11 new species were introduced. Work slowed in her later years, but never was

Here in 1911 we see Eloise, in full dress and hat, using a downed tree to navigate on a visit to the quaking bog, which is close to the Garden. Eloise would source plants there, as would Martha Crone in later years. Photo courtesy Minneapolis Public Library, Minneapolis Collection, M2632J

the year without new introductions and replantings.

Her sources of plants included the east coast nurseries she was so familiar with from her winter visits to Malden; nurseries in Minnesota, Nebraska, Wisconsin and Colorado; the Park Board nursery located adjacent to the Garden near Glenwood Lake, and her personal plant gathering forays. Returning from

one such foray to Bloomington with Mary Meeker in May 1911, their runaway buggy overturned and Eloise spent a few weeks in a hospital with an arm fracture and hip injury. (9)

In the photo above we see Eloise, well dressed as usual, wearing her peace officers star, ca. 1921 by which time the Garden was well established. Photo courtesy Minneapolis Public Library.

It was time for a fence: Eloise Butler was the 'Park Policeman' of the Wild Flower Garden. To give herself some air of authority she frequently wore a tin peace officers star. In 1912 Eloise included within the text of her annual report to the Board of Park Commissioners the following:
"Another cause for congratulations is the generous extension of the Garden limits by the addition of an adjacent hillside and meadow. The labor of the curator would be materially lightened if the garden were fenced and more warning signs posted. Her work consisted of conducting visitors, exterminating pestilent weeds and protecting the property from marauders. For " 'Tis true, 'tis pity, and pity 'tis, 'tis true" that a small proportion of our citizens have not yet learned to name the birds without a gun, or to love the wood rose and leave it on its stalk." [Nov. 8, 1912].

By 1913 the area assigned to the Wild Botanic Garden was about 10 to 12 acres. A story about the Garden that appeared in the May 3, 1913 issue of *The Bellman* stated that the Garden have been enlarged 3 to 4 times the original size. Shortly after that, a meadow north of the Garden was added bringing the total area to 20 to 25 acres. [Eloise cites both numbers in later correspondence.] The article in *The Bellman* is significant in that it is the earliest detailed description of the Garden and it included 5 photographs that are the earliest views we have of the pool in the Garden, the fernery and the large elms that Eloise had named the "inner guard" and the "lone sentinel."

In order to really secure the Garden from large animals, vandals and people that just wandered in from all directions without regard to where they stepped, it had to be securely fenced and equipped with gates that could be locked. Eloise Butler even resorted to the newspaper on three occasions to state her case for a fence, but he Garden was not protected by any substantial fence until 1924, and then only partially. Although the initial action by the Park Board in creating the Garden called for a fence, there is no positive record that one was ever put up, but if there were a fence, it would have been around the original 3 acres only as the 1907 action stated A fence was a necessary step to keep out interlopers, "spooners", and destructive animals, such as the neighboring hog.
Eloise had written in a September 18, 1921 article in the *Minneapolis Tribune*:

"It's not the wild, voracious mosquito-
It's not the snooping vagabond dog -
Nor is it the pussy-footing feline -
But it's the demon surreptitious spooner thats brought the need for an encircling barbed wire fence around the wild flower garden in Glenwood Park to save plants of incalculable scientific value from destruction. A stray cat will pitter patter into the garden and leave a narrow trail. A dog seeking food perhaps in the shape of a ribbit (sic) will snoop through and leave a wider wallow - But the spooning couple - "For destructive properties the army of tussock worms is a piker when compared with the Spooner."

In 1924 her call for a fence appeared again in the newspapers but with no action by the Board of Park Commissioners Eloise had the fence put up herself. Details on that went on are available in a separate detailed article on Garden fencing.

Today the neighboring hog has moved well away but the white tail deer have moved in and it requires consistent fence maintenance to keep them out. Natural calamities affect the garden as well. In the photo at right we see Eloise near a stand of birches, many of which were lost in a destructive tornado of June 2nd 1925. In more recent years the loss of many elms to Dutch Elm Disease and oaks to oak wilt has left some areas without the tree canopy that sustained the habitat beneath, resulting in changes in the Garden's appearance and habitat.

Eloise Butler, ca 1920 at birch tree grove. Photo courtesy Minneapolis Public Library, Minneapolis Collection, M2632B

How to handle the "errant" visitors

A Minneapolis newspaper article published in 1917 observed this about Miss Butler:

> "If any one comes upon her suddenly, at a quick turn in the path, her first thought is to exclaim: 'do not step off the path, be sure to come this way along this foot path so as not to step on those geraniums,' or it might be gentians if it is fall, or bloodroot if it is spring. These flowers are her family."

A particular person who was confronted by Miss Butler was *Minneapolis Star* writer Abe Altrowitz who wrote in 1964 about his earlier encounters with her.(10) On his first visit on assignment she led him around naming various plants. On his second assignment she was not present so he nosed around. A year later on a third assignment he writes:

> I found Miss Butler very much in evidence. Her greeting was a peremptory challenge: “Young man!” The mien and vocal quality were those of a teacher addressing an erring pupil.
> “Yes?” I said.
> “Last time you were here you strayed from the pathways. You walked where you never should have without being accompanied by the curator!”
> She knew of my transgression because of the names I had used in that second story. I believe she knew every blade of grass in that entire garden acreage. There was nothing I could do but plead guilty. Whereupon she gave me a grand smile and told me I could consider myself forgiven, on condition I never transgressed again.

Notes to Section I:

(1) “Botanical Garden Sought," *Minneapolis Tribune*, June 6, 1911
(2) "Wild Flower Garden Urged," *Minneapolis Tribune*, April 6, 1911.
(3) "Wild Flower Garden Proposed," *Minneapolis Tribune*, June 10, 1911
(4) "Miss Butler's Services Kept," *Minneapolis Tribune* February 6, 1912.
(5) The lecture was announced in the *Star Tribune* on March 27, 1909 and was preceded by an announcement about upcoming Library programs published on December 27, 1908 in the *Star Tribune.*
(6) Article in *Minneapolis Tribune*, September 9, 1910 and *Twenty-ninth Annual Report of the Board of Park Commissioners.*
(7) Minneapolis Tribune, May 31, 1926.
(8) "Wild Flower Garden City Park's Feature" *Minneapolis Tribune* March 26, 1911
(9) *Minneapolis Tribune*, May 25, 1911.
(10) *Minneapolis Star*, July 23, 1964.

Section II

Martha Crone

About 1918 a young woman named Martha Crone entered the scene. Her connection to the Eloise Butler Wildflower Garden and later to her assistance in founding The Friends of the Wild Flower Garden are linked back to her innate loving response to wild things and their place in the environment. Like most people who devote a passionate lifetime to the pursuit of a certain subject or hobby, she was largely self-taught about wild plants and birds. Her first contact with the Garden was as an inquisitive and persistent visitor, extracting information from Eloise Butler and in turn bringing in specimens and providing assistance to Eloise.

Martha and William Crone with daughter Janet, in the early 1920s

Martha and her husband William, a dentist, lived at 3723 Lyndale Ave. North in Minneapolis. Together, they were avid explorers of plant habitat and especially mushroom habitat. Martha was secretary of the Minnesota Mycological Society from 1926 till 1943 and a member until her death. Considering the need for large numbers of plants for the developing Wild Flower Garden, the Crones were able to provide good assistance to Eloise Butler in finding sources for wild plants and for rescuing plants from areas where the native habitat was soon to be overrun with development. Winter correspondence between Eloise and the Crones started in the early 1920s and continued to the end.

Naming the Garden

In Eloise Butler's early years at the Garden, she referred to it as "The Wild Botanic Garden" for two reasons. First, she maintained it in a "wild" state, such as the plants might appear in the natural environment. Second, she wanted to establish which plants would grow well in the climate of the Garden, even if they were not native - hence - it was a 'botanic' Garden. This second reason was slightly contrary to the original stated purpose "to display in miniature the rich and varied flora of Minnesota." (1) The first premise has been maintained to the present day. The second was abandoned at the end of Martha Crone's time when it was established that only plants native to the area should be present.

A second name appeared fairly early in Eloise Butler's time - "native plant reserve." Martha Crone and later Ken Avery used the term 'reserve' when speaking of the Garden. In an essay Eloise wrote in 1926 [The Wild Botanic Garden - Early History] she explained why the second name was chosen: "It was soon found that the term "Wild Botanic Garden" was misleading to the popular fancy, so the name was changed to "Native Plant Reserve," even though she was bringing in many non-native species. Nevertheless, newspaper accounts of the Garden and its Curator from 1913 to 1924 still called it the Botanical Garden of (or sometimes "in") Glenwood Park. Kirkwood's 1913 article in *The Bellman* is titled "A Wild Botanic Garden."

On June 19, 1929, the Park Board took official action and renamed the Garden the "Eloise Butler Wild Flower Garden," to which was added " and Bird Sanctuary" in 1968 when the Friends of the Wild Flower Garden requested making the name "Eloise Butler Wild Flower and Bird Sanctuary" making the

word “sanctuary” apply to both flowers and birds. Note that the Park Commissioners in 1929 named it "Wild Flower.” Most documents found in later years use the name with "wild flower" as two words until 1970 when "wildflower" came into use. That came about as the result of the 1968 Friends’ request. (2) The name addition was approved in early 1969 but in the transition when the name was officially changed to add that phrase “wildflower” was sometimes substituted for “wild flower.” In 1986 the MPRB officially made it the current ‘Eloise Butler Wildflower Garden and Bird Sanctuary’ but with the two words ‘Wild Flower’ condensed to ‘Wildflower’ and the word ‘garden’ reinserted.

The 1931 Birthday Party

Above. A gathering of friends on her 80th birthday, August 3, 1931. From l to r: Miss Alma Johnson, frequenter of the Garden; Mrs John Hadden, a former pupil; Mrs. J. W. Babcock, in whose house Eloise lodged while in Minneapolis; Miss Clara K. Leavitt, fellow teacher; Eloise; Dr. W. H. Crone (behind Eloise); Miss Elizabeth Foss, botany teacher at North H.S.; Miss Mary K. Meeker, former pupil; Mrs. O. F. (Edith) Schussler, former pupil; Mrs Crone (Martha); Mrs. Louisa Healy, former pupil. Photo: Minnesota Historical Society, Martha Crone Papers.

Below: Following the outdoor photo above, the gathering moved indoors to the J. W. Babcock House at 227 Xerxes Ave. where Eloise boarded during the time that the Garden was open. The seating arrangement here is: Left side front to back - Mrs. Louisa Healy, Eloise Butler, Mrs. Schussler, Miss Leavitt and Miss Foss. Right side, front to back - Martha Crone, Mrs. Hadden, Miss Johnson, Mrs. Babcock and Dr. Wm. Crone. Photo: Minnesota Historical Society, Martha Crone Papers.

Eloise sent copies of the birthday photos to the Crones August 14 with this note:

> "Dear "Cronies". -- I didn't know when you would be able to come into the garden so I am mailing you the snap shots of the joint birthday party. I thought you would (sic) to see how very English Dr. Crone and Mrs. Babcock look with their monocles as they sit at the table. I think that the out-door print is very good, except that the doctor is somewhat obscured by the dark tree trunk."

The Last Major Project

In the photo on the next page, we see Eloise crossing the rustic bridge at the north end of the Mallard Pool just after its construction in 1932. She has physically weakened due in part to neuritis and from burns received in 1929 when a heating pad caught fire while she was sleeping. Her doctors advised her that the burns would always be covered with scar tissue, not true skin, so they would always be somewhat uncomfortable. Perhaps the serious hip injury sustained in 1911 never completely healed either. The development of the Mallard Pool was long on gestation and short on actual building. She had dreamed for many years of creating an aquatic pool for special plants and the site was a meadow north of where the current Garden boundary ends, where water from the wetland drained out into an open meadow. In her letter to The Gray Memorial Botanical Chapter, (Division D) of the Agassiz Association for inclusion in the members circular, she wrote in 1932 (3): "Ever since the Native Plant

Preserve was started I have wished to have a pool constructed where two small streams converge in an open meadow, the only pool in the Preserve being too shady for aquatics. The hard times gave this joy to me, for a jobless expert did the work for a sum that could be afforded by the Park Commissioners." The pool was quickly constructed by the unemployed man and another (Lloyd Teeuwen) was employed to build a rustic bridge of tamarack poles and planks to span the narrow lower end of the pool. When a mallard was soon seen in it, it became the "mallard pool." Eloise had planned extensive plantings around the pool and these were completed by Martha Crone in 1933. That pool is no longer within the boundary of the Garden as the area was abandoned by 1944, but the Garden does contain a pool, in the same place where Eloise originally created one in the Garden's first years, which has acquired the same name.

Eloise Butler on the bridge at the Mallard Pool. Photo Minnesota Historical Society

More details about the wetland and the pools will be found in our article "The Wetland at Eloise Butler Wildflower Garden" and in particular in a detailed article about the original Mallard Pool in this volume.

The End of a Long Career and the myth of her death in the Garden.

1932 was Eloise's last full year as curator. She wanted to retire but had been unable to find a replacement.(4) While at Malden she wrote what would be her last letter to the Crones on January 11, 1933 in which she thanked them for the Christmas gifts they had sent and she attached copies of correspondence from Pearl Heath Frazer which she wanted the Crones to keep for her as she (Eloise) may want to show it to Mr. Wirth upon her return to Minneapolis. The correspondence was about Mrs. Frazer taking on the job of Curator so that Eloise could retire. Eloise had sent a letter, at the request of Parks Superintendent Theodore Wirth, to Mrs. Frazer on September 29, 1932, explaining the job. Mrs. Frazer had replied to Eloise that that was not the sort of job she was interested in.
In that letter to Mrs. Frazer she lays our her plan:

> "My aims are only to secure the preservation and perpetuity of The Preserve, as well as its helpfulness to students of Botany and lovers of wild life. When these aims are secured, I am ready to fade out of the picture and will promise that not even my ghost will return to haunt the premises."

Eloise Butler ca. 1930, photo courtesy Minnesota Historical Society.

Shortly after the new season of 1933 began, Eloise was back in the Garden doing what she could in her failing health. On the rainy morning of April 10, 1933 she attempted to reach the Garden from her lodgings at the J. W. Babcock's house (located just east of the Garden at 227 Xerxes Ave. North). She apparently suffered a heart attack and made her way back to Babcocks (possibly with some help by some boys). A doctor was summoned but nothing could be done and she soon passed away on the couch in the entryway of the house at 2:15 PM. Her funeral was on April 12th, 12:45 PM at the Lakewood Chapel. On May 5th, her ashes were scattered in the Garden as had been her wish.

The myth that she died in the Garden: It is frequently misstated that she

died in the Garden and some boys found her there. That is not in agreement with the accounts of those that were present at her death at the Babcock House where the doctor was attending her. Perhaps this romantic myth has some origin in Theodore Wirth's April 19th letter announcing her death when he stated *"(she)....had suddenly died in the park while on her way to her domain."* Or perhaps it is a misreading of the reports of her death in the newspapers. For example, the *Minneapolis Journal* reported on April 11th (speaking of woodland flowers) that *"Miss Butler died yesterday in their midst."* The article further says that *"she was found leaning against a stump near a little by-path."* That last part is believed to be true, (as Wirth's statement that she died *"in the park on her way to her domain"* may be partially true) as it is known from witnesses on April 10 that she attempted to go to the Garden. Some newspaper accounts and Martha Hellander's research indicate she was found on her way to the Garden and was helped back. But she did arrive back at Babcock's house. The newspaper incorrectly identifies the Babcock house as J. W. Butler's house. (5)

Eloise Butler in her last years.

Testimony of Lloyd Teeuwen: The only eye-witness account of her death by anyone still living was given by Lloyd Teeuwen on May 4, 1988 in a recorded interview with Martha Hellander while Hellander was researching material for her book *The Wild Gardener.* Teeuwen was a Garden helper for Eloise, beginning when he was 13 or 14 years old. It was he who build the rustic bridge on the Mallard Pool. It was six years later when on April 10th, on a rainy day, he came to the house to help Eloise down to the Garden, as he always did when the paths were wet and muddy. He asked *"do you want to go down there and try it." "No"* she replied, *"I don't think I want to go down there now, maybe a little later if it stops, maybe we can go down there."* He believes she may have attempted to negotiate the path herself but states *"They didn't find her anywhere, she got to the house herself."* Mrs. Babcock had told Teeuwen that Eloise had gone out but was only gone a short time when she returned. *"She'd come in and Mrs. Babcock says 'She said she didn't feel too good.' "* (6)

When Lloyd returned to Babcocks later she was there and his report of her death is as follows: *"When I came in there, the doctor was there, and she was laying in the Living Room; they had what they call a little entrance way, like a vestibule, and it had a black leather couch in it and she was laying on it.* [Hellander - In the Babcocks house?] *Yes, you came in the front door - the doctor had come in it - I don't remember his name at all any more - and he was checking her out like that* [Hellander - was she still living?] *She was still living, but she was, ten minutes later, he says (the doctor), 'she's gone.'"* (6)

Theodore Wirth Announcement.

"For a full quarter of a century, her useful life has been spent in a labor of love..." Theodore Wirth, Superintendent.

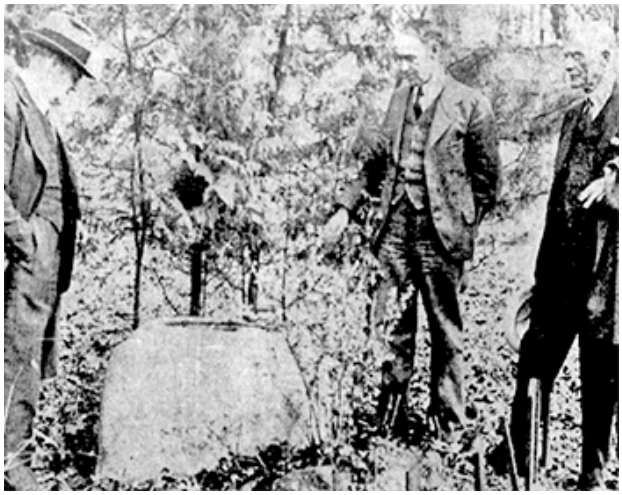
It is not unusual that the accomplishments of an individual are more clearly understood after that person has passed on. While certain people are "in-the-know" about what an individual is accomplishing, it is only after death, when congratulations are too late that the rest of world becomes aware of the qualities of the individual whose life is now past. Theodore Wirth, Superintendent of the Minneapolis Park System, was probably the first to craft a brief but informative statement about the

role Eloise Butler had taken on and played with such accomplishment. His letter of April 19, 1933, addressed to the Board of Park Commissioners informed them of her death and of her accomplishments. The letter announced the date for the remembrance ceremony to be held May 5th and also got the ball rolling on the commemorative tablet that was placed one year later.

The commemorative tablet that Wirth mentioned was also reported in the newspaper in an article announcing the upcoming ceremony. The *Minneapolis Tribune* stated on May 4 "Near the little cabin that served as her office the commissioners will stand about and scatter her ashes among the flowers she loved. They will plant a young oak in her memory, knowing that before long her former botany students will have subscribed enough for a bronze tablet to commemorate the occasion and to perpetuate her name."

The article reported that the commissioners visited the Garden on Wednesday afternoon (May 3) "They inspected the growths, the cabin, paused at the bird bath of stone, noted the bird houses, and agreed that the wildflower garden was a place of serene and peaceful beauty."

Remembrance Ceremony



At the 1917 Stone birdbath in the Garden on Wednesday May 3, 1933 are Park Board members (l to r) Alfred F. Pillsbury, president; Lucien C. Miller and Francis A. Gross.

At the entrance to the Garden on May 3 is Superintendent of operations and maintenance of the park board Christian A. Bossen.

On April 28, 1933, Superintendent Theodore Wirth wrote to the Board of Park Commissioners that the Remembrance Ceremony for Eloise Butler was to be held at 4:00 o'clock in the afternoon on May 5, 1933 in the Wildflower Garden. He stated that he had secured good specimen of a Pin Oak to be planted and made the suggestion that

> That every member of the Board participate in the planting of the tree, and that the President of the Board perform the rite of spreading the ashes.

About 100 people attended the ceremony. Mr. A. F. Pillsbury, President of the Board of Park Commissioners, officiated. The Pin Oak tree acquired by Superintendent Wirth was planted in her honor and her ashes were scattered within the area, as had been her wish. (The Pin Oak is difficult to establish there and was subsequently replaced with another.) A the full report of the Ceremony is on the website and in printable form.

Poem for Eloise

Dust we are, and now to dust again
But gently blown throughout the glen
Which was your alter and your shrine
Wherein you gave a life of tenderness all thine
In every nook your footsteps trod
The plants you loved belong to God
And in his keeping they are ours
The trees, the shrubs, the blessed flowers
And still your soul, on guard, will stand
Against the touch of vandal hand.

From Martha Crone's Notebook, Martha Crone Collection, Minnesota Historical Society

Memorial Tablet Dedication

At the end of the path from the front gate of the garden to the Martha Crone Shelter will be found a large granite boulder bearing a dedication to Eloise Butler. The boulder was placed the year following her death in front of the Pin Oak tree that was planted in her memory. On the boulder is mounted a bronze tablet, dedicated on Arbor Day, May 4th, 1934. The oak is no longer there, but the boulder is sheltered by a large Leatherwood shrub - another plant she had sought out for the Garden. Her "occult" experiences in finding this shrub were described in one of her essays - found on the website as are more commentary, historical documents, and photos of the dedication, all in printable form.

Below: Newspaper photos from day of dedication.

ELOISE BUTLER, FOUNDER OF GLENWOOD PARK GARDEN, IS HONORED TODAY.

Notes to Section II

(1) 1907 petition to the board of Park Commissioners to designate space for the Wild Botanic Garden.
(2) Notes and board minutes of Friends of the Wild Flower Garden from 1968.
(3) Agassiz Association : See the separate article in this volume.
(4) Letter to Pearl Fraser, September 29, 1932
(5). *Minneapolis Journal* April 11, 1933

(6) Interview with Lloyd Teeuwen, May 4, 1988 by Martha Hellander. Tape and transcript in the Martha Crone Collection, Minnesota Historical Society. Lloyd passed away on June 16, 1992.

Eloise Butler Biography.

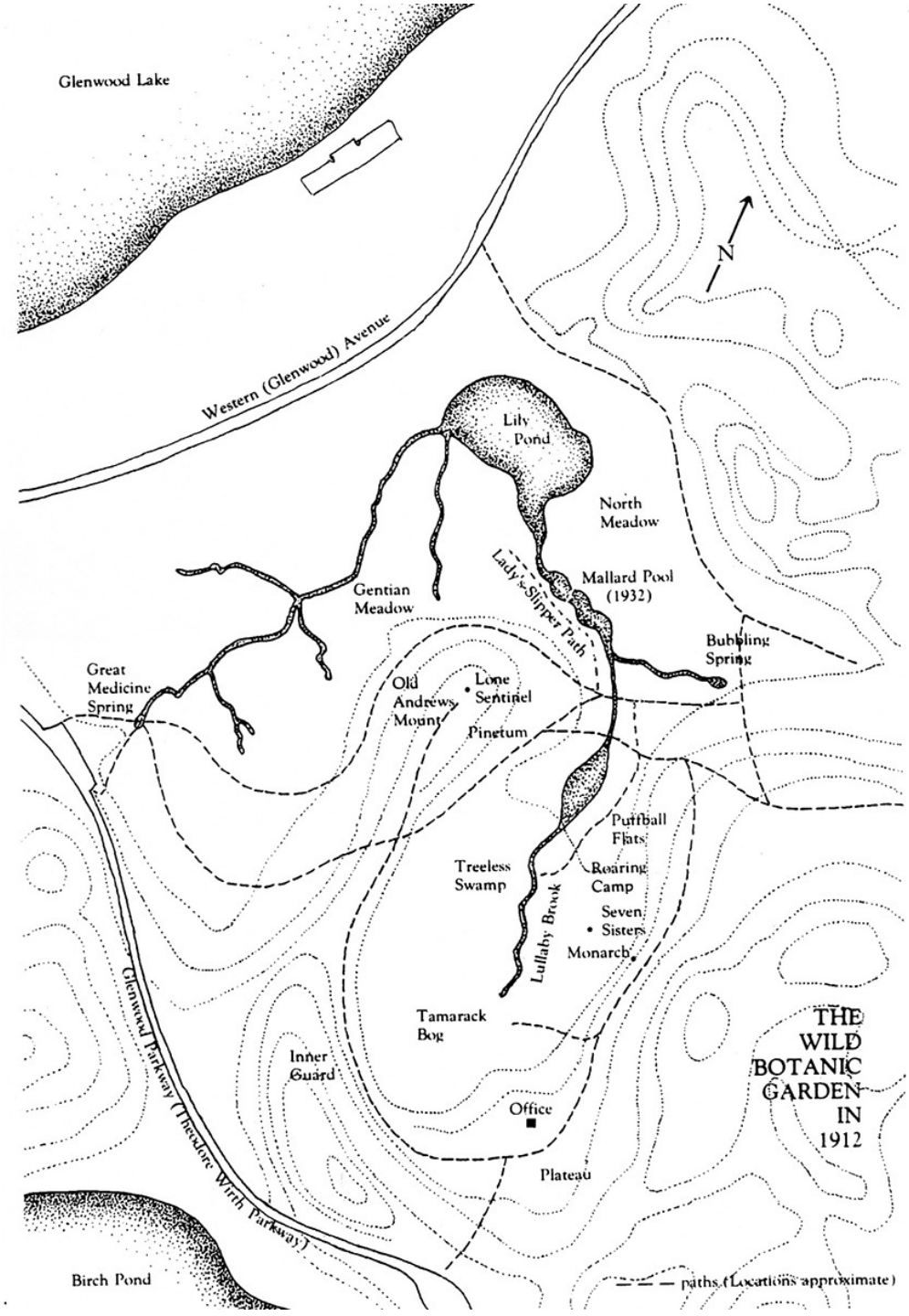
A complete biography of Eloise Butler was written in Martha Hellander's book *The Wild Gardener*. While it is now out of print and no longer available from The Friends, information on Martha Hellander and how she created this book plus photos and information on her research in Maine on the Butler Family are also on the Friends website.

The Friends have also produced another book, *The Wild Botanic Garden* - 1907-1933. as a companion volume to Martha Hellander's biography of Eloise Butler - *The Wild Gardener*, detailing the events of each year of Eloise Butler's tenure as Curator of the Garden. It is available as a downloadable PDF file on the website.

Quotations of Eloise Butler are from her various writings, from *The Wild Gardener*, by Martha Hellander, North Star Press Inc., 1992, used with permission, from newspaper articles and from documents in the Martha Crone Collection at the Minnesota Historical Society. Photos used with permission of noted source. Text by Gary Bebeau.

The Wild Botanic Garden in the time of Eloise Butler

The features identified are names given by Eloise Butler. The original space set aside for the Garden was just three acres centering on the Treeless Swamp and Tamarack Bog. Within a few years the surrounding hillsides and the area of the North Meadow had been added resulting in a wild garden of 20 plus acres. The existing back fence of the Garden in 2022 closely follows the dotted line of the old path (later known as the "tarvia path") that leads from Bubbling Spring on the east westward to where that path begins to make a great curve to the south between Gentian Meadow and Old Andrews Mount. (Map courtesy Martha Hellander)



An Autobiographical Sketch - 1911


Appleton Maine 1989

Having a reticent nature, I must confess to shivering on the brink before taking the plunge into self-revelations. I was born not long after the middle of the nineteenth century in the little village of Appleton, on the St. George River, about twelve miles from the seashore, Knox County, Maine. Here I lived until I was about fifteen, attending district and private schools, my chief amusement being then what it still is – roaming the woods. An aunt who lived with us taught my sister and me to know the plants of the neighborhood. My mother said I was abnormally good when I was a baby, but got bravely over it when I grew up. Indeed, some of the neighbors thought I must be idiotic because I lay quietly in the cradle, making no demands for attention. They said, too, that I hadn't any nose - only two little holes in my face where my nose ought to be. Accordingly, everyone was pinching my face in order to make the organ grow. Who can tell how much my lack of good looks is due to that practice?

My father was a farmer. Before marriage my father and mother had both been teachers, and at that time and place no other career than teaching was thought of for a studious girl. So, after completing the courses at high school, Lynn, Massachusetts, and normal school, Castine, Maine, I began the work that I am still engaged in. (In my next incarnation I shall not be a teacher.) My father sold his farm and moved to a small town in northern Indiana, on Lake Michigan, just as I left the normal school. I taught for a few months in Indiana. I have a keen recollection of a ludicrous experience. We New Englanders slur the sound of r. In northern Indiana, settled largely by Germans, the r is exaggerated and the speech bristles with bur-r-s. My pupils could not understand what I said, and a child where I boarded, who had learned my language, had to act as interpreter. The report went abroad that the new teacher was tongue-tied. With what circumlocutions I tried to avoid words with r's! The result of my efforts to acquire the new tongue had the following sequel: I remained West seven years before visiting East. Then my relatives threw up their hands in astonishment, exclaiming, "Good heavens! Where did you get that brogue!"


Normal School, Castine ME

Not finding a situation to my liking in Indiana, I secured a place in the Minneapolis schools and here I have lived since 1874. The monotony of my life has been broken during the long summer vacations. I have taken courses of study at Harvard, at Woods Hole and our State University and have enjoyed particularly the instruction of Dr. J. C. Arthur and Dr. Charles Bessey, the latter the greatest and most enthusiastic teacher I have ever met. The summer of 1896 I spent abroad, reveling with the old masters in art – my greatest hobby after plants. And I collected chiefly algae and ferns for three seasons in Jamaica, West Indies. Those were memorable

occasions, to which I must add a most enjoyable sojourn at the seaside station of the University of Minnesota, on Vancouver Island, a camp sixty miles from civilization.

As you will know, I chiefly live and move and have my being in and for the Wild Botanic Garden.
I haven't had a photograph taken for twenty years. . . . is a "snapshot" fired this summer as I was crossing a stream surrounding a quaking tamarack bog.

The photo at the right is the one she writes about her crossing a stream in the Quaking Bog (just west of the Garden location). The photo was dated 1911. *Photo courtesy Minneapolis Public Library, Minneapolis Collection.* Photos of Appleton and Castine Maine courtesy of Martha Hellander.

In Quest of the Walking Fern - 1909

Camptosorus rhizophyllus [now *Asplenium rhizophyllum*] is popularly known as the walking fern, on account of the runners that develop from the tips of mature leaves and take root to form new plants, which thus "walk" on from year to year.

The fern is local and is said to flourish best in soil of limestone origin. Two founders of the Wild Garden went to Osceola, Wisconsin to obtain some of the fern [occurred in May 1908]. Osceola is a picturesque little village, with high, limestone bluffs overlooking the St. Croix River. It is about two hours by rail from Minneapolis and has two daily trains, one leaving Minneapolis in the morning and the other returning in the early afternoon. Considerable time and labor were spent the day before in transporting and forming a bed of calcareous earth for the reception of the plants in the garden. On arriving at Osceola, as the day proved hot, the collectors obtained permission to hang their wraps in the office of the station, to be free of unnecessary impediments in the toilsome climb before them. The present fashion of pocketless gowns also necessitated that the one having a convenient handbag should carry the valuables of the other.

The Walking Fern (*Asplenium rhizophyllum*). Photo Martha Crone, May 31, 1950

Although the collectors were familiar with the grounds and knew from former visits just where to look for the specimens, a long and patient search failed to reveal them. The place had evidently been despoiled. Keen, indeed, was their disappointment. They finally became separated in their search, and one of them did not appear at the station in time for the journey home. The other [EB] fancying that her companion might, at the last moment, reach the train from the opposite side, snatched the wraps of both in desperate haste and boarded the train, only to discover her error and hence to get off at the first stop to investigate the cause of the apparent accident.

She found herself at the farther end of a very long and high railroad bridge, which must be crossed to get back to Osceola. It was then boiling hot, and she was weighed down with the heavy wraps and all that she could lift of earth and plants. She essayed the bridge with fear and trembling, lest she should be hurled into the depths below by a passing train. The sleepers were far apart, and, looking down to keep her footing, she became dizzy and had to summon all her grit to . .. get across the bridge. "How long is the bridge?" she asked. "half a mile," was the reply. It seemed to her more than twice that distance. And even then she was nearly five miles from the village, and with no conveyance except a hand-car, which could not leave until the close of the working day. During the long wait, she pictured her friend lying dead, or with broken bones, in some dark ravine.
Under other circumstances, the ride on the hand-car would have been enjoyed as a novel experience. The car was piled high with pickaxes and spades, among which were perilously perched some fifteen Italian laborers. A seat was arranged at the back of the car for the distracted woman, who sat bent forward to avoid the revolving machinery, and with dangling feet, which were drawn up quickly, every

now and then, as they struck the sleepers. The rare plants of the railway cutting, so close at hand and easily seen by reason of the slow movement of the car, were passed unheeded.

Reaching Osceola, she could find no trace of the missing one. She hoped against hope that her companion was safe somewhere in the village and would appear in time for the next morning's train, but her heart failed when she thought that she must finally telephone the circumstances to relatives in Minneapolis, perhaps needlessly alarming them and causing them a sleepless night.

It was now nearly dusk. The town marshal was summoned to aid in the search. As she hurriedly climbed the cliff again, shouting at intervals the name of her friend, what did she see in the failing light but a large mass of the walking fern! Up it was torn, or rather, clawed, root and all - the ruling passion strong in death, so to speak -- she, blunting the pricks of conscience by the resolve to throw the plants away if any harm came to her friend. At length it was learned from inquiries at the station, which had been closed through the period of searching, that the lost one was slowly but safely pursuing her homeward way by freight train, carrying with her the purse and return ticket for the other, who was in consequence, obliged to beg from strangers food and lodging and money for the fare to Minneapolis.

The walking fern was planted in the wild garden, where it survived on winter's cold, and where we trust it will continue to commemorate its story.

The Wild Botanic Garden in Glenwood Park, Minneapolis
Article published in "Bulletin of the Minnesota Academy of Science" Volume 5, No. 1. 1911

The most interesting features of America to a foreigner are the Indian and his primitive mode of life, soon to become a matter of tradition, and our wild scenery, with its indigenous flora and fauna, which are fast disappearing in the neighborhood of settlements and under the march of so-called improvements. Indeed, to the older residents of Minneapolis most of their favorite haunts in "the deep, tangled wildwood" exist only in memory. The prairie at Minnehaha is burned over annually by mischievous boys; the shy, woodland plants are dwindling out from our river banks; the pools and ponds, teeming with algae, as the microscopic desmids and diatoms of marvelous beauty, many of which were new to the world, have been drained and with the drying up of the water, the orchids, the insectivorous plants, and myriads of other species have vanished, that cannot thrive elsewhere.

Hence the students of botany and the lovers of wild nature have been forced to go farther and farther afield, as to the shores of White Bear and Minnetonka; but even there the land has been platted into building lots and ruthlessly stripped of those exquisite features that Nature, the greatest landscape gardener, has for so many years been perfecting. Many of the cottagers on the lake shores are imbrued with conventional ideas of plant decoration more appropriate for city grounds, and condemn their neighbors who are striving to preserve the wildness, for a lack of neatness in not using a lawn mower, and in not pulling down the vine-tangles in which birds nest and sing, – apparently dissatisfied until the wilderness is reduced to one dead level of monotonous, song-less tameness.

Again, under favorable, natural conditions, to see all the plants that are in bloom on any given day in Minnesota, would necessitate a journey of many miles, by reason of the differences in temperature and elevation, the varying factors of moisture, soil content, exposure to light, freaks of distribution, and the unequal struggles in the battle for existence.

Therefore, to preserve intact and within easy reach of some of our vanishing wild land; to maintain a depot of plant supplies for the schools; to afford an opportunity to study the problems of forestry and ecology at first hand; and to represent, as far as it can be represented in a limited space, the flora of Minnesota – for the benefit of students of botany and lovers of nature – the teachers of botany in Minneapolis and other interested citizens petitioned the park board to set aside a tract of land for a wild botanic garden. The teachers were to supervise the garden and the board were to protect the property and defray the necessary expenses. The site selected by the teachers and generously granted by the board lies in Glenwood Park, the largest and perhaps the most beautiful of all our parks, containing as it does ponds, pools and bogs, a diversity of soil and slopes, and wooded heights commanding extensive views.

The garden was opened the twentieth of April, 1907. It is reached at present by the Bryn Mawr, the Fourth and sixth avenue north, and the Western avenue street railways and is about a mile from their respective termini. It lies just beyond Glenwood lake, long known as Keegan's on Western avenue and occupies a depression of land northeast of the boulevard intersecting the park, and is directly opposite Birch pond, one of the loveliest spots in the city.

A particular reason for selecting this place was the undrained tamarack swamp, such swamps being the abode of the rarest and most interesting plants. At first, about three acres were given over to the garden, comprising besides the tamarack swamp, a bit of meadow and wooded slope. Since then, more than twice as much land acquired by a subsequent purchase has been

Below: The opening paragraph of the 1907 petition to the Board of Park Commissioners to create a wild botanic garden.

To the Board of Park Commissioners,
Minneapolis, Minnesota.

The undersigned, being especially interested in the study of plants and their preservation in their natural surroundings, are desirous of having a certain portion of the park grounds of Minneapolis permanently set aside for a natural Botanical Garden for the instruction of students of botany and for the enjoyment of all lovers of nature.

added, that greatly enhances the value of the garden.(1)

A small, winding brook runs through the treeless, eastern portion of the swamp. This has been widened near where it leaves the garden into a little pond, in which is to be cultivated the leading aquatics; and the wayward curves of the brook are accentuated by plantings of forget-me-not, cardinal flower, and other brookside favorites In the pond also the algae thrive, among them the desmids whose beautiful forms might be utilized in decorative designs for china, wall paper and textile fabrics.

All the essentials for the growth of plants are found in the garden, – variants in water supply, protection from cold or drying winds, inclines with different exposures, wooded and treeless swamps and uplands, and a rich and varied soil content. Even the sand plants have been provided for by means of an accident – a quantity of sand, heaped up for the boulevard, having been washed by a storm into a portion of the enclosure.

Above: The small pond created by widening the brook and placing a dam across the outflow. Photo from 1913, by W.P. Kirkwood, published in *The Bellman*

The wild appearance of the garden is

to be strictly maintained, and no trace of artificiality nor of human interference is to be evident. Plants are to be allowed to grow as they will, not as people may wish them to grow. Only native or naturalized Minnesotan species are to be admitted, and each plant when introduced is to be accommodated with an environment similar to its original one, and then left to take care of itself as in the wild open, with only the natural fertilization furnished by decaying vegetation. No pruning nor thinning out will be permitted, except what may be necessary for paths by which to penetrate the thickets and for healthful growth. Plants in excess may be removed, when others more desirable have been procured to replace them.

The most abundant trees of the swamp are the tamarack, the canoe and the yellow birch and black ash. More sparsely grow among them red maple, box elder and basswood; and, among the shrubs are vigorous growths of dogwoods, willows, viburnums, poison sumach, dwarf birch and *Ilex verticillata.* Bordering the swamp area are the white and the red elm, large-toothed poplar, hackberry, hop-hornbeam, hawthorns, and a superabundance of staghorn sumach, hazel and prickly ash. The undershrubs are represented by rank masses of raspberry, blackberry and wild rose; and the vines by wild grape, Virginia creeper and bitter sweet.

On the uplands flourish the oaks, –the burr, the red, the scarlet, and the white. The largest white oak in Minneapolis is an inhabitant of the garden. It is dying atop, but it is about to undergo surgical treatment to prolong its life. The white birches have crept up from the swamp and mingled with the oaks, among them a beautiful eight-boled specimen. Twenty species of trees and thirty-nine of shrubs have been identified as indigenous to the garden.In specifying the herbs, mention must be made of the large specimen of *Aralia racemosa,* or spikenard [photo below left], growing on the borders of the swamp. Near by the wild calla flourishes in its adopted home and its relative Symplocarpus, the skunk cabbage, one of our earliest bog plants to bloom, for it literally thaws its way through the ice. Deep in the recesses of the swamp are the orchids – coral root, habenarias, and our state flower, the showy cypripedium.

Above: In the background is the eight-boled white (or canoe) birch mentioned in the article. Photo from 1926, Martha Crone Collection

Of the orchid family, either indigenous or introduced, are now in the garden six species of cypripedium, eight of habenaria, [Platanthera] *Orchis spectabilis*, [*Galearis spectabilis*, showy orchis] Pogonia [*P. ophioglossoides*, rose poginia], Calopogon [*C. tuberosus*,

grass pink], Arethusa [*A. bulbosa,* dragon's mouth], two species of twayblade (Liparis) Aplectrum, coral-root, and three species of rattlesnake plantain (Epipactis) [Goodyera].

The leaves of Purple Pitcher Plant

Imbedded in the sphagnum, close by the lady's-slippers, is the pitcher plant, the only species of this latitude. The pitcher leaves are for the purpose of entrapping insects, with which the plant ekes out its food. An insect seldom escapes, by reason of the inner, slippery surface of the pitchers and their stiff, downward-pointing hairs. The pistil of the flower expands into an umbrella at the top, to keep the pollen and the nectar dry.

In the treeless swamp is an abundance of the tiny, round-leaved Sundew *(Drosera rotundifolia*), [photo at right] another insectivorous plant . The motile, sensitive hairs on the leaves are tipped with glands resembling dewdrops; but which, unlike dew, do not disappear under the influence of the sun, –hence the name, sundew. The leaf is a first-class fly-trap, and the glistening glands contain an active, digestive principle. When a thirsty insect lights on a leaf, the hairs bend over it and firmly grasp it; the more the insect struggles, the tighter it is held; more and more hairs entangle it, and finally the whole leaf rounds over it. The fluid in the globules then oozes out and digests the victim.

Cat-tails abound in the neighborhood of the brook. Near them have been established colonies of sweet flag (Acorus) and fragrant vanilla grass, used by the Indians in basketry. In their season the rosy swamp milkweed (*Asclepias incarnata*), asters, and goldenrods, glorify the meadow. One of the most precious possessions of the garden is the twin-flower named for the great Linnaeus and said to be one of his favorite flowers. The day is memorable on which it is first enjoyed in its perfection. The wild garden is its only station in Minneapolis.

The leaves of Round-leaved Sundew

With the Linnaea is found the dwarf cornel, also local in Minneapolis, the herbaceous relative of the dogwood shrubs, valued for hedges on account of their ornamental fruits and stems. The fruit of this cornel is red and edible and is commonly called bunchberry. Other indigenous rarities of the meadow are three-leaved smilacina, Menyanthes [buckbean], Tofiedia [*T. glutinosa,* false asphodel], Chelone [turtlehead], marsh rosemary and the small cranberry (*Vaccinium oxycoccus*). Especially prized are the gentians – the larger and the smaller fringed and closed, all abundant and of magnificent growth. The former, pronounced the most beautiful blue flower of the world, florists have but recently learned how to cultivate. The tall blue lobelia and three eupatoriums

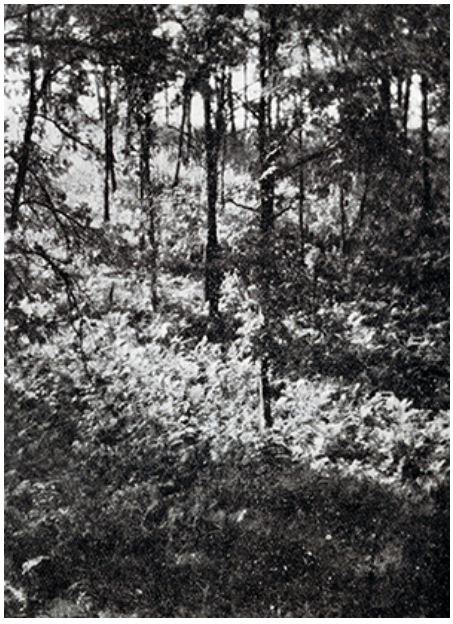
– the pale purple Jo-Pye Weed, the less striking boneset, with its grayish flowers, and the pure white-flowered snakeroot – are other adornments of the meadow.

The wooded slopes of the garden are an attractive adjunct by reason of the artistic arrangement of the trees and the rich and varied coloring of the autumnal foliage. In the rich soil under the trees, adjusted to their requisite degrees of moisture, are our most conspicuous shade plants, among them Sanguinaria [bloodroot], three species of Erythronium [trout lily], five of Trillium, and two dicentras – Dutchman's breeches and squirrel corn.

For the instruction of the unwary harborage is given to poisonous plants like the water parsnip and hemlock, poison ivy and sumach, and to the pernicious parasite, the Cuscuta or dodder, the enemy of cereals.

On the treeless slopes, the prairie plants are well established, – euphorbias [spurges], liatris [blazing stars], asters, golden-rods, petalostemums [prairie clover], Vernonia [ironweed], Heliopsis [ox-eye] being the leading genera.

If we make any discrimination, it must be in favor of the ferns, for nowhere else do they grow more luxuriantly. The most spectacular features of the garden are a hillside completely covered with the interrupted fern (*Osmunda Claytoniana*) and the large clumps of maiden-hair, some of whose fronds measure a foot and a half across. Ten species of ferns are indigenous to the garden and twenty-nine others have been introduced. Hence all the Minnesota ferns are represented in the place except a few small or rare forms that are difficult of access, like some species of Woodsia and Cheilanthes, and the fragrant shield fern.*



Above: The hillside of ferns referenced as seen in 1913. Photo by W. P. Kirkwood, published in *The Bellman*

In the list of plants the Bryophytes must be enumerated, among them abundant growths of the liverworts, Conocephalus and Marchantia, and mosses in great variety greening the earth and fallen tree trunks, as sphagnum, Bryum, Leucobryum, Thuidium, Catharinea, Dicranum, Polytricum, Climacium, and the rare Timmaea.

A bountiful harvest of mushrooms is gathered from the garden in their season, agarica, boleti, polypori, huge puffballs, lepiotas, cup-fungi, and earth-stars. Stumps and fallen tree trunks are carefully cherished to furnish food for them. Tall trunks of dead trees also serve as support for vines and as homes for birds that live in holes in trees.

Nearly four hundred species of plants have been introduced, embracing seventy-five families and two hundred and twenty-two genera. Together with the rich and varied indigenous flora,

the greater number of the most notable plants of the state are now represented in the garden. Maine, Nova Scotia, Massachusetts, New York and Wisconsin have furnished the place with barrelfuls of plants native to Minnesota, but more easily procurable in those states. On account of its geographical position Minnesota has a flora of a wide range, including representatives of alpine, forest, prairie, and drought regions. It is an interesting problem to adjust plants requiring such varying conditions to their life-relations. The largest plantings are made in the spring and fall; but plants often have been successfully lifted when in full bloom, particularly the hydrophytes. Annuals have also been transplanted by sods and have thereafter seeded themselves. But the attempt to establish sweet fern (*Myrica asplenifolia*) is as yet a failure, perhaps because it requires a poorer, or at least a different sort of soil.

Sweet Fern, which Eloise could not get to grow, now established nicely in the Upland Garden at Eloise

The list of the indigenous plants is not yet complete, because many of the smaller herbs mature and complete their course concealed by the surrounding lush vegetation. Indeed, more than once, specimens from abroad have been planted, only later to find them indigenous and plentiful in some overlooked corner of the garden.

What remains to be done is to add the wanting specimens. Increase the individuals of the most desirable plants, and to fill in the gaps made by those which die out from lack of vigor or unsuitable environment. A minute topographical survey of the garden is also to be made, and the position of the plants occupying each foot of space mapped out and designated by a reference number in the card catalogue which already records their general location and history.


Above: George U. Hay, making field notes in a field book, seated by a campfire in New Brunswick - July 1900. Photo by Mauran I. Furbish

A wild botanic garden similar to ours in design and scope was established some years ago in St. John, New Brunswick by Dr. George U. Hay, the editor of "The Educational Review" and the writer of Canadian history. At this time Dr. Hay was teaching botany in the high school of St. John, and the immediate purpose of the garden was for the instruction of his pupils. We had supposed that the scheme of our garden was purely original until hearing of this place. My interest was so greatly aroused that I went expressly to New Brunswick to see it.(2)

Dr. Hay's garden comprises about two acres, ideally situated on the St. John River, about twelve miles above the city of St. John, and is reached by the Canadian Pacific railway. It was

his aim to bring together as much as possible of the flora of New Brunswick. He told me how the idea came to him. "I observed," said he, "when standing on this very spot, that without taking a step, but by merely stretching out my hand, I could touch eight different species of trees; and the thought occurred to me: 'Since nature has done so much for this place, why cannot I help on the work by doing a little more?' " Dr. Hay's garden is without a swamp, so that some of the plants that happily flourish in ours, lead in his a precarious existence. The essential features of a swamp are, however, somewhat supplied by a broad, winding brook, and his grounds are diversified by hill, valley and meadow. Most of all I coveted his possession of large boulders, which he had completely draped with the rock fern, *Polypodium vulgare*. How truly Dr. Hay had copied nature in this respect, I did not realize, until shortly afterwards, I found at Taylor's Falls the very "moral" of those boulders in shape and size, and covered as his was with polypody.

Mountain Cranberry (Lingonberry) *Vaccinium vitis-idaea*. Photo by Paul Marcum, Wisconsin Flora.

Dr. Hay has succeeded in establishing in his garden specimens of all the trees, all the shrubs, and the most notable of the herbs of his province. Northern Minnesota and New Brunswick have many plants in common as the mountain cranberry, *Vaccinium Vitis-Idaea*, and the Huron wild tansy, *Tanacetum huronense* [*Tanacetum bipinnatum*. ssp. *huronense*] but I was surprised when he pointed out as a rarity a lonely specimen of a box-elder tree, and again that the hackberry was wanting. His ferns were of great interest, there being splendid examples of massing of the ostrich, royal and lady ferns. Rare and tiny rock ferns peeped out from artfully constructed rockeries, which I supposed were natural, until informed to the contrary.

There I saw the shield fern, named for the botanist, Goldie, which Goldie himself never saw growing, but which Dr. Hay had the great pleasure of showing to Goldie's son, when he visited the garden. My attention was also directed to a small specimen of the much be-written bake-apple, *Rubus Chamaemorus*, [Cloudberry] on which a solitary, salmon-colored berry was maturing. During the growing season, many visitors from far and near present themselves in this trained wilderness for instruction and inspiration.

Goldie's Wood Fern, *Dryopteris goldiana*

A wild garden is beautiful at all seasons. After the heavy frosts and before the kindly snow covers up in the cultivated gardens the unsightly bare earth – suggestive of newly made graves – and the dead bodies of herbs, and the tender exotics, stiffly swathed in winding sheets of burlap or straw, awaiting the spring resurrection, I turn with pride and relief to the wild garden, whose

frozen ruins are graciously hidden by the shrubs, which then enliven the landscape with their glowing stems and fruits. And how lovely are the waving plumes of the grasses, how endless the varieties of seed-pods, how marvelous the modes of seed-dispersion! The eye, no longer distracted by the brilliant flower-mosaics, sees the less flaunting beauty and rediscovers "the commonplace of miracle."

I am not an enemy of formal or cultivated gardens; although I love wild gardens more and think our native plants superior, for the most part, to foreign ones in beauty and appropriateness. For plants from abroad, torn from their natural setting, often make a false note in the landscape. Cultivated gardens have their place, are seen at every hand, and need no advocacy. In fact, the founders of the wild garden are desirous to establish an artificial, botanic garden in connection with the wild one, wherein may be reared all the leading plants of the world that can grow in this climate; thus gratifying all tastes and affording at the same time inestimable advantages to students.

Why may not a large portion of the extensive Glenwood park be used for this purpose? Why can we not duplicate in Minneapolis the Shaw Gardens of St. Louis, the Bronx Gardens of New York City, or the world-famous Arnold Arboretum of Boston? Barring the primeval hemlock grove, Glenwood park has more natural advantages, as water supply, fertility and variety of soil, than the Arnold Arboretum. Such a garden would add greatly to the fame and attractiveness of Minneapolis, and would be second only to the public library in its educative and refining influences.(3)

*The ferns indigenous to the garden are, –*Botrichium virginiaum, Osmunda Claytoniana, O. cinnamomea, Adiantum pedatum, Pteris aquilina, Asplenium filix-femina, Aspidium spinulosum, A. Thelypteria, A. cristatum, Onoclea sensibilis*.

End of text

Additional Notes:

1. Miss Butler used certain parts of her text in later articles about the Garden, particularly in her "Early History" written in 1926 and in various later writings some of which were published in the Circular of the Gray Memorial Botanical Chapter, Division D of the Agassiz Association. This article is the first that she wrote that more fully describes the concept of the Wild Garden and the plants that were there in the first years. The physical characteristics of the early garden were first, and best, described by W. P. Kirkwood in his article in the May 1913 issue of *The Bellman.*

2. A separate article is available on Dr. Hay's Garden in our book The Wild Botanic Garden 1907-1933.

3. The concept of creating a second garden area in Glenwood Park that Eloise expands on in her closing paragraphs never came to be, but in later years she and especially her successor Martha Crone, attempted to add a number of plants that were not native to our area. This concept was abandoned in the 1960s when Ken Avery succeeded Martha Crone as Garden Curator and the University of Minnesota Landscape Arboretum opened in Chaska MN.

She gave the idea of an arboretum one more try in 1931. She wrote to Professor C. O. Rosendahl, Chairman of the Department of Botany at the University of Minnesota and in the last of several attempts, Eloise approached him with the idea that the University take over supervision of her Garden. It would be very useful for the study of botany and for the University to use as an experimental site - or perhaps - working with the Park Board, to make an arboretum in that section of Glenwood Park. Prior to her leaving on her annual trip to Malden MA for the winter she have received a reply letter.

In Rosendahl's reply of October 14, 1931 he outlined the discussions he had with University people and why the proposal would not work. Then, in an abrupt ending paragraph, which must have hurt Eloise deeply, he wrote:

> *It is, therefore, clear that the botany department has no right nor legitimate reason for urging the arrangement set forth in your proposal and it will only cause us embarrassment to make any further attempt.*

This, from the man who was on the same Seaside Station research project in 1901 as Eloise, who had signed the original 1907 request to the Park Board to create the Wild Garden, and who was a fellow member of the Minnesota Chapter of the Wild Flower Preservation Society.

The Burning Hat - 1911

While I am about it, although destroying the literary unity of my paper – but where may one not ramble, if not in a wild garden? – I will give . . . a more complete idea of how we have fought, bled and nearly died for the cause by recounting another adventure that might really be called a hair-breath escape: I took two boys to the Wild Garden to help clear up the fallen brushwood and to put the place in order for the spring awakening. I was working some distance from them. Going near them to direct their work, I was astounded by their running to me, shouting at the top of their voices and beating me excitedly over the head. Do not form a hasty conclusion: They were young gentlemen and what they did was perfectly right and proper. I had been attending to the burning of the brush. In some way a spark had kindled on the top of my hat, and I had been moving serenely about, emitting flames and smoke, like a small volcano, while a crater was forming in the crown of my hat. I had been wondering all the while at the peculiar odor of the burning brush and supposing, when blinded and choked by the smoke, that the wind had veered since the starting of the fire.

If the boys had not been at hand, the accident might have been serious. As it was, my hat was a charred ruin and my hair, which I could ill afford to lose, was about one-quarter burned away. Some visitors came into the garden during the afternoon, but I sent every one home and waited alone until it was dusk, skewering my hat together with safety pins and filling up the hole in the crown with a big rose that had survived the fire. I hoped that in the crowd [on the streetcar] and darkness, my peculiar head-gear would pass unnoticed.

The small photo shows Eloise Butler (left) with a friend, fellow teacher Clara Leavitt, just outside the door of the Garden “office.".One can see the type of hats that were worn in those days. The sign near the door says "Office, Curator, Wild Botanic Garden". Photo courtesy Minneapolis Public Library, Minneapolis Collection.

The Attractiveness of Vegetables and Common Weeds, Part 1 - 1911

I sometimes think, if I have any mission in this world, it is to teach the decorative value of common weeds. A weed is simply a plant out of place; or as Emerson says, "A plant whose virtues are not yet understood." I amuse myself in summer by decorating the home with what are generally considered ugly weeds, often to be greeted with the exclamations -- "What a beautiful thing! Where did you get it, and what do you call it?" "Mullein," I may answer, or "sheep sorrel," as the case may be, "which you well know." "Of course I do, but I never really saw it before." A sympathetic interest in nature is a never failing source of delight... When in Massachusetts I never miss an opportunity to see Mr. C. W. Parker's place at Marblehead Neck. Mr. Parker is a wealthy Bostonian, a prominent member of the Massachusetts Horticultural Society, and an enthusiast in regard to our native plants. He left his grounds facing the sea in their natural ruggedness – a refreshing contrast to some of the neighboring estates, whose owners have failed to improve upon nature with their artificial walls of masonry.

The rare plants from abroad do not stand out obtrusively, but blend with the landscape, every plant appearing to belong in the place it occupies. The haunting graces of wild life are retained; no pruning is done except on fruit trees, and the meadow is left un-mown, that one may enjoy the seldom appreciated flowers and fruits of the grasses and sedges. Despised weeds are raised to the dignity of cultivated plants and rise un-cropped from the well-kept turf, in thriving luxuriance, as the mullein, the evening primrose, and the Indian poke, to demonstrate the truth that nature makes nothing un-beautiful...

On the borders of copses, a graceful composite, *Prenanthes alba* [photo left], may still be seen. One notices the broad, halberd-shaped leaves long before the flowering time and wonders what sort of plant it is. And later on is sure to mark the pendant bells of the flower heads with their delicate, mauve-colored bracts enclosing whitish petals. A closely allied species has local repute in South Carolina and elsewhere as a remedy for snakebites, so the genus is known as rattlesnake root. This "gall-of-the-earth" has subterranean tubers that are bitter enough to counteract any virulence, if, as was once believed, the more ill tasting the medicine, the more potent it is to cure. The flowers go to seed like the dandelion, but the parachute of fine hairs that wafts the seed abroad is tawny brown instead of white.

Dock is synonymous with backache to the gardener, who unearths the long tap root again and again; for it is difficult to remove in entirety, and the usual result of his efforts are more vigorous growth and a multiplication of progeny. To use the leaves for greens is his only compensation. The flowers of the docks are a dull greenish yellow; but many achieve beauty in the myriad [of] small, flattish, triangular and slightly winged fruits in all shades of red, yellow, and brown. You will sing "Rule Britannia!" to see an arrangement of tall swamp dock (*Rumex britannica*) in an appropriate vase. Every weed has decorative possibilities, and can be used when hot-house or garden flowers are lacking. Life will be richer by the discovery of beauty that we have hitherto passed unheeding. Attractive bouquets can be made even from the common sheep sorrel (*Rumex acetosella*) that earlier in the season clothed sandy hillsides with its low,

spiry inflorescence of red and yellow. The plant is a naturalized weed, originally from Europe. Children know the acid leaves as “sauer kraut.” They can be used for salad. A form similar to sheep sorrel is cultivated in France for this purpose.

The large, coarse, basal leaves of the weed burdock [photo right], novices are apt to mistake for “pie-plant.” A taste of the leaf would convince them that this disagreeable composite is no relation to the acid rhubarb which is allied to the burless docks, just mentioned. The burdock is a naturalized biennial from the old world. The seeds that sprout this season form the big leaves. Next year a large, bush-like plant will develop, crowned with pink heads surrounded with row upon row of barbed grappling hooks. We can admire the symmetry of the rank growth and rejoice with the little girls who furnish their doll houses with elegant sofas, chairs, and bureaus made of the burs; but before the seeds mature, the plant should be uprooted and burned to protect dogs and cattle from the discomforts of stinging prickles and matted fur, not to speak of the mortification of people, who fine themselves the “observed of all observers” on returning from an autumn walk, festooned and kilted by these “sticktights.”

.....A pink flowered variety of yarrow [photo left ©Ivar Leidus] is a favorite in cultivated gardens. A botanist from this country (exploring Jamaica, where what are to us rare and costly exotics grow wild by the roadside, free to any one who cares to gather them), was entertained by a wealthy planter. His hostess took much pride in her garden. What she cared for most of all and pointed out as curiosities were a few common northern plants, among them a lone, lorn, scraggly specimen of potted yarrow. In his surprise he exclaimed, “Oh, you cultivate our weeds and we cultivate yours!” Thus the unusual and foreign, even if inferior, is by the majority, preferred. We may esteem the yarrow for its steadfastness. In the middle of last November, when the surrounding vegetation was limp and blackened by frost, it was in full blossom. Any flower appeals to us when it blooms on the verge of ice-bound winter.

NOTES:
A shorter continuation to this essay was written in 1931.

Experiences in Collecting - 1911

The willow herb, or Fireweed, [*Epilobium angustifolium*] is . . . plant with a history. I thought that this showy flower would have a fine effect massed in the meadow against the background of tamaracks. The fireweed is scarce in the immediate vicinity of Minneapolis, but I knew where a full acre of it grew in Massachusetts. Whence a large quantity of what was supposedly fireweed was dug up, transported, and planted in the garden [in 1907], only to learn at blossoming time that it was not fireweed at all but another insignificant species of the genus already established in the garden and, if anything, too abundant in the place.

Fireweed, *Epilobium angustifolium*

The next season, at the close of the summer's vacation, after having enjoyed for a week or more huge bouquets of fireweed, I went confidently to the place again for specimens to take to Minneapolis, when not a blade of the plant was to be seen. The ground had been burned over, ploughed and harrowed, and seeded down with another crop. I looked for it at another station, a mile distant, but there a cow had been tethered, and had left not a wrack behind in her foraging.

For some other plants I had scoured in vain wild land in Massachusetts, although I was assured that they were common and might be found anywhere. My friends said consolingly, "Perhaps you can get them on the way back to Minneapolis." But I said, "Impossible. Everything at a railway station is cleared away, and there is nothing but a desolate sandy waste, or else a spick-and-span garden of geraniums, castor bean and canna, with unclimbable barbed wire fencing off the wilderness."

The prophecy, however, was fulfilled. My train was wrecked (fortunately without loss of life) in the wilds of Ontario; and there, on either side of the track, were growing the elusive fireweed, the other long-looked for plants, with rarities besides – and nothing to dig them up with but a broken penknife! In the enforced delay, lasting from morning till night, this small difficulty was overcome. Going farther afield in every direction, although false alarms and the fear of missing the train were the cause of briar-rent gown and headlong tumbles in the frantic rushes back to the track, I found, it seemed instinctively, just what I most desired; and my suitcase, regardless of the rights of clothing, was crammed with the spoils of accident.

But shortly after my return, such is the contrariety of Fate, I came across a quantity of fireweed in several happy hunting grounds beyond White Bear Lake, so we are no longer dependent on a foreign land for a supply of it.

Who of the participants in the adventure can ever forget about the acquisition of squirrel corn [*Dicentra canadensis*]. Much to their delight, the teachers of botany learned of a station for squirrel corn on one of the large islands of Lake Minnetonka. This plant is local and is found abundantly in a few favored places, unlike its relative, the Dutchman's Breeches, which grows all about us in rich woodlands. The squirrel corn has a similar foliage, but the flowers are white and larger, and heart-shaped, like another of the same genus – the cultivated bleeding heart – and are delightfully fragrant. The name comes from the small, subterranean tubers – round and yellow, like kernels of Indian corn.

Squirrel Corn, *Dicentra canadensis*

After a long journey by water and pathless woodlands, the teachers came to the designated place, where they stood aghast before a recently constructed fence, some nine feet high, of strong, large meshed chicken wire, attached to stout poles, with a row of barbed wire close to the ground, three more rows of barbed wire at the top, surmounted by three horizontal rows of the same sort.

Experienced as they were in getting over barriers of all sorts, they thought this, at first, unsurmountable. Nevertheless, one of the party seized a trowel and began to dig in desperation a passage-way under the fence. How long a task this would have been is an undetermined question. Another collected long poles, which she wove in and out over the top wires. These were draped by a thick waterproof recklessly sacrificed to the cause, and then the fence was scaled and the plants gathered in deathly silence, from fear of arrest for trespass.

[The teachers] were then informed by a loyal neighbor of the owner of the property, who had deemed the fence beyond their powers, of a hole on the other side of the enclosure, where a sewer was being dug, thorough which, by dint of flattening themselves to the ground they wriggled and crawled like rats – dusty and triumphant!

Notes: The Photo of Squirrel Corn is ©Elizabeth Parnas, Wisconsin Flora. Fireweed photo ©G D Bebeau

The train wreck was in the spring of 1908. The Squirrel Corn story is of 1909 as that was the year Eloise first planted the species in the Garden and she listed Big Island as the source.

Cultivation of Native Plants - 1912

In planning a home, comfort, utility and the essentials for healthful living - light, air, drainage - must be provided for; but all these can be obtained without the sacrifice of beauty, about "the best thing God invented." To observe the principles of good taste does not entail greater expense but merely forethought. The laws of artistry are well known to lovers of the beautiful. Why cannot they be followed by everyone, and why should anything ugly be tolerated? Every home should be a joy to the eye, every block a harmonious picture, every street a visa of enchantment, the horizon framing a scene of splendor. To make this ideal possible, a duly qualified art commission should be appointed to supervise the buildings of the city, and all owners of adjacent grounds should consult one another and submit their plans to this commission for approval. As it is, everything is done at hap-hazard, and harmonious results are achieved, if at all, by happy accident.

A house should be adapted to the site and the environment, harmonizing in color and mode of architecture with the neighboring buildings. The living rooms should be so arranges as to command the most beautiful prospects, including, if possible, sunrise and sunset. But what has all this to do with the cultivation of plants? Everything, for the decorative features of one's grounds should not be meaningless tags, but a part of an integral whole.

Wild Cucumber
Echinocystis lobata

Strive to retain the natural features of the site, for you can seldom improve upon nature. In the clearing of land for building, notable plants are often destroyed that cannot be restored for a price. The best intentioned efforts in grading and planting have the taint of artificiality and are stiff and commonplace compared with the inimitable graces that nature, the greatest landscape architect, has for so many years perfected. Instead of staling the infinite variety of nature by reducing the land to a monotonous level, we should cherish the native plants, boulders and outcropping ledges - the harbors of ferns, mosses and lichens - and irregularities of surface that afford differences in light, exposure and moisture, and thus make possible a greater variety of vegetation.

Unfortunately, most people cannot begin anew, but can improve only or make the best of what they have. It is not necessary to call to your attention certain principles of planting, too often disregarded: that trees and shrubbery should harmonize with the lines of architecture and connect the buildings with the ground, and be confined in the main, especially in restricted areas, to the vicinity of the walls of the building and to the borders of lawns and paths. Shrubs and flower beds otherwise placed have a patchy effect and dwarf the space. If privacy were no object, spaciousness would be best attained by treating adjacent lawns as one. Plants should also be selected with reference to color, form, size, beauty of foliage, flower or fruit, for succession of bloom and all the year-around effects - for winter is not cheerless and devoid of color. A landscape with the delicate tracery of deciduous trees against the sky, gleaming with the red, green and gold stems of shrubs hung with fruit ranging from white to blue, red and purplish black, set off by snow and the dark green foliage of evergreens, I, for one, would not exchange for perpetually blooming roses.

Avoid, above all, imported plants of unusual color, like the copper beech and the weeping trees, or plants trimmed into formal or fantastic shapes. In general, native species should be used, for plants

torn from their natural setting may strike a false note in the landscape. There are many plants just as effective as the cultivated canna, castor bean, crimson rambler, fall hydrangea, golden glow, admirable in themselves, that now pall upon the taste by reason of monotonous reiteration.

Outside of the city there is no excuse for ugliness. If you own a tract of land in the country that you can afford to keep for a pleasure ground, you have a source of perennial pleasure. The most attractive adjuncts of a place are always the native ones. You will never go astray if you endeavor to maintain the indigenous flora of brook, pond and lakeside, bog, meadow, rocky slope, wood and prairie, since each is beautiful and peculiar to itself and exemplifies unity in variety, an essential of good art. Your favorite plants can be introduced and will flourish if properly placed. You will learn what to transplant and where by observing the conditions under which the species grow most luxuriantly. Many plants, however, can adapt themselves, within certain limits, to different life-relations. You can often better the conditions, for seeds scattered by accident may have germinated where the wind, or other agent of dispersal, listeth [where it chose]. Besides giving your transplants the environment they prefer, you can enrich the soil, discourage competition by thinning out and improve the breed, or produce new varieties, by grafting or cross-pollination.

It would be impossible to enumerate in this paper the native plants desirable for cultivation, so great is their number. I have prepared, therefore, for publication in your official periodical, a lists (sic) to which you can refer, if interested in the subject.

In regards to trees, much depends upon the space available. They should be selected with an eye to scenic effects and for durability. Keeping these two points in mind, since each species has individual merit, one will make no mistake if he indulges his preferences in habit of growth, foliage, flower, fruit or autumnal coloring. Evergreens are admirable in winter but must be placed discretely to avoid somberness. Oaks, elms, hackberry, basswood, hard maple are all splendid trees. The red maple (*Acer rubrum*), although a soft wood species, well repays cultivations. It glows like a torch in the spring with its vivid flowers and fruits, and turns a gorgeous red even before frosts set in. Another small tree, black alder or holly (*Ilex verticillata*), is extremely pleasing by reason of its wealth of red berries.

Red Maple
Acer rubrum

As for small trees or notable shrubs, their name is legion: the wild crab, plum, cherry and Juneberry, decorative in flower and in fruit and of culinary value, as well; the wahoo, a veritable burning bush; the wild roses and dogwoods, whose bright stems warm the snow and display together the national colors in their fruit; and the viburnums, among them the high bush cranberry with its large flower clusters made up of blossoms that produce the scarlet, acid drupes, rimmed by a row of larger, neutral blooms. Man has transformed these clusters entirely into neural flowers, making the snowball, uninteresting and pompous with its big heads, that are of no use to him or birds and of much less beauty than those of the wilding.

In plant decoration, vines are especially important. Picturesque and graceful, they disguise faults of architecture, cover bare, unsightly places, relieve stiff formality, and furnish shelter - and often food - for birds. Room can always be found for vines on wall, fence or screen, and if one is not over-precise or

neat, he will leave here and there an upstanding trunk of a dead tree to support them and for homes for wren or bluebird - delightful songsters with endearing ways. As one recalls the luxuriant growth of the wild grape, the resplendent autumnal coloring of the Virginia creeper, the persistent, brilliant berries of the bittersweet, the profuse white flowers and grayish, fluffy plumes of the clematis, he will want them all.

Above: Boneset, Eupatorium perfoliatum

For the most part, perennial herbs are to be preferred to annals, for, when once established, they will require but little care. Some annuals, however, will seed themselves. Of especial value is the sensitive, or partridge, pea (*Cassia chamaecrista*) [now *Chamaecrista fasciculata*]. The foliage is refined, the flowers large, of bright, clear yellow with brown centers. *Cleome serrulata*, [Spider flower or Rocky Mountain Beeplant] another annual - although the odor of the foliage is somewhat rank - is sure to please, because it attains a large growth and produces for more than a fortnight a profusion of pink, feathery blooms.

Partridge Pea
Chamaecrista fasciculata

Your choice of herbaceous plants should be regulated by the light exposures, for you can change the soil and provide the needed moisture if you care to take the trouble. On the north side of buildings, or wherever there is shade, ferns can be planted. They will take the place of the early flowers, which are chiefly shade plants. All are delightful, from the tall, lush osmundas to the tiny crevice, or rock, ferns, with their exquisitely cut foliage and their cool, restful tones of green. With herbs on small grounds, a succession of bloom must be planned for. On a large estate, where conditions are varied, this point does not need to be considered. nature will attend to it.

By all means leave some grasses and sedges unmown. They soften hard edges, and nothing is lovelier in winter than their waving plumes, transfigured at times with hoar frost, ice crystals or snow.

The early flowers are usually delicately tinted - far otherwise are those of mid and late summer. Then, nature uses blues and white to tone down the garish reds and yellows and to harmonize discordant colors. White flowers in succession, of all heights and adapted to different situations, can easily be obtained. Among them - to mention only a few - are the Canadian anemone, the filmy northern bedstraw, starry campions, larkspur with ethereal wands, the stately late meadow rue, the late-blooming eupatorium and the huge cow parsnip (*Heracleum lanatum*) [*Heracleum maximum* preferred today]. Photo below.

For other perennials you can consult the printed list. [This list is not repeated here but covered 4 pages in the original journal.] I would mention particularly our native phloxes, blue and pink - social plants, excellent for massing; the pale-leaved bright-flowered *Aster sericeus*, [now *Symphyotrichum sericeum*, the Silky Aster] and the better known New England aster, of especial value on account of its height and large, richly-colored flowers; the cardinal flower, of incomparable hue; the wondrous orchids; our glorious lilies; the unique closed gentians; the wild sunflowers; the tall, profusely flowered sneezeweed; and the great St. Johnswort, whose large blossoms are as lovely as yellow roses by reason of their innumerable stamens.

To procure these plants I should deplore a reckless despoliation of the wilderness. Many of them can be found in neglected places, or where it is the intention to till the soil, or to lay out roads in the march of improvements. They are also cultivated by a number of nurserymen and florists, who offer them for sale.

NOTES:

The text of this article Published in 1912 in the *Minnesota Horticulturist*, Volume 40, No. 10, October 1912, pages 365-373. The original published article contained photos of Cow Parsnip, Wild Cucumber and Boneset. Several additional photos have been added here for reader interest

Finding the White Cypripedium - May 1914

I had but one clump of white *Cypripedium* in my wild garden and that had been given to me. What I bought from eastern florists refused to grow. This clump has blossomed for three years in succession, but this spring I had but one blossom because some vandal had picked the flowers the year before. I find that when the flowers of *Cypripediums* and trilliums are picked that they do not flower the following year. If any blossoms appear they are due to leafy stems that were infertile or without flowers. For, as you know, if the leaves - the food manufacturers - are picked off, no more food is stored up in the roots below for next year's growth.

White Lady's-slipper, *Cypripedium candidum*. Photo ©Derek Anderson, Wisconsin Flora.

The white Cypripedium is local. I had been told of various places where it grew profusely, but failed to find them. A friend 'phoned me a few days ago that she had spotted them several miles out of town. So we planned to "go for" them. We had to get up at five o'clock in order to make the train. When we left the train we expected to be met by another friend who was to drive us to the place to be explored several miles farther away. But no one was there. It had rained heavily the night before and was not yet clear so that no one dreamed that we would make the venture.

Should we take the next train home? No, never! We kilted our skirts and weighted with impediments, trudged through the wet grass some three miles across the country until we found a farmer who was willing to take us where we were bound to go. We had a pair of stout farm horses and a long heavy truck, big enough and to spare. The *Tradescantia* [Spiderwort] was out in full force, set off by great clumps of orange puccoon, *Lithospermum gmelini* [this is an older name, most likely a variety of *Lithospermum caroliniense* that is native to Minnesota]. Now and then we passed patches of the strikingly beautiful large-flowered Pentstemon [*Penstemon grandiflorus*]. We drove as far as we could. Then we had to walk a long distance through meadows to reach our plants. It did not rain, and the overcast sky was the ideal condition for such a tramp. The meadows were full of yellow Cypripedium, both the large [*Cypripedium parviflorum* var. *pubescens*] and the small [*Cypripedium parviflorum* var. *makasin*] varieties, and scores of the showy Cypripedium [*Cypripedium regina*] in bud. We came upon large expanses of *Castilleja coccinea* [Scarlet Indian Paintbrush] with heavy heads of luxuriant scarlet bloom, with a few yellow ones by way of contrast. Never had we seen them in such magnificent profusion.

Large-flowered Pentstemon (Showy Beardtongue), Penstemon grandiflorus. Photo ©G. D. Bebeau

The haunt of the white Cypripediums was an open meadow full of hummocks of tufted grasses and sedges surrounded by deep pools of water. The flowers grew on the hummocks and were hard to spade on account of the intertwined and matted roots of the sedges. In drier meadows we found *Polygala senega* [Seneca Snake Root], *Valeriana edulis* [Tobacco root] just going out of blossom, and *zygadene* [*Zigadenus elegans* - white camass] and Turk's-cap and wood lilies in bud. On an unwooded hill was a

spring surrounded by pitcher plants in full flower and all the different Cypripediums again.

I had never seen pitcher plants in such a situation before. The soil was peculiar -- a fine gray colored clay, seemingly intermixed with sand. We were enthusiastic over our “finds.” My friend said, “California can’t offer anything equal to this!”

We packed our treasures in gunny sacks and had no difficulty in getting them home, as we were met by autos at the other end of the line.

Seneca Snake Root, *Polygala senega.* Photo ©Aaron Carlson, Wisconsin Flora.

Animal, Bird, and Insect Life in the Wild Garden, 1914

A Large number of birds nest in the garden, and during the season most of the migrants reported from the state have been noted in the Garden. The tangled vine coverts, abundance of food and water, and protection from sportsmen have made the place a favorite of the birds. Song, vesper and swamp sparrows, catbird, bluebird, rose-breasted grosbeak, Baltimore oriole, brown thrasher, bobolink, marsh wren, scarlet tanager, indigo bunting hold matins and vespers in the leafy aisles along the brook, while those of brilliant plumage, together with goldfinch, Maryland yellow-throated hummingbird gleam like jewels in the foliage or as they dart through the air.

Female Rose-breasted Grosbeak.

Woodchuck in the Garden

I have stroked baby crows too young to be timid, followed the whip-poor-will in his short flights through the swamp, seen bluebirds chase out the long-eared owl, the great bittern stiffen like a stick when he heard my footstep, and a pair of the rare crested wood ducks swimming in my little pond.

The red-shouldered hawks have nested and reared their young in the garden, and just the other day a covey of nine bobwhites were found in their retreat in the meadow. All sorts of sappers and miners have homes in the garden. On the sides of the brook, round holes bordered with a ring of mud show where the Cray-fishes abide.

Many heaps of pulverized earth, sometimes, alas, in the midst of a plantation of choice flowers, are the roofs of gophers' dwellings. Big tunnels, probably enlarged by dogs in chase, mark the refuge of woodchucks. Squirrels find winter quarters in basements of decayed tree trunks, their roomy summer residences of interlaced twigs being high in the branches above. Immense mounds, which must have been built up from time immemorial, testify [to] the industry of the ant.

One of the Garden Squirrels on the Odell Birdbath.

Paper nest of the White Hornet

Trees and shrubs are hung with wasps' nests of various sizes. One season I counted fifteen of them and hardly a day passed when I was not warned by a painful prod that I was intruding on their premises. One kind of wasp has made a labyrinth in the ground, with the grass cut from the tunneled entrance as if by a scythe. Another wasp built on the ground a flat paper nest as large as a diner plate. There are various despoilers of the garden. Last winter, mice - on account of some unusual condition, I suppose, as it never happened before - girdled, a foot or more up from the base, all the many young red maples in my swamp. (I applied melted paraffin, but its efficacy remains to be proved.)

A red aphid is a persistent pest on the wild golden glow, and sometimes it attacks goldenrod. Another species of aphid, noted too late for routing, curled up nearly every leaf on one of my beloved hawthorns.

The eggs of a vile smooth caterpillar are laid in the leaf buds of the common sumach. They hatch and eat the branches bare. Our two heavy frosts, which mowed down my ferns for the first time in the history of the garden, served one good turn by killing the sumach buds and with them the caterpillars. The second crop of leaves are free from the "varmints."

Top of stem gall of a goldenrod caused by an aphid.

Another flying insect selects the buds of the sunflowers for an egg depository. Scarcely a bud escapes this infliction and my hillslopes are covered with thousands of sunflowers of several species. At this time, pulling apart the leaves of the buds discloses little wrigglers. These develop into slimy, slug like creatures with prodigious appetites. My remedy is to "scrunch 'em"- an endless and unpleasing task.
Among the doings of the animal folk in the garden, I was interested in noting the habit of the striped ground squirrel or gopher, *Citellus tridecemlineatus*. This pretty creature, with stripes mottled like a toad, although said to be the most carnivorous of squirrels, I saw eagerly eating panic grass, and again, the ripe heads of white clover.
June 1914

The text *"Our two heavy frosts, which mowed down my ferns"* indicates that this was written for the members circular of the Gray Memorial Botanical Chapter of the Agassiz Association.

Notes on Being Acquainted With Trees - 1914

In winter, a more intimate acquaintance can be made with deciduous trees. For it is only after the leaves have fallen that the architecture of trees can be clearly discerned. Every species has a different form. No individual, ever is exactly like another. A tree with its delicate tracery of leafless branches is a thing of beauty to eyes that are adjusted to see it. Note, then, the different kinds of bark, the direction of the cleavage; whether it is deep or shallow, smooth or shaggy; laid in smocking, as in white ash, or broken into coral-form bosses, as in Hackberry; or in plates with curled edges, as in black cherry. Sober colors merge and blend in trunk and branches to break in the outmost twigs into livelier tints of olive, ash-pink, red, or yellow, according to the species.

To one versed in tree-craft, a single twig is sufficient to identify the species. Is the twig stout or slender, rigid or flexible? How are the buds arranged, and what is their shape size, surface, and color? The leaf and flower buds, if separate, can be distinguished by their size and shape, the flower buds usually the larger. Particularly decorative is the alder, displaying three sorts of buds - purple oblong leaf buds, tiny


White Ash


Hackberry


Black Cherry

buds of pistillate flowers, and staminate in three-finger aments -- together with brown cones, the receptacles of last year's fruit. The buds of basswood are coated with red shellac, of box elder with mouse-colored fur, while those of sycamore are hidden within the hollow leafstalk. Buds of swamp hickory are sulphur yellow, buds of white elm resemble apple seeds; those of red elm are covered with rust colored wool. The leaf scars below the buds vary, also the arrangement on them of the little dots -- the ends of wood bundles that divide to form the venation of the leaf. The rings of bud-scale scars, marking off the annual growths of the branch, also instance the saying that "Nature repeats herself

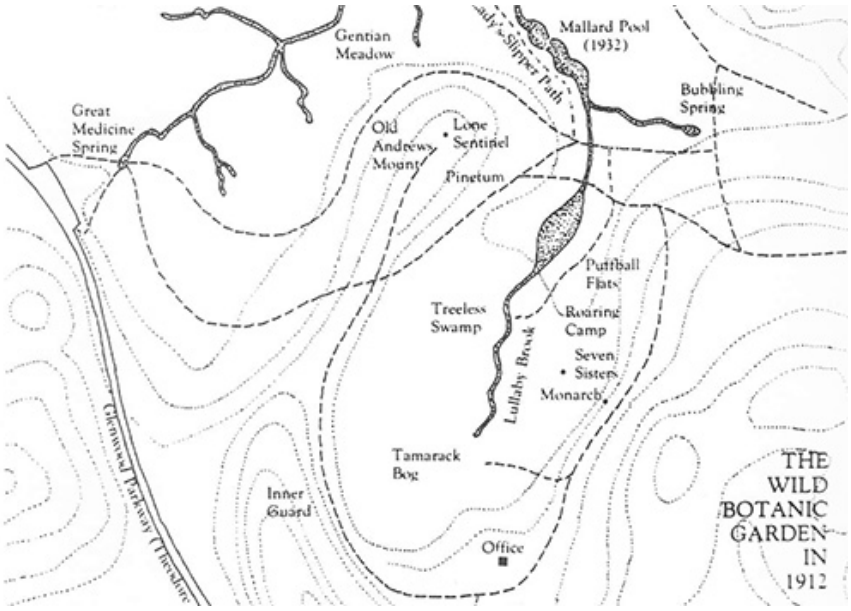

Box Elder Buds


Basswood bud


Hickory buds

with a difference." In the maples, for example, these rings are wider and shallower than in the poplars, where they are deeply indented.

A small pinetum has been established on the hillside northwest of the tamarack swamp [map below]. As the deciduous tamarack is the only conifer growing naturally in the Garden all the evergreen trees therein are juveniles. They have been placed in accordance with their predilections for dryness or moisture --red cedar, jack, white and red pines, prostrate junipers highest on the slope, followed to the level below by white spruce (*Taxus canadensis*) and hemlock along the brook. Hemlock has not been listed among Minnesotan plants; but it has sneaked in, contrary to rule, with the idea that it may sometime break across the Wisconsin border. In order that the face of nature may be changed as little as possible in our trained wilderness, only a few specimens each of the state flora not indigenous to the Garden are admitted.



Notes:
The historic map is courtesy of Martha Hellander who wrote the book on Eloise Butler - *The Wild Gardener.*

Liverworts, Lichens, Mosses, and Evergreen Ferns in the Wild Garden, ca. 1914

Nature study is an all-the-year round pursuit. Several birds, among them the snow bunting and the evening grosbeak, sporting a yellow vest, are with us only in the winter. Lichens, also, are then potent to charm, when the attention is not diverted by the more spectacular features of other seasons. Some tree trunks are gardens in miniature, when encrusted by these symbionts of fungus and imprisoned alga, forming yellow patches, or ashy gray, or grayish green rosettes, pitted here and there with dark brown fruit-disks. The tamarack boughs are bearded with gray *Usnea*; and, when the snow melts away, ground species of *Cladonia*, allied to "reindeer moss." can be seen, with tiny branches tipped with vivid red or studded with pale green goblets. Rock lichens, however, must be sought for elsewhere, as the wild garden does not provide for them either ledges or boulders.

As the snow disappears, and before Mother Nature's spinning wheels whir rapidly and her looms turn out a new carpet for the earth, a glance can be given to the mosses. A love for these tiny plants will surely awaken, if your "eyes were made for seeing," and a keener zest will be given to your out-of-door life. They are gregarious for the most part and everywhere present - by the roadside, on damp roofs and stones, as well as in the forest. Although it is especially true of mosses that "By their fruits ye shall know them," several genera can be readily determined by their leaves.

The fruit, or spore case, is usually a little urn-shaped body borne on a slender stalk. Some species fruit early. I have seen before March was half over, Bartramia [*Bartramia pomiformis*], the "apple moss." [photo right] a mass of little globes - Rhode Island greenings, one might pronounce them - which turn a rich brown when mature.

Apple Moss, *Bartramia pomiformis.* Photo Michael Lüth, Wisconsin Flora.

Sphagnum [*Sphagnum angustifolium*], or bog moss [photo below], may be recognized by its pale green color and the compact bunches of minute leaves terminating the stems. Its paleness is due to large water cells which make this plant of great value to florists for packing plants for distant transportation. We are also indebted to sphagnum for peat, which in the course of ages has been formed from it by reason of antiseptic properties that render it immune from decay. Among other abundant mosses of the swamp are *Thuidium*, the fern-moss, with branches so finely divided that it resembles filmy lace; *Leucobryum*, nearly white in color, in dense mounds around the stumps.

Bryum proliferum [*Rhodobryum roseum*], with its leaves arranged in rosettes that have been likened to green roses; *Mnium*, attracting attention by its trailing stems and leaves of lucid green, small indeed, but larger than the leaves of most mosses; *Timmaea*, a rarer moss, resembling *Mnium*, but with a persistent little bristle projecting from the base of the fruit; *Climacium*, or tree moss, that might pass for an evergreen tree in a dwarf garden.

Polytrichum, Photo Michael Lüth, Wisconsin Flora

On the "Plateau" may be seen clumps of *Polytrichum* [photo right], a comparatively tall moss, with brownish, somewhat rigid leaves. Large masses of this moss bear rosettes which shelter sperm that will fertilize the ova enclosed in apparent buds tipping other masses of the same species. The "buds" will finally develop into conspicuous fruits with shaggy caps of pale tan, aptly named "pigeon wheat."

In evolutionary order, liverworts should be mentioned before mosses. A few of them somewhat resemble in form their allies, the mosses; but the most common species in the garden are like branching green leaves coating the ground.

The fruit of *Conocephalum*, the giant liverwort, is borne on small toadstool-like growths, and the sperm on other individuals, in sessile disks. Liverworts "invented" the so-called breathing pores, or stomates [that may be seen] with the naked eye, looking like pin pricks in the center of the diamond-shaped divisions into which the surface of the plant is divided. The stomates of mosses, by the way, are found only on the fruit capsules.

Liverwort of many forms, *Marchantia polymorpha* .
Photo Michael Lüth, Wisconsin Flora

Marchantia polymorpha - liverwort of many forms [photo left], as the name implies - seems to the novice to be three distinct species. The vegetative form displays exquisitely fashioned green nests lined with tiny green eggs - not eggs, really, but what answers to bulblets in higher plants. On another individual, little stalked disks with scalloped margins carry the sperm, while a third form develops the fruit on the under surface of little, deeply fringed umbrellas. As these points are observed, one more character of liverworts will probably be noted - the cloying sweet odor.

Evergreen ferns make the woods attractive when other vegetation is brown and shriveled. They refresh eyes half blinded by reflection from the snow and serve to "keep in memory green" the delights of the growing season. Two species frequent tamarack bogs: The Spinulose shield fern, [*Dryopteris carthusiana*] whose dissected fronds have all the grace and delicacy of the well known Lady fern's, and the crested shield fern that shows marked individuality in its deeply etched venation.

The Christmas fern [*Polystichum acrostichoides]* [photo right], so common farther east, but here an introduced species, takes kindly to the bog as well as to the rich black soil of the wooded slopes. It is sometimes mistaken for a short leaved variety of the cultivated Boston fern, but a comparison of the fruit dots on the backs of fronds will show the difference.

Also, on the same hillslope, have been naturalized the prostate, glossy holly fern, *Polystichum braunii*, the marginal shield fern [photo left], *Aspidium marginale* [*Dryopteris marginalis*] which can be especially recommended as one never wearying in well-doing. For its cheerful, blue-green fronds persist each year until the new annual growth is well-developed. The rock fern, common Polypody, that elsewhere mats the sides of overhanging bluffs, has been bribed to take root in the garden by a diet of ground rock and a bed of sunken stones.

Letter to Theodore Wirth - 1914

I am often asked when one can derive the most benefit or pleasure form a visit to the wild garden. Every week, from April through October, presents new attractions. First are the early spring flowers, appearing a little later than in some other places, on account of the deeper shade in the cup-like depression occupied by the bog. There is an unparalleled display of marsh marigolds, making golden vistas through the tamaracks and surrounding marshes, accompanied by the fragrant white violet and all the other notable flowers then due, indigenous or introduced, from other parts of Minnesota.

Theodore Wirth (1863-1949) was Superintendent of the Minneapolis Parks System from 1904 to 1935.

A grouping of Marsh Marigolds in the woodland marsh. Photo G D Bebeau.

Within a space of twenty acres may be seen in an hour what would be impossible to find in traversing the state for several days. From May on, the ferns, some forty species in all, compel attention, from the time that the woolly crosiers of the interrupted fern unroll, densely clothing with its long fronds the wooded slopes, even until winter, when the evergreen species are conspicuous against the snow. In the latter part of May, the hawthorns transcend description, freighted with white flowers, from which, in the fall, will mature bright red fruits.

About decoration day, the much admired yellow and pink lady's-slippers are in bloom. June brings the roses, the strange flowers of the pitcher plant, and the marvelously beautiful showy lady's-slipper. In July, the garden is resplendent with lilies, while in August, the meadow flowers are in full force, forming brilliant mosaics of white, blue, yellow, and red.

Tamarack and Maple in the marsh at Eloise Butler. Photo G D Bebeau.

Again, not one of the the city parks surpasses Glenwood in scenic beauty during autumn, offering, with its morainic hills and ponds, wide-spreading views and a great variety of landscape. In addition to the common autumnal foliage, swamp maples yield vivid scarlet, and numerous white oaks, rich tints of mulberry red, set off by the white stems of birches and the dark green foliage of tamaracks, while the meadows are blue with gentians and the hills carpeted with asters, unaffected by frosts.

The Fragrance of the Wild Garden - 1915

Barring the malodorous Skunk Cabbage which had to be introduced into my bog, the equally offensive Carrion Flower [photo at right] which is forgiven on account of the picturesque vine and big bells of dark purple berries, and the unspeakable fungus, the stinkhorn, tolerated as a curious freak of the vegetable kingdom, at all times the garden dispenses sweet fragrance.

First, there is the woodsy smell so delightful in the spring when the wilderness is free from snow. The tamaracks yield a slight aromatic blend to this, leafless as they are. My juvenile evergreens -- all introduced -- will increase this quality in the future. The liverworts coating the ground in the bog, with their flat, leaf-like growths, have a cloying sweet odor, so individual that they could be recognized by that alone.

We know from afar when the willow catkins merge from furry pussies into yellow flower clusters, as well as the bees which are attracted by the honey-like smell that comes from the little nectar scale situated at the base of each staminate or pistillate flower above each downy bract. [photo below].

The odor of plum and cherry blossoms, is reminiscent of their fruits, while one is almost overpowered by the fragrance of the hawthorns -- spectacular features of the garden when covered with their fleece of bloom.

Most agreeable and sweetest of all is the small white violet which carpets the swamp. The Canadian Violet, introduced in large numbers, is also delicately fragrant. But for delicacy and sweetness I think every flower must yield the palm to Linnaea [*Linnaea borealis* - Twinflower]. I have not yet succeeded in naturalizing Trailing Arbutus, which is perhaps a more universal favorite. Our showy orchid [Showy Lady's-slipper] might compete with this in beauty and richness of perfume.

It is impossible to describe an odor. Comparison with other odors fails in indicating the individual quality, which is always *sui generis* [of his, her, its particular kind]. For instance, the odor of cypripediums reminds me of that of strawberries, but this conveys no true idea of it.
For spicy odors we resort to the rootstalks of Sarsaparilla, *Aralia nudiflorum* [*Aralia nudicaulis* L.], Wild Ginger, and Sweet Flag with its peculiar tang. Their leaves hold them in less degree. Unfortunately, sassafras is not a native of Minnesota.

Who does not love the fragrance of wild grape blossoms? And again that of the ripe fruit? It would be interesting to determine how much of our enjoyment in tasting fruits comes from their pleasing

fragrance. Now and then I find a fragrant specimen of Marsh Fern, *Aspidium thelypteris* [*Thelypteris palustris*], and at times the Interrupted Fern is slightly fragrant. Very delightful is the odor of the beautiful *Dicksonia* -- introduced -- [Hay-scented Fern - *Dennstaedtia punctilobula*] my favorite fern and also Thoreau's!

After a rain, we sniff the air with delight, saying, "Oh yes, there's a balm in Gilead!" as we pass a young balsam poplar that has been planted near one of the foot paths. Favorite visitors are allowed to bruise a leaf to extract the perfumes of Sweet Gale, Benzoin (introduced [1907]) [*Lindera benzoin* - Northern Spicebush], Wild Bergamot, Wild Anise, *Galium circaezans* [Licorice Bedstraw], *Dalea alopecuroides* (elusively sweet) [*Dalea leporina* - Foxtail Prairie Clover], Mountain Mint (*Pycnanthemum*) [photo at right] which must nearly equal the European Sweet Basil in fragrance, and Aromatic Sumach (introduced) [Fragrant Sumac]. Some also like to revive the memories of childhood by inhaling the stronger odors of Tansy, Catnip, and Ground Ivy (all naturalized species). The common Wild Mint [*Mentha arvensis*], makes its presence known as we walk over it in the meadows.

Pungent and less agreeable odors we obtain from bruising the fruit of Mountain Ash and the leaves of the Pasque Flower, *Anemone patens*; Prairie Clover, *Petalostemum* [*Dalea candida* (white) and *D. purpurea* (purple] ; and Wormwood, *Artemisia*.

June, of course, is redolent with wild roses and the blossoms of locust. In September, the meadows abound in the lovely, sweet-scented ladies' tresses, *Spiranthes* [several species]. Lastly, in the fall, we are greeted by a compound of agreeable odors as we walk scuffling the leaves under our feet.
Of the many plants she mentioned, here are links to information sheets containing photos and descriptions.

Children's Forage Plants in the Wild Garden - Jan 1915

I have been thinking lately about the plants I used to browse upon when I was a child and am trying to persuade my sister to write a paper on the subject. I wonder if any of you can add to the list from your own experience.

I ate but little at the table when beech leaves were young and tender. I do not know how delectable their acid would seem now, for I have but one small beech in the garden and no leaves to spare for experiments. The beech barely reaches the eastern border of Minnesota. The white starchy bud of the Interrupted Fern was a delicious morsel well worth long and hard digging to procure. It has a taste peculiar to itself and I think it would make an excellent salad. [See note below] We used to dig industriously also for the tubers of Dwarf Ginseng (*Panax trifolium*); ground nuts we called them. Do they have the same properties as commercial ginseng? I have naturalized them in the garden from tubers sent me from Maine. It bloomed for me May 22. After fruiting it dies to the ground. We nibbled quantities of the nutlets of Sweet Fern, *Myrica asplenifolia*. [*Comptonia peregrina* - photo right] Boys made cigarettes of the leaves. It wasn't fashionable in our set for girls to smoke. I have failed to induce this plant to grow, although I try every season. I have succeeded with *Myrica gale*, another fragrant plant of the genus. I have never tested the edibility of its fruits. It loves water, while sweet fern affects a gravelly soil.

Young shoots of raspberry and blackberry, peeled of their prickles, and the tips of wild grape tendrils were good fodder, too. The common red raspberry is in excess in the Garden. It is uprooted when I want room for something else. I discovered only last summer a few roots of the Thimbleberry, *Rubus occidentalis.* [Garden Log July 11, 1914. We now call it Black Raspberry.] The stems are covered with thick white bloom. In Maine, everyone is fond of the young leaves of ivory plums, *Gaultheria procumbens*. We called them "youngsters," and the spicy fruit, "boxberries." Another name for the leaves was "ivries," the meaning of which is not apparent to me. The inner bark of Slippery Elm and of Sweet Birch, *Betula lenta*, were especially esteemed - the latter not a native of Minnesota.

The spore capsules of the moss, called "pigeon wheat," *Polytrichum*, were culled for their slightly acid taste; but for extreme tartness, leaves of Sheep Sorrel were resorted to, which caused a peculiar sensation in the hinges of the jaw most often employed with the product of the spruces. Spearmint and Pennyroyal supplied aromatic flavors, also bits of Sarsaparilla, *Aralia nudicaulis*; and Sweet Flag, *Acorus calamus*. In Minneapolis, children also eat the berries of common sumach, *Rhus typhina* [*Rhus hirta* - photo above]; and the roots of Sweet Cicely, *Osmorhiza* [*Osmorhiza].* Of course, all sorts of berries were eaten - sweet or otherwise, puckery, juicy or stony.

Besides those mentioned above, Bunchberries, *Cornus canadensis*; and snake berries (rare in Minneapolis) - a local name for Partridge Berries - *Mitchella repens*, Creeping Snowberry, concealed on the under surface of the delicate vine, were special favorites, notwithstanding the "horrid smart-bug" that was often popped into the mouth along with the sweet Bunchberries. Thorn apples and bird cherries, nearly all stone, were made to yield their pulp. Chokecherries were devoured to the right degree of puckerment for "papa, prunes, and prisms."

Other edible fruits in the wild garden are chokeberry, blackberry, dewberry, two species of Juneberry, two species of strawberry, flowering raspberry (rather tasteless), salmon berry, wild crab, the two cranberries, sheep berry, high-bush cranberry, may apple, blueberry, huckleberry, highbush blueberry, two species of gooseberry, three of currant, purple-berried elder, wild crab, black cherry, Besssy's cherry, and sand cherry, *Prunus pumila*.

Of nuts, there are only hazel - two species. Other nut bearers are introduced, but not old enough to fruit.

To Mrs. Holtzoff's list of substitutes for tea, I can add *Amorpha canescens* [Leadplant - photo right]. It is used for the sake of economy by some western farmers.

A German lady comes to the garden for *Galium circaezans* [Licorice Bedstraw] which she uses as a flavoring for Rhine wine and lemonade.

Note: The fiddleheads of Interrupted fern (and all *Osmundas*) are now known to be carcinogenic.

The opening and closing text of this essay indicates that this article was sent to the Gray Memorial Botanical Chapter, division D, of the Agassiz Association for publication in the Group's circular bulletin.

Ferns in the Wild Garden - 1915

Mrs. Keeler's paper leads me to write about our ferns. Minnesota is not as rich in ferns as New York and a single county would not yield as many species as she names. [Harriet L. Keeler was an early 20th Century writer on New York State plants]

Ten ferns are indigenous to the wild garden. Indeed, the most spectacular feature of the garden is a hillside densely clothed with the Interrupted Fern, *Osmunda clintoniana*, [now *Osmunda claytoniana*] and the tamarack swamp abounds with Cinnamon fern, *O. cinnamomea* and the lovely evergreens, *Aspidium spinulosum* and *A. cristatum*, [Wood Ferns] with the second in point of numbers -- the Marsh Fern, *A. thelypteris* [*Thelypteris palustris*], which is also massed in the marsh on the eastern side of the swamp.


Cinnamon Fern

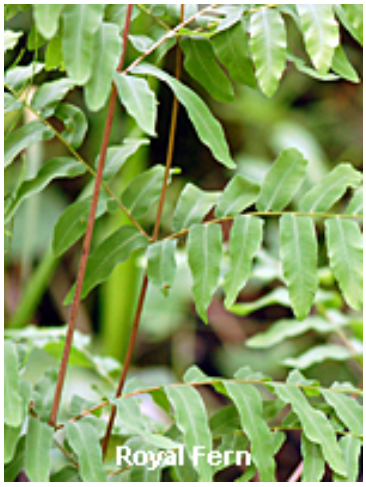

Lady Fern


Sensitive Fern

We also have an abundance of Lady Fern, *Asplenium filix-femina* [*Athyrium filix-femina*]; Sensitive Fern, *Onoclea sensibilis*; and Maidenhair, *Adiantum pedatum*, which forms mats of unusual size and height. The Rattlesnake Fern, *Botrychium virginianum*, is frequent, and the Brake, *Pteris aquilina* [*Pteridium aquilinum*], is rapidly spreading, although when the garden started in 1907 it was not in evidence and I recall that three of the teachers of botany tried and failed to dig up a root of it to transplant in the garden. This may repeat the history of the Royal Fern, *Osmunda regalis*, which has been introduced on the border of the swamp. Much to my surprise I found a single specimen, [September 29, 1914] not large, but beyond the period of childhood, in the center of the swamp where it had not been consciously planted. The query is, how did it get there? Possibly in the sod from some other plantation, for it is too soon for it to develop from the spores of the introduced specimens. The fern is abundant in a thicket about two and one-half miles from the garden.

The other ferns that grow about Minneapolis and have been introduced in numbers in the garden are the Ostrich Fern, *Onoclea struthiopteris* [*Matteuccia struthiopteris*], which is locally abundant in moist ravines. In one place, I have been told, fronds grow six feet high; *Cystopteris bulbifera* [Bladder Fern] with very long fronds on moist, rocky banks, and the less frequent Fragile Bladder Fern, *C. fragilis*; Common Polypody, *Polypodium vulgare* [*Polypodium virginianum*] on the bluffs of the Mississippi. I know of one limestone bluff that is carpeted with it and close by another that has an equally rank growth of *Woodsia obtusa* [Blunt-lobe Cliff Fern]. On our river bluffs is also found perhaps the most

interesting fern of all, *Cryptogramma stelleri*, the Slender Rock Brake, differentiated, small as it is, into two sorts of fronds, the sterile and fertile.



I have had to go several miles farther afield, a journey by rail farther south along the river, for the Purple Cliff Brake, *Pellaea atropurpurea*, where I find it abundant in crevices of bold, out cropping rock; and my nearest point for the Walking Fern, *Camptosorus rhizophyllus* [*Asplenium rhizophyllum*], is over the border in Osceola, Wisconsin. Here, too, I have obtained the pretty Oak Fern, *Phegopteris dryopteria* [*Gymnocarpium dryopteris*] and *Woodsia ilvensis* [Rusty Woodsia]. For the other beech ferns, *P. polypodioides* and *P. hexagonoptera*, I have had to depend upon florists. I find that *P. hexagonoptera* prefers a shady hillside, while the two other beech ferns do well in the swamp.

I have obtained besides from eastern florists, *Asplenium trichomanes* [Maidenhair Spleenwort], *A. angustifolium*, the Narrow Spleenwort, *A(thyrium) acrostichoides* [*Deparia acrostichoides*]; the Silvery Spleenwort; *Polystichum braunii* [Braun's Holly Fern], one of the most beautiful evergreen ferns; *Aspidium noveboracense* [*Thelypteris noveboracensis*], the New York Fern; *Aspidium Filix-mas* [*Dryopteris filix-mas*}, the Male Fern; *A. goldianum* [*Dryopteris goldiana*, Goldie's Fern] (a fine species); *A. bootii* [*Dryopteris X bootii*, Boott's Wood Fern] (another favorite); and three varieties of *A. cristatum* [*Dryopteris cristata*, Crested Shield Fern -also- Crested Wood Fern]; and *A. spinulosum* [*Dryopteris carthusiana*, Spinulose Wood Fern]; also the Hay-scented fern *Dicksonia punctilobula* [*Dennstaedtia punctilobula*] (which I like best of all; so did also Thoreau!); Adder's tongue, *Ophioglossum vulgatum* [*Ophioglossum*

pusillum]; the Grape Fern, *Botrychium obliquum* [*Botrychium dissectum*].

Colorado has furnished me with the little *Woodsia scopulina* [Rocky Mountain Woodsia] and I have myself successfully transported from Malden and Franklin, Mass., the Christmas Fern, *Polystichum acrostichoides*; the Marginal Shield Fern, *Aspidium marginale* [*Dryopteris marginalis*]; and the precious Ebony Spleenwort, *Asplenium platyneuron* -- the last three evergreen, especially to be commended. The thick, blue-green fronds of *Aspidium marginal*e persist each season until after the new leaves are formed, doing duty the whole year round.

All my ferns are prospering except *Pellaea atropurpurea* and *Asplenium trichomanes*, which require renewing.

To complete the flora I still need:

- *Botrychium simplex* [Least Moonwort]
- *Botrychium lunaria* [Common Moonwort]
- *Cheilanthes feei* [Slender Lipfern]
- *Aspidium fragrans* {Fragrant Shield Fern - rare]
- *Woodsia oregana* [Oregon Cliff Fern]
- *Woodsia glabella* [Smooth Cliff Fern]
- *Phegopteris robertiana* [*Gymnocarpium robertianum* - Scented Oakfern]
- *Cystopteris montana* [Mountain Bladderfern]

Of the fern allies, three species of horsetails are indigenous - - *Equisetum arvense* [Field Horsetail], *sylvaticum* [Woodland Horsetail], *hyemale* [Rough Horsetail], and I have imported *E. scirpoides* [Dwarf Horsetail].

I have not succeeded in naturalizing *lycopodiums*. Conditions do not seem favorable. They live a season or two and then peter out. One specimen of *Lycopodium lucidulum* [*Huperzia lucidula* - Shining Clubmoss] was found growing naturally in the swamp [1908] but it has disappeared. However, a large mat of transplanted *Selaginella rupestris* [Northern Selaginella] is completing its third year in the garden. Neither have I one snippet of *Isoetes* [Quillworts] (of which there are three species in Minnesota); nor *Salvinai natans* [Floating Watermoss], nor *Azolla caroliniana* [Carolina Mosquitofern], both of which are listed in our flora.

NOTES:

The unusual opening sentence tells us this essay was sent to the Gray Memorial Botanical Chapter, division D, of the Agassiz Association for publication in the Groups circular bulletin.

In 1919 Eloise wrote a very similar article, which we also believe was sent to the Gray Memorial Botanical Chapter for circulation.

Effective Coloring in the Wild Garden That is Not Due to Flowers - 1915

I had decided to write a little on this subject before reading in the November *Garden Magazine*, Mr. E. H. Wilson's delightful paper on "The Glory of the Autumn." He says, "No scene in nature is more delightful than the woods of eastern North America in the fullness of their autumn splendour." The forest region of Minnesota may be included in this eulogy . . .

The first note of the brilliant color of the waning year is struck by the red maple, *Acer rubrum*, which is abundant in all stages of growth in the wild garden. Its poignant beauty persists until after the first heavy frosts. In the spring, this tree glows brilliant in fruit as well as in flower. When the maple leaves fall, the oaks begin to put on their gorgeous crowns in many shades of red, bronze, and russet brown, set off by the yellow leaves of the birch and poplars, the gleaming white stems of the birches and the dark green foliage of the tamarack. The white oaks lend a distinctive tint of a peculiarly rich mulberry red. Nature makes a lavish use of pigments on many of the shrubs and low bushes. The sumachs [photo right] cover the landscape here and there with floods incarnadine [pale red to blood red]; and the woodbines, or Virginia Creepers, are trailing clouds of glory; the viburnums show deep red; the dark pink leaves of the waahoo [Wahoo - *Euonymus atropurpureus*] are succeeded by fruit-tassels of coral pink and red; the foliage of the black currant, *Ribes floridum* [*Ribes americanum]*, is rimmed and streaked with red; and the blackberry's vicious prickles are forgiven when its leaves are like the petals of damask rose.

The ground blazes where the blueberry appears, or the malignant poison ivy, and flecks of crimson or scarlet mark the position of Flowering Spurge, *Euphorbia corollata* and of *Epilobium coloratum* [Willowherb]; and the miniature poinsettia, *Euphorbia heterophylla* [Wild Poinsettia], decks its green bracts with a scarlet blotch at the base.

All this brilliancy is enhanced in the garden by the young evergreen trees, the evergreen ferns and trailers in the swamp, and by the persistent green of some of the deciduous trees and shrubs, like locust and Ceanothus; and variety is added by the mottled leaves of *Geum macrophyllum* [Largeleaf Avens]; *Heuchera americana* [Alumroot]; and the rosettes of Evening Primrose, while the patches of *Epipactis*, of three species [Helleborines], in their white tracery are a never ending delight.

Fruits often excel flowers in richness of color. I have already mentioned the fruits of red maple and wahoo. To classify by color, various shades of red are represented by the following: *Sambucus racemosa* [Red Elderberry - photo left], appears early in summer, a veritable Queen of Sheba against a background of green; the birds scarcely allow us a glimpse of the sweet

Juneberry, and the children cull the fragrant strawberries on the hillsides; the brilliant pomes of the hawthorns and the rosehips endure for a longer period, also the fruits of mountain ash. The red raspberry disappears quickly, but not in the same way; the Strawberry-blite, *Chenopodium capitatum*; or the Red Baneberry; the fruits of Trillium; *Smilacina* [False Solomon's Seal - *Maianthemum*]; Jack-in-the-pulpit; Wild Calla; Green Dragon Twisted Stalk; Bearberry; Coral Berry, *Ilex verticillata* [Winterberry]; Canadian holly; *Lonicera*; and of the vines - Bittersweet; Matrimony vine; and *Solanum dulcamara* [Climbing Nightshade]. The bright berries of *Panax quinquefolius* [American Ginseng] may not escape the ginseng hunter, but he passes by the smaller *P. trifolius* [Dwarf Ginseng].

Birds and children quickly despoil the various cherries and the yellowish red wild plum and the buffalo berry of their fruits, but the swamp affords some protection from children to Bunchberry, (*Cornus canadensis*); Cranberries; May Apple, *Mitchella repens* [Partridge Berry]; Dewberry; Red currant. The introduced Boxberry, *Gaultheria procumbens* [Eastern Teaberry]; and Mountain cranberry [Lingon-berry], *Vaccinium vitis-idaea*, are too sparse to attract attention. The large, showy thyrsi of the Staghorn Sumac must not be omitted from this list; neither many vermilion-hued fungi -- the red cup of early spring, *Sarcoscypha coccinea*; the Swamp *Boletus pictus* [*Boletus edulis*]; the little *Hygrophorus conicus* [Witch's Hat]; rosy *russulas*, and the deadly *Amanita muscaria*. Very pleasing, too, are the red tipped lichens, species of *Cladonia*. I had nearly forgotten the berry-like fruit of "Ground Hemlock," *Taxus canadensis* [American or Canada Yew]; and the beautiful High-bush Cranberry [photo right], delicious preserves for the Bohemian waxwing and jelly for humans.

Among blue or purple fruits we have the wonderful blues of Cohosh [photo left], Clintonia, of *Cornus amomum* [Silky Dogwood]; *C. circinata* [*C. rugosa* - Round-leaved Dogwood]; *C. alternifolia* [Pagoda Dogwood]. Other blues, lighter or darker, are blueberries, grapes, Moonseed (*Menispermum*), fruits of Woodbine, Juniper, *Lonicera caerulea* [*Lonicera villosa*, Blue Honeysuckle]; *Viburnum pubescens* [*Viburnum dentatum*, Southern Arrowwood].

Dark purple or black fruits: Buckthorn, *Rhamnus alnifolia* [Alderleaf Buckthorn]; blackberry; Thimbleberry, *Rubus occidentalis*; Sheepberry; *Smilax* of several species [Carrion Flower and Greenbriars]; Black currant, *Ribes floridum* [*Ribes americanum*]; *Aralia nudicaulis* [Wild Sarsaparilla]; *Aralia racemosa* [American Spikenard]; Solomon's seal; Gooseberry; Chokeberry; *Sambucus canadensis* [Common or Canada Elderberry]; Hackberry, purplish-brown in color.

Yellow fruits: *Crataegus punctata* [Dotted Hawthorn]; Horse Gentian, *Triosteum perfoliatum;* Deerberry; Chokecherry var. *leucocarpa [Prunus virginiana* var. *leucocarpa* - usually considered an amber color version of *P. virginiana*]

Greenish white or white fruits: Snowberry; Creeping Snowberry, *Chiogenes hispidula* [*Gaultheria hispidula*]; Wolfberry; White baneberry; Poison Ivy; Poison sumach; *Cornus asperifolia* [Toughleaf dogwood]; *C. Baileyi* [a cultivar of *Cornus sericea* - Redosier Dogwood]; *C. stolonifera* [*Cornus sericea* - Redosier Dogwood]; *C. paniculata* [*Cornus racemosa* - Gray Dogwood]. The fruits of white baneberry and

Cornus paniculata [photo right] are given additional beauty by their red stalks. Under this head may be placed the fluffy appendages of dry fruits or seeds which add in their season a conspicuous note to the landscape: Clematis; Cotton grass, *Eriophorum angustifolium*; the pappus of many composites, as dandelion, thistle, *Senecio* [the ragweeds], [and many others] and the appendages of seeds, as willow and milkweed.

Quaker grey and silver are furnished by many of the Artemisias, by the foliage and fruit of the Silverberry, *Elaeagnus argentea* [*Elaeagnus commutata*]; by Poverty grass, *Hudsonia tomentosa*; Cudweed; and *Salix candida* [Sageleaf Willow].

The tones of grasses are potent to charm and almost defy classification. I will mention a few of my favorites without attempting to define the color: Indian Grass, *Sorghastrum nutans*; *Andropogon scoparius* [*Schizachyrium scoparium* - Little Bluestem]; *A. furcatus* [*Andropogon gerardii* - Big Bluestem - photo left]; *Eragrostis pectinacea* [Tufted Lovegrass]; *Phragmites communis* [*Phragmites australis* - Common reed]; *Bromus ciliatus* [Fringed Brome]; *Glyceria canadensis* [Rattlesnake Manna grass]; and of the sedges: *Scirpus validus* [Soft-stem Bullrush]; *S. sylvanticus* [*Scirpus expansus* - Woodland Bullrush], and *S. atrovirens* [Green Bullrush].

Our Oaks, except *Quercus macrocarpa*, retain their leaves in winter, and though turned to dusky brown, still give variety to the landscape. When the birds have eaten the fruit and the deciduous trees and shrubs are bare, the stems of dogwoods and roses make a cordon of red and purple about the garden swamp, and the willows light up gray days with sunshine-yellow. The sense of color can also be gratified in noting the gradations of tints in trunk, branches and outmost twigs. It is interesting to distinguish trees by the color of their bark as well as by their leaf forms and general architecture. The twigs of trees show soft, bright tints, and there is much individuality in the color of buds. To note but a few: The mouse-colored buds of Box Elder; the Bitter nut, sulfur tinted; the American elm, appleseed brown; those of Basswood like red shellac [photo right]. Of course, the color of tree trunks varies with age. Everyone admires the conspicuous bolls of the White Birch, but those of the Yellow Birch like old brass; the Mountain Ash like copper; the Red Maple is ash-pink; the Aspen, pale greenish gray.

I particularly love the color tones of spring when the buds are beginning to unfold. They are more difficult to characterize, and I wish to renew my impressions before I make the attempt.

Note:

The wording of the opening text however indicates that this essay was sent to the Gray Memorial Botanical Chapter, division D, of the Agassiz Association. for publication in the Groups circular bulletin.

Asters in the Wild Garden - June 1915

From year to year I become more and more attached to wild asters. They are so varied in color, habit and form. They bloom from August well into October, defying frosts. The one I look at last, I like best of all, for each species has a charm peculiar to itself.

Asters indigenous to the wild garden:

Aster azureus [*Symphyotrichum oolentangiense* var. *oolentangiense*]; Sky Blue Aster] still burgeons on the hillsides [as of October 5]. It is a sine qua non not only on account of its late blossoms, but because of their profusion and bright, pure color.

Aster junceus [Northern Bog Aster, *Symphyotrichum boreale*] is a pleasing adjunct of the meadows. It appears early and has a long period of bloom. The flowers, white and palely tinted, the slender stalks, and linear leaves, make it a fitting companion for its associate, the marsh bellflower, *Campanula aparinoides*. Photo ©Merle R. Black, Wisconsin Flora.

Aster laevis [Smooth Blue Aster, *Symphyotrichum laeve* var. *laeve*] with richly colored flowers, smooth, thick leaves, and sturdy habit, is also still in evidence on dry, sandy soil. [As of her date of writing - October 5]

"O, you cunning little thing!" we exclaim at the wee blossoms peeping out through the leaves densely clothing the diffusely branched stems of *Aster lateriflorus* - the so-called Calico Aster - [Side-flowering Aster, *Symphyotrichum lateriflorum*] the purple disks and pale rays forming a pattern on the background of the small green leaves.

Aster lateriflorus var. *hirsuticaulis* has somewhat larger flowers with yellow discs and seems to form a connecting link with *A. tradescanti* the Michaelmas daisy, which is also sparsely found in the garden. The variety has a stricter habit than the type. [This is also the Calico Aster, *Symphyotrichum lateriflorum* var. *lateriflorum*. Note: The distinction of varieties within *S. lateriflorum* is not recognized today by most authorities including *Flora of North America* and the U of M Herbarium and MN DNR] [We believe the Michaelmas daisy she refers to is actually the Ontario Aster, *Symphyotrichum ontarionis* and we illustrate that here.]

Aster multiflorus [White Heath Aster, *Symphyotrichum ericoides* var. *ericoides*] has been largely planted in the garden, but last season I found a specimen of it well established in my swampy meadow, where I never should have thought of planting it - the inhabitant of dry prairies. This aster with its small rigid leaves and multiplicity of flowers might well be called *ericoides* if the name had not been preempted, for it looks like a heath [see notes below in the "introduced" section below]. Robust specimens are fully as fine as the overworked Spirea Van Houttei.

Aster novae-angliae [New England Aster, *Symphyotrichum novae-angliae*] is truly a splendid plant - tall, late-blooming, with prodigal large flowers of many shades of rich blue and pink purple. It often has the striking tone of the ironweed.

Aster paniculatus [White Panicle Aster, *Symphyotrichum lanceolatum* - Note: There are three varieties of this aster recognized as present in Minnesota] is often mistaken for Boltonia in the distance. The inflorescence, however, is not flat-topped like that of Boltonia, and the disk-flowers are of a deeper color. This aster is highly decorative, growing as it does in large masses.

Aster salicifolius [Willowleaf Aster or Veiny lined aster, *Symphyotrichum praealtum* var. *praealtum*] has a similar habit and, when the flowers are white, is scarcely distinguished from it. [Not shown]

Aster puniceus, the Red-stemmed Swamp Aster, [*Symphyotrichum puniceum* var. *puniceum*] is nearly as showy as *A. novae-angliae*. The typical plants, tall and bushy, their flowers with narrow rays, deep blue or pale, or even white, with orange disks, look as if studded with stars.

Aster puniceus var. *lucidulus* [Purplestem aster, *Symphyotrichum puniceum puniceum*] is a late bloomer and the most abundant aster in the garden, growing in large masses in the meadow bordering the west side of the tamarack bog. The stem is yellowish brown, more simple and far less hairy than that of the type. The flower is of the palest blue and somewhat smaller. The leaves are glossy and shining. [Note: The variation of *A. puniceus* that Eloise lists as Purplestem Aster is currently considered the same plant as Red-stemmed Aster, *A. puniceus*, just a variation of local ecotypes of the same plant, and the reclassification the new world asters now classifies both ecotypes as *Symphyotrichum puniceum* var. *puniceum*]

Aster sagittifolius [White Arrowleaf Aster, *Symphyotrichum urophyllum*] is of refined beauty. It has a wand-like habit and is crowed with blossoms of medium size, generally white or pale blue, with purplish disks.

Aster drummondii [Drummond's aster, *Symphyotrichum drummondii* var. *drummondii*] is said to be hardly distinct from it; but, with me, *A. drummondii* has larger, thicker leaves, larger and darker blue flowers, a less brittle stem, and a more gregarious habit. Photo ©Mark Feider, Wisconsin Flora.

Aster umbellatus [Flat-topped Aster, *Doellingeria umbellata* var. *pubens*] is highly esteemed because of its tallness, its ample flat-topped flower clusters of mingled gray and yellow that set off and harmonize with the luxuriant masses of Joe-Pye weed.

Introduced Asters [to the Garden]:

Aster commutatus [White Prairie Aster, *Symphyotrichum falcatum* var. *commutatum*] is a sort of glorified *Aster multiflorus*. The flowers are quite a bit larger. I have but two roots in the garden and they have not yet blossomed.

Aster divaricatus, [White Wood Aster, *Eurybia divaricata,* shown in photo.] sparsely introduced, has entirely died out.
This is also the case with *Aster ericoides*. [*Symphyotrichum ericoides*; White Heath Aster] Both species were obtained from Massachusetts and probably could not withstand the rigors of our severer climate. [This name is a misapplication. Eloise's problem with this plant is probably explained by this note from *Flora of North America*: *"A number of aster cultivars are sold under the name* 'Aster ericoides.' *These are all derived from European garden plants and are either cultivars of S. dumosum, S. lateriflorum, S. pilosum, or S. racemosum, or hybrids involving one of those species and another taxon. The misapplication of the epithet ericoides dates back to the nineteenth century and has persisted in the horticultural literature."*

The large, rough basal leaves of *Aster macrophyllus* [Bigleaf Aster (Large-leaved Aster), *Eurybia macrophylla*] give the plant a marked individuality. The flowers, though pale in color, attract attention by their size and abundance. This aster is local in the vicinity of St. Paul and takes kindly to cultivation. [Note: This species is considered native to Minnesota].

Aster novi-belgii [New York Aster, *Symphyotrichum novi-belgii* var. *novi-belgii*] is not yet well established in the garden. I am not very familiar with its characteristics. [Note: Not native to Minnesota] Photo ©Robert Mohlenbrock, USDA-NRCS Plants Database.

Aster oblongifolius [Aromatic Aster, *Symphyotrichum oblongifolium*] is local on our prairies. it is pleasing by reason of the size, color and aromatic odor of the blossoms.

Aster patens [Late Purple Aster, *Symphyotrichum patens* var. *patens*] did not put in an appearance this season. A particularly fine aster, its stems thickly clothed with sessile, cordate [heart-shaped] leaves, the flowers large and of rich purple hue. [Note: Not shown, not native to Minnesota - not shown]

Aster ptarmicoides [Prairie Goldenrod, *Oligoneuron album*] behaves like a biennial. I think every other year that it has petered out, but it comes up serenely the next season. The small flowers have the pure whiteness and texture of camellias. [Note: Not native to Minnesota] Photo ©Christopher Noll, Wisconsin Flora.

If I have any special favorite, it is *Aster sericeus* [Silky Aster, Western Silver Aster, *Symphyotrichum sericeum*]. The flowers are lilac tinted, a shade peculiar to themselves, and the contrast with the silky, pale foliage is altogether charming. It is abundant on the hillsides just outside of the garden and I have introduced it in large quantities.

Aster cordifolius [Heart-leaved Aster, Common Blue Wood Aster, *Symphyotrichum cordifolium*] is abundant in the woods along our river banks. I have specimens of remarkable beauty where I have planted it in burnt-over tracts, branching diffusely and crowded with pale blue flowers whose disks take on a richer tone in maturity.

Aster undulatus, [Wavy-leaf aster, *Symphyotrichum undulatum*] also introduced from Massachusetts, perhaps on account of its thick epidermis, thrives well in the garden. Its flowers are pleasing and about of the same tone as those of *A cordifolius*. [Note: Not native to Minnesota - not shown]

I would like to exchange roots of asters, if agreeable to any members of the chapter [see note at bottom of page]. I wish to experiment again with my failures and would like some specimens also of:

Aster shortii [Short's Aster, *Symphyotrichum shortii*, native, photo at left]

A. dumsous [Rice-button Aster, *Symphyotrichum dumosum*, many varieties, not known which she writes about, not native.]

A. polyphyllus [Pringle's Aster, *Symphyotrichum pilosum* var. pringlei] native, not shown.

A. vimineus [Small white oldfield aster, *Symphyotrichum racemosum* not native]

A. modestus [Giant Mountain Aster, *Canadanthus modestus*] native,not shown.

A. angustus [Not found - name not resolved]

[Ed. note: She was evidently not successful with this request as it was 1921 until she found most of these plants - 1926 in case of Short's Aster and never in the case of the unresolved *A. angustus and polyphyllus*.]

I find that I have omitted from my list of introduced species, *A. linariifolius* [Stiff Aster, Flaxleaf Whitetop Aster, *Ionactis linariifolius*]. They have not yet reached the blossoming stage. [Note: Not native to Minnesota] Photo ©Merle R. Black, Wisconsin Flora.

This essay was sent to The Gray Memorial Botanical Chapter, (Division D) of the Agassiz Association for inclusion in the members circular.

A Collection of Garden Experiences - c1916

Mistress Mary, so contrary
How does your garden grow?

Like Mistress, like garden is the reply. In quirks, in whimsies, and in sheer contrariness a wild garden surpasses Mistress Mary. This is true especially of the introduced species. Last summer a robust specimen of *Aster multiflorus* [*Symphyotrichum ericoides*] appeared in the marsh, although it had been placed where it ought to be contented when transplanted from the dry prairie. *Gentiana andrewsii* has been naturalized by the brook, and now it comes spontaneously on the dry hillsides. *Viola conspersa* [*Viola labradorica* - American Dog Violet] was found in large masses putting to shame carefully nurtured specimens planted at the opposite end of the swamp. The showy *Liatris pycnostachya* has chosen to appear of itself in the meadow, and the little twayblade, *Liparis Loeselii*, has established itself at a distance from the planted colony.

American Dog Violet (*Viola labradorica*). Photo ©Mark Fieder, Wisconsin Flora.

Showy Orchis (*Galearis spectabilis*). Photo ©Jeff Hapeman, Wisconsin Flora.

The royal fern, *Osmunda regalis*, not indigenous to the garden, as was supposed, but laboriously dug and transported from miles sway to the borders of the swamp, has mysteriously sprung up in the center. The most superb growth of *Orchis spectabilis* [*Galearis spectabilis* - Showy Orchis] is also unaccounted for, in somewhat dry and infertile soil, where no gardener would ever think of placing it. *Castilliea coccina* [Scarlet Indian Paintbush], suspected of root parasitism, and accordingly lifted in large blocks of sod, rewarded repeated efforts last season with a single stalk; but at the same time another specimen was found in a seemingly unsuitable place. I have failed in cultivating *Epilobium angustifolium* [Fireweed], although I have planted it both in the spring and in the fall - in season and out of season, from various places in different situations. Two years ago it broke out in two widely separated spots where it had not been consciously introduced.

I have had a similar experience with Indian Pipe, *Monotropa uniflora*, but difficulty with a saprophyte was to be expected. Last summer there was no sign of Indian Pipe, although to my surprise and joy it was abundant for the two previous seasons.

I have thought that I knew every foot of my garden and the position of every sizable plant in it, but I have had so many surprises that I am no longer confident. *Lythrum alatum* [Winged Loosestrife] is a case in point. I wanted to obtain some for the wild

Indian Pipe (*Monotropa uniflora*) Photo ©G D Bebeau

Winged Loosestrife (*Lythrum alatum*) Photo ©Merle R. Black, Wisconsin Flora.

garden and looked for it in vain through four seasons. Then I came across a large patch of it in full bloom in the garden! It is not uncommon and I have since found it in existence elsewhere.

The hazelnut, *Corylus americana*, is a superfluity in my garden, but I have been watching with interest the development of some introduced specimens of C. rostrata [C. cornuta - Beaked Hazelnut]. I felt rather foolish last summer when I discovered a lot of the latter in my bog loaded with the long beaked fruit. It is listed for the northern part of the state and I never dreamed of finding it in Minneapolis. With the exception of the fruit, it differs but little from *americana*. At about the same time I discovered also the Thimbleberry, *Rubus occidentalis*. [She lists the scientific name for Black Raspberry, which her text indicates is what she is talking about, but Thimbleberry is a name used today for *R. parviflorus*] This, too, was in fruit and thereby easily distinguished from the more common red raspberry. But how blind I was not to notice before the thick white bloom on the stems.

Teucrium canadense [Germander] is another new comer. This has followed in the wake of the extermination of Canada Thistle. Shaking my digger at *Zygadene chloranthus* [now *Zigadenus elegans* - Mountain Camas] and *Veratrum viride* and threatening to replace them with something more tractable, brought them to luxuriant blooming, although they had not shown even a switch of a flower bud during five years of zealous care. The Zygadene bears an elongated raceme of attractive greenish white shallow bells. The Veratrum (false hellebore) is a stout tall plant with large plaited leaves and a many-branched panicle of innumerable small flowers. its hugeness makes it noticeable.

Mountain or White Camas (*Zigadenus elegans*) Photo ©Aaron Carlson, Wisconsin Flora.

A specimen of *Rubus odoratus*, the beautiful flowering raspberry -- its large rose-colored flowers and maple-like leaves familiar to many under cultivation - was procured from cold Ontario but it died down to the ground every winter and was as effortless as the first Mrs. Dombey [ref to a Dickens character]. Last season it was piqued by jealousy to sprouting into a big bush which blossomed and blossomed, outdoing every plant of that kind I have ever seen. I merely planted around it a quantity of *Rubus parviflorus*, the salmonberry, saying "I am sure I shall like these as well. They have beautiful white flowers, leaves as fine as yours, Odoratus, and better tasting fruit of an unusual color."

I would say to Mrs. Jackson that it is much easier to ask questions than to answer them.

I have planted a good deal of *Erythronium albidum*, but have had but two blossoms, although I have been careful to select two-leaved specimens after the fruit has matured. The leaves come up all right. It seems to require a long time to recover from transplanting. I have seen the flowers in abundance in open meadows and again on limestone bluffs. *E. americana*, on the other hand, blossoms freely in my bog where I have set the *albidum*.

A florist in New York raised *Gentiana crinita* [Fringed Gentian]. He says that the first season's growth from the seed is very tiny. His methods may be learned from consulting Garden Magazine some five years back.

This essay was sent to the Gray Memorial Botanical Chapter, division D, of the Agassiz Association for publication in the Groups circular bulletin.

Fringed Gentian (*Gentiana crinita*). Photo Martha Crone Sept 24, 1950

A Visit to Interstate Park
In Search of the Fragrant Fern - 1916

The photographer of the garden [Mary Meeker] and the curator, the later part of August, were so fortunate as to be the guests for a few days of Mr. Hazzard, the Superintendent of the Minnesota Division of the Interstate Park of Minnesota and Wisconsin at Taylor's Falls. We were given possession of Mr. Hazzard's summer cottage at the park, which is luxuriously fitted for the accommodation of several guests. Although the park is of primary interest to the geologist on account of its wonderful rock formations, it is a first-class hunting ground for the botanist.

Fragrant Fern (*Dryopteris fragrans*). Photo ©Emmett J. Judziewicz, Wisconsin Flora

I will not attempt to describe the geologic features of the place, for I was familiar with them and gave them only a cursory glance, and I was determined to discover, the rare, fragrant fern *Aspidium fragrans* [*Dryopteris fragrans*], listed some thirty years ago in Upham's catalogue of the *Flora of Minnesota*, at Taylor's Falls. I have never seen a greater display and denser massing of *Polypodium vulgare* [*Polypodium virginianum* - Common Polypody], *Woodsia ilvensis* [Rusty Woodsia], *Camptosorus rhizophyllus* [*Asplenium rhizophyllum* - Walking Fern], *Cystopteris bulbifera* [Bublet Bladder Fern], and *C. fragilis* [Brittle Bladder Fern].

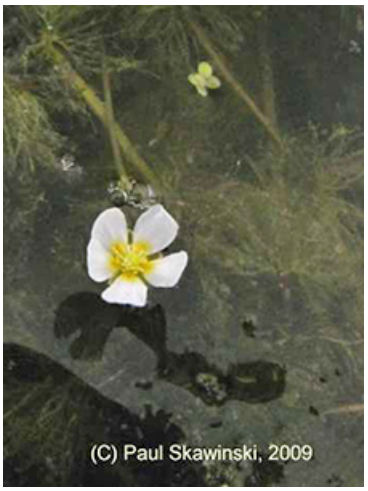
Rusty Woodsia (*Woodsia ilvensis*). Photo ©Robert W. Freckmann, Wisconsin Flora.

All that I had to help me in my search was a mental picture of the illustration of *Aspidium frangrans* in Clute's "Ferns and their Allies." The young and mature fronds of *Woodsia ilvensis* differ occasionally, and many a time I was falsely lured to climb precipitous ledges. My chief reliance in identification was the sense of smell. So I climbed sniff-sniffing at every frond that had a suspicious appearance. I found several fragrant fronds, but I was not positive that I had secured the prize.

On the third and last day of our visit, when I was making a farewell round of the place and had given up all hope of finding the fern, I espied a specimen that sent a thrill along my spinal cord. "There's my fern!" I exclaimed. "no, it isn't," scoffed the photographer. "It's only another rusty woodsia, just like hundreds all around here." "O, I am sure this time," said I. "Don't you try to get it. You'll break your neck if you do!" "You keep still!" I commanded. "I can and will get it!" By holding onto a not over strong root of sumach I managed the plant. One sniff at it made assurance doubly sure --such an indescribable compound of sweet odors! -- and the plant was tossed to the photographer with a "There, didn't I tell you so?"

I have no doubt but that more of this aspidium could be found at Taylor's Falls under more favorable conditions. The season was so dry that many fronds were reduced to powder and could not be distinguished. This one specimen grew in a cool, sheltered place.

I was also able to obtain specimens of the floating white water crowfoot [*Ranunculus aquatilis* var. *diffusus*]. I had never found specimens of it in Minnesota before. In a deep ravine skirting an ancient indian trail that has on its course as as yet unexplored mound, I found an unusually rich growth of *Epipactis pubescens* [*Goodyera pubescens* - Downy Rattlesnake Plantain]. I also added to my collection a species of cactus which I have not identified. It grew in moss in the crevices of a ledge.



White Water Crowfoot, (*Ranunculus aquatilis* var. *diffusus*). Photo ©Paul Skawinski, Wisconsin Flora.

Additional notes of Eloise Butler are appended here for lack of any particular document she referenced. The first paragraph appears to have been a writing for the Chapter circular as well.

Above: Eloise Butler with Clara Leavitt (right) in from the of the Garden office. Photo courtesy Minneapolis Central Library, Minneapolis Collection.

At Miss Leavitt's request, I will add an account of one of the many vagaries in wild gardening: Are you all familiar with Prairie Dock, *Silphium terebinthinaceum*, belonging to the same genus as the famous Compass Plant, *S. laciniatum*. It is a native of Minnesota, but is not found near Minneapolis. A single specimen was given me nine years ago and I planted it near my office. Every season it sent up its large green banners, but nary a flower. I hesitated to change the plant to another situation because of its large root and lest I might lose it altogether. So this last spring I gave it a good talking to and bought half a dozen more Prairie Dock and planted them elsewhere. To my astonishment the obstinate specimen sent up at once the tall stalk that burgeoned out into a number of sizable yellow flowers! I have had somewhat similar experiences. Does it mean that plants are sentient beings?

The Boston Herald of July 31 prints an illustrated account of two freak dandelions growing in a yard in Weston, Massachusetts. One is nine foot in height and the other six feet. Both are in the budding stage, so they will attain still greater heights. The nine foot dandelion had a stalk one inch in diameter. Both had leaves eight to ten inches in length.

In clearing out my desk I found a questionnaire that I had once given my pupils in Botany. I will copy two of the replies made to the following questions:

Why did you take the course in Botany? What benefit, if any, have you derived from the study? What part of the subject do you like best?

"I am not a bit sorry I have taken Botany and if I hadn't. I would have been the lesser. Now I observe beautiful nature and feel as if I had accomplished a great deal, although I don't intend to end here. Although I may not study my book as much after this as now, still I will study nature and derive all the knowledge I can from it. Everyone should be made to study Botany." Alpha Sjoblon

"I took the course in Botany, first because I was interested in plants and know my ignorance of nature. I really think people ought to know nature, for, as Shakespeare says, 'The closer we are acquainted with nature, the closer mankind becomes to one another."

"I have gained the habit of keeping my eyes open, to notice the different plants and changes in nature. In keeping my eyes open for nature, I have become unconsciously more sharp or bright in my other lessons. I really have found this to be true. I like the part of Botany where we study how closely plants and animals are related in their work for each other." Florence McDonnel.

Photo of Eloise Butler, ca. 1920, at top of first page courtesy Minneapolis Public Library. The other photos are ©as credited.

Birdbath Acquisition - June 1917

The latest acquisition in my wild garden is a big boulder hauled in on a stone drag by four pairs of horses, and chiseled out by a stone mason into a bird bath with four shelves, each about seven inches wide on a half inch grade. It is much appreciated by the birds who bathe in it early in the morning and late in the afternoon, and stop to take a drink in passing.

That was all she wrote about it in the essay but here is some fill-in from other sources:

In her Garden log she noted that work on the boulder was completed on June 5, 1917, and on July 25, 1917 she wrote: "Saw crow standing in bird bath. Shortly after 5 pm saw as many as thirty birds taking their turn in the bath. Often 6 at once." During the year 1917 she planted Golden Corydalis, Common Blue and Downy Yellow Violets around the boulder and by 1920, clumps of Lady Fern.

In a newspaper article about her and the Garden from 1917 this was written:

"This is the only bit of work that Miss Butler has been known to allow a man to do in her "estate," and it was only when she realized that time had made some claims against her vitality she surrendered this task of love to a mere outsider. . . . Here come the birds in the early morning and sing their matins while they splash and play in the glinting sunlight. They have no fear, for they are never molested nor disturbed."

In a 1924 Newspaper article she said that the birds give regular concerts there early each day as they bathe and sing to their heart's content.

The photos above are two views of the 1917 birdbath as seen in the Woodland Garden today. Over the years soil has filled in around it so it does not appear so tall as in 1917.

Eloise Butler with Clara Leavitt at the newly installed bird bath - 1917. Photo MHS

The text of Eloise's essay continues with these comments:

"My phoebe who raised two broods last year in a nest that she built over a wren box under the eaves of my office, returned this season and is new feeding her second brood.

The first of June, as I was clearing away the dead stalks of perennials near the edge of my swamp, I flushed a bird that I had only seen in pictures or as stuffed specimens in museums. It made a short, low flight and fluttered feebly to the ground as if it were wounded unto death. As I followed it, the bird repeated the feint several times, sometimes running for a little distance and peeking out at me from behind a bush with one bright eye. Of course, I understood that the bird was trying to lure me away from her nest and I recognized from the long bill and bobbed tail that is was a woodcock. The next day I found her in the swamp with three little ones."

Below are two comparison photos of the Birdbath. The black & white from June 22, 1934 (probably taken by Martha Crone or E. F. Pabody) and the color photo from 2015. Note the growth in the cedar trees behind the birdbath.

Photo of Eloise Butler, ca. 1920, at top of page courtesy Minneapolis Public Library. Contemporary photos G D Bebeau.

Ferns in the Wild Garden - 1919

Minnesota is not as rich as Vermont in ferns. How I envy Vermonters! Our university lists in its Fern Guide but thirty-eight species; but Warren Upham in his catalogue of Minnesota Flora printed in 1884 gives authority for these additional species: *Asplenium platyneuron, Phegopteris Robertiana, Aspidium (Dryopteris) noveboracense, Aspidium bootii, Aspidium marginale, Aspidium acrostichoides* [Note - this is an unresolved name], *Aspidium lonchitis, Polystichum braunii, Cystopteris montana, Woodsia glabella, Woodsia oregana, Dicksonia punctilobula, Botrychium ternatum.* I have introduced all of the above except *Phegopteris Robertiana, Cystopteris montana, Woodsia glabella;* and all listed in the University Fern Guide except *Botrychium simplex, B. lunaria, Cheilanthes feei, Woodsia oregana.*

Ten ferns are indigenous to my garden: *Osmunda claytonia* which is one of the spectacular features of the place, clothing, as it does, an entire hillside with its tall fronds; *Asplenium filix-femina* forming large masses near the boulder bird bath and scattered throughout the garden; *Adiantum pedatum* gracing the foot paths and reaching unusual size in clumps in the tamarack swamp, where is also found in luxuriant growth *Osmunda cinnamomea*, and fine specimens of the evergreen *Aspidium spinulosum* and *A. cristatum*; the treeless portion of the swamp is carpeted with *Aspidium thelypteris*, and the meadow

below the hillside of Clayton's fern is crowded with *Onoclea sensibilis*; while *Botrychium virginianum* dots the entire region just above the marsh line. Of the ten natives, *Pteris aquilina* is the least abundant, but it is rapidly increasing on the sides of the knoll on which my office stands.

In my recently planted Fern Gulch, maidenhair, lady fern and *Aspidium spinulosum* are self-established. It was my aim to make a plantation in this gully of all the ferns native to Minnesota that were not indigenous in the garden and that could be induced to grow under the prevailing conditions of light and moisture. I see that I have omitted from my list of ferns in the Gulch *Polypodium vulgare*. This was obtained from the vicinity of Minneapolis and naturalized in the Garden. I have also introduced to the garden a few specimens of *Aspidium fragrans*, but I fear that they will die out.

With the exception of a few roots of *Aspidium cristatum* and *Aspidium thelypteris* transferred from the swamp, and specimens of *Camptosorus rhizophyllus, Cystopteris fragilis* and *C. bulbosa* that were naturalized in the garden, the plants were all obtained from Gillett's Nursery, Southwick Mass, vis: *Aspidium filix-mas, A. noveboracense, A. spinulosum* var *dilatatum, A. cristatum* var. *Clintonianum, A. goldianum, A. marginale, Polystichum acrostichoides, P. braunii, Pellaea atropurpurea, Asplenium platyneuron, A. trichomanes, A. angustifolium, A. (Athyrium) acrostichoides (thelypteroides), Dicksonia punctilobula, Woodsia ilvensis, W. scopulina, W. obtusa, Phegopteris hexagonoptera, P. dryopteria, P. polypodioides.* All these have been naturalized with more or less success elsewhere in the garden. The plants from the nursery were fine specimens and I hope that they will winter well. Most of the small species were pot-grown.

The ferns were set out with reference to size and conditions of light and moisture as will as drainage. I have also outside of the Gulch well established *Osmunda regalis* and large colonies of *Onoclea struthiopteris*. These I did not place in the Gulch because of their need of space and more moisture. I have besides a few highly cherished specimens of the dainty little cliff brake, *Cryptogramma stelleri*, and *Ophioglossum vulgatum*; and when I left the Garden last November a quantity of *Azolla caroliniana* and *Salvinia natans*, planted during the summer, were bravely green on the surface of my little pond.

Of fern allies I have *Equisetum arvense, E. hyemale, E. scirpoides, E. sylvaticum.* One lone indigenous specimen of *Lycopodium lucidulum* has been noted in my swamp and I have introduced from time to time, with ill success, *L. complanatum, L. clavatum,* and *L. obscurum* var. *dendroideum,* also *Selaginella rupestris*.
I will faithfully record in the Bulletin next fall the haps and mishaps of my new fern plantation.

NOTES:
1. The reference to the "Bulletin" indicates Eloise forwarded her paper to the Gray Memorial Botanical Chapter, division D, of the Agassiz Association for publication in the Groups circular bulletin.
In 1915 Eloise wrote an earlier article on ferns, which was also sent to the Chapter for circulation.

2. Fern names: Since Eloise Butler's day the botanical classification of a number of these ferns has changed. The list below details: 1) the name Eloise used, 2) a new name if there is one, 3) the common name, 4) dates she brought in the species to the Garden. 5) Indigenous species are noted, those possibly indigenous are marked with a "P".

- *Adiantum pedatum*; no new name; Maidenhair Fern; Indigenous, 1916 ,'17.
- *Aspidium bootii, Dryopteris X bootii*; Bootts Wood Fern; 1913, '16.
- *Aspidium cristatum; Dryopteris cristata*; Crested Woodfern. Indigenous.
- *Aspidium cristatum* var. *Clintonianum; Dryopteris clintoniana*; Clinton Fern; 1916, '18. P
- *Aspidium filix-mas; Dryopteris filix-mas*; Male Fern; 1918.
- *Aspidium goldianum, Dryopteris goldiana*; Goldie's Fern; 1916, '18.
- *Aspidium lonchitis; Polystichum lonchitis*; Northern Holly Fern; 1918.
- *Aspidium marginale; Dryopteris marginalis*; Marginal Wood Fern; 1908, '09, '18.
- *Aspidium noveboracense; Thelypteris noveboracensis*; New York Fern; 1909, '18. P
- *Aspidium spinulosum; Dryopteris carthusiana*; Spinulose Wood Fern; Indigenous, 1911, '18.
- *Aspidium thelypteris; Thelypteris palustris*; Marsh Shield Fern; date not certain.
- *Asplenium filix-femina; Athyrium filix-femina*; Lady Fern; Indigenous.
- *Asplenium platyneuron*; no new name; Ebony Spleenwort; 1909, '13, '14, '18. P
- *Athyrium acrostichoides; Deparia acrostichoides*; Silvery False Spleenwort; 1909, '11, '18
- *Botrychium ternatum; Botrychium rugulosum*; Ternate Grapefern; 1909, '16. P
- *Botrychium virginianum*; no new name; Virginia Grape Fern; Indigenous. P
- *Camptosorus rhizophyllus; Asplenium rhizophyllum*; Walking Fern; 1908, '12, '17, '18. P
- *Cryptogramma stelleri*; no new name; Slender Cliff Brake Fern; 1909, '13.
- *Cystopteris bulbosa; Cystopteris bulbifera*; Bublet Bladder Fern; 1908, '09, '12, '14, '17, '18, '19. P
- *Cystopteris fragilis*; no new name; Brittle Bladder Fern; 1910, '11, '13, '18, '19.
- *Cystopteris montana*; no new name; Mountain Bladder Fern; never planted pre 1920.
- *Dicksonia punctilobula; Dennstaedtia punctilobula;*, Hay-scented Fern; 1909, '16, '18. P
- *Onoclea sensibilis*; no new name; Sensitive Fern; Indigenous, 1918.
- *Onoclea struthiopteris; Matteuccia struthiopteris*; Ostrich Fern; 1907, '08, '10, '14.
- *Osmunda cinnamomea*; no new name; Cinnamon Fern; Indigenous.
- *Osmunda claytonia; Osmunda claytoniana*; Interrupted Fern; Indigenous.

- *Osmunda regalis*; no name change; Royal Fern; 1907, ’08, ’09, ’15, ’20.
- *Phegopteris dryopteria; Gymnocarpium dryopteris*; Western Oakfern; 1908, ’09, ’12, ’13, ’16, ’18. P
- *Phegopteris hexagonoptera*; no name change; Beech Fern; 1912, ’18, ’19. P
- *Phegopteris polypodioides; Phegopteris connectilis*; Long Beech Fern; 1908, ’09, ’16, ’18. P
- *Phegopteris Robertiana; Gymnocarpium robertianum*; Scented Oak Fern, never planted pre 1920.
- *Polypodium vulgare; Polypodium virginianum*; Common Polypody; 1908, ’12, ’13, ’17, ’18. P
- *Polystichum acrostichoides*; no name change; Christmas Fern; 1908, ’09, ’11, ’16.
- *Polystichum braunii*; no name change; Braun’s Holly Fern; 1909, ’16. P
- *Pteris aquilina; Pteridium aquilinum*; Western Bracken Fern; P.
- *Woodsia glabella*; no name change; Smooth Woodsia; never planted pre 1920.
- *Woodsia ilvensis*; no name change; Rusty Woodsia; 1908, ’12, ’14, ’16, ’18, ’19. P
- *Woodsia obtusa*; no name change; Blunt-lobe Cliff Fern; 1909, ’12, ’15, ’18, ’20. P
- *Woodsia oregana*; no name change; Oregon Cliff Fern; never planted pre 1920
- *Woodsia scopulina*; no name change; Rocky Mountain Woodsia; 1914, ’18. P

Fern relatives:

- *Azolla caroliniana*; no name change; Carolina Mosquitofern; 1918, ’19, ’20.
- *Equisetum arvense*; no name change; Field Horsetail; considered indigenous.
- *Equisetum hyemale*; no name change; Scouring Rush Horsetail; considered indigenous.
- *Equisetum scirpoides*; no name change; Dwarf Scouring Rush; 1915.
- *Equisetum sylvaticum*; no name change; Woodland Horsetail; considered indigenous.
- *Lycopodium clavatum*; no name change; Running Clubmoss; 1916.
- *Lycopodium complanatum*; no name change; Ground Pine; 1916, ’18.
- *Lycopodium lucidulum; Huperzia lucidula*; Shining Club Moss; Indigenous, 1916, ’18, ’19.
- *Lycopodium obscurum* var. *dendroideum; Lycopodium dendroideum*; Tree Groundpine; 1916.
- *Ophioglossum vulgatum*; no name change; Southern Adderstongue; 1912.
- *Salvinia natans*; no name change; Floating Watermoss; 1918, ’19.
- *Selaginella rupestris*; no name change; Northern Selaginella; 1914.

Garden Principles - 1920

My wild garden is run on the political principle of laissez-faire. Fallen leaves are not raked up unless they lie in too deep windrows and are likely to smother some precious specimen; but are retained to form humus. But the tall dead canes of herbs like Joe-Pye Weed and wild golden glow, which are allowed to stand during the winter to protect the dormant vegetation beneath, are remove from the meadows in the spring for a clear view of the clumps of marsh marigolds, trilliums, etc. I also gather and burn all fallen branches, and in the fall while the late flowers are still blooming, all unsightly evidence of decay. Of course, I do not allow at any time any outside litter to be brought in - - not the tiniest scrap of paper, or string, or peanut shell. The great mass of herbaceous plants, as asters, goldenrods, and most composites, I admire in their fluffy state, after they have gone to seed.

Some species, however, are to me the reverse of ornamental in old age. These are snipped to the ground or torn up by the roots and reduced to ash. Red Clover is one of the offenders. It becomes unkempt and scraggly; and the stalks of the common milkweed that are without fruit, after shedding their leaves, turn black and look like long rat tails. Touch-me-not, *Impatiens biflora* [now *Impatiens capensis*] and *I. pallida*, collapse with the first frost and cumber the ground with a brown slime; and wood nettle, *Laportea canadensis*, is smitten as with a pestilence. A few specimens of stingers and stick-tights are permitted on the grounds. Laportea is a persistent spreader and sometimes gets the upper hand, busy as I am with many other things. In the fall I grub it out and plant something else in its place. Then I learn its encroaching ways. The roots are not very deep, but they are woven and knotted together into a dense mat that seems as hard as rock.

The Wild Garden in 1925

A most unusual season --spotted, indeed, if due to sun spots. In April, very hot wether that unduly stimulated vegetation. Then late frosts -- ice forming May 26 -- that nipped aspiring flower buds. Some things were frozen four times. Therefore, no wild grapes, no May apples, nor several flowers. During May, heavy rains and cold weather, so that we said, "We'll not complain when the sun roasts us." June 2 a tornado swooped upon us from the northwest, uprooting trees and laying everything flat with wreckage. Fortunately, only a few lives were lost. The damages cannot be repaired in years. Through August and not yet fairly broken the most protracted drought ever recorded in Minnesota. The hillsides in the Reserve have suffered severely but the asters are holding their own fairly well. The usual crop of mushroom is a complete failure.

Have had some pleasant outing to break general dismalness. Went out on the prairies early in July when the wood lily mingled with the tall cream-colored spikes of zygadene at its height, and on the low lands, large masses of showy moccasin flowers disported themselves. In August, spent two days at Lake Kabecona, about twenty miles east of Itasca Park. There I saw for the first time in their native haunts the spurred gentian [*Halenia deflexa*] and the northern grass of parnassus [*Parnassia palustris*]. On a creek floated the pretty white water crowfoot in full blossom, and all the land was blue with harebells.

Spurred Gentian, *Halenia deflexa*. Photo ©Robert Bierman, Wisconsin Flora

Strange to say, a little earlier, a single specimen of *Halenia* was brought to me from the north to identify. From the venation, I thought it must be an endogen and tried to place it in the lily or orchid families. Over the telephone I got a hint from one who knew, that is must belong to the gentian family, although the name could not be recalled. The small flowers were cream colored and spurred. Then "spurred gentian" flashed through my mind, and also the scientific name, *Halenia deflexa*, although I had no consciousness of previous knowledge. The botanist confirmed the wireless telegram. This is another instance of several experiences that I have had of unconscious registration. We all really know much more than we are aware of . . .

[Thanks to Martha Hellander for unearthing this bit of writing]

NOTES:

This essay was sent to the Gray Memorial Botanical Chapter, division D, of the Agassiz Association for their circular bulletin.

Trees in the Wild Garden - 1926

A census was taken at once of the most obvious inmates of the Reserve, which has been increased from time to time by many delightful surprises. To begin with the trees, the most conspicuous is a majestic white oak, 700 years young, the largest and oldest in the vicinity of Minneapolis. "Monarch," as we call him, was slowly dying atop. So, in obedience to the scriptural injunction, his dead limbs were cut off and cast away, and decayed portions of his "heart" - not essential as with humans for circulation -- were taken out and replaced with concrete. [done in 1912] Thus, lopped and reinforced, he bade fair for many more years to hold sway. Alack and alas! In the tornado of June [1925], large chunks of concrete were belched out and all the limbs torn off. How long will he yet stand without his crown? (1)

The leading tree in the swamp was the tamarack. They were piled up like jackstraws by the tornado, and but few left standing. But most of the white birches, which were nearly equally abundant, were spared by reason of their deeper root system, as was also another prime ornament of the garden - a much be-photographed eight-boled white birch that dominates the eastern hillside. A few clumps of yellow birch reside in the swamp, the rarer small tree, *Betula sanbergii*, and many dwarf birch, *B. pumila.* One river birch, *B. nigra*, has been planted at the base of the south hillside. A few ash trees both black and white, border the swamp, and the green and red ash have been introduced. A single tall hackberry, with its beautiful corrugated bark, adorns the west side of the pool. Younger trees will be developed in time to take its place. Next in size to "Monarch" are the white and red elms, more or less defaced by the storm. Two cork elms have been planted on the west bank. A goodly sized basswood stands in the east meadow and young basswoods are springing up on every side. A fine specimen of large-toothed poplar, *Populus grandidentata*, is on the "Plateau" near the south entrance to the garden, and innumerable youngsters are springing up that must be held in check. The smaller quaking [aspen] is much in evidence, and two cottonwoods are beginning to tower above the landscape.

The large white birches on the east hillside in 1926- referenced in the text. Photo Martha Crone Archives.

In the garden's second spring, a small balm of gilead was planted at the base of the west hillside. It has grown into a lusty tree, and, after a shower, the fragrance of the young leaves is wafter over the whole enclosure. In September 1919, the curator, on a trip to the North Shore of Lake Superior, dug up a balsam poplar, as fragrant as its variety, the balm of gilead, and added it to the treasures of the garden. It is planted near the gate on the south side of the tarvia road that divides the precincts. (2)

Besides "Monarch" there are many other white oaks whose leaves in rich shades of maroon lend a special glory to the autumnal coloring. And red oaks vie with them when dressed in reds and browns, not to speak of the tender blush of the young leaves just escaping from the bud. Several bur oaks express their gnarly individuality - the Carlyles among the oaks. A few swamp white oaks *Quercus bicolor*, have been introduced, also *Q. prinoides*, the chinquapin oak, the latter from Boulder Colorado.

The most popular tree in the Reserve is commonly called the "fire tree," the red swamp maple, *Acer rubum*. It really is aglow twice a year. The young leaves and keys warm the landscape and often in August, before frosts, the trees are aflame throughout the swamps. Our other native maples have been introduced to the Reserve, even the common white or silver maple and the hard or sugar maple which form large "orchards" in many sections of Minnesota. Very interesting additions are two northern species, *Acer spicatum*, the mountain maple, thickly hung with yellowish flower plumes which develop into highly decorative small rose-red keys, and the striped maple, or moosewood, whose showy striped bark is a tidbit for moose. It bears drooping green racemes and the largest leaves of any of our maples.

The ten most abundant trees in the Native Plant Reserve, Minneapolis, are: tamarack (*Larix laricina*), white birch (*Betula alba* var. *papyrifera*), ironwood (*Ostrya virginiana*), northern pin oak (*Quercus ellipsoidalis*), white oak (*Quercus alba*), red oak (*Quercus rubra*), white ash (*Fraximus americana*), red maple (*Acer rubrum*), basswood, (*Tilia americana*), large-toothed aspen (*Populus grandidentata*).

The least frequent trees in the Reserve are: Scarlet Oak (*Quercus coccinea*), one tree only; white maple (*Acer saccharinum*), one tree endemic; hackberry (*Celtis occidentalis*), one tree endemic and a few young ones.

Tamaracks and Red Maples in October color at Eloise Butler Wildflower Garden in recent times. Photo ©G D Bebeau

The other trees in the Reserve are not rare in the immediate vicinity. Two other rare trees in Minneapolis are Kentucky coffee-tree (*Gymnocladus dioica*), swamp white oak (*Quercus bicolor*).

Notes:

1. For a history of Monarch and a refutation of the 700 year age, see the separate article about Monarch.

2. The notation of the tarvia road dividing the precincts is a referral to the Garden being divided into two sections by the wide pathway the runs east and west outside what is the current back fence of the Garden. In 1926 the meadow north of this path was part of the Garden proper cared for by Eloise Butler. It was in this northern section that she build the Mallard Pool in 1932. The northern section was abandoned in 1944.

The text indicates that this essay was sent to the Gray Memorial Botanical Chapter, division D, of the Agassiz Association for their circular bulletin.

Shrubs in the Wild Garden - 1926

The brightly hued berries of the shrubs are but a "fleeting show" in the garden, being scarcely allowed to ripen by the fruit-loving birds. The sweet fruit of the shadbush or Juneberry vanished like dew before the sun, shortly after the eye is gladdened by the gracefully drooping sprays of *Amelanchier canadense* in flower and the more upright plumes of the low gray-leaved *A. oblongifolia.*

The dogwoods richly furnish forth the bird tables. The gray dogwood, *Cornus paniculata* [*C. racemosa*], is the most abundant of all. The inflorescence does not unfavorably compare with white lilac, and the profuse white berries, borne on red stalks, are very pleasing. Red-osier dogwood, *C. stolonifera* [*C. sericea*], forms a cordon around the swamp, warms the snow, and enlivens winter landscape with its red stems. The stems turn brown as the leaves develop, but then it is soon adorned with flowers and white or bluish fruits and has the further recommendation of blossoming twice during the season. This shrub is selected by a certain sawfly for an egg depository, and hundreds of her larvae banded with olive green and pale yellow may be found coiled like little serpents on the under side of the leaves. *C. alternifolia* [Pagoda Dogwood] is certainly our handsomest dogwood, its glossy leaves forming tufts at the ends of the branches, and flower clusters so large that is often mistaken for an arrowwood; but the four-parted corolla shows that is not a kin. *C. circinata* [*C. rugosa* - Roundleaf Dogwood] is another fine species that may be distinguished by its larger round leaves and greenish, warty stems. The silky dogwood, *Cornus amomum*, with its waxy blooms and dull purplish stems, is distinguished by being the favorite kinnikinnik of the Indians. The bark of the red-osier dogwood was also used by the Indians for tobacco, but the former was preferred. *Cornus baileyi* [basically *C. sericea* - Red Osier] also a native of Minnesota, naturalized, but not endemic in the Reserve, bears a general resemblance to *C. stolonifera*, although it does not form a thicket by the stolon habit. All these dogwoods are bog-trotters, except that *C. circinata* will also thrive on woody hillsides.

Also a dweller in bogland is the lovely herbaceous member of this genus, the dwarf cornel, or bunchberry, *Cornus canadensis*. The flower Cluster with four showy white bracts surrounding a bunch of small inconspicuous flowers that develop into red berries, resembles on a smaller scale that of its beautiful congener, the flowering *Cornus florida*, which, alas, is too tender for the rigorous climate of Minnesota. The dwarf cornel spreads by slender creeping rootstocks and makes an excellent ground cover for low shady places. The "bunch" of sweet berries is considered delectable by children, despite a doubtful suspicion of being poisonous. I, myself, have devoured them by handfuls without any ill effect. *Cornus asperifolia*, the rough-leaved dogwood .. . is not found in the neighborhood of Minneapolis and has not yet been planted in the wild garden.

Our arrow-woods or viburnums are even superior to the dogwoods for bird food. Some of the fruit is, indeed, appreciated by humans. The flower clusters are larger and more striking, and the foliage is vividly conspicuous in autumn. Nannybush, or sheepberry, *Viburnum lentago*, takes the lead in height, the trunks often clustered. The leafstalks have wing-like margins, the buds are shaped like candle extinguishers, the drupes are bluish black, as are also the fruits of the lower and almost equally attractive downy arrow-wood, *V. pubescens* [She lists the wrong species. Downy Arrowwood is *V. affine* in her day, now *V. refinesquianum*]. The fruit of *V. dentatum* [Southern Arrowwood] is an exquisite shade of blue. The last named species is not endemic in the Reserve. Other introduced species are hobblebush or moosewood, *V. alnifolium* [*V. lantanoides*], a resident of northern woods, witherod, *V. cassinoides*, very decorative in fruit, its wand-like stems wreathed with globes in varying shades of green, reddish brown and blue-black; dockmackie, the maple-leaved arrow-wood, *V. acerifolium*, common in New England; and the few flowered high-bush cranberry, *V. pauciflorum* [*V. edule*, Squashberry], endemic in northern Minnesota. The widely distributed highbush cranberry, *V. opulus* var. *americanum*, is fortunately one of

Highbush Cranberry fruit in Eloise Butler. *Viburnum opulus* var. *americanum*

the native adornments of the Reserve. With showy inflorescences and bright red fruit, it vies in beauty with the famous flowering dogwood. The fruit, as acid as genuine cranberries, is esteemed for jelly, it hangs on the bushes late in the season, and the Bohemian waxwing may be seen culling from them his dessert for Thanksgiving. As you all know, the useless stupid garden snowball was produced from the European *V. opulus*, which is almost identical with the American variety, by converting the small fruit-bearing flowers into showy neutrals like those bordering the clusters, at the expense of beauty and food for man, bird, and bee. Thereby was overturned the house that Jack Built, for Dame Nature, who practices economy when she can, had intended the neutrals for guide boards to insects that, in getting the food prepared for them in the numerous small perfect flowers, would do service in turn, by insuring fruit for birds and humans.

The ten shrubs most common in the Reserve are: willows, of which the most abundant are *Salix discolor* [Pussy Willow], *S. petiolaris* [Slender Willow], *S. rostrata* [*S. bebbiana*, Bebb Willow]; common hazel (*Corylus americana*); prickly ash (*Zanthoxylum americanum*); beaked hazel (*Corylus cornuta*); smooth sumach (*Rhus glabra*); gray dogwood (*Cornus paniculata [racemosa]*); red-osier dogwood (*Cornus stolonifera [sericea]*); dwarf birch (*Betula pumila*); wild buckthorn (*Rhamus alnifolia*); round-leaved thorn (*Crataegus rotundifolia*)[*Crataegus chrysocarpa* var. *hrysocarpa*].

Of the many other species of endemic shrubs, none are infrequent except *Ilex verticillata* [Winterberry]. Of the under-shrubs, even more abundant are: Blackberry (*Rubus allegheniensis*), raspberry (*Rubus idaeus* var *aculeatissimus*), wolfberry (*Symphoricarpos occidentalis*), poison ivy (*Rhus toxicodendron*)[*Toxicodendron rydbergii*].

Below: Autumn leaves of the Blackberry *Rubus allegheniensis*.

The above under-shrubs may be denominated “weeds” and are grubbed out continually. Others abundant, but not allowed to be rampant, are: *Rosa blanda*, bush honeysuckle, (*Diervilla lonicera*), New Jersey tea (*Ceanothus americanus*); and the vines: bitterseeet (*Celastrus scandens*), wild grape (*Vitis vulpina*), Virginia creeper (*Psedera quinquefolia* [now *Parthenocissus quinquefolia*]).

The Plateau - 1926

The "Plateau," heretofore mentioned, is a natural terrace of about half an acre in extent that cuts in twain the south hillside. Here in 1915, was erected the Curator's office, a small building subdivided by a partition, serving as a tool house and a reception room for visitors. On the north and east side of the office is a pergola-trellis that supports wild grape, *Vitis vulpina* [*Vitis riparia*]; Virginia creeper, *Psedera quinquefolia* [*Parthenocissus quinquefolia*]; and bittersweet, *Celastrus scandens*. At the right of the entrance on the south wall clambers the common clematis, *C. virginiana*, and on the left an uncommon clematis, *C. verticillaris*. It was procured from northern Wisconsin and was tended assiduously for eight years before it responded by displaying lilac blooms fully four inches in diameter that endured the whole latter half of May. The common bindweed, *Convolvulus sepium* [*Calystegia sepium*], is confined with some difficulty to trellises on the east side of the building, where also are growing wild yam, *Dioscorea villosa*; moonseed, *Menispermum canadense*; wild smilax, *S. hispida*; and climbing nightshade, *Solanum dulcamara*; also occasionally the lovely climbing fumitory, *Adlumia fungosa*. The last named I have some difficulty in establishing. On the north side flourishes a stalwart Dutchman's pipe that loves the shade and is festooned with its curious "pipes" before the leaves attain their splendid maximum size.

Below: The Garden Office from the back side as it looked in 1949 showing part of the pergola and the trellis. Photo by former curator Martha Crone.

At the southern rim of the Plateau and on the winding path leading to the south gate, a large granite boulder has been set that has been chiseled out for a bird bath in a series of steps on a half-inch gradient to a depth of five inches. [There is a separate essay on the birdbath] The birds like to step from shallow water into deeper, and the steps are left rough so that their feet will not slip. The bath is partially surrounded be a covert of thickly planted evergreens - white pine, spruce and arbor vitae.

Clusters of evergreen exclamation points, *Juniperus virginiana*, stand on each side of the south gate and accentuate the entrance to the "deep, tangled wildwood" to which the primal soul responds.
A few other evergreens have also been set near the southeast boundary. No evergreens are endemic in the Reserve. Representatives of all of the Minnesota conifers form a small pinetum on the western bank, and many hemlocks, which have but one stand in the part of the state, have reached a sturdy growth in the vicinity of the garden pool where they are protected from hurtful dry winds of winter. This evergreen with its low-spreading delicately sprayed branches and the blue-berried mats of junipers, *Juniperus communis* and *J. horizontalis*, are not only highly decorative but form ideal shelters for birds.

Notes:
A more detailed physical description of the plateau area, and the entire Garden, was published by W.P. Kirkwood in the May 1913 issue of *The Bellman*.

The Wild Botanic Garden - Early History - 1926

In the early '80s Minneapolis was a place of enchantment – a veritable fairyland. Along the river banks grew in profusion trillium, bloodroot, wild phlox, anemones, Dutchman's breeches, and hepatica; the meadows were glorious with Indian paint brush, both red and yellow, with gentians, purple fringed orchids, and royal clumps of blue violets. In the tamarack swamps of the suburbs might be seen long vistas of our state flower, the showy lady's-slipper, together with the wild calla, and pitcher plants without number. And who could describe the outlying prairies, rioting in colors far exceeding the brilliancy of tropical flora. A long procession beginning with the pasque flower, the "crocus in chinchilla fur," the rosy three-flowered avens, and the equally profuse bird's-foot violet, that gave way in turn to the more gorgeous blooms of midsummer and early autumn, as the purple blazing stars, giant sunflowers, goldenrods, and asters of many species and hues. Various lily-rimmed pools and lakes were teeming with algae, among them microscopic desmids, and diatoms of extraordinary beauty, many of which were new to the world.

Pasque Flower which begins what Eloise calls "the long procession" of blooming plants. Photo G D Bebeau

What changes have been wrought by the rapid growth of the city and the onward march of "improvements"! The shy woodland plants are fast dying out on our river banks; the tamarack swamps have been drained, and with the drying up of the water have disappeared the wondrous orchids and the strange insectivorous plants. The pools with the desmids and diatoms have been filled in and houses built over them; and the prairies have been plotted into building lots. The land has been ruthlessly stripped of the exquisite features that Nature, the greatest landscape gardener, has wrought through the ages, and "all the king's horses and all the king's men" can never make the place the same again. The foreign plants used to replace our native species, and introduced with so much labor and expense, removed from their natural setting, look formal and stiff, and impress one much as impaled butterflies do in a museum case.

Again, it is cleared land that is invaded by unwelcome foreigners like burdock, sand-bur, and Russian thistle; for most of our vegetable tramps, like the human ones, are from the Old World. Inured to keener competition, they multiply rapidly and crowd out our native wildings. Cottagers on the suburban lake shores have fettered ideas of planting that are more appropriate for city grounds, and condemn their neighbors who strive to preserve the wildness, for a lack of neatness in not using a lawnmower and in not pulling down the vine tangles in which birds nest and sing – apparently dissatisfied until the wilderness is reduced to a dead level of monotonous, songless tameness. What does one go into the wilderness for to see? A reed shaken by the wind, if you please; but surely not geometric flower beds, nor mounds of the ubiquitous canna and castor bean.

Hence, to preserve intact and within easy reach some of our vanishing wild land, to maintain a supply of native plants for educational purposes, to study at firsthand the problems of ecology and forestry, to preserve the indigenous flora and to introduce, if feasible, the flora of all the other regions of botany in Minnesota for the benefit of students of botany and lovers of wild life – the teachers of botany in Minneapolis petitioned the city park commissioners to set aside a tract of land for a wild botanic

garden. The site selected by the teachers and generously granted by the commissioners lies in Glenwood Park, the largest and perhaps the most beautiful of all our parks, containing three ponds of fair extent, a diversity of soil and slopes and wooded heights commanding extensive views. In autumn, the scene is of surpassing loveliness with the beautiful groups of trees on the hills, in the valleys, and about the ponds, the vivid reds of the maples and the oaks, and the gold of the poplars set off by the white boles of birch and the dark green foliage of tamaracks.

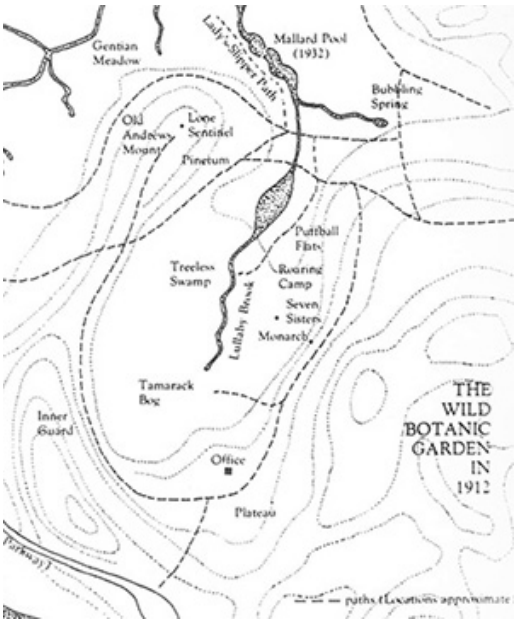
Below: Tamaracks in the Eloise Butler wetland today. Photo G D Bebeau.

A particular reason for selecting this place was the undrained tamarack swamp, such a swamp being the abode of most of our orchids and insectivorous plants so interesting in habit and structure. Indeed, most lovers of wild plants are bog-trotters and find in the depths of a swamp an earthly paradise. The indigenous flora was found to be captivating. Among the notables were sundew, pitcher plant, Linnaea, Turk's-cap lily, the two species of fringed gentian, showy and yellow lady's-slippers.

In the spring of 1907, the experiment began on a tract of about three acres in extent, comprising the small tamarack bog with meadows on the south and west merging into wooded slopes. Longing eyes were cast upon a marsh overgrown with willows on the eastern side of the bog. This was private property, but before a year had passed it was purchased by the park commission and added to the garden together with the adjacent hillside. Later, meadows on the north and west were also annexed so that the garden now contains about twenty-five acres.

A tiny stream threaded the bog and emerged into a depressed area of slimy ooze flanked by low banks. A dam was constructed that converted the depression into a lovely pool that has become a favorite sketching point for artists. It has proved too shady for aquatics and it is proposed to make a small pond by excavation in the open north meadow where the stream from the bog unites with one that flows from a spring on the eastern boundary. The delicious water of this spring is not one of the least important adjuncts of the garden.

It was planned from the beginning to make the garden a living museum of the flora of Minnesota and to preserve strictly the wild appearance of the place. There were to be no formal beds. Plants were to be allowed to grow according to their own sweet will and not as humans might wish them to grow, and without any restraint except what could be essential for health and mutual well-being. Each plant introduced to the garden is provided with an environment similar to its original one and then left to take care of itself as in the wild open, with only the natural fertilizers such as decaying wood and leaves. No watering is done after the plants are firmly established. Plants growing in excess and pestilent weeds are removed to make room for more desirable newcomers.



The Wild Garden in 1912 showing the location of various features. The dam Eloise mentions would be at the upper (north) end of the pool that is to the left of the words "puffball flats". Map ©Martha Hellander.

Minnesota has a flora of wide range, with representatives from the forest region of the east, the prairies of the west, the Alpine region of the north, and even a few species from the arid Great Plains.

Plants are obtained for the Reserve by collection, by exchange, and by purchase from nurserymen who deal in native species. As a rule they thrive best from regions of similar climatic conditions. The largest plantings are made in the spring and fall and the late flowering in the spring, although specimens have been successfully transplanted in full flower in midsummer – anything desirable being taken whenever procurable. This is a risky procedure but bog plants can be lifted at any time if not allowed to become dry in transit. Whether fall or spring planting is preferable depends for the most part upon succeeding conditions of weather. With reliable forecasting, all doubts would be settled. Do not plant heavily in the fall when the winter will be open or in the spring when early droughts are expected. The greater rush of work in the spring is an argument in favor of fall planting.

Eloise Butler gathering some plants in the Quaking Bog in Glenwood Park in 1911. Photo courtesy Minneapolis Public Library, Minneapolis

At the very beginning a garden "log" was installed in which a record of the plantings, period of blossoming, and other data have been faithfully transcribed. A brief history and the location of each species are also preserved in a card catalogue. A species is not indexed until it has wintered, and the necrology is noted by merely withdrawing the name from the catalogue. Only a small percentage refuse to flourish. Sand and lime are imported for species requiring an excess of that diet; tannic acid and ammonium sulphate for greater acidity. Trailing arbutus, *Viola lanceolata* and *V. rotundifolia* are found to be the least persuasive. It is probable that these could be established if they could

be raised situ from the seed. Some annuals like *Campanula americana* have been raised from self-sowing by being planted when in flower.

It was soon found that the term "Wild Botanic Garden" was misleading to the popular fancy, so the name was changed to "Native Plant Reserve."

"Is this the wild garden?" was a common query accompanied by widely roving eyes.
"Yes."
"Well, where are the flowers?"
"All about you. But many do not grow in masses. They are planted naturally and not in beds, and must be looked for as in any wilderness. Some have been picked by vandals; others are out of blossom, and many of the leafy flowerless stalks, which must have room to grow, will not blossom for weeks to come."

NOTES:
1. Parts of Eloise Butler text were incorporated into an article compiled by Mrs. John. Jepson and printed in *The Minnesota Clubwoman* in June 1933 following the death of Eloise.
2. The majority of this article was slightly modified from an earlier text published in the "Bulletin of the Minnesota Academy of Science" Volume 5, No. 1. 1911, and titled *The Wild Botanic Garden in Glenwood Park, Minneapolis*.

Spring Exhibits in the Native Plant Reserve - 1928

I arrived here as usual April 1. There had been abundant snow during the winter, but at this time the weather was dry and warm. On account of the drought there was nothing in evidence except white maple, hazel, willow and alder. But on the afternoon of April 2, one or two buds of hepatica showed color and the venturesome flowers of *Trillium nivale* [Snow Trillium] began to open. The hepaticas were truly wonderful the greater part of the month. They withstood two heavy snowfalls on the 5th and the 13th, and several succeeding frosts with undiminished loveliness, and now the beautiful clumps of new leaves are fully grown and will be a joy throughout the year.

Before *Trillium nivale* had finished shedding, the showy red-purple *T. erectum* appeared followed before the 10th of May by all the glorious rout - *T. declinatum* [now *T. flexipes*], *grandiflorum, recurvatum, sessile*, and last of all the endemic *T. cernuum*. The petals of *grandiflorum* have turned pink and are now beginning to shrivel, but the purple *recurvatum* with its pretty blotched leaf and the western specimens of *declinatum* are still holding their own, while *T. cernuum* is at the height of bloom.

Shortly afterward, the next great pageant was staged - literally acres of lowland bespread with [a] "cloth of gold" - marsh marigold. I sincerely pity those who are not privileged to see this flower in bloom. With marsh marigold came lovely *Mertensia virginica* (Virginia Bluebells) delighting the eye with its pink buds and lead-blue bells. At this writing the northern *M. paniculata* [Tall lungwort] is beginning to blossom. At the same time dense mats of spring beauty, *Claytonia virginica*, vivified the swamp. The pretty bell is a welcome spreader. its seeds are widely scattered, and the flower crops up in unexpected laces, while *C. caroliniana*, with similar flower but shorter and broader leaf, remains stationary.

Above: Virginia Spring Beauty, *Claytonia virginica*. Photo ©G D Bebeau

May is the time of the flowering shrubs. Shadbush came early and soon disappeared, so also did the wild thorn, *Crataegus rotundifolia*. I have yet to know if anything can surpass *Malus coronaria* in wealth of bloom. *Cornus stolonifera* [now *Cornus sericea*] is now in full blossom and the other dogwoods and all the viburnums are preparing to follow speedily.

In April, the pretty yellow *Viola rotundiflolia* came and went, but the others were at their height the middle of May. The mats grow larger and denser every year. The prettiest one of all is . . . *V. septentrionalis.* It is clear white with a pale blue center and favors damp soil.

I had a clump of twisted stalk, *Streptopus roseus*, as big over a bushel basket. It is a charming plant with the habit of *Uvularia* and hung with many tiny pink bells. The "twist" is in the pedicels.

The west path in the Reserve is called "Geranium Path," thickly beset, as it is, on either side with *Geranium maculatum*. One would think that nothing else could fine room there. But no, there is a succession before and after their advent. *Phlox divaricata* is now in the ascendant. It came in late this season. I have known it to blossom with violets. I never tire of this phlox in many shades of pink and blue lavender merging into white. . .

Masses of May apple, *Podophyllum peltatum*, and the cypripediums - *C. parviflorum, pubescens* and *acaule* now lend a tropical air to the Reserve. One clump of *C. candidum* has over forty blossoms. June 15 is

expected to usher in the crowing event of the year - our wonderful state flower, *Cypripedium hirsutum* [this species name was used by Eloise quite a few times in reference to the state flower, the Showy Lady's Slipper, but all current references state that *C. hirsutum* is an old synonym for the Moccasin Flower, *C. acaule*.]

Above: Showy Lady's Slipper, *Cypripedium reginae*. Photo ©G D Bebeau

This essay was sent to the Gray Memorial Botanical Chapter, division D, of the Agassiz Association for their circular bulletin.

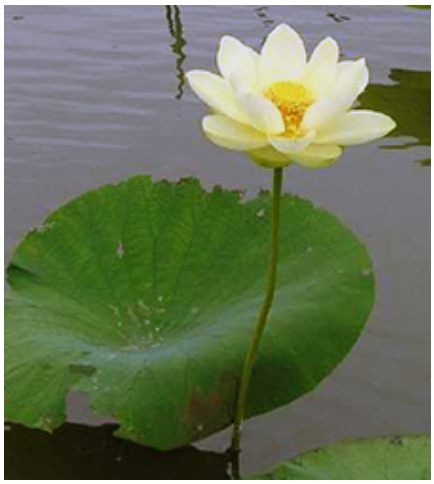
The Wild Garden in 1930

It seems amazing that Mother Nature - by blending two factors, temperature and moisture, in different proportions - can form an endless variety, no two seasons alike, [with] constant variations in vegetation.

Spring was late and cold with continual downpours. The early blooms were much belated, but the last heavy frost was later than usual, so that the new foliage had had time to develop a resistant epidermis and did not suffer as in the year before, when May Apple and twisted stalk were blighted and fern fronds seared. The flower buds of dogwoods and viburnums were, however, badly affected, and the food for birds was materially diminished. The unfolding buds of walnuts and hickories were, as usual, frozen, I despair of ever having any nuts develop.

The display of spring and summer flowers was fine - hepaticas bloodroot, spring beauty, anemonella, anemones, marsh marigold, mertesnia, trilliums, violets, dentaria, wild geranium, buttercups, showy orchis, habenarias, cypripediums, lilies, etc. Lupine was a great joy. As I have but little sandy soil, I have found it difficult to establish. I think that is is now a permanent possession. So also is horsemint which thrives on a coal cinder diet. This plant is particularly effective in masses, growing as it does, in large clumps, with its flower spikes made up of whorl upon whorl of pale yellow spotted corollas subtended by more showy pink, velvety bracts.

Then followed the unprecedented midsummer drought. The wild garden suffers less than other places on account of the lie of the land - drainage flowing into it from three sides. But this season foliage of shrubs on the hillsides shriveled and dropped off. I did not mind the prickly ash dying, of which I have a superfluity. On this shrub during the early wet season there developed a disgusting scale insect enwrapping nearly every twig. The heroic remedy applied was pruning and burning, lest the pest might spread to other plants. I cannot tell until next season how many plants were killed outright by the drought. The most apparent effect was the smaller crop of autumn blooms and the scarcity of mushrooms. In one respect I was surprised. A year ago a drought prevented the annual appearance of the huge edible fan tuft (*Polyporus frondosus*) at the base of our venerable white oak [Old Monarch]. Sometimes it has attained a weight of over eight pounds. This year it sprang up again and grew to a goodly size. It as taken up while still growing for the delectation of the Mushroom Club.



American Lotus, *Nelumbo lutea*. Photo ©Merle R. black, Wisconsin Flora.

Since I left Minneapolis this fall, an interesting discovery was made. A wild duck was given to a pair of ardent nature lovers [Martha and Bill Crone]. In dressing the bird, some undigested seeds of American lotus (*Nelumbo lutea*) were found in the gizzard. This was enough to start an investigation, for the lotus has been nearly exterminated in the vicinity of Minneapolis. The duck was shot near the neighboring town of Stillwater. [actually Shakopee]. My friends thought that they knew every square rod of the territory. But a vigorous search revealed much to their delight a large tract of lotus that had been concealed in blossoming time by a rank growth of tall grasses. A quantity of seeds were collected and encased in balls of clay to serve as sinkers The ponds around my garden were bombarded with these balls, and a quantity of seeds were sent to me to distribute in Massachusetts. I have sent some to the director of Harvard's botanic garden, and some will be planted in the cemetery where my sister, Mrs. Cora E. Pease, lies buried. The lotus

is said to be the largest flower of this latitude. The appearance is striking when the flower in full bloom. And the large top-shaped receptacle is very singular. It breaks off [and] rolls over and over in the water, shedding the seeds through the perforated disk like a patent seed dropper.

Editor's additions to Eloise's text

In a letter to Martha and Bill Crone in October, Eloise writes to them about the Lotus seed discovery: "I never heard of such a wonderful snoopin' ! It reads like a fairy tale or a story out of Arabian Nights. I shall rehearse it for my botanical correspondence club [as she did as quoted above]. I left Minneapolis the 17th, the day after your bombardment, in such a hurry that I did not have time to telephone to any one." (1)

More followup on the lotus seeds was forwarded to the Crones on Jan. 1, 1931 when Eloise wrote them that she had received some of the lotus seeds from them and added "I expect to have "Crone Plantations" in all the ponds hereabout where protection can be guaranteed. I have written to the Director of Harvard Botanic Gardens to ask if he wishes any seeds for his gardens and the Arboretum. What a wonderful discovery you made! I embodied in my annual report to Mr. Wirth your account of the bombardment of Birch Pond. I want your work to be appreciated at headquarters." (2)

(1) Letter to Martha and Bill Crone 28 October 1930
(2) Letter to Martha and Bill Crone 1 Jan. 1931

NOTES:

This essay was sent to the Gray Memorial Botanical Chapter, division D, of the Agassiz Association for their circular bulletin.

The Mallard Pool

Eloise Butler's Essay - Where it was located - Why was it abandoned

The Mallard Pool was a creation of Eloise Butler. Her description of it is contained in an article of Oct. 1932 sent to The Gray Memorial Botanical Chapter, (Division D) of the Agassiz Association for inclusion in the members circular.The Agassiz Association was founded in the late 1800's to be an association of local chapters that would combine the like interests of individuals and organizations in the study of Nature. Only the Gray Memorial Botanical Chapter to which Eloise belonged, was still active. First we have Eloise describing the pool.

Eloise Butler's essay text

Ever since the Native Plant Preserve [Eloise's word] was started I have wished to have a pool constructed where two small streams converge in an open meadow, the only pool in the Preserve being too shady for aquatics. The hard times gave this joy to me, for a jobless expert did the work for a sum that could be afforded by the Park Commissioners. The pool is about 35 feet long, several feet narrower, and of irregular outline. Indeed, the contour is beautiful. The excavation was made in a dense growth of cat-tails. While digging, the workman saw a mallard duck wending its way through the meadow with a train of four little ones. Hence the name of the pool, as this duck had never been listed before in the Garden.

The voracious muskrat was also observed, and I began to fear that the roots of my water lilies would be gobbled up. It was thought that stout wire netting at the top and bottom of the pool would prevent the muskrats from entering, but my adviser knew little of their predatory habits. Some white water lilies were planted in the pool. In two days only a fragment of the leaves could be found. Then it was decided to encircle the pool with the netting sinking it two feet in the ground. Before this work was completed, a muskrat preempted the pool with two little ones. We thought we could trap them inside and throw them over the fence but before the circuit was

Eloise Butler around age 80 near the time she wrote this article.

complete, they left on their own accord, probably in search of more food, and the gap was closed against them. It is possible that they will burrow under the fence. Traps must be set next spring.

A rustic fence of unpeeled tamarack poles has been built across the narrow lower end of the pool. Here one at advantage the pool and the border [sic - as written]. Opposite at the upper end, is "The Gurgler," the water entering gently by a short series of low rapids. Here my ingenious bridge-builder will insert a water-wheel made of galvanized tin and about five inches in diameter, designed to throw a mist-like spray over plants like Pinguicula that flourish on dripping rock. We call the place Atlantic City because, at each end of the bridge, a plank walk was laid over the cat-tail slough.

Many desirable plants were already established near or on the border of the pool: *Sagittaria latifolia, Eupatorium maculatum, E. perforatum, Verbena hastata, Epilobium coloratum, Lythrum salicaria, Mentha canadensis, Rumex brittanica [britannica], Solidago canadensis, S. uliginosa, Aster puniceus, A. juncea [junceus], A. umbellatus, A. paniculatus,*

Asclepias incarnata, Helianthus tuberosus, H. grosseserratus, Rudbeckia laciniata, Chelone glabra, Gallium asprellum, Caltha palustris, Impatiens biflora, Aspidium thelypteris, [pencil addition] *Onoclea sensibilis,* and an overplus like water cress and cat-tail, and others that must be grubbed out with ruthless hand like *Cuscuta gronovii* and *Bidens cernua.* In the near vicinity are the grandest species of our flora - - *Cypripedium hirsutum, C. parviflorum, C. pubescens, C. candidum,* and far enough distant not to shade the pool *Cornus stolonifera, C. paniculata, Viburum lentago, V. opulus,* and a few tamaracks.

The soil is a rich peaty loam. Here and there on the border this was mixed with a due proportion of sand to accommodate the plants that will not grow except in wet sand. Large sods of sand-lovers have been contributed by friends of the garden -- packed full of *Polygala sanguinea, P. cruciata, Viola lanceolata, V. sagittata, V. arenaria* [pencil change], *Eriocaulon articulatum, Gratiola aurea, Steironema quadrifolium, Kyris [Xyris] flexuosa, Hypericum canadense.* In lesser amount have also been planted *Pogonia ophioglossoides, Calopogon pulchellus, Lilium superbum, L. umbellatum, Geradia tenuifolia, Spiranthes gracilis, S. romanzoffiana, Drosera rotundifolia, Spiraea tomentosa, Mimulus ringens, M. jamesii, Gerardia tenuifolia, Sagittaria heterophylla, Cyperus strigosus, Calla palustris, Parnassia caroliniana, C. palustris, Veronica americana, Primula farinosa, P. mistassinica, Saxifraga aizoon, Pinguicula vulgaris, Gentiana andrewsii, Aster novae-angliae, A. modestus, Lysimachia terrestris, Viola incognita, Boltonia asteroides, Veronia fasciculata, Helenium autumnale, Hydrocotyle americana, Comandra livida [lividum], Solidago ridellii, Astragalus canadensis, Helianthus hirsutus, Habenaria ciliaris, H. blephariglottis* (the last two a contribution from Mr. Lownes), several clumps of *Lobelia siphilitica* and *L. cardinalis,* sowed seeds of *Cassia chamaecrista, Crotalaria sagittalis* and *Strophastyles helvola,* also *Collinsia verna.* This may seem too large a number of plants for a border, but the border is of indefinite width. It comprises nearly an acre and extends across the sunlit area of the marsh. I shall probably think of more desirable plants!

Eloise Butler overlooking the Mallard Pool after its construction. Photo courtesy of Minnesota Historical Society.

The small pool is another proposition. Its size will not admit more than one or two specimens of all the species that I wish. I have already planted therein *Castalia tuberosa* [pencil change - see note below], *Nelumbo lutea, Pontedera cordata.* I shall also introduce when I can get them -- next spring if not this fall -- *Nymphaea advena, N. microphylla, Prasenia schreberi, Lymphoides lacunosum [???], Ranunculus aquatilis* var. *caillaceus, R. delphinifolius, Lobelia dortmanna, Hippuris vulgaris, Sparganium simplex.* I should have written above *Castalia odorata,* instead of *tuberosa,* the latter is not a free bloomer and spreads too rapidly. any member of the chapter will confer a great favor by telling me where I can get the *Nymphoides* which is not listed by florists. I find that I have omitted from the margin, *Osmunda regalis, Liatris pycnostachya, Physostegia virginiana, Decodon verticillatus, Zygadenum chloranthus,* [next garbled - assume - *Tofleldia pursilla*], *Tanacetum huronense, Lobelia Kalmii, Hypericum ascyron,*

Prenanthes racemosa, Gentiana andrewsii, Hibiscus militaris, Stachys palustris, Habenaria paycodes, H. fimbriata, Myosotis scorpoides, Lysimachia quadrifolia, Lythrum alatum, Chelone obliqua, Saururus cernuus, Alisma plantago, Lilium canadense, Melanthium virginicum, Spriraea salicifolia, Iris versicolor, Pedicularis lanceolata.

I intend the fence barring out the muskrats to be concealed by the tall herbaceous perennials.

[The following was an additional note not included in the text for the Bulletin.]

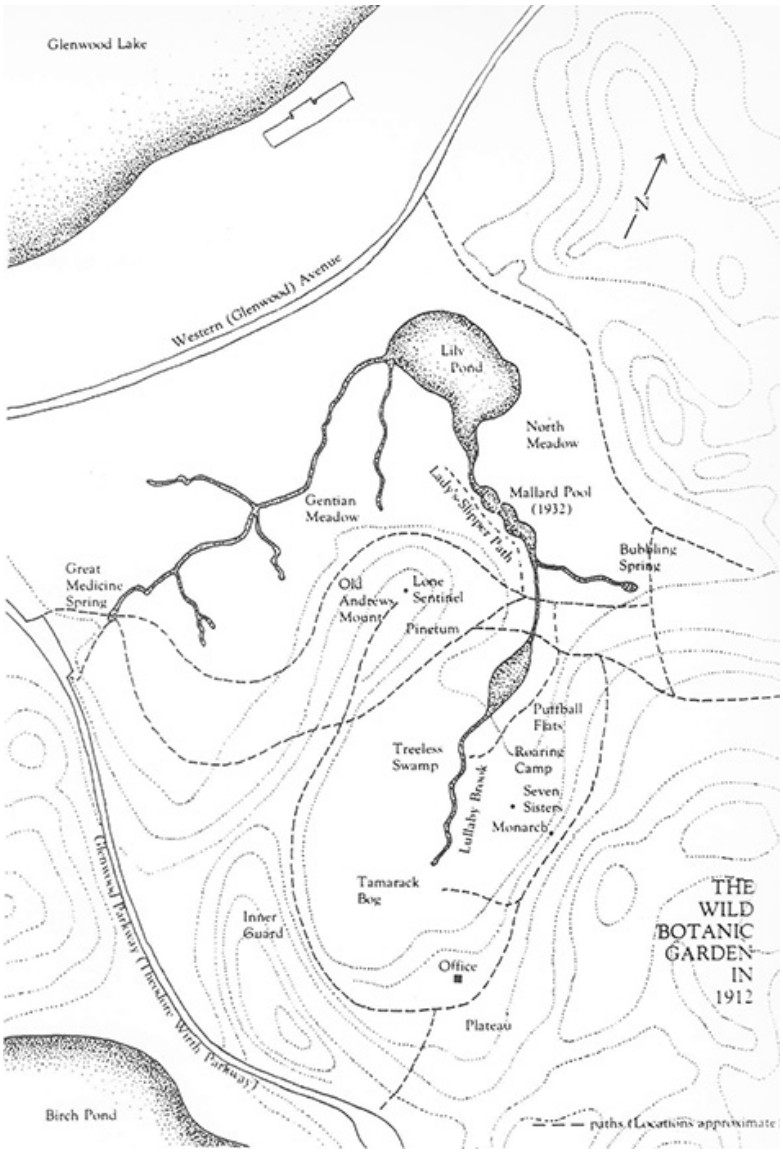
The little water wheel (to be removed during the winter lest the paddles be bent by ice) has been inserted in "The Gurgler," but the name has been changed to "The Jolly Spindrift." It chugs around so merrily, the spray splashing in the sunlight, that everyone smiles audibly when he sees it. I gave it the name at first sight, to find afterward that it is a new coinage, the compound not being in the dictionary. Below the rustic bridge another excavation has been made, continuous with the first, but more like a little pond, while the first is like a winding river emptying into it, increasing the length of the water area to fifty feet. I needed the "pond" for the display of the aquatic buttercup -- white and yellow -- which I hope the muskrats will find too bitter to eat. Otherwise, the pond must be fenced. Some yews, "ground hemlock", have just been contributed to the border, whose bright green foliage will greatly add to the toute ensemble. Gratiola continued to blossom for some time after planting and marsh marigold began to bloom for the second time on the border. Even now, at the beginning of work, the place with its setting is truly enchanting and I have to tear myself away from it. I shall dream of it all winter and conjure up the futurity of the plantings.

Exactly where was the location of the Pool?

On the next page is the plan of the Wild Botanic Garden ca. 1912. Features noted are names given by Eloise Butler. The location of Mallard Pool, added in 1932, is noted. This spot is within what Eloise Butler called the "north enclosure" - the name she gave to one of two areas that were fenced in during 1924. Eloise noted in her log on July 7, 1932 "Mallard Pool completed in north enclosure." The bridge she writes about was completed July 29 [Log] and would be at the northern end of Mallard Pool. The bridge was made by Lloyd Teeuwen (1) who was her helper in the Garden and was with her at the Babcock house just before she went to the Garden on April 10, 1933 and suffered a heart attach. Lloyd returned to the Babcock house as the doctor was administrating to Eloise and was present when she died.

She further fixes the location in the opening paragraph of her essay when she writes "I have wished to have a pool constructed where two small streams converge in an open meadow, the only pool in the Preserve being too shady for aquatics." Today, the location of the pool, Bubbling Spring, the North Meadow and the Lily Pond lay outside the North Garden boundary, just north of the back fence. Beyond the Lily Pond to the North is the Wirth Park picnic area and across Glenwood Avenue is the present Wirth Beach area. The dotted line of the path that intersects Lady's-slipper Path, running from near Bubbling Spring westward toward Gentian Meadow, is the approximate location of the existing paved path just outside the back fence of the Garden and the location of what Eloise called "the tarvia road". The dam of 1909 vintage (2), crossing the stream from the Garden, that created the small pool in the Garden was next to this path. A difference today is that prior to 1992 the path and back fence were more to the south and next to the dam. The fence and path were moved northward in a 1991/92 renovation of that part of the Garden. This path (the tarvia road as Eloise called it), bisected the Garden in Eloise Butler's time into the southern portion (today's garden) and the northern portion where the Mallard Pool was located.

In Martha Crone's time Martha would sometimes refer to this also and sometimes Martha would call it the "lower enclosure".



Map above: ©Martha Hellander.

We can deduce from Martha Crone's Garden log that she actively kept up part of that northern meadow at least until 1939. Here are samples - all from her log and diary.

1933: July 2: Bill cut path to Mallard Pool. [We believe this must have been on southern end as Eloise had put in a plank walk on the northern end. Bill is Martha's husband. From her diary.]
1934, April 9: Woodcock in woods near swamp west of Mallard pool.
1934, May 25: Found nest of Pheasant on edge of Mallard pool containing 11 eggs.
1934, June 17: Found nest containing young of Green Heron, mother bird flew short distance, in Tamarack on north boundary of lower inclosure.
1934, July 2: Drinking spring has gone dry - [This would be the first evidence of trouble with the spring that provided water to the pool]
1934, July 5; planted 18 Christmas fern on east and west border of pool, also at rustic bridge.
1934, July 12: Planted from Stillwater 12 Bladder Fern on east edge of pool and near foot bridge.
1935, April 26: Saw woodcock in lower enclosure.
1936, Aug. 29: Transplanted a number of Showy Lady's Slippers to a new colony in lower enclosure.

The wetland area opposite Wirth Beach parking lot in Winter 1938. As Eloise Butler wrote, it was filled with cattail and other vegetation. The diagonal line across the lower right cattails may well be the plank walkway Eloise Butler wrote about and the pool would be to the lower right. Photo courtesy University of Minnesota.

1937, July 16: 2 *Habenaria fimbriata* in bloom in lower enclosure near book and High-bush Cran.
1938, May 14: Also Autumn Willow in beautiful yellow color along broad path west of North enclosure.
1938, May 27: Planted 2 Valerian (*Valerian exdulis*) in north enclosure below waterfall.
1938, Aug. 30: Warbling Vireo still in song noted near north boundary of lower enclosure.
1939, May 19: Planted 10 American Dog Violet from Cedar swamp in lower enclosure below dam.
1939, May 25: In bloom . . . . Blue Delphinium near west gate of lower enclosure

Future events and abandonment

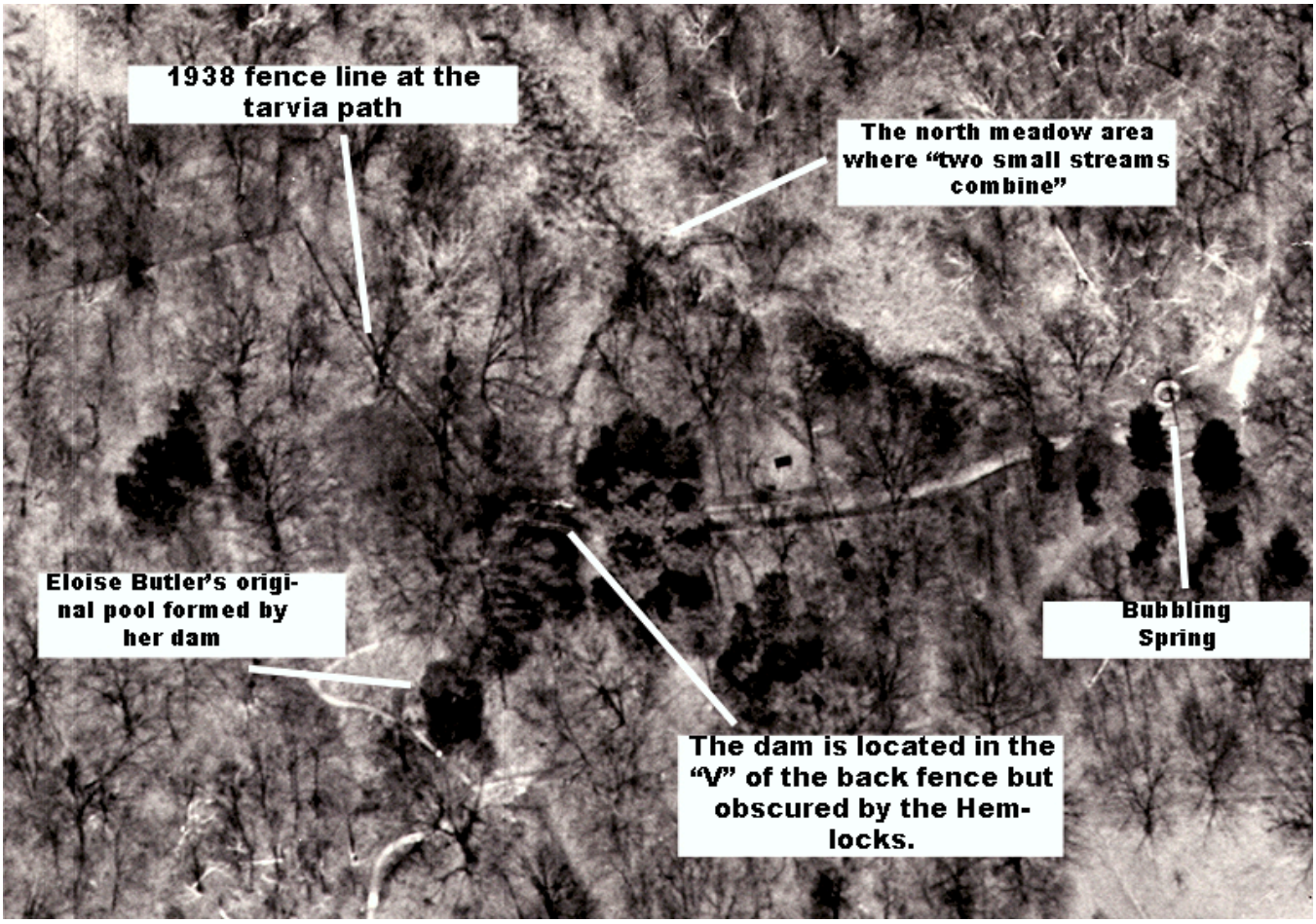
During the summer of 1938 the southern part of the Garden was surrounded by a new fence which was greatly appreciated by Curator Martha Crone and well received by the public. The old fence dated back to 1924 and Martha Crone had made a plea for a new fence in her 1937 report to the Park Board. It was stated that 1,900 linear feet was installed which is hardly enough to enough to enclose about 5-1/2 acres.(3) However, aerial photos from late 1938 [Next page] show a new fence, highlighted by a snow line, enclosing what was then the Garden Martha Crone tended, about 9 or 10 acres - that is the portion south of the tarvia road, which was the southern part of Eloise Butler's 25 acres which had also included the northern meadow and adjacent areas. (see photo below) The new fence was six feet high and of wire mesh, with 3 gates for entrance.

As all of what today is the Woodland Garden seems to have been fenced in, the amount of fencing was obviously much more than the 1,900 feet reported. The existing wire mesh fence (2018) is aged and presumably the same one erected in 1938. There is no replacement known.

Martha noted in her diary on January 18, 1939 that Park Board maintenance workers were in working on new fencing in the "lower enclosure", which must have been an area excluded in the 1938 project. Eloise had written in the 1932 article of the possible need for a fence. The "lower enclosure" would seem to be the same area Eloise Butler called the "north enclosure", as that is an area of lower elevation. This all ties in with what happened in 1944.

When the Upland Garden area was added in 1944, Martha Crone said in her 1945 report to the(4) Park Board that the addition added about 10 acres. This is too high a number. The total acreage before the most recent addition in 1993 was 14 acres. We know that over the years from 1907 to 1993 certain areas expanded from the original 3 acres, including adding in the north

Below: A 1947 aerial photo of the Garden area showing main features of the southern Garden area and a portion of the northern area where the Mallard Pool was located - a place "where two small streams combine." The fence line is the position of the 1938 fence with the tarvia path following the fence line. The Bird Feeding Station is in right center surrounded by a triangular fence. Photo Courtesy University of Minnesota



meadow and the area of the Bubbling Spring. Eloise wrote in 1926[5] that the entire area was 25 acres at that time including the North Meadow and the Bubbling Spring.

From the late 1930s forward, the north meadow area containing the Mallard Pool apparently became more and more neglected and there are no further plantings noted for the area in Martha Crone's log after 1939. We do know she removed some plants from the area and transferred them to the current garden space. These two log notes refer to that:
1946, June 11: 32 Showy Lady's Slipper from lower enclosure to violet path.
1947, July 17: 4 Willow Herb from lower enclosure.

When Clinton Odell proposed to the Park Board in 1944 to add the current upland area to the Eloise Butler Wild Flower Garden, Martha Hellander's research found that Odell said to the Park Board that the northern area (which included the Mallard Pool) should never have been fenced and that it was swampy and should be abandoned in favor of an upland area which the garden did not have at that time[6]. In an exchange of letters in 1944 to Odell from Park Board Secretary Charles Doell and from Superintendent C. A. Bossen, the Park Board agreed with parts of his proposal, including the funding that he proposed. (more details in *The Upland Addition to the Eloise Butler Wildflower Garden*, Friends Website, Garden History Archive).

Former Gardener Cary George remembered that the chain link fencing that was used in the northern enclosure was removed and used to fence the new upland addition, because in 1944 wartime shortages of steel precluded new fencing being obtained. Presumably there was a garden record of this, but it may have been related to him by Ken Avery.[7]

So here we have this conclusion: The Mallard Pool area was still being somewhat attended to by Martha Crone until about 1940, then abandoned by 1944. The Bubbling Spring dried up more or less permanently by 1959 (*"Springs in and near the Garden"*, Friends Website, Garden History Archive). The area reverted to the wild area we have today, At the time the Upland Garden was established in 1944, requiring much development work by Martha and the one person she had for help at that time, there was no possibility that the entire north meadow could be cared for as well.

In a strange turn of events all the area that had earlier been abandoned, including the Mallard Pool area, were added back to the control of the Garden staff in 1964. The Park Board had approved the expansion of the area under the Gardener's control. Outside of the fenced area of the Garden proper, this new area was the surrounding wild area west to the Parkway, north to Glenwood Ave. and east to the picnic grounds. Gardener Ken Avery was in favor of this change. In fact he considered it an important milestone -
"... one rivaling, if not exceeding, in importance that of the addition of the Prairie Garden in 1944."
He added -

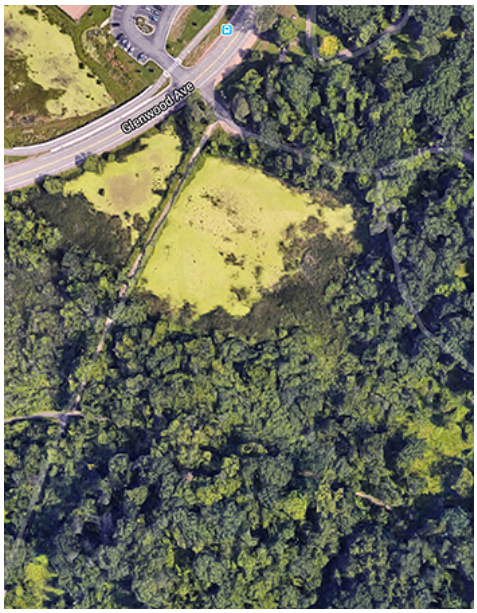
> This quadrupled the area we have to work with and makes it possible to treat the entire area as one integrated unit. We of the Wild Flower Garden are eager to assume this task.....we have always felt that the chief value of this area was for the study and appreciation of nature. Now that the Board has passed the motion dedicating it to this end, we are planning to adjust all maintenance activities toward this goal. It will not require any great change but just that all activities be paced to show greater respect for the ecological relationship of the area and to exploit all of its possibilities as a natural area.[8]

The area within the gray lines became the expanded area tended by the Garden staff in 1964.

This now includes (or re-includes) that "north enclosure" area where the Mallard Pool was located. It did not last long however, as the Park Board budget did not allow Ken to have sufficient staff to care for such a large area and by 1967 it was back to 14 acres and the Mallard Pool area was once again left to grow wild as Eloise Butler had found it in 1907, except that it became the basis of a buffer zone around the garden in later years.

[There is additional detail and photos about the area of the Mallard Pool and all the other pools in the Garden in an article titled "Aquatic Pools in the Garden" - it is found on the website.]

The area today



The old Lily Pond area is now somewhat clear of cattails with open water in the Summer. This area was modified in 1957 when the Park Board put in a large diameter underground pipeline to divert water from Bassett's Creek to Brownie Lake. That line lies beneath the gravel path that now bisects the area Photo-Google

A current view of the water channel leaving the Garden after it has combined with the second stream that Eloise mentions at the beginning of her text. The view is looking to the North toward Wirth Lake. The Mallard Pool would have had its southern end near this spot. Photo G D Bebeau.

Above left: Looking west toward the old Mallard Pool location from the area of the Bubbling Spring. The old stonework of the spring is just visible The runoff channel, which also drained this part of the wetland, runs vertically up the center of the photo to where it joins the stream coming out of the Garden which is seen in the right hand photo. Photos G D Bebeau, 2020.

Notes and References:

Notes:

(1) Martha Hellander's book *The Wild Gardener* - 1992, Page 96. Martha Hellander's research was financed by the Friends and by the Minnesota Historical Society.

(2) An article about the Garden published in *The Bellman* in 1913, described the dam as covered with vegetation as though it had always been there. The dam had to have been put in prior to the Fall of 1909 as on September 12, 1909 Eloise first references the pond and dam in her log planting notes - "in pond"; "by pond"; and "near brook below dam."

(3) *The Story of W.P.A. in the Minneapolis Parks, Parkways and Playgrounds,* for 1938, Minneapolis, Minnesota pub by Park Board in 1939.

(4) Annual Report to the Board ofPark Commissioners for 1944, dated February 20, 1945 by Martha Crone

(5) *The Wild Botanic Garden - Early History*, by Eloise Butler, 1926.

(6) *The Wild Gardener*, page 104.

(7) Conversation with the author May 18, 2018. Ken Avery was the Gardener preceding Cary George.

(8) Annual Report to the Board of Park Commissioners for 1964 dated March 12, 1965, by Gardener Ken Avery.

Other references:

(1) Eloise Butler's Garden Log

(2) Martha Crone's Garden Log

(3) Martha Crone's diaries

(4) Mrs. John. *Our Native Plant Reserve, Glenwood Park, Minneapolis Minn., Now called "Eloise Butler Wild Flower Garden"*. This article was written sometime after 1929 but prior to Eloise Butler's death in 1933 and placed in the Park Board Archives. Mrs. Jepson's husband was a parks commissioner at this time. The text was then published in June 1933 in *The Minnesota Clubwoman*, following the last rites ceremony for Eloise in May and including details of that ceremony. That the article was written no earlier than 1929 is indicated by the subtitle as the Garden was renamed in 1929.

Text and research by Gary Bebeau.
Photos as credited.

Occult Experiences of a Wild Gardener

"What's this, Miss Butler?" asked a pupil, holding up a wilted flower, as she took her seat in the classroom.
"I don't know. It is a cultivated flower, is it not?"
"No, it grows wild on the prairie."
"That doesn't seem possible. I never saw it before. What do you call it?"
"An anemone."
"I have never seen an anemone like that. Bring me the whole plant and I will analyze it."

Carolina Anemone (*Anemone caroliniana*). Photo ©Kitty Kohout, Wisconsin Flora.

As I was familiar with the prairie flora of the neighborhood, I continued to think that the plant was an escape from the garden. About a week afterward, the plant was brought in just as recitation was beginning. At one glance, without taking it in my hand, I said, "you are right. It is an anemone. It is the Carolina anemone." Then I was immediately stricken with astonishment at my own words, for I had never seen the Carolina Anemone (ref #1) and could not have described it to save my life. But at the first free moment, I found that the botanies confirmed my rash statement.

Not many days later a group of teachers were talking about violets. One asked another, "How many violets are native to Minnesota?" "I do not know," was the reply. "Can you tell us Miss Butler?" "Seventeen," I flashed, as one would answer to what is twice three, but immediately exclaimed, "Why did I say that? I haven't the slightest idea of the number." However, consulting two authorities, we found that the answer was confirmed.

Leatherwood (*Dirca palustris*). Photo ©G D Bebeau

Associates in botany have remarked to me, "You always find the plant you look for." I wished to get some Leatherwood for the wild garden. It had died out from the place where I had found it years ago. One day a University student inadvertently asked me, "Do you know Leatherwood?" "Indeed I do. That is just what I wish most to see. Tell me where I can find some and I will get it this very day." Her ideas of its whereabouts were vague. She had seen it two years before near St. Thomas' School, but on what side of the buildings, or the road, she could not tell. With this direction, I scoured all the region about St. Thomas, without success. As it was then past the dinner hour and high time for me to go home, I left the place reluctantly and started for the streetcar. Suddenly, without conscious volition, but obeying a blind, unreasoning impulse, I turned and plunged on a bee-line into the woods. "Eloise Butler," I said to myself, "what are you doing? You are due at home." But on I went and walked directly into a pocket lined with Leatherwood in full blossom - - a place that I had never visited before. The whole affair seeded uncanny to me.

The following summer, merely out of curiosity, as I have no belief in spiritistic phenomena, I had a "sitting" with an alleged "Medium," who was visiting the family. Among other queer remarks she said,

"When you want a plant, you always find it. This is the cause of it: You have two friends, botanists, who are deeply interested in your work. It is as if they put their hands on your shoulders and pushed you toward the right place." Then I laughed, saying, "That explains my experience with Leatherwood." The medium, by the way, knew nothing about my work.

Two or three times since, I have put the matter to a test. When delayed by a railway wreak in Ontario (ref. #2), I wanted to find sweet gale. I walked aimlessly for some distance and came right upon it. Then I tried the other side of the railway in the same way, and successfully, for the yellow round-leaved violet.

At another time I wanted *Gentiana puberula* [Downy Gentian] I had never gathered the plant. I only knew that it grew on the prairie. So I betook myself to the prairie and hunted until I was tired. Then I bethought myself of my ghostly friends and murmured, "Now, I will let 'them' push me." Thereupon, I wandered about, without giving thought to my steps, and was just thinking, "The spell won't work this time," when my feet caught in a gopher hole and I stumbled and fell headlong into a patch of the gentian.

Downy Gentian (*Gentiana puberula*). Photo ©G D Bebeau

September 20, 1913, I was planting more *Gentiana puberula* in the wild garden. I had just unwrapped the plants to set them in the holes prepared for them, when I was seized with another uncontrollable impulse, and I dropped my hoe, leaving the roots of the gentians exposed to the hot sun, and went quickly to the pond.

[Here the typed text ends and we do not know what happened at the pond. Also, it is not clear what year she wrote this, but it is probably in the mid-teens, as she retired from teaching in 1911, the train wreck occurred in 1908, she first set out the Downy Gentian in 1912 and she mentions above, planting it in 1913.]

Notes:
ref. #1. Carolina anemone, *Anemone caroliniana*, a Minnesota native plant, found in of a number of counties in the central part of the state, including Hennepin.

ref #2. The railway wreck was near Mackey, Ontario in 1908 and Eloise brought back several other plants from that site (including Purple Flowering Raspberry shown at right) and reported, in her Garden log, planting them on September 5th. but she does not list in the log planting the sweet gale [*Myrica gale* L.] or the round-leaved violet [*Viola rotundifolia*].

Purple flowering Raspberry (*Rubus odoratus*) - a plant brought back from Mackey Ontario. Photo ©G D Bebeau

Additional Material. In another essay written in 1925: *The Wild Garden in 1925*, Eloise adds another such instance:

"IN August, spent two days at Lake Kabecona, about twenty miles east of Itasca Park. There I saw for the first time in their native haunts the spurred gentian [*Halenia deflexa*] and the northern grass of

parnassus [*Parnassia palustris*]. On a creek floated the pretty white water crowfoot in full blossom, and all the land was blue with harebells.

Strange to say, a little earlier, a single specimen of *Halenia* was brought to me from the north to identify. From the venation, I thought it must be an endogen and tried to place it in the lily or orchid families. Over the telephone I got a hint from one who knew, that is must belong to the gentian family, although the name could not be recalled. The small flowers were cream colored and spurred. Then "spurred gentian" flashed through my mind, and also the scientific name, *Halenia deflexa*, although I had no consciousness of previous knowledge. The botanist confirmed the wireless telegram. This is another instance of several experiences that I have had of unconscious registration. We all really know much more than we are aware of . . .

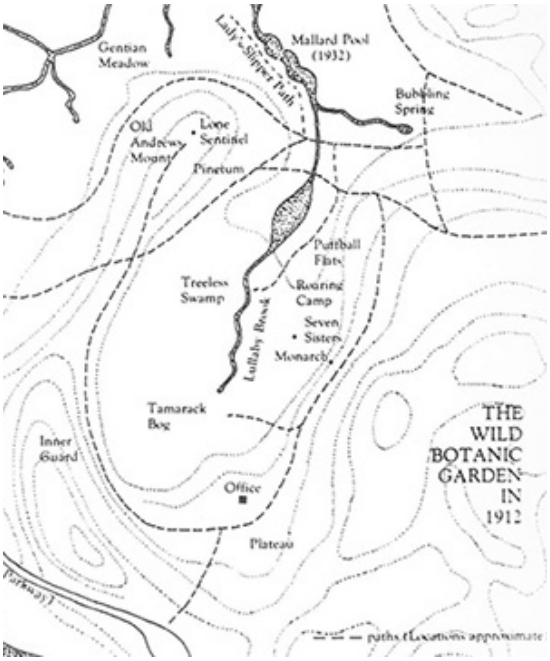
Old Andrew

Old Andrew's Mount . . . the highest point in the garden . . . The western slope of the mount and the meadows to the west and north are the most recent acquisitions of the garden .. . . A gravelly pit on this western slope marks a mystery. It was hollowed out and roofed over by a solitary called Old Andrew. Here, mailed in silence, he lived for several years and no one knew his history. One day he disappeared. Weeks afterward, the body of a man past recognition was found in the vicinity. It may have been Old Andrew's but there was no definite proof. At any rate, he was never seen again. His cave and trenches furrowing the meadow below, which he attempted to farm are the only traces of his life among us.

Shortly after Old Andrew's cave was included in the Garden, the curator's work was interrupted by the sound of an axe coming from that direction. Rushing up the incline to ward off the trespasser, she found no one, and heard nothing, but, when her work was resumed, the experience was repeated. This happened again and again, for two or three days in succession.

A sense of mystery the spirit daunted,
And said, as plain as whisper in the ear,
The place is haunted.
(unknown source)

Old Andrew used to cut wood for the neighbors. Could he be the ghostly woodchoppper? Means were at once taken to exorcise him. The cave was cleared of fallen tree trunks and branches. Basketfuls of violets, hepatica, wild columbine and trailing fern, with a generous amount of rich loam, were dibbled in. And thereupon the "perturbed spirit" was induced to rest.



Map of the old Garden courtesy Martha Hellander. from *The Wild Gardener*. 1992.

That is the end of the Butler text, but in 1924 she provided some additional details in a newspaper interview: (see 1924 section)
She was quoted "Of course, being New England born, I don't believe in ghosts, but years ago when Glenwood Lake was known as Keegan's Lake, an old hermit lived in a cave in the woods. Suddenly he disappeared. Three months later a body was discovered which was believed to be his, anyway, he was never seen again."

Pasque Flowers at Easter Time Proclaim Yearly Spring Miracle - April 16, 1911

However early Easter Sunday is in the calendar, the bells of the Pasque flower proclaim the yearly miracle. Or, to change the metaphor, nearly four weeks ago, on sandy, southern slopes of the virgin prairie, the "goslings," as children call them, thrust their downy heads above the brown, bare earth, undismayed by succeeding snows and frosts, all the way from Wisconsin to the Rockies.

Blossoms of the purple flowered Pasque Flower. Other photos below of the deeply cleft palmate leaves and the seed head. All photos ©G D Bebeau.

In exposed situations they lie huddled on the ground; but, under the stimulus of increasing warmth, they will peep out from the stretch above the brooding mother earth, from day to day, throughout the month of April.

The scientific name of the Pasque flower, according to the seventh edition of *Gray's Botany*, is *Anemone patens* var. *wolfgangiana*. It is called a variety because the Pasque flower of Europe was first named. None but a botanist would note the difference between the European and American forms. Britton calls the plant *Pulsatilla hirsutissima*. [Both older names now classified as *Anemone patens* var. *multifida*]

Under this name it is known to pharmacists, for it has medicinal properties. The leaves when bruised exhale a pungent odor, which has given rise to other popular names, as hartshorn and headache plant.

Mrs. Helen Hunt-Jackson, perhaps better known as "H.H." has thus recorded her first view of this exquisite flower in *Bits of Travel at Home*:

> The first Colorado flower I saw was the great blue wind-flower, or anemone. it was brought to me one morning, late in April, when snow was lying on the ground, and our strange spring-winter seemed to be coming on fiercely. The flower was only half open, and only half way out of a gray, furry sheath some two inches long; it looked like a Maltese kitten's head, with sharp-pointed blue ears - the daintiest, most wrapped-up little blossom. "A crocus, out in cinchilla fur!" I exclaimed.
>
> "Not a crocus at all; an anemone," said they who knew.
>
> It is very hard, at first, to believe that these anemones do not belong to the crocus family. They push up through the earth in clusters of conical gray, hairy buds, and open cautiously, an inch or two from the ground, precisely as the crocuses do; but, day by day, inches at a time, the stem pushes up, until you suddenly find, some day, in a spot where you left low clumps of what you
>
> will persist, for a time, in calling blue crocuses, great bunches of waving blue flowers, on slender waving stems from six to twelve inches high, the blossoms grown larger and opened wider, until they look like small tulip cups, like the Italian anemones.

A week or two later you will find at the base of these clumps a beautiful mat of leaves, resembling the buttercup leaf, but much more deeply and numerously slashed on the edges. These, too, grow at last, away from the ground and wave in the air; and, by the time they are well up, many of the flowers have gone to seed, and on top of each stem flutters a great ball of fine, feathery seed plumes, of a green or claret color, almost as beautiful as the blossom itself.

Notes:

The text of this article, included photos of the Pasque Flower by Mary Meeker

Anemones, Hepaticas and Buttercups Prominent in Crowfoot Family Here - April 30, 1911

A number of the early flowering plants are members of the crowfoot family (Ref. #1) [such] as the anemones and buttercups. In the divided leaves of a crowfoot, as some of the buttercups are called, the early botanists saw a resemblance to a bird's foot.

The buttercups of Minnesota are not so much in evidence as the tall European [Tall] Buttercup [*Ranunculus acris*] the pest of the hay fields - farther east.

Tall Buttercup, *Ranunculus acris*

One early species, *Ranunculus abortivus*, [Littleleaf (or Kidneyleaf) Buttercup] has so small a flower that a novice would scarcely notice it, and is surprised to hear it named a buttercup. Neither would a child be likely to apply the time-worn test of holding the flower to your face to learn if you love butter.

Littleleaf Buttercup, *Ranunculus abortivus*

This lowly buttercup [her text omits the common name] blooms sparsely on the prairie with the pasque flower. The specific name *rhomboideus* [prairie buttercup] indicates the shape of the leaf.

The low, tufted *R. fascicularis* [Early buttercup] has a larger flower, but is not conspicuously massed.

Our two prettiest buttercups are aquatics - one with shining, yellow petals; the other with smaller white flowers and long, railing stems; and both bearing finely dissected leaves.

The large Crowfoot family is without strongly marked characters. Its plants have usually an acrid taste; the leaves are generally more or less cut or divided; the corolla is often wanting, and, when this is the case, the calyx is colored like a corolla; the stamens are numerous; the pistils vary in number from one to several; and all the parts of the flower are distinct or unconnected.

Early Buttercup, *Ranunculus fascicularis.* Photo ©Merle R. Black, Wisconsin Flora.

All these points may be verified in the hepatica, or liverleaf, now in bloom along the river banks. It seems somewhat incongruous to associate a name so musical and a flower so beautiful with anything so prosaic as the liver. Yet hepatica is "liver" in Greek, and some herbalist, long ago, made the comparison, when he saw the three-lobed leaf. The leaves endure through the winter and their rich tints of bonze and purple garnish the tuft of lovely flowers varying through all shades of blue and lilac to white.

The lighter tones are found in the older and more exposed flowers. Just under the flower, and separated from it by a very short stem, are three green leaves or bracts, as leaves on flower stems are technically

Prairie Buttercup, *Ranunculus rhomboideus.* Photo ©Derek Anderson, Wisconsin Flora.

named - which exactly imitate a calyx, thus fooling the unwary. When the flowers go to seed, new leaves appear. Several plants get their flower work done early, before they are shaded by the leaves, which unfold later to prepare the food for the next year's flowers and seeds.

The hepatica is closely allied to the anemones. Two species are found in Minnesota - one with sharp-lobed and one with round-lobed leaves (Ref. #2). The sharp-lobed species only, is indigenous to Minneapolis; but both have been planted in the wild garden in Glenwood Park.

Notes:

1. Crowfoot Family, (Ranunculaceae) -in current times this family is now called the Buttercup Family
2. Sharp-lobed Hepatica is now classified as *Anemone acutiloba* and Round-lobed is classified as *Anemone americana*.

The text of this article included a large photo of the Hepatica by Mary Meeker.

Bloodroots, Marsh Marigolds, Adder's Tongues and Dutchman's Breeches Among Spring Blooms that Delight Eye and Heart - May 7, 1911

Within the last fortnight the red swamp maple (*Acer rubrum*) has glorified the lowlands with its flowers of brilliant hue, forming a pleasing contrast with the ash-gray stems. It is strange that this tree is not more often used for decorative planting, for it will adapt itself to drier sites, and would well take the place of the much admired red-bud growing farther south. The flowers of the maple are succeeded by the scarlet wings of the pendulous fruit, and, before the summer is over, the leaves will take on more gorgeous tints than the autumnal colors of other trees.

Leatherwood
Dirca palustris.

When the red maple blooms, here and there along the river, we find a shrub still bare of leaves but covered with tiny yellow flowers. This is the Leatherwood, (*Dirca palustris*). If you strip down the bark and try to pull it from the stem, you will understand the significance of the common name and its value to the Indians, who use the bark for thongs.

Now is the time that we are enticed to buy from children on the street big bunches of the cheerful Marsh Marigold (*Caltha palustris*). For she always sits with her feet - roots - in the water, and only a barefooted boy is likely to reach her, although "enough for everybody and to spare" is her motto. The plant is wrongly called "cowslip." The true cowslip is a European primrose and resembles the marsh marigold only in color. Wordsworth's Peter Bell would have stopped to pick the young leaves of the marsh marigold for greens - something more substantial than mere yellow flowers. Both the primrose and marsh marigold are familiar flowers in Europe and both are named in Jean Ingelow's "Songs of Seven."

Marsh Marigold
Caltha palustris L.

With the advance of May, Mother Nature's spinning wheels whir faster and faster, and the earth-carpet - the most lovely product of her looms - is woven with intricate designs of flowers in bewildering profusion. But from them all we single out the dogtooth violet or adder's tongue [now called Trout Lily] for special admiration. The latter name, due to the tongue-shaped, brown-blotched leaf, is more appropriate, for the plant is a species of lily and of no kin to a violet. It has two shining leaves which spring from a deeply buried bulb. Between the leaves arises a beautiful cream colored bell slightly tinted with mauve at the base [she refers here to the White Trout Lily [*Erythronium albidum*].

White Trout Lily *Erythronium albidum*

The yellow flowered adder's tongue [Yellow Trout Lily, *Erythronium americanum*] is common in the Eastern states. A smaller species [Minnesota Dwarf Trout Lily, *Erythronium propullans*] with a rose colored flower is also found in Minnesota. This genus flowers best in alluvial soil.

Far more common is the Dutchman's breeches [*Dicentra cucullaria*]. Everyone is familiar with the pretty pale pink or yellowish flowers arranged along a slender stalk. The divergent nectaries of the flower have given rise to the ludicrous common name. The single pale green leaf, finely divided into many segments, adds to the delicate beauty of the plant. On Big Island, Lake Minnetonka, protected from marauders by an un-climbable barbed wire fence, grows another member of the same genus, the squirrel corn [*Dicentra canadensis*], similar to Dutchman's breeches except that the flowers are usually white and shaped like those of another relative, the bleeding heart of the gardens. The squirrel corn is developed from subterranean tubers, round and yellow like grains of Indian corn. [See NOTE 1. below.]

Dutchman's breeches
Dicentra cucullaria

Many will not observe the flower of the Wild Ginger [*Asarum canadense*.], although they cannot fail to see the large round leaves. But when one has learned the habit of the plant, he will stoop to look between the leaves for the purplish-red flower-bell bent down to the ground and tricked out with three slender horns. The enigma is easily interpreted: If the curious should lift up the flower to gaze upon it, the horns would protect it from the "evil eye." With closer approach one perceives another charm - the delightful aromatic odor. Some persons carry about with them a piece of the thick rootstalk as a specific for bodily ills.

Yellow Trout Lily
Erythronium americanum


Squirrel Corn, *Dicentra canadensis*. Photo ©Elizabeth Parnis, Wisconsin Flora.

Wild Ginger
Asarum canadense

Bloodroot
Sanguinaria canadensis

Who does not know the Bloodroots [*Sanguinaria canadensis*]- babes in the wood - each closely wrapped in the swaddling blanket of a quaintly fashioned grayish-green leaf? As the leaf unrolls the flower bud is disclosed, ensheathed in two thin, pale yellowish green sepals, which fall as the snow white corolla expands. The petals, some eight to twelve, are evanescent and will not endure rough handling or a long journey. Hence let us leave them to light up the woodland. The flower passes quickly from infancy to

maturity. Presently nothing is left but the seed pod. But the leaf continues to grow lustily. It is an attractive feature with its odd lobation and prominent reddish veins. The red fleshy subterranean stem is the origin of the name – bloodroot. The relationship of the bloodroot to the poppy is shown by the two sepals which fall so easily.

Notes:

1. NOTE: The full details of the collecting of Squirrel Corn were written up in Eloise Butler's unpublished history of the Wild Botanic Garden. It is found in the article "Experiences in Collection - 1911."
2. The text of this article included photos of Wild Ginger, Bloodroot, Dutchman's Breeches, Marsh Marigold and Adder's Tongue Dogtooth Violet, all by Mary Meeker.

Plum Blossoms, Skunk Cabbage, and Modest Jack-in-the-Pulpit among May Arrivals That Please Lover of Life in the Woods - May 14, 1911

From a distance thickets of the thorny, still leafless, Wild Plum [*Prunus Americana*] now seem covered with snowflakes, the illusion being due to myriads of white blossoms. We find the resultant red and yellow, somewhat puckery fruit not unpalatable, if the birds do not forestall us in harvesting it.

American Plum, *Prunus Americana*

And the hard or Sugar Maple [*Acer saccharum*] becomes conspicuous by reason of its drooping sprays of cream colored flowers, swaying on threadlike stems. The hard maple is certainly our finest deciduous tree. When grown in the open it forms a compact dome-like head, which affords refreshing shade from summer's heat. The leaves usually turn a bright yellow in the autumn. This tree will prove an ornament of stately beauty for the street or lawn, and a beneficent testimonial to the wisdom of the planter, calling forth the gratitude of countless passersby, long after he is dust.

Skunk Cabbage, *Symplocarpus foetidus.*

To turn to herbs, the Skunk Cabbage [*Symplocarpus foetidus*] is one of our earliest spring flowers, for it literally thaws through the soil of the icebound marshes. You will have a greater respect for Dame Nature's ability as a packer if you take apart the leaf bud made up of many leaves tightly rolled one within another and smaller and smaller in the center. The bud expands into a clump of large leaves, from which the name cabbage is derived. The disagreeable odor is attractive to flies, which find a shelter from the cold within its purplish-red, hood-like spathe and pay rent by pollinating the flowers. The spathe - the showy part of the inflorescence - is merely a large leaf enwrapping numerous minute flowers set on a fleshy axis.

It is always well to get at the roots of things. If you dig deep down into the muck you will discover a stout subterranean stem, from which spring many roots ringed like angleworms. These roots have contracted like muscles, thereby forming the rings and giving the stem a deep, safe anchorage in the earth. This is only one of the many instances of self-burial by a "pull on the stem."

Jack-in-the-pulpit in mid-spring. *Arisaema triphyllum*

More agreeable and better known members of the Arum family are Calla [*Calla palustris*.] and Jack-in-the-Pulpit [*Arisaema triphyllum*]. In the case of the Jacks, the upper part of the fleshy flower axis is naked and is used as a support of the roof of the pulpit, or spathe. The small, simple flowers at the base of the axis are without floral leaves and are usually separated, namely, some of the Jacks bear only pollen producing flowers, and others, which in the course of time will develop seeds. The leaves of the Jacks are branched and made up of

Jack-in-the-pulpit red mature berries of late summer. *Arisaema triphyllum*

three leaflets. The seed-producing Jack usually bears a pair of these branching leaves in place of the one carried by the pollen-bearing Jack.

For the individual producing the seed must manufacture food for storage in them as well as in the onion-shaped, subterranean bulb, which gives another name - Indian turnip to the plant. The Indians used the turnip, after pressing out the poisonous sap, as a farinaceous food. Jack-the-Jester has, of course, the reputed wisdom of former times; but you'll get no drippings of it, unless you frequent the sanctuary of the wilderness. But even as a preacher, he cannot refrain from some foolish pranks.

No one would be astonished to find, as is sometimes the case, two Jacks fraternally occupying the same pulpit; but an observer was doubled up with laughter to see a Jack holding forth in two united pulpits.

Only the student, or one versed in wood lore, would recognize Jack, when he first pricks through the ground, in the form of a slender, slightly curved, sharp-pointed bud, with a protective sheath mottled like snake skin. Again, but few connect the last stage of seed-bearing Jack with the crowded bunch of bright red berries so common in late summer.

Virginia Spring Beauty, *Claytonia virginica*.

It is a far cry from Arum to the Portulaca family [now Purslane], to which the much beloved Spring Beauty belongs. The spring beauty is local, but it brightens large patches of low woodlands, which it chooses for an abiding place. Spring beauty of Minneapolis (*Claytonia virginica)* is a low, slender plant with narrow leaves which come from a dark brown triangular tuber imbedded in the earth. The flowers are dainty white bells striped with pink, and in masses thickly carpeting the earth are a joy to the eye.

Notes:

The text of this article included photos of Jack-in-the-Pulpit, Skunk Cabbage, Spring Beauties and Plum trees, all Mary Meeker.

Beautiful Large-flowered Trilliums Grace Minnetonka Wood in May; Violets, Forest, Hillside and Prairie Varieties Flourish Near Minneapolis - May 21, 1911

In some favored places about Lake Minnetonka may be seen during May profuse growths of the beautiful Large-flowered Trillium (*T. grandiflorum)*. So highly is this plant esteemed by the English that they have imported large quantities of it from this country for plantations in their private parks. The petals, at first pearly white, turn pink in age, as does the seed vessel.

Large-flowered Trillium, *Trillium grandiflorum*

The Trilliums are closely related to the lilies. All have a thick underground stem, bearing a single aerial stem, which supports a whorl of three large leaves varying somewhat in size and shape in different species. Above the leaf whorl arises the lovely flower, with or without a stalk; erect or drooping; white, red, purple or pink striped, according to the species. The flower is also on the plan of three green sepals, three colored petals, six stamens in two rows and one pistil made up of three united carpels. The name trillium probably comes from the three leaves. The plant has a number of local names - wake robin, bath flower and "way down East;" the pink-striped or painted trilliums are called "wild pinies" - meaning peonies.

A cute little species and one of the earliest to blossom is the Dwarf trillium [Snow trillium, *Trillium nivale*], much smaller as the name implies. The most common trillium about Minneapolis is *T. cernuum* (Nodding Trillium), lovely but less showy than the large flowered form.

Large-flowered Bellwort, *Uvularia grandiflora*

Another ally of the lilies is the Large-flowered Bellwort (*Uvularia grandiflora)*, bearing a slender, drooping yellow bell at the extremity of each fork of the leafy stem. In this species the leaves are perfoliate, that is, the stem seems to pass through the base of the leaf. In another pretty species of bellworts - a smaller plant with cream colored bells - the leaves are sessile [Wild Oats or Sessile-leaved Bellwort *Uvularia sessilifolia*]

Wild Oats, *Uvularia sessilifolia*

The following four species people often bunch indiscriminately together as May flowers, or anemones. The False Rue Anemone (*Isophyrum biter natum*) [*now Enemion biternatum*], with branched leaves and a few white flowers, stars the woods about Minnehaha. The fibrous roots of this plant are thickened at intervals; the seed vessel has two or three seeds instead of one, as in the anemones. The Rue Anemone [*Thalictrum thalictroides*] of

oak woods has a cluster of bright purplish pink flowers on stalks set like the sticks of an umbrella above a whorl of leaves. Another leaf, similar to that of the false rue anemone, arises directly from a cluster of three or four fleshy roots like miniature sweet potatoes.

A genuine anemone - the one-stalked grove anemone [Wood Anemone, *Anemone quinquefolia*] - bears above a whorl of branched leaves, a single flower, white and daintily flushed with pink when it first appears, but turning white as it matures. This plant has a slender, horizontal root stalk. The hepatica always may be recognized by the evergreen, three-lobed leaf, and the three green leaves under the flower, closely imitating a calyx.

These are all members of the crowfoot family [now called Buttercup family]. In all the petals are absent but the sepals are brightly colored. It is a rule in botany to call the outer floral leaves sepals, however bright their color; and if but one set of leaves is present, to consider the petals are absent.

False Rue Anemone, *Enemion biternatum*

Rue Anemone, *Thalictrum thalictroides*

Wood Anemone, *Anemone quinquefolia*

Viola sororia, Common Blue Violet

But the violets are pre-eminently the flowers of May, and is it not true that of all flowers they are the most beloved, not excepting the rose? At least nine sorts of violets can be readily distinguished by the novice in the vicinity of Minneapolis.

Violets may be classed under two heads - the leafless and the leaf-stemmed. The leafless species have only a subterranean stem, while the other class have also a stem above ground. To the first class belong the common blue meadow violet [*Viola sororia*. with *V. papilionacea* now assigned here also].
One is rapturously happy when he chances upon a meadow tufted with clumps of these violets. No wonder at such a time one supposedly guiltless of "dropping into poetry" was heard crooning over and over to himself, "I would rather know where violets grow than a good many other things!"

Bird's-foot Violet, *Viola pedata.* Photo ©Merle R. Black, Wisconsin Flora.

The bird's-foot violet of the prairies [Bird's-foot Violet, *Viola pedata*] has a finely divided leaf. The flower is pale lilac with a lighter eye like a small pansy. The Larkspur violet [*Viola pedatifida*], also a prairie form, has a flower similar to that of the meadow violet but a dissected leaf. The Arrow-leaved violet [*Viola sagittata*] growing on low land usually has leaves with an arrow-shaped base, but it may vary considerably in shape. The flower is a bright purple.

Often associated with this violet, on the sandy shores of ponds, is the white, Lance-leaved violet [*Viola lanceolata*], its leaves slender as grass blades - not at all like the typical, more or less rounded, violet leaf. Another favorite is the small, white violet of the bogs, much prized on account of its exquisite fragrance.

Larkspur Violet, *Viola pedatifida*. Photo ©Merle R. Black, Wisconsin Flora.

Lance-leaved Violet, *Viola lanceolata*. Photo ©Kitty Kohout, Wisconsin Flora.

Arrow-leaved Violet, *Viola sagittata.* Photo ©Merle R. Black, Wisconsin Flora.

In the second class are the Common yellow violet [Downy Yellow Violet, *Viola pubescens*] of the rich woodlands, the small very pale dog violet of wet meadows [*Viola labradorica* - old *V. conspersa*] and the Canadian violet [*Viola canadensis*]. The last named has the same habit as the yellow, but the petals of the flower are white and blotched with purplish pink. Besides pleasing the eye, the flowers are fragrant, and, in open places, bloom throughout the season, like its aristocratic sisters the cultivated pansies.

Downy Yellow Violet, *Viola pubescens*.

Over twenty species of violets are found within the borders of the state, but the characters of some of these are based upon features that can be determined only by experts.

Violets are in the habit of producing besides the beautiful flower, so called secret, bud-like flowers, that are without color and never open. These secret flowers mature seeds through self-fertilization; while the showy flowers are dependent upon insects for pollination. The expert on violets must ascertain the number, form and color of the seeds made by the hidden or secret flowers.

Canada Violet, *Viola canadensis*

The insect-pollinated flower is fitted to the insect, and the insect to the flower, as a key to its lock. In sucking the nectar from the hollow spur on the lower side of the violet flower, the insect - a bee, for instance - is obliged to take such a position as to become smeared with the pollen, which it transfers unconsciously to the sticky part of the pistil of the next violet that it visits. The insect is further directed by the nectar guides, where to insert its tongue, as they converge toward the nectary, or spur.

Therefore, when flowers are pollinated by insects, the color, fragrance, spots, streaks and irregularities in the shape of the flower, are all for the purpose of furthering the production of seeds. But from these attractive features, for utility only in the flower, arbitrarily assumed, we derive our purest pleasures.

The text of this article included photos of Large-flowered Trillium, False Rue-anemone, Bellwort, Common Blue Violet and Canadian Violet , all by Mary Meeker.

Geum, Early Meadow Rue, Lousewort, Phlox, and Hoary Puccoon Are Described as Wild Beauties in Miss Butler's Weekly Article - May 28, 1911

Nearly contemporaneous with the pasque flower, and likewise on the prairie, grows the Avens, or three-flowered Geum [Prairie Smoke, *Geum triflorum*]. It bears a tuft of fern-like, interruptedly pinnate leaves, each leaf consisting of divided leaflets arranged along the stalk like the parts of a feather, interspersed with still smaller leaflets. The plant has a single flower stalk with three branches at the top, each terminated by a rosy, pensile bell, looking like a flower bud, decorated with slender, recurved bracts. One would wait in vain, however, for these debutantes to appear otherwise. "Buds" they will seem to be throughout their season. Opening the five closed petals you will find attached to them five creamy petals and many stamens. In the center of the flower are innumerable pistils, which finally form a lovely claret-colored ball of gossamer plumes, each serving to waft through the air the little seed-like fruit.

Flower of Prairie Smoke, *Geum triflorum*.

Seed head of Prairie Smoke, *Geum triflorum*.

The Geum belongs to the Rose family, the family containing most esteemed cultivated fruits of the temperate regions, as the strawberry, peach, cherry, pear - a long list. At the head of this list should be placed the apple, which - tame, wild and crab - has within the past week gladdened the eye with its pearly, rose-tinted clouds of bloom.

Along with the Geum will be seen in abundance another plant, the Lousewort [Canadian Lousewort, *Pedicularis canadensis*]; or, if you prefer a more euphonious name, the Wood Betony. The former name was given by farmers, who fancied that cattle feeding upon the plant were infested with one of the Egyptian plagues. The pinnately divided leaves of betony are arranged in a rosette. The pale yellow flowers are bilabiate, with the laterally compressed upper lip arched over the stamens and the pistil and are densely crowded in the leafy spike. This plant belongs to the Figwort family, in which the flowers are usually two-lipped - like the snap dragons - and are ingeniously adapted to insect pollination.

Canadian Lousewort, *Pedicularis canadensis*. Photo ©Merle R. Black, Wisconsin Flora.

Another prairie flower of brighter yellow is the Hoary Puccoon [*Lithospermum canescens*], popularly called Indian Pink, perhaps because the roots afford a beautiful red dye much used by the Indians. Slender leaves thickly clothe the stem, which bears at the top a good-sized cluster of the brilliant flowers, tubular at the base and spreading abruptly into a flat border. Such a flower is called salver shaped. The tube serves to enclose the stamens and hold the nectar. The puccoon shows its

Hoary Puccoon, *Lithospermum canescens*. Photo ©Merle R. Black, Wisconsin Flora.

relationship to the heliotrope in the shape of the flower and in the way in which the flower cluster uncoils as the buds expand.

It is not uncommon in Maying parties to hear the explanation, "Oh, what a pretty fern!" as the attention is attracted to the delicate many-branched leaf of the Early Meadow Rue [*Thalictrum dioicum*], one of the crowfoot family (Ref #1). The leaf stalk of the meadow rue is branched four times into three divisions, so that it bears in all eighty-one leaflets. The leaf is as pleasing as that of a fern and adds an airy fern-like grace to a bouquet. Ferns, by the way, have three characters by which they may be distinguished from other plants - a coiled leaf-bud which unrolls at the base when the leaf expands, displaying a forked venation; a second peculiarity of the fern., and, later some brown or yellowish dots usually on the under side in which are developed spores. Ferns have neither flowers nor seeds, while one individual of the Early Meadow Rue has a spray of tiny pollen-bearing flowers, and another the seed-producing flowers. These separated flowers are pollinated by the wind.

Early Meadow Rue, *Thalictrum dioicum*.

Red Columbine, *Aquilegia canadensis*

A much admired genus of the crowfoot family is the Columbine, which has one representative in Minnesota [Red Columbine, *Aquilegia canadensis*]. All the columbines make a brave showing, from the cultivated ones of different hues to the peerless large white species, to the state flower of Colorado, [Rocky Mountain Columbine, *Aquilegia caerulea*]. But our species holds its own among them all, burgeoning in red and yellow in rich relief against the background of gray rock, as it nods from boulder crevices. The columbine has both calyx and corolla and both are colored. The long spurred petals gorged with nectar for the entertainment of insect guests have given rise to the name honeysuckle which, to avoid confusion, would better be kept for the true honeysuckle in no wise related to the columbine. The foliage of the columbine is fern-like as is the meadow rue and others of the same family.

Golden Ragwort, *Packera aurea*

In the meadows may also be seen an early composite, the Golden Ragwort [*Packera aurea*]. In the composite family what seems to be a flower, at a careless glance, is in reality a flower cluster, composed of small closely crowded flowers, with buds or tubular flowers in the center that might be mistaken for stamens and pistils, and surrounded on the outside by whorls of green leaves called bracts

that exactly imitate a calyx. The foliage of the ragwort is more or less cut or parted, hence the name.

Near the Hill seminary [in St. Paul] lies a fairyland, carpeted in May with flower mosaics, pink, white, yellow and blue. The Spring Beauty forms the pink vistas of this woodland; the False Rue Anemone, the white, Marsh Marigold, ragworts and buttercups, the yellow; violets and phlox, the blue. In this flower elysium cares fly away, and all alike are happy children reveling with the flowers. But one is shocked to see traces of the slimy serpent in this paradise. It has been desecrated by dumps of old tins and other rubbish, and it is rumored that it is the intention to cut a road through the place. By next summer, no doubt, it will exist only in memory. The confines of the wilderness are becoming more and more restricted under the resist-less march of settlement.

The low phlox (*P. divaricata*) of this region runs the gamut of colors from white, blue to lilac. It is readily transplanted and blossoms freely, and will flourish in sun or shade. There is no better plant, wild or cultivated, for edgings or borders, as it tones harmoniously with other flowers. The world is indebted to America for the splendid cultivated phloxes which have developed, one and all, from various native species.

Notes:
1. Crowfoot Family, (Ranunculaceae) -in current times this family is now called the Buttercup Family
2. The text of this articleincluded photos of Trillium, Early Meadow Rue, Phlox, Geum, Columbine and Hoary Puccoon, all by Mary Meeker.

Hawthorn of World Fame through Poetry and Prose of England, Virginian Waterleaf, White Lily and Geranium Featured in June - June 4, 1911

Many are the allusions to the hawthorns of England in poetry and prose. Indeed, the very name, England, calls up to the observer of plants a mental picture of hawthorn thickets and hedges. It is pertinent to ask why writers neglect to extol the American species. For our hawthorn trees or shrubs are of extreme beauty, when covered with their snowy fleece of bloom, or when glowing with the sweet tasting, stony bright red "thorn apples." The leaves of the hawthorn may have margins varying from toothed to lobed or divided. The thorns may be long and stout, or few and feeble; thus belying the name.

Of all the botanical mazes, that of the hawthorn is the most intricate. In Gray's seventh edition, no less than sixty-five species of the genus are described, as well as many varieties. Some botanists go so far as to affirm that every individual is a different species. When the ordinary student wearies of cudgeling his brain over minute differences of stamen, nutlet or whatnot, he ignominiously names the species "*Crataegus sp.*?" or passes on the puzzle to the greatest authority, Professor Sargent, the director of the renowned Arnold Arboretum of Boston. Those desirous of extending their acquaintance of hawthorns may see grouped together in this arboretum the largest collection of both native and foreign species known to the world.

Virginia Waterleaf, *Hydrophyllum virginianum*.

At this time hydrophyllum [*Hydrophyllum virginianum*], the Virginian waterleaf makes a profuse growth in rich woodlands. It may be recognized by the pinnately divided leaf, often blotched with white, and the somewhat showy flower cluster made up of lavender colored bells to which a touch of fragile grace is added by the slender protruding stamens.

Close by the waterleaf, may be seen some of the *smilacinas*, or False Solomon's Seal[s], [such] as the star-flowered with a sparsely flowered raceme of small white blossoms [now classified Maianthemum stellatum]; *Smilacina racemosa*, stouter, with larger, coarser and smaller and more numerous compactly clustered yellowish flowers, [False Solomon's Seal, now classified as *Maianthemum racemosum*]; *S. trifolia*, similar to and equally beautiful, but of lower habit than the leafy stemmed *stellata* and affecting bog lands [now named Threeleaf false lily of the valley, now classified as *Maianthemum trifolium*]; last of all, the two-leaved *Maianthemum canadense,* the lowliest and loveliest - often called wild lily-of-the-valley [or Canadian Mayflower].

Starry False Solomon's Seal, *Maianthemum stellatum*.

The latter species is not classed with the *smilacinas* because it has

four floral leaves and four stamens instead of six. [Classification of these has since changed.] All of these species are decorative in fruit as well as in flower, for they have red berries.

Canadian Mayflower, *Maianthemum canadense*.

Fortunately, those who are interested may see growing by the side of the smilacinas the real Solomon's seal [*Polygonatum biflorum*], similar in habit to *Smilacina racemosa*, but with a few drooping, elongated, green flower bells above the leaves, all along the stem, succeeded in time by dark purple berries. Why called Solomon's seal, do you ask? Burrowing in the earth will disclose a fleshy underground stem scarred at interval with rounded, shallow pits that have been likened to a seals - a seal for each annual aerial stalk. "Venerable is Solomon" you will exclaim, if you attempt to trace their number.

Red Baneberry, *Actaea rubra*.

In the same vicinity is the Baneberry, more noticeable in fruit than in flower. One species bears large red berries [*Actaea rubra*], and another white, on short red stalks [*Actaea pachypoda*]. The flowers are inconspicuous and white; the leaf, large and branched, composed of many small leaflets.

Few are unable to name the Wild Geranium [*Geranium maculatum*] when they observe the form of the leaf, the flower cluster, and the flower. [Photo below] This geranium enlivens large expanses of woodlands with its purplish flowers. The significance of another name - cranesbill - is seen when the blossom goes to seed, forming a birdlike beak, from the base of which uncurl fine little seed-like fruits.

The text of this article included photos by Mary Meeker of Virginia Waterleaf, Wild Geranium, Hawthorn, Wild Lily of the Valley, Smilacina and Star-flowered Smilacina.

Wild Roses Know When it is June, According to Miss Butler, Who Describes Blossoms that Delight the Rambler Out-of-Doors - June 11, 1911

One unfamiliar with the native flora is surprised to learn that the superb large-flowered Pentstemon (*P. grandiflorus*) [Ref #1] is not an exotic. A hillside covered by this plant, with its large, showy, five-parted, two-lipped bells of delicate, varying shades of blue, lilac and lavender, once seen, can never be forgotten. Attached to the inner base of the corolla are five curved stamens, the origin of the scientific name, Pentstemon. One of these stamens has, instead of the usual pollen sacs, a close tuft of hairs. This bearded stamen, partially closing up the throat of the corolla tube, and thus facilitating insect pollination, has given rise to the common name, beard-tongue. The thickish even-margined, grayish green leaves as may be noted from the accompanying print, are arranged in opposite pairs. They are covered with an evanescent bloom, like the leaves of the cabbage and pea, or the fruit of the plum.

Large or Showy Penstemon, *Penstemon grandiflorus*, (aka Showy Beardtongue)

The Pentstemon is but one of the many native flowers as remarkable for size, color and beauty as many that are laboriously cultivated in gardens or greenhouse, and with the elusive, individual charm rarely retained by plants torn from their natural setting.

Spiderwort, *Tradescantia bracteata*

Another beautiful flower, often cultivated, and like the beard-tongue, a frequenter of sandy soil, is *Tradescantia virginiana*, commonly called spiderwort, from the slender, keeled leaves stretching out like the legs of a spider. (Ref. #2)

This plant is closely allied to the lilies. The flower is on the plan of three - having three green sepals, three bright reddish or bluish purple petals, six stamens and a pistil usually made up of three united carpels. The stamens are a distinctive feature of the flower, with their yellow pollen sacs against the purple petals. The stalks of the stamens are densely fringed with purple hairs, whose beauty has a depth "that is deeper still" under the armed eye of the microscope. The hairs, when magnified, are seen as branching chains of exquisitely tinted spherical and cylindric, bead-like cells, within which pulsate circling streams of protoplasm - the living substance - endowed with the same properties in the humblest and in the highest forms of life.

Many plants of the pea or pulse family are now in bloom. Among them the lupine [*Lupinus perennis*] will easily rank first, by reason of its showy spikes of blue or purple butterfly-shaped flowers, and beautiful palmately divided leaves. The lupine also grows in sandy soil, to which it is adapted by a tap root penetrating to a depth that will tire out the most persistent digger who may intend to obtain a specimen for transplanting.

Below - Historic Photo: A field of Wild Lupine in the Eloise Butler Wildflower Garden on May 31, 1946. Photo from a Kodachrome taken by Martha Crone

Bunchberry, *Cornus canadensis*, in flower Photo ©Robert Mohlenbrock, USDA-NRCS Plants Database.

A search of bogs and low rich woodlands will be rewarded at this time by the lovely dwarf cornel [Bunchberry, *Cornus canadensis*]. What seems like four white petals in this flower are bracts - as the leaves on flower stalks are technically named - and no integral part of the blossom, but grouped about a cluster of small flowers, which develop later into a rounded bunch of bright red berries, toothsome to children, although of cloying sweetness. [This plant had a long history in the Eloise Butler Wildflower Garden, being first noted in the Garden in 1910 and then planted by Eloise Butler, then by Martha Crone, and as late as 1960 by Ken Avery. No longer extant.]

One would not at first sight connect this lowly herb with its relatives, the dogwood shrubs, one species of which is favored for hedges on account of its attractive white, flat-topped flower clusters, its white or sometimes purple fruit, and especially for the vividly red stems that give the needed touch of color to the winter landscape. [Red-Osier Dogwood, *Cornus sericea*]

Oyster Mushroom, *Pleurotus ostreatus*. Photo ©Diana Thottungal, MPRB

Although not flowers, we cannot pass without a glance the denizens of decaying logs and stumps. To students of foliage and epicures, these forms of vegetation may be of more interest than

the flowering plants. The edible oyster mushroom, *Pleurotus ostreatus* is somewhat shell-like in shape, and the individuals overlap one another like oysters attached to some substratum in the sea. The under surface is covered, too, with gills, not for breathing, as in oysters and fish, but for bearing spores or reproduction cells.

How do the roses know that it is June? With the advent of the crowning month of the year, gardens, wild wood and prairie are ever redolent with the fragrance and glorified with the supernal loveliness of the rose.

Strange to say, a cult exists, slowly increasing in numbers, that considers single flowers - yes, even single roses - more lovely than the double ones, transformed by man from beautiful utility to useless beauty. For, with the multiplication of the velvety petals disappear the stamens and pistils which are the essentials for the formation of the seed - the purpose of the flower in nature.

We may marvel at the skill of the florist in producing a cabbage-like double-dahlia and chrysanthemum; but we linger over and dearly love the single forms of these flowers. Banks of single roses in large gardens of double ones compel admiration and seem more decorative than the artificially produced double ones, to these possible-mistaken few.

Notes:
1. Large-flowered Pentstemon , now spelled “penstemon”, *Penstemon grandiflorus*, Showy or Large Beardtongue). Eloise planted this species in 1910 and 1911, as did Martha Crone in 1933, '34 & '35.
2. *Tradescantia virginiana*. In the Eloise Butler Wildflower Garden today we have *T. bracteata* and *T. ohiensis*. Eloise planted *T. virginiana* in 1908 and 1909 but it has not survived.

The text of this article included photos by Mary Meeker of Penstemon, Spiderwort, Wild Rose, Dwarf Cornel and Lupine.

Painted Cup Notable among Wild Flowers Found near Minneapolis; Bog-trotter's Zeal Repaid by Orchids and Other Swamp Blossoms - June 18, 1911

A**n account of the notable wild flowers** of Minneapolis would be incomplete without some mention of the Painted Cup, *Castilliea coccinea*. [Now - Scarlet Indian Paintbrush, *Castilleja coccinea*]. In the latter part of May, the meadows favored by this plant are visions of delight. Painter's brush is by far the better name for it, as only the tips of the floral leaves of the compact spike flame in scarlet, or, less frequently, in yellow, thus suggesting a brush dipped in the pigments of an artist's palette. It is the leaves (bracts) among the flowers that are colored vividly. The tubular calyx has but a narrow rim of brightness and the slender, greenish corolla is, contrary to rule, the least conspicuous of all.

Indian Paintbrush, *Castilleja coccinea*. Photo ©Merle R. Black, Wisconsin Flora.

Purple Pitcher Plant, *Sarracenia purpurea*.

The reckless enthusiast now plunges wildly into mire and willingly pays toll to myriads of mosquitoes. He must needs be a bog-trotter in order to see the carnivorous plants and orchids found only in un-drained tamarack swamps. Imbedded in bog mass, whorls of curiously constructed, lurid-veined leaves, arched and hollow, and filled with water, greet his eyes. It is the pitcher plant, *Sarracenia purpurea* - a plant that lives partially on insects.

A fly seldom escapes from one of these leaf traps when she visits it for a sip of water. For, if she succeeds in crawling up the inner slippery surface, she will encounter a margin of stiff, downward pointing hairs that will hinder further progress. As the insects decay, they are absorbed. In this way the plants obtain the nitrogenous food, more or less necessary for all plants, as shown by the use of fertilizers.

But what is novel about the insectivorous plants is that they capture living insects. They can thereby get a living from poorer soil and with feebler roots than can other plants. The flower also has a striking appearance. The calyx is dark red purple. The fiddle-shaped petals of rich wine color are folded over a genuine umbrella - the stigma of the pistil, which not only serves the usual purpose of pollination, but also keeps the pollen and nectar dry - an umbrella in use long before man thought of making one.

We have but one pitcher plant in this latitude. Another species is a native of the southern states, and still another of the Pacific coast. Others again are found in the old world and in the tropics. All these may be recognized by the pitcher leaf, but the plants vary considerably, for "nature repeats herself with a difference." The southern species has a yellow flower; the pitcher of the Pacific states has an arching roof and a lurid, fishtail appendage; and some of the tropical pitchers are on vines, and are filled with digestive fluids, protected by motile lids that close automatically over the struggling captives.

Showy Lady's-slipper in the Woodland Garden, *Cypripedium reginae*

The greatest prize of the swamp is our state flower, the showy Cypripedium, the pink and white Lady's-slipper [The Showy Lady's-slipper, *Cypripedium reginae*], a member of the orchid family. No flower, wild or cultivated, is more magnificent than this. The plant is the tallest of the genus and has the broadest leaves and the largest and most beautifully tinted flowers, often bearing two on one stalk.

Only North American Indian ladies wear slippers of this style, and the precise always call them moccasins. Goddesses, also, must have approved of this kind of footgear, for the scientific name, *cypripedium*, means Venus' boskin.

Small White Lady's-slipper, *Cypripedium candidum*. Photo ©Derek Anderson, Wisconsin Flora

Six cypripediums are native to Minnesota - the Showy [*Cypripedium reginae*], the small white [*(Cypripedium candidum*], the two-leaved pink [*(Cypripedium acaule* also called Moccasin Flower or Stemless] and the small and rare Ram's head cypripedium [*Cypripedium arietinum*]. All but the last named may be seen in their season in the wild garden in Glenwood park. The ram's head is a comical little boskin, with two horns that readily suggest the popular name. [She did not list the two varieties of the Yellow Lady's-slipper, *Cypripedium parviflorum* var. *makasin* and var. *pubescens* but goes on to write:] The photograph of the larger yellow cypripedium was taken in Dr. T. G. Lee's wild garden on the River road in Southeast Minneapolis. Here have been transported with patience and skill the charms of "the deep tangled wildwood." The fern in the background is the rare or local male fern, *Aspidium filix-mas*. The two slender petals of this moccasin flower look like the corkscrew ringlets of the old-time spinster.

Ram's head Lady's-slipper, *Cypripedium arietinum*. Photo by Martha Crone, June 9, 1954.

Of extreme interest are the twayblades, cousins of the *cypripediums*. They have been introduced into the wild garden in Glenwood park and have blossomed faithfully for two successive years. Two species are shown in this print growing side by side [note - we illustrate them separately]. The flowers are bits of fairy gossamer. In one species they are green [*Liparis loeselii*; the Yellow Wide-lip Orchid]; in the other [*Liparis liliifolia*; the Brown wide-lip Orchid] they are a trifle larger and of an indescribable shade of mauve. They belong to the genus *Liparis*. Another genus of twayblades is *Listera*, not yet represented in the wild garden. [Note; *Listera convallarioides,* Broadlipped Twayblade, and *Listera cordata,* Heart-leaf Twayblade, were added in later years, but are no longer extant.]
The tropics abound in orchids of bewildering forms and hues, many of them air plants; but we are grateful for those we have, although they are hidden for the most part in the cool recesses of the bog land. A tree in the tropics is a garden in itself, when covered with trailing ferns, orchids and other air plants. Some of these orchid flowers simulate gay butterflies in

shape and coloring; one called the "flower of the Holy Ghost," resembles a dove sitting on its nest. The fantastic shapes are conformations to the insects that pollinate the flowers. For information on this fascinating subject, the student may be referred to Muller's *Fertilization of Flowers* and William Hamilton Gibson's *Our Native Orchids.*

Yellow Widelip Orchid, *Liparis loeselii*.
Photo ©R K Kupfer, Wisconsin Flora

Brown Widelip Orchid, *Liparis liliifolia.* Photo
©Merle R. Black, Wisconsin

Also, when floundering in the bogs, we come across the Wild Calla [*Calla palustris*], a flower just as lovely, though smaller, as the well-known cultivated calla imported from Africa. This species has a creeping stem and heart-shaped, glossy leaves. It belongs to the Arum family, which includes, as you may remember, the skunk cabbage and Jack-in-the-Pulpit. Like them, too, the showy part of the inflorescence is a large bract or spathe enwrapping a dense cluster of small flowers.

The text of this article included photos by Mary Meeker of Wild Calla, Yellow Lady's-slipper, Showy Lady's-slipper, Twayblades, Pitcher Plant and Painted Cup.

Blue Flag, Native Minnesota Iris, Classed as Richest of Lilies; Early Meadow Rue and Larkspur Treated by Miss Butler - July 2, 1911

Born in the purple, born to joy and pleasance,
Thou does not toil nor spin,
But makest glad and radiant with they presence
The meadow and the lin.
The wind blows and uplifts thy drooping banner,
And round thee throng and run
The rushes, the green yeomen of they manor,
The outlaws of the sun.
Thou art the Iris, fair among the fairest,
Who, armed with goldenrod
And winged with the celestial azure, bearest
The message of some god.
O flower-de-luce, bloom on, and let the river
Linger to kiss thy feet!
O flower of song, bloom on, and make forever
The world more fair and sweet

Thus sang Longfellow of the iris, most fitting emblem of France, the leader in refined taste and art. "If eyes were made for seeing," we do not need to be poets in order to note the grace of the recurved petals, the stately pose of the flower and the choice reserve that withholds, except under close inspection, the delicate finish of etched lines and blending of color.

Blue Flag, *Iris versicolor*.

The flower is richer than other lilies by reason of the pistil terminating above in three leafy divisions colored like the petals. Behind them are artfully concealed the three long stamens in exactly the right position for the insect guest to be powdered with the pollen.

Early Meadow Rue, *Thalictrum dioicum*

An ardent lover of flowers has dreamed of a garden devoted entirely to irids [sic] from all quarters of the earth and including the hybrids produced under cultivation - of every conceivable shade and combination of color, ranging from dwarfs to splendid grenadiers, and with a succession of bloom throughout the growing season. Among them our native iris, or "Blue Flag" [*Iris versicolor*] would have an honored place.

The Early Meadow Rue [*Thalictrum dioicum*] is one of the most common woodland flowers of May. In June, the much showier late and Tall Meadow Rue, *Thalictrum polygamum*, (Note 1) is a charming feature of the low lands. Its white, feathery masses of bloom, swaying in response to the gentlest breeze, cannot fail to win admiration.

No less lovely and growing in the same habitat or on drier soil is the dainty Northern Bedstraw, *Galium boreale*. The flowers are very small but so compactly massed that the tract so fortunate as to be starred with them can be detected from a distance.
This plant has the same effect in bouquets as the much esteemed exotic, Gypsophila.

Tall Meadow Rue, *Thalictrum dasycarpum*

Northern Bedstraw, *Galium boreale*

Prairie or Carolina Larkspur, *Delphinium carolinianum*. Photo ©Merle R. Black, Wisconsin Flora.

One species of Galium, very similar to the one under consideration, is cultivated under the name "baby's breath." The entire genus is characterized by small leaves arranged in whorls on slender, four-sided stems and tiny three or four parted corollas. Some of the species are covered with hooks which grip everything at hand, and the roots of some afford a red dye, thereby accounting for the other popular names, cleavers and madder.

Whoever sees a rocky hillside lit up with the tall candles of the white larkspur (Note 2) will decide that they outrank with their ethereal beauty the great blue larkspurs in the formal garden of royal pedigree. Burly bumblebees flock about the plants, clasping each flower in turn upon the wand like stalks and thrusting their long tongues into the upturned spurs to extract the sweets within.

It seems necessary to write a work in favor of what are usually called weeds, which may be defined as plants out of place, growing where we wish something else to grow. The print of the Cow Parsnip [*Heracleum maximum* - she is referring to the photo in the article] shows fine decorative possibilities. A rampant growth of this herb gave character to a certain roadside. Barely an hour after a photograph was taken, the plants were mown down and nothing left in their place by monotonous stubble. A plea is offered for the next season: O scytheman, spare this weed! It is harmless, and does its best to make glad the waste places. It is named for the god Hercules on account of its massive bulk.

Compare it with the castor bean occupying the central post of honor in an ornamental mound of flowers. Has it not as vigorous a growth; are not the leaves as large and finely formed and the flowers as beautiful as that of the favored imported bean?

Turning from the sturdy habit of the *Heracleum* to the *Linnaea* we are reminded that it is proverbial that goodness and sweetness are concentrated in small masses. For the Twin Flower (note 3) is a trailing, small-leaved evergreen studded with pairs of little white flowers striped with pink.

Cow Parsnip, *Heracleum maximum*

Twin Flower, *Linnaea borealis* L. Photo ©Kitty Kohout, Wisconsin Flora.

It was a favorite with its namesake, Linnaeus, and that it becomes of every one who once enjoys its exquisite delicacy and fragrance. The wild garden in Glenwood Park is the only place where it may be found in Minneapolis. To conserve this flower alone is a sufficient reason for the perpetuation of the place.

Tours to the Garden. The following was also printed at the beginning of the article.

Miss Butler will conduct parties through the Wild Botanic Garden in Glenwood Park, Tuesday and Thursday mornings, meeting them at the terminus of the Fourth and Sixth Avenue north Street Railway, Sixth Avenue and Russell Avenue North, at 10 o'clock; also Saturday & Sunday afternoon, meeting then at 2:30 o'clock at the same place. One hour later on the same days, persons coming by automobile or carriage will be met at the entrance to the Garden, on the boulevard, at a point northeast of Birch Pond in Glenwood Park. To reach Birch Pond, turn in at the left on Western Avenue where the Park Boulevard intersects the avenue.

Notes:

1. *Thalictrum polygamum.* Here she refers to a species known as King of the Meadow that is not present in Minnesota. The species present in Minnesota and known as Tall Meadow Rue and indigenous to the Garden is *Thalictrum dasycarpum*.
2. Prairie Larkspur or Carolina Larkspur, *Delphinium carolinianum* ssp. *virescens,* first planted in 1910 and in many years thereafter. The older botanical name is *Delphinium virescens.*
3. *Linnaea borealis* ssp. *americana* was indigenous to the Garden area. It was also planted in the Garden by Martha Crone in 1933, 1934 and 1936. Ken Avery planted it in 1961.

The text of this article included photos by Mary Meeker of Blue Flag Iris, Northern Bedstraw, Larkspur, Cow Parsnip, Twin Flower and Late Meadow Rue.

Milkweed Flowers Much in evidence during July, Harebells, Ox-Eyes, and Water Lilies Also Bloom in Abundance - July 9, 1911

At present the flowers most in evidence are the milkweeds. About a dozen species of them are indigenous to Minnesota. Every one knows the tall, rank, Common Milkweed [*Asclepias syriaca*] and probably admires more than the large umbels of pale purplish flowers the rough, gray seed pods, that, splitting down one side, disclose a wondrous freight of closely packed, brown seeds. A gust of wind quickly twirls these out; for each seed, in place of a magic carpet is provided with a tuft of white, silky down to transport it to some distant place.

Whorled Milkweed, *Asclepias vericillata*

Swamp Milkweed, *Asclepias incarnata*

The first milkweed to appear was the oval-leafed, white-flowered species of the prairies [Oval-leaf Milkweed, *Asclepias ovalifolia*] This has been succeeded by another species [*Asclepias vericillata*, the Whorled Milkweed] with smaller white blossoms and threadlike leaves. Meadows and treeless swamps are gay with large masses of a rose colored milkweed [Swamp Milkweed] *Asclepias incarnata;* and sandy banks and roadsides are fairly ablaze with red and orange *A. tuberosa*, which has been successfully transferred to gardens. It is rightly named Butterfly Weed, not only because the flowers attract hosts of butterflies, but because they vie with them in gorgeous coloring. Another name, pleurisy root, recalls the alleged medicinal properties of the milkweeds that gave rise to the scientific name *Asclepias* - a modification of the name of the ancient physician Aesculapias.

Butterfly Milkweed, *Asclepias tuberosa*

Most of the milkweeds, as the term implies, are furnished with a copious, milky juice. Crawling insects are likely to be covered and impaled by this sticky fluid, which exudes from wounds made by their sharp claws, as they scale the stems of the plants, and thus prevents them from rifling the nectar provided by the flowers for the pollen-distributing, hairy-bodied flying insects.

Wonderful are the adaptations of the flower to desirable insect guests. Above the petals is a crown of five hood-like nectaries, each bearing within a slender, inverted horn. The center of the flower is designedly slippery.

When an insect alights on this slimy surface to sip the abundant nectar, her feet slip and are tightly caught in crevices, also of fell design. When she extricates her toes, so to speak, she drags out attached

to them a dangling pair of pollen masses - pollinia, a part of which is sure to adhere to the pistil of the next milkweed flower she visits. Insects have been caught at this season with stalks of these pollinia attached to every one of their six feet.

Flower detail of the Common Milkweed, *Asclepias syriaca*

Blue Harebell, *Campanula rotundifolia.*

In contrast with the robust milkweed, peeps out from rocky, wooded banks, the drooping, purplish Blue Harebell [or Bluebell Bellflower], swaying on its slender stalk. It is identical with the bonny bluebell o' Scotland, so often alluded to in Scottish literature. One might wonder on seeing the slender, attenuated leaves why the plant is called *Campanula rotundifolia.* The rotund leaves are the first comers, and generally die away before blossoming time. (Note 1)


American Wintergreen, *Pyrola americana* Sweet. Photo ©Emmett J. Judziewicz, Wisconsin Flora.

Particularly under cone-bearing trees may be found the false wintergreen, or Pyrola (Note 2). The somewhat round and thick leaves of this plant do not rise far above the ground; the sweet, waxy white or pinkish flowers are arranged in wand-like racemes. To think of this plant in its native haunts sets the gypsy blood a coursing for a tramp in the wild to breathe the air from the pines and to crush their needles under foot.

After the Pasque flower, our most conspicuous anemone is the *canadensis* [*Anemone canadensis* Canada Anemone], once known as the *pennsylvanica.* On account of a similarity of leaf it is often taken for a white geranium. The flower, however, has an entirely different structure from that of the geranium. The anemone, for instance, has no corolla; the white floral leaves are sepals. The *Garden Magazine* for July has a paper on anemones, especially recommending this species for plantings, and emphasizing the value of white flowers for harmonizing discordant colors and for toning down the hot and violent reds and yellows and outrageous magentas.

Canada Anemone, *Anemone canadensis*.

The meadows and copses are now wild with the ox-eye (*Heliopsis*) [Smooth oxeye, *Heliopsis helianthoides*], much like the wild sunflowers, and distinguished from them only by the specialist in a few details. The ox-eye is a forerunner of the golden seas of bloom that characterize the waning summer. It is to be commended for its profuse growth and for its adaptability to varying conditions.

For coolness, rest and peace go to the lakes encircled and islanded

by the refreshing white lilies serenely resting on the surface of the water among the large, round leaf pads. These lilies of the water toil not, neither do they spin. They are, indeed, lotuses with power like those of the Nile to induce dreams and visions. The flowers are closed at night. At sunrise, if one chances to be at a lily pond, he will be entranced to see the flowers, burst open all at once under the influence of the sun - a sudden transformation of the dark water into a scene of enchantment.

Smooth Oxeye, *Heliopsis helianthoides*

American Water Lily, *Nymphaea odorata* Photo ©Scott A. Milbum, Wisconsin Flora.

The pond lily of this vicinity [American Water Lily, *Nymphaea odorata* ssp. *tuberosa*] (Note 3), has but little fragrance compared with that of the East. The stout, subterranean stem scarred with the evidence of former leaf and flower stalks has also tubers which break off to propagate new plants. The pond lily is of special scientific interest because it illustrates Goethe's theory that all the parts of a flower are modified leaves. The green sepals merge into the white petals, and they, in their turn, into broad yellow stamens, which become narrower toward the center.

Somewhat stiff and coarse by the side of the white lily is the Yellow Cow Lily [Yellow Pond Lily, *Nuphar lutea* ssp. *variegata*], a plebeian, if you please, but a pleasing foil to the patrician beauty. Nevertheless anyone would admire the flower of the wee cow lily, measuring less than an inch across. This species is common in Nova Scotia and New Brunswick and has been reported in Minnesota.

Tours to the Garden. The following was also printed.
Miss Butler will conduct parties through the Wild Botanic Garden in Glenwood Park, Tuesday and Wednesday mornings, meeting them at the terminus of the Fourth and Sixth avenue north street Railway, Sixth avenue north and Russell Avenue, at 10 o'clock. Also Saturday & Sunday afternoon, meeting then at 2:30 o'clock at the same place. One hour later on the same days, persons coming by automobile or carriage will be met at the entrance to the Garden, on the boulevard, at a point northeast of Birch Pond in Glenwood Park. To reach Birch Pond, turn in at the left on Western Avenue where the Park Boulevard intersects the avenue.

Notes:

1. *Campanula rotundifolia.* Eloise Butler first planted this species in the Garden in 1908. Martha Crone planted it in 1933.
2. We believe she is referring to *Pyrola asarifolia,* now reclassified as *Pyrola americana,* called American Wintergreen. Eloise Butler first planted this species in the Garden in 1909 and 1910.
3. *Nymphaea odorata* was planted in the Garden in 1933 at the newly created Mallard Pool. These had been obtained by Eloise Butler the previous fall and heeled in at Mrs. Babcock's house. Eloise passed away before she could plant them in the spring. Martha Crone did the job

The text of this article included photos by Mary Meeker of Common Milkweed, Swamp Milkweed, Water Lily, Ox-eye, Harebell and Canadian Anemone.

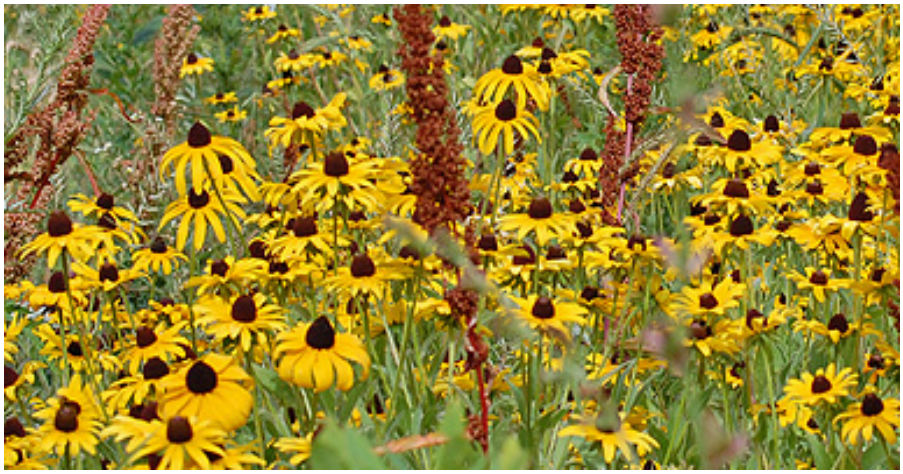
Lily Declared Crowning Wild Flower near Minneapolis in July; Miss Butler Describes, Also, the Blossoms That Kept it Company - July 16, 1911

Doubtless Everyone Would select as the crowning wild flower for the calendar months of the growing season in Minneapolis the pasque flower for April, violets for May, roses for June and lilies for July.

Of our three native lilies the Turk's-cap [shown above], although not the lily of Palestine, may be said to surpass the glory of Solomon, as it is arrayed in recurved orange-red petals flecked with spots of purple and in buds like fingers of (unintelligible in original). Sometimes as many as forty blossoms are borne on a single plant. Beautiful, also, are [is] the yellow swamp lily, (Ref. 1) with floral leaves spotted with brown and less recurved than those of the Turk's-cap, and the Wood Lily, *Lilium philadelphicum*, with an erect, cup-like flower of deep, glowing red. The vivid colors of all these lilies were developed in crucibles fired by summer's fiercest noon-tide heat.

Wood Lily, *Lilium philadelphicum*
Photo by Martha Crone on June 22, 1949 in the Garden.

Troops of Black-eyed Susans boldly stare at roamers over the hillsides. [photo below] As we return Susan's unblinking gaze we see that her eyes are a velvety, purplish brown instead of black. This coneflower, *Rudbeckia hirta*, is a composite. The "eye" is made up of many small, tubular flowers, and each yellow eyelash is also a flower.



Another composite adorned with yellow ray petals and towering in splendor above its competitors in rich, alluvial soil, is the Cup Plant, *Silphium perfoliatum*. The large leaves, arranged in pairs along the stem, are united at the base to form a deep cup for holding water.

This may serve the double purpose of tiding the plant over a dry spell and of keeping unwelcome, crawling insects from the flowers. People in the tropics use a similar means to keep the ants from food by inserting the legs of the dining tables in dishes of water.

Compass Plant, *Silphium laciniatum*

The interesting Rosin, or Compass Plant of the prairie [*Silphium laciniatum*] is of the same genus as the cup plant. Its leaves are cut edgewise and point due north and south. Persons lost on a trackless, uninhabited prairie might find their bearings by this vegetable compass. An army officer stationed on the western plains, the first observer of the plant, thought the leaves must have the properties of the magnetic needle. Failing to prove this theory by experiments, he forwarded specimens of the *Silphium* to Dr. Asa Gray, the American Darwin, who suggested that the peculiar position of the leaves was for the purpose of avoiding the direct rays of the sun in order to check too great a loss of water by transpiration.

Cup Plant, *Silphium perfoliatum*

Since that time "polarity" has been observed in the leaves of many other plants growing in drought regions or in exposed situations, as the eucalyptus trees of Australia. Such trees, of course, afford no shade. The habit may be noted in the roadside weed prickly lettuce, and in some degree even in the garden lettuce.

To subdue the brilliant orange and reds of the lilies and composites, Mother Nature has planted among them with judicious and generous hand various white flowers, as *Veronica virginica,* (Ref. 2) with feathery spires of bloom, some branched like candelabras, topping slender stems, clothed at intervals with whorls of narrow, pointed leaves. It is popularly called Culver's Root, or Culver's Physic, because one of that name extracted a specific from the root.

Culver's Root, *Veronicastrum virginicum*

New Jersey Tea, *Ceanothus americanus*

The shrub-like Ceanothus [*Ceanothus americanus*] or New Jersey Tea, seemingly covered with sea foam and mist, has drifted from the Atlantic to the valley of the Mississippi. This plant has historic interest as well as refined beauty. It is well that it grows in prodigal masses in wide distribution. For, after the Boston Tea Party, a brew of the leaves of the *Ceanothus* plenished the teapots of our revolutionary forebears.

Who pictures a swamp without the familiar cattails and red-winged blackbirds flying in and out piping their cheerful notes? In an aesthetic craze a few years ago, the cattails, or flags, were the popular decoration of the home, filling large jardineres or embroidered or painted on screens and lambrequins. Though of inherent decorative

value they have fallen into “innocuous desuetude” by reason of overuse.

It is a warning to “avoid the obvious.” Individuality, not too pronounced or extreme, should be expressed.

Why, for instance, because a neighbor has a beautiful plant on his premises should every one in the vicinity straightway fill his grounds with the same in monotonous reiteration? Among the hosts of ornamental plants may not something else be selected besides hydrangea, scarlet rambler, canna and golden glow to prevent satiety? If a plant is “all the rage” it is the very best reason why one should fall out of line and imitate nature in her endless variety.

Common Cattail, *Typha latifolia*

The flower cluster of the cattail (Ref. 3) is made up of innumerable blossoms of two sorts, without nectar, fragrance or bright color, because they are pollinated by the wind. The slender spike at the top bears the pollen-producing flowers. These after doing their work wither sway and disappear, while the flowers of the stouter body below ripen into tiny, seed-like fruits that are converted by tufts of fine hairs into aeroplanes that will take a long flight through the air before they settle down to propagate new plants.

Cattails are still in fashion with children, who carefully store them for a gala time, when they are dipped in kerosene to use for torches in Halloween processions.

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Notes from the text:
1. Swamp Lily - It is not clear how she is referring to these lilies. Only two are native to Minnesota, *L. michiganense* and *L. philadelphicum*. She is probably first referring to our non-native Turk's-cap, *L. superbum*, that she noted growing in the Garden as early as 1908 and Eloise planted more. It is also usually more reddish. *L. michiganense*, with a lighter color would be the second lily she refers to, while *L. philadelphicum* becomes the third species. Unfortunately she uses the term "Swamp Lily" which is the name commonly applied to *Crinum pendunculatum* and *Crinum americanum*, both southern plants, and don't grow here. It is also possible that the "swamp lily" is the non-native Canada Lily, *L. canadensis* whose petals are much less recurved.
2. Culver’s Root - now classified as *Veronicastrum virginicum*
3. Cattails in the Eloise Butler Wildflower Garden are of two species, Narrow-leaved Cattail, *Typha angustifolia* and Common Cattail, *Typha latifolia.*

The text of this article included photos by Mary Meeker of Turk’s-cap Lily, Cup Plant, New Jersey Tea, Culver's Root, Compass Plant and Black-eyed Susan.

Mint, Abundant in Minnesota, Delights the Senses; Miss Butler Tells of Wild Flowers in Glenwood Park Garden - July 23, 1911

There are many kinds of Gardens. Those are most interesting that have an individual flower and express, as pleasure grounds should, within the bounds of good taste, the owner's personality. Some persons aim to have strictly an old-fashioned garden, loving best the delightful old-time favorites rooted deep in memory. Again, there are literary gardens, devoted to the flowers mentioned by some author, as Keats or Shakespeare; while more, perhaps, make a specialty of a few beautiful plants, and with solicitous care become experts in raising them.

Mrs. Mable Osgood Wright, in her *The Garden, You and I*, describes a fascinating garden designed by an invalid lady, in which nothing was admitted but plants with fragrant flowers or leaves. In such a garden, the mints would abound, and among them would be *Monarda fistulosa*, the Wild Bergamot, that now enlivens the borders of woods and meadows with large clumps of bright lavender bloom. Abundant as it is, we are never ready to cry "Hold! Enough!" For, besides its delicate perfume, it delights the eye as well. This plant will at once remind one of the cultivated, red-flowered bee balm or Oswego tea (*Monarda didyma)* (ref #1) The mints may be recognized by their square stems, two-lipped flowers, and usually aromatic odor.

Wild Bergamot, *Monarda fistulosa*.

The Tofieldia, or false asphodel, (Ref #2) is an attractive little lily. Its compact raceme of feathery, small, white flowers forms the larger part of the plant, surrounded by plants that one would trudge miles to see - wild buckbean, orchids, the pitcher plant, and just now a marsh harebell with a bluish white blossom poised on the frailest imaginable stalk.

In wet meadows, the white flowers needed to offset the garish yellow are supplied by the Water Parsnip (*Sium*) (Ref. #3) and the Spotted Cowbane (*Cicuta*) (Ref. #4), both poisonous, alas! to man and beast. Cattle generally know instinctively that they are inedible and avoid them. But children should be taught not to taste unknown plants. The leaves of the water parsnip are uni-pinnate, while the leaves of the cowbane are twice or thrice compounded. The Poison Hemlock (*Conium*) [*Conium maculatum*], a relative of theirs naturalized from Europe, furnished, according to tradition, the poison by which Socrates was put to death.

The parsley family, to which these dangerous plants belong, together with, strange as it may seem, several food plants, as caraway, parsnip, carrot, celery, may be recognized in the main by the flat-topped flower clusters with stalks arranged like the sticks of an umbrella, each bearing a like bunch of smaller stalks, crowned with a tiny flower. Such clusters are called compound umbels.

Spotted Water Hemlock (Spotted Cowbane), *Cicuta maculata.*

False Asphodel or Sticky False Asphodel (Tofieldia), *Triantha glutinosa*. Photo ©Merle R. Black, Wisconsin Flora.

The Blue Vervain [Hoary vervain], (*Verbena stricta*), a weed common in neglected, vacant lots, is well worthy of attention. It stands up bravely among ignoble surroundings, old tins, broken bottles and ash heaps, which it attempts to mask. Large, downy leaves thickly clothe the stem. The flower spikes are long and slender, having close rows of seed pods at the base with a ring of bright blue flowers above and tapering at the tip with the still unopened buds. The garden Verbena, unlike this weed, has the lazy habit of lying with its elbows on the ground and getting covered with dirt. Another weed verbena, the *hastata*, (Ref. #5), of slenderer habit, but showy in the mass, is abundant in lowlands; also the white verbena, [*Verbena urticifolia*], slenderer still and with still smaller flowers.

Hoary Vervain, *Verbena stricta* (which Eloise called "blue vervain")

Leadplant, *Amorpha canescens*.

Regiments of clover hussars (Petalostemum) bivouac on the prairies with shakos of violet red or of white. Three species respond to muster roll in Minnesota. All are armed with very slender leaf blades and all reek a pungent odor. (Ref. 6).

The amorphas - camp followers of their military cousins, the petalostemums - have pale, hoary, pinnate leaves and narrow flower spikes. The typical flower of their tribe - the pea - is butterfly shaped, with five petals: The broad standard, or banner, two slender side petals, the wings, and two partially united petals, the keel, arched over the stamens and pistil.

The amorphas have but one of these petals, the standard, the purple color of which contrasts pleasingly with the yellow stamens. Amorpha leaves are used in hard times as a substitute for tea. Farmers call the smaller species of the genus “shoestrings” because the roots thickly interlace the soil and make plowing more laborious. The Tall Amorpha (Ref. #7), is often cultivated and is an esteemed ornament of parks.

Desert Indigo Bush, *Amorpha fruticosa*. Photo ©Derek Anderson, Wisconsin Flora.

Great St. Johnswort, *Hypericum ascyron*

One of our finest native, yellow flowered plants is the Great St. Johnswort, *Hypericum ascyron*. It may be seen in rich lowland about Minnehaha. It is tall and sturdy, a profuse bloomer and interesting in bud and in fruit. The multiplicity of the stamens gives a light-some grace to the flowers of this family. The flower of this species is large, measuring some three inches across. The petals, when aging, roll up lengthwise, forming a spidery appearance, which adds variety to the inflorescence, together with the striking buds and seedpods. We can but wonder that with all its merits this plant has not been seized upon for cultivation. In the wild garden in Glenwood Park, it is well established in two colonies.

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Notes:

1. Also called Scarlet Bee Balm. This is an introduced non-native plant.
2. Now classified as *Triantha glutinosa*, also called Gluten tofieldia, or Sticky false asphodel
3. *Sium suave*, also called Hemlock Water Parsnip.
4. *Cicuta maculata,* Spotted Water Hemlock.
5. *Verbena hastata*, Swamp verbena
6. These plants are now classified in the genus Dalea. Two species are in the Garden, Purple Prairie Clover, *Dalea purpurea* and White Prairie Clover, *Dalea candida.*
7. We believe she is referring to *Amorpha fruticosa,* Desert Inidgo-bush, or False indigo, one of two Amorpha species native to the state, the other being Lead Plant, *Amorpha canescens*.

The text of this article included photos by Mary Meeker of Wild Bergamot, False Asphodel, Great St. Johnswort, Red Prairie Clover, Blue Vervain and Water Parsnip.

Flowering Spurge Graces Roadside and Prairie in Late summer; Varieties of Yellow Blooms Classed as "Sunflowers" Confusing. - July 30, 1911

On dry or sandy soil by the roadsides and on the prairies, throughout the rest of the season, will be found the flowering spurge, *Euphorbia corollata*. On account of its white, filmy, lace-like inflorescence, it is much used by florists to set off other flowers in bouquets.

Flowering Spurge, *Euphorbia corollata.*

What seem to be petals in the flower cluster are colored bracts. The flowers themselves are inconspicuous. The euphorbias form a large family of highly specialized plants, including the small-leaved, pestiferous weedmats [or sandmats], poinsettias and trees in the tropics. One of the characters is a milky sap, which is, in the rubber tree, now indispensable to man. A wild species, with leaves about the flowers deeply margined with white, is cultivated under the name of mountain snow [or Snow on the Mountain, *Euphorbia marginata*].

The painted leaf [or Wild Poinsettia, *Euphorbia cyathophora*]. a quaint little native euphorbia, a newcomer in the wild garden, is like a miniature poinsettia, the bracts being blotched with red. Often trained against the wall in greenhouses is a tropical species, a stout vine covered with cruel thorns [Christplant, *Euphorbia milii*]. One might well believe that from this was plaited the crown that symbolized the agony of the world.

Snow on the Mountain, *Euphorbia marginata*. Photo Patrick J. Alexander, USDA-NCRS Plants Database.

Wild Poinsettia, *Euphorbia cyathophora*. Photo ©G D Bebeau

Very confusing are the many varieties of yellow blooms which the amateur is likely to class as sunflowers. The green involucre under the head of the sunflower is made up of several unequal rows of leaves overlapping each other like shingles on a roof; while the ox-eye, mentioned in a previous article,

Cup Plant, *Silphium perfoliatum*. One of 4 Silphiums in the Garden.

has nearly equal rows of bracts, and the Cup Plant may be known by the large leaves united to form a cup. All the sunflowers are natives of North America, and about fifteen are found within the borders of the state. When this country was discovered, the huge-flowered species was cultivated by the Indians, the seeds affording food and oil and the stalks textile fibers. The size of the flower makes apparent an obeisance to the sun, a feature not peculiar but common to the leaves as well and to other plants to get needful exposure to light.

Widowsfrill (Starry Campion), *Silene stellata*

Dusky glens are illuminated by the Starry Campion, *Silene stellata*, (Ref. #1) thus refuting the poet who says that the night has a thousand stars and the day but one. The poignant beauty of the flower is due to the delicate white-fringed petals that cap the green calyx bell. Some of the silenes are catch-flies and are active assistants in the campaign against the malignant germ carriers, slaying innumerable hordes by glutinous hairs.

All the food of animals is directly or indirectly prepared from the elements of earth, water and air by green plants. Plants without leaf-green chlorophyll are, like ourselves, consumers instead of producers. Among them is the Dodder, *Cuscuta*, [*Cuscuta gronovii*], an annual belonging to the Convolvulus family (Ref. #2). The seed germinates in the ground. But as soon as the plantlet can stretch to neighboring vegetation the connection with the earth dies away and it twines closely around its hapless host, drawing out the life-sap with countless, tooth-like roots.

Dodder, *Cuscuta gronovii*

It is merely a yellow, leafless, thread-like stem, which in the course of time, will wreath its victim with a beautiful garland of compact, small white flowers. The dodder is pernicious in the garden and on the farm. A very inferior quality of flower or fruit, if any at all, would be produced by plants attacked by it. It is called love vine. A less demonstrative and less self-seeking affection is certainly to be preferred. We allow the Dodder to grow in the wild garden in order "to point a moral and adorn a tale," but strive to keep it under restraint.

We will reserve our admiration for plants that make their own living, as the sweet basil or mountain mint. [*Pycnanthemum virginianum*] It needs no other charm than its sweet fragrance, although the flat-topped flower clusters have a cool gray, artistic tone.

To this agreeable list we may add another mint, Wild Anise (Ref. 3), which has long, whorled spikes of blue flowers. The leaves are white beneath. When bruised they exhale an odor like that of anise.

Virginia Mountain Mint,
Pycnanthemum virginianum

Anise Hyssop, *Agastache foeniculum.*

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Notes:
1. *Silene stellata* is sometimes called Widowsfrill. Eloise first planted this species in the wildflower garden in 1910
2. Morning Glory Family. Dodder, *Cuscuta gronovii*: The newer family classification for this plant is CUSCUTACEAE - Dodder Family. Eloise first noted the presence of this plant in the wildflower garden in 1911.
3. Blue giant-hyssop, or Fragrant Giant-Hyssop, *Agastache foeniculum*. Eloise Butler planted it in the Garden first in 1908.

The Wild Botanic Garden in Glenwood Park, became the "Native Plant Reserve" and was then renamed the Eloise Butler Wild Flower Garden in 1929.

Tramp Plants, Migrants from Foreign Lands, Thrive in Minnesota; They Often Pre-empt Ground, Crowding Out Native Citizens of Soil. - August 6, 1911

Most of our vegetable tramps, like the human ones, are of foreign birth. These migrants from the old world, where the land has been cultivated from times immemorial, inured through fierce competition, have become adaptable and fit to cope with hard conditions.

Hence, when brought by design or accident to a new country, they pre-empt the land, wherever they can gain roothold, and crowd out other plants. Our native plants can hold their own on virgin soil. But more than seven evil spirits (weeds) enter into land once cultivated, and then neglected, and dwell there, and the last state of that field becomes worse than the first. The best remedy for weeds in constant cultivation.

Bouncing Bet (Soapwort), *Saponaria officinalis*

Some naturalized plant citizens, with attractive flowers, one might like to have in the garden, if they were not so aggressive. But, if admitted, they would selfishly shoulder out the weaker and possible more desirable inmates. The place for such vagrants is, therefore, the roadside where they will thrive on a hard bed and a crust of earth. Bouncing Bet and Butter 'n' eggs may be cited as examples. A blue ribbon should be awarded them for certain sterling qualities. During protracted droughts, when other vegetation has succumbed and even the grass blades have shriveled, they alone put out their blossoms and brighten what would otherwise be a bare and desert waste. The name Bouncing Bet (Ref. 1) probably refers to the luxuriant growth; but the other name, "old maid's pinks", seems especially applicable. For to do their duty cheerfully under adverse circumstances is the metier of spinsters

Butter 'n' Eggs, *Linaria vulgaris*

The pale and the deep yellow colors of the flowers of *Linaria vulgaris*, so well set off by the slender, sage green leaves, are aptly characterized by the rustic name, Butter 'n' eggs. The nectar held in the sharp pointed spur lures the humble bee to the lips of the blossom, stubbornly closed, as in the related snapdragon, to other insect rovers.

Three sister composites - eupatoriums - grow together in the meadows. The homeliest, *E. perfoliatum,* has rather a coarse aspect, and its dull gray flowers scarcely command a glance from the passerby. Yet, under closer observation, they will not fail to please and will not be ignored when properly arranged in a vase.

Boneset, *Eupatorium perfoliatum*

White Snakeroot, *Ageratina altissima*

Every natural growth has a beauty of form, if not of color, that needs only to be seen to be appreciated. As Emerson said, *"We are immersed in beauty, but our eyes have no clear vision."* Folks brought up in the old-fashioned way have a bitter memory of this *eupatorium* under the name of Throughwort or Boneset, which in the spring was dealt out copiously to every member of the household, as a thorough remedy to prevent or to remove influenzal bone aches and, in general, "to purify the blood."


Sweet-scented Joe-Pye Weed, *Eupatorium purpureum*

The tall Jo-Pye weed, *Eupatorium purpureum*, succeeds the rosy-hued swamp milkweed in furnishing red tones to the meadows; a red, however, of a subdued, crushed raspberry hue. (Ref 2) It is named for a New England Indian, who concocted medicine from it for fevers that once had a ready sale.

The most beautiful of the eupatoriums is the White Snakeroot, *E. urticaefolium,* (Ref 3) also of medicinal repute. It is of value not only on account of its profuse, soft, starry inflorescence of harmonious white, but because it is easily cultivated and can be depended upon to bloom after frosts have set in. In one garden at least in Minneapolis, besides the wild one, where it stars the ground in late summer, it is the most prized ornament. The flowers yield not a whit in beauty to those of the ageratum, which they resemble so much in form that they once bore the name *ageratoides* - meaning like ageratum.

Wild Cucumber, *Echinocystis lobata*.

Woods without vines are comparatively bare, formal and unduly trim. Best of all, vines form tangles in which birds nest and sing. Of the annual vines, none has a more graceful and riotous growth than the common Wild Cucumber (*Echinocystis lobata*). Lacking an upstanding object to embrace, it will run along the ground and form borders of bewitching spires of bloom. The fibrous, netted inside of the seed vessel, sometimes called balsam apple, resembles on a smaller scale that of a vine of the South known as the towel gourd, which is sold in the market as a bath sponge.

The gourd family can produce huge fruits, as the mammoth squashes and pumpkins, the prize winners of county fairs. Prominent among the tropical gourds - for the family is most largely represented in the tropics - is the calabash, whose hard-rinded fruit, when cleared of its contents, is indispensable to the natives as receptacles for food. The big pumpkins on a calabash

tree might brain, in falling, the luckless wayfarer.

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Notes:
1. Bouncing Bet, also called Soapwort, *Saponaria officinalis*
2. We wonder if Eloise listed the wrong species. She refers to meadows and replacing the swamp milkweed and then calls the color a crushed raspberry hue. All three are more characteristic of *E. maculata*, the Spotted Joe-Pye Weed.
3. White Snakeroot. In later years the scientific name was changed to *Eupatorium rugosum*, and very recently the plant has been reclassified into the ageratums as *Ageratina altissima*. Eloise does not mention the toxic elements of this plant. Use the link below for this plant to read more.

The text of this article included photos by Mary Meeker of Wild Cucumber, White Snakeroot, Joe-Pye Weed, Bouncing Bet, Butter 'n' Eggs and Boneset.

Common Plantain Is Compared with the Alisma Plantago, Otherwise Known as the Water Variety. - August 13, 1911

The cosmopolite weed, the common plantain or ribwort *(Plantago major*) is presented in this paper for comparison with the somewhat more decorative Water Plantain *Alisma plantago*. But it is hoped that the former will win some favor, although universally considered a homely weed.

The flower stalk of Common Plantain, *Plantago major.*

The contrast of the wandlike, fruiting spikes with the deeply ribbed rosette of leaves is surely not without charm. The leaves illustrate one of the methods of preventing over-shading, a difficulty met with in the rosette habit. In the plantain each leaf gets its modicum of light and air, by the upper and inner leaves being smaller and shorter stalked than the lower ones. Birds are fond of the seeds enclosed in the little rounded pods, which are lidded like snuff boxes. Farmers put the leaves in their hats to protect from sunstroke in haying time. Again, when macerated, the leaves are deemed a sovereign remedy to use as a poultice for inflammatory bruises.

Water Plantain *Alisma plantago*.

The water plantain, fringing pools and lakes, is no relation to the roadside weed. It has received its name from the similarity of the leaves in shape, arrangement and venation. The small flowers are entirely different, being white and arranged in a large, loose, many branched cluster.

Green-headed Coneflower, *Rudbeckia lacinaita*.

Veritable fields of cloth of gold are now gleaming with sunflowers, coneflowers and golden rods, not for kings alone, but for all the people. In this display of gold the tall coneflower, *Rudbeckia laciniata,* [Green-headed Coneflower] takes the lead - a brother of Black-eyed Susan, with eyes of golden brown, fringed with longer, drooping lashes of paler yellow. The palmi-parted leaf readily shows that it is the original of the popular favorite, the cultivated golden glow. Many prefer the single wilding, for it is less insistent to be observed and does not pall upon the taste. It fulfills, moreover, its purpose in nature, that of producing seed.

Lepachys pinnata [Gray-headed Coneflower, now classified as Ratibida pinnata] shown in the print above [below in the this text] has a longer cone and more drooping rays. It is abundant on the prairies. L. *columnaris,* (Ref #1) is distinguished by a still longer and slenderer cone, but with shorter rays.

A variety has lovely velvety petals of dahlia red, with a dash of yellow at the base. This long coneflower, with its variety, is the pride of a beautiful garden in the city, whose owner delights in native plants. (Ref. #2).

Long-headed Coneflower, *Ratibida columnifera*.

A much admired annual is now in bloom in the wild garden - the partridge pea, *Cassia chamaecrista* (Ref. #3). The beauty of the large flower of clear, bright yellow is enhanced by a purplish brown eye formed by the stamens and the blotching of some of the petals. The delicate, fresh, green leaflets of the compound leaf close together when touched and also for protection from cold at night.

Partridge Pea, *Chamaecrista fasciculata.*

Sensitiveness is an endowment of all forms of life. As plants have no nerve fibers, stimuli are conveyed from cell to cell. Many mem[missing text] in a marked degree. The tendrils of the common pea and the tendrils or stems of all climbers must have this quality in order to find the required support. The foliage of the mimosas, plants common in warm regions, make instant response to disturbing influences. “At the tramp of the horse’s hoof on the turf of the prairies far in advance are closed the leaves of the shrinking mimosa.” The natives call the mimosa “shame”; for, presto! a filmy mass of green turns at a touch into a bunch of seemingly dry twigs, which slowly erect themselves and resume their leafy appearance when the danger is past.

A large crop of mushrooms - edible and inedible, of all sizes, shapes and colors - promoted by the frequent warm showers are daily harvested. The mental, if not the physical, appetite is keenly whetted of those inoculated with a passion for those interesting forms of vegetable life. The photograph shows different stages of development of the edible Parasol Mushroom, *Lepiota procera*. [Note - photo not shown.] The largest specimen was 15" high and the cap measured 8-1/2 inches across. One cap is broken off so that the gills, the spore bearing surface, may be seen. Although the mushroom is taken as a type of rapid growth, the “spawn” - the slender, many-branched, subterranean fibers - are of slow formation and may be of great age. Small round “buttons” appear on these fibers and expand quickly into the aerial, spore-producing bodies.

In this species of *Lepiota,* the cap at the top of the stalk at first resembles a small cone. It finally spreads out like a Japanese parasol, breaking away the veil - a membrane covering the gills - a vestige of which remains in the form of a ring, which again, like a parasol, may be moved up and down the stem.

In the ring on the stem and the scaly top of the cap, this fungus is like a deadly *Amanita*, but it is without the volva or cap at the base, a character of the poisonous genus.

The question is often asked, how can edible fungi be distinguished from the poisonous form? No infallible rule can be given. One must learn to distinguish carefully one species from another, and never taste of an unknown or doubtful specimen.

Tours to the Garden. The following was also printed at the beginning of the article:
Miss Butler will conduct parties through the Wild Botanic Garden in Glenwood Park, Tuesday and Thursday mornings, meeting them at the terminus of the Fourth avenue south and Sixth avenue north Street Railway, Sixth avenue and Russell avenue, at 10 o'clock; also Saturday & Sunday afternoons, meeting then at 2:30 o'clock at the same place. One hour later on the same days, persons coming by automobile or carriage will be met at the entrance to the Garden, on the boulevard, at a point northeast of Birch Pond in Glenwood Park. To reach Birch Pond, turn in at the left on Western Avenue where the Park Boulevard intersects the avenue. Phone - T. S. Calhoun 1021; N. W. Main 4295

Notes:
1. Long-headed or Prairie Coneflower, now classified as *Ratibida columnifera*.
2. This variety is usually known by the name Mexican Hat.
3. Partridge Pea - Now classified as *Chamaecrista fasciculata*.

The text of this article included photos by Mary Meeker of Common Plantain, Water Plantain, Long-headed Coneflower and Parasol Mushroom.

Wild Balsam Occupies Low Places in Wild Gardens; Leaves Shine Like Silver When Put in the Water. - August 20, 1911

Every inch of space on low, moist soil not held firmly by tufted meadow grasses and sedges is occupied by the Wild Balsam (Ref. #1). The smooth, glossy stem has a translucent appearance, and its joints are swollen, affording another proof, of course, that rheumatism is induced by dampness! The leaves are thin and delicate. When dipped in water, their under-surfaces appear to gleam like quicksilver, an appearance due to tiny hairs that catch the water and enmesh air bubbles. The hairs keep the pores that are abundant on the under side of the leaves from being clogged with water. Some water beetles show the same phenomenon when they dive; but, in their case, the air bubbles supply them with the requisite oxygen during the period of immersion.

Spotted Jewelweed, *Impatiens capensis*

Pale Jewelweed, *Impatiens pallida*.

Little girls are familiar with the plant as Jewelweed. By means of the curved nectar spur, they hook the flowers in their ears and are fine ladies, for the nonce, with gold ear-drops. The most common species of Balsam has flowers usually spotted with brown, of varying shades of orange and yellow, and sometimes pink or white. This is called *Impatiens biflora. I pallida* has larger, pale yellow, often unspotted flowers, with stouter spurs.

The term Impatiens refers to the nature of the seed-vessel, the origin of another common name, touch-me-not. If you gently press the plump, ripe seed-pod between your thumb and forefinger you will be startled by its breaking up into writhing, wormlike pieces, and by the seeds snapping out several feet into space. Many other plants are seed-catapults, among them the violets. If you do not pick your pansies before they go to seed you may lose your eyes some day when leaning over the pansy bed.

Showy Tick-trefoil (or Canada Tick-trefoi)l *Desmodium canadense*

Fur-bearing animals are involuntary agents of seed-dispersal. Cows have been seen patiently chewing their cuds with their faces plastered over with "beggars' lice" and their tails festooned with burdock burrs. People are brought into service. You will be busy for some time after a walk in the woods in getting rid of various stick-tights that have taken a free ride attached to your clothing, some even burrowing into the flesh. The tick trefoils (ref #2) will be in the crowd. You will know them by the scalloped pea-pods, covered with small barbed grapplers. When you pull them off, the scallops separate, each one having a single seed. The tick trefoils have, as the name implies, compound leaves made up

of three leaflets. The blossoms are bright purplish pink, clustered in long racemes.

We stop long to admire the delicate, pure white flowers and splendid leaves of the arrowhead or *sagittaria*, which densely fringes the margins of brooks and ponds. Disappointment will follow if we are tempted to pick them for a bouquet, for the flowers and leaves wither quickly, when detached from their natural element, the water. The print suggests how their beauty might be preserved in decorative designs for leather, metal or wood. [Note that newspaper photo is shown in the pdf of the article] The leaves of *sagittarias* vary greatly in width. Some are very slender and others are without the arrow lobes.

Further east, thickets of tall, leafy Buttonbush, *Cephalanthus occidentalis,* abound in the neighborhood swamps. The "buttons" are creamy balls over an inch in diameter, composed of closely packed, small, tubular flowers. A specimen of this interesting plant, with many other species, was shipped from Massachusetts for planting in the wild garden in July of the first year of its founding (Ref. #3). The location of the plant was not recorded, and it was supposed to have died out. The next year another plant was obtained, which produced one blossom the following season, and the next summer a dozen or more blooms.

While admiring these, a random glance perceived a bush some distance within the swamp luminous with starry globes. It was the first buttonbush, all covered with buttons à la mode, which had grown to maturity, undetected in the rank vegetation.

The seed pods of Showy Tick-trefoil as described in the text above.

Buttonbush flower ball, *Cephalanthus occidentalis.*

Broadleaf Arrowhead, *Sagittaria variabilis.*

The buttonbush must not be confused with the Buttonwood [*Platanus occidentalis*], a tree which is also strung with buttons hanging from long, fibrous stems. This tree is [not] (Ref. #4) a native of Minnesota. It is called also plane tree, because of its smooth bark, which scales off in patches, leaving light-colored spots, as if it were affected with leprosy.

It reaches a magnificent growth on the river bottoms of the Middle West, where it is known by another name, the Sycamore. You remember the sobriquet of Senator Vorhees of Indiana - the "Tall Sycamore of the Wabash."

The present season seems favorable to the Wild Onion, *Allium cernuum,* (Ref. #5), for pink balls of fairy grace lifted on slender, leafless stalks give a magical brilliancy to the billowing grasses of large expanses of the prairie. Do not be disconcerted by the name. The onion is, after all, a sort of lily, considered by every one a flower queen, and the odor is not perceptible, except when the plant is bruised. The leaves of this Allium are very narrow, unlike those of the early leek, so abundant in the wood in early spring.

If you should peer under the boughs of a dense plantation of prickly ash in the wild garden, you would see stars - not from being cruelly pricked by the thorns, nor do you see them as a reflection from the sky, but actual stars -geasters, literally, earth-stars - not revolving in space, but grubby, toad-colored bodies attached to the ground. In fact, a species of puffball, with a thick envelope that breaks up when mature into starlike rays reflexed to the ground. Before the rays are formed the geaster looks like a big, dull acorn.

The mature seed pod of London Planetree, *Platanus* X*acerifolia*. See Ref. #4.

The species photographed is the Collar Earth-star, *Geaster triplex* [now *Geastrum triplex*]. Other species are collarless and in some the spore-bearing part is unstalked. A tiny species has been found at Minnehaha, about the size of a pea. The edibility of the earth-stars has not been tested.

Collar Earth-star, *Geastrum triplex*, Photo ©Michael Kuo.

Nodding Wild Onion, *Allium cernuum*

Tours to the Garden. The following was also printed at the beginning of the text.
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Notes:

1. Wild Balsam. As Eloise explains further on, this is a common name at that time for Jewelweed. "Wild Balsam" is derived from the Latin family name for the species, BALSAMINACEAE and in English as the Touch-me-not Family. The name Jewelweed is more commonly in use today in the United States. The current botanical classification of the two species is *Impatiens capensis* Meerb. for the Spotted Jewelweed (Formerly *I. biflora*) and *Impatiens pallida* for the Pale Jewelweed.

2. There are two tick trefoils extant in the Eloise Butler Wildflower Garden today: Showy Tick-trefoil (or Canada Tick-trefoil) *Desmodium canadense*; and Pointed-leaved Tick-trefoil, *Desmodium glutinosum*.

3. The first plant was obtained from Malden MA and planted on July 2, 1907. The plant could have been collected in Minnesota as it is native, but its range is restricted to the counties on the eastern edge of the State from Pine in the north to Houston in the south, Goodhue excepted.

4. *Platanus occidentalis*. The western most range of this tree is Iowa and its northern range almost reaches southern Minnesota. A hybrid of this tree and the Oriental Planetree of Europe, *Platanus orientalis*, and named London Planetree, *Platanus Xacerifolia*, is widely used in parts of the Southwest for landscape planting.

5. *Allium cernuum*. This plants common name is Nodding Wild Onion. The other common wild onion of this area is known as "Prairie Wild Onion" and is *Allium stellatum.* Flowers are similar in structure other than *A. stellatum* flowers are not nodding when in flower but rather held upright resembling stars.

The text of this article included photos by Mary Meeker of Earth Stars, Arrowhead, Buttonbush and Wild Onion.

Prickly Armor Furnishes Protection for the Thistle; Caterpillars Crawl by and Browsing Horses Shun Plant. - August 27, 1911

The Scotch made no mistake in selecting the thistle for their national flower. Bristling with needle-like prickles, a type of stern independence, it does not admit of close intimacy. But we are captivated by its reddish purple blooms, fragrant as roses and brimmed with sweetness. Economical and thrifty, the thistle can wrest a living from the scantiest means; but "ower canny" as it is, it sends out myriads of plumy seeds, by which it will establish itself in richer soil whenever the opportunity offers. The voracious caterpillar crawls by it to plants with unarmed herbage; the thistle is browsed only be underfed donkeys. It is often decked with winged visitants of black and gold, the thistle birds or goldfinches, surrounded by drifting clouds of silvery plumes, as they lightly swing on the matured flower heads and eagerly break them apart to obtain their favorite food. The buds, the beautiful flower clusters, the feathery balls of fruit, and the deeply lobed leaves with ruffled margins of the thistle, all readily lend themselves to designs for ornament.

Field Thistle, *Cirsium discolor*

Canada Thistle, *Cirsium arvense*

The Field Thistle, *Cirsium discolor*, is particularly lovely by reason of its pale pink, or sometimes white flowers, and long, drooping leaves. The bull thistle (Ref. #1) has larger heads and still more formidable prickles; while the tall swamp thistle is less stout and spiny. [*C. muticum*].

These species are not undesirable for a garden, if one has space enough to keep them at arm's length. But no good word can be said for the Canada Thistle (Ref. #2), an emigrant from Europe that multiplies apace, although allowed no rights of citizenship. It seems useless to legislate against it; for it has a running root stock that spreads while we sleep, and the seeds fly over the country to sow discomfort everywhere. It is a pest because it is so difficult to keep within bounds. If you wish to know just how Theophilus Thistlewaite thrust three thousand thistles through the thick of his thumb (too low an estimate by far!), clear by hand a plot of land that has been overrun by Canada Thistles.


Dog Fennel, (Stinking Chamomile or May Weed). *Anthemis cotula*

A vegetable pariah, also of foreign origin, humbly occupying waste places, is especially abundant about drains and pig styes, and is stigmatized by the rude Saxon term, "stinkweed". It is also known as Dog Fennel and as May Weed, although it blooms throughout the summer until nipped by frost. It is as pretty as its much admired cousin, "Marguerite" - cultivated here (Ref. #3), but an injury to the hay fields in the East - for it has the daisy beauties of pearly white ray

flowers encompassing golden tubular flowers of the disk.
The leaf too, may be favorably compared with that of the fern. But the weed is without regard on account of its associations and fetid odor. It bears the scientific name *Maruta cotula* (Ref. #3), and its nearest kin are the garden and medicinal chamomiles.

Marsh Grass-of-Parnassus, *Parnassia palustris*

One might be justified in asking the mower to stay his scythe in the meadow until the fleeting beauty of the Grass-of-Parnassus is past (Ref. #4).

It is not a grass, but it is always found among the grasses. The glossy leaves are clustered in a rosette close to the ground. The cream white flowers grow singly on the stalk, and the deeply veined petals are marvels of perfectness in detail. Poets drew inspiration from similar species on Mount Parnassus, in the legendary days of Greece.

Happy is he who finds in brooks winding through meadows the tiny blossoms that vie with the violet and the rose in popular favor - the forget-me-not. It is not easy to Forget these pale blue flowers with yellow eyes - an unequaled harmony of color. The Brook Forget-me-not (Ref. #5), after three unsuccessful attempts has been firmly established in the wild garden, where it blooms the summer long. The parent stock in Needham, Massachusetts, grew waist high in prodigal profusion. "Oh!" said one admirer, "these flowers are just like those we see on hats!"

True Forget-me-not, *Myosotis scorpiodes*

In pastures, giant puffballs [*Calvatia gigantea*] may be seen breaking through the grass. The one photographed [shown in attached article] weighed 14oz but specimens weighing twice as many pounds are occasional. Several over four pounds in weight have been noted this season. Some of the small puffballs have a smooth surface, some are covered with tiny tubercles of spines, and some are stalked. In the puffballs, the spores are enclosed instead of being exposed to the air on the surface of gills or tubes as in the umbrella or bracket forms of fungi. As far as is known, the true puffballs are edible. They are to be used for food when the inside is firm and white - like cottage cheese.

Giant Puffball, *Calvatia gigantea.*

When mature, the puffball splits regularly or irregularly, according to the species, discharging a mass of dark, powdery spores. Those fond of this delicacy are much grieved when they see a specimen that has been used as a football and kicked to pieces. If one realized that a puffball when fresh is good, palatable food, he would resist the impulse that impels him to destroy it.

State Fair exhibit. The following was also printed.
An exhibit of the wild garden in Glenwood Park will be given in the horticulture building at the coming state fair. During the remainder of the season Miss Butler will have no regular days for conducting parties through the garden. However, those wishing to see the Garden may set a time by telephone to suit convenience. Phone N.W. Colfax 1689.

Notes:

1. *Cirsium vulgare* - distributed throughout North America and is listed as a prohibited noxious weed in Minnesota.
2. *Cirsium arvense* - distributed throughout North America except for six states in the SE section of the U.S. It is also listed as a prohibited noxious weed in Minnesota.
3. *Maruta cotula*, today classified as *Anthemis cotula*. It is established throughout North America except for the far north Canadian Provinces. It too is listed as a noxious weed by several states. As to "Marguerite" - she is referring to the Oxeye Daisy, *Leucanthemum vulgare* (formerly - *Chrysanthemum leucanthemum*) which has a similar flower arrangement. The old French name for that flower, "Marguerite," is from the petal pulling game of "He loves me, he loves me not" ('effeuiller la marguerite' in the French)
4. Grass-of-Parnassus: There are two native to Minnesota, *Parnassia glauca*, Fen grass-of-parnassus; and *Parnassia palustris*, Marsh grass-of-parnassus. In her 1908 Garden Log, Eloise noted *Parnassia caroliniana* growing in the wild garden. As this species is restricted to the Carolinas and Florida, it would seem impossible to be here. The resolution of this is a notation in *Flora of North America* Volume 12, that P. caroliniana had been misapplied to *P. glauca* in early references such as Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York.
5. Brook Forget-me-not: She refers here to *Myosotis laxa*, which is native to Minnesota and which she first planted in 1909. Introduced later was *Myosotis scorpiodes* which is an introduced plant, native to Europe. It is the plant in the Wildflower Garden today and it also has become naturalized in Minnesota.

The text of this article included photos by Mary Meeker of Canada Thistle, Puffballs, Mayweed and Grass of Parnassus.

Virgin Minnesota Prairie in Full Bloom Surpasses Flora of Tropics; Earth's Tapestry Shows a Riot of Color before Autumnal Frosts. - September 03, 1911

Virgin Minnesota prairie at the height of its bloom surpasses the far-famed flora of the tropics in brilliancy of coloring. Here all shades of red, blue and gold are intricately interwoven in earth's tapestry before it is destroyed by autumnal frosts and replaced by Winter's carpet of snow. Prominent in the riot of color and beauty of design are the *liatras* or blazing stars, with their flower heads loosely arranged in slender wands, or in splendid, compact spikes, sometimes over a foot in length. The flowers might be mistaken for thistles, but they have no stabbing prickles. Other popular names, as gay feather and button snakeroot, show the esteem in which the plants are held.

Prairie Blazing Star, *Liatris pycnostachya*

Minnesota has six species of *liatras,* (Ref. #1) and three of them - L. *Pycnostachya, cylindracea* and *scariosa* have been introduced into the wild garden (Ref. #2). *L. pycnostachya* has gone by, but the other two species are in full bloom. They are easy to cultivate on account of their thick, bulbous rootstalks.

Curlycup Gumweed, *Grindelia squarrosa*

Not many years ago the gum plant, *Grindelia squarrosa,* (Ref. #3) was not to be found within the limits of Minneapolis. It is common on the great plains, and it has spread from the western part of the state until it is now a common weed by sandy roadsides and in vacant lots, and one against which our gardeners and farmers wage battle. Nevertheless, it is an attractive plant with its profuse, pure yellow flower heads resembling sunflowers and its lettuce-green leaves.

We are glad, moreover, to learn that it is of some use, as a specific for ivy poisoning. But why is it named gum plant? Not that it furnishes a delectable wad for the ruminating folk, but because under the flower clusters a mass of sticky, resinous matter is exuded to keep out from the blossoms the crawling insect tribes that are unable to do the work of pollination. It is unnecessary to glue the flower heads to the herbarium sheets, for they provide their own mucilage.

Common Sneezeweed, *Helenium autumnale*

***Helenium autumnale* is a glorious**, late composite in rich, low land. From now on it will unfold its golden disks as long as any flower endures. It blossoms freely and often attains a height of six feet. The soft yellow ray petals are divided like those of coreopsis and surround a convex disk. The leaves are pale green, just the right shade to harmonize with the flowers. They run down on the angles of the stem, making narrow, winglike projections. If the leaves are dried and pulverized they make a titillating powder as efficacious as snuff for those who enjoy sneezing, hence its common name, sneezeweed. (Ref. #4)

Florists cultivate the plant and have produced from it varieties. It is excellent for formal gardens on account of its height, refined color and its late, profuse blooms. It never fails to respond under transplanting. A colony of sneezeweed in the wild garden of two successive seasons which was lifted when in full bloom has repaid the labor by continuing to bloom at its appointed time.

High above the lovely Grass of Parnassus (Ref. #5) rise the spikes of tall lobelia (Ref #6) in such opulence that the meadows appear to be gemmed with lapis lazuli rimmed with goldenrod.

Great Blue Lobelia, *Lobelia siphilitica* showing the closed stamen ring at the pistil.

The tubular portion of lobelia flowers is split down to the base for the convenience of the nectar-seeking insects, and the stamens, five in number, are united in a closed ring around the pistil so that, to the novice, stamens and pistil seem to be a single body. The lobelias may be recognized, whatever their size or color, by these peculiarities.

A certain botanist arriving at a house where he was expected as a guest found the whole family assembled in the front yard in a state of excitement and the host, with coat off, tearing up the flooring of the piazza.

"What is the matter, good people?" he asked.
"Oh, a rat or some other animal has died under the piazza and we shall have typhoid if the body is not removed."
"Poor souls!" the botanist exclaimed, "that is no dead rat. It is only a stinkhorn, a small fungus that will soon disappear. It is not necessary to unfloor your piazza on its account, Why, here it is outside on the grass, and you have had all this work for nothing!"

Eastern North American Stinkhorn Mushroom, *Phallus ravenelii.*

Eastern North American Stinkhorn Mushroom, *Phallus ravenelii.*
The reason for alluding to this vile smelling form of vegetable life is to prevent a similar occurrence. The color, to be sure, is as bad as that of carrion; but, once perceived, it will never afterward be mistaken for anything else. Therefore, it would be a good idea to get one whiff of it at least from the mushroom table at the state fair, where it will be kept tightly corked as as not to befoul the air.
Examining the structure through the glass in which it will be encased you will note a cylindrical stem set in a cup of jelly. The stem is capped when mature by a cone perforated at the top and smeared with dark green slime, which holds the spores. It is from this slime that the bad smell chiefly comes, which is attractive to flies, the active agents in distributing the spores.

The stem is covered with an exquisitely fashioned network. When in the bulbous state, before the stem emerges from the cup and the strong odor is developed, the plant is eaten by the peasantry of Europe, with whom wild mushrooms are a staple article of food.

Notes:
1. Only five *Liatris* species are native to the state: *L. aspera*, Tall or Rough Blazing Star; *L. cylindracea*, Ontario or Cylindric blazing star; L. *ligulistylis*, Rocky Mountain or Northern Blazing Star; *L. punctata* . var. *punctata*, Dotted Blazing Star; and *L. pycnostachya*, Prairie or Great Blazing Star.
2. There is some issue here with her words. Four were introduced to the wild garden by 1911 based on her Garden Log, not three. They were *L. pycnostachya*, introduced in 1907, *L. cylindracea*, introduced in 1908 from the Minnehaha area; and *L. scariosa* and *L. spicata*, both introduced in 1908 also. The latter two are not native to Minnesota but her notes in 1908 state she obtained them from Ft. Snelling and from Mahtomedi. Since some of these species are similar, perhaps she mis-identified them, which may be the case with *L. scariosa* as this is a species of the eastern coast, and as for *L. spicata*, perhaps it may have existed, but like *L. scariosa*, none of the known varieties of this species has been collected in Minnesota.
3. *Grindelia squarrosa*, Curlycup Gumweed. This plant was indigenous to the area. Eloise brought in plants in 1910 from a source in Glenwood Park, within which the Garden was located. Despite the virtues Eloise notes, the Minnesota Dept. of Agriculture considers the plant a noxious weed.
4. *Helenium autumnale* L., Common Sneezeweed. Eloise first obtained this plant for the Garden in 1907 by bringing in specimens she found near the Lake Street Bridge over the Mississippi. She planted more in 1908 and 1909. Martha Crone also planted in the early 1930s. The plant is poisonous to cattle. (UM Herbarium)
5. She discusses this plant in her August 27, 1911 column.
6. Great Blue Lobelia, *Lobelia siphilitica.* It is indigenous to the garden area. Eloise first catalogued it on September 6, 1907.

The text of this article included photos by Mary Meeker of Stinkhorn, Blazing Star, Sneezeweed and Gum Plant.

Fringed Gentian, Termed Loveliest of Blue Flowers, Now in Bloom; Asters and Goldenrod Indicate Autumn Has Reached Minnesota. - September 10, 1911

September brings us what is pronounced the loveliest blue flower of the world - the Fringed Gentian. [*Gentianopsis crinita*]. The indescribable color of rich, deep blue, the exquisite finish of the petals, the large number of flowers borne on a single individual, together with the late time of blooming, make this species of extraordinary value. The poet Bryant has given it immortal fame. Everyone knows his beautiful poem, *"To the Fringed Gentian."* It is somewhat captious to criticize this venerated master of literature and keen observer and lover of nature. Perhaps the case was different in Bryant's Berkshire home but, with us, this "blossom bright with autumn dew, and colored with the heaven's own blue," does not "come alone, when woods are bare and birds are flown." Late August finds it here with a large company of other flowers, and the trees are still in full leafage. The color of the flower, also, is not "sky blue."

Fringed Gentian, *Gentianopsis crinita*. Photo by Martha Crone on September 24, 1950

But who can say what sort of blue may not be found in the sky? Among the many tints gentian-blue will sometimes be seen there.

> Then doth thy sweet and quiet eye
> Look through its fringes to the sky,
> Blue - blue - as if that sky let fall
> A flower from its cerulean wall.

Lesser Fringed Gentian, *Gentianopsis virgata*. Photo ©Hugh H. Iltis, Wisconsin Flora.

A smaller fringed gentian [*Gentianopsis virgata virgata*, formerly *G. procera*] with slight stem, linear leaves and fewer and paler colored blossoms, grows with the showier species. These flowers are annuals. Florists desirous to cultivate them were long baffled in their attempts. It was at length discovered that the seeds were biennial, that is, that they do not germinate until two years old. We must always leave some of the flowers to go to seed, however much their beauty tempts us, in order that the plant may not be exterminated.

Less local in the meadows is the Closed Blue Gentian, or chimney flower *(Gentiana andrewsii).* The tubular flower never expands. It displays all shades of blue. It is sometimes tinted with pink, and sometimes white, or white striped with blue.

There are other small-flowered gentians, with white or blue flowers. The Prairie Gentian, *Gentiana puberula* [Downy Gentian, now classified *Gentiana puberulenta*], has a large handsome, arm-shaped blossom of the deepest, darkest blue imaginable for petals. It looks almost black when seen across the prairie.

Closed Gentian, *Gentiana Andrewsii*

Downy Gentian, *Gentiana puberulenta*

Sure signs of approaching autumn are the asters and goldenrods, the lambent flames of dying summer, that leap up and blaze with unwonted vividness before they are banked with snow. Gray (Ref. #1) enumerates fifty-six species of goldenrod and fifty-nine of aster, a large proportion of which are native to Minnesota. Both are difficult for beginners in botany to determine, but a few of them have such well marked characters that he who runs may read their names.

Stiff Goldenrod. *Oligoneuron rigidum* var. *rigidum.*

For example, the sweet, flat-topped prairie goldenrod, *Solidago rigida* [Stiff Goldenrod, now classified as *Oligoneuron rigidum* var. *rigidum*]. Another flat-topped species is the narrow-leaved, early blooming *S. graminifolia* [now classified *Euthamia graminifolia* var. *graminifolia*, Grass-leaved Goldenrod] found in damp soil. Among the more usual types with many-branched, elongated flower clusters are *S. latifolia* [now classified as *Solidago flexicaulis*, Zig-zag Goldenrod], a wood species, with broad, ovate leaves pointed at both ends, zigzag stems and with flower heads in bunches among the leaves; and in bogs, *S. uliginosa* [Bog Goldenrod], that exemplifies the name in the inflorescence forming a straight, slender reed.

The aster flower head is constructed like that of a daisy. It may be tiny or have a diameter of two inches or more. The ray petals are dark or pale blue, lilac, or white, according to the species.

The New England Aster [*Symphyotrichum novae-angliae*] is tall and many flowered, with long, bright purple rays; *Aster puniceus* [now classified as *Symphyotrichum puniceum*, Red-stemmed Aster] is a swamp species with

New England Aster, *Symphyotrichum novae-angliae*.

flowers of paler blue and hairy, red stems; *A. umbellatus* [now classified as *Doellingeria umbellata* var. *pubens*, Flat-topped Aster] is a tall, flat-topped, white swamp aster; and on the prairies are the small leaved and small flowered *A. multiflorus* [now classified as *Symphyotrichum ericoides*, White Heath Aster or Many-flowered Aster], as lovely as the spiraea, known as bridal wreath; and, loveliest of all, *A. sericeus* [now classified as *Symphyotrichum sericeum*, Western Silver Aster or Silky Aster], a silver gray, silky-leaved aster with large, bright, red-purple flowers.

Wild Rice, *Zizania aquatica*
Photo ©Merle R. Black,
Wisconsin Flora.

No mention has yet been made of the grasses and sedges. Nature has not granted them bright colors, fragrance or nectar, because they are pollinated by the wind instead of by insects, but in place of these attractions, grace and beauty of form, qualities not to be ignored.

They are social plants and live together in large companies. Many sedges have three cornered, solid stems, while all the grasses have round stems which are hollow except at the leaf joints. Colonies of *Zizania aquatica* [wild or Indian rice], may be noted in the shallow waters of lakes and ponds. The leaves are long and slender and tall, attenuated flower spikes pierce the air like needles. The wild rice was carefully harvested by the Indians for breadstuff, and the grain-eating birds eagerly cull its seeds.

No one fond of mushrooms fears to gather and eat freely the shaggy mane, *Coprinus comatus*, for it is easily recognized. There is a lively contest for it on the parade ground (Ref. #2), where it abounds, and the first comers in the morning often carry off basketfuls in the season. The photograph shows several stages of growth [note - we show two separate photos]. The cylindrical cap covered with large scales like turkey feathers finally expands into a disk and deliquesces, dripping with a black fluid containing the spores. The mushroom is eaten of course, before this change takes place and when the flesh is firm and white. The black liquid treated with a preservative may be used as ink. It has been suggested that the government should use this fluid for printing bank notes to insure against counterfeiting. The microscope would at once expose a fraud, for the spores in the ink have a definite size and shape.

The other *copriri* are common and also edible - the ink cap, *Coprinus atramentaries* [Now classified as *C. atramentarius*], whose cap is usually smooth, gray and cup-shaped; and the little ink cap, *C. micaceus,* a small yellowish brown mushroom, common on lawns, especially above decaying roots of trees, throughout the season. The cap of this species is sometimes covered with gleaming, mica-like scales. The gills turn black when mature, but the plant generally dries without deliquescing.

Tours to the Garden. Following the closure of the State Fair where Eloise maintained an exhibit, the following was also printed with this article:

> Miss Butler will conduct parties through the wild garden in Glenwood Park. Those wishing to see the place may set a time by telephone to suit convenience. Phone N.W. Colfax 1689.

Shaggy Mane, *Coprinus comatus*.
Photo ©Tom Volk, Wisconsin Flora.

Little Ink Cap mushroom after deliquescing of the cap.

Notes:

1. Here she is referring to botanist Asa Gray of Harvard.
2. "The Parade Ground" - this phrase refers to the parade ground at Fort Snelling, which in the early years of the Wild Flower Garden was a prime source of plants for Eloise.

The text of this article included photos by Mary Meeker of Larger Fringed Gentian, Shaggy Manes, Colored Gentian and Indian Rice.

Acrid Taste Gives Name to the Smart Weed; Miss Butler Describes Wild Grasses in the Park. - September 17, 1911

Smart weeds [are named] not for their enterprise in taking possession of the wet lowlands wherever they can get roothold, or for their smartness in attire - many species being decked with gaily colored, graceful, drooping flower spikes of rich shades of rose graded down to pale pink, flesh color and white, which brighten large expanses of moorland - but because, if tasted, the acrid peppery sap will make one's mouth burn or smart.

Water Pepper. *Polygonum amphibium* Photo © Matthew L. Wagner, Wisconsin Flora.

A very humble relative - small-leaved, prostrate and a spreading pest, unnoticed except when you investigate the cause of the disappearance of the velvety turf on your lawn - is the knot weed, or dooryard grass. Do not be misled by the latter name, for it is not a grass. The term knot weed refers to a character of the family - the enlargements or "knots" of the stem just below the sheathing stipules. These are close together on this plant and the most noticeable feature, for the greenish flowers in the axils of the leaves are exceedingly small. The weed well illustrates the meaning of the generic name, *Polygonum* (many knees or joints).

Arrow-leaved Tearthumb, *Polygonum sagittatum.* Note the sharp reflexed teeth on the stem.

The Water Pepper, an aquatic *polygonum,* [*Polygonum amphibium*] with oblong, floating leaves, has a heavy, rose-colored spike that beautifies the borders of ponds. The tear-thumb, a malignant *polygonum,* [*P. sagittatum* , Arrow-leaved Tearthumb] with sparse white flowers, forces acquaintance, when we are botanizing in meadows, by making jagged wounds with its sharp, reflexed teeth that bristle on the edges of the angled, prostrate stem.

The familiar Climbing False Buckwheat [*P. scandens*], a slender vine with pendant racemes of small, greenish white flowers, is another species of this large genus. This will remind you that the cultivated buckwheat, *Fagopyrum* [*F. esculentum*], is a cousin of the *polygonums*.

Hedge False Bindweed, *Calystegia sepium*

A Wild Morning Glory, *Convolvulus sepium* [now classified as *Calystegia sepium*, Hedge False Bindweed], is everywhere present, running over waste places and doing good service by concealing unsightly objects with its lovely large flowers of pale pink or white, and making dense tangles in the woods, which, in the struggle to break through, forcibly impress one to rename it bindweed. Being common and a weed, it is not properly appreciated. It might be improved and varied by cultivation, and it would

outrank its relative, the tame morning glory, *Ipomaea*, as a porch vine, for it is a perennial and can always be depended upon to furnish shade. A certain piazza in Nova Scotia, decorated with a long established specimen of bindweed, is admired by all who see it.

White Turtlehead, *Chelone glabra*

A turtle takes a daily sunning on a rock in the little pond in the wild garden. His tail held stiffly erect suggested to someone a marlingspike, the tool that is associated with a boatswain. Accordingly the turtle was dubbed Bos'n, and a little one that has lately appeared, Bos'nette. Very appropriately, a plant with white-flowered spikes, named *Chelone* (turtle) [*C. glabra*, Turtlehead] graces the sides of the same pond. It is easy to understand how the name turtlehead was applied to this plant growing in the damp places that turtles frequent, when one has an opportunity to compare the lips of the animal with those of the flower.

Who has not seen a tall, stout weed with a long dense spike of sweet-scented flowers with rather large, deflexed, yellow petals? But how many take the trouble to know its name, *Oenothera biennis*, or Common Evening Primrose? The flowers are succeeded by stiff, four-valved pods splitting at the top, from which the seeds are threshed out by the wind. The seeds that sprout will form a rosette lying flat on the ground and made up of row upon row of oblong leaves narrowed at the base and becoming shorter and shorter above and towards the center - a fine example of one of the methods of preventing overshading.

Evening Primrose, *Oenothera biennis.*

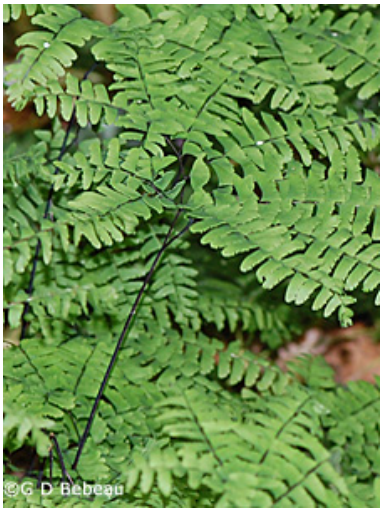
Narrowleaf Evening Primrose, *Oenothera fruticosa.* Photo Robert H. Mohlenbrock, USDA-NRCS Plants Database.

The rosette has varied autumnal tints and survives the winter to form, from a central bud, an erect flowering stalk that often branches like a candelabra, and completes its course when the seed is ripened. Such plants are biennials like many garden vegetables, cabbage, beet, etc. In flower, this weed decorates the roadside.

Some native *oenotheras* are prized ornamental plants, particularly *O. fruticosa* (Sundrops) [Narrowleaf Evening Primrose], a low perennial of easy cultivation and with bright yellow, profuse blooms.

The season must not go by without some attention to the ferns. The dearly loved shade or vernal plants flower and disappear when the trees are fully leaved. Then we find but few plants in bloom in the woods, and most of our pleasure in woodland walks, aside from the trees, comes from observing the fungi and the ferns. These do not usually need strong sunlight for their development. The attractiveness of ferns is wholly due to their foliage. The leaves or fronds of restful green, and usually finely dissected, are types of delicacy and grace. Justly popular

is our one species of maidenhair fern, that favorably compares with the exotic forms cultivated in greenhouses.



Maidenhair fern, *Adiatum pedatum*. Note the dark polished leaf stalks.

Maidenhair ferns [*Adiatum pedatum*] are characterized by dark, polished leafstalks, and branched leaves of many pinnules with marginal spore cases protected by little inturned teeth. Groups of these ferns in the wild garden have fronds that are fully three feet high and that measure eighteen inches across.

The shelf-like mushrooms found on stumps and trees may be called bracket fungi. Some of the woody forms are used for brackets in summer cottages and are often etched with fanciful designs. Many of these fungi belong to the genus *Polyporus* (many pored). The under surface of the bracket is studded with minute pores - the terminations of tubes which are lined with spores. Such fungi are hurtful to trees. Through a fissure in the bark the spores gain entrance, germinate, and form a network of fibers that prey upon the wood. The bracket grows out from these threads and is the fruit of the plant. Some of the softer brackets are edible when young, among them the sulphur polyporus [*Laetiporus sulphureus*]. This fungus, as one would infer from the name, is bright yellow in color. *Polyporus betulinus* [now classified *Piptoporus betulinus*] particularly affects birches. It is dull gray, while other species are a rich, red brown. Sometimes the bracket fungi assume strange shapes. Some have been found that resemble the head of Napoleon. Some species are phosphorescent and light up the dusky woodland with a ghostly glow that makes the bones of the timorous quake.


Shelf, or bracket, mushroom on an Ohio Buckeye.

This was printed at the beginning of the text:
The 100 beautiful photographs, many of them colored by hand, illustrating the wild garden in Glenwood Park and the native flowers of Minnesota growing therein, exhibited by Miss Mary K. Meeker at the state fair, may be seen hereafter on application at the public library.
For the remainder of the season Miss Butler will conduct parties through the wild garden according to appointments by telephone,
Phone, N. W. Colfax 1689.

The text of this article included photos by Mary Meeker of Wild Morning Glory, Evening Primrose, Smartweed and the Sulphur Polyporus.

Late Blooming Flowers Dot Meadows with White, Blue and Gold; Asters, Gentians, Lobelias, and Sunflowers Greet Field Lovers. - September 24, 1911

For the late-blooming flowers we must turn to the floodplains and meadows still glorious in the white, blue and gold of the moisture-loving asters, gentians, lobelia and sunflowers, tricked out here and there with the deep red of the Cardinal Flower- the purest red found in nature. The brilliant salvia now blooming in the cultivated gardens has a tinge of yellow in its redness, but that cannot be said of the red lobelia known as the Cardinal Flower [*Lobelia cardinalis*]. Conspicuous in this notable company is the large-flowered, pale pink *Hibiscus militaris*, [Now classified as *H. laevis*, Halberdleaf Rosemallow], locally abundant on the river bank. The hibiscus from the wild garden printed above [shown below] is *H. moscheutos* [Ref. #1] with a larger and brighter colored flower. This species is not indigenous to Minnesota but is the glory of the swamps ranging from Massachusetts to Ontario and Missouri.

Cardinal Flower, *Lobelia cardinalis*

Crimson-eyed Rose Mallow, *Hibiscus moscheutos* Photo Robert H. Molenbrock, USDA-NRCS Plants Database.

The Swamp Betony, *Pedicularis lanceolata* [Swamp lousewort], would be of interest to the close observer, with its dense, leafy spikes of pale yellow, laterally compressed, two-lipped flowers, but who can spare a glance for it when awed by the miraculous blue of the fringed gentians that surround it? Reference was made last May to *P. canadensis* [Common or Canadian Lousewort] similar to this betony, that was abundant on the prairie and adjacent woodland slopes, early in the season.

The sweet fragrance, however, of the tiny *Spiranthes cernua* [Ref. #2], an orchid slender as a grass blade, makes one conscious of its presence, and its pearly whiteness intensifies the celestial blue of Bryant's flower (Ref #3).

Nodding Lady's Tresses, *Spiranthes cernua*. Photo ©Merle R. Black, Wisconsin Flora.

Most of the orchids are early bloomers. The blossoms of this delicate late-comer are arranged in a curiously twisted raceme, so that it has been given the name ladies' tresses.

The naturalized plants have enforced their citizenship on cultivated land and contest their rights by defensive and offensive methods. For instance, the Russian Thistle [Ref. #4] appears to be in its youth harmless and innocent; but it grows prodigious, develops numerous short spines and over spreads the ground, destroying other vegetation. When the seeds are ripe, the plants are uprooted by the wind and, like a huge cartwheel, roll over the ground, sewing evil broadcast for another season until they come to a fence, where their advance is checked until piled to the top, when the procession is formed again.

Prickly Russian Thistle, *Salsola tragus* L. Photo ©Stephen L. Solheim, Wisconsin Flora.

This plant, introduced from Russia several years ago, is not a true thistle, although so called on account of its prickles. It belongs to the goosefoot family, which numbers other tumble weeds. The Smooth Pigweed, or lamb's quarters [*Chenopodium album*], whose young, tender leaves are superior to spinach for the table, is of close kin.

A part of the wild garden recently acquired by the park board was once used for a pasture. Consequently, several naturalized weeds, as Canada Thistles [*Cirsium arvense*] and Creeping Charley or ground ivy [*Glechoma hederacea*], are firmly established in excess. The thistle is discouraged by being pulled up wherever it shows its head, but it continually breaks out from the newly budding, creeping rootstalks. Another method is taken with Creeping Charley, who, with pretty, scalloped, round leaves and bright blue flowers, is not uncomely, if only he could be taught to keep his proper place. Various other rampant, naturalized plants, with pleasing foliage or flowers - Butter 'n' Eggs [*Linaria vulgaris*], Cypress Spurge [*Euphorbia cyparissias*], Aaron's rod [Ref. #5], Bouncing Bet [*Saponaria officinalis*] - have been planted around him, which, together with the native goldenrods, will tussle with one another for possession of the field. We shall watch the scrimmage with somewhat, we fear, of the Irish delight in a shindy.

Creeping Charlie, *Glechoma hederacea*

Last November Tansy [*Tanacetum vulgare*] also was planted among the contestants. Every root has grown and blossomed, and it bids fair to spread and hold its own with odds in its favor. Tansy is found on the sites of burned down or abandoned houses in the country and is associated with days long past. The finely curt leaves have a pungent odor and the flower disks, bright and golden as sunlight are fine for large bouquets.

Your attention is called to another edible bracket mushroom *Polyporus frondosus* (Ref. #6), pale gray and velvety, and made up of many overlapping brackets. The pores on the under surface are barely perceptible to the naked eye.

A large Hen of the Woods mushroom, *Grifola frondosa*. Photo from a Kodachrome taken by Martha Crone, Sept. 25, 1951.

This fungus particularly affects the roots of oaks, and was found in the wild garden at the foot of "Monarch," an aged white oak. It often attains great size. One was discovered a year ago by an oak stump on the top of the highest bluff in Lake City, too big for removal. The specimen in the wild garden weighed 20 pounds. The one who took it up thought it might weight fifty as he tugged it to the waiting automobile. It was displayed of a few days on Nicollet Avenue in Mr. Hoffman's (the optician's) window, until it began to shoot its spores all over the store, covering everything with a white, dustlike powder.

Tansy, *Tanacetum vulgare*

Mullein (Aaron's Rod), *Verbascum thapsus*

Notes:

1. *Hibiscus moscheutos*, Crimson-eyed rose mallow. Eloise first planted this in the Garden in 1908.
2. *Spiranthes cernua*, Nodding ladies tresses first planted by Eloise in 1909. Native to the state.
3. Bryant's flower. She is referring to the Fringed Gentian, the subject of Wm. Cullen Bryant's poem "To the Fringed Gentian" which she referenced in her September 10th column..
4. Prickly Russian Thistle, now classified as *Salsola tragus*.
5. Aaron's Rod. It is unclear which plant she refers to here. In classification today, *Thermopsis villosa* carries that name but this is an east coast plant, not found in Minnesota.*Verbascum thapsus*, commonly known today as Mullein is the most likely plant as that has been naturalized in the state and Eloise noted it in the Garden on September 5 1908.
6. *Polyporus frondosus*, now classified as *Grifola frondosa*. and known as "Hen of the woods." This mushroom would be seen many times in the Garden near the big oak, including a 25 pound specimen harvested by Garden Curator Martha Crone on September1, 1935, which she took to the Mushroom Society meeting on the 23rd of September.

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The 100 beautiful photographs, many of them colored by hand, illustrating the wild garden in Glenwood Park and the native flowers of Minnesota growing therein, exhibited by Miss Mary K. Meeker at the state fair, may be seen hereafter on application at the public library.

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Phone, Northwestern Colfax 1689.

The text of this article included photos by Mary Meeker of Fantuft polyporus, Russian Thistle, Hibiscus and Swamp Betony.

The Gray Memorial Botanical Chapter
Agassiz Association
1897 - 1961
Eloise Butler and the Chapter

Within the preserved writings of Eloise Butler are references to correspondence with other botanists and replies to correspondence from others. Most references imply or refer to her membership in the Gray Memorial Botanical Chapter, Division D which originally was a chapter, with five divisions, of the Agassiz Association. This correspondence was circulated between the membership of the Chapter.

Eloise Butler was a member of Division D (1) which was mainly made up of members in the middle west of the United States, although anyone could belong to any of the divisions as long as you contributed articles for circulation to the members. More on Eloise in the Chapter history section.

The Agassiz Association

The Agassiz Association, named after famed botanist Louis Agassiz, was founded in the late 1800's to be an association of local chapters that would combine the like interests of individuals and organizations in the study of nature. Chapters could be associated with colleges, universities, secondary schools and just interested parties, but over the years the Agassiz Association membership dwindled and by 1900 the Gray Chapter was one of few still active and remained so until 1943.

Asa Gray in 1867

This chapter was named for Asa Gray (1810-1888), American botanist, Professor of Natural History at Harvard and instrumental in unifying plant knowledge of North America and author of Gray's Manual - *Manual of the Botany of the Northern United States, from New England*

to Wisconsin and South to Ohio and Pennsylvania Inclusive. He is considered the most important American botanist of the 19th century.

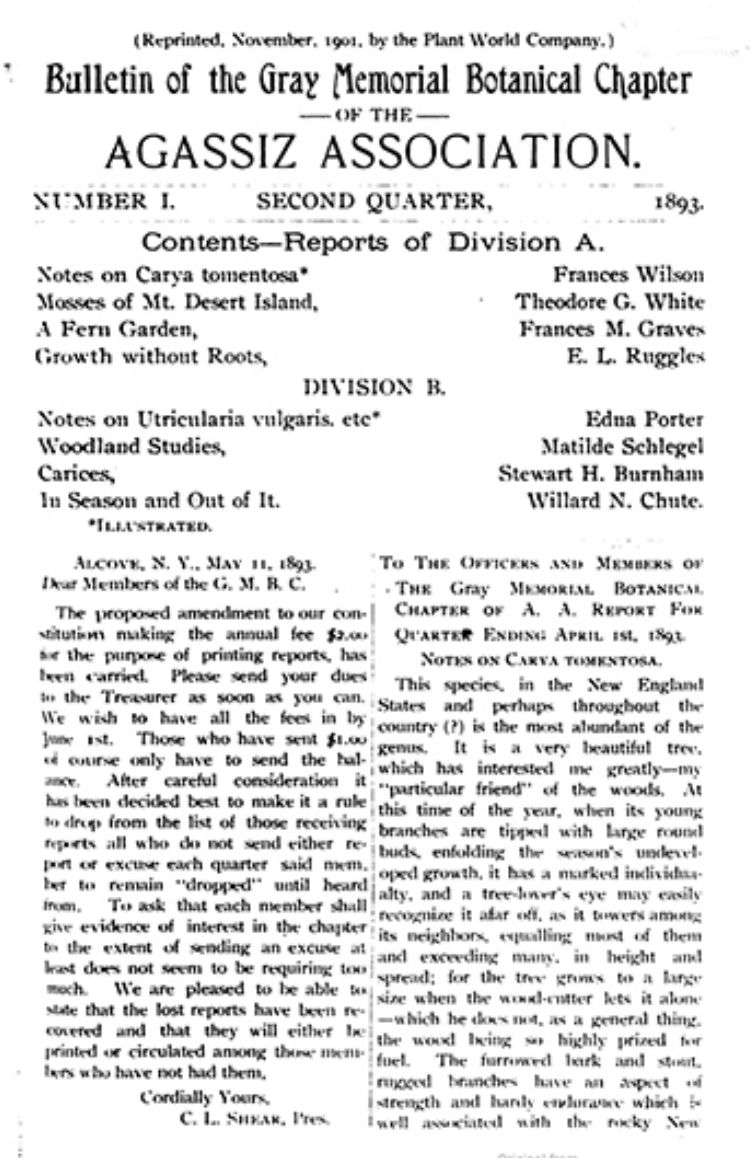
History of the Gray Chapter

The Gray chapter was formed in 1888 following Gray's death in January of that year and eventually had 5 divisions, A B C D E. Members of the chapter were expected to contribute articles of general interest, specific researches or "a report of one's own finding — a personal letter as it were — to all of the fellow members, which would have an appeal that most formal contributions lack." (2) These articles were bundled together as a bulletin, in the format in which the author had submitted, and sent in round-robin fashion by mail to the membership. Non-contributors were asked to provide their excuses for not contributing. This of course led to members leaving because of their personal time constraints on preparing articles and of the time it took for the bulletin to make the rounds, not to mention the postal costs.

These membership problems led to the creation of a published journal in 1893, which ran to Jan. 1901. Members subscribed to the journal and it began to accept articles from outside parties and the necessity of preparing contributions was alleviated. Editorship transitioned to several persons and institutions over the years.

During those 7 years Chapter members gradually dissociated themselves from the Bulletin. Some Chapter members known as the "conservative wing" preferred the old and more personable circular routing and continued to do that. When the editor of the Bulletin died in late 1900, one other person agreed to publish one last issue and then fold the *Bulletin.*

Sometime in the early 1930 the Chapter changed its name to the Gray Memorial Botanical *Association* and the circular picked up the name *Asa Gray Bulletin.* The round-robin circular method, in continuous use by some members and after 1900 by all members, continued to be used by the



(Reprinted, November, 1901, by the Plant World Company.)

Bulletin of the Gray Memorial Botanical Chapter
—OF THE—
AGASSIZ ASSOCIATION.

NUMBER I. SECOND QUARTER, 1893.

Contents—Reports of Division A.

*ILLUSTRATED.

ALCOVE, N. Y., MAY 11, 1893.

Dear Members of the G. M. B. C.

The proposed amendment to our constitution making the annual fee $2.00 for the purpose of printing reports, has been carried. Please send your dues to the Treasurer as soon as you can. We wish to have all the fees in by June 1st. Those who have sent $1.00 of course only have to send the balance. After careful consideration it has been decided best to make it a rule to drop from the list of those receiving reports all who do not send either report or excuse each quarter said member to remain "dropped" until heard from. To ask that each member shall give evidence of interest in the chapter to the extent of sending an excuse at least does not seem to be requiring too much. We are pleased to be able to state that the lost reports have been recovered and that they will either be printed or circulated among those members who have not had them.

Cordially Yours,
C. L. SHEAR, Pres.

TO THE OFFICERS AND MEMBERS OF THE GRAY MEMORIAL BOTANICAL CHAPTER OF A. A. REPORT FOR QUARTER ENDING APRIL 1ST, 1893.

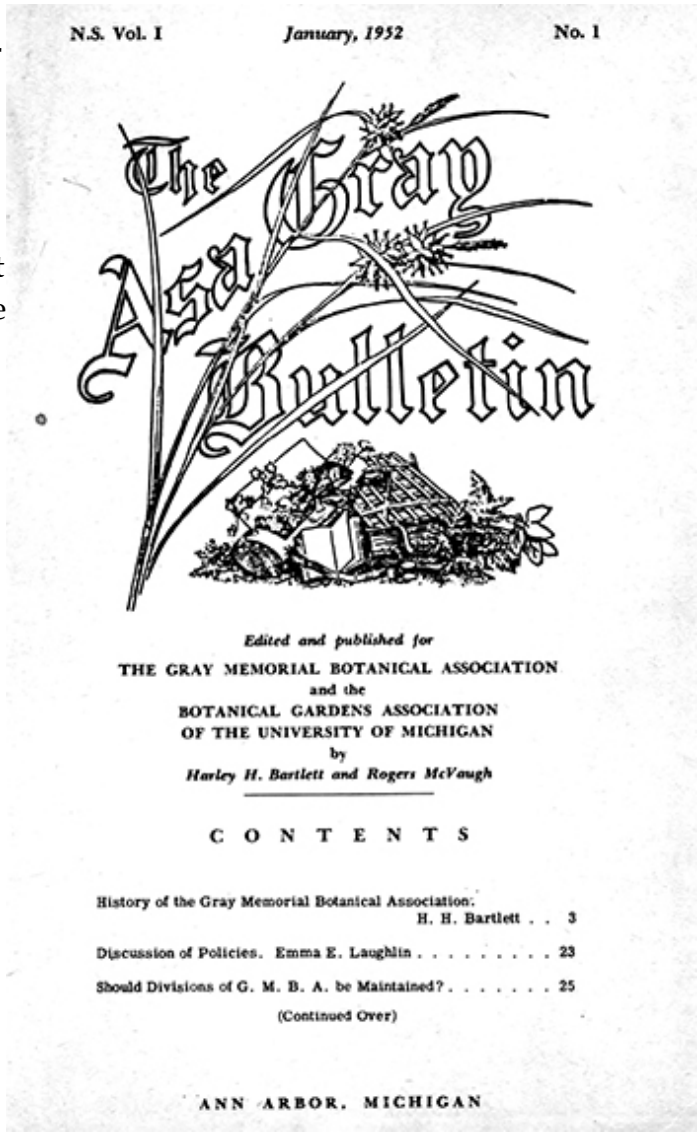
NOTES ON CARYA TOMENTOSA.

This species, in the New England States and perhaps throughout the country (?) is the most abundant of the genus. It is a very beautiful tree, which has interested me greatly—my "particular friend" of the woods. At this time of the year, when its young branches are tipped with large round buds, enfolding the season's undeveloped growth, it has a marked individuality, and a tree-lover's eye may easily recognize it afar off, as it towers among its neighbors, equalling most of them and exceeding many, in height and spread; for the tree grows to a large size when the wood-cutter lets it alone—which he does not, as a general thing, the wood being so highly prized for fuel. The furrowed bark and stout, rugged branches have an aspect of strength and hardy endurance which is well associated with the rocky New

Chapter until 1934 when it was decided to incorporate members submissions into several pages of the quarterly *American Botanist.*
It was during this time period of Eloise Butler's membership (1908-1933) that she submitted articles all of which would have been part of the round-robin circulation method of the Chapter's Bulletin during that time period.

From November 1934 to 1943 an attempt was made to still publish the round-robin Bulletin of the Gray Memorial Botanical Association in the months between issues of the quarterly *American Botanist,* but the circulation method still had its drawbacks.
By 1939 A group of students at Marietta College took over publication of the circulated articles and prepared a printed journal, naming it the "Journal of the Gray Memorial Botanical Association" which lasted until 1943 when the war made it unpractical to continue.

In 1952 the surviving members of the Chapter reorganized and the University of Michigan began to publish a new bulletin, reviving the name "Asa Gray Bulletin." These were created as the "new series" and were quite voluminous. Issues were put out frequently at first but after two years - infrequently. Volume I came out in 1952 with 4 issues - total of 408 pages; volume II in 1953 with 4 issues - total of 464 pages. Volume III was the last with three issues - June 1955, July 1957 and Spring 1961 - total 578 pages. Then publication ceased. (3)


N.S. Vol. I January, 1952 No. 1

The Asa Gray Bulletin

Edited and published for
THE GRAY MEMORIAL BOTANICAL ASSOCIATION
and the
BOTANICAL GARDENS ASSOCIATION
OF THE UNIVERSITY OF MICHIGAN
by
Harley H. Bartlett and Rogers McVaugh

CONTENTS

ANN ARBOR, MICHIGAN

Reference notes:
(1). Martha Hellander's research for her book on Eloise Butler indicated that Eloise joined the Chapter in 1908 and was a member until her death in 1933. *The Wild Gardener*, 1992, North Star Press, page 82.
(2). More details of the history of the Gray Memorial Botanical Chapter are found in "History of the Gray Memorial Botanical Association and the Asa Gray Bulletin" by Harley H. Bartlett in the *Asa Gray Bulletin* Vol. 1, No. 1, January 1952, Ann Arbor Michigan.
(3). This information may be found in the Botanicus.org section of the Missouri Botanical Gardens online publications.

Martha Hellander and her book about Eloise Butler - *The Wild Gardener*

From 1985 to 1990 Martha Hellander and her family lived near the Eloise Butler Wildflower Garden. In 1987, when she discovered there were no books about the life of the Garden's namesake and first curator she became interested in writing such a book.

Martha Hellander signing her book in the Martha Crone Shelter on May 12, 2002.

At The Friends' Annual Meeting on May 14th, 1988, Martha was introduced. At that time she was a new member and was already doing research for her book. Several members of The Friends, including former President Moana Beim (daughter of Friends Founder Clinton Odell) would provide information for her.

At the next Annual Meeting on May 20, 1989 Martha made a presentation on the progress of her work. She had contacted 13 descendants of Eloise Butler's siblings, two of whom were named for Eloise Butler and she had visited Malden MA in 1988 It was her intention to travel east in July for continued research (details below). Butler's family was from Maine and Massachusetts.

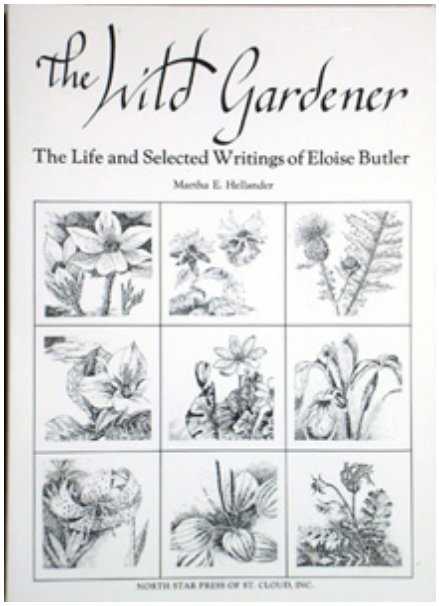
Eloise Butler ca. 1890. Photo: Branche's Studio, Minnesota Historical Society Collection.

During the past year she had also met with former Garden Curator Martha Crone in her nursing home. When Martha Crone passed away in February 1989 her daughter Janet Prevey was preparing to sell the house and Martha Hellander was invited to review the hoard of documents that Martha Crone had stored away, including her slide collection. It was here Hellander found all the notes made for Martha's newsletter issues, her diaries, correspondence between her and Eloise Butler, some of Miss Butler's diaries and Miss Butler's long lost Garden Logs. The circumstances could not have been more fortuitous as Janet was killed in a car accident four months after her mother's death. Janet passed Martha's slide collection to the Friends, who used them for a number of years, and the documents to Hellander. Most of that material, including the slides, is now at the Minnesota Historical Society in the Martha Crone Collection.

At this time it was Martha's intention to produce a book in two parts, the first part, a biography, and the second, a selection of Eloise Butlers writings. It ended up as one book. She read one story by Eloise at the 1989 meeting - "The Quest for the Walking Fern". At this time the Friends provided $870 in assistance for her expenses.

At the Friends Annual Meeting on May 19, 1990, Martha was back for another report on her progress. She was working on chapters 5 & 6 of the book. The trip to Maine the

previous summer provided much information on Eloise's early years. Martha hoped to finish the draft of the book by the end of the year.



The Wild Gardener received a Minnesota Book Award in 1992.

In the mean time she was also giving talks to groups about Eloise Butler. The Friends provided another $3,400 to help with her expenses. The Friends applied for a Minnesota Historical Society Grant and Martha was awarded $3,600 for the project.

By the time of the 1991 Annual Meeting on May 18th, Martha could report that the the book, now titled *The Wild Gardener,* would be published at the end of June 1992 by the North Star Press of St. Cloud, MN.

Her next appearance at an annual meeting was the following year on May 16, 1992 when she spoke about the process of getting the book published. She also announced that she and her family were moving to Chicago in June but she returned after publication to sign books at an event on Sunday August 2, commemorating Eloise Butler's birthday when a special stamp cancellation by the U.S. Post Office.

The Friends promoted her book in our Newsletter, *The Fringed Gentian™*, with handouts in the Martha Crone Shelter at the Garden and at various events.

The Wild Gardener received a Minnesota Book Award in 1992, so Martha was back in the Garden on Mother's Day, May 9, 1993 from Noon to 4 PM for a book signing. She made several more appearances at events with her last appearance in 2002 when she appeared for a book signing on May 12, 2002 at the Garden during The Friends' 50th Anniversary Celebration.

Martha Hellander in Maine in 1989. Friends photo.

Martha also received funding help from the Minneapolis Woman's Club and the Minnesota Historical Society as mentioned above.

Many members of the Minneapolis Park and Recreation Board helped her with her research as well as archivists, librarians and historians on the east coast where the Butler family lived. Staff at the University of Minnesota and other institutions in the east helped with the scientific text.

In addition there were many individuals who were still alive who had contact with Miss Butler, or their relatives who had information to share.

The Wild Gardener is no longer in print and not available from the Friends.

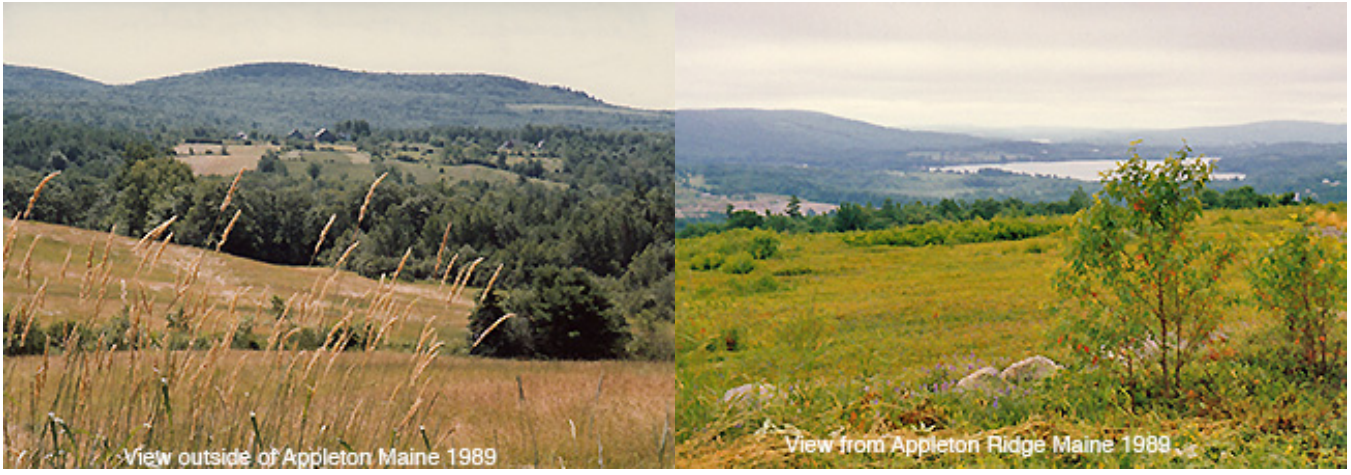
Details of the east coast trip: In the summer of 1989 Martha went east to do research in the area where Eloise Butler grew up. Appleton Maine was the original home of the Butler Family. Eloise was born on their first farm in 1851. In 1859 they moved to the second farm up toward the hill known

as Appleton Ridge. They attended the Baptist Church. In 1870 having finished High School, she was enrolled in the Eastern State Normal School on the coast in Castine Maine, graduating in 1873. By 1874 she was in Minneapolis.

When Martha returned in the fall she made the following report to the Friends:

> "I had a heavily-scheduled itinerary of historical societies, people and places. I accomplished all my objectives and made contacts for correspondence. In Massachusetts I reviewed an entire (rare) set of the publication *Wildflower,* owned by the Arnold Arboretum library. I have found no evidence of any public wildflower garden in the United States founded prior to Eloise Butler's. I believe it is the oldest. I have found records of Eloise's attendance at summer and extension courses at Harvard University. In Lynn I found records of Eloise's years in high school and her graduation.
> In Malden MA I met Mary and Frank Tribble, elderly neighbors of Eloise's sister, Cora Butler Pease; and Leon Cushing, present owner of Cora's house in Malden where Eloise spent winters after retiring from teaching science in Minneapolis High Schools. [Martha wrote "Frank Cushing" as owner but photos provided state "Leon Cushing" as owner.]
>
> In Maine: I spent five days in Appleton, where Eloise was born; and one day in Castine, where she went to Normal School. In Appleton I had the generous assistance of Theodore Brown, former lawyer and now local historian. He has become interested in Eloise Butler and her family, who lived down the road from his own farm. He guided me to the farm where Eloise was born and spent the first eight years, with her grandparents' place just across the road. The owners showed me through both houses, and the fields where Eloise roamed as a child. The "ledgy pasture" through which she walked on her way to school was filled with wild blueberries.

Above: Appleton Ridge on the road where the second Butler farm was located.




Appleton Maine main street 1989


Appleton Maine 1989


Baptist Church, Appleton Maine 1989


Front of Currant house on 2nd Butler Farm, Appleton


Rear of house on 2nd Butler Farm


House on original Butler Farm, Appleton ME 1989


Original barn foundation on 1st Butler Farm, Appleton ME

One evening, after I had spent the day searching deeds at the Knox County Recorder's office, Mr. Brown stayed up until 2 A.M. studying the deeds. He determined that in 1959 the Butlers had moved to a second farm, which we visited the next morning. In the door of the barn we found a board inscribed "O. R. Butler - 1863." The present owners had never been able to decipher it."

Here are some photos, courtesy of Martha Hellander, that she took in 1989 while doing research in the east.

Above: The coastline at Castine Maine where Eloise Butler attended Eastern State Normal School. Castine is located across Penobscot Bay from Appleton, except Appleton is 15 miles inland.

Cora Pease house at 20 Murray Hill Road in Malden MA. above left Ethel Moore (left), Eloise M. Riggs (right) at street entrance. At right the dining room

Text by G. D. Bebeau. Appleton Maine photos courtesy Martha Hellander. Malden House from Leon Cushing via Martha Hellander.