



Paintings and Drawings by Frederick A. Walpole

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Compiled by John V. Brindle

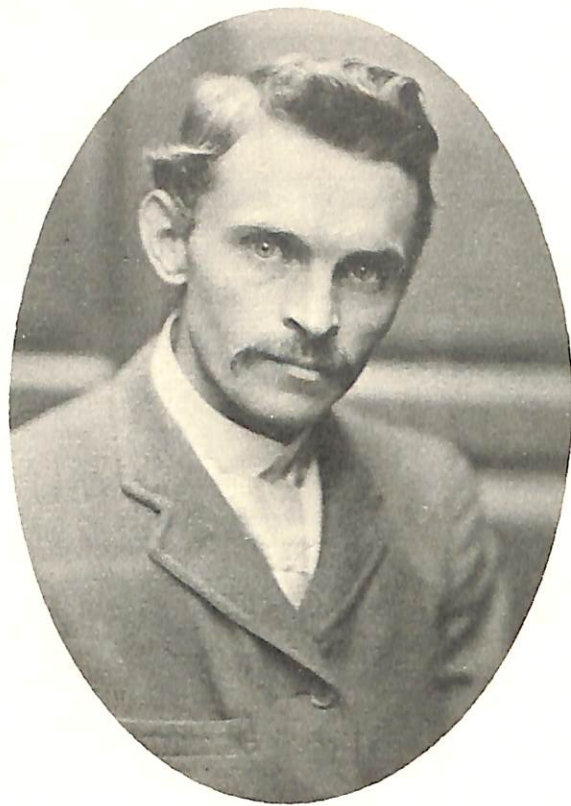
Hunt Institute  
for Botanical Documentation  
Carnegie-Mellon University  
Pittsburgh, Pennsylvania

This exhibition and its catalogue are dedicated to the memory of  
Dr. William Andrew Archer.

Following his retirement in 1964 from the National Arboretum until his death on 7 May of this year, Dr. Archer worked as a volunteer archivist within the Department of Botany of the Smithsonian Institution. Although Frederick A. Walpole's drawings and paintings illustrated many of the Smithsonian Institution's publications at the turn of the century, his work had been forgotten and it was Dr. Archer who rediscovered him. Not only did he reassemble all of the Walpole material still remaining within the Smithsonian Institution, but he also wrote to an old friend, Mrs. Agnes T. Janssen of Salem, Oregon, in hopes that she could find some trace of the artist. Mrs. Janssen's search was successful, and from old newspaper files she found that Walpole was an Oregon man. His obituary led, in turn, to a nephew, Mr. Theodore Walpole Burkhart. Mr. Burkhart was still living in the same house in Portland, Oregon, that Walpole had built in 1893, and was able to supply photographs and much additional information on Walpole's early life. Introduced to Walpole's work by Dr. Archer, Mr. James J. White, of the U.S. National Herbarium at the Smithsonian Institution, carried on further investigations into Walpole's activities and continues Dr. Archer's interest in the artist.

To all the above individuals who have contributed to this exhibition, we owe a debt of gratitude, but particularly to Dr. William Andrew Archer whose interest and efforts first called our attention to Frederick A. Walpole.

Gilbert S. Daniels  
Director  
Hunt Institute





## Foreword

The rediscovery of forgotten artists is a recurrent phenomenon of art history and particularly of the history of nineteenth century American painting where rehabilitated careers flourish in museums and galleries, adding excitement to the art scene. In staging an exhibition of the work of Frederick A. Walpole, the Hunt Institute, through the cooperation of the Smithsonian Institution, calls attention to an obscure figure indeed. As a scientific illustrator, his role in the art world of his day was a modest one, his career leaving no appreciable mark in the major art centers or in the mainstream history of American art. It is strictly on his merits as a plant illustrator that Walpole is considered a worthy subject for exhibition. His skills, accuracy, and technical knowledge, above all the individual qualities of artistic sensitivity shown in his work, may be considered adequate justification.

Frederick Andrews Walpole's background and the course of his short career are incompletely documented. He was born in Port Douglas, Essex County, New York, January 17, 1861. In 1871, his family (another branch of which included Horace and Robert Walpole) moved to Chicago where Frederick became a pupil of an artist named Sloan, possibly Junius R. Sloan, a landscape and portrait artist then working in that city. In 1882, the 21 year old Walpole left Chicago, making his way by rail and on foot to Southern Oregon to seek out a homestead site. One of his few extant journals covers this period. He arrived at Redding, California, in the Sacramento Valley on March 22. Learning that the stage fare to Jacksonville, his destination, would be \$36.00, he shipped his baggage ahead and set out to cover the last 177 miles of his

journey on foot. After exploring the region, he took up a land claim near the present town of Trail in the Crater Lake region, which includes Walpole Creek, named after him. His account book lists all his purchases and living expenses and his occasional receipts from commissioned sketches of towns and settlements.

There are no extant journals for the years 1884 to 1899, but we know that Walpole's family came to Oregon, settling in Portland where, in 1886, Frederick took a job as illustrator for The Lewis and Dryden Printing Company. In 1891 or 1892, Walpole met an English girl who was visiting a brother in Oregon, and married her in England in 1893. An only son, Sidney, was born in 1894. In 1898, Walpole's wife died of typhoid fever in Washington, D.C. From the period around 1880, a few small landscapes in oil survive, and five of them are included in this exhibition.

In 1896, Walpole's work came to the attention of Frederick V. Coville, a Department of Agriculture botanist and Curator of the National Herbarium, who was in Oregon researching plants used by the Klamath Indians. Coville persuaded Walpole to apply for the position of Artist for the Division of Botany of the Agriculture Department, and he was appointed on September 19th. The bare facts are tantalizingly incomplete. We do not know that Walpole had prior botanical training, or even that he had drawn plant subjects. In any case, his later journals show him on field drawing trips botanizing, collecting specimens, and confidently identifying plants by their scientific Latin names. An obituary notice mentions that John Ruskin was a favorite author of Walpole's. The

reverence for nature which Ruskin had inspired in American artists of the 1850s and 1860s could well have predisposed Walpole to the study of plant life.

Walpole's career as a plant illustrator was divided between work in Washington at the Agriculture Department (and after November of 1902 at the National Museum) and on field trips to the Northwest. The journals for the period 1900-1903 cover his activities in Washington and his journeys across the continent, as well as his two trips to Alaska (1900 and 1901). Besides copious data on railroad timetables and shipping schedules, they give descriptions of terrain, regular weather reports, accounts of his movements and work, and scrupulous notations of income and expenditures, recording purchases of newspapers and magazines, of toothpicks (10¢), and a tip to a child of 1¢. Also recorded is a surprisingly lively social life: numerous visits to family and friends, celebrations of birthdays and holidays, and attendance at events both cultural and otherwise: science lectures (especially geographical), music recitals, exhibitions at Washington's Corcoran Gallery (frequent), the Congress and the Library of Congress, church (Unitarian, if available, but Greek Orthodox in Alaska). A span of the journals from November 1902 to January 1903 lists the following activities: two visits to Zoological Park; showing his own pictures (along with L. A. Fuertes, the famous bird artist, and C. R. Knight, the animal artist) at an American Ornithological Union meeting; lecture by Lieutenant Peary on his arctic work; Jane Addams' lecture at Congregational Church; recital by Mme. Schumann-Heinck; Corcoran Gallery exhibition; visit to Library of Congress; lecture

on wingless birds; another on protective coloring; another on Martinique; reading Owen Wister's *The Virginian*; meeting of the Folk Lore Society; reception of the American Association for the Advancement of Science; music recital at Unitarian Church; Hagenbeck's Trained Animal Show; ping pong party across the street. Considering that he was a member of the American Association for the Advancement of Science, the National Geographic Society, and the Biological Society of Washington, we might say that Frederick Walpole was a man firmly devoted to the American virtue of participation and self-improvement.

The journal passages covering the Alaska trips presents a different picture: Walpole working at his profession, reacting to awesome views of glaciers and mountains, observing natives and fellow travellers. These passages also afford insights into the man's character.

Taking ship at Seattle, he sailed along the coast of Alaska as far as the Seward Peninsula, making forays inland. The journal reports the names of plants collected and drawn: lists Aleut, Tlinglit and Russian names for plants; reports on weather, topography, vegetation, and people. He finds much to deplore: an afternoon fishing party that hauled in, by seine, over 4,000 salmon within two hours' time—"Stupid cold blood white man's fishing" which threatens extermination of the Chinook; the greed of Yankee operators of the Alaska Commercial Company, who exploit the natives by selling them hunting equipment at high prices, paying low prices for hides, and recovering most of what they had paid at company stores. There are other sidelights. In the small



settlement at Kenia (population around 100, mixed Russians and Indians), the only school is conducted by Russian priests ignorant of the English they are expected to teach; they pretend to do so. These priests were, however, generally well regarded, excepting one who had lost favor when he mortgaged the local church for \$250 and lost the money at the poker table.

Walpole found Alaska to his liking, and nothing more so than the bidarka, a graceful, hide-covered canoe used by the Aleuts. A long passage of the journal tells of an excursion near Kodiak with Walpole stiffly balanced between two Aleut friends. They knew no English, but Walpole comments: "You can have a jolly good time without talking if only you have congenial companions. I could talk to the Yankees but we had nothing to talk about. With the Aleuts I had something in common . . . I think they had something of a feeling of kinship with me as with a fellow barbarian." In a later letter to his brother, Walpole writes: "I have been out west to Kodiak and got the bidarka fever. If I wasn't too old I think I would turn Aleut. It's very silly to live in the way most white people do!" From the same letter: "Skagway is a town of shacks and shanties in a narrow valley with high rocky mountains on either side. Its inhabitants have cut down trees that used to cover the valley and are now burning those on the mountain so as to make the place as desolate as possible."

Frederick Walpole died, from typhoid fever contracted while working in California, May 11, 1904. While his short career had gained him no wide recognition, the character



D a. Crater Lake, Oregon, ca. 1989.

and sincerity of the man himself had earned the respect and esteem of his friends and colleagues. In Walpole's honor, his name has been given to a willow he had discovered on the tundra of Seward Peninsula in Alaska.

As a botanical artist, Walpole worked in water color, ink, and pencil. Coville described his unusual technique of ink drawing. Using the finest sable brush from which all but a few of the bristles had been cut away, and holding it almost parallel to the surface of the paper, Walpole drew lines of extraordinary delicacy. These drawings had much the appearance of fine line engraving but were impossible to adequately reproduce at that time, since the lines were slightly brown in color. The pencil drawings are notable for their realization of form by carefully controlled modulations of tone. They are strong enough to hold their own even when displayed next to ink drawings and would probably have pleased John Ruskin himself. Indeed all of Walpole's work may be considered a faithful embodiment of a Ruskin attitude toward natural history art. Avoiding any degree of contrived artificiality, Walpole produced honest portraits of plants which, to a remarkable degree, succeed in capturing on paper the fragile grace and living essence of the plants themselves.

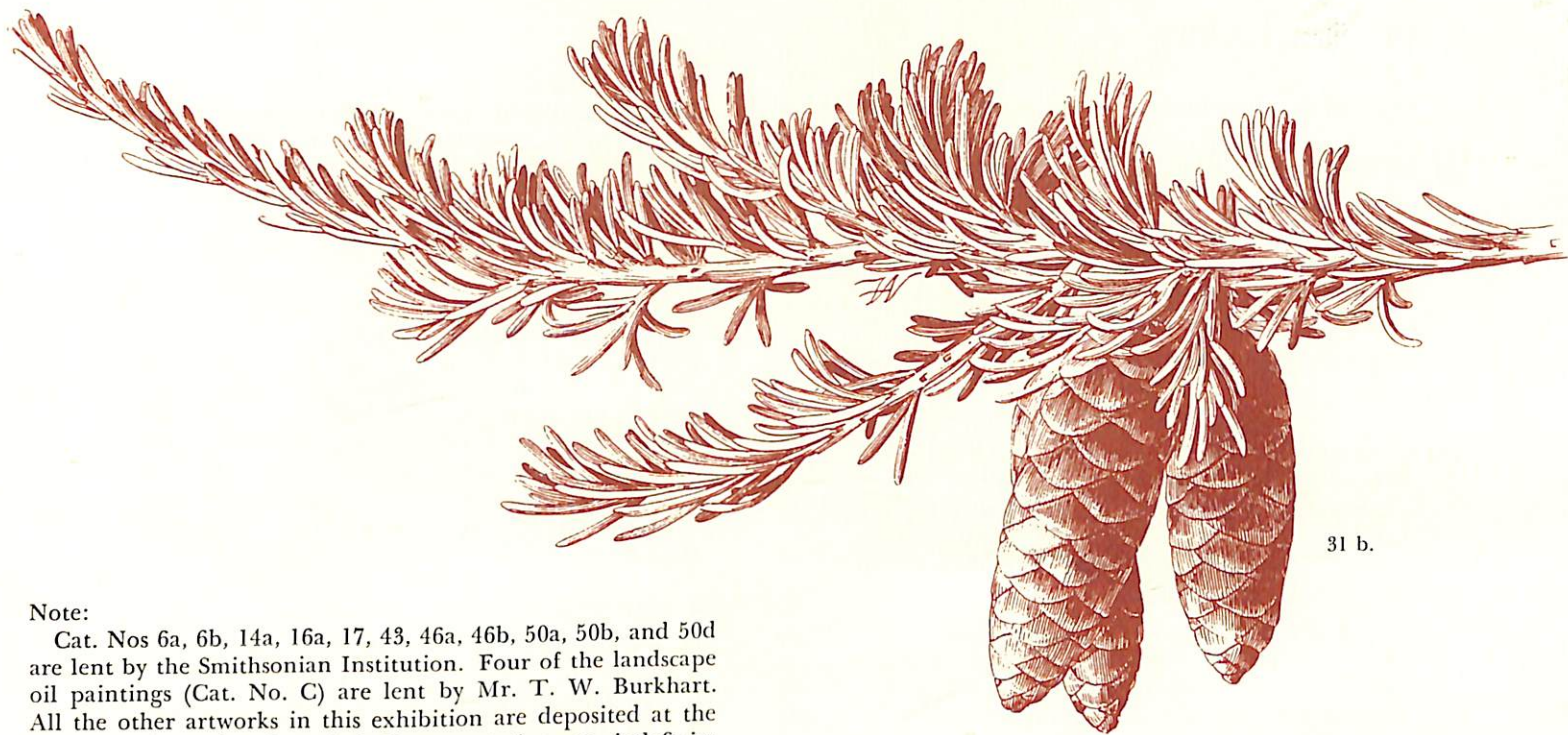
We may regret that Frederick Walpole's career was cut so short, that his plant illustrations were never widely reproduced and published (as they doubtless would have been had he worked at an earlier period), and that he painted so few pictures for gallery exhibition, but we can be grateful for a few hundred plant illustrations of a very high order which the Hunt Institute is proud to represent in this exhibition.

I am indebted to and herewith thank Mr. James White of the Smithsonian Institution for generously making available the fruits of his researches on the life of Walpole and for his bition. In the preparation of both exhibition and catalogue the help of Miss Mary Wallace and Miss Sarah Weintz was essential and is gratefully acknowledged.

John Brindle  
Art Curator, Hunt Institute







31 b.

**Note:**

Cat. Nos 6a, 6b, 14a, 16a, 17, 43, 46a, 46b, 50a, 50b, and 50d are lent by the Smithsonian Institution. Four of the landscape oil paintings (Cat. No. C) are lent by Mr. T. W. Burkhardt. All the other artworks in this exhibition are deposited at the Hunt Institute for Botanical Documentation on indefinite loan from The Department of Botany of the U.S. National Museum of the Smithsonian Institution.

The portrait photograph (Cat. No. A) is from Mr. T. W. Burkhardt. The photographic views of Oregon (Cat. No. D) are from the National Archives and Record Services.

**Note:** Walpole's illustrations are all small. Sheet sizes are about 14 x 10" with the mat openings varying within a fairly narrow range.

## Catalogue Listing

- A. Frederick A. Walpole, age 35. Photograph.
- B. Landscape with chapel and distant town, 1877. Pencil.
- C. Five landscapes, ca. 1880. Oil, average size 8 x 10".
- Walpole homestead cabin in southern Oregon.
  - Cabins in southern Oregon homestead area.
  - View, Lake Champlain, New York.
  - Mountain view, New York.
  - View.
- D. a. "Crater Lake, Oregon. Looking North-west."  
ca. 1898. Photograph from F. V. Coville files.
- b. Oregon view, 1898. Photograph from F. V. Coville files.
- E. Color classification charts.
- In 1903 Walpole devised (in his spare time, apparently) a "Plan for Color Classification," in which, through charts, diagrams, and 22 typescript pages of explanation, he describes construction of a geometrical figure expressing color relationships. He cites as a theoretical base a study of the spectrum published by W. de W. Abney in *Philosophical Transactions of the Royal Society* (London, 1899). Walpole hoped to produce a universally acceptable system which would serve artists and scientists by simplifying and stan-

dardizing nomenclature. By the use of uniform color charts and templates, any color could be described simply and in recognizable terms. The three-dimensional model—an "irregular cone"—which Walpole constructed, has unfortunately disappeared.



## Lily Family

- 1a. *Bloomeria clevelandi*. Watercolor.
- b. *Bloomeria* sp. Watercolor.
- 2a. *Allium* sp. Pencil.
- b. *Allium crispum*. Watercolor.
3. *Lilium washingtonianum*. Watercolor.
4. *Zigadenus venenosus*. Watercolor.

## Alaskan Flora

For the summer of 1899, Edward H. Harriman, the railroad and shipping tycoon, had proposed a family pleasure cruise to Alaska. But planning gradually evolved in a different direction. With the active cooperation of The Washington Academy of Science, the cruise developed into an elaborate expedition of scientific exploration and collecting. Its roster of 126 members included a scientific party of 25, among them John Muir, John Burroughs, and Walpole's friend, the botanist F. V. Coville. Taxidermists, physicians, and a chaplain were aboard, along with a 500-book library. Walpole himself was not a member but was sent the next summer (1900) to prepare illustrations for the account of The Harriman Alaskan Expedition, of which Volume 1, *Alaska*, published in 1901, is shown. He returned also in the summer of 1901 to continue his portrayal of plants for a projected Alaskan Flora, of which Coville was a collaborating author, but which was never published.

- 5 *Myosotis sylvatica* Forget-Me-Not. Watercolor.
- 6a. *Pinguicula* sp. Butterwort. Watercolor.
- b. *Silene acaulis* Catchfly. Watercolor.
- 7a. *Picea* sp.? Spruce. Watercolor.
- b. *Arcteranthus cooleyae*. Watercolor.
- c. *Empetrum nigrum* (Crowberry) with Moss. Watercolor.



5.



- 8 *Epilobium angustifolium* Fireweed. Watercolor.
- 9a. *Cassiope stelleriana*. Watercolor.  
 b. Same (details). Pencil.  
 c. *Cassiope mertensiana*. Pencil.  
 d. *Cladonia rangiferina* Reindeer Moss. Watercolor.  
 Shown with heliotype color plate in Harriman Alaska  
 Expedition, *Alaska*, Vol. I, New York, 1901.

## Mexican Flora

In 1889, the Department of Agriculture was authorized to conduct "botanical exploration and collecting of plants in little-known districts of America." Dr. J. N. Rose, of the U.S. National Museum, made four field trips to Mexico between 1897 and 1902, bringing back to Washington thousands of herbarium specimens and large consignments of bulbs, roots, and seeds, many of which were successfully grown in greenhouses. Although Walpole did not accompany Rose, he made drawings from the collected material in Washington.

- 10a. *Malvaviscus leiandra*. Watercolor.  
 b. *Tradescantia lanceolatus* Spiderwort. Watercolor.  
 Shown with heliotype color plates from J. N. Rose,  
 "Studies of Mexican & Central American Plants," in  
*Contributions from the U.S. National Herbarium*,  
 Vol. VIII, Part 2, 1903.



12 c.

- 11a. *Tillandsia* sp. Watercolor.
- b. *Laelia* sp. Orchid. Watercolor.
- c. *Talinum* sp. Fame-Flower. Watercolor.

- 12a. *Ricinus communis* Castor-Bean. Ink.
- b. *Passiflora colimensis* Passion-Flower. Ink.
- c. *Echinocactus* sp. Cactus. Ink.
- d. *Potentilla madrensis* Cinquefoil. Ink.
- e. *Potentilla rydbergiana* Cinquefoil. Ink.
- f. *Heliocarpus reticulatus*. Ink.

[Note: 12b, d, and e published in J. N. Rose, "Studies in Mexican and Central American Plants." (No. 2 and No. 3) in *Contributions from the U.S. National Herbarium*, Vol. V, 1899, and Vol. VIII, 1903.]



12 c.

## Oregon Flora

Walpole was authorized to do much of his field work in his home state and appears to have concentrated his botanizing, collecting, and drawing in the south around Klamath Falls and Crater Lake.

- 13a. *Amelanchier alnifolia* Service-Berry. Watercolor.
  - b. Same (fruit). Watercolor.
  - 14a. *Mahonia aquifolium* Barberry. Watercolor.
  - b. *Mahonia nervosa* Oregon-Grape. Watercolor.
  - 15. *Sagittaria arifolia* Arrowhead. Watercolor.
  - 16a. *Valeriana edulis* Valerian. Watercolor.
  - b. *Scirpus lacustris* Bulrush. Watercolor.
  - c. *Sparganium eurycarpum*. Watercolor.
  - 17. *Acer circinatum* Vine Maple. Watercolor.
  - 18. *Pedicularis groenlandica* Lousewort. Watercolor.
  - 19. *Polygonum bistortoides* Knotweed. Watercolor.
  - 20a. *Nuphar polysepalum* Yellow Pond-Lily. Watercolor.
  - b. Same (fruit details). Watercolor.
- Shown with heliotype color plate from F. V. Coville, "Wokas, a primitive food of the Klamath Indians," in *Report of the United States Museum*, Washington, D.C., 1904.

- 21a. *Prunus demissa* Choke-Cherry. Pencil.
- b. *Prunus subcordata* Pacific Plum. Watercolor.
- c. *Prunus subcordata* var. *oregana* (fruits). Watercolor.
- d. *Rubus nivalis* Bramble. Pencil.
- e. *Malus fusca* Oregon Crab-Apple. Pencil.
- f. *Acer macrophyllum* Oregon Maple. Pencil.
- g. *Rhamnus californica* Coffee-Berry. Pencil.
- h. *Arbutus menziesii* Madrona. Pencil.
- i. *Rhododendron macrophyllum*. Pencil.
- j. *Phoradendron flavescens* North American Mistletoe. Pencil.
- k. *Populus trichocarpa* Western Balsam Poplar. Two pencil studies.
- l. *Myrica gale* Sweet Gale. Pencil.
- m. *Vitis californica* Grape. Pencil.
- n. *Ceanothus integerrimus* Deer-Brush. Pencil.

## Succulents

A great many species of the *Crassula* family were collected and grown by J. N. Rose at the National Herbarium. Walpole appears to have taken delight in their exotic forms.



24 n.



22 *Dudleya* species. Watercolor.

a. *D. brandegei*

c. *D. compacta*

b. *D. rigida*

d. *D. parishii*

23a. *Pachyphytum bracteosum*. Watercolor.

b. *Pachyphytum uniflorum*. Watercolor.

24 *Echeveria* species. Watercolor.

a. *E. x 'Clevelandii'*

j. *E. glauca*

b. *E. secunda*

k. *E. cuspidata*

c. *E. multicaulis*

l. *Echeveria* natural hybrid

d. *E. australis*

m. *Echeveria* natural hybrid

e. *E. obtusifolia*

n. *E. paniculata*

f. *E. atropurpurea*

o. *E. scheerii*

g. *E. walpoleana*

p. *E. sp.*

h. *E. metallica*

q. *E. sp.*

i. *E. racemosa*

[Note: No. 24c to i reproduced in Eric Walter, *Echeveria*, San Francisco, 1972.]

25a. *Manfreda virginica*. Watercolor.

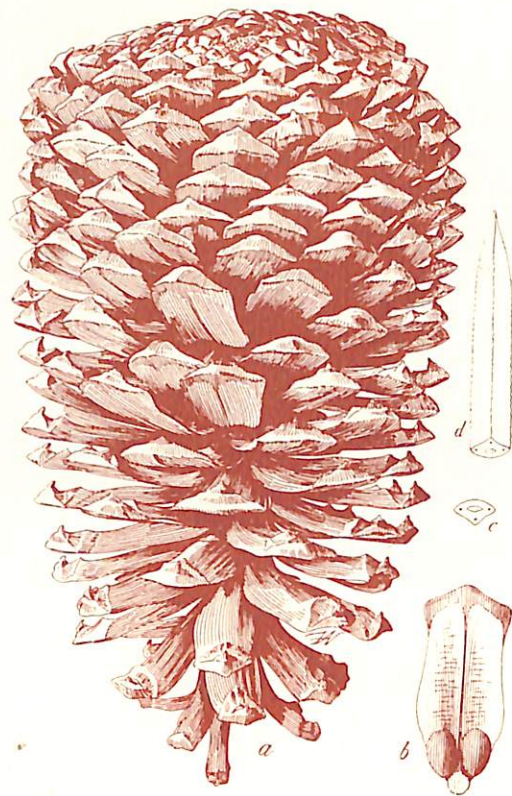
b. *Manfreda sp.* Watercolor.

c. *Manfreda maculosa*. Watercolor.

d. *Sedum sp.* Watercolor.

e. *Villadia goldmani*. Pencil & watercolor.

f. *Villadia ramosissima*. Watercolor.



28 d.



D b. Oregon view, ca. 1898.

## Conifers

Walpole did numerous studies of conifers, and prepared finished ink drawings of many, obviously intended for publication. There are even heliotype proofs of several of these, but no publication of them is known.

- 26 *Abies amabilis* Cascade Fir. Ink (with 4 pencil studies).
- 27a. *Abies grandis* Giant Fir. Ink (with 3 pencil studies).  
b. Same. Watercolor.
- 28a. *Pinus contorta* Shore Pine. Ink.  
b. *Pinus contorta* var. *latifolia* Lodge-Pole Pine. Ink.  
c. *Pinus attenuata* Knob Cone Pine. Ink.  
d. *Pinus jeffreyi* Jeffrey Pine. Ink.  
e. *Pinus monticola* Western White Pine. Ink.
- 29a. *Chamaecyparis nootkatensis* Nootka Cypress. Ink.  
b. *Libocedrus decurrens* Incense Cedar. Ink.
- 30 *Larix occidentalis* Larch. Ink (with pencil study).
- 31a. *Tsuga heterophylla* Western Hemlock. Ink.  
b. *Tsuga mertensiana* Mountain Hemlock. Ink.
- 32a. *Taxus brevifolia* Western Yew. Ink.  
b. *Abies magnifica* var. *shastensis* Red Fir. Watercolor.  
c. *Picea sitchensis* Sitka Spruce. Pencil.  
d. *Pinus attenuata* Knob Cone Pine. Watercolor.  
e. *Sequoia sempervirens* Redwood. Pencil.

## Duck Foods

A memorandum, on U.S. Department of Agriculture, Office of the Botanist letterhead, lists a number of species under the heading "Duckfoods." It suggests a special illustration commission, but again, no publication is known for these drawings of water plants which Walpole made in Washington during 1902 and 1903.

- 33a. *Potamogeton lonchites* Pondweed. Watercolor.
- b. *Potamogeton pectinatus* Pondweed. Watercolor.
- c. *Vallisneria spiralis* Wild Celery. Watercolor.
- 34a. *Ruppia maritima* Wigeon Grass. Ink.
- b. *Anacharis canadensis* Water-Weed. Ink.
- c. *Chara fragilis* Stonewort. Ink.
- d. *Myriophyllum spicatum* Water-Milfoil. Ink.

## Pharmacology Collection

A series of watercolor illustrations was commissioned by the Department of Agriculture, Bureau of Plant Industry, for an exhibition of poisonous plants displayed in the 1904 Louisiana Purchase Exposition at St. Louis.

- 35 *Veratrum californicum* False Hellebore. Watercolor.

- 36 *Datura stramonium* Jimson Weed. Watercolor.
- 37 *Rhus vernix* Poison Sumac. Watercolor.
- 38 *Solanum nigrum* Deadly Nightshade. Watercolor.
- 39 *Menispermum canadense* Moonseed. Watercolor.
- 40a. *Camassia quamash* Camass. Watercolor.
- b. Same. Watercolor.
- 41a. *Brodiaea lactea* Wild-Hyacinth. Watercolor.
- b. *Calochortus* sp. Mariposa-Lily. Watercolor.
- 42a. *Cicuta maculata* Water Hemlock. Watercolor.
- b. *Conium maculatum* Poison-Hemlock. Watercolor.
- 43 *Rhododendron macrophyllum*. Watercolor.
- 44 *Prunus demissa* Choke-Cherry. Watercolor.
- 45 *Kalmia latifolia* Mountain Laurel. Watercolor.
- 46a. *Phytolacca decandra* Pokeweed. Watercolor.
- b. Same (root). Watercolor.
- 47 *Cannabis sativa* Hemp, or Marijuana. Watercolor.





## Currants and Gooseberries

Walpole's friend and colleague, F. V. Coville, is famous for having "tamed the wild blueberry," but he also studied currants and gooseberries. Although many of these drawings appear to be composed (some by cutting and pasting) as text illustrations, no publication of them is known.

- 48a. *Grossularia menziesii* Canyon Gooseberry. Watercolor.
- b. *Grossularia californica* Hillside Gooseberry. Watercolor.
- c. *Grossularia divaricata* Straggly Gooseberry. Watercolor.
- d. *Grossularia amarum* Bitter Gooseberry. Watercolor.
- e. *Ribes malvaceum* Chaparral Currant. Watercolor.
- f. *Ribes* sp. Watercolor.
- g. *Grossularia roezlii* Sierra Gooseberry. Watercolor.
- h. *Grossularia hesperia* Southern California Gooseberry. Watercolor.
  
- 49a. *Ribes laxiflorum* Trailing Black Currant. Pencil.
- b. *Ribes viscosissimum* Sticky Currant. Pencil.
- c. *Ribes saxosum*. Pencil.
- d. *Ribes* spp. (flower details). Pencil.
- e. *Grossularia klamathensis* Klamath Gooseberry. Pencil.



49 b.

## Spiderwort Family

- 50 *Tradescantia* species. Watercolor.  
a. *T. subaspera* var. *montana* c. *T. longifolia*  
b. *T. ohimensis* d. *T. gigantea*
- 51 *Tradescantia virginiana*. Three watercolor studies.

## Willows

Willows, another preoccupation of F. V. Coville, are cited frequently in Walpole's journals as drawing subjects. The ink drawings are based on careful pencil studies.

- 52a. *Salix walpolei*. Ink.  
b. *Salix phlebophylla* Skeleton Willow. Ink.  
c. *Salix richardsoni*. Ink.  
d. *Salix hookeriana*. Pencil.  
e. *Salix cordata* Heart-leaved Willow. Pencil.  
f. *Salix arctica* Arctic Willow. Ink (with 2 pencil studies).  
g. *Salix barclayi*. Ink (with pencil study).

[Note, 52b, c, f, and g reproduced in F. V. Coville, "Papers from the Harriman Alaska Expedition, XXIV: The Willows of Alaska." In, *Proceedings of the Washington Academy of Science*, Vol. III, 1901.]

Design: Mary Wallace



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