

Proceedings of the Iowa Academy of Science

Volume 30 | Annual Issue

Article 47

1923

Some Notes on Plants of Whitehall, Michigan

L. H. Pammel
Iowa State College

R. I. Cratty
Iowa State College

Let us know how access to this document benefits you

Copyright ©1923 Iowa Academy of Science, Inc.

Follow this and additional works at: <https://scholarworks.uni.edu/pias>

Recommended Citation

Pammel, L. H. and Cratty, R. I. (1923) "Some Notes on Plants of Whitehall, Michigan," *Proceedings of the Iowa Academy of Science*, 30(1), 279-285.

Available at: <https://scholarworks.uni.edu/pias/vol30/iss1/47>

This Research is brought to you for free and open access by the Iowa Academy of Science at UNI ScholarWorks. It has been accepted for inclusion in Proceedings of the Iowa Academy of Science by an authorized editor of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

SOME NOTES ON PLANTS OF WHITEHALL, MICHIGAN

L. H. PAMMEL AND R. I. CRATTY

During the latter part of August, 1920, the senior author spent a part of his vacation in the vicinity of Whitehall, Michigan. Whitehall is on Whitehall river at the head of Whitehall lake, one of the numerous bays on the shore of Lake Michigan. At this and many other places on the shore of Lake Michigan, there are numerous sand dunes. The sand dunes at Whitehall are not nearly so fine as those at Muskegon, nor do they compare with those farther south in northern Indiana or eastern Illinois, on the shore of Lake Michigan.



Fig. 1. Trunk of a fine sugar maple (*Acer saccharum*), Whitehall, Michigan.

It is not our purpose to discuss the many interesting features of the sand dunes. This has been done in a classic paper by H. C. Cowles* "The Ecological Relations of the Vegetation on the Sand Dunes of Lake Michigan." It has been pointed out by Dr. Cowles that there are two distinct types of beaches, one the xerophytic and the other the hydrophytic. The constant disturbance of the beaches through wave action changes the lower beach which contains very few plants or none, except certain algae. The moving dunes contain such interesting types as *Cirsium Pitcheri*, *Prunus pumila*, *Potentilla argentea*, *Cakile edentula*, *Arctostaphylos uva-ursi*, *Hypericum Kalmianum*, and *Juniperus communis*. I collected a few plants like *Cakile edentula*, *Corispermum* and *Euphorbia polygonifolia*. A third beach has been designated the upper beach, where such plants as *Artemisia canadensis* and *Lathyrus maritimus*, *Prunus pumila*, *Salix syrticola*, *Equisetum hyemale*, *Arabis lyrata* and *Cirsium Pitcheri* occur.



Fig. 2. Staghorn sumach (*Rhus typhina*) near Whitehall, Michigan, on sand dune.

Many plants are important in holding the sands. Such grasses as *Ammophila arenaria* and *Elymus canadensis* are important in starting the growth of plants on these dunes. Of these shrubs the most important are *Prunus pumila*, *Salix syrticola*, *Populus deltoides*, *Cornus stolonifera* and *Pinus strobus*. There are many depressions between the dunes and some of these are marshy and frequently contain water. Many aquatic or semi-aquatic plants are found in the depressions, like *Castalia odorata*, *Nymphaea advena*, *Glyceria nervata*, *Scirpus lacustris* and *Polygonum Hartwrightii*.

* Bot. Gazette 27: 95, 167, 281, 361.



Fig. 3. The lighthouse near Whitehall Lake



Fig. 4. A fixed sand dune with oaks, sumach, and white pine

The old shore lines may be seen for some miles back of the lake and these have been covered with such trees as *Pinus Strobus*, *Acer rubrum*, *Acer saccharum*, *Fraxinus americana*, *Tilia americana* and *Quercus velutina*.

The list of plants follows, nearly all of which are from Whitehall.

POLYPODIACEAE. *Aspidium spinulosum* (O. F. Müller), Sw. woods, *Aspidium spinulosum* var. *dilatatum*, *Aspidium marginale* (L.) Sw., *Aspidium Thelypteris* (L.), Sw. marshes, *Aspidium cristatum* (L.) Sw., low woods, *Phegopteris Dryopteris* (L.) Fee, *Phegopteris polypodioides* Fee, *Polypodium vulgare* L., *Pteris aquilina* L., *Asplenium Filix-toemina* (L.) Bernh., *Onoclea sensibilis* L.

OSMUNDACEAE. *Osmunda cinnamomea* L., *Osmunda regalis* L., *Osmunda Claytoniana* L.

EQUISETACEAE. *Equisetum arvense* L.

PINACEAE. *Pinus Strobus* L., stationary sand dunes, *Tsuga canadensis* (L.) Carr., stationary dunes, *Thuja occidentalis* L., *Juniperus communis* L.

NAJADACEAE. *Potamogeton Richardsonii* (Bennett) Ryd.

GRAMINACEAE. *Digitaria sanguinalis* (L.) Scop., *Panicum capillare* L., *Cenchrus tribuloides* L., *Setaria viridis* (L.) Scop., *Muhlenber-*



Fig. 5. A moving sand dune, Whitehall, Michigan.

gia mexicana (L.) Trin., *Agrostis alba* L., *Agrostis perennans* (Walt.) Tuck, *Cinna arundinacea* L., *Calamovilfa longifolia* (Hook.) Hack, *Amphiphila arenaria* (L.) Link, *Avena fatua* L., *Eragrostis megastachya* (Koeler) Link, *Poa pratensis* L., *Bromus secalinus* L., *Agropyron repens* (L.) Beauv., *Elymus canadensis* L., *Elymus canadensis* var. *glaucofolius* (Muhl.) Gray.

CYPERACEAE. *Scirpus americanus* Pers., *Scirpus atrovirens* Fernald, *Carex vulpinoidea* Michx., *Rhynchospora glomerata* Vahl.

ARACEAE. *Arisaema triphyllum* L., *Acorus calamus* L.

JUNCACEAE. *Juncus pelocarpus* E. Mey.

LILIACEAE. *Smilacina stellata* Desf., *Smilacina racemosa* Desf.

SALICACEAE. *Salix interior* Rowlee, *Salix syrticola* Fernald, *Salix rostrata* Richards, *Salix cordata* Muhl., *Salix lucida* Muhl., *Salix petio-*



Fig. 6. Sand dunes, Whitehall, Michigan, white pine and sand cherry in the foreground.

laris Smith, *Salix discolor* Muhl., *Salix nigra* Marsh, *Salix humilis* Marsh, *Populus tremuloides* Michx., *Populus balsamifera* L., *Populus deltoides* Marsh, *Populus grandidentata* Michx.

MYRICACEAE. *Myrica asplenifolia* L.

BETULACEAE. *Betula papyrifera*, *Betula lutea* Michx. L., *Alnus incana* (L.) Moench, *Ostrya virginiana* (Mill.) K. Koch, *Carpinus Caroliniana* Walt.

FAGACEAE. *Fagus grandifolia* Ehrh., *Castanea dentata* (Marsh) Borkh., *Quercus alba* L., *Quercus rubra* L., *Quercus velutina* Lam., *Quercus ellipsoidalis* Hill.

URTICACEAE. *Ulmus fulva* Michx., *Ulmus americana* L., *Celtis occidentalis* L., *Morus rubra* L., *Urtica gracilis* Ait.

POLYGONACEAE. *Polygonum convolvulus* L., *Polygonum acre* L., *Polygonum lapathifolium* L., *Polygonum sagittatum* L.

PHYTOLACCACEAE. *Phytolacca decandra* L.

AIZOACEAE. *Mollugo verticillata* L.

CARYOPHYLLACEAE. *Silene noctiflora* L.

CHENOPODIACEAE. *Chenopodium Botrys* L., *Chenopodium album* L., *Salsola Kali* L. var. *tenuifolia* G. F. W. Meyer.

NYMPHAEACEAE. *Nymphaea advena* (Ait.), *Castalia tuberosa* (Paine) Greene.

RANUNCULACEAE. *Hepatica triloba* Chaix, *Ranunculus pennsylvanicus* L., *Delphinium consolida*, *Anemone canadensis* L., *Actaea rubra* (L.) Willd.

LAURACEAE. *Sassafras variifolium* (Salisb.) Ktze., *Benzoin aestivale* (L.) Nees.

FUMARIACEAE. *Dicentra canadensis* (Goldie) Wolf.

CRUCIFERAE. *Brassica juncea* L., *Arabis canadensis* L.

SAXIFRAGACEAE. *Mitella diphylla* L., *Saxifraga pennsylvanica* L., *Ribes cynosbati* L., *Ribes floridum* L'Her.

HAMAMELIDACEAE. *Hamamelis virginiana* L.

ROSACEAE. *Spiraea salicifolia* L., *Amelanchier spicata* (Lam.) C.

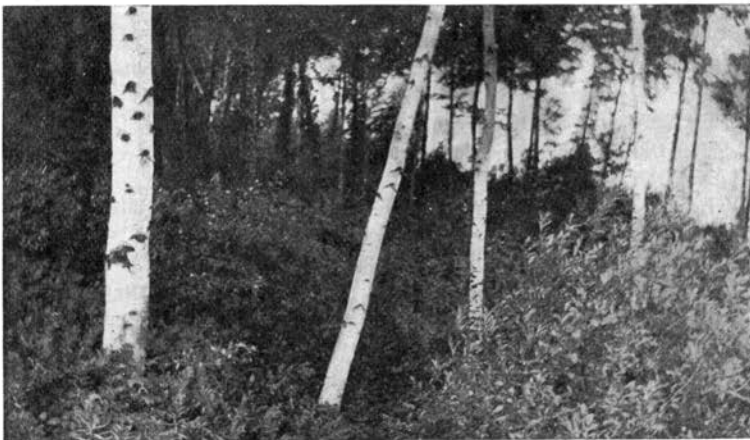


Fig. 7. A group of paper birch (*Betula papyrifera*).

Koch, *Fragaria vesca* L. var. *americana* Porter, *Potentilla argentea* L., *Potentilla palustris* (L.) Scop., *Potentilla Anserina* L., *Rubus triflorus* Richards, *Rosa blanda* Ait., *Prunus virginiana* L., *Prunus pennsylvanica* L. f., *Prunus avium* L., naturalized, *Prunus pumila* L., *Prunus serotina* Ehrh.

LEGUMINOSAE. *Trifolium arvense* L., *Lathyrus venosus* L., *Robinia pseudo-acacia* L., *Apios tuberosa* Moench.

RUTACEAE. *Ptelea trifoliata* L.

EUPHORBIACEAE. **Euphorbia polygonifolia* L., **Euphorbia corollata* L., **Euphorbia macullata* L., *Euphorbia cyparissias* L., introduced.

ANACARDIACEAE. **Rhus typhina* L., **Rhus glabra* L., *Rhus copallina* L.

ACERACEAE. *Acer spicatum* Lam., *Acer saccharum*, Marsh, *Acer rubrum* L., *Acer saccharinum* L.

VITACEAE. **Psedera vitacea* (Knerr) Greene, *Vitis bicolor* Le Conte, **Vitis vulpina* L.

TILIACEAE. *Tilia americana* L.

MALVACEAE. *Malva rotundifolia* L.

HYPERICACEAE. *Hypericum Kalmianum* L., *Hypericum maculatum* Walt.

CISTACEAE. **Hudsonia tomentosa* Nutt.

CACTACEAE. *Opuntia Rafinesquii* Engelm.

ONAGRACEAE. *Epilobium coloratum* Muhl., **Oenothera biennis* L., **Oenothera rhombipetala* Nutt., *Circaea lutetiana* L.

ARALIACEAE. *Aralia racemosa* L., *Panax quinquefolium* L.

UMBELLIFERAE. *Osmorrhiza longistylis* DC. *Cicuta maculata* L., **Cicuta bulbifera* L., **Sium cicutaefolium* Schrank, **Heracleum lanatum* Michx., *Angelica atropurpurea* L.

CORNACEAE. **Cornus canadensis* L., *Cornus stolonifera* Michx., **Cornus alternifolia* L. f., *Cornus amomum* Mill.

ERICACEAE. **Pyrola americana* Sweet, **Gaultheria procumbens* L., *Arctostaphylos Uva-ursi* (L.) Spreng, *Vaccinium pennsylvanicum* Lam.

PRIMULACEAE. *Lysimachia thyrsoiflora* L., *Steironema ciliata* (L.) Raf., *Trientalis americana* (Pers.) Pursh.

OLEACEAE. *Fraxinus americana* L., **Fraxinus lanceolata* Borkh., **Fraxinus nigra* Marsh.

APOCYNACEAE. **Apocynum androsaemifolium* L.

ASCLEPIADACEAE. **Asclepias incarnata* L., **Asclepias syriaca* L.

CONVOLVULACEAE. **Convolvulus sepium* L.

BORAGINACEAE. **Cynoglossum officinale* L., *Lappula echinata* Gilbert, **Lithospermum Gmelini* (Michx.) Hitch.

VERBENACEAE. **Verbena hastata* L., *Verbena stricta* Vent.

LABIATAE. **Teucrium canadense* L., **Scutellaria lateriflora* L., *Scutellaria galericulata* L., **Nepeta Cataria* L., *Prunella vulgaris* L., **Monarda fistulosa* L., *Monarda punctata* L., **Lycopus lucidus* Turcz. var. *americanus* Gray, **Mentha arvensis* L. var. *canadensis* (L.) Briquet, *Mentha spicata* L.

SOLANACEAE. **Datura tatula* L., *Solanum nigrum* L.

SCROPHULARIACEAE. **Verbascum Blattaria* L., *Linaria vul-*

OROBANCHACEAE. *Conopholis americana* (L. f.) Wallr.

PLANTAGINACEAE. **Plantago major* L., *Plantago lanceolata* L.

RUBIACEAE. *Galium tinctorium* L., *Galium asprellum* Michx., **Galium boreale* L., *Mitchella repens* L.

CAPRIFOLIACEAE. *Lonicera dioica* L., *Diervilla Lonicera* Mill., **Symphoricarpos occidentalis* Hook., *Linnaea borealis* L. var. *americana* (Forbes) Rehder, *Viburnum Opulus* L. var. *americanum* (Mill.) Ait., *Sambucus racemosa* L., **Sambucus canadensis* L.

CUCURBITACEAE. *Sicyos angulatus* L.

CAMPANULACEAE. *Campanula rotundifolia* L., *Campanula aparinoides* Pursh., **Campanula americana* L.

LOBELIACEAE. **Lobelia Kalmii* L., **Lobelia syphilitica* L.

COMPOSITAE. *Vernonia fasciculata* Michx., **Eupatorium purpureum* L., *Eupatorium perfoliatum* L., **Solidago canadensis* L., *Solidago serotina* Ait., *Solidago juncea* Ait., *Solidago speciosa* Nutt. var. *angustata* T. and G., **Solidago Riddellii* Frank, *Solidago rigida* L., *Aster macrophyllus* L., **Aster novae-angliae* L., **Aster azureus* Lindl., **Aster laevis* L., **Aster salicifolius* Ait., **Aster umbellatus* Mill., *Aster divaricatus* L., *Erigeron annuus* (L.) Pers., *Gnaphalium polycephalum* L., *Ambrosia psilostachya* DC., **Rudbeckia hirta* L., **Lepachys pinnata* (Vent.) T. and G. *Helianthus petiolaris* Nutt., **Helianthus strumosus* L., *Helianthus microcephalus* T. and G. **Bidens vulgata* Greene, **Bidens cernua* L., **Helenium autumnale* L., *Achillea lanulosa* Nutt., *Anthemis Cotula* L., *Artemisia caudata* Nutt., **Artemisia canadensis* Michx., **Arctium Lappa* L., **Cirsium discolor* (Muhl.) Spreng., **Cirsium altissimum* (L.) Spreng., **Cirsium muticum* Michx., *Cirsium Pitcheri* (Torr.) T. and G., **Cirsium arvense* (L.) Scop., **Taraxacum officinale* Weber, *Lactuca Scariola* L., *Lactuca canadensis* L.

DEPARTMENT OF BOTANY

IOWA STATE COLLEGE