

SOME PLANTS OF THE BOIS FORT INDIAN RESERVATION AND VICINITY IN MINNESOTA

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The Bois Fort Indian Reservation, containing 107,519.43 acres, is situated 140 miles northwest of Duluth, Minnesota, and 38 miles south of Fort Frances, Ontario. It surrounds a beautiful sheet of shallow water of three-fourths of a township in area, known as Nett Lake. Its land is variable in condition of soil and possible fertility. One-half of it is swamp and is known to the Indians as "muskeg" land. The non-swamp eastern part is composed of rock ridges of the Couchiching formation, flanked with clay land covered with pine and hardwood forest trees. The western part, which is not covered with swamp, is a sandy region. Nett Lake and its tributary streams occupy the east-central part of the reservation and the Little Fork and Nett rivers cross it. The swamp areas are in the jungle state. The dry land is still heavily timbered where not already logged, while wild rice grows in the shallow lake so that it looks like a vast wheat field in summer. As is seen, the region is practically in the virgin state. The same might be said of the region extending southward and eastward to Duluth and Lake Superior and northward to the Arctic Ocean, much of which is composed of lakes and swamps.

The tribal timber of the reservation was cut prior to 1909 when the writer became agent of the reserve, and the individual Indian timber is being logged off now (1921). The individual pine timber was estimated at 17,000,000 feet B. M. and the pulp wood into millions of cords.

Below are some of the plants of the region that were identified by the writer as time would permit while he was in charge of the agency there.

RANUNCULACEAE (CROWFOOT FAMILY.)

Genus *Ranunculus*.

*Ranunculus affinis*, R. Br. common.

*Ranunculus affinis*, var. *validus*, Gray. Often seen.

Genus *Caltha*, L. Marsh Marigold.

*Caltha palustris*, L. Common.

Genus *Aquilegia*, Tourn. Columbine.

*Aquilegia canadensis*, L. Wild Columbine. Found everywhere.

## SARRACENIACEAE. PITCHER FAMILY.

Genus *Sarracenia*, Tourn. Side-saddle Flower.

*Sarracenia purpurea*, L. Side-saddle Flower, Pitcher Plant, Huntsman's Cup. Quite common.

## PAPAVERACEAE. POPPY FAMILY.

Genus *Sanguinaria*, Dill. Blood-root.

*Sanguinaria canadensis*, L. A very common Indian medicine. It is also used in the jugglery performances of the medicine men. It blooms in April.

## FUMARIACEAE. FUMITORY FAMILY.

Genus *Dicentra*, Borkh. Dutchman's Breeches.

*Dicentra cucullaria*, DC. Dutchman's Breeches. Very common.

## CRUCIFERAE. MUSTARD FAMILY.

Genus *Lepidium*, Tourn. Pepperwort. Peppergrass.

*Lepidium virginicum*, L. Wild Peppergrass. Abundant everywhere. Much used by the Indians.

Genus *Sisymbrium*, Tourn. Hedge Mustard.

*Sisymbrium officinale*, Scop.

Genus *Brassica*, Tourn.

*Brassica campestris*, L. Escaped from cultivation.

## VIOLACEAE. VIOLET FAMILY.

Genus *Viola*, Tourn. Violet. Heart's Ease.

*Viola sagittata*, Ait. Arrow-leaved Violet. Common.

*Viola palustris*, var. *Nettlakeis*, n. var. Resembles *V. palustris*, but has a long, slender spur, slightly thickened at the end; spur almost as long as the beardless violets.

*Viola rotundifolia*, Michx. Round-Leafed Violet. Quite common.

*Viola pubescens*, Ait. Downy Yellow Violet. Very common.

*Viola pubescens*, var. *Nettlakeis*. All petals veined with purple. Seen May 19, at Little Fork R.

## PORTULACACEAE. PURSLANE FAMILY.

Genus *Portulaca*, Tourn. Purslane.

*Portulaca Oleracea*, L. Common Purslane. Very common.

## TILIACEAE. LINDEN FAMILY.

Genus *Tilia*, Tourn. Linden. Basswood.

*Tilia americana*, L. Basswood. Very common, trees unusually large.\*

\*Thread, twine, cord and rope are usually made from basswood for many uses now and wholly so in the old times, unless made from the sinew of the moose and deer or from rawhide.

The basswood tree of this region, when in bloom, is a beautiful tree.

As a further note on the use of basswood: In preparing basswood thread, the inner bark of young sprouts is removed in sheets and boiled in water to which a large quantity of lye from wood ashes has been added. This softens the fiber and permits it to be manipulated without breaking. The unoccupied squaws then employ their time in pulling the bark into shreds and twisting same into twine and the latter into ropes as needed. This twine is the sewing material used in weaving mats, erecting bark houses and tepees and for almost all other household purposes. When put away for future use it is hung up in hanks.

## GERANIACEAE. GERANIUM FAMILY.

Genus *Impatiens*, L. Balsam. Jewel-weed.

*Impatiens pallida*, Nutt. Pale Touch-Me-Not. Common.

## CELASTRACEAE. STAFF-TREE FAMILY.

Genus *Celastrus*, L. Staff-tree. Shrubby Bitter-Sweet.

*Celastrus scandens*, L. Wax-Work, Climbing Bitter-Sweet.

## SAPINDACEAE. SOAPBERRY FAMILY.

Genus *Acer*, Tourn. Maple.

*Acer pennsylvanicum*, L. Striped Maple, a common tree.

*Acer spicatum*, Lam. Mountain Maple.

*Acer saccharinum*, Wang. Sugar or Rock Maple.\*\*

*Acer saccharinum*, var. *nigrum*, Torr & Gray. Black Sugar Maple.\*\*

\*\*The sugar maple is a common tree on the reservation. It grows in groves. The trees are scarred by repeated tappings, causing each to be considerably enlarged in the part of the trunk that is subject to the tapping. Many tons of sugar are annually made by the Bois Fort Indians.

The sugar-making season comes when the first crow appears, usually about the middle of March, while there is yet snow on the ground. The medicine men give orders and the sugar-making holiday is begun; every one goes to his respective maple grove, which is the place of the sugar-making for that respective family and claimed by right of descent, through the mother's totem.

The first thing on arriving on the ground is to erect the temporary tepees. These are the usual conical frame made of poles leaning together at the top and spreading to the ground all around, and covered with bark or canvas. There is one entrance door and the smoke from the central fire escapes at the top among the loosely fastened poles. Racks are then set up, on which to hang the pots for boiling the syrup, enclosed often in enlarged, elongated bark tepees.

The next work is the preparing of sap dishes and sap buckets.

Quantities of bark is peeled off from the nearby white birch trees; pieces of the bark are cut and folded into sap dishes and pans, each measuring eight to twelve inches in width, eighteen inches in length, and about six inches in depth. The ends are carefully folded and stitched along the edge with bass-wood fiber, so that it will retain its shape. Several hundred of these dishes are made by each family. Sap buckets are then made from birch bark. These are cut and folded at the corners so as to avoid breaking the bark. The folds are then seamed with pine resin. When completed these buckets are elongated in shape, are supplied with a carrying bale, and are made deep enough to hold one or two gallons. The average bucket measures about six inches across the top, which is round, and eight to nine inches across the elongated bottom; the depth is about nine inches. To strengthen the pail the top and rim are held in place by means of thin strips of wood neatly stitched fast with bass-wood fiber. Mocoeks or boxes for containing the sugar product are made in the same way and are much the same shape.

When the preparations are completed, the sap gathering commences. One (or more) small oblique gash is cut in each sugar tree so as to take out the bark and about an inch of the sap wood. Down this gash the sap runs to the bottom and trickles downward along the side of the tree. Just below the lower point of the gash a horizontal cut is made in the bark and a downward sloping chip is driven into this cut so that the sap from the cut above runs over it and drips from the end into a sap dish set under the chip to catch the drippings. Twice a day these dishes are emptied into sap buckets and the sap carried to the tepee to be boiled into sugar.

The sap is boiled in cans and kettles within the large wigwams or outside under the racks previously mentioned; they have a tradition that before they could get iron kettles, their ancestors used to make kettles of clay with which they boiled sap. As soon as one kettle full is converted into sugar, another kettle full of sap is hung over the fire; as many kettles are used in this process as the family can obtain.

When the syrup begins to granulate, it is poured into wooden troughs where it is stirred and the granulating process completed. Much of the syrup just in the act of granulating is thrown on snow to cool rapidly, forming sugar wax, which is a good substitute for our candy.

Sugar cakes are also formed by pouring the syrup into sauce dishes, small cake dishes and the like, when just in the act of granulating. These are melted into syrup when needed. Much of the maple sugar is now sold to the whites in cake form, the granulated product being put into mocoeks for future use.

Besides sugar being obtained from the sugar tree, many things are made from the hard wood of this tree. One of these is the bowl used in the dice bowl game. This is a large, rather shallow, symmetrical, nicely finished, hemispherical bowl. It is made from a large, round nodule of maple root, and is consequently a rare and expensive article for its size. It is fashioned solely with the aid of an ax and a knife. A specimen at hand measures nine inches in diameter at the top and is two inches in depth. It is nearly one inch in thickness at the bottom, but gradually tapers to about one-fourth of an inch at the rim.

## ANACARDIACEAE. CASHEW FAMILY.

Genus *Rhus*, L. Sumach.

- Rhus glabra*, L. Dwarf Sumach.  
*Rhus copallina*, L. Dwarf Sumach.  
*Rhus canadensis*, Marsh.  
*Rhus aromatica*, Ait.

The Sumach is a very common shrub throughout the region. Its bark and berries are much used in the medicine ceremonies of the aborigines.

- Polygala senega*, L. Seneca Sankeroot. It is used as a medicine.\*  
 \*Of the family Polygalaceae; Milkwort Family.

## LEGUMINOSAE. PULSE FAMILY.

Genus *Baptisia*, Vent. False Indigo.

*Baptisia tinctoria*, R. B. Wild Indigo. Very common. This plant was used much in native coloring and as medicine.

Genus *Lathyrus*, Tourn. Vetching. Everlasting Pea.

- Lathyrus ochroleucus*, Hook. Quite common.  
*Lathyrus palustris*, L. (?)

## ROSACEAE. ROSE FAMILY.

Genus *Prunus*, Tourn. Plum, Cherry, Etc.

- Prunus americana*, Marshall. Wild Yellow or Red Plum.  
*Prunus pennsylvanica*, L. f. Var. Nettlakea. Pin Cherry. Very common.  
*Prunus virginiana*, L. Choke Cherry.  
*Prunus serotina*, Ehrh. Wild Black Cherry.  
*Prunus demissa*, Walp.

The plums and cherries above are very plentiful in the Bois Fort region and are quite extensively used as food. The fruit is eaten fresh and also dried for winter use. When needed for use after being dried, the berry, seed and all, are often crushed and ground up and the whole used as a sort of flour in making soups.

Genus *Rubus*, Tourn. Bramble.

*Rubus strigosus*, Michx. Wild Red Raspberry. A very abundant plant. Its fruit is extensively used by the natives as a food. The fruit is both eaten fresh and dried for winter use.

Genus *Fragaria*, Tourn. Strawberry.

*Fragaria virginiana illinoensis*, Gray. Seen near Flat Rock. Strawberries are much used as food by the Indians.

Genus *Rosa*, Tourn. Rose.

- Rosa sayi*, Schwein. (?)  
*Rosa lucida*, L. Common. The buds are occasionally eaten. The root and bark are also sometimes used as medicine.

Genus *Pyrus*, L. Pear. Apple.

- Pyrus coronaria*, L. American Crab-apple. Quite common.  
*Pyrus americana*, D. C. American Mountain Ash.\*  
*Pyrus sambucifolia*, Cham. & Schlecht. Occasionally seen.

\*When steamed the ash is bent into any form desired by the Ojibwa.

Genus *Crataegus*, L. Hawthorn. White Thorn.

- Crataegus coccinea*, L. Quite common.

Genus *Amelanchier*, Medic. June-berry.

*Amelanchier canadensis*, var. *oblongifolia*, Torr. & Gray. Shad-bush.  
Service-berry. Quite common.

#### SAXIFRAGACEAE. SAXIFRAGE FAMILY.

Genus *Ribes*, L. Currants. Gooseberry.

*Ribes gracile*, Michx. Gooseberry.

*Ribes oxycanthoides*, L. Common.

*Ribes hudsonianum*, Richards. Currant. Common.

*Ribes floridum*, L'Her. Black Wild Currant.

*Ribes rubrum*, L., var. *subglandulosum*, Maxim. Red Currant. Common.

The currants and gooseberries are used as food by the Indians, both fresh and dried. The roots and bark are also much used as medicine.

#### ONAGRACEAE. EVENING-PRIMROSE FAMILY.

Genus *Oenothera*, L. Evening Primrose.

*Oenothera rhombipetala*, Nutt. Common. In bloom June 30.

#### CUCURBITACEAE. GOURD FAMILY.

Genus *Sicyos*, L. One-seeded Bur-Cucumber.

*Sicyos angulatus*, L. Common everywhere, becoming a pest in the fields.

#### UMBELLIFERAE. PARSLEY FAMILY.

Genus *Conioselinum*, Fisch. Hemlock-Parsley.

*Conioselinum canadense*, Torr. & Gray. Common.

Genus *Heracleum*, L. Cow-Parsnip.

*Heracleum lanatum*, Michx. Common. Much used as greens.

Genus *Aralia*, Tourn. Ginsang. Wild Sarsaparilla.

*Aralia racemosa*, L. Spikenard. Common. Used as medicine by the Indians. One old medicine man cultivates a patch of this plant.

#### CORNACEAE. DOGWOOD FAMILY.

Genus *Cornus*, Tourn. Cornel, Dogwood.

*Cornus sericea*, L. Silky Cornel. Kinnikinnik. A Chippewa medicine. Also smoked and much used in the various ceremonies of the Northern Indians. Indians also get drunk on the smoke of the plant and the other kinnikinnik, which will be described later.

*Cornus stolonifera*, Michx. Red-Osier Dogwood.

#### CAPRIFOLIACEAE. HONEYSUCKLE FAMILY.

Genus *Sambucus*, Tourn. Elder.

*Sambucus racemosa*, L. Red-berried Elder. Common. Used as food.

Genus *Viburnum*, L. Arrow-wood. Laurestinus.

*Viburnum opulus*, L. Cranberry Tree. High Cranberry Bush. Quite common. The acid fruit is used much in making jelly by the whites. The Indians use the fruit also.

#### RUBIACEAE. MADDER FAMILY.

Genus *Mitchella*, L. Partridge-Berry.

*Mitchella repens*, L. Common. Much used by the Indians.

#### COMPOSITAE. COMPOSITE FAMILY.

Genus *Bidens*, L. Bur-Marigold.

*Bidens bipinnata*, L. Spanish Needles. Too plentiful.

Genus *Erechtites*, Raf. Fireweed.

*Erechtites hieracifolia*, Raf. Fireweed. A very common and abundant weed in burned areas.

Genus *Arctium*. Burdock.

*Arctium lappa*, L. Common. Probably escaped or introduced with seed.

Genus *Cnicus*, Tourn. Common or Plumed Thistle.

*Cnicus arvensis*, Hoffm. Canada Thistle. Too plentiful.

Genus *Taraxacum*, Haller. Dandelion.

*Taraxacum officinale*, Weber. Common Dandelion. Common.

(ERICACEAE) MONOTROPEAE. INDIAN-PIPE FAMILY.

Genus *Gaylussacia*, HBK. Huckleberry.

*Gaylussacia resinosa*, Torr. & Gray. Black Huckleberry. Used as a food.

Genus *Vaccinium*. Blueberry. Bilberry. Cranberry.

*Vaccinium pennsylvanicum*, Lam. Dwarf Blueberry.

*Vaccinium Canadense*, Kalm. Blueberry.\*

\*The blueberries are abundant. Every hill and open space is covered with them. Blueberry harvest is a great time for the Indians. They go far and near and gather them to sell at so much a box. Car loads are gathered and sold to the nearby stores for shipment, buyers often being sent from St. Paul, Minneapolis, Duluth and the nearby towns to purchase them. The natives also now can them white man's way. Many are eaten fresh and tons of them dried on racks in the sun for winter use. These berries are the most abundant wild fruit of the region.

*Vaccinium oxycoccus*, L. Small Cranberry.

*Vaccinium macrocarpon*, Ait. Large or American Cranberry.

Cranberries are very plentiful in the swamp regions and are quite an article of food. Many bushels are also sold by the Indians each year.

Genus *Arctostaphylos*, Adams. Bearberry.

*Arctostaphylos una-ursi*, Spreng. Bearberry. The leaves of this plant are smoked, causing intoxication. The plant is much used in the medicine ceremonies.

Genus *Epigaea*, L. Ground Laurel. Trailing Arbutus.

*Epigaea repens*, L. Trailing Arbutus. Seen on burning near Thompson's homestead.

Genus *Gaultheria*, Kalm. Aromatic Wintergreen.

*Gaultheria procumbens*, L. Creeping Wintergreen. Common on sand ridges near Thompson's homestead. The "berry" was much used as a food by the Ojibwa.

POLEMONIACEAE. POLEMONIUM FAMILY.

Genus *Polemonium*, Tourn. Greek Valerian.

*Polemonium reptans*, L. Common.

*Polemonium caeruleum*, L. Jacob's Ladder. Common.

BORRAGINACEAE. BORAGE FAMILY.

Genus *Echinosperrum*, Lehm. Stockweed.

*Echinosperrum floribundum*, Lehm. Beggar lice. A pest everywhere.

Genus *Mertensia*, Roth. Lungwort.

*Mertensia paniculata*, Don. Blue Bells. Quite common.

SOLANACEAE. NIGHTSHADE FAMILY.

Genus *Solanum*, Tourn. Nightshade.

*Solanum nigrum*, L. Common Nightshade. Common. Used in the medicine ceremonies by the Indians.

LABIATE. MINT FAMILY.

Genus *Mentha*, Tourn. Mint.

*Mentha canadensis*, L. Wild Mint. Quite common.

Genus *Stachys*, Tourn. Hedge-Nettle.

*Stachys palustris*, L. Nettle. Common.

## PLANTAGINACEAE. PLANTAIN FAMILY.

Genus *Plantago*, Tourn. Plantain.*Plantago major*.. Common Plantain. Not common.

## CHENOPODIACEAE. GOOSEFOOT FAMILY.

Genus *Chenopodium*, Tourn. Pigweed.*Chenopodium album*, L. Pigweed. Common.

## POLYGONACEAE. BUCKWHEAT FAMILY.

Genus *Rumex*, L. Dock. Sorrel.*Rumex altissimus*, Wood. Pale Dock. Common.Genus *Polygonum*, Tourn. Knotweed.*Polygonum dumetorum*, var. *scandens*, Gray. Climbing False Buckwheat.

## THYMELAEACEAE. MEZEREUM FAMILY.

Genus *Dirca*, L. Leatherwood. Moosewood.*Dirca palustris*, L. Moosewood. Used for withes by Indians.

## URTICACEAE. NETTLE FAMILY.

Genus *Ulmus*, L. Elm.*Ulmus fulva*, Michx. Slippery or Red Elm. Rare.*Ulmus americana*, L. American or White Elm. Quite common, and a large tree.

## CUPULIFERAE. OAK FAMILY.

Genus *Betula*, Tourn. Birch.*Betula lenta*, L. Cherry Birch; Sweet or Black Birch.*Betula lutea*, Michx. f. Yellow or Gray Birch.*Betula papyrifera*, Marshall. Paper or Canoe Birch.

The birches and poplars are the most numerous trees of the reservation and from an Indian point of view are among the most valuable, especially the birches, for from them their birch bark utensils are made.\*

\*Birch Bark Utensils: The bark of the white (paper) birch was used in the old times and is still used for making various convenient small vessels, pails, and trays. When made for permanent use, the parts of the article are firmly sewed together with basswood twine and the edges counter wrapped with the same material.

If the article is wished to be made water tight, its seams are sealed with pitch. The following are some of the useful birch bark articles used by the Bois Fort Indians: Mocoeks (in which wild rice and maple sugar are stored); dishes; sap dishes (used in catching maple sap); rice baskets; buckets; trays and winnowing dishes (used when separating the chaff from the rice.)

The CANOE is also made from birch bark. The Ojibwa reached his zenith in manufacture when he made the canoe. It is undoubtedly the most beautiful and light model of all the water crafts ever invented. The frame work is made of white cedar or some other light, durable wood; the ribs are thinned to the right thickness with a drawing knife, and when the desired number are obtained, they are steamed, after which they are curved according to the part of the canoe which they are intended to brace. The tops of the ribs are then securely tied to the top plate-piece of the canoe with roots of tamarack, or some other tough tying material; this frame is then placed in a sort of rack and the birch bark put on it so ingeniously and so well sewed together and the seams so well closed with pitch, that the finished canoe is water tight and rides on the water like a cork.

Genus *Corylus*, Tourn. Hazel-nut.*Corylus rostrata*, Ait. Beaked Hazel-nut. Very common and much used as food by the natives.Genus *Carpinus*, L. Hornbeam. Iron-wood.*Carpinus caroliniana*, Walter? American Hornbeam. Blue or Water Beech.

Genus *Quercus*, L. Oak.

*Quercus rubra*, L. Red Oak. Common. There are other oaks in the region, but were not identified by the writer, though often seen.

## SALICACEAE. WILLOW FAMILY.

Genix *Salix*, Tourn. Willow. Osier.

*Salix candida*, Willd. Sage or Hoary Willow. Common.

*Salix balsamifera*, Barratt. Common.

Genus *Populus*, Poplar. Aspen.

*Populus tremuloides*, Michx. American Aspen. Very common in loamy sections, but not so common as the poplars.

*Populus grandidentata*, Michx. Occasionally seen.

*Populus balsamifera*, L. Balsam Poplar. Very common in the loamy regions.

*Populus monilifera*, Ait. Cotton Wood. Common along the streams, and occasionally seen inland.

There are millions of cords of pulp wood of the *Populus* species above on the reservation.

## CONIFERAE. PINE FAMILY.

Genus *Pinus*, Tourn. Pine.

*Pinus strobus*, L. White Pine.

*Pinus banksiana*, Lambert. Northern Scrub Pine.

*Pinus resinosa*, Ait. Red Pine.

The pine still standing on the reservation in the fall of 1920 was estimated at 17,000,000 feet B. M.

Genus *Picea*, Link. Spruce.

*Picea nigra*, Link. Black Spruce.

*Picea alba*, Link. White Spruce.

Genus *Abies*, Link. Fir.

*Abies balsamea*, Miller. Balsam or Balm-of-Gilead Fir. Common.

Genus *Larix*, Tourn. Larch.

*Larix americana*, Michx. Tamarack. Practically the whole region just at the swamp line when in the "dry" peaty state is covered with tamarack forest from the Nett Lake region on northward into Canada as far as the writer has been in that dominion. The Ojibwa use the roots of this tree to sew their canoes and also in the strong upper wrappings over the edges of same.

Genus *Juniperus*, L. Juniper.

*Juniperus sabina*, L., var. *procumbens*, Pursh. Found in the swampy areas.

*Juniperus virginiana*, L. Red Cedar. Found bordering the streams and inland, but usually on higher ground than *J. procumbens* above.\*

\*It is estimated that there are cedar post timber enough in the region to furnish a billion posts. The pulp wood and the cedar posts are now being floated down the various streams to Canada where the pulp wood is made into paper at the International Falls pulp mills, said to be the largest in the world. There, also, the posts are loaded onto cars and shipped to the States for fencing. Cutting posts and pulp wood is a great industry in this section and will be for many years to come.

## BROMELIACEAE. PINEAPPLE FAMILY.

Genus *Cypripedium*. Lady's Slipper.

*Cypripedium pubescens*, Willd. Large Yellow Lady's Slipper. Common.

## LILACEAE. LILLY FAMILY.

Genus *Maianthemum*, Wigg.

*Maianthemum danadense*, Desf. A common plant.

Genus *Uvularia*, L. Bellwort.

*Uvularia perfoliata*, L. Occasionally seen.

*Uvularia grandiflora*, Smith. Seen in the rich woods.

#### JUNCACEAE. RUSH FAMILY.

Genus *Juncus*, Tourn. Rush. Bog-rush.

*Juncus stygius*, L. Common around lakes. This plant is used in weaving mats. \*It also holds quite a place in the myths of the Ojibwa.

#### TYPHACEAE. CAT-TAIL FAMILY.

Genus *Typha*, Tourn. Cat-tail.

*Typha latifolia*, L. Common Cat-tail. The flags of this plant are used much in mat weaving.\*

\*The Bois Fort Indians have several varieties of mats. These are made from rushes, from cedar bark and from the broad blades of the cat-tail flag. Some of the mats are woven coarse, others fine; they are from six to fifteen feet in length and about a yard in width, and are used for bedding and house and floor coverings.

#### ARACEAE. ARUM FAMILY.

Genus *Arisaema*, Martinus. Indian Turnip. Dragon Arum.

*Arisaema triphyllum*, Torr. Indian Turnip. Jack in the Pulpit. A very common plant and much used as medicine by the natives.

#### LYCOPODIACEAE. CLUB MOSS FAMILY.

Genus *Lycopodium*, L. Club-Moss.

*Lycopodium lucidulum*, Michx. Common.

*Lycopodium selago*, L. Very common.

The mosses are abundant in this region, many species, no doubt, being represented. The trees hang with it and the swampy areas are covered with it. Moreover the peat of the region is composed for the most part of moss, rushes and flags.\*

\*The following plants were seen but not identified:

Reindeer Moss (Tripe Roche.) The writer was told that this moss was eaten by the Indians in the old times, also that moose feed on it.

Wuab-es-sec-pin (Ojibwa name.) This plant resembles the potato. It grows in wet ground. It is mealy when boiled. It is even now occasionally eaten by the natives who eat it with a relish.

Stitch-auc-waub-es-see-pin (Ojibwa name.) This is a similar plant to the last named above. It is found throughout the region. It is used as a food by the natives, being boiled.

#### GRAMINEAE. GRASS FAMILY.

Genus *Setaria*, Beauv. Bristly Foxtail Grass.

*Setaria glauca*, Beauv. A common pest.

Genus *Zizania*, Gronov. Water or Indian Rice.

*Zizania aquatica*, L. Indian Rice. Water Oats. This is the most important wild food plant in the region. It grows along the swampy borders of streams and in the shallow water of the numerous small lakes of the region from the Great Lakes on westward throughout Minnesota to the Red River valley in that state and on northward into Canada. It belongs to the grass family. It is an annual; flowers monoecious; the staminate and pistillate are both in 1-flowered spikelets in the same panicle. Glumes 2, subtended by a small cartilaginous ring, herbaceous-membranaceous, convex, awnless in the sterile, the lower one tipped with a straight awn in the fertile spikelets. Palet, none. Stamens 6. Stigmas pencil-form. A large reed-like water-grass. Spikelets jointed upon the club-shaped pedicels, very deciduous. Culms 3 to 9 feet high; leaves flat, 2 to 4 feet long (and lie flat on the water when they first emerge; later they stand erect and finally decline at the tips), linear lanceolate; lower branches are of the ample pyramidal panicle staminate, spreading; the upper erect, pistillate; lower glume long awned, rough; styles distinct; grain linear, slender, 6" long.

This rice is one of the leading articles of food of the aborigines and was such in the old times.\*

\*The writer became acquainted with this plant at Nett Lake, Minnesota, where he had charge of the Bois Fort Indian Reservation as Superintendent and Special Disbursing Agent from 1909 to 1914. Nett Lake, the lake that bears that name, covers three-fourths of a township in area and is in the shape of a great lobster's paw with the claws pointing eastward, the major claw being the northern member. It is a very shallow lake, the greater part being less than four feet in depth. In this the wild rice grows in such quantities that the lake looks like a great barley field.

The rice does not ripen all at once, so can not be cut like a field of barley. But as the grains drop from the stalk very easily when ripe, it can be pounded off into a canoe with a stick and the green grain still left to ripen.

The rice begins to ripen the latter part of August. The Indians then have a secret ceremony and much powowing. Then the chief medicine man gives permission for them to go out and gather rice.

With canoes, the Indians go among the rice and beat the heads over the canoe with short clubs. This they keep up till they have a canoe full of rice. Then they go to the village with it.

At the village, the rice, which is just past the milk stage when gathered, is parched and scorched in a large iron kettle inclined over the fire so that a squaw can stir it to keep it from burning. By this scorching process the hulls are all burned from the kernels, or are so dried and charred that they can be loosened and removed by the next process.

As soon as the scorched rice is removed from the kettle and is cold enough to handle, it is placed in a cylindrical hole in the ground that has been lined with cement or marl from the lake. Then the Indian man of the house gets into this hole and tramps the hulls off with his feet. After the tramping is completed, the chaff, dust and ashes are winnowed from the rice by the women. The product is then sacked and is ready for sale as breakfast food. It sells at not less than 30 cents per pound at the village, and as high as 50 cents in the neighboring cities.

This rice makes good gem cakes. It is also used to stuff ducks and other fowls when preparing them for dinners. Orders have come from as far as Salt Lake City for rice for making dressing for ducks for Thanksgiving dinners.

In preparing it as breakfast food, it is prepared and cooked the same as white rice and can be cooked in as many different ways. The preferable way, however, is to take a cupful of the rice and pour a cupful of boiling water on it at bedtime and then cover it up so as to keep the steam in and let it set till morning, then put it on the stove and evaporate the remaining water. It is then puffed-rice, and is delicious with sugar and cream.

The Ojibwa sometimes boil the excrements of the rabbit with the rice "to season it" and are said to esteem it as a luxury. To make that dish still more palatable, and one of the highest epicurean dishes, they occasionally take a partridge, pick off the feathers, and without any further dressing except pounding it to the consistency of jelly, throw it into the rice, and boil it in that condition.

Genus *Hordeum*, Tourn. Barley.

*Hordeum jubatum*, L. Squirrel-Tail Grass. Common.

#### EQUISETACEAE. HORSETAIL FAMILY.

Genus *Equisetum*, L. Horsetail.

*Equisetum pratense*, Ehrh. Very common. The Indians eat the tubers of this plant.