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Milwaukee, Wis.

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THE FOX AND THE GREASE KETTLE

(Winnebago)

John Blackhawk

At a council of animal people it was discussed as to how much fat each animal should carry. In the center of the lodge there was a large kettle of grease or fat. This was to be apportioned among the animals. The crafty Fox jumped into it very suddenly and emerged very fat. The Bear, who was acting as leader of the council, called on the other animals to catch and hold the Fox. He was caught and all of the fat was squeezed out of him but a little above his forearms or legs. Then he was cast out of the council.

The animals then each in turn entered the grease kettle and to each was given the amount of fat which he should properly carry. The actions of the Fox at this animal council explain why this crafty member of the animal tribe is never in a fat condition.

PLANTS USED BY THE BOIS FORT CHIPPEWA (OJIBWA) INDIANS OF MINNESOTA

Albert B. Reagan

The Bois Fort Chippewa (Ojibwa) Indians, who are known by the Chippewa name Sugwaundugahwininewug (men of the dense wooded forest), have a reservation in the northern part of Minnesota. It contains 107,519.43 acres and is situated 140 miles northwest of Duluth in the same state, 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 very 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 rocky ridges of the Couchiching formation, flanked with clay land covered with pine, and hard wood 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 lands are 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 toward Duluth and Lake Superior and northward to the Arctic Ocean, much of which is composed of lakes and swamps.

The plants used by the Bois Fort Indians, as known to the writer, are as follows, arranged by families:

PAPAVERACEAE: POPPY FAMILY

Genus *Sanguinaria* Dill. Blood-root

* *Sanguinaria canadensis* L. A very common Indian medicine, used as a blood medicine. It is also used in the

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* For those who are interested in a medicinal way, the following general medicinal receipts are given as the writer found them copied in a medicine man's note book, the scientific names being added by the writer; the rest is given in direct translation.

"1. Receipt for medicine for pain in the stomach, also for fainting and trembling in fits. Also if very sick or bad sore apply this medicine externally. Also for cuts, say of an ax, put this preparation on.

"Make a tea of all the different roots and barks mentioned below by boiling or steeping same: swamp spruce (*Picea nigra* Link, sometimes called Black Spruce), the pussy willow (*Salix discolor* Muhl., also known as Glaucous Willow), tamarack or Black Larch (*Larix americana* Michx.), Norway Pine (*Pinus resinosa* Ait.), White Pine (*Pinus strobus* L.), kinnikinnik (*Arctostaphylos uva-ursi* Spreng and *A. alpina* Spreng), and oak (*Quercus ruba* L. and other *Quercus* species). To this add a little sugar to sweeten it.

"2. For a cut foot apply tea made from boiling together roots of the rose bush (*Rosa lucida* L.), bitterroot, and elm (*Ulmus fluva* Michx.). A little of this tea is also taken inwardly for bleeding.

"3. For a 'bad-sick' stomach or bowels caused by eating too much or for constipation, drink medicine tea of horsetails (*Equisetum palustre* L.), and horsemint (*Monarda punctata* L.) boiled together.

"4. For stomach trouble drink a cupful of tea, prepared by boiling together native pepermint (*Mentha canadensis* L.), a rush pepper plant or Lizard's Tail (*Saururus cernuus* L.), Minnesota Fern, and the roots of the crow berry (*Empetrum nigrum* L.), and slippery (common red) elm (*Ulmus fluva* Michx.).

"5. Another remedy for fainting and fits, also used as a blood medicine, is sarsaparilla (*Aralia nudicaulis* L.) tea made from the leaves of this plant. This drink." The owner of the receipts advised the writer that this remedy is called "Eastern Medicine," as it is the medicine of the Wabena (Eastern) Society of his people.)

"6. Another general remedy: Take the roots of the swamp tea plant (*Saururus cernuus* L.) kinnikinnik (*Arctostaphylos uva-ursi* Spreng and *A. alpina* Spreng), white poplar (*Populus alba* L.), and

jugglery performances of the medicine men. It blooms in April.

CRUCIFERAE: MUSTARD FAMILY

Genus *Lepidium* Tourn: Pepperwort, Peppergrass

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

Genus *Brassica* Tourn

Brassica campestris L. Escaped from cultivation. Used as medicine.

TILIACEAE: LINDEN FAMILY

Genus *Tilia* Tourn: Linden, Basswood

Tilia americana L. Basswood. A very common tree of large size. It is also a very beautiful tree when in bloom. The inner bark of young sprouts of this species is made into thread, twine and rope; the other threads and cords, used in the old times and occasionally even now, were made from the sinew of the moose and deer or from rawhide.*

Balm of Gilead Poplar (*Populus balsamifera* L., var. *canadensis* Gray), and pound them to a pulp. This stew into a tea. This tea apply to the afflicted parts by placing cloths on same and pouring the tea on the cloths so as to thoroughly saturate them. The pounded roots and bark when hot just from the steeping tray are also applied. This remedy is much used for rheumatism and kindred diseases.

"7. The following medicine is to be given for 'internal blood diseases:'

"Boil the bark of the following trees and shrubs: white poplar (*Populus alba* L.), yellow poplar (*populus balsamifera* L.), white birch (*Betula papyrifera* Marshall), yellow birch (*Betula lutea* Mich.,) red oak (*Quercus rubra* L.), small oak (*Quercus* sp.), small kinnikinnik (*Arctostaphylos alpina* Spreng), and large kinnikinnik (*Arctostaphylos uva-ursi* Spreng). Drink the tea thus made.

"8. For gonorrhea make a tea of the root-bark of the following trees and all the trees growing south of them: *Pyrus americana* DC. (which the note book designated as ash), oak (*Quercus rubra* L.), white elm (*Ulmus americana* L.), and sugar maple (*Acer saccharium* Wang and *A. saccharinum*, var. nigrum Torr & Gray). Then add a little tobacco. When cool, drink a cupful three times a day.

* In preparing the thread, etc., the bark of the basswood is removed in sheets and boiled in water in which a quantity of lye from wood ashes has been added. This softens the fiber and permits it to be manipulated without breaking. The unoccupied women then employ their time pulling the bark into shreds and twisting the 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.

CELASTRACEAE: STAFF-TREE FAMILY

Genus *Celastrus* L. Staff-Tree. Shrubby Bittersweet

**Celastrus scandens* L. Wax-work. Climbing Bittersweet. Used as medicine.

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* The sugar maple is a common tree of 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 tappings. Many tons of sugar are made annually 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 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 (wigwams). These are the usual conical frame made of poles leaning together at the top, and spreading to the ground all around, and covered with canvas or bark. 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 pots for boiling the syrup, enclosed often in enlarged, elongated bark tepees.

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

Quantities of bark are pealed off of 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 basswood 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 more 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 basswood fiber. Mococks, or boxes for containing the sugar product, are made in the same way and are of 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 the sap dish set under the chip to catch the drippings. Twice a day these dishes are emptied into the 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 in which they boiled sap. As soon as one kettleful

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. *Shishigime-wish* (which Indian name also applies to the next species, as well). Sugar is made from the sap of this tree and the next below, and the wood of all the maple trees mentioned is used for various purposes.

Acer saccharinum, var. *nigrum* Torr. and Gray. Black Sugar Maple.‡

ANACARDIACEAE: CASHEW FAMILY

Genus *Rhus* L. Sumac

‡*Rhus glabra* L. Dwarf Sumac.

‡*Rhus copallina* L. Dwarf Sumac.

‡*Rhus canadensis* Marsh.

‡*Rhus aromatica* Ait.

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

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is converted into sugar, another kettleful 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 the 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 re-melted into syrup when needed. Much of the maple sugar is now sold to whites in cake form, the granulated product being put into mococks for future use.

Besides sugar being obtained from the maple sugar tree, many things are made from the hard wood of this tree and the other maples of the region. 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. The arrows of the old times were also made of maple wood.

POLYGALACEAE: MILKWORT FAMILY

Genus *Polygala*

‡*Polygala senega* L. Seneca Snakeroot. This plant is used as medicine.

LEGUMINOSEAE: PULSE FAMILY

Genus *Baptisia* Vent. False Indigo

‡*Baptisia tinctoria* R. Br. Wild Indigo. Very common. This plant was used in the native coloring and as medicine.

Genus *Lathyrus* Tourn. Vetching. Everlasting Pea

Lathyrus ochroleucus Hook. Quite common.
Lathyrus palustris L. (?)
The wild pea was used as food in the old times.

ROSACEAE: ROSE FAMILY

Prunus serotina Ehrh. Wild Black Cherry.
Prunus americana Marshall. Wild Yellow or Red Plum.
Prunus pennsylvanica L. f. var. *nettlakea*. Pin Cherry. Common.
Prunus virginiana L. Choke 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, is 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 Raspberry. A very common 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. Strawberries are much used as food by the Indians.

Genus *Rosa* Tourn. Rose

‡*Rosa sayi* Schwein. (?)

‡*Rosa lucida* L. Rose. *Oki-ni-mi-nah-gash.* The buds of this rose and the species above 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. Used as food.

‡*Pyrus americana* DC. American Mountain Ash. *Ah-o-je-mahg (adjimag)*‡

The root-bark of this tree is used as medicine. Also, when steamed, its wood is bent into any form desired by the Ojibwa. It is used in making ribs for canoes, snow shoe frames, lacrosse clubs, etc.

Pyrus sambucifolia Cham. & Schlecht. Occasionally seen. Fruit eaten.

Genus *Crataegus* L. Hawthorn. White Thorn

Crataegus coccinea L. Quite common. The fruit is occasionally eaten.

Genus *Amelanchier* Medic. June-berry

Amelanchier canadensis, var. oblongifolda Torr & Gray. Shad-brush. Service-berry. Quite common. The fruit of this species is sometimes eaten now and generally so in the old times.

SAXIFRAGACEAE: SAXIFRAGE FAMILY

Genus *Ribes* L. Currants. Gooseberries

‡*Ribes gracile* Michx. Gooseberry. Common.

‡*Ribes oxyacanthoides* L. Common.

‡*Ribes hudsonianum* Richards. Currant. Common.

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

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

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* The Chippewa spelling of the Indian plant names, as found in some of their note and receipt books, will be given in parenthesis.

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

UMBELLIFERAE: PARSLEY FAMILY

Genus *Heracleum* L. Cow-Parsnip

Heracleum lanatum Michx. Common. Much used as greens.

ARALIACEAE: GINSENG FAMILY

Genus *Aralia* Tourn. Wild Sarsaparilla

‡*Aralia nudicalis* L. Wild Sarsaparilla. *Bah-gwah-mahn (ba-gwa-nan).* Sarsaparilla tea is used as a blood medicine, also used for fainting and fits.

‡*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.

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

The *Cornus* species above are called kinnikinnik by the natives. Their bark is used as medicine. It is also smoked and much used in the various ceremonies. The Indians also get drunk on the smoke of these plants and the other kinnikinnik, which will be described later.

CAPRIFOLIACEAE: HONEYSUCKLE FAMILY

Genus *Sambucus* Tourn. Elder

‡*Sambucus racemosa* L. Red-berried Elder. Common. Used as food. A tea made from the roots of this plant is also used as medicine.

Genus *Viburnum* L. Arrow-wood. Laurestinus

Viburnum opulus L. Cranberry-tree. High Cranberry-bush. Quite common. The acid fruit is much used in making jelly by the whites. The Indians also use the fruit.

COMPOSITAE: COMPOSITE FAMILY

Genus *Arctium*. Burdock

=*Arctium lappa* L. Common. Used as a blood medicine.

Genus *Taraxacum* Haller. Dandelion

Taraxacum officinale Webber. Common Dandelion. Common. Roots used as a blood medicine.

(ERICACEAE) MONOTROPEAE: INDIAN-PIPE FAMILY

Genus *Gaylussacia* HBK. Huckleberry

Gaylussacia resinosa Torr & Gray. Black Huckleberry. Used as food.

Genus *Vaccinium*. Blueberry, Bilberry, Cranberry

Vaccinium pennsylvanicum Lam. Dwarf Blueberry.
Vaccinium canadense Kalm. Blueberry.

The blueberries are abundant. Every hill and open space are 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 are dried on racks in the sun for winter use. These berries are the most abundant fruit of the whole region.

Vaccinium oxycoccus L. Small Cranberry.

Vaccinium macrocarpon Ait. Large American Cranberry.

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

Genus *Arctostaphylos* Adams. Bearberry

=*Arctostaphylos uva-ursi* Spreng and *A. alpina* Spreng. *Me-squah-be-mag*, or, *mesgwah-be-mag (mi-squa-bi-mag*, or, *mis-gwa-bi-mag)*. The *A. alpina* is also designated, *Be-gwah-dje-me-squah-be-mag (bi-gwa-dji-mi-squa-bimag*. Another name is, *Sah-gah-go-me-nah-gah-shen (sa-ga-go-mi-*

na-ga-shin). The leaves of these plants are smoked, causing intoxication. They are also much used in the medicine ceremonies, and also as medicine. For a general term, these plants are known to the Indians as kinnikinnik.

Genus *Epigaea* L. Ground Laurel, Trailing Arbutus

Epigaea repens L. Common on the west side of the reservation.

Genus *Gaultheria* Kalm. Aromatic Wintergreen

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

RUBIACEAE: MADDER FAMILY

Genus *Mitchella* L. Partridge Berry

‡*Mitchella repens* L. Much used by the Indians.*

SOLANACEAE: NIGHTSHADE FAMILY

Genus *Solanum* Tourn

‡*Solanum nigrum* L. Nightshade. Common. Used as medicine and also used in the medicine ceremonies of the Indians.

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* The Bois Fort Ojibwa of our day smoke tobacco and must have it on all occasions of ceremony. Formerly he used kinnikinnik, which be obtained as the pulverized inner bark (or leaves) of several plants. Among these were the partridge-berry *(Mitchella repens)*, the bearberry *(Arctostaphylos uva-ursi* and *A. alpina)*, the red dogwood *(Cornus stolonifera)*, and a species of dog-wood *(Cornus sericea)*. They used the leaves of the bear-berry and partridge-berry and the inner bark of *C. stolonifera* and *C. sericea*. The latter was the plant most used and is now still used in certain ceremonies.

This plant grows five or six feet high and is reddish in color, unless it happens to be growing in a shady place, in which case it is greenish. In preparing the kinnikinnik from it, the stems of the plant are gathered green and the red outer bark removed with a sharp knife. The inner fibrous bark is then scraped off of the wood and dried in some container before the fire till it is crisp and brittle and is readily crushed in the hand. It is then "kinnikinnik" and is ready for smoking.

Among the Bois Fort Indians tobacco and kinnikinnik are frequently used as an offering to Manabush and the other manido. They are also sprinkled on the grave boxes to aid the dead on the journey to the spiritland. Tobacco is also used as a peace offering, and so was kinnikinnik in the old times. Its origin is regarded as mystic.

LABIATAE: MINT FAMILY

Genus *Mentha* Tourn. Mint

**Mentha canadensis* L. Wild Mint. *Nah-may-ben (na-me-bin).* Quite common. Used as medicine for stomach trouble.

Genus *Monarda* L. Horse-Mint

**Monarda punctata* L. Horse-Mint. Kah-be-sah-ne-gwa-y *yok (ka-bi-sani-gwe-iag).* Used as rubbing medicine, smelling medicine, and also as a remedy for stomach trouble.

CHENOPODIACEAE: GOOSEFOOT FAMILY

Genus *Chenopodium* Tourn. Pigweed

Chenopodium album L. Pigweed. Common. Eaten as greens.

POLYGONACEAE: BUCKWHEAT FAMILY

Genus *Rumex* L. Dock. Sorrel

**Rumex altissimus* Wood. Pale Dock. Common. Used as medicine.

THYMELAEACEAE: MEZEREUM FAMILY

Genus *Dirca* L. Leatherwood, Moosewood

Dirca palustris L. Moosewood. Used for withes by the Indians.

Genus *Saururus* L. Lizard's-Tail

**Saururus cernuus* L. Indian Pepper. *We-ne-se-bah-gon (wi-ni-si-ba-gon).* Used as stomach medicine.

URTICACEAE: NETTLE FAMILY

Genus *Ulmus* L. Elm

**Ulmus fluva* Michx. Slippery or Red Elm. *Ah-nib,* or, *ah-nep (a-nib).* Quite common and a large tree. Used as medicine for gonorrhea.

CUPULIFERAE: OAK FAMILY

Genus *Betula* Tourn. Birch

Betula lenta L. Cherry Birch; Sweet or Black Birch.

Betula lutea Michx. f. Yellow or Gray Birch. *We-ne-sek (winisik).*

Betula papyrifera Marshall. Paper or Canoe Birch. *We-gwas (wi-gwas).*

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.*

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* Birch Bark Utensils: The bark of the white (paper) birch was used in the old times and still is 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 Chippewas: Mococks (in which wild rice and maple sugar are stored), dishes, sap dishes (used in catching maple sap), rice baskets, buckets *(manitoulin)*, 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 craft ever invented. The framework is 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 parts of the canoe they are intended to brace. The tops of the ribs are then securely tied to the top plate-piece of the canoe with tamarack roots, 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.

Birch bark is placed on the coffins when burying the dead, placed with edges projecting downward along the sides and ends of the coffin. A layer of this bark is also usually spread over the filled grave. This bark is also used in building dwellings and lodges.

DWELLINGS AND LODGES

Besides the medicine lodge, the Bois Fort Ojibwa have the ordinary regulation wigwam, the birch bark camp, the bark house, and the "wickeup."

The birch bark (or cedar or ash bark) camp is made by setting poles in the ground or on top of the ground, in elongated-rectangular ground-plan style. These are firmly fastened together at the top by being tied along a center-ridge-pole. Over this frame the bark is placed so as to make a comfortable dwelling. When the family moves the bark is taken down and transported to the new home; each one carrying a part; each camping place furnishes its own house frame

Genus *Corylus* Tourn. Hazelnut

Corylus rostrata Ait. Beaked Hazelnut. Very common and much used as food by the natives.

Genus *Carpinus* L. Hornbeam. Ironwood

Carpinus caroliniana Walter? American Hornbeam. Blue or Water Beach.

Genus *Quercus* L. Oak

Quercus rubra L. Red Oak. *Me-te-go-mish (mi-ti-go-mish);* large oak, *Me-te-ko-mesh (mi-ti-ko-mish);* small

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and braces. Thus in an hour after landing at any chosen site, the Indians have a house to dwell in.

The "wickeup" is simply some posts set in the ground over which a flat roof of brush is erected; at times the sides of the "wickeup" are also closed in with a thatch of small brush, which is firmly tied to the poles and posts. This style of house is quite comfortable in summer. While at times this sort of a framework is added as a sort of porch to a house.

The tepee may be the regular round regulation type of wigwam or it may be of the elongated style. The framework is of poles tied together at the top; over this frame are placed mats of birch bark or of cat-tail flags. The mats of birch bark are pealed from the trees in strips corresponding to the size of the trees from which stripped. The strips are placed end to end and sewed together with basswood thongs; a bark mat thus sewed is often twelve to twenty feet in length and as wide as a strip of bark could be conveniently pulled off the tree. The cat-tail-flag leaves are gathered when full grown in summer and woven into mats from three to five feet in width and from twenty to twenty-five feet in length, strengthened at the edges by being counter wrapped with basswood twine. When put in place, these mats are projected over each other both on the roof and sides, like shingles. An opening is left at the top of the wigwam for the exit of smoke. These wigwams are loose and light and furnish perfect ventilation. The only disagreeable thing about them is the ever smoke nuisance.

The Birch Bark House.—Many of the Bois Fort Chippewas now live in log houses, but an occasional birch bark house still remains to remind one of the old times. The birch bark house was a permanent affair. It is elongated in ground plan. Its framework is of vertical posts to which horizontal pieces, about two inches in diameter, are tied at intervals of almost thirteen inches. The ridge of the roof is about ten feet high and from ten to twenty feet in length. The walls are also about six feet high and the width of the structure about eighteen feet. Poles parallel with the ridge pole make the roof-frame-work. This frame is covered over with birch or cedar bark, matched in shingle style and firmly tied with basswood twine, the roof projecting over the frame so as to form eaves. The doors are at the east and west ends, under the gables. Long poles are placed on the top of the roof and firmly tied down to keep the bark in place. A hole is left in the roof along the ridge pole near the middle of the house for the exit of smoke. The dirt floor is covered with reed mats. On the whole, houses of this type are very comfortable.

oak, *We-sah-ge-me-te-go-mesh (wisa-ge-mi-ti-go-mish).* Common. There are many oaks in the region, but were not identified by the writer, though often seen. Oak bark was used in tanning and coloring in the old times. Oak bark tea is also used as a medicine.

SALICACEAE: WILLOW FAMILY

Genus *Salix* Tourn. Willow family, Osier

Salix candida Willd. Sage or Hoary Willow.

Salix balsamifera Barratt. *O-se-se-go-be-mish (o-si-si-go-bi-mish).*

‡*Salix discolor* Muhl. Glaucous or Pussy Willow. Bark used as medicine. The roots are also sometimes used in making medicine tea. The remedy is for stomach trouble. fainting, and trembling.

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, and *P. balsamifera,* var. *candicans* Gray. Balm of Gilead Poplar. *Mah-nah-sah-te (manasati).* Used as medicine for internal blood diseases.

‡*Populus alba* L. White Poplar. *Ah-sah-te (a-sa-ti).* Bark and roots used as medicine. A tea made from these is used for internal blood diseases.

Populus monilifera Ait. Cottonwood. Common along streams and occasionally inland. The buds of this tree are eaten, as are also the clusters of seed capsules with their contained sweet, cottony seeds.*

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

EMPETRACEAE: CROWBERRY FAMILY

Genus *Empetrum* Tourn

Empetrum nigrum L. Black Crowberry. *Ah(n)-tay-go-bin (a-te-go- bin).* Common on the reserve. Fruit eaten.

* The cottony part is also chewed as gum.

CONIFERAE: PINE FAMILY

Genus *Pinus* Tourn. Pine

**Pinus strobus* L. White Pine. *Kah-be-sah-dah-ge-set (ka-bi-sa-da-gi-sit).* Used as medicine.

**Pinus baksiana* Lambert ? Northern Scrub Pine. Used in the following concoction for fainting and fits, etc. A tea is made from the bark of this tree, the bark and root of the glaucous or pussy willow (*Salix discolor* Muhl.), Norway pine and the other pine varieties including *P. strobus* (White Pine), oak (*Quercus rubra* L.), and kinnikinnik (*Arctostaphylos uva-ursi* Spreng).

Pine boughs are used on the ground or floor as a bed on which blankets and other bedding are spread if they are at hand. Wooden dishes and wooden bowls were also made of this wood in the old times.

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. *Say-say-gah-dag* (or, *dug*) *(se-se-ga-dag).*

**Picea alba* Link. White Spruce. *Me-naig (mi-naig).* A tea was made from the roots and bark of this species and the species last above and used for a pain in the stomach and for fainting and trembling, also for fits.

Genus *Abies* Link. Fir

**Abies balsamea* Miller. Balsam or Balm of Gilead Fir. *Ne-naig-wah-day (ni-naig-wah-dag).* Used as medicine for coughs.

Genus *Larix* Tourn. Larch

**Larix americana* Michx. Tamarack. Practically the whole region just at the swamp line 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. Tea made from tamarack roots and bark is also used as a general medicine.

Genus *Juniperus* L. Juniper

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

Juniperus virginiana L. Red Cedar. Found bordering the streams, but usually on higher ground than the other cedars of the region.

Juniperus communis L., var. *alpina* Gaud.

It is estimated that there is 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 streams to Canada where the pulp wood is made into paper at International Falls; the pulp mills there are 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. Cedar bark is also used by the natives in house, wigwam, and wickeup building. The cradle board is also made of cedar. The board, too, is padded with crushed, inner cedar bark, or with moss. Mats are also made from fibrous cedar bark. Graves are also usually inclosed in a pen of split cedar strips or stakes, and a thatch of split cedar is also usually placed on the grave.

OLEACEAE: OLIVE FAMILY

Genus *Fraxinus* Tourn. Ash

‡*Fraxinus americana* L. White Ash. Used in canoe manufacture, the making of snowshoes, etc. The root-bark of this tree is also used as medicine, being prepared as a tea.

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 in weaving:*

*The Bois Fort Ojibwa have several varieties of mats. These are made from rushes, from cedar bark, and from the broad blades

ARACEAE: ARUM FAMILY

Genus *Arisaema* Martinus. Indian Turnip. Dragon

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. Club-Moss. Very common. Eaten by the Indians.

The mosses are very 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, and flags.

The cradle board was often padded with moss.*

GRAMINEAE: GRASS FAMILY

Genus *Zizania* Gronov. Water or Indian Rice

Zizania aquatica L. Indian Rice or Water Rice or 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 the state and on northward into Canada. It belongs to the grass family. It is an annual; flowers monoecious; the staminate and pistil-

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of the cat-tail flag. Some of the mats are woven coarse, some fine; they are from six to fifteen feet and even twenty-five feet in length and about a yard in width, and are used for bedding and house and floor coverings.

* 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 the moose feed on it.

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

Stich-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 food by the natives, being boiled.

late 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. Glums 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 ample pyramidal panicle staminate, spreading; the upper erect, pistallate; 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 much used in the old time.*

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* 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 grain drops 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 powwowing. Then the chief medicine men give 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 woman 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 thirty cents per pound at the village, and as high as fifty cents per pound 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 for rice have

EQUISETACEAE: HORSETAIL FAMILY

Genus *Equisetum* L. Horsetail

**Equisetum pratense* Ehrh. Common Horsetail. *Wesh-go-be-dje-beake (wishgobidjibik)*. Very common. The Indians eat the tubers of this plant. A tea made from this plant and horse-mint is used for stomach trouble.

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come even 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 ordinary 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 over 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 also 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.