2003 Edible Wild Plants Angier - Wild Food Trail Guide, etc.

Bradford Angier

Field Guide to EDIBLE WILD PLANTS

a quick, all-in-color identifier of more than 100 edible wild plants growing free in the United States and Canada ISBN 0-8117-2018-7 \$17.97 at Barnes and Noble

INTRODUCTION

Few of the American and Canadian Indians had gardens when Columbus rediscovered the New World, instead regularly supplementing their meat and fish with wild fruits, nuts, roots, tubers, greens, seeds, beverages, and the like which they gathered free from the land. We can have the satisfaction of doing the same thing today, for these edible wild plants still grow everywhere.

You needn't be any kind of an expert, even in this day of space travel and split atoms, to begin eating what remains unspoiled and free. If you will positively identify everything before you gather it—made easy at long last by this field guide with its detailed descriptions and its illustrations in full color—you will never have any trouble.

Wild foods have long been important on this young continent. Acorns probably rated the top position on the long list of edible wild vegetation depended upon by the Indians, acorn soup or mush being the chief daily food of more than three-fourths of the native Californians. Too, when Cortez and his conquistadors advanced through the dry, open Southwest, they found the Indians of that region using the tiny brown, grey, and white seeds of the chia for food, a teaspoonful of them being regarded as sufficient to sustain a brave for a day on a forced march.

Indians long used the seeds of the lamb's quarter, 75,000 of which have been counted on a single plant, for cereal and for grinding into meal. Although the purslane that today grows wild from one coast to the other does not become large, 52,300 seeds have been found on a single plant, and the Indians in our Southwest used these for making bread and mush. They made a nutritious meal from the roasted seeds of the shepherd's purse. Incidentally, the green leaves of all three of these plants are delectable.

If you've ever sat down to a well prepared meal that included wild vegetables, maybe you've noticed that many of them seem to taste better than domesticated varieties from the store. I'll let you in on a trade secret. They are better.

Green leafy vegetables, to give just one example, deteriorate very rapidly. Even when purchased as fresh as obtainable from the finest nearby market, they'll already have lost a sizable proportion of vitamins. Some of the food values of greens diminish as much as one-third during the first hour after picking. But gather them fresh from nature's own garden and eat them while they're at their tastiest, and you'll enjoy the best they have to offer.

When the Forty-Niners stampeded up California's streams and into the deserts and mountains for gold, the lack of fresh food brought crippling and killing scurvy to not a few of the camps. The Indians helped some of these argonauts cure the vitamin-deficiency disease by introducing them to the succulencies of miner's lettuce. The more than a dozen docks thriving on this continent from the Arctic coast southward throughout the United States provide hearty greens which were widely eaten by the Indians, some of whom used the abundant seeds in grinding meal.

Indians used the bark of the slippery elm for food, some of them boiling it with the tallow they rendered from buffalo fat. They used to preserve service berries by drying them by the thousands of bushels, spreading them in the sun and later beating some of them into a mash which was molded into cakes and dried. Mulberries, which can be gathered by the gallon just by shaking a heavily laden branch over an outspread cloth, were also a standby.

Instead of potatoes, carrots, radishes, parsnips, beets, and turnips as we now know them, Indians often relied on wild roots and tubers, especially in those parts of the arid West where the lack of rainfall made any vegetable raising virtually impossible. When pioneers, prospectors, and others later began daring the plains and deserts, many of them starved amidst abundance because they didn't know what to eat or how to prepare it.

The prairie turnip, for example, was a mainstay of such tribes as the Sioux. Indians from the Atlantic to the Pacific ate the potato like roots of the arrowhead, usually either boiling them or roasting them in the hot ashes of campfires. Jerusalem artichokes, distinctively flavored tubers of a native wild sunflower, were relished by the red men. Indians along the eastern seaboard relied on the potato like groundnut which, after they'd shown them to the Pilgrims, saw these latter to a large extent through their first rugged winter in Plymouth.

Wild onions, including the leeks, the chives, and the garlics, grow wild all over North America except in the far northern regions. Indians used them extensively, not only for the provocative taste they impart to blander foods but also as a main part of the meal. Some of the tribes regularly used wild ginger roots for seasoning. Many Indians relied on the dried and powdered roots of the familiar jack - in - the - pulpit for flour.

The picturesque cattails, now too often neglected except by nesting birds, once provided many important Indian foods. The two native varieties of wild rice, tagged with surprisingly high prices when they are available today, have long been notable Indian delicacies. Walnuts, butternuts, hazelnuts, beechnuts, and especially hickory nuts were eaten in great quantities by the

Indians. The pinon and its cousins, such as the Parry pine and the Digger pine, have long been important food-wise to the Indians in the Southwest.

The Indians depended largely on edible wild plants such as spearmint, oswego tea, some of the wild coffees, sweet fern, sassafras, spicebush, Labrador tea, sumac, the birches, and the pines for their beverages. When the first settlers arrived, and for centuries afterward when they were pushing their way westward, they followed suit. If these wild drinks had not been rich in Vitamin C, a vitamin which the body cannot store and which is necessary for the prevention and cure of scurvy, many pioneers would not have lived to open our frontiers.

When it comes to the maple, even the seeds are edible, some Indians formerly hulling the larger of them and then boiling them. The various species of broad-leaved, tendril-clinging, high-climbing or trailing wild grapes were long an Indian mainstay throughout much of the continent. The Senecas (Note: some of my ancestors were from this tribe. - Paul) were among the Indians roasting wild sunflower seeds, after the highly edible kernels had been extracted, and pouring hot water over them to produce a coffee like beverage.

Wild plums were great favorites among the Indians. A few of the tribes used to dry and grind juniper berries and use them for cakes and mush. Both the Indians and the early settlers dried barberries for winter use, making an agreeably cooling drink from them, and turning much of the rest into pleasantly tart sauces. Indians used to devour tremendous amounts of buffalo berries, gathering them by the bushel and often making a pudding of them and the flour of the aforementioned prairie turnip.

Milkweed, growing from coast to coast, was long used by the Indians. The Indians found pokeweed, one of the first wild greens of the spring, delicious, and some of the first European adventurers on these shores were in such agreement that they took the seeds back to France and southern Europe, where the vegetable became popular. And so it went.

Today gourmets, campers, and stay-at-home cooks alike will find pleasure in harvesting their meals from the wild lands where nature is the farmer and where nothing is ever due at any check out counter.

IMPORTANT NOTE: WHILE THE BARK OF MOST TREES CAN BE EATEN, HICKORY AND DOGWOOD BARKS WILL POISON YOU!

Nine common plants from the book:

BIRCH

EDIBILITY - Grouse and prairie chicken feast on the catkins, buds, and seeds, while such songbirds as the chickadee, finch, redpoll, sapsucker, siskin, and sparrow confine themselves more to the seeds. Moose, elk, and deer browse on the twigs and foliage.

The inner bark of the birches is edible and in emergencies has

kept many from starving. Dried and then ground into flour, this has been used by Indians and frontiersmen for bread. It is also cut into strips and boiled like noodles in stews. But you don't even need to go to that much trouble. Just eat it raw.

You can drink the refreshing sap just as it comes from the trees in springtime or boil it down into syrup. About half as sweet as maple sap, it flows much faster and can easily be harvested by the methods suggested in the section on maple.

A particularly tasty tea can be made from the red inner bark of the black birches, that from the roots being less disfiguring to the trees. A teaspoon to a cup of boiling water, set off the heat and allowed to steep for five minutes, makes a beverage that is delicately spicy. Milk and sugar make it even better in the estimation of many. As a matter of fact, any of the birches make good tea even if you use only the young twigs.

This tea is brisk with wintergreen. In fact, when the commercial oil of wintergreen is not made synthetically, it is distilled from the twigs and bark of the black birch. This oil is exactly the same as that from the little wintergreen plant, described elsewhere.

CATTAIL

EDIBILITY - Although cattail seeds are too minute and hairy to attract most birds, some like the teal feed on them. The starchy underground roots and the bright green shoots are relished by geese and muskrats. The shoots, too, are sought by moose and elk when they first appear each new spring. The roots, as well as the lower portions of the stem, are sweetish with more than half weight-sustaining carbohydrates. These are fairly easy to pull up or to dig out, even in deep snow, with no more help than a pointed stick. They are delicious and nutritious raw, baked, roasted ash-sheathed in the glowing embers of a campfire, or briefly boiled. First scrub, then peel while still wet.

The cores can also be dried and ground into a substantial white flour, which you may want to sift to get out any fibers.

The tender young shoots, which somewhat resemble cucumbers in taste, are very much edible. If they are starting to get tough, drop them into boiling salted water to simmer to tenderness. These young shoots also make tasty pickles.

Peeled of their outer rind, the tender white insides of the first 1 or 1 1/2 feet of the young stems gives this worldwide delicacy its provocative name of Cossack asparagus. Again, these are edible both raw and cooked.

The greenish-yellow newer spikes, before they become tawny with pollen, can be gathered, husked as you would corn, and dropped into rapidly boiling salted water to simmer until tender. Or steam them to retain even more of the goodness. Eat like corn, dripping with butter or oleomargarine. Or scrape these boiled flower buds from the wiry cobs and use them like cooked corn kernels.

These flower spikes later are gilded with thick pollen which, easily and quickly rubbed or shaker: into a container, is a flour

substitute for breadstuffs. It can be cleaned if necessary by passing through a sieve. For delectable golden hot cakes in camp, mix half and half with the regular flour in any pancake recipe.

Finally, there is a pithy little tidbit where the new green stem sprouts out of the rootstocks which can be roasted or boiled like young potatoes.

CATTAILS

SUPERMARKET OF THE SWAMP...

Cattails contain ten times the starch of an equal weight of potatoes.

Early spring new shoots pick peel, cook, or eat raw.

Harvest young flower heads, boil and eat like corn on the cob; or pickle.

Collect early summer pollen in a bag, add to other flours (protein/vitamins).

Winter rootstocks: pick mash rinse, dry, and grind into flour. Use fresh, pounded root directly as a poultice on infections, blisters, & stings. Tie in place over night. Replace for the next day.

Sticky substance at the base of the green leaf is antiseptic, coagulant, & and even a bit numbing.

Boil leaves for external skin wash.

Starchy, mashed root use as a toothpaste.

Use pollen as a hair conditioner.

Drink root flour in a cup of hot water or eat the young flower heads to bind diarrhea and dysentery.

Use the fuzz from mature female flower heads for scalds, burns, diaper rash & place in diaper to soak up urine.

Down makes excellent tinder.

Dry brown head of a dry stalk in animal fat for a torch.

Dry stalks use for hand drill, arrow shafts with added hardwood notch and fore shaft.

Leaves excellent for thatching, basket weaving, cordage (one of the most important aspects of outdoor survival).

Pollen is hemostatic & astringent. Place directly on cut to control bleeding. Take internally for internal bleeding, menstrual pain, chest pains, & other forms of blood stagnation.

Mix pollen with honey; apply to bruises, sores, or swellings. Pollen is also mildly diuretic and emenagogue.

Cherokee Primitive Survival

http://members.truepath.com/cherokeesurvival/cattails.htm

CHICORY

EDIBILITY - Chicory, millions of pounds of whose roots have been roasted, ground, and used as an adulterant and as a substitute for coffee, also provides greens for salads and for cooking. As these leaves grow older they, like those of the dandelion, become more and more bitter, encouraging some cooks to drain off the first boiling water and then to simmer to tenderness in the second.

Raw chicory greens, although over 92% water, have for each 100 grams of the edible portion 86 milligrams of calcium, 40 mg. of phosphorus, .9 mg. of iron, 420 mg. of potassium, plus no less than 4,000 international units of Vitamin A, 22 mg. of Vitamin C, and goodly traces of thiamine, riboflavin, and niacin.

Much of the chicory root used on this continent as a coffee substitute, stretcher, and flavorer is imported from Europe, but exactly the same roots grow wild right here at home. If you'd like to proceed on your own, just dig some of the long roots, scrub them with a brush, then roast them slowly in a partly open oven until they will break crisply between the fingers, exposing a dark brown interior. Then grind and store in a closed container for brewing perhaps as a coffee substitute, in lesser amounts like the smaller product of the dandelion, as it's stronger, or for blending with your regular supply of the bean.

CLOVER

EDIBILITY - Clover is the preferred forage of everything from moose and elk, mountain sheep, and deer, and from the largest brown bear to the smallest black bear. It is important to game birds from Canada geese to grouse, pheasants, prairie chicken, and the warily sagacious turkey. Woodchuck, beaver, muskrat, rabbit, and raccoons are among the smaller mammals dining on the foliage. Larks, nuthatches, and pipits are among songbirds seeking the seeds.

Indians ate the clovers both raw and cooked, the Diggers, for example, steaming large quantities of well dampened plants between hot stones. Other tribes partially dried and smoked the sweetish roots, or rolled and dipped them in oil or meat drippings. Still others enjoyed the tender young leaves both raw and briefly cooked. The fresh raw stems, flowers, and leaves were sometimes first dipped in salty water.

The sweet-scented blossoms have been used for everything from flavoring cheeses and tobaccos to stowing with furs to keep away moths. They are also frequently eaten raw. Bread made from the seed-filled dried blossoms has nourished entire groups of people during famines.

A wholesome and reputed medicinally valuable tea can be made by picking the mature blossoms on a dry sunny day, drying them at room or sun temperature, rubbing them into tiny particles, and sealing them in jars or bottles to retain the aroma. Add a level teaspoon of these to each cup of boiling water in a warmed cup or teapot, steep for five minutes, and drink as you would regular tea.

DANDELION

EDIBILITY - The dandelion's flowers and seed heads are a favorite spring and summer food of Canada geese, grouse, partridge, pheasant, prairie chicken, and quail. Blackbirds, siskins, and

sparrows are among the songbirds relishing the seeds. Deer, moose, elk, both the black bears and the grizzlies, the little prairie dogs, and the even sprier and smaller chipmunks eat the plants.

The dandelion, which has saved peoples from starvation, is a three - tiered food; the succulent roots, the tender and tasty crowns, and the tops from young leaves to flower buds all being exceptionally tasty and sustaining. Even the older leaves are good, although ordinarily you can find enough young ones for a meal, always starting them in boiling water and when someone objects too strenuously to the clean tang of the bitterness changing the water at least once. Interestingly, the first few frosts in the fall revive the sweetness of the leaves.

Scraped and sliced, then boiled in salted water, the roots are of pleasant taste and texture and when you haven't tried them before surprisingly sweet. Incidentally, these roots can be roasted in an oven until nut-brown all the way through, grated, and used as a coffee stretcher or substitute, dandelions being close cousins of the similarly used chicory.

The white crowns, the parts of the perennial between the roots and the surface of the ground, are even finer flavored than the young leaves in many's estimations.

Raw dandelion greens, 85% water, have an abundant 14,000 international units of Vitamin A per 100 grams, plus . 19 milligrams of thiamine, .26 mg. riboflavin, and 35 mg. of the vital ascorbic acid, all of which helps to explain why the lowly dandelion was so highly regarded as a tonic and general remedy by frontiersmen and early settlers long before the days of vitamin pills.

This same portion of edible greens is further enriched with 198 milligrams of calcium, 76 mg. of sodium, and 397 mg. of potassium. To get all this goodness undiluted, let the tender young greens enhance your fresh salads.

HICKORY (other sources say Hickory bark is poisonous to people) EDIBILITY - Wood ducks, ring-necked pheasants, bobwhites, and the wary wild turkeys compete with man for the nuts. Black bears, raccoons, squirrels, and rabbits eat both the nuts and the bark, while the white-tailed deer relishes both these and the younger twigs it can reach.

The name hickory comes from the Indian name for a liquor that was concocted by pounding the shells and kernels of the sweet nuts in a mortar until they were powdered, at which time water was poured in and the action continued until a milky, oily liquid remained.

You can have a happy time with a pocketful of hickory nuts and just a stone or hammer. But the pleasant, slightly aromatic kernels also excel in the kitchen, both with vegetables and in desserts.

Hickory nuts are very nutritious, 100 grams of the kernels yielding 673 calories, over 13 grams d protein and more than 68 grams of fat, plus a whopping 360 milligrams of phosphorous.

PINES

EDIBILITY - Pines occupy a position very close to the top in importance to wildlife. Just their seeds, for example, make up more than half the diet of the white-headed woodpecker, the red crossbill, and the Clarke nutcracker. Numerous other birds and mammals depend on these tasty, oily, and extremely nutritious seeds to a large extent. The needles are eaten by several types of grouse and by some of the browsers. In fact, when other food is scarce cattle seek them. There are also the buds. Porcupines and small rodents consume the bark and wood. Then there are the facts that the evergreen furnish cover, favorite roosting and nesting places, and home-building materials.

The entire pine family comprises one of the most vital groups of wild edibles in the world. The inner bark, eaten both raw and cooked, has saved hundreds of people from starvation. The Indians made great use of this. In fact, Adirondacks is the Indian name for tree-eaters.

The colonists early learned to gather this inner bark in the springtime, dry it throughout the summer, and then grind it or mix it with regular flour. Next to devouring it raw, though, the easiest way to eat this sweet cambium is to cut it into thin strips, then cook it like spaghetti either alone or with meat.

Some of the tribes went to more elaborate preparations, even to making a sort of bread. The squaws mashed the pine's inner bark to a pulp in water, then molded this into big cakes. While this was going on, a rousing fire was kindled in a rock-lined hole. The coals were then removed, the cakes laid in on green leaves, and the embers raked back over a thick topping of more leaves. Damp moss covered everything, which was left to cook for upwards of an hour. The cakes were then placed on pole frames and smoked for a week, after which they could be carried as trail rations. The results were so sturdy that before use, the cake was customarily broken into bits and boiled until soft.

Even pine needles, when they are new and starchy, are pleasantly nutritious to chew upon. Some Indians boiled the still firm, spike like flower clusters, in which the petalless blossoms grow on slim stalks in circular rows, to flavor their game. As for the cones, the young ones can be ground and used to flavor meat sauces. Some Indians used to roast the soft centers of green cones in the fringes of their campfires and feast on the syrupy results. Then, of course, there are the gums, the sugary sap of some of the conifers, and the bared young shoots of the white pine in particular which are sometimes candled.

Hemlock tea is famous in northern New England and Canada. Drunk hot and black, its taste is reminiscent of the way a Christmas tree smells. More important for prospectors, trappers, loggers, and other outdoorsmen, this tea contains the vital Vitamin C.

It doesn't really make too much difference if you mistake one of the other conifers for hemlock. All these members of the pine family provide aromatic and beneficial tea. The bright green young tips, when they appear in the springtime, are best. Older green

needles will do, too. Just place a handful in a receptacle, cover them with boiling water, and let them steep until the tea tastes strong enough. For a much higher ascorbic acid content, cover and let stand overnight. If you prefer this black as I do, there's no need of any straining. Just narrow your lips on the rim and quaff it down.

Then there are the pinons. These soft little nuts from the pine cones of millions of low spreading conifers in the western U.S. and Mexico are among the most delicious to be had anywhere especially when they have been roasted, after being shelled with the help of pliers or hammer, by spreading them in a single layer in a pan and placing this for five minutes in a moderate 360" oven, shaking the pan several times during the process.

A 100-gram portion of pinons has been found by U.S. Department of Agriculture experts to contain 635 calories, 13 grams of protein, 60.5 grams of fat, 20.5 grams of carbohydrates, plus a huge 604 milligrams of phosphorous, 5.2 of iron, 1.28 of thiamine, .23 of riboflavin, and no less than 4.5 mg. of niacin. And if there is any more delectable way to get these necessary ingredients than in the subtly piquant little nuts, I've never discovered it.

EDIBLE PINE

From an653@freenet.toronto.on.ca Tue Jun 8 20:13:03 1999

Return-Path: Date: Sun, 06 Jun 1999 21:19:15 -0500 From: Debra Johnson

From: DEANN21647@aol.com

From SB2001 or Survival Bible 2001 or survival@ils.net

Taken from American Survival Guide 2/1990

In 1535, the French explorer Jacques Cartier and his men were in desperate condition after a particularly severe winter in Newfoundland. Already 25 lay dead and not one of the remaining survivors was not suffering from the ravages of Scurvy. Fortunately for history a group of local Indians took pity on them, and told Cartier that their medicine man had the perfect cure. Shoving their prejudices aside, they went to the medicine man.

The miracle brew of this wise man was so simple that Cartier and his men nearly rejected it at first. Without any hocus pocus, the medicine man simply plucked a hand full of pine needles from a nearby tree and boiled them in a pot for a few minutes.

Then he gave each one a cup of "soup". Although skeptical, they did as they were told and the soup transformed their health in a matter of 6 days. This is recorded because they lived to tell the tale. Pine needles contain 5 times the vitamin C found in lemons.

Think of it as an herbal tea. A handful of pine needles, or 1/4 cup fresh chopped needles steeped in boiling water for 10 to 15

minutes provide 100% of the U.S.R.D.A. of vitamin C. Pine soup (or tea) tastes like the pine forest smells, or add a squeeze of lemon and a little honey to liven it up a bit.

In the southwestern deserts of the U.S. grows the Pinion Pine. (California, Nevada, Arizona, Utah, and New Mexico.) Every few years when comes an abundant rainfall, the trees produce a bumper crop of cones bearing the delicately flavored seeds. They can best be foraged by raiding the messy looking nests of wood rats, who hoard many of the seeds.

Certain Indian tribes used to peel young shoots of pine and use them as a green vegetable. The colonists used to make a candy out of these same shoots by boiling them in a heavy sugar syrup until they were nearly transparent and thoroughly crystallized.

Ojibway Indians made use of the young staminate catkins (little pine cone like growths, covered in soft brown scales and growing at the terminal end of the needle clusters) by cooking them with a chunk of meat.

Don't throw on the steak yet. Some varieties of pine have a heavy turpentine flavor. Try some by just boiling before you ruin a piece of meat. When you find a tasty variety, then throw the steak in with them for a really good experience. PINE BARK Don't make the mistake of trying to eat the dead outer layer of the pine tree bark.

It is the moist white living inner bark (cambium layer) we are after. The cambium is located just underneath the dead outer layer and it is here where the tree's girth growth occurs. The best way to get a supply is to peel off some large chunks of bark, being careful not to girdle the tree lest you destroy it, the carefully fillet the moist layer of cambium clinging to the inside of that.

You can prepare it immediately or dry it for later use. If dried, be sure to soak a couple of hours before cooking. Late spring is the best time, when the tree is richest in sugars. Use the largest trees possible. Width is more important than height, the wider the tree, the thicker the cambium layer. The best way is to find a logging operation and obtain permission to peel the stumps.

This is where the cambium is thickest and best, and you can get the most food with the least work. Boil for a half hour, or until the water turns red from resins. Change water and boil a second time for a half hour. Change water and boil a third time for a half hour.

On the last boiling, the bark will be fairly tender and the water will only be light pink. The "bark" will have a color like fresh ham, with a texture exactly like cooked turkey breast.

The bark has no particular flavor at all, which makes it an excellent meat substitute with the proper seasonings. After the last cooking and draining, add four cups of chicken stock (made by dissolving four chicken bullion cubes in four cups of water) and simmer for one hour.

To half of the pine chicken add some Chinese noodles, some

green onions, a dash of soy sauce, and a beaten egg to make a superb "Pine Ramen" soup. From the other half, remove the pine bark and set aside. Melt 1/4 cup of butter in a skillet and add 4 table spoons of white flour to make a thick paste.

Into this add 2 cups of pine chicken broth, adding slowly and stirring in to a nice lumpless gravy. Take an uncooked pie shell and heap it full of the leftover pine bark. Add cooked potatoes and carrots, a coarsely chopped onion, and a handful of peas.

Cover it all with the gravy, put a pie shell lid on top, and cook in the oven at 400 for about 40 minutes, or until nicely browned.

When I gave a slice to some relatives one of them remarked that the chicken was very good, but where was the pine bark. Nutritional analysis reveals that this bark is high in carbohydrates and is an excellent source of fiber.

The medicinal value of the pine goes beyond the vitamin C in it's needles. The White Pine (Pinus Strobus) is officially recognized in the U.S. Pharmacopoeia. The cambium layer of the bark is an effective cough remedy, and still finds it's way into cough syrups.

To make your own, put a tablespoons of crushed pieces into a jar with 2/3 cup of boiling water. Cover with a loose plastic lid (not metal) and let steep for 2 hours. Add a half cup of brandy and seal. Let the infusion sit overnight. In the morning strain out the bark and add 1 cup of honey to the liquid. Seal and use 2 tablespoons at a time, as needed.

THIS MESSAGE IS FROM ALABAMAY2K MAILING LIST. IT IS INTENDED FOR EDUCATIONAL AND DISCUSSION PURPOSES, NOT FOR COMMERCIAL USE.

POPLAR

EDIBILITY - The resinous catkins and buds supply valuable winter and spring food for various species of grouse. The tender bark, twigs, and foliage are eaten abundantly by rabbits and hoofed browsers, especially moose. It is the favorite food of the beaver in many localities.

The poplar's sweetish, starchy sap layer is edible both raw and cooked. This lies between the wood of the trunks, branches, and twigs and outside bark, the latter being intensely bitter with salacin which is an ingredient in some tonics concocted for the benefit of mankind and as a factor in reducing fever.

It can be scraped off and eaten on the spot. It can also be cut into strips or chunks and cooked like noodles in soups and stews. Dried and powdered, it is a flour additive and substitute.

PRICKLY PEAR

(Actually seen around North Carolina in many people's front yards. Paul)

EDIBILITY - A number of wildfolk could not survive if it were not for this desert plant. Doves and sapsuckers are among the birds eating the seeds, also relished by some of the little desert mammals. Mountain sheep and deer, as well as cattle, disregard the thorns and browse on the prickly pear, also dethorned with blowtorches by some cattlemen for silage.

To enjoy the so-called Indian fig, cut off the ends of these fruits of the prickly pear, slice the hide lengthwise, and scoop out the pulp. Either that, or peel them. A few species, though, are smooth, while others are covered only with bristles that can be easily scraped away as with a bunched handful of grass. Pleasant raw, the ripe fruit can also be turned into candy or jelly.

The dried seeds are sometimes ground into flour or used to thicken soups. The newer, tenderer pads in particular are sweetly edible once they have been despined when necessary. Sliced, boiled, or roasted, and seasoned, they have proved to be valuable greens in lean times. Although this can be further cooked until it is a rich, dark, highly nutritious paste, some say it is at its best while still a sauce if first allowed to ferment slightly. They also make an interesting pickle.

A bitterish and somewhat sticky juice can be pressed or sucked from the insides of these prickly pear stems and used as emergency water.

EDIBLE WILD PLANTS

Wild Food Trail Guide

Hall, A. The Wild Food Trail Guide, new and expanded edition.

New York: Holt, Rinehart and Winston, 1976, pages 3-21.

NOTE THAT THE BOOK IS NO LONGER IN PRINT

There are readily available wild plants that can provide for almost any food need short of the meat course. . .

SALADS

These are tender plants that can be eaten without cooking. Included here are salad greens that may be used in place of lettuce and a smaller number of roots, tubers, shoots, and stems that can be eaten raw by themselves or added to salads in the manner or radishes, cucumbers, celery, etc. Since these plants are not cooked, their nutritional value is at its maximum, particularly when they are eaten very soon after being picked. While some of these salad greens are mild, others have strong flavors ranging from peppery to bitter and are best when mixed with blander greens. It's a good idea to sample a leaf and decide how much you want to use before you begin picking. A good mild green is Purslane. Chickweed is extremely mild, in fact too mild

for many tastes, but is excellent when mixed with stronger greens like Chicory or Dandelion, which are bitter, or with Water Cress or Winter Cress, which have a peppery character. Plants that grow in water; that may be polluted should be disinfected before use (especially Water Cress and Cat-tail). The best method is to carry a few water purification tablets, such as Halazone, which can be bought in most camping supply stores. Mix 1 tablet with 1 pint of water, wait 30 minutes, wash the greens in the water, and rinse in fresh water to remove the chlorine taste. This treatment should be sufficient to remove any pathogenic bacteria that may be clinging to the items or leaves.

Edible Wild Pants and Their Uses

Spring and summer
Spring and summer
Spring
Spring and summer
Spring
Spring through fall
Spring
Spring through fall
Spring
Spring
All year
Spring
Spring
Spring through fall
Fall through spring
Spring
Spring and summer
Spring
Spring
Spring
Summer to fall
Spring
Spring and summer
Spring and summer
Spring and early summer
All year
Fall through spring
Early summer through fall

TRAIL NIBBLES

This group includes a few plants that are also listed under salads but that are chewed on the trail by hikers and mountain climbers. They have a moist, thirst-quenching quality and, in the case of Sheep Sorrel and Wood Sorrel, a pleasant acidity. Chewed on the trail, they alleviate that dry-mouth feeling that seems to plague walkers no matter how often they rinse their mouths out with water.

Burberry (leaves)
Blackberry (shoots)
Calamus (shoots)
Dewberry (shoots)
Great Bulrush (shoots)
Indian Cucumber (roots))
Purslane (leaves)
Raspberry (shoots)
Rose (flowers)
Sheep Sorrel (leaves)
Violet (flowers)
Wood Sorrel (leaves)

Spring
Spring
Fall to spring
Spring
Fall to spring
Spring through fall
Spring to fall
Spring
Summer
Spring and summer
Spring
Early summer through fall

POTHERBS

Potherbs are leaves that are boiled and served as greens like spinach; Since many of these plants are obtainable in the spring, identifying characteristics such as flowers and fruits have not yet appeared. For this reason, care should be taken not to include the young foliage of other nearby plants. which could be poisonous. Only small, lender young leaves should be collected; as they mature, they rapidly become tough and bitter. In the case of plants that are listed for summer and even all, the young leaves at the top of the stems are always the most tender and mild.

The potherbs included here are listed in two groups. Those in the first group are tender and require little cooking. They should be prepared just like spinach: rinsed in cold water and boiled in the barest amount of salted water until they are tender. Don't overcook. They may be eaten as they are or with vinegar. Some potherbs have a coarse, dry texture and are improved by adding bacon during cooking or by pouring bacon fat, butter, or oil over them after draining. The potherbs requiring a minimum of cooking include:

Spring and summer Brooklime Catbrier Spring and summer Chickweed Spring through fall Cleavers Spring Coltsfoot Spring and summer Dock Spring and summer Green Amaranth Spring Horseradish Spring Lamb's Quarters Spring and summer Mallow Spring and summer Pruslane Summer to fall Spring and summer Sheep Sorrel Thistle Spring and summer Violet Spring and summer Water Cress All year

While the leaves of the plants in the second group provide good

potherbs, more care in preparation is required. Some are bitter and strongly flavored; others contain poisonous substances that are soluble in the cooking water and are thrown away with it or are destroyed by cooking. Plants listed below that are not listed under salads should never be eaten raw. The difference between cooking these and the plants in the first group is that long cooking in two or more changes of water is necessary. The initial cooking waters are drained off and thrown away. To speed preparation, it's a good idea to keep a large pot of water boiling and use to to replace the first cooking water as soon as that stage is completed. Plants with tough, stringy fibers, such as Burdock, can be tenderized by adding a pinch of bicarbonate of soda to the first cooking water. While such rigorous cooking certainly doesn't improve the vitamin content any, essential and equally important minerals do remain. If nor cooked in this manner, these plants are often unpalatable, but with proper preparation, they are worth the effort to the camper.

Burdock
Chicory
Dandelion
Jewelweed
Marsh Marigold
Milkweed
Mustard
Nettle
Pokeweed
Shepherd's Purse
Winter Cress

Spring
Spring
Spring
Spring and summer
Spring
Spring and summer
Spring
Spring and summer
Spring
Spring

Spring and summer

All year

COOKED GREEN VEGETABLES

Included here are wild plants that are cooked and served like a number of familiar garden vegetables. Young shoots are used like asparagus, several roots could be compared to turnips or beets, and other parts to green beans, peas, celery. or broccoli. As with young potherbs, those shoots that are used for food are collected at a stage when they are extremely difficult to identify. Unless you are absolutely confident that you are getting the right plant, don't eat it. However, many -- including Ostrich Fern and Pasture Brake -- are distinctive and easily identified.

Burdock (roots, stems. leaf stalks)
Cat-tail (sprouts. stems, flowers)
Chufa (tubers)
Dandelion (roots, leaves)
Day Lily (tubers, flowers)
Evening Primrose (rood
Goat's Beard (roots, leaf crowns)
Groundnut (seed pods)
Hog Peanut (seeds)
Japanese Knotweed (shoots)

Spring and summer
Spring and summer
Spring through fall
Spring
All year
Fall through spring
Spring through fall
Summer
Fall to early spring
Spring

Mallow (fruits) Late spring and summer Milkweed (shoots, pods, flowers) Spring and summer Ostrich Fern (fiddleheads) Spring Pasture Brake (young fronds) Spring Pokeweed (shoots) Spring Salsify (roots, leaf crowns) Spring through fall Thistle (stems, roots) Spring thorough fall Wild Onion (bulbs) Spring through fall

POTATO SUBSTITUTES

Roots, tubers, and corms that are rich in starch and have a mild flavor can be used as a substitute for potatoes. All those listed here are tender and can be treated just like potatoes: baked, boiled, fried, etc. In many cases where root vegetables are cited, the season of availability is given as "Fall to spring." This is because the starch is stored food for the next year's growth and is most abundant during the winter months. During the cold months the storage organs are usually firm and crisp; when the plant is using the starch in the spring and summer, it gets mushy. Developing storage organs can be found in the summer although they are smaller and less abundant, and, as a result, more work is required to gather enough for a meal.

Arrowhead (tubers)

Cat-tail (roots)

Great Bulrush (roots)

Groundnut (tubers)

Jerusalem artichoke (tubers)

Spring Beauty (corms)

Wild Potato (roots)

Yellow Pond Lily (roots)

Fall to spring

Spring

Spring

All year

All year

Fall to spring

Fall to spring

Fall to spring

FLOURS AND CEREALS

A large number of plants can be used as breadstuffs or ground into flour. While a goodly number are sufficient only for emergency use, others provide nutritious, flavorful products that can be used to prepare excellent pancakes, muffins, breads, etc.

Among the best wild flours are those prepared from nut meats. All flour require some preparation, but nut meats are among the easiest, particularly acorns. Acorns can usually be collected in great abundance, the shells are easily opened. and the meat is one large piece. And while the bitter tannin must be removed, you can let a stream or faucet do the work. Other nuts have the advantage of providing flour and cooking oils at the same time smashing the nut and boiling it to separate the nut meat (which is subsequently ground into flour) from the oil and shells is often easier than picking out pieces of nut meal for immediate eating.

Those flours that are obtained from roots or tubers are probably the easiest to use in the field, and Cat-tail, Arrowhead, and Chufa are all very good in this respect. Two preparation

techniques can be used. The first is best if you are preparing flour for immediate use. Free the roots of clinging mud and small rootlets and crush them with a hammer or between rocks. Then rinse them vigorously in a container of cold water to free the starchy material from the fibers. Strain out the fibers and allow the water to settle until a whitish sediment collects on the bottom and the rest of the water is fairly clear. Pour off the water, add fresh water, stir, and repeat the settling process. Repeat this until the water ceases to feel slimy. Finally, drain off all the water. The flour may be used while still wet if recipes are modified to allow for the extra liquid present. For storage or transportation, it can be dried and then ground into a powder. In the second technique, the roots are first dried, then ground into a powder, and the fibers finally sifted out.

Closer to conventional wheat flour are those prepared from wild cereals or seeds. But the similarity ends with the preparation technique; they taste very different, although they are not necessarily unpleasant. Before they can be ground into flour, the seeds must first be both threshed and winnowed. Threshing removes the husks from the seeds and winnowing separates the seeds from the husks and other trash. Some seeds have loose husks that can be freed from the seed simply by rubbing the seed between the hands, but others call for more rigorous treatment. A good way is to rub the seeds between two boards or flattened pieces of wood. Flat rocks can also be used, or the seeds can be spread on a flat surface and crushed beneath the feet. The best way to winnow grains is to pour them back and forth between two tin cans or similar containers in slowly moving air. The trash, being lighter, will blow away and the seeds will fall into the receiving can. The only real problem is the slowly moving air: if the air is moving too slowly, The trash will go right along with the seed, and if it's moving too fast, the seed will go right along with the trash. However, this method does work, and with a little practice at judging wind currents it is almost easy.

Grinding is another problem. In the field, about the only way it can be accomplished is between two rocks. The quality of the flour depends on its fineness, and no small amount of grinding: is required, particularly when small, hard seeds insist on popping out from between the stones. In the home, grinding is much easier. A knife-type kitchen blender works well for small quantities and hand flour mills may be used.

While seeds can be used to make flour, they can also be used as cereals and boiled into mush. The only seed that is of excellent quality when boiled is Wild Rice, but many others are palatable and nourishing, which counts most in the wilderness. The addition of sugar, honey, maple syrup, or bacon fat improves them greatly. The seeds of several species are easily collected in great abundance (Dock and Lamb's Quarters, in particular) and even if it seems like too much trouble to use them for flour, they could be extremely important in an emergency.

The only source of flour that needs absolutely no preparation is

the bright yellow pollen of Cat-tail, which is already finer than you could ever hope to grind it. Its extreme fineness, however, makes it exceedingly hard to wet and it is much easier to use if it is mixed with wheat flour. The baking qualities of other wild flours are often improved by blending with wheat flour and they can be used to advantage to extend dwindling supplies of flour in the wild.

Fall to Spring Arrowhead (tubers) Beech (nuts) Fall Black Walnut (nuts) Fall Butternut (nuts) Fall Cat-tail (pollen, roots) All year Spring through fall Chufa (tubers) Dock (seeds) Summer and fall Great Bulrush (roots. pollen, seeds) All year Green Amaranth (seeds) Late summer and fall Hazelnut (nuts) Fall Fall Hickory (nuts) Lamb's Quarter (seeds) Fall and winter Oak (acorns) Fall Purslane (seeds) Fall Shepherd's Purse (seeds) Fall Sunflower (seeds) Fall Wild Rice (seeds) Summer or fall Yellow Pond Lily (seeds) Fall

NUTS AND LARGE SEEDS

Acorns and sunflower seeds should be roasted before use and are not good when added to baked goods. Also, the bitterness of acorns varies from species to species and even from tree to tree, so try one out and if it's too bitter, forget it or use it for something else, like flour.

Beech (nuts)	Fall
Black Walnut (nuts)	Fall
Butternut (nuts)	Fall
Hazelnut (nuts)	Fall
Hog Peanut (seeds)	Fall to spring:
Oak (acorns)	Fall
Sunflower (seeds)	Fall

COOKING OILS AND BUTTERS

A very limited number of North American plants have sufficient extractable oil to be worth bothering with. Still, cooking oils and butters are an important staple food, and, while early colonists relied on animal fats for this purpose, the Indians made use of the nuts and seeds listed here One of the oils most highly valued by the Indians was extracted from the Shagbark Hickory.

Oils can be extracted from nuts by crushing and then boiling them. The oil will rise to the top of the water and can be skimmed off. Skimming is easier if the liquid is poured into a narrow container; this will give the oil greater depth and reduce the likelihood of getting a lot of water mixed in with the oil

Beech (nuts) Fall
Black Walnut (nuts) Fall
Butternut (nuts) Fall
Hickory (nuts) Fall
Sunflower (seeds) Fall

FRESH FRUITS

While some wild fruits are palatable only after cooking, the vast majority can be eaten as they are picked. In the wilderness or in the absence of a freezer, wild fruits, particularly berries, can be preserved by drying. Herbs, such as Mint and some tea substitutes can also be dried in the same manner as fruits, or bunches of stems and leaves can be hung upside down in a warm room or near the kitchen stove.

Bearberry (in an emergency)

Blackberry

Black Cherry

Blueberry

Summer

Late summer to early fall

Summer

Currant Summer
Dewberry Summer
Gooseberry Summer
Grape Summer
Fall

Ground Cherry Late summer or fall

Huckleberry
Juneberry
May Apple
Mountain Ash (in an emergency)
Summer
Late Summer
Fall and winter

Pawpaw Fall

Persimmon Fall and winter

Raspberry Summer

Strawberry Early summer

Wild Plum Summer

Wintergreen Fall through spring

COFFEE SUBSTITUTES

Comparatively few plants can be used as substitutes for coffee; while several have achieved wide use, they lack caffeine and fail to provide that slight "eye opening" stimulation coffee drinkers usually look forward to in the morning. Nonetheless, there are people who prefer the roasted root of Chicory to coffee and it has had a long history as a choice adulterant. Cleavers is the only North American plant that is actually related to coffee and its

flavor most closely resembles the real thing.

Beech (nuts)
Chicory (roots)
Chufa (tubers)
Clcavers (fruits)
Dandelion (roots)
Goat's Beard (roots)
Salsify (roots)

Fall
All year
All year
All year
All year

TEAS

Many of the plants that can be seeped in hot water and drunk as tea have had a long history of medicinal use and in some cases they do have mild medicinal properties. Others, though, owe their fame to nothing more than a pleasant flavor and several came into use during the American Revolution when Oriental tea was under embargo. One wild tea plant, Cassina, has the distinction of containing caffeine.

Birch (twigs and bark) All year Blackberry (leaves) Summer Cassina (leaves) All year Coltsfoot (leaves) Spring and summer Dewberry (leaves) Summer Elder (flowers) Summer Labrador Tea (leaves) All year Mint (leaves) Spring and summer New Jersey Tea (leaves) Spring and summer Persimmon (leaves) Summer Raspberry (leaves) Summer Rose (leaves) Spring and summer Sassafras (roots) All year Strawberry (leaves) Summer Summer and early fall Sweet Goldenrod (leaves) Wintergreen (leaves) All year

WINES AND BEERS

There are few plants that have not been made into wine at some point. Wines made from Elder and Dandelions are well known to most people, but a fairly respectable number of wild plants make good wines. Wild plants from which wine can be made are:

Blackberry (fruits)

Black Cherry (fruits)

fall

Choke Cherry (fruits)

Currant (fruits)

Dandelion (flowers)

Dewberry (fruits)

Summer

Late summer to early fall

Summer

Late spring

Summer

Elder (fruits. flowers)
Goose berry (fruits)
Grape (fruits)
Highbush Cranberry (fruits)
Mountain Ash (fruits)
Raspberry (fruits)
Wild Plum (fruits)
Wintergreen (leaves)

Summer
Summer
Fall
Fall and winter
Fall and winter
Summer
Summer

All year

The flavorings of such popular carbonated beverages as birch beer and sarsaparilla were originally obtained from plants, although they are generally prepared synthetically today. Both of these beverages can be made at home and are every bit as good as the commercial varieties. The plants that can be used to make beers are:

Birch (twigs and bark)
Catbrier (roots)
Persimmon (fruits)
Wintergreen (leaves)

All year All year Fall and winter All year

VINEGAR'S

Sweet tree saps are a prime source of vinegar, although unwanted experience with the manufacture of vinegar is often gained when homemade hard cider or wine inexplicably turns. What has happened is that it has become contaminated with a common airborne bacterium that feeds on the alcohol produced by the yeasts and turns it into acetic acid. But despite the loss of a certain quantity of alcohol, vinegar is very useful stuff in its own right. The simplest way to make your own vinegar is to start a yeast fermentation in sweet tree saps, but (leave them open to the air; they are almost certain to turn to vinegar. Vinegars can also be made from any of the plants listed under wine, but less sugar should be added because sugar raises the alcohol level and when it gets high enough, the vinegar-producing bacteria can't survive.

Birch
Black Walnut
Butternut
Maple
Persimmon

Spring Spring Spring Spring

Fall and winter

SUGARS

The best source of sugar is the Maple tree, but several other trees produce sap with a high enough sugar content to be worth boiling it down. The roots of the Great Bulrush also contain considerable amounts of sugar. It comes nowhere near tree sugars

in quality, but it is useful in a pinch.

Birch (sap)

Black Walnut (sap)

Butternut (sap)

Great Bulrush (roots)

Hickory (sap)

Maple (sap)

Spring

Spring

Spring

Spring

Spring

Spring

Spring

Persimmon ((fruits) Fall and winter

SEASONINGS AND FLAVORINGS

The seasonings and flavorings in everyday use include spices such as Mustard, herbs like bay and tarragon, and flavorings like ginger or chocolate. Wild plants provide an equally broad and varied range. many of which are familiar, some of which are nor. With unfamiliar ingredients, only experimentation will tell how much to use and where to use it. A fairly good indication can be had by tasting a small quantity before adding it to other foods.

Catbrier (roots) All year Spring and summer Coltsfoot (leaves) Day Lily (flowers) Summer Elder (flowers) Summer Horseradish (roots) All year Mint (leaves) Spring and summer Summer Mustard (seeds) Purple Avens (roots) All year Rose (flowers) Summer All year Spring and summer Fall Sassafras (leaves) Sassafras (leaves)
Sheep Sorrel (leaves)!: Shepherd's Purse (seeds) Spring through fall Wild Onion (bulb, leaves)

CONDIMENTS

Several wild plants can be used to prepare condiments. Sassafras root bark makes a good chutney, Ground Cherries an excellent relish, and Mustard seeds a prepared mustard comparable to that sold in the stores.

Ground Cherry (fruits)

Horseradish (roots)

Mustard (seeds)

Sassafras (roots)

Late summer or fall

All year

All year

CONFECTIONS

When chocolate had not yet become widely available, candied plants were the popular confections. The flavors of Oak, Calamus, and Wild Ginger were utilized as candies by boiling them in a sugar syrup until they were thoroughly saturated, allowing the

sugar to harden. And rolling in granulated sugar to cover the sticky surface. A different kind of confection can be made from Mallow. This was the original source of marshmallow. which is now made from corn syrup, egg albumin, and starch.

Calamus (rhizome)
Mallow (fruits and roots)
Oak (acorns)
Strawberry (fruits)
Violet (flowers)
Wild Ginger (roots)

Spring through fall Spring and summer Fall Early summer Spring Spring and summer

THICKENERS

Materials that impart body to soups, gravies, stews, etc., are important to cooking. A large number of plants have a mucilaginous quality and act as thickeners when they are cooked with other foods. For example, powdered leaves of Sassafras can be used in anything and are the equal of corn starch or flour.

Day Lily (flowers)
Mallow (leaves)
Pasture Brake (young fronds)
Purslane (leaves)
Sassafras (leaves)
Sheep Sorrel (leaves)
Violet (leaves)

Summer
Spring and summer
Spring
Summer and fall
Spring and summer
Spring and summer
Spring and early summer

McPherson, A. and S. "A SEASONABLE GUIDE TO WILD FOOD PLANTS," IN WILD FOOD PLANTS OF INDIANA AND ADJACENT STATES.

Bloomington, Indiana University Press, 1977, pages 16-18.

SPRING

Alfalfa and clovers (leaves)
Arrowheads (early: tubers)
Asparagus (shoots)
Basswoods (flowers)
Bulrush (early: roots) (shoots, sprouts)
Cattails (early: roots) (shoots, sprouts, spikes)
Chickweed (leaves)
Chicory (leaves, crowns)
Chufa (early: tubers)
Dandelion (leaves, crowns, flowers, roots)
Day lily (shoots, flowers buds, bulbs)
Dock (leaves)
Evening primrose (leaves, shoots, roots)
False Solomon's seal (shoots, roots)

Page 23 of 26 Edible Wild Plants Consolidated 2003

```
Ferns (fiddleheads)
Grapes (tendrils, leaves)
Greenbriar (shoots, roots)
Jerusalem artichoke (early: tubers)
Lamb's quarters (leaves)
Milkweed (shoots, young leaves)
Mints (leaves)
Morels
Mustards (leaves, flower buds)
Nettles (leaves)
Onion, garlic, leek (bulbs)
Pines (needles, bark)
Pokeweed (sprouts)
Puffballs
Purslane (leaves, stems)
Roses (buds, petals)
Sassafras (leaves, roots)
Shaggymane
Skunk cabbage (early: shoots) (leaves)
Solomon's seal (shoots, roots)
Sorrels (leaves)
Spicebush (leaves, twigs,: bark)
Spring beauty (corms)
Strawberry (late: fruits)
Sugar Maple (early: sap)
Violets (leaves, flowers)
    SUMMER
Alfalfa and clover (greens and flowers)
Asparagus (seeds)
Bulrush (pollen)
Cattails (sprouts, pollen)
Cherries (fruit)
Chickweed (leaves)
Chicory (roots)
Day lily (flowers, bulbs)
Dock (leaves)
Elderberry (flowers, fruits)
False Solomon's seal (berries)
Grapes (leaves, fruit)
Hazelnuts (nuts)
Juneberry (fruit)
Lamb's quarters (leaves)
Mayapple (fruit)
Spicebush (leaves, twigs, bark, berries)
Strawberry (early: fruit)
Sulphur shelf (late)
Milkweed (flower buds, young pods)
Mints (leaves)
Mulberries (fruit)
Mustard (seeds)
```

Page 24 of 26 Edible Wild Plants Consolidated 2003

```
Nettles (leaves)
New Jersey tea (leaves)
Onion, garlic, leek (early bulbs)
Pawpaw (fruit)
Persimmon (leaves)
Plum (fruit)
Puffballs
Purslane (leaves, stem)
Raspberry, blackberry, dewberry (fruit)
Roses (petals)
Sorrels (leaves)
Sumac (fruit)
Walnuts (early: immature nuts)
    FALL
American chestnut (nuts)
Arrowhead (tubers)
Bulrush (roots)
Cattails (roots, shoots)
Chickweed (leaves)
Chufa (tubers)
Crab apple (fruit)
Day lily (bulbs)
Dock (leaves)
Elderberry (fruit)
Evening primrose (early: roots)
False Solomon's seal (roots)
Ginger (underground stem)
Grapes (early: leaves, fruit)
Greenbriar (roots)
Hawthorns (fruit)
Hazelnut (nuts)
Hickories (nuts)
Jerusalem artichoke (tubers)
Lamb's quarters (leaves, seeds)
Mints (leaves)
Oaks (nuts)
Persimmon (fruit)
Pines (seeds)
Puffballs
Roses (fruit)
Shaggymane
Skunk cabbage (roots)
Solomon's seal (roots)
Sorrels (leaves)
Spicebush (berries)
Sugar maple (fruit)
Sulphur shelf
Sumac (fruit)
Walnuts (nuts)
Wild rice (grain)
```

WINTER
Cattails (roots)
Pines(bark)
Sugar maple (late: sap)

SUPPLEMENTARY READING

Knap, A. H. Wild Harvest.
Toronto: Pagurian Press, Ltd., 1975.

Tatum, B. J. Billy Joe Tatum's Wild Foods Cookbook and Field Guide.

New York: Workman Publishing Company, Inc., 1976.

Peterson Field Guides; A Field Guide to Edible Wild Plants; ISBN 0-395-92622-X