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Native Medicinal Trees of Georgia

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Native trees have many values provided over many years and across many human generations. The cultural history of native trees, or how they have interacted and been used by first nations and subsequent waves of people from around the world, is deep and complex. One use in particular has made our native trees critical to human health and comfort – traditional medicinal and health products derived from native trees.

Traditional tree medicinal products have been discovered, compounded, and used for as long as people have been in our forests. Georgia's native trees are a great asset to the State. Georgia has approximately 265 native trees – from the mountains to the sea. Both rural forests and urban plantings contain these native trees. There is a native tree for every site and situation. Among these trees are medicinal trees.

Natives

The native trees of Georgia are summarized in Figure 1, which provides a list of the largest genera native to the State. Roughly 50% of all native tree species are in the largest 12 genera. Largest in species numbers among the State's native trees are oak, hawthorn, holly, hickory, and pine.

Native tree species numbers are not quite precise and accurate due to tree hybridization and changes in tree taxonomy. For example, hawthorn (Crataegus spp.) has been listed with 5, 18, 37, or 53 species in Georgia. Basswood or lindens have been cited as having 2, 3, or 4 species, depending upon the author. Because oaks have more than 35 species, and 75 naturally occurring hybrids in Georgia, it can be difficult to appreciate a single individual oak standing in a woodlot as a specific species.

To summarize – all of Georgia's native trees represent a diverse genetic background which have been used by surrounding humans for millennia. Primary uses for native trees are focused in five areas: fuel, structure, food, comfort, and traditional medicinal products. The first three uses of trees are thought of most commonly – fuel for burning and charcoal; structures for protection and building; and, food from seeds, nuts and fruits. Comfort from trees, both from an aesthetic and psychological standpoint, and from providing products and modifying environments, bring many values to people.

Finding Health

Medicinal use of trees is one aspect of forest and tree values seldom appreciated. For many generations, people in their health management have been using native tree products. In the industrial age, the systematic use of medicinal trees was practiced by physicians, psychiatrists, nurses, mid-wives, herbalists, and parents. For medicinal trees, the term herbalist needs to be replaced by silvalist – a person knowledgeable in the health uses of trees.



Disclaimer!

This publication is a literature search of historic medicinal uses of trees, not a prescription outline, preparation recipes, or determination of effective and appropriate use. Proper tree identification, careful concentration or isolation of tree tissue constituents, and recognition of appropriate dose are all critical aspects of historic tree medicinal use. No suggestion or recommendation is made for anyone to try, or attempt to try, any medicinal tree product for human or animal health issues. Seek advice and assistance of qualified medical personnel before handling, consuming, or using tree derived products to treat any symptoms or their cause. Also remember the medicinal value of trees change over tree lifespans and time of year. Chemical constituent presence, concentration, and relative proportions change as the tree and its environment change.

Sources

Books cited in the selected literature section of this publication are the primary sources for the medicinal tree information listed. Information here includes both current explorations and testing of tree derived medicinal products, and traditional uses of trees for health products. Current uses are derived from German standards (Commission E), herbalists, and medical trials and findings. Traditional uses come from written and oral sources of Native American Nations, African Americans, Asian Americans, Chinese herbal medicinal, European Americans, Eastern North American folk medicinal, and old-wives and husband tales.

In examining medicinal uses of trees, there is much published and available on-line. A note of caution is required with some sources of information in this area. Some sources are unreviewed and self-published, hear-say and secondary accounts, traditional uses without clinical trials, general literature reviews, and personal testimonials. Great care must be exercised when handling or using medicinal tree materials. Please remember for some tree medicinal products, a placebo effect can be as important as the impact of actual tree constituents on symptoms and causes.

Trees & Treatments

The different forms of tree-centered medicinal therapies include: 1. Massage – soft tissue rubbed externally with diluted volatile and non-volatile oils; 2. Aromatherapy – volatile oils from distillation diffused into air; and, 3. Medicinal – select tree parts used internally, externally, or within body entrances.

For this general historic review of native tree medicinal uses, no attempt has been made to directly pair trees, tree parts or components, and any health issue impact with a specific treatment or recipe. Only lists are provided to allow the reader to appreciate past use and to encourage further exploration of tree medicinal information from primary sources.

Health Problems

Here, 220 separate human health symptoms or treatments are listed associated with native medicinal trees. These individual symptoms or treatments were cited more than 1,750 times in selected literature associated with individual native tree species or species groups. An alphabetical list of all medicinal and comfort problem solutions which have been sought in medicinal trees is given in Figure 2. Of the 220 problems, afflictions, symptoms, and treatments, all are listed with the number of times each medicinal use was cited. From abdominal pain to worms, medicinal trees were enlisted to help.



Figure 3 provides the tree medicinal citations, in numeric order of citations, from the reviewed literature. For example, fever is a problem which various native trees have been cited 42 times in selected literature as providing help. Notice 62 individual problems (28%) are only mentioned once in the limited literature review here provided.

The top 12 problems cited represent $\sim 25\%$ of all citations of medicinal support from native trees. Top problems of arthritis, rheumatism, diarrhea, fever, and cancer have been and still remain a plight of human-kind. The number one term, "tonic" can mean a number of things including, a cleansing drink or tea taken in Spring to relieve Winter doldrums, a drink for specific treatments such as pre or post childbirth issues, or long-term use for chronic conditions or prevenative care.

There are a number of serious infectious diseases medicinal tree were enlisted to combat. Figure 4 lists a select number of these diseases with their number of citations. Malaria, measles, tuberculosis, and smallpox were notable scourges attacked with native medicinal tree. Medicinal tree were also cited for use against some lesser known and interesting problems: lovesickness, gunshot, lunacy, alcoholism, and bad breath.

History of Health

In reviewing the list of afflictions people were trying to attack with medicinal tree products, it is clear the same problems people have today, were the same problems our ancestors were trying to manage with medicinal trees. Fighting colds, dysentery, worms, stomach problems, toothache, and venereal diseases were issues where medicinal tree help was sought.

It is interesting how our predecessors managed their health and survived without what we would call modern medical assessments and treatments. Their health issues remain our health issues to this day, and maybe there is room for tree-derived products to be better incorporated into today's medical treatments.

Forest Pharmacy

The wide diversity of native medicinal tree products are associated with both the evolutionary age of each tree species, time of year, age of tree, and tree parts sampled. Tree parts used for medicinal use are concentrated among those tissues and organs most responsible for tree defense – roots, periderm / bark, leaves, & fruit. For survival, trees must prevent tissue loss, manage infections and attacks, control ecologically viable space, and defend new embryos. Figure 5 lists tree parts most commonly used for medicinal extraction and use. Bark, leaves, fruit / cones, and roots comprise 59% of all tree parts used for medicinal materials.

Trees utilize many types of compounds and chemicals for managing damage from other living things – including other trees. Fungi, bacteria, virus, insect, worm, vertebrate, and parasite pests afflict trees – and similar pests afflict humans. Some defensive chemicals generated in trees might be effective against human problems. Trees change their protective chemicals over time – months, seasons, years – as they age and are challenged by other organisms and the environment. Tree medicinal materials can vary by a tree's location, its population, and between neighboring individuals. Medicinal value even change depending upon the location of the same tissue within a single tree.

Witch's Brew

Trees are cauldrons of many chemicals, some physiologically active and some held for use defensively. Trees manufacture acids, alkaloids, amino acids, antioxidants, bioflavonoids, coumarins,



flavonoids, glycosides, gums, mucilages, napthoquinones, oils (volatile & non-volatile), organic acids, phenolics, polysaccharides, proteins, resins, saponins, sterols, sugars, and tannins, among many others. For medicinal use, some materials could help, some could hurt, and some will do nothing and have no effect. Any product extracted from trees will contain a mix of materials, all at various concentrations.

Poison Dose

A major component of safely using tree derived materials is directly tied to the dose given. The dilution and concentration of tree chemicals, coupled with the method of extraction, can shift relative medicinal concentrations and associated dose over time. Individual human tolerance and reactions to tree-derived chemicals can be highly variable across families, gender, previous challenges, and age, as well as body size / weight. Without knowing what comprises a medicinal tree extract, and at what concentration each component is present, patience and caution in use is critical.

Extraction

Extracting, diluting, and concentrating tree chemicals can be accomplished in many ways. The primary forms of extraction include: cold and hot water, alcohol, vinegar, cold and hot oil, and distillation. The more reactive the solvent, and the more energy used in an extraction, the more concentrated and varied any released chemicals may be, and potentially more dangerous in use.

Terms used to describe extraction of medicinal materials from trees include: <u>infusion</u> – cold to hot water over various time periods; <u>tea</u> – warm to hot water over various time periods; <u>decoctions</u> – simmered or boiled in water for various lengths of time; <u>percolation</u> – water or alcohol dripped over and through tree tissues; <u>tincture</u> – macerated tree tissues soaked in alcohol, alcohol-water, vinegar, or glycerin for various time periods (hours to weeks); and, <u>distillation</u> – water / steam condensates. Extraction variables are the solvent liquid, temperature of solvent, and length of contact time with tree tissues.

Applications

Tree medicinal materials can be applied in several ways: <u>compress</u> – cloth wrap soaked in extraction liquid; <u>poultice</u> – macerated moist tissue placed directly on the body; <u>powder</u> – tree tissue dried and ground for use; <u>liniment</u> -- tincture derived material from alcohol extration; <u>creams</u> & <u>ointments</u> – various mixtures of fats and water as carriers of extraction materials; <u>oils / salves</u> – hot oil (lard / non-volatile oil) extraction, or acting as a carrier (may include beeswax thickener); and, <u>syrup</u> – extraction material with added sugar.

There are number of extraction processes, applications, and/or delivery methods for medicinal tree products. A list of extraction, preparation, and use methods using native medicinal trees are given in Figure 6. The top 5 preparation represent roughly 56% of all items. Medicinal preparations dissolve, distill, purify, concentrate, dilute, or extract active ingredients from various tissues using a silvalist's experience, traditional foundations, and knowledge. One clear warning of note within extraction and use processes is to never use volatile oil extracts internally.

Medicinal Tree Species

There are more than 65 species or species groups of important, commonly cited native medicinal trees in 36 families within Georgia. Figure 7 provides an alphabetical list of native medicinal tree species. This does not represent an all-inclusive list of native trees having been used for medicinal



applications. Some listings include species groups not individual species because scientific identification of tree species have been fraught with problems. If modern identification of medicinal trees are an issue in some species groups, how closely differentiated were medicinal tree species in the past? In some cases, historical records of actual tree species identifications are unclear, or one species is mixed with several other non-related species.

Medicinal trees, in order of medicinal citation numbers, are given in Figure 8. The top ten species or species groups comprise 35% of all medical citations reviewed. A grove of these medicinally varied and useful trees would be a fine collection in yard, park, or greenway. Figure 9 provides an alphabetical list by medicinal tree family. This list helps highlight family, genus, and species of medicinal trees reviewed in Appendix 1.

Medicinal Tree Catalog

Appendix 1 provides a species by species listing of native tree species name, tree parts medicinally used, current explorations of detailed medicinal uses, traditional medicinal uses, medicinal preparations, and any caution / hazard warnings provided in the literature. The notes in Appendix 1 have many important warning and cautions regarding each medicinal tree. These species represent the most common and important native trees or tree groups cited with medicinal values. Appendix 1 is the collected source of information for this publication. This is not intended as an inclusive list of native medicinal trees.

Conclusions

Do not self-medicate or prescribe medicinal tree products for any reason. Seek knowledgeable medical advice for diagnosing, assessing, and treating symptoms or causes of any problem. Be certain of native tree species identification before handling medicinal trees.

Georgia's native trees are a great biological storehouse and a cultural museum. Native trees and their growth ranges continue to change. Native trees remain an ecological gift and responsibility for everyone, especially medicinal trees. Unfortunately, less than half of native trees have been examined for medicinal use, suggesting more research is needed. In addition, some medicinal trees are rare and should be more widely planted and conserved. Maybe a historic medicinal tree planting or arboretum should be in your community or backyard.



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| genus | name | number of species | species running total |
|------------------|----------|-------------------------|-----------------------------|
| Quercus | oak | 34 | 34 |
| Crataegus | hawthorn | 18 | 52 |
| llex | holly | 13 | 65 |
| Carya | hickory | 11 | 76 |
| <u>Pinus</u> | pine | 10 | 86 |
| Acer | maple | 9 | 95 |
| Prunus | cherry | 9 | 104 |
| Magnolia | magnolia | 8 | 112 |
| Viburnum | viburnum | 8 | 120 |
| Cornus | dogwood | 6 | 126 |
| Aesculus | buckeye | 5 | 131 |
| <u>Fraxinus</u> | ash | 5 | 136 |

Figure 1: List of the 12 tree genera with the most number of species native to Georgia.



| 6 | abdominal pain | 3 | bruises |
|----|------------------------|----|--------------------|
| 6 | abortion | 17 | burns |
| 1 | abrasions | 1 | bursitis |
| 5 | acne | 1 | cataracts |
| 2 | alcoholism | 40 | cancer / tumor |
| 6 | allergies | 1 | cellulite |
| 3 | Alzheimer's | 1 | chafing |
| 1 | anorexia | 1 | chest pain |
| 1 | anthrax sores | 2 | chickenpox |
| 2 | antibacterial | 6 | childbirth issues |
| 7 | antibiotic | 6 | cholera |
| 7 | antifungal | 9 | cholesterol |
| 18 | antimicrobial | 7 | circulation |
| 10 | antioxidant | 30 | colds |
| 22 | antiseptic | 12 | colic |
| 9 | antispasmodic | 2 | colitis |
| 6 | antiviral | 1 | collagen |
| 1 | anxiety | 1 | committing suicide |
| 4 | aphrodisiac | 5 | congestion |
| 8 | appetite stimulant | 13 | constipation |
| 30 | arthritis / rheumatism | 35 | cough |
| 18 | asthma | 4 | cuts |
| 35 | astringent | | |
| | | 6 | dandruff |
| 2 | backache | 1 | decongestant |
| 7 | baldness | 2 | dermatitis |
| 1 | bedbugs | 11 | diabetes |
| 12 | bladder issues | 42 | diarrhea |
| 18 | bleeding | 5 | digestive issues |
| 1 | blisters | 3 | disinfectant |
| 2 | blood clotting | 26 | diuretic |
| 10 | blood pressure | 2 | dizziness |
| 3 | blood purifier | 7 | douche |
| 4 | boils | 28 | dysentery |
| 1 | bone fractures | | |
| 11 | bowel issues | 3 | ear ache |
| 3 | brain health | 8 | eczema |
| 14 | bronchitis | 14 | edema continued |
| | | | |

Figure 2: Alphabetical list of human health symptoms, causes, and problems where native medicinal trees were used, and number of citations. (220 individual problems / 1,761 medicinal citations)



| 25 | emetic | 1 | incontinence |
|----|------------------------------|----|-------------------------|
| 8 | enema | 16 | indigestion |
| 1 | enhance mood | 1 | induce labor |
| 7 | epilepsy | 5 | infections |
| 14 | expectorant | 31 | inflammation |
| 20 | eye wash | 5 | insect bites |
| | - | 8 | insecticide |
| 1 | fainting | 3 | insomnia |
| 1 | fertility / sterility issues | 8 | itching |
| 42 | fever | | _ |
| 11 | flatulence | 9 | jaundice |
| 1 | flea / tick | 2 | joint swelling |
| 8 | flu | 21 | kidney issues |
| 2 | foot issues | | - |
| 1 | frostbite | 3 | labor pains |
| 5 | fungal infections | 6 | lactation issues |
| | _ | 1 | lameness |
| 9 | gallbladder issues | 3 | laryngitis |
| 5 | gangrene | 1 | last weeks of pregnancy |
| 3 | gas | 33 | laxative |
| 2 | goiter | 2 | leprosy |
| 9 | gout | 3 | leukemia |
| | | 5 | lice |
| 3 | hair health | 17 | liver issues |
| 1 | hallucinogenic | 7 | lotion |
| 5 | hardening of arteries | 14 | lung issues |
| 18 | headache | 1 | lupus |
| 28 | heart issues | | |
| 17 | heart burn | 19 | malaria |
| 17 | hemorrhoids | 2 | mastitis |
| 1 | hepatitis | 9 | measles |
| 5 | herpes | 1 | menopause |
| 2 | HIV | 15 | menstrual issues |
| 1 | hyperactivity | 16 | metal health |
| 1 | hyperthyroidism | 2 | migraines |
| | | 1 | miscarriages |
| 4 | immune system | 1 | mites |
| | stimulation | | continued |
| | | I | |

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| 16 | mouth health | 10 | scurvy |
|----|------------------------|----|------------------------|
| 12 | mouthwash / gargle | 16 | sedative |
| 4 | muscle cramps | 1 | sexual issues |
| 1 | muscle relaxant | 1 | shampoo |
| | | 1 | shaving lotion |
| 6 | narcotic | 1 | shingles |
| 5 | nausea | 6 | sinus issues |
| 2 | nerve pain | 36 | skin issues |
| 1 | night blindness | 2 | sleep disorders |
| 1 | numbing | 4 | smallpox |
| | _ | 1 | smoke for cleaning |
| 3 | obesity | | after illness |
| | - | 2 | snake-bite |
| 16 | pain | 26 | sore throats |
| 1 | palsy | 1 | sore muscles |
| 2 | pancreas issues | 36 | sores / wounds |
| 1 | phlebitis | 5 | spleen issues |
| 1 | period pain | 1 | sprains |
| 1 | pink eye | 2 | steam baths |
| 3 | pneumonia | 8 | stimulant |
| 5 | poison ivy | 1 | stimulate contractions |
| 1 | post-partum bleeding | 22 | stomach issues |
| 1 | pregnancy backaches | 1 | stool softner |
| 1 | promote labor | 1 | sunburn |
| 5 | prostate issues | 3 | sweat baths |
| 1 | protracted labor | 1 | swollen breasts |
| 8 | psoriasis | | |
| 1 | purifying smoke | 5 | tapeworm |
| | | 13 | ТВ |
| 6 | rash | 1 | teething pain |
| 1 | reduce food cravings | 1 | tendonitis |
| 9 | respiratory infections | 2 | thrush |
| 12 | rheumatism | 1 | tinnitus |
| 7 | ringworm | 43 | tonic |
| _ | | 9 | tonsilitis |
| 2 | scabies | 3 | tooth paste |
| 1 | scarlet fever | 1 | tooth / gum health |
| | | | continued |

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toothache 20 typhus 6 2 ulcers urinary issues 12 uterine issues 10 vaginal issues 11 varicose veins 20 **VD** 2 virility 11 vitamins A C B1 B2 vomiting 3 warts 10 whooping cough 27 worms

Figure 2: Alphabetical list of human health symptoms, causes, and problems where native medicinal trees were used, and number of citations. (220 individual problems / 1,761 medicinal citations)



| 43 | tonic | 16 | mouth health |
|----------|-----------------------------|--------|--------------------------------------|
| 42 | arthritis / rheumatism | 16 | pain |
| 42 | diarrhea | 16 | sedative |
| 42 | fever | 15 | menstrual issues |
| 40 | cancer / tumor | | |
| | | 14 | bronchitis |
| 36 | skin issues | 14 | edema |
| 36 | sores / wounds | 14 | expectorant |
| 35 | astringent | 14 | lung issues |
| 35 | cough | 13 | constipation |
| 33 | laxative | 13 | ТВ |
| 31 | inflammation | 12 | bladder issues |
| 30 | colds | 12 | colic |
| | | 12 | mouthwash / gargle |
| 28 | dysentery | 12 | uterine issues |
| 28 | heart issues | 11 | bowel issues |
| 27 | worms | 11 | diabetes |
| 26 | diuretic | 11 | flatulence |
| 26 | sore throats | 11 | varicose veins. |
| 25 | emetic | 11 | vitamins A C B1 B2 |
| 22 | antiseptic | 10 | antioxidant |
| 22 | stomach issues | 10 | blood pressure |
| 21 | kidney issues | 10 | scurvy |
| 20 | eye wash | 10 | vaginal issues |
| 20 | toothache | 10 | whooping cough |
| 20 | VD | | |
| 40 | | 9 | antispasmodic |
| 19 | malaria | 9 | cholesterol |
| 18 | antimicrobial | 9 9 | gallbladder issues |
| 18 | asthma | _ | gout |
| 18 | bleeding headache | 9 | jaundice |
| 18 | | 9 | measles |
| 18 17 | urinary issues burns | 9 9 | respiratory infections tonsilitis |
| 17 | heart burn | 8 | |
| 17 | hemorrhoids | 8 | appetite stimulant |
| 17 | nemorrnolas liver issues | 8 | eczema enema |
| 16 | indigestion | 8 | flu |
| 16 | metal health | 8 | ina a a 41 a 1 d a |
| | motal noath | | insecticide continued |

Figure 3: List of human health symptoms, causes, and problems where native medicinal trees were used in order of citations. (total of 220 individual problems / 1,761 medicinal citations)



| 8 | itching | 4 | aphrodisiac |
|--------|-----------------------|--------|--------------------|
| 8 | psoriasis | 4 | boils |
| 8 | stimulant | 4 | cuts |
| 7 | antibiotic | 4 | immune system |
| 7 | antifungal | | stimulation |
| 7 | baldness | 4 | muscle cramps |
| 7 | circulation | 4 | smallpox |
| 7 | douche | 3 | Alzheimer's |
| 7 | epilepsy | 3 | blood purifier |
| 7 | lotion | 3 | brain health |
| 7 | ringworm | 3 | bruises |
| 6 | abdominal pain | 3 | disinfectant |
| 6 | abortion | 3 | ear ache |
| 6 | allergies | 3 | gas |
| 6 | antiviral | 3 | hair health |
| 6 | childbirth issues | 3 | insomnia |
| 6 | cholera | 3 | labor pains |
| 6 | dandruff | 3 | laryngitis |
| 6 | lactation issues | 3 | leukemia |
| 6 | narcotic | 3 | obesity |
| 6 | rash | 3 | pneumonia |
| 6 | sinus issues | 3 | sweat baths |
| 6 | typhus | 3 | tooth paste |
| | | 3 | vomiting |
| 5 | acne | _ | |
| 5 | congestion | 2 | alcoholism |
| 5 | digestive issues | 2 | antibacterial |
| 5 | fungal infections | 2 | backache |
| 5 | gangrene | 2 | blood clotting |
| 5 | hardening of arteries | 2 | chickenpox |
| 5 | herpes | 2 | colitis |
| 5 | infections | 2 | dermatitis |
| 5 | insect bites | 2 | dizziness |
| 5 | lice | 2 | foot issues |
| 5 | nausea | 2 | goiter |
| 5 5 | poison ivy | 2 | HIV |
| 5 | prostate issues | 2 | joint swelling |
| 5 5 | spleen issues | 2 2 | leprosy |
| 5 | tapeworm | _ | mastitis continued |
| | | | |

Figure 3: List of human health symptoms, causes, and problems where native medicinal trees were used in order of citations. (total of 220 individual problems / 1,761 medicinal citations)



| | | <u> </u> | |
|---|-----------------------|----------|------------------------|
| 2 | migraines | 1 | lameness |
| 2 | nerve pain | 1 | last weeks of |
| 2 | pancreas issues | | pregnancy |
| 2 | scabies | 1 | lupus |
| 2 | sleep disorders | 1 | menopause |
| 2 | snake-bite | 1 | miscarriages |
| 2 | steam baths | 1 | mites |
| 2 | thrush | 1 | muscle relaxant |
| 2 | ulcers | 1 | night blindness |
| 2 | virility | 1 | numbing |
| | | 1 | palsy |
| 1 | abrasions | 1 | period pain |
| 1 | anorexia | 1 | phlebitis |
| 1 | anthrax sores | 1 | pink eye |
| 1 | anxiety | 1 | post-partum bleeding |
| 1 | bedbugs | 1 | pregnancy backaches |
| 1 | blisters | 1 | promote labor |
| 1 | bone fractures | 1 | protracted labor |
| 1 | bursitis | 1 | purifying smoke |
| 1 | cataracts | 1 | reduce food cravings |
| 1 | cellulite | 1 | scarlet fever |
| 1 | chafing | 1 | sexual issues |
| 1 | chest pain | 1 | shampoo. |
| 1 | collagen | 1 | shaving lotion |
| 1 | committing suicide | 1 | shingles |
| 1 | decongestant | 1 | smoke for cleaning |
| 1 | enhance mood | | after illness |
| 1 | fainting | 1 | sore muscles |
| 1 | fertility / sterility | 1 | sprains |
| | issues | 1 | stimulate contractions |
| 1 | flea / tick | 1 | stool softner |
| 1 | frostbite | 1 | sunburn |
| 1 | hallucinogenic | 1 | swollen breasts |
| 1 | hepatitis | 1 | teething pain |
| 1 | hyperactivity | 1 | tendonitis |
| 1 | hyperthyroidism | 1 | tinnitus |
| 1 | incontinence | 1 | tooth / gum health |
| 1 | induce labor | 1 | warts |
| | | | |

Figure 3: List of human health symptoms, causes, and problems where native medicinal trees were used in order of citations. (total of 220 individual problems / 1,761 medicinal citations)



| venereal disease | 20 |
|------------------|----|
| malaria | 19 |
| tuberculosis | 13 |
| whooping cough | 10 |
| measles | 9 |
| flu | 8 |
| cholera | 6 |
| typhoid fever | 6 |
| herpes | 5 |
| smallpox | 4 |
| chickenpox | 2 |
| leprosy | 2 |

Figure 4: List of major infectious diseases historically attacked with native medicinal trees, and number of citations.



Tree Parts Extracted / Used

| bark leaves fruit / cones root | 53 47 40 29 | fruit juice new shoots sap ashes | 7 6 5 3 |
|---|----------------------|---|------------------|
| twigs flowers buds | 19 17 11 | pith smoke | 2 2 |
| oil | 11 | cambium | 1 |
| seeds | 11 | galls | 1 |
| | | latex | 1 |
| gum / resin | 9 | wax | 1 |
| stem / wood | 9 | | |

Figure 5: List of historic native medicinal tree parts extracted or used for traditional health or restorative products.

(total of 21 tree parts listed across 285 citations)



| tea decoction infusion tincture poultice | 55 49 37 32 31 | ash vinegar juice roasting sap | 4 4 3 3 |
|--|----------------------------|--|------------------|
| powder syrup ointment alcohol | 22 15 13 11 | beer charcoal gum wine | 2 2 2 2 |
| water boiled oil cream steam | 10 9 9 8 8 | cider crushed fruit fermentation heating latex soap / | 1 1 1 1 |
| distillate smoke | 7 5 | shampoo tar turpentine | 1 1 1 |

Figure 6: List of historic native medicinal tree preparation methods and applications, with number of product citations. (total of 34 methods listed across 365 citations)



- 31 Acer spp. maple
- 32 Aesculus spp. buckeye
- 31 Alnus spp. alder
 - 5 <u>Amelanchier canadensis</u> serviceberry
- 15 Aralia spinosa devil's walking stick
- 17 <u>Asimina</u> spp. pawpaw
- 51 Betula spp. birch
 - 3 <u>Carpinus caroliniana</u> American hornbeam
 - 8 Castanea spp. chestnut
 - 9 Catalpa spp. catalpa
 - 4 <u>Celtis laevigata</u> sugarberry
- 14 Cephalanthus occidentalis buttonbush
 - 7 Cercis canadensis redbud
- 26 <u>Chionanthus virginicus</u> fringetree
- 27 Cornus spp. dogwood
- 15 Corylus spp. hazel
- 41 Crataegus spp. hawthorn
- 28 <u>Diospyros virginiana</u> persimmon
- 19 **Euonymus atropurpureus** burningbush
- 14 Fagus grandifolia beech
 - 9 Frangula caroliniana buckthorn
- 29 Fraxinus spp. ash
- 23 Gleditsia triacanthos honey-locust
- 13 **Gymnocladus dioicus** Kentucky coffeetree
- 59 <u>Hamamelis virginiana</u> witch-hazel

(continued)

Figure 7: List of medicinal tree importance values in alphabetical order by genus with number of citations.

(65 medicinal plants = 63 native trees, 1 naturalized tree & 1 tree parasite = 1,771 medicinal citations)



35 llex spp. - holly **52** Juglans cinerea – butternut **75** Juglans nigra - black walnut Juniperus spp. - juniper 56 Kalmia spp. - mountain-laurel 15 Liquidambar styraciflua - sweetgum 24 Liriodendron tulipifera - yellow-poplar 18 Lyonia ferruginea - staggerbush 2 10 Maclura pomifera - Osage-orange (naturalized) Magnolia spp. - magnolia 41 63 Malus spp. - crabapple Morella spp. - wax-myrtle 36 **30 Morus rubra – red mulberry** Ostrya virginiana – Eastern hophornbeam Oxydendron arboreum - sourwood 14 Phoradendron leucarpum - American mistletoe **30** (tree parasite) Pinus spp. - pine **57** Platanus occidentalis - sycamore 24 Populus deltoides - cottonwood 18 Prunus augustifolia - wild plum 14 Prunus caroliniana - cherry-laurel 8 Prunus serotina - black cherry 43 Ptelea trifoliata - hoptree 13 60 **Quercus** spp. – oak (continued)

Figure 7: List of medicinal tree importance values in alphabetical order by genus with number of citations.

(65 medicinal plants = 63 native trees, 1 naturalized tree & 1 tree parasite = 1,771 medicinal citations)



- 7 Rhododendron spp. rhododendron
- 30 Rhus spp. sumac
 - 8 Robinia pseudoacacia black locust
- 70 Salix spp. willow
- 74 <u>Sambucus</u> spp. elderberry
- 33 Sassafras albidum sassafras
- 14 <u>Serenoa repens</u> saw palmetto
- 41 Sorbus americana American mountain-ash
- 23 Tilia spp. basswood / linden
 - 7 <u>Toxicodendron vernix</u> poison sumac
- 23 <u>Tsuga</u> spp. hemlock
- 56 <u>Ulmus</u> spp. elm
- 36 <u>Vaccinium arboreum</u> sparkleberry
- 22 <u>Viburnum</u> spp. viburnum
- 25 Yucca spp. yucca
- 27 Zanthoxylum spp. prickly-ash

Figure 7: List of medicinal tree importance values in alphabetical order by genus with number of citations.

(65 medicinal plants = 63 native trees, 1 naturalized tree & 1 tree parasite = 1,771 medicinal citations)



Juglans nigra - black walnut **75** Sambucus spp. - elderberry 74 **70** Salix spp. - willow Malus spp. - crabapple **63 60** Quercus spp. - oak Hamamelis virginiana - witch-hazel **59 57** Pinus spp. - pine Juniperus spp. - juniper **56** Ulmus spp. - elm **56 52** Juglans cinerea – butternut 51 Betula spp. - birch Prunus serotina - black cherry 43 41 Sorbus americana – American mountain-ash 41 Crataegus spp. – hawthorn Magnolia spp. - magnolia 41 36 Vaccinium arboreum – sparkleberry Morella spp. - wax-myrtle 36 35 llex spp. - holly 33 Sassafras albidum – sassafras **32** Aesculus spp. - buckeye 31 Alnus spp. – alder Acer spp. - maple 31 **30** Rhus spp. – sumac Phoradendron leucarpum - American mistletoe **30 30** Morus rubra – red mulberry 29 Fraxinus spp. - ash 28 Diospyros virginiana – persimmon 27 Cornus spp. - dogwood **27** Zanthoxylum spp. - prickly-ash Chionanthus virginicus - fringetree 26 25 Yucca spp. - yucca (continued)

Figure 8: List of tree importance values based upon the number of medicinal citations. (1,771 medicinal citations with 35% of all citations among the top ten species)



- 24 Platanus occidentalis sycamore
- 24 <u>Liquidambar styraciflua</u> sweetgum
- 23 <u>Tilia</u> spp. basswood / linden
- 23 Gleditsia triacanthos honey-locust
- 23 <u>Tsuga</u> spp. hemlock
- 22 <u>Viburnum</u> spp. viburnum
- 19 <u>Euonymus atropurpureus</u> burningbush
- 18 <u>Liriodendron tulipifera</u> yellow-poplar
- 18 Populus deltoides cottonwood
- 17 Asimina spp. pawpaw
- 15 Corylus spp. hazel
- 15 Kalmia spp. mountain-laurel
- 15 Aralia spinosa devil's walking stick
- 14 Prunus augustifolia wild plum
- 14 Fagus grandifolia beech
- 14 <u>Serenoa repens</u> saw palmetto
- 14 Oxydendron arboreum sourwood
- 14 Cephalanthus occidentalis buttonbush
- 13 <u>Gymnocladus dioicus</u> Kentucky coffeetree
- 13 Ptelea trifoliata hoptree
- 10 <u>Maclura pomifera</u> Osage-orange (naturalized)
 - 9 Frangula caroliniana buckthorn
 - 9 <u>Catalpa</u> spp. catalpa
 - 8 Prunus caroliniana cherry-laurel
 - 8 <u>Castanea</u> spp. chestnut
 - 8 Robinia pseudoacacia black locust
 - 7 Cercis canadensis redbud
 - 7 <u>Toxicodendron vernix</u> poison sumac
 - 7 Rhododendron spp. rhododendron
 - 7 <u>Ostrya virginiana</u> Eastern hophornbeam
 - 5 Amelanchier canadensis serviceberry
 - 4 <u>Celtis laevigata</u> sugarberry
 - 3 <u>Carpinus caroliniana</u> American hornbeam
 - 2 Lyonia ferruginea staggerbush

Figure 8: List of tree importance values based upon the number of medicinal citations. (continued)



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Adoxaceae - moschatel family (formally Caprifoliaceae - honeysuckle family)
      Sambucus spp. – elderberry
      Viburnum spp. – viburnum
Altingiaceae - sweetgum family (formally Hamamelidaceae - witch-hazel family)
      Liquidambar styraciflua - sweetgum
Anacardiaceae - cashew family
      Rhus spp. - sumac
      Toxicodendron vernix - poison sumac
Annonaceae - pawpaw family
      Asimina spp. – pawpaw
Aquifoliaceae - holly family
      <u>llex</u> spp. - holly
Araliaceae - ginseng family
      Aralia spinosa – devil's walking stick
Arecaceae - palm family
      Serenoa repens – saw palmetto
Asparagaceae - asparagus family (formally Agavaceae - yucca family)
      Yucca spp. – yucca
Betulaceae - birch family
      Alnus spp. - alder
      Betula spp. – birch
      Carpinus caroliniana - American hornbeam
      Corylus spp. - hazel
      Ostrya virginiana – Eastern hophornbeam
Bignoniaceae - catalpa family
      Catalpa spp. - catalpa
Cannabaceae - hemp family (formally Ulmaceae - elm family)
      Celtis laevigata - sugarberry
Celastraceae - bittersweet family
      Euonymus atropurpureus - burningbush
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Figure 9: List of common and important native medicinal trees alphabetically by family, genus, species, and common name.

Cornaceae - dogwood family

Cornus spp. - dogwood



Cupressaceae - cypress family

Juniperus spp. - juniper

Ebenaceae - ebony family

Diospyros virginiana – persimmon

Ericaceae - heath family

Kalmia spp. - mountain-laurel

Lyonia ferruginea - staggerbush

Oxydendron arboreum - sourwood

Rhododendron spp. - rhododendron

Vaccinium arboreum – sparkleberry

Fabaceae - legume family

Cercis canadensis - redbud

Gleditsia triacanthos - honey-locust

Gymnocladus dioicus - Kentucky coffeetree

Robinia pseudoacacia - black locust

Fagaceae - oak family

Castanea spp. - chestnut

Fagus grandifolia - beech

Quercus spp. - oak

Hamamelidaceae - witch-hazel family

Hamamelis virginiana – witch-hazel

Juglandaceae - walnut family

<u>Juglans cinerea</u> – butternut

Juglans nigra – black walnut

Lauraceae - laurel family

Sassafras albidum - sassafras

Magnoliaceae - magnolia family

<u>Liriodendron tulipifera</u> – yellow-poplar

Magnolia spp. - magnolia

Malvaceae – mallow family (formally Tiliaceae – basswood family)

<u>Tilia</u> spp. – basswood / linden

Moraceae - mulberry family

Maclura pomifera – Osage-orange (naturalized)

Morus rubra - red mulberry

Figure 9: List of common and important native medicinal trees alphabetically by family, genus, species, and common name.

(continued)



Myricaceae - wax-myrtle family

Morella spp. – wax-myrtle

Oleaceae - olive family

<u>Chionanthus virginicus</u> – fringetree Fraxinus spp. – ash

Pinaceae - pine family

<u>Pinus</u> spp. – pine <u>Tsuga</u> spp. – hemlock

Platanaceae - plane-tree family

Platanus occidentalis – sycamore

Rhamnaceae - buckthorn family

Frangula caroliniana spp. – buckthorn

Rosaceae - rose family

Amelanchier canadensis – serviceberry

Crataegus spp. – hawthorn

Malus spp. – crabapple

Prunus augustifolia – wild plum

<u>Prunus caroliniana</u> – cherry-laurel <u>Prunus serotina</u> – black cherry

Sorbus americana – American mountain-ash

Rubiaceae - coffee family

Cephalanthus occidentalis – buttonbush

Rutaceae - citrus family

<u>Ptelea trifoliata</u> – hoptree <u>Zanthoxylum</u> spp. – prickly-ash

Salicaceae - willow family

<u>Populus deltoides</u> – cottonwood Salix spp. – willow

Sapindaceae - soapberry family (formally Aceraceae - maple family)

Acer spp. – maple

Sapindaceae - soapberry family (formally Hippocastanaceae - buckeye family)

Aesculus spp. – buckeye

Ulmaceae - elm family

Ulmus spp. - elm

Figure 9: List of common and important native medicinal trees alphabetically by family, genus, species, and common name.

(continued)



APPENDIX 1:

Native Tree Species Traditional Medicinal Uses (organized by medicinal tree family name)

Adoxaceae - moschatel family (formally Caprifoliaceae - honeysuckle family)

Sambucus spp. – elderberry

bark, inner bark, flowers, fruit, fruit juice, leaves, root.

Current Explorations: antivirus, astringent, bronchitis, cancer / tumor, colds, cough, diabetes, diarrhea, fevers, flu, immune system stimulation, laxatives, vitamin A, vitamin C.

Traditional Use: acne, allergies, antiseptic, arthritis / rheumatism, asthma, bronchitis, burns, cancer / tumor, colds, colic, constipation, coughs, cuts, decongestant, diarrhea, diuretic, ear ache, eczema, edema, emetic, epilepsy, expectorant, eye wash / pink eye, fever, flu, headache, heart health, hemorrhoids, inflammations, insect repellent, irritations, kidney issues, laxative, lotion, lung issues, malaria, mastitis, measles, pneumonia, promote labor, purgative / emetic, rashes, scarlet fever, sinus congestion, skin health, skin issues, sores / wounds, sore throats, stimulant, stomach ache, sunburn, swollen breasts, TB, tonic, wine tonic, tonsillitis, toothache, urine increase, VD.

Preparations: compress, cream, decoction, infusion, ointments, poultices, syrup, tea, tincture.

(Note -- root, stems, bark, leaves, flowers, and unripe fruit contain dangerous cyanide & alkaloids)

Adoxaceae - moschatel family (formally Caprifoliaceae - honeysuckle family)

<u>Viburnum</u> spp. – viburnum

bark, leaves, root, stem, twigs.

Traditional Use: antibacterial, antispasmodic, anxiety, asthma, astringent, blood pressure, childbirth pain, diabetes, diarrhea, diuretic, fever, heavy / irregular periods, insomnia, menstrual issues, miscarriages, muscle relaxant, period pain, post-partum bleeding, sedative, skin issues, tonic / uterine tonic, uterine sedative.

Preparations: decoction, infusion, poultice, tea, tincture.

(Note – aspirin allergy warning – do not use.)

(Note – fruit poisonous.)

(Note – do not take with low blood pressure.)

(Note - do not use when pregnant.)

Altingiaceae - sweetgum family (formally Hamamelidaceae - witch-hazel family)

<u>Liquidambar styraciflua</u> – sweetgum

bark, fruit, gum / resin, leaves, twigs, roots.

Traditional Use: antimicrobial, antiseptic, asthma, bladder infections, bronchitis, cholera, colds, coughs, diarrhea, dysentery, expectorant, fungal infections, hemorrhoids, inflammation, mouth health, respiratory infections, ringworm, scabies, skin issues, sore throats, sores / wounds, whooping cough, vaginal issues, VD.

Perparations: cream, infusion, ointment, syrup, tea, tincture, water.

(Note – resin requires dilution before internal use.)



Anacardiaceae - cashew family

Rhus spp. – sumac

bark, fruit, leaves, root, stem.

Traditional Use: antibiotic, antiseptic, asthma, astringent, blisters, burns, cancer, cold, cough, diabetes, diarrhea, diuretic, dysentery, emetic, fever, heart issues, hemorrhoids, lactation, mouth sores, ringworm, skin health, sore throats, tonic, tonsillitis, TB, urinary issues, uterine issues, vaginal issues, VD, worms.

Preparations: decoction, infusion, poultice, powder, smoke, syrup, tea, tincture.

(Note – confusion with dangerous Toxicodendron vernix (Rhus vernix) = poison sumac)

Anacardiaceae - cashew family

<u>Toxicodendron</u> (<u>Rhus</u>) <u>vernix</u> – poison sumac leaves, bark.

Traditional Use: allergies, incontinence, narcotic, rheumatism, ringworm, skin issues, stimulant.

Preparations: infusion, tincture.

(Note – flowers, fruit, honey, leaves, pollen, roots, sap, stems, contain urisol, a skin damaging agent – toxic!)

(Note – all parts toxic and should not be touched or used.)

Annonaceae - pawpaw family

Asimina spp. - pawpaw

fruit, fruit juice, leaves, seeds, stem.

Current Explorations: antifungal, antimicrobial, cancer / tumor, flea / tick, herpes, lice, worms.

Traditional Use: antiviral, cancer / tumor, diuretic, emetic, insecticide, laxative, lice, narcotic, tonic, worms.

Preparations: juice, powder, tincture.

(Note – seeds are toxic and fruit is a skin irritant & causes dermatitis.)

Aquifoliaceae - holly family

<u>Ilex</u> spp. – holly

bark, fruit, leaves / young leaves, roots.

Current Explorations: colic, diuretic, emetic, heartburn, muscle cramps, stimulant.

Traditional Use: bleeding, cold, colic, coughs, diarrhea, diuretic, dysentery, emetic, epilepsy, expectorant, eye wash, fever, flu, hallucinogenic, indigestion, itching, laxative, lung issues, malaria, measles, pleurisy, pneumonia, rheumatism, sleep disorders, smallpox, sores / wounds, spleen issues, TB, toothache.

Preparations: compress, decoction, infusion, powder, roasting, syrup, tea.

(Note - fruit & leaves contain dangerous alkaloids and considered toxic - cause vomiting, diarrhea, sedation)

(Note – internal use should be avoided.)



Araliaceae - ginseng family

<u>Aralia spinosa</u> – devil's walkingstick

bark, fruit, root.

Traditional Use: arthritis / rheumatism, cholera, colic, diabetes, emetic, fever, gas, lung issues, shingles, skin issues, sore throat, sores / wounds, tonic, toothache, VD.

Preparations: decoction, infusion, oil, ointment, tincture, poultice.

(Note – roots cause dermatitis)

Arecaceae – palm family

Serenoa repens - saw palmetto

fruit.

Current Explorations: prostate issues.

Traditional Use: asthma, bladder issues, bronchitis, colds, cough, diuretic, expectorant, headaches, migraines, sedative, tonic, urinary issues, vaginal issues.

Preparations: powder, syrup, tincture.

(Note – do not use when lactating.)

Asparagaceae – asparagus family (formally Agavaceae – yucca family)

Yucca spp.

flowers, fruit, leaves, root.

Current Explorations: antimicrobial, arthritis, cancer / tumor, gallbladder / liver issues, shampoo.

Traditional Use: abrasions, antifungal, arthritis, baldness, cancer / tumor, emetic, fever, gallbladder issues, headache, inflammation, laxative, lice, liver issues, pain, purifying smoke, rashes, skin issues, stimulate childbirth contractions, VD, vomiting.

Preparations: cream, decoction, infusion, poultice, smoke, soap / shampoo, tea.

(Note – do not use if allergic to salicylate / aspirin, or if pregnant)

(Note – overdose causes stomach ache & nausea.)

Betulaceae - birch family

Alnus spp. – alder

bark, fruit / cones, leaves.

Traditional Use: astringent, bleeding, bruises, burns, cancer, cough, diarrhea, diuretic, dysentery, emetic, eye wash, fever, heartburn, hemorrhoids, hepatitis, indigestion, inflammation, labor pains, malaria, mouth sores, pain, poison ivy, rash, rheumatism, sore throats, stomach issues, swellings, tonic, toothache, urinary issues, VD.

Preparations: compress, decoction, infusion, poultice, tea.



Betulaceae - birch family

Betula spp. - birch

bark, flowers / fruit, leaf buds, leaves, new shoots, oil, sap, stem wood, twigs.

Current Explorations: bladder / kidney stones, rheumatism, urinary track infections.

Traditional Use: antiseptic, arthritis / rheumatism, astringent, baldness, bladder infections, boils, burns, chafing, colds, coughs, diarrhea, disinfectant, diuretic, dysentery, eczema, edema, fever, flatulence, gangrene, gout, headaches, indigestion, inflamation, kidney issues, lactation, laxative, liver issues, lung issues, menstrual pain, mouthwash, pain, poison ivy, psoriasis, ringworm, scurvy, skin issues, sores / wounds, stomach issues, teething pain, tonic, toothache, urinary issues, VD, vitamins A, C, B1, B2, worms.

Preparations: alcohol, ash, beer, boiled, charcoal, decoction, distillation, infusion, juice, oil, ointment, poultice, sap, steam, syrup, tea, tincture, vinegar.

(Note – do not take if you have edema, heart disease, or kidney problems.)

(Note – aspirin allergy and essential oil toxicity warning.)

(Note – topical use is potentially toxic and internal use of oil, especially for children, can be fatal.)

Betulaceae - birch family

<u>Carpinus caroliniana</u> – American hornbeam bark.

Traditional Use: astringent, cancer, sores / wounds.

Preparations: decoction, infusion, tea.

Betulaceae - birch family

Corylus spp. - hazel

bark, leaves, nuts, oil, twigs.

Traditional Use: astringent, cancer / tumor, cough, diarrhea, emetic, fever, hair treatments, liver issues, lung issues, rash, sinus issues, skin issues, sores / wounds, varicose veins, worms.

Preparations: decoction, oil, poultice, tea.

Betulaceae - birch family

Ostrya virginiana – Eastern hophornbeam

bark, wood.

Traditional Use: fever, heartburn, malaria, nervous conditions, rectal cancer, rheumatism, tonic.

Preparations: decoction, steam, tea.



Bignoniaceae - catalpa family

<u>Catalpa</u> spp. – catalpa bark, fruit, leaves, seeds.

Traditional Use: antiseptic, asthma, bronchitis, heart issues, laxative, sedative, snake-bite, sores / wounds, worms.

Preparations: poultice, tea.

(Note - honey toxic.)

Cannabaceae - hemp family (formally Ulmaceae - elm family)

<u>Celtis laevigata</u> – sugarberry

bark, fruit.

Traditional Use: antimicrobial, inflammation, kidney issues, urinary issues.

Preparations: decoction, tea.

Celastraceae - bittersweet family

Euonymus atropurpureus - burningbush

bark, fruit, root, seeds.

Traditional Use: acne, appetite stimulant, constipation, dandruff, diuretic, emetic, expectorant, fever, gallbladder issues, indigestion, laxative, liver issues, malaria, psoriasis, stomach ache, tonic, urinary issues, uterus issues, worms.

Preparations: decoction, infusion, powder, tea, tincture.

(Note – not during pregnancy or lactation.)

(Note - bark, fruit, leaves, seeds contain dangerous cardio-active alkaloids & proteins - do not ingest.)

Cornaceae - dogwood family

Cornus spp. - dogwood

bark, flower, fruit, root, twigs.

Current Explorations: malaria.

Traditional Use: anthrax sores, antiseptic, astringent, chickenpox, colds, colic, cough, diarrhea, fever, flu, headaches, inflammation, jaundice, kidney issues, laxative, liver issues, malaria, menstrual issues, mouth / throat issues, pain, pregnancy backaches, tonic, toothaches, tooth paste, typhus, uterine issues.

Preparations: decoction, infusion, poultice, powder, tea, tincture.

(Note – do not use with difficult or painful urination.)



Cupressaceae - cypress family

Juniperus spp. - juniper

cones, leaves, oil, resin, smoke, twigs, wood ash.

Current Explorations: antiseptic, cancer / tumor, laxative.

Traditional Use: abdominal pain, abortion, antifungal, antiseptic, appetite stimulant, arthritis / rheumatism, asthma, astringent, bladder infection, blood coagulation, bronchitis, cancer / tumor, colds, colic, cough, diabetes, digestion stimulant, disinfectant, diuretic, edema, expectorant, fevers, flatulence, flu, hardening of arteries, headaches, heart issues, insecticide, kidney issues, last weeks of pregnancy, lotion, measles, menstrual issues, mouth sores, pain, rash, respiratory infections, scurvy, sedative, smallpox, smoke for cleaning after illness, sore throats, sores / wounds, steam baths, stimulant, stomach issues, sweat baths, tapeworm, tonsilitis, toothache, urinary issues, vaginal issues, VD, vitamin C, worms.

Preparations: ashes, cream, decoction, distilled, infusion, ointment, poultice, smoke, steam, tea, tincture.

(Note – high volatile oil content – not for use during pregnancy, lactation, or with kidney disease. -- do not ingest.) (Note – cones / "berries" can generate kidney problems, liver damage, miscarriage, & uterine contractions.)

Ebenaceae – persimmon family

<u>Diospyros virginiana</u> – persimmon bark, fruit, leaves, root.

Current Explorations: antimicrobial, cancer / tumor, inflammation, liver issues, pain management, wound healing.

Traditional Use: abdominal pain, antimicrobial, astringent, bone fractures, bowel issues, cancer / tumor, diarrhea, dysentery, eye infections, fever, heartburn, hemorrhoids, leprosy, liver issues, sore throat, sores / wounds, stomach ache, thrush, ulcers, uterine issues, VD, warts, whooping cough.

Preparations: alcohol, poultice, syrup, tea, tincture, water.

Ericaceae - heath family

<u>Kalmia</u> spp. – mountain-laurel juice, leaves.

Traditional Use: arthritis / rheumatism, astringent, bleeding, committing suicide, diarrhea, fever, headaches, heart issues, inflammation, jaundice, nerve pain, sedative, skin issues, sores / wounds, VD.

Preparations: decoction, ointment, poultice, powder, tea, tincture.

(Note – leaves, resin, twigs, flowers, honey contain dangerous hydroquinone — toxic – avoid use)

Ericaceae - heath family

<u>Lyonia ferruginea</u> – staggerbush

leaves.

Traditional Use: itching, sores / wounds.

Preparations: tea.

(Note – poisonous – extreme caution.)



Ericaceae - heath family

Oxydendron arboreum – sourwood

bark, leaves, twigs.

Traditional Use: asthma, bladder infection, diarrhea, dysentery, fever, heartburn, indigestion, itch, kidney issues, lung issues, menopause, menstrual issues, mouth sores, tonic.

Preparations: decoction, infusion, tea.

Ericaceae - heath family

Rhododendron spp. - rhododendron

flowers, leaves.

Traditional Use: arthritis / rheumatism, fever, headaches, heart issues, inflammation, jaundice, VD.

Preparations: ointment, poultice, tea.

(Note – leaves, twigs, flowers, honey & resin contain hydroquinone toxin -- avoid use.)

Ericaceae - heath family

<u>Vaccinium arboreum</u> – sparkleberry

bark, fruit, fruit juice, leaves, root bark, twigs.

Current Explorations: Alzheimer's, antibiotic, antioxident, blood clotting, blood flow, diarrhea, flatulence, hardening of arteries, heart issues, inflammation of mouth & throat, metal health, night blindness, varicose veins.

Traditional Use: antibiotic, astringent, circulation, dermatitis, diabetes, diarrhea, diuretic, dysentery, edema, eye wash, hardening of arteries, inflammation, kidney issues, lactation suppression, mouth sores, nausea, scurvy, sore throat, tonic / childbirth tonic, urinary issues, vaginal issues, varicose veins, vitamin C.

Preparations: boiled, decoction, infusion, syrup, tea.

(Note – long term use potentially causes kidney damage.)

Fabaceae - legume family

Cercis canadensis - redbud

bark, flower, root.

Traditional Use: astringent, congestion, diarrhea, dysentery, fever, leukemia, whooping cough.

Preparations: tea, water.



Fabaceae - legume family

<u>Gleditsia triacanthos</u> – honey-locust

bark, fruits, leaves, seeds.

Current Explorations: allergies, antibacterial, antifungal, antihyperlipidemic, cancer / tumor (larynx, breast, cervix, liver, colon), fever, HIV, inflammation, pain.

Traditional Use: antiseptic, bowel issues, chickenpox, cold, constipation, diarrhea, fever, heart burn, indigestion, kidney issues, measles, smallpox, sore throat, whooping cough.

Preparations: alcohol, beer, powder, seed oil, tea, water.

(Note – all parts contain dangerous toxins)

Fabaceae – legume family

Gymnocladus dioicus - Kentucky coffeetree

bark, fruit, leaf, roots, seeds.

Traditional Use: bleeding, constipation, cough, diarrhea, diuretic, enema, fainting, hemorrhoids, laxative, lunacy, protracted labor, stimulant, tonic.

Preparations: tea, water.

(Note – fruit pulp, leaves, seeds, & young shoots contain dangerous alkaloids.)

Fabaceae - legume family

Robinia pseudoacacia – black locust

bark, flowers, root.

Traditional Use: antispasmodic, cough, diuretic, emetic, laxative, rheumatism, tonic, toothache.

Preparations: syrup, tea.

(Note – bark, fruit, leaves, & seeds contain dangerous proteins -- all parts toxic.)

Fagaceae - oak family

Castanea spp. - chestnut

leaves.

Traditional Use: astringent, coughs, diarrhea, menstrual issues, rheumatism, sedative, sore throats, whooping cough.

Preparations: decoction, tincture.



Fagaceae - oak family

Fagus grandifolia - beech

bark, leaves, nuts.

Traditional Use: astringent, bronchitis, burns, cough, expectorant, frostbite, kidney issues, lung issues, poison ivy, psoriasis, skin irritation, swellings, TB, worms.

Preparations: boiled, oil, ointments, poultices, tar, tea.

(Note – careful use advised -- raw seeds toxic.)

Fagaceae - oak family

Quercus spp. – oak

acorns / molded acorns, bark, buds, galls, leaves, twigs.

Current Explorations: antiseptic, antiviral, bronchitis, cancer /tumor, cough, diarrhea, mouth sores, skin issues.

Traditional Use: alcoholism, antiseptic, arthritis, astringent, baldness, bleeding, burns, cancer / tumor, cholera, colds, congestion, constipation, cough, cuts, dandruff, diarrhea, dizziness, douche, dysentery, emetic, enema, fever, gangrene, gargle, goiter, gout, hemorrhoids, infections, inflammation, joint swelling, leukemia, lung issues, malaria, mouth issues, mouthwash / gargle, nausea, pain, poison ivy, sinus issues, skin issues, sore throats, sores / wounds, spleen issues, tonic, tonsillitis, toothache, urinary issues, uterine issues, vaginal issues, VD, varicose veins, vomiting.

Preparations: alcohol, compress, decoction, infusion, poultice, powder, tea, tincture.

(Note – only short duration internal use.)

(Note -- do not use for constipation.)

Hamamelidaceae - witch-hazel family

Hamamelis virginiana – witch-hazel

bark, leaves, new shoots, roots, twigs.

Current Explorations: astringent, burns, cancer / tumor (colon), colitis, eczema, eye wash, hemorrhoids, liniment, mouth rinse / gargle, psoriasis, skin creams, skin inflammation, sore muscles, sores / wounds, sprains, varicose veins.

Traditional Use: acne, arthritis, asthma, astringent, bleeding, blood purifier, bowel issues, bruises, burns, cancer / tumors, childbirth bleeding, cholera, colds, cough, diarrhea, douche, dysentery, eczema, edema, enema, eye wash, foot fungus, headaches, hemorrhoids, infections, inflammation, insect bites, menstrual issues, mouth irritations, pain, phlebitis, pink eye, sedative, shaving lotion, skin issues, sore throats, sores / wounds, stomach ulcers, tonic, TB, tonsillitis, varicose veins, VD.

Preparations: alcohol, compress, creams, decoction, distilled, infusion, liniment, ointments, poultice, steamed, tea, tincture.

(Note – usually only for external use.)



Juglandaceae - walnut family

<u>Juglans cinerea</u> – butternut

bark, fruit, leaves, nuts, oil, root bark, roots, sap.

Current Explorations: prostate issues, skin issues.

Traditional Use: acne, antiseptic, appetite stimulant, baldness, bowel issues, brain health, burns, cancer / tumor, colic, constipation, dandruff, diarrhea, douche, dysentery, eczema, emetic, enema, eye wash, fever, fungal infections, gallbladder issues, hair / scalp problems, head wounds, headaches, hemorrhoids, induce labor, jaundice, lactation stoppage, laxative, liver issues, malaria, mental illness, mouth irritations, mouthwash / gargle, psoriasis, rheumatism, ringworm, skin issues, sore throats, sores / wounds, tapeworms, tonic, tonsilitis, toothache, urinary issues, vaginal issues, varicose veins, VD, virility, worms.

Preparations: boiled, compress, decoction, oil, poultice, powder, syrup, tea, tincture.

(Note – not when pregnant or lactating -- contains juglone toxin.)

Juglandaceae - walnut family

Juglans nigra – black walnut

bark, buds, leaves, nut husks, nuts, oil, root bark.

Current Explorations: antifungal, antimicrobial, antineoplasia, antioxidants, antiviral, arthritis, cancer / tumor (prostate), cardioprotective, cholesterol, enhance mood, hyperthyroidism, psoriasis, reduce food cravings, scabies, sedative.

Traditional Use: antifungal, antimicrobial, antiseptic, appetite stimulant, arthritis / rheumatism, astringent, baldness, bedbugs, boils, bowel issues, burns, cancer / tumor, colic, cough, dandruff, diarrhea, douche, dysentery, ear aches, eczema, emetic, enema, eye wash, fever, fungal infections, gangrene, goiter, hair health, head wounds, hemorrhoids, herpes, inflammation, insect bites, insecticide, lactation stoppage, laxative, lice, liver issues, lotion, mouthwash, ringworm, skin health, skin issues, smallpox, sore throat, sores / wounds, stomach ache, tapeworms, TB, tonic, tonsilitis, tooth / gum health, toothache, toothpaste, vaginal issues, varicose veins, VD, virility, whooping cough, worms.

Preparations: alcohol, compress, decoction, husk juice, infusion, oil, poultice, powder, tea, water.

(Note - fruit, leaves, nuts contain dangerous quinones -- contains juglone toxin -- not for use during pregnancy.)

Lauraceae - laurel family

Sassafras albidum - sassafras

bark, flowers, fruit, leaves, oil, pith, root, twigs.

Traditional Use: abortion, antiseptic, arthritis / rheumatism, bleeding, blood pressure, blood purifier, bowel issues, bronchitis, bruises, colds, colic, diarrhea, diuretic, dysentery, eye wash, fevers, gas, gout, insect repellent, kidney issues, lameness, liver issues, measles, menstrual issues, mouthwash, respiratory issues, skin issues, sores / wounds, stomach acne, swelling, tonic, VD, worms.

Preparations: boiling, decoction, distilled, infusion, oil, ointment, poultice, tea, wine.

(Note – leaves, oil & root contains carcinogen & causes liver damage)

(Note -- dangerous in concentrated forms & as topical ointments.)



Magnoliaceae - magnolia family

<u>Liriodendron tulipifera</u> – yellow-poplar

bark, buds, leaves, seeds.

Traditional Use: aphrodisiac, burns, cancer / tumor, cough, diuretic, dysentery, fever, gout, headache, heartburn, malaria, menstrual issues, rheumatism, stimulant, stomach ache, tonic, toothache, worms.

Preparations: decoction, ointment, poultice, tea.

Magnoliaceae - magnolia family

Magnolia spp. – magnolia

bark, flowers, fruits, leaves, seeds, stem.

Current Explorations: antioxidant, cancer / tumor, depression, heart issues, inflammation, leukemia, muscle relaxant, pain, sedative, skin whitening, skin care, sleep enhancement.

Traditional Use: abdominal cramps, antispasmodic, arthritis / rheumatism, asthma, blood pressure, colds, depression, diarrhea, digestive issues, epilepsy, fertility issues, fever, gas, heart issues, heartburn, indigestion, inflammation, itching, loss of appetite, malaria, muscle spasms, sinus issues, steam baths, stomach ache, tonic, toothache, typhoid, vomiting, worms.

Preparations: decoction, infusion, steam, tea, tincture.

(Note – Not to be used during pregnancy.)

Malvaceae - mallow family (formally Tiliaceae - basswood family)

Tilia spp. – basswood / linden

bark, flower bracts, flowers, leaves, twigs.

Traditional Use: antispasmodic, anxiety, bladder infections, blood pressure, bowel issues, child hyperactivity, cholesterol, cold, cough, dysentery, fevers, headaches, heart issues, hysteria, immune support, indigestion, insomnia, migraines, sedative, stomach ache, TB, tonic, urinary issues.

Preparations: charcoal, decoction, infusion, powder, sap, syrup, tea, tincture.

Moraceae - mulberry family

<u>Maclura pomifera</u> – Osage-orange (naturalized)

bark, fruit, latex, root.

Current Explorations: cancer / tumor, immune stimulation.

Traditional Use: antiseptic, cough, eye wash, fungicide, insecticide, rheumatism, toothache, VD.

Preparations: decoction, latex, tea.



Moraceae - mulberry family

Morus rubra – red mulberry

bark, fruit, fruit juice, leaves, root bark, twigs.

Current Explorations: diabetes, psychiatric disorders, skin whitening, stress.

Traditional Use: antimicrobial, antioxidants, arthritis, asthma, blood pressure, cancer / tumor, colds / flu, cough, diuretic, dizziness, dysentery, edema, emetic, expectorant, fever, immune system, laxative, mouth issues, narcotic, ringworm, sedative, sore throat, tapeworms, tinnitus, tonic, worms.

Preparations: alcohol, decoction, infusion, tea, water.

Myricaceae - wax-myrtle family

<u>Morella</u> spp. – wax-myrtle (formally genus <u>Myrica</u>) bark, fruit, leaves, root bark, stems, wax.

Current Explorations: Alzheimer's, colds, diarrhea, emetic, fever, headaches, laxative, moisturizer.

Traditional Use: astringent, bleeding, boils, colds, congestion, diarrhea, dysentery, emetic, enema, expectorant, fever, flatulence, insect bites, jaundice, mouthwash / gargle, narcotic, scratches, scurvy, sinus issues, sore throat, sores / wounds, stimulant, TB, tonic, uterine issues, vaginal issues, vitamin C, worms.

Preparations: alcohol, boiled, decoction, poultices, powder, tea.

(Note – wax is carcinogen -- do not use when pregnant.)

Oleaceae - olive family

<u>Chionanthus virginicus</u> – fringetree bark, leaves, root.

Traditional Use: antimicrobial, antiviral, astringent, cholesterol, constipation, cuts, diabetes, diuretic, fever, flatulence, gallbladder issues, inflammation, jaundice, kidney issues, laxative, liver issues, malaria, migraines, mouthwash, pancreas issues, pink eye, rheumatism, skin irritations, sores / wounds, tonic, typhoid.

Preparations: decoction, tea, tincture.

(Note – do not use when pregnant.)

Oleaceae - olive family

Fraxinus spp. – ash

ashes, bark, buds, fruit, leaves, new shoots, root, seeds, stem.

Traditional Use: aphrodisiac, arthritis / rheumatism, astringent, bleeding, constipation, diuretic, eczema, edema, emetic, fever, flatulence, gout, headache, inflammation, itch, jaundice, kidney issues, laxative, leprosy, lice, liver issues, malaria, obesity, snake-bite, sores / wounds, spleen issues, tonic, uterine issues, weight loss.

Preparations: ashes, decoction, infusion, poultice, powder, syrup, tea.



Pinaceae - pine family

Pinus spp. - pine

bark, buds, cambium, gum, needles, new needles, oil, resin, rosin, sap, seeds.

Current Explorations: blood pressure, bronchitis, colds, coughs, fever, infections, mouth inflammation, nerve pain, pain, vitamin C.

Traditional Use: antimicrobials, antiseptic, arthritis / rheumatism, , astringent, backache, bladder issues, bronchitis, burns, cancer / tumor, chest pains, colds, colic, coughs, cuts, diarrhea, diuretic, ear aches, eczema, emetic, expectorant, eye issues, flatulence, headaches, hemorrhage, hemorrhoids, infections, inflammation, insect bites, insecticide, itching, kidney issues, laxative, liver issues, lung issues, malaria, mental issues, mites, psoriasis, scurvy, skin issues, sore throats, sores / wounds, tonic, TB, vitamin C, worms, wound sealing.

Preparations: alcohol, infusion, compress, decoction, distilled (oil, rosin, turpentine), oil, ointments, poultice, powder, roasted, tea, tincture, turpentine.

(Note – buds / needles use can lead to miscarriage.)

Pinaceae – pine family

Tsuga spp. - hemlock

bark, leaves, new twig tips, oil, resin, roots, twigs, wet branches.

Current Explorations: cancer / tumor, hardening of arteries, needle tea, sweat lodge.

Traditional Use: abortion, antimicrobial, antiseptic, arthritis / rheumatism, astringent, bladder infection, bleeding, colds, coughs, diarrhea, kidney issues, laryngitis, mouth infections, scurvy, skin issues, sores / wounds, stomach ache, sweat lodge steam, vitamin C.

Preparations: boiled, decoction, distilled, fermented, heated, infusion, poultice, steam, tea, tincture.

(Note – do not use internally)

Platanaceae - plane-tree family

<u>Platanus occidentalis</u> – sycamore bark, leaves, oil.

Current Explorations: antibiotic, cancer / tumor, collagen support, HIV.

Traditional Use: antibiotic, antiseptic, colds, cough, dermatitis, dysentery, emetic, eye issues, heart issues, inflammation, laxative, lung issues, measles, respiratory infection, rheumatism, scurvy, skin issues, TB, toothache, varicose veins.

Preparations: boiled in vinegar, decoction, tea.



Rhamnaceae - buckthorn family

<u>Frangula caroliniana</u> – buckthorn (formally genus <u>Rhamnus</u>) aged bark, bark, wood.

Current Explorations: cancer / tumor, laxative.

Traditional Use: acne, constipation, emetic, jaundice, laxative, loss of appetite, psoriasis.

Preparations: decoction, tea, tincture.

(Note – use seasoned / aged bark only, and only for short time periods.)

(Note – fruit & bark ingestion causes diarrhea & vomiting -- do not use when pregnant.)

Rosaceae - rose family

Amelanchier canadensis - serviceberry

bark, fruit, immature fruit, root.

Traditional Use: diarrhea, eye wash, menstrual issues, tonic, worms.

Preparations: crushed fruit, decoction, infusion, tea.

(Note – bark, leaves, seeds, & twigs contain dangerous cyanide generators.)

Rosaceae - rose family

Crataegus spp. – hawthorn

bark, flowers, fruit, leaves, new shoots.

Current Explorations: angina, blood pressure, bowel issues, cholesterol, diarrhea, coronary blood flow, dysentery, gallbladder issues, heart muscle regeneration, heart health, heart issues, heartburn, leg pain, tachycardia.

Traditional Use: alcoholism, antioxidants, antiseptic, arrhythmia, arthritis, astringent, blood pressure, cholesterol, circulation, coronary blood flow, diabetes, diarrhea, diuretic, dropsy, hardening of arteries, heart issues, insomnia, kidney issues, mouth sores, nervousness, sore throats, sores / wounds, stomach aches, swelling, tonic / heart tonic, urinary issues, uterine issues.

Preparations: boiling, decoction, infusion, powder, smoke, tea, tincture.

(Note – do not use with ACE inhibitors or blood pressure medications -- not for use during pregnancy / lactation.)



Rosaceae - rose family

Malus spp. - crabapple

bark, flowers, fruit, juice, seeds.

Current Explorations: Alzheimer's, antimicrobial, antioxidanats, antiviral, cancer / tumor (breast, colon, lung, skin), cholesterol, diabetes, heart health, inflammation, stomach lining protection.

Traditional Use: allergies, antimicrobial, antioxidant, arrhythmia, arthritis, asthma, astringent, baldness, blood pressure, burns, cholesterol, cold sores (herpes virus), constipation, corns / callouses, dandruff, diarrhea, digestive issues, disinfectant, diuretic, dysentery, edema, fevers, flatulence, gallbladder issues, genital sores (herpes virus), gout, heartburn, heart health, heart issues, indigestion, insect bites, itches, joint aches, kidney issues, laxative, liver issues, lung issues, menstrual issues, mouth health, muscle aches, nausea, prostate issues, respiratory infections, skin issues, sore throat, spleen issues, stomach aches, tonic, toothache, vitamins B1, B2, C, weight loss.

Preparations: apple cider vinegar, apple cider, decoction, infusion, poultice, tea.

(Note – crab-apple fruit should not be eaten raw -- do not ingest seeds.)

Rosaceae - rose family

<u>Prunus augustifolia</u> – wild plum bark, fruit, gum, leaves, oil, roots.

Current Explorations: cancer / tumor.

Traditional Use: antispasmodic, asthma, astringent, constipation, gallbladder issues, kidney issues, mouthwash / gargle, scurvy, sedative, skin health, sores / wounds, urinary issues, worms.

Preparations: decoction, gum, infusion, tea.

(Note – cyanide generating, especially bark and seeds.)

Rosaceae - rose family

<u>Prunus caroliniana</u> – cherry-laurel leaves, oil.

Traditional Use: asthma, astringent, coughs, heartburn, indigestion, narcotic, sedative, whooping cough.

Preparations: decoction, distillation, infusion.

(Note – cyanide generator – use with great caution!)



Rosaceae - rose family

<u>Prunus serotina</u> – black cherry bark, fruit, gum, twigs.

Current Explorations: cancer / tumors, colds, congestion, diarrhea, inflammation, respiratory infections, sore throats.

Traditional Use: abdominal cramps, allergies, astringent, bronchitis, burns, cholera, colds, coughs, diarrhea, dysentery, expectorant, eye wash, fevers, headaches, heartburn, indigestion, inflammation, insomnia, kidney issues, labor pain, laryngitis, lung issues, measles, mouthwash / gargle, nose / throat issues, pneumonia, respiratory issues, sedative, sinus issues, sores / wounds, stomach aches, TB, tonic, thrush, whooping cough, worms.

Preparations: boiled, decoction, gum, infusion, poultice, powder, roasted, steam, syrup, tea, tincture, water, wine.

(Note – bark, leaves, root, & seeds contain cyanide generators -- do not use during pregnancy.)

Rosaceae - rose family

<u>Sorbus americana</u> – American mountain-ash ash, bark, buds, fruit, fruit juice, root, terminal buds.

Current Explorations: boils, burns, digestive aid, tonic (energy boosting / blood purifying).

Traditional Use: antimicrobial, antioxidant, appetite stimulant, arthritis / rheumatism, astringent, bladder issues, childbirth pain, colds, colic, constipation, cough, depression, diarrhea, douche, eye wash, fever, flatulence, gallbladder issues, gout, heartburn, heart issues, hemorrhoids, indigestion, laxative, malaria, mouthwash / gargle, nausea, scurvy, sore throats, stomach ache, tonic, tonsilitis, urinary issues, uterine issues, vaginal issues, vitamin C, worms.

Preparations: decoction, infusion, tea, tincture.

(Note – seeds contain cyanide generating compounds.)

Rubiaceae - coffee family

<u>Cephalanthus occidentalis</u> – buttonbush

bark, flower, leaves, root.

Traditional Use: astringent, coughs, diuretic, dysentery, emetic, eye wash, fever, internal bleeding, kidney issues, laxative, malaria, palsy, tonic, toothache.

Preparations: decoction, syrup, tea.

(Note – leaves poisonous.)

Rutaceae - citrus family

Ptelea trifoliata - hoptree

bark, buds, fruit, leaves, root, twigs.

Traditional Use: antibiotic, asthma, fever, fungal infections, gastroenteritis, heartburn, indigestion, lung issues, promote appetite, rheumatism, stomach issues, tonic, worms.

Preparations: poultice, tea.



Rutaceae - citrus family

<u>Zanthoxylum</u> spp. – Hercules' club bark, fruit.

Traditional Use: abdominal pain, antimicrobial, antispasmodic, arthritis / rheumatism, cancer / tumor, cholera, circulation, colic, epilepsy, fevers, flatulence, heartburn, indigestion, inflammation, laxative, local numbing, malaria, menstrual issues, pain, skin issues, sore throats, sores / wounds, stimulant, tonic, toothache, typhus, worms.

Preparations: compress, cream, decoction, infusion, poultice, powder, tincture.

(Note – stomach irritation from ingestion -- increases blood pressure -- do not use if pregnant.)

Salicaceae - willow family

Populus deltoides - cottonwood

buds, inner bark, leaves, new buds, new shoots, resin.

Current Explorations: anorexia, antibiotic, antispasmodic, arthritis / rheumatism, burns, hemorrhoids, inflammation, pain, prostate issues, sores / wounds.

Traditional Use: antimicrobial, colds, female tonic, inflammation, rheumatism, scurvy, sores / wounds, system cleanser.

Preparations: alcohol, tea.

(Note: do not use if allergic to aspirin.)

Salicaceae - willow family

Salix spp. – willow

bark, buds, flower buds, leaves, root, seeds, shoots, smoke, stem sap, twig ash, twigs.

Current Explorations: antimicrobial, antioxidant, antiseptic, arthritis / rheumatism, astringent, cataracts, diuretic, fever, fungicidal, inflammation, insecticidal, laxative, pain, worms.

Traditional Use: abortion, antiseptic, aphrodisiac, arthritis / rheumatism, asthma, astringent, backache, bladder issues, bleeding, bursitis, cancer / tumor, cold, coughs, dandruff, diarrhea, diuretic, dysentery, emetic, enema, epilepsy, expectorant, eye wash, fever, flu, gangrene, gout, hair growth, headaches, heartburn, heart issues, hysteria, indigestion, inflammation, jaundice, laryngitis, malaria, mastitis, menstrual issues, mouthwash / gargle, pain, poison ivy, sedative, sexual issues, skin issues, sores / wounds, teeth whitening, tendonitis, tonic, tonsilitis, toothache, ulcer, urinary issues, uterine issues, VD, whooping cough, worms.

Preparations: alcohol, ash, compress, decoction, hot water, infusion, poultice, powder, smoke, tea, tincture.

(Note – do not use if allergic to salicylate / aspirin -- do not use with stomach ulcers.)



Santalaceae - mistletoe family

<u>Phoradendron leucarpum</u> – American mistletoe (native tree parasite)

fruit, leaves, twigs.

Current Explorations: anxiety, asthma, cancer / tumor, diabetes, diarrhea, epilepsy, heart rate, menstrual issues, rheumatism, whooping cough.

Traditional Use: abortion, antispasmodic, aphrodisiac, bleeding, blood pressure, cancer / tumor, childbirth bleeding, convulsion, dysentery, epilepsy, headache, heart issues, induce labor, lovesickness, narcotic, sedative, sores / wounds, sterility, tonic, TB, typhus, urinary issues.

Preparations: decoction, infusion, powder, tincture.

(Note – tissues cause dermatitis and all are toxic -- fruit, leaves, & stems contain dangerous proteins.)

Sapindaceae - soapberry family (formally Aceraceae - maple family)

Acer spp. - maple

bark, leaves, pith, sap, twigs, wood.

Current Explorations: pancreas health.

Traditional Use: abrasions, antiseptic, antispasmodic, astringent, blood purifier, colds, congestion, cough, cramps, diarrhea, diuretic, douche, dysentery, emetic, expectorant, eye wash, internal bleeding, kidney issues, lactation, liver issues, measles, nausea, rash, skin irritations, spleen issues, tonic, uterus issues, VD, vitamin B, worms.

Preparations: decoction, poultice, sap, steam, syrup, tea, water.

Sapindaceae - soapberry family (formally Hippocastanaceae - buckeye family)

Aesculus spp. - buckeye

bark, flowers, fruit, leaves, seeds.

Current Explorations: brain trauma, cancer / tumor, edema, hemorrhoids, thrombosis, varicose veins.

Traditional Use: arthritis / rheumatism, asthma, astringent, bowel issues, cancer / tumor, cellulite, childbirth bleeding, circulation, cough, diarrhea, dysentery, fever, hemorrhoids, infections, inflammation, labor pains, liver issues, lupus, malaria, narrows blood vessels, prostate issues, skin issues, swelling, tonic, toothache, varicose veins.

Preparations: cream, ointment, powder, tincture.

(Note – do not use on broken skin – considered dangerous to effectively use.)

(Note – bark, flower, honey, leaves, nuts, seeds, & shoots all contain dangerous / toxic alkaloid, saponin, & coumarin.)

(Note – do not use when pregnant or lactating -- do not give to children -- do not use with blood thinners.)



<u>Ulmus</u> spp. – elm bark, flower.

Current Explorations: antioxidant, bowel issues, bronchitis, cancer / tumor, colds, herpes, lotion, respiratory issues, sore throats, stomach ulcers, throat soothing, VD.

Traditional Use: abortion, antiseptic, arthritis / rheumatism, bladder issues, bleeding, bowel issues, bronchitis, burns, cancer / tumor, childbirth preparations, cholesterol, colds, colitis, constipation, cough, damaged mucus membranes / skin, diarrhea, douche, dysentery, enemas, expectorant, flatulence, gangrene, gout, gunshots, heartburn, heart issues, hemorrhoids, indigestion, internal bleeding, laxative, lotion, lung issues, menstrual issues, respiratory infections, skin issues, sore throats, sores / wounds, stomach issues, stool softener, TB, tapeworms, typhus, worms.

Preparations: compress, cream, decoction, infusion, poultice, powder, tea, tincture, vinegar.

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