PLANTS USED AS CURATIVES

BY CERTAIN SOUTHEASTERN TRIBES

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INTRODUCTION

WHETHER or not Indian herbal remedies are of any medicinal value has long been a moot question and there has been little published to substantiate either side of the argument. Many collections of Indian herbal remedies have been made by the ethnologist, but no attempt has been made to analyze these remedies in the light of our knowledge of the medicinal properties of plants.[1] It was with this problem in mind that the present study was undertaken.

Using the writer's field material gathered from two tribes, namely the Choctaw and Koasati, and supplementing it with published literature, a fairly representative group of medicines for the Southeast has been brought together. Unless otherwise noted, the data for the Alabama, Natchez and Creek medicines are to be found in T. R Swanton, “Religious Beliefs and Medical Practices of the Creek Indians." The material on the Chickasaw is from T. R. Swanton, "Social and Religious Beliefs and Usages of the Chickasaw Indians." The Cherokee formulas are from Mooney and Olbrechts, "The Swimmer Manuscript," The data for the Catawba medicines are from F, G. Speck, "Catawba Medicines and Curative Practices." The Choctaw medicines which are marked with an asterisk are from Bushnell, "The Choctaw of Bayou Lacomb." The data for the remaining Choctaw and the Koasati medicines were collected by the writer.

Wherever it has been possible to do so, the medicinal data has been taken from Wood, Remington and Sadtler, "The Dispensatory of the United States of America," or from Hare, Caspari and Husby, "The National Standard Dispensatory." The other authorities have been used only when a plant docs not appear in either of the above volumes. It must be realized that the medicinal properties attributed to some of the plants by the earlier authorities are open to doubt and future pharmacological work may show them to be in error.

The material has been organized from a botanical viewpoint with the remedies listed by family, genera and species. Plant families are arranged according to the modified system of Engler and Prantl. Genera and species are arranged alphabetically under the family heading. The most recently accepted form of plant names has been used and where these are at variance with those in the anthropological sources, the latter are given as synonyms.

Under each plant is listed the tribe or tribes using it, what it is used for, the part employed and the method of preparing and applying it. It will be noted that, in some cases, such complete data is lacking, but this fault rests with the original sources. However, it was thought better to include all Evidence bearing on this subject, no matter how fragmentary.

[1] Frances Densmore in her paper “Uses of Plants by the Chippewa Indians," has enumerated the plants used as remedies and their medicinal properties, but she has made no attempt to bring the two together or to discuss whether or not the plants are used correctly.

GLOSSARY

Alteratives - medicines which tend to change a morbid state into one of health
Anthelmintics - medicines used to destroy intestinal worms
Antiperiodics - medicines used for the relief of malarial fevers
Antiseptics - substances which have the power of preventing putrefaction
Antispasmodics - medicines used to allay or prevent spasms
Aperients - gentle laxatives
Astringents - medicines having the power of influencing vital contractibility, thereby condensing tissues
Carminatives - medicines used to excite intestinal peristalsis and provoke an expulsion of flatus
Cathartics - medicines which produce discharges from the bowels
Counter-irritants - medicines which produce another irritation so as to relieve a previously existing irritation
Decoction - an extract obtained from a body by boiling it in water
Demulcents - mucilaginous principles used in solution to soothe and protect irritated mucous membranes and other tissues
Diaphoretics - medicines which produce sweating
Diuretics - medicines which increase secretion of urine
Emetics - medicines which cause vomiting
Emmenogogues - medicines which stimulate menstruation
Emollients - applications to allay irritation and soreness
Errhines - medicines which promote discharge of mucous from the nasal passages
Haemostaties - medicines which arrest hemorrhages
Hydragogues - medicines which cause watery evacuations
Infusions - an extract obtained from a body by boiling it in water (the term normally refers to boiling in alcohol, but is used in this paper as a synonym of decoction)
Oxytoxics - medicines which stimulate uterine contractions
Sudorifics - medicines which cause sweating
Tonics - medicines which permanently increase systematic tone by stimulating nutrition
The definitions of the medicinal properties are taken from
Wood, Remington and Sadtler. "The Dispensatory of the United States of America. "

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PART I
PLANTS USED MEDICINALLY

POLYPODIACEAE
(Fern Family)

Adiantum pedatum Linnaeus Sp. PI. (1753) 1095. Maidenhair Fern.

CHEROKEE-rheumatism-The roots, mixed with those of Polytichum acrostichoides and Osmunda cinnamomea, are put into warm water and the resulting decoction is rubbed on the rheumatic place.

MEDICINAL PROPERTIES: Adiantum pedatum is aromatic, bitter and demulcent (8), and is used in catarrhs and pectoral affections (20). There are no data available on the medicinal properties of the other two plants.

COMMENTS: So far as can be ascertained from the medicinal data available, this medicine is of no value as used by the Cherokee.

Polystichum acrostichoides (Michx.) Schott Gen. Fil. (1834) t. 9.
Aspidium acrostichoides Swartz Syn. Fil. (1806) 44.

Christmas Fern.

CHEROKEE-rheumatism-See Adiantum pedatum above.

Camptosorus rhizophyllus (L.) Link Hart. Herol. 2 (1833) 69.

Walking Leaf.
CHEROKEE-swollen breast-The whole plants of Camptosorus rhizophyllus and Asarum canadense, mixed with the roots and leaves of Collinsonia canadensis, are made into a decoction which is applied to the swollen breast. This decoction is also drunk to induce vomiting which is thought to relieve the swelling.

MEDlCINAL PROPERTIES: There are no data on the medicinal properties of Camptosorus rhizophyllus.

Pteridium aquilinum (L:) Kuhn in van der Dechen Reisen 3, pt. 3 (1879) 11. Pteris aquilina Linnaeus Sp. PI. (1753) 1075.

Common Brake.

KOASATI-chest pain-The ground roots are boiled and the decoction is drunk to relieve a pain in the chest.

MEDlCINAL PROPERTIES: This plant is useful for destroying the tape worm (20).
COMMENTS: This remedy seems to be of no value as applied.

OSMUNDACEAE
(Flowering Fern Family)

Osmunda cinnamomea Linnaeus Sp. PI. (1753) 1066.

Cinnamon Fern.

CHEROKEE-rheumatism- The roots, mixed with those of Adiantum pedatum and Polystichum acrosticoides, are put into warm water and the resulting decoction is rubbed on the rheumatic place.

MEDICINAL PROPERTIES: No data.

OPHIOGLOSSACEAE
(Adder's Tongue Family)

Botrychium virginianum Swartz in Schrader J ourn. Bot. 1800, pt. 2 (1801) 111.

Rattlesnake Fern.

CHEROKEE-emetic- The root is put into water and boiled down to a syrup which is drunk to cause vomiting.

MEDICINAL PROPERTIES: No data.

PINACEAE
(Pine Family)

Pinus sp.

ALABAMA-dysentery-The inner bark of saplings is boiled and the decoction is drunk as a cure for dysentery.

MEDICINAL PROPERTIES: Tannin, which is a strong astringent, is found in Pinus (8).

COMMENTS: An astringent is very beneficial in dysentery.

Pinus echinata Miller Gard. Diet. ed. 8, (1768) no. 12. Pinus mitis Michaux FI. Bor.-Am. (1803) 204.

Shortleaf Pine.

CHOCTAW-worms-The buds are soaked in cold water and the solution is drunk to dispel worms.

MEDICINAL PROPERTIES: There are no data for this particular species, but it doubtlessly contains tannin.

COMMENTS: There are no medicinal data that would indicate this remedy to be useful in dispelling worms.

Tsuga caroliniana Engelmann in Bot. Gaz. 6 (1881) 223.

Crag Hemlock.

CHEROKEE-afterbirth--The roots, mixed with those of Smilax glauca and Platanus occidentalis, are boiled and the decoction is drunk to cause discharge of the afterbirth.

MEDICINAL PROPERTIES: There are no medicinal data for any of the above plants.

GRAMINEAE
(Grass Family)

Andropogon glomeratus Britton, Stern & Poggenburg Prelim Cat. N. Y. (1888) 67.

CATAWBA-backache-The root is used.

MEDICINAL PROPERTIES: No data.

Arundinaria tecta Muhlenberg Descr. tiber. Gram. (1817) 19l.

Switch Cane.

CHOCTAW-pain in the breast-The cane root is boiled and the medicine is drunk to relieve a pain in the breast.

MEDICINAL PROPERTIES: No data.

Glyceria obtusa (Muhl.) Trinius in Mem. Acad. St. Petersb. ser. 6, 1 (1831) 366.

Manna Grass.

CATAWBA-backache-The beaten root is put into water and allowed to stand. The medicine is drunk three times a day and is, believed to improve as it "ages."

MEDICINAL PROPERTIES: No data.

Panicum sp.

Panic Grass

NATCHEZ-malaria-A warm infusion of panic grass is drunk to relieve malarial fever.

MEDICINAL PROPERTIES: No data.

CYPERACEAE
(Sedge Family)

Scirpus validus Vahl Enum. PI. 2 (1806) 268.

Great Bulrush.

CHEROKEE-emetic-This emetic is made by boiling a mixture of Scirpus validus, Juncus effusus, Coronilla varia, Vicia caroliniana and the bark of Rhus Toxicodendron. The decoction is drunk every day for four days, being reboiled before each use.

MEDICINAL PROPERTIES: There are no data for Scirpus validus.

ARACEAE
(Arum Family)

Arisaema quinatum (Nutt.) Schott. Syn. Aroid. (1856) 28.

Prester-.John.

CHOCTAW*-to make blood-An extract, made by boiling the root, is drunk "to make blood. "

MEDICINAL PROPERTIES: No data.

.JUNCACEAE
(Rush Family)

Juncus effusus Linnaeus Sp. PI. (1753) 326.

Common or Soft Rush.

CHEROKEE-emetic-Juncus effusus is boiled with Scirpus validus, Coronilla varia, Vicia caroliniana and the bark of Rhus Toxicodcndron. The resulting decoction is drunk every day for four days and is reboiled before each use.

MEDICINAL PROPERTIES: The seeds of Juncus effusus are cathartic (20).

COMMENTS: It is impossible to say what the effects of this plant are as the only properties given are for the seeds.

LILIACEAE
(Lily Family)

Aletris farinosa Linnaeus Sp. PI. (1753) 319.

Colic Root, Star Grass.

CATAWBA-colic and stomach disorders-A solution, made by putting the leaves in cold water is drunk in cases of colic and stomach disorder.

CATAWBA-dysentery-The leaves are put into water and the medicine is drunk to stop a bloody dysentery.

MEDICINAL PROPERTIES: This is a simple bitter tonic and stomachic and has been used in colic. In large doses it acts as an emetic and cathartic (20).

COMMENTS: The tonic properties of this plant are beneficial in colic and stomach disorders. The cathartic properties are useful in dysentery, but it would be preferable were an astringent agent used after the cathartic.

Smilax sp.
Greenbrier.

CREEK-ulcers on the leg-The pounded roots are boiled and the liquid is poured over the ulcers.

MEDICINAL PROPERTIES: This is useful in cutaneous diseases (20) and contains three active glucosides belonging to the saponin group (12).

COMMENTS: The saponin in this plant makes it a beneficial soapy wash for ulcers.

Smilax glauca Walter FI. Carol. (1788) 245.

Saw Brier.

CHEROKEE-afterbirth-The roots are mixed with those of Tsuga caroliniana and Platanus occidentalis and boiled. The decoction is drunk to cause discharge of the afterbirth.

MEDICINAL PROPERTIES: No data.

Smilax rotundifolia Linnacus Sp. P1. (175:3) 10:30.

Common Green Brier.

KOASATI-headache- Four splints of Smilax are used to scratch the back of the patient without drawing blood.

MEDICINAL PROPERTIES: The root is used as an alterative (8).

COMMENTS: Outside of the relaxing effect of back scratching, this remedy is of no value.

Smilax Bona-nox Lillnaens Sp. PI. (175:3) 10:.10.

Smilax tamnoides A. Gray Man. Bot. No. U.S. (1848) 485.

Chinabrier, Bullbrier, Tramp's Trouble, Stretch-berry.

CHOCTAW -tonic-The stems are boiled and the medicine is taken as a general tonic.

MEDICINAL PROPERTIES: This may be used in the same manner as Smilax sp. above (5).

COMMENTS: There are no tonic properties recorded for this plant so its value as a general tonic is doubtful.

Veratrum viride Aiton Hort. Kew. 3 (1789) 422.
Indian-poke, American White Hellebore.

CHEROKEE-aches-A warm infusion is made from the leaves, mixed with those of Rhododendron maximum and Kalmia latifolia. This is put on scratches which have been made over the location of the pain.

CHEROKEE-scratches on the leg-The roots, mixed with those of Gillenia trifoliata and the leaves of Kalmia latitolia, Leucothoe Catesbaei and Rhododendron maximum, are made into a warm infusion which is rubbed into scratches made on the legs. This scratching operation is a frequent preliminary to the application of medicine in the treatment of rheumatism, languor, and kindred ailments, as well as in preparing contestants for the ball game (10).

MEDICINAL PROPERTIES: Veratrum viride is a strong irritant, producing first a burning, then a cold sensation, with reddening and sometimes vesication. The irritation is much stronger on the abraded skin (1.5).

COMMENTS: The application of Veratrum viride to the abraded skin is probably used for its strong counter-irritant effect. Yucca aloifolia Linnaeus Sp. PI. (1753) 319.

Spanish Dagger.

CHOCTAW* -salve-The roots are first boiled and then mashed and mixed with grease or tallow. The resulting salve is used for various purposes.

.MEDICINAL PROPERTIES: No data.

COMMENTS: If this species contains saponin as does Yucca filamentosa, it would be beneficial as applied.

Yucca filamentosa Linnaeus Sp. PI. (1753) 319.

Adam's Needle.

CATAWBA-skin disease-The root is rubbed on the body and is also made into a decoction which is drunk to relieve a skin disease.

MEDICINAL PROPERTIES: The rhizome of this plant contains saponin (8).

COMMENTS: The soapy quality of this root, due to the saponin, a beneficial cleansing effect when used externally.

AMARYLLIDACEAE
(Amaryllis Family)

Agave virginica Linnaeus Sp. Pl. (1753) 323.

False Aloe, Rattlesnake-master.

CATAWBA-snakebite-The roots are washed and put into water. This solution is used externally and internally.

CATAWBA-dropsy-The pounded root is put in a glass of water to which a tablespoon of whiskey has been added. The medicine is used externally and internally.

MEDlCINAL PROPERTIES: Agave virginica has a very bitter root which is used in colic (20) and as an antispasmodic and stomachic (8).

COMMENTS: This plant is of little use in either of the above ailments.

IRIDACEAE
(Iris Family)

Iris versicolor Linnaeus Sp. PI. (1753) 39.

Larger Blue Flag.

CREEK-cathartic.

MEDlCINAL PROPERTIES: This plant possesses cathartic, emetic and diuretic properties (20).

COMMENTS: Although no data were given in the original source as to the method of use of this medicine, it is undoubtedly an efficient cathartic.

ORCHIDACEAE
(Orchid Family)

Aplectrum hyemale (Muhl.) Torrey Compend. Fl. No. & Middle States (1826) 322. Aplectrum spicatum Britton, Stern & Poggenberg Prelim. Cat. N. Y. (1888) 51.

Putty-root, Adam-and- Eve.

CATAWBA-boils-The root is beaten and applied to the boil.

MEDICINAL PROPERTIES: No data.

Cypripedium Calceolus L. var. pubescens (Willd.) Correll in Bot. Mus. Leafl. Harv. Univ. 7 (1938) 1. Cypripedium parviflorum Salisbury in Trans. Linn. Soc. I (1791) 77.

Smaller Yellow Lady's Slipper.

CHEROKEE-worms-The roots, mixed with those of Spigelia marilandica, are made into a decoction which is sweetened with honey or with the pods of Gleditsia triacanthos. This is drunk to dispel worms.

MEDICINAL PROPERTIES: This plant is a gentle nervous stimulant or antispasmodic (20).

COMMENTS: This plant is of no value in dispelling worms.

PIPERACEAE
(Pepper Family)

Saururus cernuus Linnaeus Sp. PI. (17.53) 341.

Lizard's Tail.

CHOCTAW*-wounds-The boiled roots are mashed and applied to the wound as a poultice.

MEDICINAL PROPERTIES: Saururus cernuus is antispasmodic, sedative and astringent (20).

COMMENTS: The astringent properties make this a beneficial application for wounds.

SALICACEAE
(Willow Family)

Populus sp.

CHICKASAW-dysentery-The roots are boiled with those of 'Fi,~8alix sp. and the decoction is drunk to cure dysentery.

CREEK-broken arm-A decoction, made by boiling the bark, poured over the fractured part. Splints for bandaging the arm made from the inner bark of the tree.

MEDlCINAL PROPERTIES: The properties of Poplar bark are the same as those of Willow bark (8) and contain astringent properties.

COMMENTS : The astringent properties are valuable in dysentery.

Populus angulata Aiton Hort. Kew. 3 (1789) 407.

CHOCTAW*-snakebite-The wounds are steamed with water in which the stems, bark and leaves have been boiled."

MEDICINAL PROPERTIES: No data.

AI.ABAMA-fever,-The roots are put into cold water which the atient drinks and bathes in to relieve a fever.

CHICKASAW-nosebleed-The roots are used.

CHICKASAW-headache-The roots are used.

CHICKASAW-severe headache- Branches of Willow and Elder are warmed in water and then placed on the patient's head to cure a severe headache.

CHICKASAW-dysentery-See Populus sp. above.

CREEK-biliousness-The roots are used.

CREEK-malaria-The roots are used.

CREEK-fever-The roots are used.

CREEK-dropsy-A decoction is made by boiling Salix roots with Monarda sp. The patient drinks and bathes in this medicine to relieve dropsy.

CREEK-rheumatism-Salix is used with Lindaa Berr:oin.

CREEK-emetic-Salix is used with Lindera Benzoin.

MEDICINAL PROPERTIES: Salix is astringent and has been used as a stomachic and an antiperiodic (8).

COMMENTS: The astringent properties are beneficial as a cure for dysentery. If the roots, or a decoction of them, is put into the nose it will stop the nosebleed. The antiperiodic properties are useful in the treatment of fevers.

Salix alba Linnaeus Sp. PI. (1753) 1021.

White willow.

Native of Europe.

CHEROKEE-hoarseness-The inner barks of Salix alba, Cornus florida, Prunus virginiana, Quercus rubra and Pyrus Malus are made into a decoction which is drunk to loosen up the phlegm.

MEDICINAL PROPERTlES: Willow bark possesses tonic and astringent properties (2).

COMMENTS: The astringent properties found in this plant and in Quercus rubra make it useful as applied by the Cherokee.

Salix nigra Marshall Arbust. Am. (1785) 139.

Black Willow.

KOASATI-dyspepsia-The roots are boiled and the decoction is drunk before noon. "It cools the insides. "

KOASATl-fever-The roots are put into cold water and the solution is drunk to reduce a fever.

KOASATl-headache-The roots, mixed with those of Pycnanthemum incanum, are boiled and the infusion is drunk to relieve a headache.

MEDICINAI. PROPERTIES: The root is a strong bitter (20).

COMMENTS: The strong bitter principle is useful for dyspepsia.

Salix tristis Aiton Hort. Kew. 3 (1789) 393.

Dwarf Gray-willow.

CATAWBA-sore mouth-The root is made into a medicine with which the child's mouth is washed when it is sore.

CATAWBA-sore nipples.

MEDICINAL PROPERTIES: Willow possesses tonic and astringent properties (2).

COMMENTS: An astringent may be used with beneficial results in both of the above cases.

MYRICACEAE
(Sweet Gale Family)

Myrica cerifera Lillaeus Sp. PI. (1753) 1024.

Morella cerifera (L.) Small FI. Southeast U. S. (1903) 337,1329.

Wax Myrtle.

CHOCTAW*-fever-The leaves and stems are boiled and the extract is taken during attacks of fever.

CHOCTAW-tonsils-The roots are boiled and the decoction is gargled, but not swallowed, to relieve inflamed tonsils.

KOASATI-child's stomach ache-The roots are boiled and the decoction is drunk.

MEDlCINAL PROPERTIES: The root is astringent and, in large doses, emetic (2).

COMMENTS: The astringent properties make this a beneficial gargle. Dr. Leland Wyman has suggested that the "child's stomach ache" is probably infant diarrhea in which case the astringent property is useful.

JUGLANDACEAE
(Walnut Family)

Carya tomentosa (Lam.) Nuttall Gen. PI. 2 (1818) 22l.
Carya alba (L.) K.Koch Dendrol. (1896) 596, non Nutt.
Hieoria alba (L.) Britton in Bull. Torr. Bot. Club 15 (1888) 284.

Mocker Nut, White-heart Hickory.

CHEROKEE-sore mouth-The doctor chews the inner bark of the tree and then blows into the patient's mouth.

MEDlCINAI. PROPERTIES: The bark is astringent (20).

COMMENTS: The astringent properties are beneficial and are probably as effective second-hand as first-hand.

BETULACEAE
(Birch Family)

Alnus rugosa (DuRoi) Sprengel Syst. Veg. 3 (1826) 848.

Smooth Alder.

CHEROKEE-eye trouble-An infusion is made from the barks of Alnus rugosa and Alnus serrulata and is rubbed into the eye.

CHEROKEE-female emetic and cathartic-An infusion is made of the roots of Alnus rugosa, Hydrangea aruorescens, Platauus occidentalis, Rubus Idaeus var. strigosus and Rubus occidentalis. This is drunk by women during their catamenial periods to cause emcsis and catharsis.

CHEROKEE-unable to retain food-A decoction, made by boiling the inner barks of Alnus rugosa, Nyssa sylvatica, Clethra acuminata and Corylus americana, is drunk to induce vomiting in cases where the patient is unable to retain food.

MEDlCINAL PROPERTIES: The bark of Alnus rugosa is tonic and astringent (:10). It is also an emetic and useful in indigestion caused by general debility of the stomach (21).

COMMENTS: The astringent properties of this plant are valuable as an eye wash. It is correctly used by the Cherokee as an emetic and is particularly valuable as used by them in cases of nausea.

Alnus serrulata Willdenow Sp. PI. 4 (1805) 336.

CHEROKEE-eye trouble-See Alnus rugosa above.

MEDICINAL PROPERTIES: The bark and leaves are very astringent (20).

COMMENTS: Both species of Alnus contain astringent proper making this medicine a very useful eye wash.

Betula spp.

CREEK-pulmonary tuberculosis-The bark is boiled and the suiting decoction is drunk.

MEDICINAL PROPERTIES: The bark is bitterish and astringent, and has been employed in intermittent fevers (:10).

COMMENTS: The astringent properties of this medicine will be useful in clearing up the cough, but will have no real effect on the tuberculosis.

Betula nigra Linnaeus Sp. PI. (1753) 982.

River or Red Birch.

CHEROKEE-difficult urination with yellow or mucous discharge-The inner bark, in mixture with that of Quercus stellata, Carpinus earoliniana and Platanus occidentalis, is boiled and the decoction is taken internally.

MEDlCINAL PROPERTIES : No data.

Carpinus caroliniana Walter FI. Carol. (1788) 236.
American Hornbeam.

CHEROKEE-difficult urination with yellow or mucous discharge-See Betula nigra above.

MEDlCINAI. PROPERTlES: Carpinus carolinian a contains tonic, astringent and antiperiodic properties (8).

COMMENTS: A diagnosis of this, as well as the other urinary ailments treated in this paper, cannot be made owing to the paucity of symptoms given in each case.

Corylus americana Walter Fl. Carol. (1788) 236. Hazelnut.

CHEROKEE-unable to retain food-A decoction, made by boiling the inner bark of Corylus americana, Alnus rugosa, Nyssa sylvatica and Clethra acuminata, is drunk to induce vomiting in cases where the patient is unable to retain food.

MEDlCINAI. PROPERTlES: No data.

FAGACEAE
(Beech Family)

Castanea pumila (L.) Miller Gard. Diet., ed. 8, (1768) no, 2. Chinquapin.

CHEROKEE-feverish with chills and cold sweats-An infusion made from the dry leaves is blown on the patient.

KOASATI-stomach trouble-The roots are boiled in water and the decoction is drunk in cases of stomach trouble.

MEDlCINAL PROPERTlES: Chinquapin is astringent and tonic and has been employed in intermittent fevers (20).

COMMENTS: The tonic properties are beneficial as used by the Koasati in cases of stomach trouble. The use of this plant in fevers would be beneficial if taken internally, but the Cherokee method of blowing the medicine on the patient is ineffective.

Quercus borealis Michx.f var. maxima Ashe in Proc. Soc. Am. For. 11 (1916) 90. Quercus rubra Auct., non Linnaeus.

Gray Oak.

CHEROKEE-dysentery-The excrescences from the twigs are made into an infusion with Gerardia virginica, the inner barks of Ulmus fulva, Platanus occidentalis and Tilia americana, and the buds or suckers growing from the base of Quercus stellata.

ALABAMA-sores-The bark is boiled to make a wash for bad smelling sores which have broken out on the head or feet.

AI.ABAMA-sore throat-A decoction is made from the bark.

ALABAMA-lung trouble-An infusion is made by boiling the bark. This is drunk in the morning and vomited before eating.

ALABAMA.-for children old enough to walk but still too weak to do so. The bark is mashed with tree moss and Ascyrum hyperpericoides var. multicaule. This mash is boiled and the child is bathed in the infusion.

MEDICINAL PROPERTlES: Oak bark contains tannin and is therefore astringent (20).

COMMENTS: The astringent properties are useful in the first four cases, namely dysentery, sores, sore throat, and lung trouble.

Quercus marilandica Muenchhausen Hausvater (1770) 253.

Black-jack, Scrub Oak.

CHOCTAW-childbirth-Three coals of the tree bark, burned to red heat, are put into a glass of water which is drunk to aid in childbirth. A half a gallon of water into which nine coals have been put is drunk to remove the afterbirth and ease cramps after childbirth.

MEDICINAL PROPERTlES: Oak bark is astringent (20).

COMMENTS: There are no medicinal properties listed for this which suggest it to be of any value as used by the Choctaw.

Quercus rubra Linnaeus Sp. Pl/ (1753) 996.

Spanish Oak

CHEROKEE-hoarseness-A decoction is made from the inner of Quercus rubra, Salix alba, Cornus florida Prunus virginiana and Pyrus Malus. The patient drinks this to loosen the phlegm so that it may be coughed up.

MEDlCINAL PROPERTIES: The bark is astringent (20).

COMMENTS: The astringent properties found in this bark, plus those of Salix alba, make this medicine very beneficial as used by the Cherokee.

Quercus stellata TVangcnhcim Beitr. Forstwiss. Nordam. Holz. (1787) 78.

Post Oak, Iron Oak.

CHEROKEE-difficult urination with yellow or mucous discharge-The inner bark, mixed with that of Betula nigra, Carpinus caroliniana and Platanus occidentalis, is boiled and the infusion is drunk.

CHEROKEE-dysentery-See Quercus borealis var. maxima above.

CHOCTAW-stomach ache-The bark is boiled and the decoction is drunk to cure a stomach ache.

CREEK-dysentery-The bark is used in a drink.

MEDICINAL PROPERTIES: Oak bark contains tannin (20).

COMMENTS: The tannin in oak bark is astringent and hence a useful cure for dysentery. If the Choctaw use of this for stomach ache refers to gastric acidity, the tannin is also beneficial (12).

ULMACEAE
(Elm Family)

Ulmus americana Linnaeus Sp. PI. (1753) 226.

American or White Elm.

CHOCTAW-menstrual cramps-The inner bark is made into a decoction which is drunk to relieve menstrual cramps.

KOASATI-appendicitis- The inner bark, cut from the east side of the tree, is boiled and the patient drinks and bathes in the infusion.

KOASATI -gun wound -The bark, in mixture with that of Nyssa sylvatica and Acer rubrum var. Drummondii, is boiled. The decoction is taken internally and is also applied to the wound.

MEDICINAL PROPERTIES: No data.

COMMENTS: This species is very similar to Ulmus fulva and probably contains similar properties (see below), in which event it is useful in the above ailments. It is doubtful that the Koasati have any real knowledge of appendicitis. The term is probably used to refer to any severe pain in the region of the lower trunk.

Ulmus fulva Michaux FI. Hor.-Am. 1 (1803) 172.

Slippery Elm.

ALABAMA-delayed birth-A decoction is made by boiling the bark and a little gunpowder in water. This is drunk when labor is prolonged.

CATAWBA-consumption-The bark is used.

CHEROKEE-dysentery-A decoction is made of the inner barks of Ulmus fulva, Platanus occidentalis and Tilia americana boiled with Gerardia virginica, the excrescences from twigs of Quercus calis var. maxima and the buds or suckers growing from the base of Quercus stellata.

CHEROKEE-childbirth-A decoction is made by boiling together the bark of Ulmus fulva, the stems of Impatiens biflora and the roots of Veronica officinalis. This is drunk to ease labor.

MEDICINAL PROPERTIES: Elm bark is an excellent demulcent, useful in dysentery and diarrhea and is an emollient application cases of external inflammation. It has been used for dilating os uteri (20).

COMMENTS: The medicinal properties of this tree are most valuable as applied in the above ailments.

MORACEAE
(Mulberry Family)

Morus rubra Linnaeus Sp. PI. (1753) 986.

Red Mulberry.

ALABAMA-yellow urine-a decoction, made by boiling the roots, is taken when a person is weak from passing yellow urine.

MEDlCINAL PROPERTIES: "Taenifuge" (11).

COMMENTS: Here, again, the urinary ailment cannot be readily diagnosed.

LORANTHACEAE
(Mistletoe Family)

Phoradendron flavescens (Pursh) Nuttall in Journ. Acad. Phila. n.s. 1 (1847) 185.

American Mistletoe.

CREEK-lung trouble-The leaves and branches are used.

MEDICINAL PROPERTIES: American Mistletoe is an oxytoxic and is efficacious in arresting post-partum hemorrhages (20).

COMMENTS: This remedy is of no value as used.

ARISTOLOCHIACEAE
(Birthwort Family)

Aristolochia Serpentaria Linnaeus Sp. PI. (1753) 96l.

Virginia Snakeroot.

CHEROKEE-breast pains-The roots, mixed with Panax trifolium, are put into water to which a few live coals have been added. This solution is taken internally to relieve a pain in the breast.

CHOCTAW*-stomach pains-Snakeroot roots are soaked in water, but not boiled. The medicine is drunk to alleviate stomach pains.

NATCHEZ-fever- The plant is boiled and the decoction is drunk during fever attacks.

MEDICINAL PROPERTIES: Snakeroot is a stimulant, tonic and antiperiodic (20) and is also useful in promoting perspiration (21).

COMMENTS: The tonic properties are beneficial in cases of stomach ache and the diaphoretic and antiperiodic properties are valuable for fever.

Asarum arifolium Michaux FI. Bor.-Am. 1 (1803) 279.

CATAWBA-heart trouble-The leaves are steeped and the tea is drunk for heart trouble.

CATAWBA-pain in the stomach-The leaves are steeped and the tea is drunk.

CATAWBA-backache-The part of the plant used and the method of application are not given in the original source (15), but Asarum arifolium is used with Chimaphila umbellata.

MEDICINAL PROPERTIES; This is an aromatic bitter (8).

COMMENTS: The aromatic bitters are useful in cases of stomache.

Asarum canadense Linnaeus Sp. PI. (1753) 442.

Asarabacca, Wild Ginger.

CHEROKEE-swollen breast-The whole plants of Asarum canense and Camptosorus rhizoplzyllus, mixed with the roots and leaves of Collinsonia canadensis, are made into an infusion which is applied to the swollen breast. This infusion is also drunk as an emetic which is believed to relieve the swelling.

CHEROKEE-abdominal pain-The plant is made into an herb decoction with Hepatica acutiloba and Epigaea repens. This is boiled down to a thick syrup and is drunk to cause vomiting as a cure for a pain in the stomach.

MEDICINAL PROPERTIES; It has an aromatic, slightly bitter taste and is said to become nauseous in large doses (13).

COMMENTS: The bitter principle is useful for a pain in the stomach.

POLYGONACEAE
(Buckwheat Family)

Rumex verticillatus Linnaeus Sp. PI. (1753) 334.

Swamp Dock.

CHOCTAW*-smallpox prevention-The leaves are boiled and infusion is bathed in once a day for four days to prevent smallpox.

MEDICINAL PROPERTIES: Rumex verticillatus is astringent, tonic, an alterative which makes it useful in skin diseases (20).

COMMENTS: This medicine, if taken internally, would be beneficial in a skin disease already contracted, but it is of no value as a preventative.

CHENOPODIACEAE
(Goosefoot Family)

Chenopodium ambrosioides L. var. anthelminticum (L.) A. Gray Man. Bot. No. U.S. ed. 5 (1867) 408.

Wormseed.

Native of Tropical America.

CREEK-spring tonic.

CREEK-fever.

KOASATI-worms-The leaves are boiled and a little sugar added to the decoction which is drunk to dispel worms.

NATCHEZ-worms in children.

NATCHEZ-fever.

MEDICINAL PROPERTIES: Wormseed is a very effective anthelmintic (20). It also possesses tonic properties and is useful in chronic malaria (12).

COMMENTS: This plant is a useful medicine in all of the above applications.

RANUNCULACEAE
(Crowfoot Family)

Hepatica acutiloba deCandolle Prodr. 1 (1824) 22.

Liverleaf, Hepatica.

CHEROKEE-abdominal pains-This plant is made into an herb infusion with Asarum canadense and Epigaea repens. This is boiled down to a thick syrup which is drunk as an emetic to cure abdominal pains.

MEDICINAL PROPERTIES: Hepatica possesses tonic and astrigent properties and was used in chronic hepatic affections (20).

COMMENTS: The tonic properties of this plant, plus those of Asarum canadense, make this a useful medicine for stomach pains.

Zanthorhiza apiifolia L'Heritier Stirp. Nov. (1784) 79.

Shrub Yellow-root.

CATAWBA-jaundice- Yellow-root is boiled and drunk as a cure for jaundice.

CATAWBA-ulcerated stomach-A decoction is drunk as a cure for ulcerated stomach.

MEDICINAL PROPERTIES: This plant possesses tonic properties (20) and is said to resemble Berberis which is an active cathartic and hepatic stimulant (8).

COMMENTS: "Ulcerated" stomach probably refers to a stomachache in which event the tonic properties are beneficial. The cathartic and hepatic stimulant properties are useful in cases of jaundice.

MAGNOLIACEAE
(Magnolia Family)

Magnolia grandiflora Linnaeus Syst. Nat., ed. 10 (1759) 1082.

Southern Magnolia, Bull-bay, Laurel.

CHOCTAW*-prickly heat-The bark is boiled and the decoction is used as a bath to lessen or prevent prickly heat.

CHOCTAW-dropsy-A boiling infusion, made with the mashed bark of Magnolia and Bignonia capreolata L., is used to steam the patient.

KOASATI-sores-The bark is boiled and the decoction is poured over the sores.

MEDICINAL PROPERTIES: Magnolia is a stimulant tonic and a diaphoretic (20).

COMMENTS: The medicinal properties of Magnolia are of no use in the above applications. The Choctaw remedy of steaming the patient to reduce the swelling in dropsy is a somewhat drastic one and might result in more serious complications. The use of a diuretic is preferable in such cases.

CALYCANTHACEAE
(Calycanthus Family)

Calycanthus fertilis Walter Fl. Carol. (1788) 151.

Carolina Allspice.

CHEROKEE-urinary trouble-A composite medicine is made by boiling together the barks of Calycanthus-fertilis, Vitis aestivalis,

Rubus allegheniensis, Euonymus americanus, Vitis labrusca Ampelopsis cordata and the roots of Lysimachia quadrifolia. The infusion is drunk when the patient has difficulty in urinating after a period of excessive urination.

MEDICINAL PROPERTIES: The roots, leaves and bark are used as an antiperiodic (8).

COMMENTS: Sufficient symptoms are not given in the original source to be able to diagnose this ailment.

LAURACEAE
(Laurel Family)

Lindera Benzoin Blume Mus. Bot. Lugd.-Bat.1 (1857)32
Benzoin aestivale (L.) N ees Syst. Laurin. (1836) 495.

Spice Bush, Benjamin Bush.

CREEK-to cure aches-An infusion, made from the boiling branches is used as a drink and as a steam bath. This is done produce perspiration as a cure for aches.

CREEK-emetic-A mixture of Spice Bush and Salix sp. used as an emetic.

MEDICINAL PROPERTIES: An infusion of the small branches has been used as a stimulant and diaphoretic in the treatment of low fevers (8). Benzoin is irritant to the fauces (12).

COMMENTS: It is difficult to say whether or not the irritant principle of Benzoin would actually cause emesis, but it probably would, given a mental predisposition to vomit. As a cure for aches, the patient would certainly perspire from the diaphoretic effects of the plant and from the sweat bath.

Sassafras albidum (Nutt.) Nees Syst. Laurin. (1836) 490.
Laurus Sassafras Linnaeus Sp. PI. (1753) 371, Sassafras Sassafras (L.) Karsten Pharm. - Med. Bot. (1882) 20.5, Sassafras, Ague-tree.

CHEROKEE-worms in children-The bark, mixed with that of Cornus florida, A melanchia canadensis and Nyssa sylvatica, is steeped in warm water with the roots of Rosa virginiana. The child drinks and bathes in the infusion to dispel worms.

CHOCTAW-measles-The root is boiled and the decoction is drunk to cure measles.

CHOCTAW*-to thin the blood-A decoction, made by boiling the root, is drunk.

KOASATI-heart trouble-The roots are boiled and the decoction is drunk for heart trouble.

KOASATI-bee sting-The leaves are mashed and applied to the sting as a poultice.

MEDlCINAL PROPERTIES: The bark of the root and the root are stimulant, diaphoretic and diuretic and have been used in skin eruptions (21). Sassafras also contains tannic acid (20.).

COMMENTS: The value of Sassafras in skin eruptions makes it beneficial in measles. The tannic acid is a beneficial application for the bee sting.

SAXIFRAGACEAE
(Saxifrage Family)

Hydrangea arborescens Linnaeus Sp. PI. (1753) 397.

Wild Hydrangea.

CHEROKEE-female emetic and cathartic-An infusion is made from the roots of Hydrangea arborescens, Alnus rugosa, Platanus occidentalis, Rubus [daws var. strigosus and Rubus occidentalis. This is drunk by women during their catamenial periods.

MEDICINAL PROPERTIES: Hydrangea is cathartic, diuretic and nephritic (20.).

COMMENTS: In this medicine, Alnus rugosa causes the emesis, Hydrangea arborescens causes the catharsis. Hydrangea cinerea Small in Britton Man. FI. Northern States and Can. (190.1) 484.

Ashy Hydrangea.

CHEROKEE-vomiting bile-Bark scrapings of Hydrangea cinerea are mixed with those of Clethra acuminata and made into an infusion which is drunk when a person has been vomiting bile.

MEDICINAL PROPERTIES: No data.

HAMAMELIDACEAE
(Witch-Hazel Family)

Liquidambar styraciflua Linnaeus Sp. PI. (1753) 999.

Sweet Gum, Bilsted.

CHOCTAW*-cuts and bruises-The scum which rises to the top of the water when this plant is boiled is collected and mixed with the roots of Obolaria virginica. This is used as a dressing for cuts and bruises.

KOASATI-night sickness-The bark is boiled and the decoction is drunk by people who are well during the day but sick at night.

MEDICINAL PROPERTIES: The scum resembles in properties liquid storax which is antiseptic and disinfectant.

COMMENTS: The antiseptic and disinfectant properties are very beneficial for cuts.

PLATANACEAE
(Plant Tree Family)

Platanus occidentalis Linnaeus Sp. PI. (1753) 999.

Sycamore, Buttonwood.

CHEROKEE-dysentery- An infusion is made from the inner barks of Platanus oceidentalis, Ulmus fulva and Tilia american are mixed with the excrescences from twigs of Quercus borealis var: maxima, Gerardia virginica and the buds or suckers growing from the base of Quercus stellata.

CHEROKEE-difficult urination with yellow or mucous discharge-A mixture of the inner barks of Platanus occidentalis, Quercus stellata and Carpinus caroliniana is made into an infusion which is drunk.

CHEROKEE-female emetic and cathartic-The roots of Platanus occidentalis, Alnus rugosa, Hydrangea arborescens, Rubus Idaeus var. strigosus and Rubus occidentalis are made into a decoction which is drunk by women during their catamenial periods.

CREEK-pulmonary tuberculosis-A decoction, made by boiling the bark and chips from the tree, is drunk.

MEDICINAL PROPERTIES: No data.

ROSACEAE
(Rose Family)

Amelanchier canadensis Medikus Geschict. (1793) 79.

Shad Bush, Service Berry.

CHEROKEE-worms in children-A mixture of the barks of Amelanchier canadensis, Nyssa sylvatica, Cornusflorida and Sassafras albidum are steeped in warm water with Rosa virginiana. The child drinks and bathes in the infusion.

MEDICINAL PROPERTIES: No data.

Gillenia trifoliata (L.) l,"Ioench Meth. PI. Suppl. (1802) 286. Porterarztlus trifoliatus (L.) Britton in Mem. Torr. Bot. Club 5 (1894) 115.

Bowman's Root.

CHEROKEE-leg scratches-The roots, mixed with those of Veratrum viride and the leaves of Kalmia latifolia, Leucothoe Catesbaei and Rhododendron maximum, are made into an infusion which is rubbed into scratches that have been made on the legs.

MEDICINAL PROPERTIES: This is a mild and efficient emetic (20).

COMMENTS: It is difficult to discover just what purpose this plant plays in the medicine.

Prunus sp.

KOASATI-dyspepsia-The inner bark is made into an infusion which is drunk to relieve dyspepsia.

MEDICINAL PROPERTIES: No data.

Prunus sp.

Wild Plum.

CREEK-dysentery-An infusion, made by boiling the roots, is drunk to cure dysentery.

MEDICINAL PROPERTIES: No data.

Prunus Persica (L.) Batsch Beytr. Entw. Pragm. Gesch. Natur. (1801) 30.

Peach.

Native of the Old World.

KOASATI-tired legs-Scratches are made on the legs until blood is drawn. Peach leaves are then rubbed in these scratches to relieve tired legs.

MEDICINAL PROPERTIES: The leaves yield hydrocyanic acid (20). Hydrocyanic acid, when locally applied to the skin, penetrates the epidermis and paralyzes the end organs of the sensory nerves in the derma (12).

COMMENTS: This closely parallels the Cherokee use of Veratrum viride applied to the abraded skin.

Prunus serotina Ehrhart Beitr. 3 (1788) 20.

Wild Black or Rum Cherry.

CHEROKEE--childbirth-The bark is made into a warm infusion which is drunk at the first pangs of labor.

CHEROKEE--Chill, fever, ague-The bark, in mixture with that of Prunus virginiana, is made into a decoction which is blown on the patient.

MEDICINAI. PROPERTIES: The bark is astringent and sedative and is used as a tonic in convalescence from fevers (21).

COMMENTS: The decoction of Prunus serofina may be given in childbirth for its sedative properties with the idea of quieting the mother.

Prunus virginiana Linnaeus Sp. PI. (1753) 473.

Chokecherry.

CHEROKEE-chill, fever, ague-See Prunus serofina above.

CHEROKEE-hoarseness-A decoction is made from the inner barks of Prunus virginiana, Salix alba, Cornus florida, Quercus rubra and Pyrus Malus. This is drunk to loosen the phlegm that it may be more easily coughed up.

MEDICINAL PROPERTIES: Chokecherry has the property calming irritation and diminishing nervous excitability and is use in cases where debility of the system is united with general local irritation (20).

COMMENTS: The astringent properties of Quercus rubra and Salix alba would seem to be the most important in this remedy.

Pyrus Malus Linnaeus Sp. PI. (1753) 479, Malus Malus (L.) Britton in Britton and Brown Ill. FI. North. U.S. 2 (1897) 236.

Apple.
Introduced from Europe.

CHEROKEE-hoarseness-See Prunus virginiana above.

MEDICINAL PROPERTIES: No data.

Rosa virginiana Miller Gard. Dict. ed. 8 (1768) no. 10.
Rosa lucida Ehrhart Beitr. 4 (1789) 22.

CHEROKEE--worms in children-The roots are steeped in warm water with the barks of Cornus florida, Amelanchier canadensis, Sassafras albidum and Nyssa sylvatica. The child drinks and bathes in the decoction to dispel worms.

MEDlCINAL PROPERTIES: No data.

Rubus sp.

Blackberry.

CHOCTAW-tonic to improve circulation-A decoction, made by boiling the roots, is drunk.

CHOCTAW-dysentery-The roots, mixed with those of Callicalpa americana, are boiled and the infusion is drunk to cure dysentery.

MEDICINAL PROPERTIES: Blackberry is tonic and astringent (9).

COMMENTS: This plant is beneficial as used by the Choctaw for a tonic and the astringent properties make it valuable as a cure for dysentery.

Rubus allegheniensis Porter in Bull. Torr. Bot. Club 23 (1898) 153. Rubus nigrobaccus L. H. Bailey EvoI. Native Fruits (1898) 370-371.

CHEROKEE-urinary trouble-An infusion is made by boiling the barks of Rubus allegheniensis, Vitis aestivalis, Calycanthus fertilis, Evonymus americanus, Vitis labrusca and Ampelopsis cordata, and the roots of Lysimaehia quadrifolia. This is given there has been excessive urination which gradually decreases in quantity.

MEDICINAL PROPERTIES: It is an astringent used in diarrhea (20).

COMMENTS: It is impossible to diagnose this ailment from symptoms given.

Rubus Idaeus L. var. strigosus (Michx.) Maximowicz Bull. Acad. St. Petersb. 17 (1872) 16l.
Rubus strigosus Michaux FI. Bor.-Am. 1 (1803) 297.

CHEROKEE-female emetic and cathartic-During their catamenial periods, women drink an infusion made by boiling together the roots of Alnus rugosa, Hydrangea arboreseens, Platanus oeeidentalis, Rubus occidentalis and Rubus Idaeus var. stri

MEDICINAI. PROPERTIES: The leaves and fruit are astringent and stimulant (21).

COMMENTS: The medicinal properties given for this plant would have neither an emetic nor a cathartic effect.

Rubus occidentalis Linnaeus Sp. PI. (1753) 493.

Black Raspberry.

CHEROKEE-female emetic and cathartic-See Rubus Idaeus var. strigosus above.

MEDICINAL PROPERTIES: No data.

LEGUMINOSAE
(Pulse Family)

Baptisia sp.

Wild Indigo.

CREEK-child's tonic-The roots are boiled and the decoction is used as a drink and a bath by children who are drowsy and listless.

MEDICINAL PROPERTIES: In large doses, wild indigo is a strong emetic and cathartic, in smaller doses it has a laxative effect (20

COMMENTS: Although not stated in. the original source (17) the laxative effect is probably what is desired.

Baptisia leucantha Torrey & Gray FI. No. Am.1 (1840) 385.

White Wild Indigo, Prairie Indigo.

CHOCTAW-swellings-The roots and leaves are used as a poultice and applied to the swelling.

KOASATI-rheumatism-A decoction is made by boiling together the roots of Baptisia leucantha, Erythrina herbacea and Liatris acidota, with the leaves of Ascyrum linifolium, Bignonia capreolata and Cephalanthus occidentalis. This decoction is drunk to relieve rheumatism.

MEDICINAL PROPERTIES: This plant is a strong emetic and cathartic in large doses and a laxative in small ones (20, 11).

COMMENTS: The medicinal properties of Baptisia leucantha are of no use in either of the above ailments.

Cercis canadensis Lillnaeus Sp. PI. (1753) 374.

Judas Tree, Redbud.

ALABAMA-congestion-The roots and inner bark are put into water. The resulting solution is drunk when there is congestion and fever. This congestion is supposed to be fatal unless relieved.

MEDICINAL PROPERTIES: The bark is an active astringent (20).

COMMENTS: It is difficult to diagnose this ailment, but Dr. Leland Wyman has suggested that it might refer to pneumonia.

Coronilla varia Linnaeus Sp. PI. (1753) 743.

Native of Europe.

CHEROKEE-emetic-Coronilla varia, Juncus effusus, Scirpus validus, Vicia caroliniana and the bark of Rhus Toxicodendron are boiled together. The decoction is drunk as an emetic every day for four days and is reboiled before each use.

MEDICINAL PROPERTIES: No data.

Desmodium sp.
Meibomia sp.

Tick Trefoil.

ALABAMA-bad lung cold-A tea, made from Desmodium is drunk and vomited before breakfast to cure a cold.

MEDICINAL PROPEllTIES : No data.

Erythrina herbacea Linnaeus Sp. PI. (1753) 706.

Cardinal Spear.

ALABAMA A-female bowel pain-The pounded roots are put in cold water which is drunk by women to relieve a bowel pain.

CHOCTAW*-tonic-After boiling the leaves, the decoction is strained and reboiled before taking as a tonic.

CHOCTAW-chest pain in children-The leaves are mixed Monarda fistulosa and grease, and the resulting salve is rubbed into the child's chest to relieve pain.

KOASATI-sore legs from walking--The small roots are boiled and the decoction is drunk when the legs have become sore from walking too far.

KOASATI-rheumatism-See Baptisia leucantha above.

MEDICINAL PROPERTIES: The roots are diaphoretic (13).

COMMENTS: The diaphoretic properties are of no use in the above ailments.

Gleditsia triacanthos Linnacus Sp. PI. (1753) 1056.

Honey Locust.

CHEROKEE-dyspepsia-The bark is steeped overnight in warm water with the roots of Specularia perfoliata and Aesculus Pavia. The patient drinks and bathes in the solution to cure dyspepsia.

CREEK-smallpox prevention-The finely chopped sprigs, thorns and branches are boiled and the decoction is used as a bath to prevent contracting smallpox.

MEDICINAL PROPERTIES: The leaves and twigs are narcotic anodyne (21).

COMMENTS: The narcotic and anodyne properties are of no use in the above ailments.

Psoralea pedunculata (Mill.) Vail in Bul l. Torr. Bot. Club 21 (1891) 114.

Congo Root, Sampson's Snakeroot.

CATAWBA.-sores-The boiled root is applied to the sore.

MEDICINAL PROPERTIES: This is an aromatic bitter tonic (20).

COMMENTS: The medicinal properties given for this plant are of no value as an application for sores.

Robinia sp.

Black Locust.

CHICKASAW-headache-The roots are used.

MEDICINAL PROPERTIES: The root is tonic and, in large doses, purgative and emetic. Cases of poisoning by the root have resulted in vomiting, dilated pupils, intermittent heart action and stupor (20).

COMMENTS: This is of no value for headache and seems to be rather dangerous owing to its violent reactions.

Tephrosia ambigua M. A. Curtiss ex Chapman FI. South. U.S. (1860) 96. Cracca ambigua (M.A.Curtiss) O. Kuntze Rev. Gen. 1 (1891) 174.

CIIOCTAW-sores-The beaten root is boiled and the decoction is applied to the sore.

KOASATI-snakebite-The roots are boiled and the infusion is applied to the bite.

MEDICNAI, PROPERTIES: No data.

Tephrosia virginiana (L.) Persoon Syn. PI. 2 (1807) 329.

Goat's Rue, Cat Gut.

CATAWBA-rheumatism-The leaves are put in the shoe to cure rheumatism.

CHEROKEE-child's tonic-The roots are boiled and the decoction is drunk by children to make them strong and muscular.

CREEK-pulmonary tuberculosis.

CREEK-bladder trouble-Eight mashed roots are put into cold water and the solution is drunk to cure bladder trouble.

CREEK-loss of manhood-The roots of Tephrosia virginiana and Stillingia sp. are pounded and put into water. This is drunk to regain potency.

NATCHEZ--coughs.

MEDICINAL PROPERTIES: The roots are cathartic, tonic, diaphoretic and anthelmintic (20).

COMMENTS: The tonic properties of Tephrosia virginiana are useful as applied by the Cherokee. They are of no value as applied by the other tribes.

Vicia caroliniana Walter Fl. Carol. (1788) 182.

Vetch.

CHEROKEE-muscular cramps-An infusion, made by boiling Vicia caroliniana and Gnaphalium polycephalum, is rubbed inti scratches which have been made over the location of the pain.

CHEROKEE-emetic-An infusion is made by boiling this plant with Scirpus validus, Juncus effusus, Coronilla varia and the bark of Rhus Toxicodendron. This infusion is taken every day for four days and is reboiled each day.

MEDICINAL PROPERTIES: No data.

LlNACEAE
(Flax Family)

Linum usitatissimum Linnaeus Sp. PI. (1753) 277.

Common Flax.
Introduced from Europe.

CHEROKEE-fever-A decoction of flax is poured over the patient to reduce a fever.

MEDICINAL PROPERTIES: Flax is believed to kill cattle due the formation of HCN in the wilted leaves. People working with the plant are reported to have a form of dermatitis (11).

COMMENTS: This remedy is of no value.

RUTACEAE
(Rue Family)

Xanthoxylum americanum Miller Gard. Dict. ed. 8 (1768) no. 2.

Northern Prickly Ash, Toothache Tree.

ALABAMA-itching-The inner bark is boiled and the infusion is rubbed on the itch to relieve it.

ALABAMA-toothache-Some of the inner bark is put into a cavity and more is packed around the tooth to relieve a toothache.

MEDICINAL PROPERTIES: The bark is a popular remedy for toothache and is also used as a counter-irritant (20).

COMMENTS: This plant is beneficial as applied in both of the above cases and its use as a popular remedy may have been learned from the Indians.

POLYGALACEAE
(Milkwort Family)

Polygala lutea Linnaeus Sp. PI. (1753) 705.

Milkwort.

CHOCTAW*-swellings-The dried blossoms are mixed with water and applied to the swellings as a poultice.

MEDICINAL PROPERTIES: No data.

EUPHORBIACEAE
(Spurge Family)

Euphorbia corollata Linnaeus Sp. PI. (1753) 459.
Flowering Spurge.

CHEROKEE-yellow urine-An infusion is made of the bruised roots of Euphorbia corollata and Euphorbia hypericifolia and is drunk in cases where the patient is passing yellow urine.

MEDlCINAL PROPERTIES: In small doses, this is a diaphoretic and expectorant, in larger ones it acts as an emetic (20).

COMMENTS: It is impossible to diagnose this ailment from the scanty symptoms given.

Euphorbia hypericifolia A. Gray Man. Bot. No. U.S. (1848) 407.

CHEROKEE-yellow urine-See Euphorbia corollata above.

MEDICINAL PROPERTIES: This is useful in dysentery, diarrhea, menorrhages and leucorrhea (20).

Stillingia sp.

CREEK-childbirth-The mashed roots are boiled and the mother drinks and bathes in the decoction soon after the child is born.

CREEK-loss of manhood-The roots of Stillingia and Tephrosia virginiana are pounded and put into water. This is drunk to regain potency.

CREEK-cathartic.

MEDICINAL PROPERTIES; StilIingia is emetic and cathartic (20).

COMMENTS; The combination of the roots of Stillingia and Tephrosia virginiana makes a very strong cathartic, but does produce the effect desired by the Creeks.

ANACARDIACEAE
(Cashew Family)

Rhus copallina Linnaeus Sp. PI. (1753) 266.

Dwarf Sumac.

CHEROKEE-blisters-A mixture of the barks of Rhus copallina Rhus typlrina and Rhus glabra is made into a decoction which is poured over the blisters..

CREEK-dysentery-A decoction, made by boiling the root, is drunk as a cure for dysentery.

KOASATI-to make a baby walk-The leaves are boiled and the baby drinks and is bathed in the decoction to make him strong enough to walk.

MEDICINAL PROPERTIES; Rhus copallina contains much tannin and is a good astringent (13).

COMMENTS: The astringent properties are beneficial for blisters as applied by the Cherokee and for dysentery as used by the Creek.

Rhus glabra Linnaeus Sp. PI. (1753) 265.

Smooth Sumac.

CHEROKEE-blisters-See Rhus copallina above.

CREEK-dysentery-The roots are boiled and the decoction is drunk to cure dysentery.

MEDICINAL PROPERTIES; This has astringent, alterative and tonic properties, and is useful in dysentery, diarrhea and leucorrhea (21).

COMMENTS; The combination of Rhus glabra and Rhus copallina makes a very strong astringent application for blisters.

Rhus Toxicodendron Linnaens Sp. PI. (1753) 266.

Poison Ivy, Poison Oak.

CHEROKEE-emetic-The bark of Rhus Toxicodendron is boiled with .Scirpus validus, Juncus effusus, Coronilla varia and Vicia caroliniana. This emetic is taken every day for four days and is reboiled before each use.

MEDlCINAL PROPERTIES; Poison Ivy, when taken internally, has irritant properties, causing vomiting, drowsiness, stupor, dilated pupils and convulsive movements (20).

COMMENTS; In this composite medicine, Rhus Toxicodendron seems to be the most important ingredient. It is strong enough to produce emesis and is the only plant in the medicine to which emetic properties are attributed.

Rhus typhina Linnaeus Cent. PI. 2 (1756) 14; Amoen. Acad, 4 (1760) 311.

Staghorn Sumac.

NATCHEZ-boils-The roots are made into a poultice which is applied to boils.

MEDICINAL PROPERTIES; No data.

COMMENTS: The astringent properties found in other species of Rhus are probably present in this one, in which event it is a beneficial application for boils.

AQUIFOLIACEAE
(Holly Family)

Ilex opaca Aiton Hort. Kew. I (1789) 169.

American Holly.

ALABAMA-sore eyes-The bark is boiled and the decoction is used as a wash for sore eyes.

CATAWBA -measles- A decoction, made from the leaves, is drunk for measles.

CHOCTAW-sore eyes-A decoction, made by boiling the leaves, is dropped in the eye to relieve soreness.

KOASATl-itch-The bark is boiled in water and the infusion is rubbed on the itching part.

MEDICINAL PROPERTIES: American Holly has been used as a diaphoretic (20) and is demulcent and expectorant (8).

COMMENTS: The demulcent properties make this a soothing wash. Diaphoretics have been used to bring out the skin eruption in measles but they are scarcely necessary as the rash will come out unaided.

Ilex vomitoria Aiton Hort. Kew. 1 (1789) 170.

Cassena, Yaupon.

ALABAMA-emetic-The toasted leaves are boiled and the decoction is drunk to cause emesis (3).

CREEK-emetie-The leaves and shoots are made into a decoction which is drunk (I).

CHEROKEE-emetic-A strong infusion, made from the leaves, is drunk (1).

NATCHEZ-emetic (6).

MEDICINAL PROPERTIES: Ilex vomitoria, or Cassine Tea, is a well known emetic (20).

COMMENTS: This is the famous Black Drink mentioned so frequently in the literature on the Southeastern Indians. It is primarily a ceremonial emetic and drinking it is part of the Busk Ceremonial.

CELASTRACEAE
(Staff Tree Family)

Evonymus americanus Linnaens Sp. PI. (1753) 197.
Strawberry Bush.

CHEROKEE-urinary trouble-An infusion is made from the bark of Evonymus americanus, Calycanthus fertilis, Vitis aestivalis, Rubus allegheniensis, Vitis labrusca and Ampelopsis cordata and the roots of Lysimachia quadrifolia. This is given in cases where the symptoms are excessive urination followed by a gradual decrease until urination is difficult.

MEDICINAL PROPERTIES: The bark is cathartic and also acts as an irritant on the gastro-intestinal mucous membrane (20).

COMMENTS: No comments can be offered owing to the difficulty in diagnosing the ailment.

ACERACEAE
(Maple Family)

Acer rubrum Linn. var. Drummondii (Hook. & Arn.) Sargent Rept. Forests No. Am. (l0th Census U.S. 9) (1884) 50.

Red or Swamp Maple.

KOASATI-gun wound-The bark, in mixture with that of Ulnus americana and Nyssa sylvatica, is made into an infusion which is drunk and also used as an application to the wound.

MEDICINAL PROPERTIES: No data.

SAPINDACEAE
(Soapberry Family)

Aesculus sp.

Buckeye, Horse Chestnut.

CREEK-pulmonary consumption-The roots are used.

KOASATI-tonsils-The beans are heated and applied to the throat.

MEDICINAI. PROPERTIES: The kernel of the nut is an errhine, the bark is an antiperiodic, and the leaves are used in a decoction for whooping cough (20).

COMMENTS: The medicinal properties of this plant are of no use in the above applications.

Aesculus Pavia Linnaeus Sp. PI. (1753) 344.

Red Buckeye.

CHEROKEE-dyspepsia-A mixture of Buckeye roots with those of Specllíaria pelfoliata is steeped overnight in warm water with the bark of Gleditsia triacanthos. The patient drinks and bathes in the medicine to relieve dyspepsia.

MEDICINAL PROPERTIES: No data.

BALSAMINACEAE
(Touch-Me-Not Family)

Impatiens biflora Walter FI. Carol. (1788) 219.

Spotted Touch-Me-Not.

CHEROKEE-childbirth-The stems are made into a decoction with the roots of Veronica officinalis and the bark of Ulmus fulva. This is drunk to ease childbirth.

MEDICINAL PROPERTIES: No data.

RHAMNACEAE
(Buckthorn Family)

Berchemia scandens (Hill) Trelease in Trans. Acad. Sci. St. Louis 5 (1889) 364.

Supple-jack.

CHOCTAW-blood turns to water.

KOASATl-cough-The burned stem is put into water. This is taken as a cough medicine.

MEDICINAL PROPERTIES: No data.

Ceanothus sp.

CHOCTAW*-lung hemorrhage-The roots are boiled and the extract is taken in small doses to stop a lung hemorrhage.

MEDlCINAL PROPERTIES: See Ceanothus americanus below.

Ceanothus americanus Linnaeus Sp. PI. (1753) 195.

New Jersey Tea.

ALABAMA-injured feet and legs-A decoction is made by boiling the roots. This is cooled and used to bathe the injured part.

MEDlCINAL PROPERTIES: The root is astringent (21). It has been shown that the drug contains a mixture of alkaloids which reside in the root bark; that an extract containing these alkaloids has the property of hastening blood coagulation when orally administered; that this effect on blood coagulation is apparent regardless of the age or sex of the subject; that this is due to an acceleration of the action of thromboplastin" (18).

COMMENTS: The astringent properties are useful as an application to wounds. The property of hastening blood coagulation makes this an invaluable remedy for lung hemorrhage.

VlTACEAE
(Vine Family)

Ampelopsis cordata Michallx FI. Bor.-Am. I (1803) 159.

CHEROKEE-urinary trouble-An infusion is made by boiling together the barks of Ampelopsis cordata, Calycantllls fertilis, Vitis aestivalis, Rubus allegheniensis, Evonymus americanus and Vitis labrusca, with the roots of Lysimachia quadriJolia. This is given in cases where the patient has difficulty in urinating after a period of excessive urination.

MEDlCINAL PROPERTIES: No data.

Parthenocissus sp.

Woodbine.

CREEK-gonorrhea-The roots are used.

MEDICINAL PROPERTIES: No data.

Vitis aestivalis - Michaux FI. Bor.-Am. 2 (1803) 230.

Summer Grape.

CHEROKEE-urinary trouble-See Ampelopsis cordata above.

MEDICINAL PROPERTIES: No data.

Vitis labrusca Linnaeus Sp. PI. (1753) 203.

Northern Fox Grape.

CHEROKEE-urinary trouble-See Ampelopsis cordata above.

MEDICINAL PROPERTIES: No data.

TILIACEAE
(Linden Family)

Tilia americana Linnaens Sp. PI. (1753) 514.

Basswood, Limetree.

CHEROKEE-dysentery-The inner bark, mixed with that of Ulmus fulva and Platanus occidentalis, is made into an infusion with the excrescences from twigs of Quereus borealis var. maxima, Gerardia virginica, and the buds or suckers growing from the base of Quereus stellata.

MEDICINAL PROPERTIES: No data.

MALVACEAE
(Mallow Family)

Gossypium herbaceum Linnaeus Sp. PI. (1753) 693. J

Common Cotton.

Introduced from the West Indies, Mexico, Central America South America.

KOASATI-childbirth-The whole roots are boiled and the decoction is drunk during labor to ease childbirth.

MEDICINAL PROPERTIES: Cotton root is an excellent oxyto and is valuable in arresting hemorrhage and ameliorating the other symptoms of uterine fibroids (20).

COMMENTS: This is a most valuable medicine as used by the Koasati.

HYPERICACEAE
(St. John's Wort Family)

Ascyrum hypericoides Linnaens Sp. PI. (1753) 788. Aseyrnlll Crucv-Andreae Linnaeus Sp. PI. ed. 2 (1763) 1107 Ascyrum muticaule Michaux ex Willdenow Sp. PI. 3 (1803) 1472.

St. Andrew's Cross.

ALABAMA-eye wash-A tea, made from this plant, is used as an eye wash.

ALABAMA-dysentery-The entire plant is boiled and the infusion is drunk four or five times a day to cure dysentery.

ALABAMA-children old enough to walk but still too weak to do so-This plant is made into a mash with the bark of Quercus borealis var. maxima and tree moss. The mash is boiled and the child is bathed in the decoction.

CHOCTAW*-colic-A decoction of the boiled root is taken to relieve colic.

CHOCTAW*-sore eyes-A tea, made from the leaves, is used as a wash for sore eyes.

NATCHEZ-for children unable to urinate-The plant is made into a tea which the child is given to drink.

MEDICINAL PROPERTIES: No data.

Ascyrum linifolium Spach Rist. Nat. Veg. Phan. 5 (1836) 459.

KOASATI-rheumatism-A decoction, made by boiling the leaves in well water, is drunk to relieve rheumatism.

KOASATI-rheumatism-A mixture of the leaves of Ascyrum linifolium, Bignonia capreolata and Cephalanthus occidentalis is made into an infusion with the roots of Liatris acidota, Baptisia leneantha and Erythrina herbaeea. This infusion is drunk to relieve rheumatism.

MEDICINAL PROPERTIES: No data.

CISTACEAE
(Rockrose Family)

Lechea sp.

Pinweed.

CATAWBA-sores-The beaten root, mixed with grease, is boiled and the infusion is applied to sores.

MEDICINAL PROPERTIES: No data.

ARALIACEAE
(Ginseng Family)

Aralia sp.

CREEK-passing blood-The root is used.

MEDICINAL PROPERTIES: An infusion of the root bark is emetic and cathartic (20).

COMMENTS: A cathartic is useful in cases of dysentery, but an astringent agent should be used after it.

Aralia spinosa Linnaeus Sp. PI. (1753) 273.

Ange]ica Tree, Hercules Club.

CHOCTAW-boils-The mashed roots are boiled and made into a poultice which is applied to the boil.

CHOCTAW-swollen leg veins-The beaten roots are applied as a poultice to swollen leg veins.

KOASATI-sore eyes-Cold water, in which the roots have been put, is dropped into the eye to relieve sore eyes.

MEDICINAL PROPERTIES: This contains tannin (20).

COMMENTS: The tannin is a strong astringent, useful for boils and sore eyes.

Panax quinquefolium Linnaeus Sp. PI. (1753) 1058.

Ginseng.

CREEK-cuts-Ginseng is applied to the cut to stop the flow of blood.

CREEK-fever-A decoction is made by boiling ginseng with ginger and mixing it with alcohol. This is given to the patient to drink during a fever attack to cause sweating.

CREEK-short windedness-A decoction, made by boiling the cut roots, is drunk.

MEDICINAL PROPERTIES: Ginseng is little more than a demulcent (20).

COMMENTS: The demulcent properties of Ginseng are of no value in the above ailments.

Panax trifolium Linnaeus Sp. PI. (1753) 1059.

Dwarf Ginseng.

CHEROKEE-breast pains-Dwarf Ginseng, mixed with the roots of Aristolochia Serpentaria, is put into water which is heated by a few live coals. This is drunk to relieve a pain in the breast.

CHEROKEE-apop]exy-The roots of Dwarf Ginseng are made into a decoction with Nicotiana rustica. This is blown or rubbed into scratches which have been made on the patient.

CHEROKEE-headache-The doctor chews the plant, then takes a sip of water and blows it on the patient's head.

MEDlCINAL PROPERTIES: No data.

UMBELLIFERAE
(Parsley Family)

Cicuta maculata Linnaeus Sp. PI. (1753) 256.

Spotted Cowbane.

CHEROKEE-contraceptive- Women chew and swallow the roots every day for four days to make themselves sterile.

MEDlCINAL PROPERTIES: Upon man it operates as an acrid narcotic, producing vertigo, intoxication, and convulsions, followed by general paralysis and death (20).

COMMENTS: This plant is not a contraceptive and its use is actually dangerous to the user.

Eryngium aquaticum Linnaeu.~ Sp. PI. (1753) 232. Eryngium virginianum Lamarck Encycl. 4 (1797) 759.

ALABAMA-emetic-An infusion, made by boiling the whole plant, is drunk to cause emesis (19).

CHEROKEE-nausea-An infusion, made of seven plants, is drunk to cause vomiting as a cure for nausea.

KOASATI-emetic-A decoction of the boiled roots is drunk as an emetic.

MEDICINAL PROPERTIES: The root contains diaphoretic and expectorant properties, and in large doses is emetic (20).

COMMENTS: This emetic is used ceremonially as well as medicinally among the Alabama and Koasati. The latter attribute great magical powers to the plant and believe that merely striking an enemy with it will kill him (19).

Eryngium yuccifolium Michaux FI. Bor.-Am. (1803) 164.

Rattlesnake Master, Button Snakeroot.

CREEK-kidney trouble-The pounded root is put into water. This is drunk to relieve kidney trouble.

CREEK-neuralgia-Cold water, in which the pounded root' been placed, is drunk to cure neuralgia.

CREEK -snake bite.

CREEK-to cleanse the system and purify the blood.

NATCHEZ-nosebleed-The stem and leaves are chewed to stop a nosebleed.

NATCHEZ-dysentery-The parched leaves are made into a tea which is drunk to cure dysentery.

MEDICINAL PROPERTIES: This contains diuretic, expectorant and diaphoretic properties. In large doses it is emetic (7).

COMMENTS: The diuretic properties should be of some use in kidney trouble. Although not stated in the source material, emesis may be desired by the Creek to cleanse the system.

CORNACEAE
(Dogwood Family)

Cornus sp.

ALABAMA-dysentery-A decoction of the boiled inner bark is drunk to cure dysentery.

MEDICINAL PROPERTIES: This is an astringent tonic (20).

COMMENTS: The astringent properties are beneficial for dysentery.

Cornus florida Linnaeus Sp. PI. (1753) 117.

Flowering Dogwood.

CHEROKEE-hoarseness-A decoction is made by boiling together the inner barks of Cornus florida, Salix alba, Prunus virginiana, Quercus rubra and Pyrus Malus. This is drunk to loosen the phlegm so that it may be coughed up.

CHEROKEE-worms in children-The barks of Cornus florida, Sassafras albidum, Amelanchier canadensis and Nyssa sylvatica are steeped in warm water with the roots of Rosa virginiana. The child drinks and bathes in the infusion.

MEDICINAL PROPERTIES: The bark is a feeble astringent tonic (20).

COMMENTS: The astringent properties are useful in hoarseness, but arc scarcely necessary in this case as Quercus rubra and Salix alba are strong astingents.

Nyssa sylvatica Marshall Arbust. Am. (1785) 97. Nyssa multiflora Wangenheim Beytr. zur. teutsch. holzg. Forstwiss. Anpfl. (1787) 46.

Black Gum.

CHEROKEE-worms in children-See Cornus florida above.

CHEROKEE-unable to retain food-The inner bark, mixed with that of Alnus rugosa, Clethra acuminata and Corylus americana, is made into a decoction. This is drunk to induce vomiting when the patient has been unable to retain food.

CREEK-pulmonary tuberculosis-The patient drinks and bathes in a decoction made from the boiled bark.

KOASATI-gun wound-A decoction made by boiling together the barks of Nyssa sylvatica, Ulmus americana and Acer rubrum var. Drummondii, is drunk and is also applied to the wound.

MEDICINAL PROPERTIES: No data.

ERICACEAE
(Heath Family)

Chimaphila umbellata (L.) Nuttall Gen. PI. 1 (1818) 274.

Pipsissewa.

CATAWBA-backache-Pipsissewa is used with Asarum arifolium.

MEDICINAL PROPERTIES: Pipsissewa is tonic, astringent and diuretic (20).

COMMENTS: This remedy is of no value for backache.

Clethra acuminata Michaux FI. Bor.-Am. 1 (1803) 260.

CHEROKEE-unable to retain food-- The inner bark, mixed with that of Alnus rugosa, Nyssa sylvatica and Corylus americana, is made into a decoction which is drunk to induce vomiting in cases where the patient has been unable to retain food.

CHEROKEE-vomiting bile-A mixture of the bark scrapings of Clethra acuminata and Hydrangea cinerea is made into a decoction. This is drunk when the patient has been vomiting bile.

MEDICINAL PROPERTIES: No data.

Epigaea repens Linnaeus Sp. PI. (1753) 395.

Mayflower.

CHEROKEE-diarrhea in children-An herb infusion is given to the child to drink to cure diarrhea.

CHEROKEE-abdominal pain-An herb decoction is made from Epigaea repens, Hepatica acutiloba and Asarum canadense. This is boiled down to a thick syrup and is drunk to cause vomiting in cases of abdominal pain.

MEDICINAL PROPERTIES: This plant is astringent and tonic (20).

COMMENTS: The astringent properties are beneficial in diarrhea.

Gaylussacia sp.

Huckleberry.

CHICKASAW-delirium-The roots are used.

MEDICINAL PROPERTIES: No data.

Kalmia latifolia Linnaeus Sp. PI. (1753) 391.

Mountain Laurel.

CHEROKEE-aches-The leaves, mixed with those of Veratrum viride and Rhododendron maximum, are made into a warm infusion. This is put on scratches which ha\-e been made over the location of the pain.

CHEROKEE-scratches on the legs-A composite medicine is made from the leaves of Kalmia latifolia, Leucothoe Catesbaei and Rhododendron maximum, boiled with the roots of Veratrum viride and Gillenia trifoliata. This is rubbed into scratches which have been made on the legs as a preliminary treatment to the application of medicine in various ailments.

MEDICINAL PROPERTIES: The leaves are astringent (21).

COMMENTS: No data is given in the original source (10) as to which reaction the Cherokee desire from the use of this medicine. The astringent properties would tend to close up the scratches, but the counter-irritant reaction of Veratrum viride would be the one noticed by the user since it has very strongly reacting properties.

Leucothoe Catesbaei (Walt.) A.Gray Man. Bot. No. U.S., ed. 2 (1856) 252.

Fetter Bush.

CHEROKEE-scratches on the legs-See Kalmia latifolia above.

MEDlCINAL PROPERTIES: This is an errhine (11).

COMMENTS: Fetter Bush has no reaction as applied in this medicine.

Lyonia ligustrina (L.) deCandolle Prodr. 7 (1839) 599. Sebastiana ligustrina Mueller-Argovius in deCandolle Prodr. 15, pt. 2 (1866) 1165.

Male Berry.

ALABAMA. -cathartic-The roots are chewed.

MEDICINAL PROPERTIES: No data.

Oxydendron arboreum (L.) deCandolle Prodr. 7 (1839) 601.

Sourwood Tree, Sorrel Tree.

CATAWBA-menopause-Oxydendron arboreum (no data in original source as to part used) is put into cold water. Women drink this to regulate and check excessive flow of blood.

MEDlCINAL PROPERTIES: The leaves are diuretic (20).

COMMENTS: This plant is of no value as used by the Catawba.

Rhododendron maximum Linnaeus Sp. PI. (1753) 392.

Great Laurel.

CHEROKEE-aches-See Kalmia latifolia above.

CHEROKEE-scratches on the legs-See Kalmia latifolia above.

MEDICINAL PROPERTIES: The Great Laurel is narcotic (11).

COMMENTS: It is doubtful if the narcotic properties would have any effect in the above uses.

PRIMULACEAE
(Primrose Family)

Lysimachia quadrifolia Linnaells Sp. PI. (1753) 147.

Loosestrife.

CHEROKEE-urinary trouble-The roots are made into an infusion by boiling them with bark of Calycanthus sfertilis, Vitis aestivalis, Rubus allegIteniensis, Evonymus americanus, Vitis labrusca and Ampelopsis cordata. This infusion is given when the patient has difficulty in urinating after a period of excessive urination.

MEDICINAL PROPERTIES: This is an astringent and stomachic. (13).

COMMENTS: It is impossible to diagnose this ailment from the symptoms given.

STYRACEAE
(Storax Family)

Symplocos tinctoria (L.) L' Heritier in Trans. Linn. Soc. 1 (1791) 176.

Horse Sugar.

CHOCTAW-fever-The top of the root is scraped and the decoction is drunk to relieve a fever.

MEDICINAL PROPERTIES: No data.

OLEACEAE
(Olive Family)

Chionanthus virginica Linnaeus Sp. PI. (1753) 8.

Old Man's Beard.

CHOCTAW-infected sore-A decoction of the boiled roots is splashed on the sore.

CHOCTAW*-cuts and bruises- Water is added to the beaten bark and it is used as a poultice for cuts and bruises.

CHOCTAW*-wounds-Wounds are bathed in an extract made from the boiled bark.

KOASATI-cuts-The bark is made into a decoction which is used as a wash for cuts.

MEDICINAL PROPERTIES-The bark contains narcotic properties. (9, 11).

COMMENTS: If the narcotic properties are strong enough, they would relieve the pain as administered above.

LOGANIACEAE
(Logania Family)

Spigelia Anthelmia Linnaeus Sp. PI. (1753) 149.

CREEK-worms.

MEDlCINAL PROPERTIES: See Spigelia marilandiea below.

Spigelia marilandica Linnaens Syst. N at., ed. 12 (1767) 734.

Indian Pink.

CHEROKEE-worms-A decoction of the roots, sweetened with honey, is drunk to dispel worms.

CHEROKEE-worms-A decoction is made from the roots of Spigelia marilandica and Cypripedium Calceolus var. pubescens. This is sweetened with honey or with the pods of Gleditsia triacanthos and drunk to dispel worms.

MEDlCINAL PROPERTIES: This is considered one of the most powerful anthelmintics (20).

COMMENTS: The use of this plant was originally learned from the Cherokee and was introduced into the medical practice of the white race by doctors in the South (20).

GENTIANACEAE
(Gentian Family)

Obolaria virginica Linnaeus Sp. PI. (1753) 632.

Pennywort.

CHOCTAW*-cuts and bruises-The roots are mixed with the scum collected from the top of the water after boiling Liquidambar Styracijiua. This mixture is used as a dressing for cuts and bruises.

CHOCTAW*-cuts-Cuts are bathed in a decoction of the boiled roots.

MEDICINAL PROPERTIES: No data.

ASCLEPIADACEAE
(Milkweed Family)

Asclepias sp.

Milkweed.

NATCHEZ-Syphilis.

NATCHEZ--kidney trouble and Bright's Disease-The root is cut into small pieces and made into a tea. Three swallows of tea are taken three times a day for four days to relieve kidney trouble.

MEDICINAL PROPERTIES: It is probably of little medicinal value (20), but appears to exert a stimulant power over the excretories (13).

COMMENTS: The diuretic properties are useful in kidney trouble.

BORAGINACEAE
(Borage Family)

Cynoglossum virginianum Linnaells Sp. PI. (1753) 134.

Wild Comfrey.

CHEROKEE-itching genitals-The roots, mixed with those of Lappula virginiana, are made into a decoction which is drunk a is bathed with to relieve the itching.

MEDICINAL PROPERTIES: This plant is supposed to be poisonous (11).

COMMENTs: This remedy is of no medicinal value as used.

Lappula virginiana (L.) Greene in Pittonia 2 (1891) 182. ,

Stickseed.

CHEROKEE-itching genitals-See Cynoglossum virginianum,

MEDICINAL PROPERTIES: No data.

VERBENACEAE
(Vervain Family)

Callicarpa americana Linnaeus Sp. PI. (1753) 111.

French Mulberry.

ALABAMA-malarial fever-The patient is given a sweat bath with the steam from the boiling roots and leaves of the French Mulberry.

CHOCTAW-dysentery-The roots are boiled with those of Rubus sp. The patient drinks the decoction to cure dysentery.

CHOCTAW*-colic-A decoction made from the roots and berries is drunk to relie,-e colic.

CHOCTAW-dizziness-The roots are boiled and the decoction is drunk during attacks of dizziness.

KOASATI-stomach ache-A decoction is made by boiling the roots. This is drunk to relieve stomach ache.

MEDICINAL PROPERTIES: No data.

COMMEN'TS: The sweating of the patient during a fever attack would be beneficial regardless of the plants used.

LABIATAE
(Mint Family)

Collinsonia canadensis Linnaeus Sp. PI. (1753) 28.

Rich-weed.

CHEROKEE-swollen breast-The roots and leaves are boiled with the whole plants of Camptosorus rhizophyllus and Asarum canadense. The infusion is applied to the breast and is also drunk to cause vomiting which is believed to reduce the swelling.

MEDICINAL PROPERTIES: Collinsonia canadensis contains tonic, astringent, diaphoretic and diuretic properties and is locally irritant. It produces vomiting even in small doses (20).

COMMENTS: This medicine acts as an irritant in external application and as an emetic when taken internally. It is impossible to say, however, why the Cherokee expect emesis to alleviate a swelling in the breast.

Hedeoma pulegioides (L.) Pcrsoon Syn. PI. 2 (1807) 131.

American Pennyroyal.

CATAWBA--colds-The roots are boiled.

CHICKASAW-itching eyes-The roots are soaked and the medicine is applied to the forehead to relieve itching eyes.

MEDICINAI. PROPERTIES: American Pennyroyal is a stimulant aromatic and promotes perspiration when given in a warm infusion (20).

COMMENTS: The diaphoretic properties are useful in the treatment of colds.

Monarda sp.

Horsemint.

CREEK-to promote perspiration-A decoction is made by boiling the entire plant.

CREEK-dropsy-The patient drinks and bathes in an infusion made by boiling together Monarda sp. and Salvia sp.

CREEK-delirium-A decoction is made by boiling Monarda sp. with Everlasting.

MEDICINAI. PROPERTIES: Horsemint is stimulant and carminative (20).

COMMENTS: This plant probably contains the diaphoretic properties found in Monarda fistulosa (see below) in which event it will promote perspiration.

Monarda fistulosa Linnaeus Sp. PI. (1753) 22.

Wild Bergamot.

CHOCTAW-cathartic-An infusion, made of the boiled leaves is drunk to make the bowels move.

CHOCTAW-chest pain in children-Wild Bergamot and Erythrina herbacea are mixed with grease and rubbed on the child's chest to relieve the pain.

KOASATI-chill-The patient bathes in a decoction of the boiled leaves to cure a chill.

MEDICINAL PROPERTIES: This is a very active diaphoretic (20).

COMMENTS: The diaphoretic properties are of no value in the above applications.

Pycnanthemum albescens Torr. ~ Gray in Am. Journ. Sci. 42 (1842) 45.

CHOCTAW*-colds-The leaves are boiled and the decoction is drunk every hour to cause sweating as a relief from colds.

MEDICINAL PROPERTIES: Its properties are similar to those of P. linifolium Pursh, the hot infusion of which is diaphoretic (20).

COMMENTS: This medicine will cause sweating which is beneficial as a cure for colds.

Pycnanthemum incanum (L.) Michaux FI. Bor.-Am. 2 (1803) 7.

Mountain Mint, Wild Basil.

CHOCTAW-headache- The mashed leaves are placed in warm water which is given to the patient to drink and is poured over his head to relieve a headache.

CHOCTAW-sickly all the time-The doctor takes a mouthful of the medicine, made by mashing the leaves in water, and blows it on the patient, three times on the head, three times on the back, and three times on the chest. Before sunup the next morning the patient is bathed in the medicine.

KOASATI-Iaziness-The cold water in which the leaves have been placed is used by the patient as a drink and to bathe his face.

KOASATI-nosebleed-The medicine, made by putting the whole plant in water, is put up the nose to stop a nosebleed.

KOASATI-headache-The roots, mixed with those of Salix nigra, are boiled. The decoction is drunk to relieve a headache.

MEDICINAI. PROPERTIES: This species contains tannin and is astringent (8).

COMMENTS: The astringent properties are useful in stopping a nosebleed.

Salvia lyrata Linnaeus Sp. PI. (1753) 23.

Lyre-leafed Sage.

CATAWBA-sores-A salve, made from the roots, is applied to the sores.

MEDICINAL PROPERTIES: The plants of the Labiatae are said to contain tannin (8).

COMMENTS: The astringent properties of the tannin make this a beneficial application for sores.

Scutellaria lateriflora Linnaeus Sp. PI. (1753) 598.

Mad-dog Skullcap.

CHEROKEE-to expel the afterbirth-The roots are mixed with those of Polymnia uvedalia and made into a decoction which the mother drinks as an emetic to aid in expelling the afterbirth.

MEDlCINAL PROPERTIES: Although once used in the treatment of various ailments, Skullcap is destitute of medicinal properties (20).

COMMENTS: This plant is of no value as applied by the Cherokee:,

SOLANACEAE
(Nightshade Family)

Nicotiana rustica Linnaeus Sp. PI. (1753) 180.

Wild Tobacco.

CHEROKEE-apoplexy-Tobacco leaves are made into a decoction with the roots of Panax trifolium. This decoction is blow or rubbed into scratches made on the patient.

CHEROKEE-headache-The doctor chews the tobacco, sips water, and then blows on the patient's head.

MEDICINAL PROPERTIES: Tobacco is relaxant and its active principle is absorbed by the skin (20).

COMMENTS: Possibly tobacco rubbed into scratches has some relaxing effect in apoplexy. It is impossible to say whether or not this method of using it would have a strong enough effect to quiet the patient.

SCROPHULARIACEAE
(Figwort Family)

Collinsia violacea Nuttall in Trans. Am. Phil. Soc. 5 (1837):, 179.

NATCHEZ-coughs, consumption-The patient drinks a tea made from the roots.

MEDICINAL PROPERTIES: No data.

Gerardia virginica (L.) Britton, Stern & Poggenberg Prel. Cat. N. Y. (1888) 40. Dasystoma virginica (L.) Britton in Mem. Torr. Bot. Club 5 (1864) 295.

Smooth False Foxglove.

CHEROKEE-dysentery-A compound medicine is made by boiling together Gerardia virginica, the inner barks of Ulmus fu1va. Platanus occidentalis and Tilia americana, the excrescences from twigs of quercus borealis var. maxima, and the buds or suckers growing from the base of quercus stellata.

MEDlCINAL PROPERTIES: No data.

Verbascum Thapsus Linnaeus Sp. PI. (1753) 177.

Common Mullein.

CHEROKEE-diphtheria-The leaves are beaten up in warm water and applied to the throat as a poultice.

CREEKS-coughs-A decoction of the boiled roots is drunk to relieve coughs.

MEDICINAL PROPERTIES: Mullein leaves are demulcent, emollient and anodyne and are useful in pectoral complaints (20).

COMMENTS: The demulcent properties make this a soothing application in diphtheria.

Veronica officinalis Linnaeus Sp. PI. (17,)3) II.

Common Speedwell.

CHEROKEE-childbirth-The roots are made into a decoction with the bark of Ulmus fulva and the stems of Impatiens biflura. This is drunk by women to ease childbirth.

MEDlCINAL PROPERTIES: No data.

BIGNONIACEAE
(Bignonia Family)

Bignonia capreolata Linnaeus Sp. PI. (1753) 624.

Cross-vine.

CHOCTAW-dropsy- The bark is mashed with that of Magnolia grandiflora and boiled. The patient bathes in the steam from the boiling decoction.

KOASATI-headache-The patient drinks and bathes in a decoction of the boiled bark.

KOASATI -rheumatism -The leaves of Bignonia capreolata, Ascyrum linifolium and Cephanthus occidentalis are boiled with the roots of Baptisia leucantha, Liatris acidota and Erythrina herbacea.

The decoction is drunk as a cure for rheumatism.

MEDICINAI. PROPERTIES: No data.

RUBIACEAE
(Madder Family)

Cephalanthus occidentalis Linnaeus Sp. PI. (1753) 95.

Buttonbush.

KOASATI-rheumatism-See Bignonia capreolata above.

KOASATI-enlarged muscles-A decoction, made by boiling the root, is drunk in cases of enlarged muscles.

CHICKASAW-eye trouble-The roots are warmed and put on the head to relieve eye trouble.

CHOCTAW*-sore eyes-The bark is boiled and the decoction is used to bathe the eyes when they are sore.

CHOCTAW*-toothache-The bark is chewed to relieve toothache.

MEDICINAL PROPERTIES: This contains astringent properties (8) as well as being laxative and tonic (20).

COMMENTS: The astringent properties may afford some relief in sore eyes and toothache.

CAPRIFOLIACEAE
(Honeysuckle Family)

Sambucus canadensis Linnaeus Sp. PI. (1753) 269.

Common Elder.

CHIKASAW-severe headache- warm water, in which Elder and Cedar branches have been put, is placed on the patient's head to relieve a headache.

CHOCTAW-liver trouble-The seeds and roots are made into a decoction which is drunk for liver trouble.

CREEK-swollen breast-The pounded roots are mixed with hot water and bound on the swollen breast.

MEDICIAL PROPERTIES: The inner bark is a hydragogue cathartic and an emetic, the berries are diaphoretic and aperient, the flowers are sudorific, and the root has been recommended in dropsy as a hydragogue cathartic (20).

CONTENTS: The medicinal properties of Elder are of no value in the above ailments.

Sambucus intermedia Carriere in Rev. Hortic. (1876) 400.

CHOCTAW-swollen hands-The beaten leaves are mixed with flour or meal and applied to the swollen hands as a poultice.

CHOCTAW-dyspepsia- A decoction, made by boiling the root, is drunk to relieve dyspepsia.

CHOCTAW-bladder trouble-A decoction of the boiled root is drunk to cause urination when the bladder hurts.

MEDICINAL PROPERTIES: This has diuretic properties (8).

COMMENTS: The diuretic properties are beneficial in bladder trouble.

CUCURBITACEAE
(Gourd Family)

Citrullus vulgaris Schrader in Ecklon & Zeyher Enum. PI. Af. Aust. Extratrop., pt. 2 (1836) 279.

Watermelon.
Native of South Africa.

CHICKASAW-blood in the urine-The black watermelon seeds are mashed and boiled. The decoction is drunk to stop blood in the urine.

MEDICINAL PROPERTIES: Watermelon seeds are used in cases of strangury and other affections of the urinary passages (20).

COMMENTS: This is a very useful remedy in urinary ailments and has long been employed as a domestic remedy among country people.

CAMPANULACEAE
(Bluebell Family)

Lobelia spicata Lamarck Encycl. 3 (1791) 587.

CHEROKEE-shaking arms-The roots are steeped in cold water in a "cymling gourd." The medicine is put into scratches on the arms. This ailment is a type of paralysis.

MEDICINAL PROPERTIES: This is closely akin to Lobelia inflata which is an antispasmodic, motor depressant and narcotic (12).

COMMENTS: It is impossible to say whether or not enough of the principles of this plant can be absorbed into the system, when administered in this manner, to have an antispasmodic effect.

Specularia perfoliata (L.) A. deCandolle Monogr. Campan. (1830) 351.

Venus's Looking-glass.

CHEROKEE-dyspepsia-The roots, mixed with those of Aesculus Pavia, are steeped overnight in warm water with the bark of Gleditsia triacanthus. The patient drinks and bathes in the decoction to relieve dyspepsia.

MEDICINAL PROPERTIES: No data.

COMPOSITAE
(Composite Family)

Antennaria sp.
Pussy's Toes.

NATCHEZ-coughs, colds-The roots and tops of this plant are made into a tea which is drunk to relieve coughs and colds.

MEDICINAL PROPERTIES: This is a soothing expectorant and a stomachic (8).

COMMENTS: The expectorant properties are beneficial for coughs.

Chrysopsis graminifolia (Michx.) lVuttali Gen. PI. 2 (1818) 151.

Golden Aster.

CHOCTAW*-mouth sores-The entire plant is dried and then burned. The ashes are used as a powder to cure mouth sores.

MEDICINAL PROPERTIES: No data.

Erigeron ramosus Britton, Stern & Poggenberg Prel. Cat.. NY. (1888) 27.

Daisy Fleabane.

CATAWBA-heart trouble-The roots are made into a drink.

MEDICINAL PROPERTIES: This herb is diuretic and stomachic (20).

COMMENTS: The properties of this plant are of no value in heart trouble.

Eupatorium perfoliatum Linnaeus Sp. PI. (1753) 838.

Thoroughwort, Boneset.

KOASATI-to make urine yellow-A decoction made from the roots is drunk to make urine yellow.

KOASATI-emetic-A decoction of the boiled leaves is taken as emetic.

MEDICINAL PROPERTIES: The herb is tonic and diaphoretic and large doses emetic (20).

COMMENTS: This plant produces the desired emesis.

Gnaphalium obtusifolium Linnaeus Sp. PI. (1753) 851.

Common Everlasting.

ALABAMA-nerves and insomnia-A decoction made by boiling everlasting with Cedar, is used to wash the face in cases of nerves and insomnia.

CHEROKEE-muscular cramp-Everlasting is made into an infusion on with Vicia caroliniana. This is rubbed into scratches made over the location of the pain.

CHOCTAW*-colds, lung pain-A decoction of the leaves and blossoms is drunk to relieve a cold or pain in the lungs.

CREEK-mumps-A cloth is dipped in water in which the leaves have been boiled. Lard is added to the cloth which is tied around the throat.

KOASATI-fever-A decoction is made from the leaves, field herbs (names unknown) and salt. This is drunk during fever attacks.

KOASATI-child's fever-The child drinks and bathes in a decoction made by boiling the leaves. Smoking leaves are carried around the house.

MEDICINAL PROPERTIES: Everlasting is used as a tea in intestinal and pulmonary catarrhs, and as a fomentation in bruises. It is said to be anodyne (20).

COMMENTS: As in similar cases mentioned above, it is impossible to say whether or not enough of the anodyne properties are absorbed through scratches to have any effect on the muscular cramp. It is of value in lung pain as applied by the Choctaw, in mumps as applied by the Creek.

Helenium tenuifolium Nuttall in Journ. Acad. Nat. Phil. 7 (1834) 66.

Sneezeweed.

KOASATI-dropsy, great swellings-The patient is given a sweat bath in steam from the boiling water in which the entire plant has been put.

MEDICINAL PROPERTIES: This is an errhine (20).

COMMENTS: Sweating the patient will reduce the swelling, but is a somewhat drastic method as there are apt to be other complications. In the above case, however, the plant used has nothing to do with the effects achieved by the treatment.

Liatris acidota Engelmann ~ Rist. 5 (1837) 218.

Deer Potato.

KOASATI-rheumatism-The roots are mixed with those of Baptisia leucantha and Erythrina herbacea, and are made into an infusion with the leaves of Ascyrum linifolium, Bignonia capreolata and Cephalanthus occidentalis. The decoction is drunk to relieve rheumatism.

MEDlCINAL PROPERTIES: The root possesses diuretic properties (20).

COMMENTS: This remedy is of little use in relieving rheumatism.

Parthenium Hysterophorus Linnaeus Sp. PI. (1753) 988.

KOASTI-dysentery-A decoction, made by boiling the roots, is drunk to stop dysentery.

MEDICINAL PROPERTIES: It is probable that the tannin found in the European species is also found in the American species (8).

COMMENTS: Tannin is an astringent and useful in dysentery.

Parthenium integrifolium Linnaeus Sp. PI. (1753) 988.

CATAWBA-burns-Fresh leaves are put on the burns.

MEDICINAL PROPERTIES: See Parthenium Hysterophorus above.

COMMENTS: Tannin is most beneficial for the relief of burns.

Pluchea foetida (L.) deCandolle Prodr. 5 (1836) 452.

Marsh Fleabane.

CHOCTAW*-fever-The leaves are boiled and the extract is drunk during fever attacks.

MEDICINAL PROPERTIES: No data.

Polymnia uvedalia Linnaells Sp. PI., ed. 2 (1763) 1303.

Leafcup.

CHEROKEE-to expel the afterbirth-A decoction is made from the roots mixed with those of Scutellaria laterifiora. This is drunk to produce vomiting which is thought to aid in expelling the after-birth.

MEDlCINAL PROPERTIES: The root is used as a stimulant, laxative and anodyne (21).

COMMENTS: Neither of these two plants have emetic properties, nor are any medicinal properties found in them which would recommend their use in childbirth.

Solidago sp.

Goldenrod.

ALABAMA-bad cold-A tea, made from the roots, is taken to cure a cold.

ALABAMA-toothache-The roots are put into a cavity to relieve a toothache.

MEDlCINAL PROPERTIES: Goldenrod is an astringent and, in infusions, diaphoretic.

COMMENTS: The astringent properties are useful for a toothache. The diaphoretic properties are of value in dispelling a cold.

Verbesina virginica Linnaeus Sp. PI. (1753) 90l.

Crown beard.

CHOCTAW*-fever-The pounded roots are soaked in water but not boiled. This medicine is taken during fever attacks.

MEDlCINAL PROPERTIES: A decoction of the roots is sudorific (13).

COMMENTS: The sudorific properties are beneficial.

Vernonia sp.

Ironweed.

NATCHEZ-dysentery-A decoction made from the whole plant is drunk to cure dysentery.

MEDICINAL PROPERTIES: The leaves are astringent (13).

COMMENTS: The astringent properties are beneficial in dysentery.

Xanthium commune Britton Man. FI. Northern States & Can. (1901) 912.

Cocklebur, Clotbur.

KOASATI-to remove the afterbirth-Four roots are boiled and the decoction is drunk to remove the afterbirth.

MEDICINAL PROPERTIES: No data.

PART II

DISCUSSION

Before presenting any conclusions that may be drawn from the above data, it will be advisable to discuss certain features apparent in the material which have some bearing on the conclusions. The first of these is the possibility of the borrowing of herbal remedies by one tribe from another. An examination of the 185 plants enumerated above shows that only 40 are used by two or more tribes. Only ten of these 40 plants are utilized by two or more tribes for the same ailment. These are:

Salix-Alabama and Creek for fevers.
Quercus stellata-Cherokee and Creek for dysentery.
Ulmus fulva-Alabama and Cherokee in childbirth.
Chenopodium anthelminticum- Koasati and Natchez for worms; Creek and Natchez for fever.
Ilex apaea-Alabama and Choctaw for sore eyes.
Ilex vamitaria-Alabama, Creek, Cherokee, Natchez as an emetic.
Eryngium aquaticum-Alabama, Cherokee, Koasati as an emetic.
Chiananthus virginiCa-Choctaw and Koasati for cuts.
Pycnanthemum incanum-Choctaw and Koasati for headache.
Cephalanthus occidentalis-Chickasaw and Choctaw for sore eyes.

The properties of these plants are beneficial for the ailment for which they are utilized, with the exception of Pycanthemum incanum which is of no value for a headache. The Chickasaw remedy of Cephalanthus occidentalis for sore eyes would be useful if applied to the eyes, but placing it on the forehead, as they do, will not alleviate eye trouble. It is at least suggestive that the ten plants employed by two or more tribes for the same ailments are, with the one exception, useful ones.

Since all of the 185 plants enumerated are found throughout the Southeast, and except in a few cases, are easy to procure, such a small percentage of similarity seems to indicate very little in tribal borrowing of plant cures. The ten plants, similarly employed by two or more tribes, might represent all the borrowing that actually has taken place. However, the fact that they cut across linguistic, cultural and even geographical lines, as shown in Table I, contrive to make even these suspect.

Table 1
Number of plants used in common for the same ailment.

Alabama and Cherokee	3
Alabama and Creek	2
Choctaw and Koasati	2
Creek and Natchez	2
Alabama and Natchez	1
Alabama and Choctaw	1
Alabama and Koasati	1
Cherokee and Creek	1
Cherokee and Natchez	1
Cherokee and Koasati	1
Chickasaw and Choctaw	1
Koasati and Natchez	1

If these tribes were unwilling to borrow plant uses along linguistic, cultural or even geographical lines, it is perhaps less likely that borrowing would have taken place from groups not so closely associated.

The final words concerning this problem will necessarily wait upon detailed comparison with other areas. It appears improbable, at the present writing, that any of the tribes treated here have received any considerable amount of plant lore from sources outside the Southeast. It seems more probable that local discoveries are to be considered the major source of plant cures.

The possibility of the Indians having learned some of the plant usages from the whites should be taken into account, but information on this subject is lacking. There are many documented in cases of borrowing by the whites from the Indians, but the known cases of Indians borrowing from the whites are few. Even in the use of introduced plants, it is unwise to assume that these uses were learned from the white people, since their use may have been discovered independently by the Indians. The remedies presented in this paper may be divided into three groups for purposes of discussion: (a) those for which the anthropological and medicinal data are insufficient or lacking; (b) those which are useless; (c) those which are of some value as utilized by the Indians.

In most of the cases under (a) the deficiency is in the medicinal data. However, in many cases, the anthropological information is deficient in regard to symptoms of the ailments and methods of preparing and applying the remedies.

The medicines in the second category (b) may have parallel useful cures for the same ailment or may be useless remedies which have no corresponding useful cures. As an example of the former, the Creek, although possessing several good emetics, use a plant for which no emetic properties are given in modern pharmocopoeias. In this case there is the possibility that its properties have not yet been fully recognized in our materia medicas. There is also the possibility of its having a nauseous taste to which the Indians have an aversion that might be of a cultural origin. It is difficult to believe that without some such reason they would continue to use a plant which fails to produce so obvious an effect. A similar case is the use of Monarda by the Choctaw as a cathartic. This is not a cathartic but a carminative. No reason for the use of a cathartic is given in the original source, but in all probability it is used for a stomach ache, in which event, the carminative properties would be beneficial. There are several completely useless remedies for sores, wounds and ulcers in tribes which have other useful cures for the same ailment. Useless remedies for fevers, worms, stomach and urinary ailments are also found in tribes which possess beneficial cures for these complaints. It would be interesting to know if cultural conservatism will retain these useless cures in the native pharmocopoeia or whether in time they will be discarded. It seems reasonable to assume that herb medicines, like other phases of culture, are not static and that, where other obviously beneficial remedies are known and can replace them, the useless remedies would be dropped.

Several of the tribes treat dropsy by sweating to reduce swelling. The Creek produce the sweating by the use of a diaretic plant. The other tribes achieve it by steaming the patient with boiling water in which the plants are put. In this event, use of the plant has no real effect other than, perhaps, impart an odor to the steam. Since there is danger of heart complication resulting from so drastic a treatment as sweating, the cure actually be detrimental and certainly does not treat the cause of the complaint.

In lung ailments, such as tuberculosis, the Indians use medicines which are useful in clearing up the cough that accompanies the disease, but which do not effect the disease itself: Ceanothus for a lung hemorrhage, as used by the Choctaw, causes swift coagulation and stops the bleeding but does not effect the cause of the hemorrhage.

There are several ailments for which none of the tribes have a useful remedy, the principal ones being heart trouble, rheumatism headache and snakebite. The remedies for rheumatism and heart trouble are of no value whatsoever since they neither cure the ailment nor alleviate its effects. Headache may be the result of one of several causes, eye strain, sick stomach, etc. As far as can be determined from the anthropological data, the Indians make no attempt to discriminate between the different possible causes. Five of the remedies consist of liquids placed on the head, a treatment which may be soothing but which is of no real value. The back scratching remedy of the Koasati is in the same category. Of the three remedies which are taken internally, one is a violently reacting medicine which causes stupor when taken in large doses and the other two contain stomachic properties which might be of use if the headache is caused by an upset stomach. Snakebite remedies are identical, or equivalent, to those found in some of our older materia medicas. They must, however, be classed as useless, since anti-venom is the only cure recognized in modern medicine.

The special baths used for protection against smallpox have no effect in preventing the disease. Cleanliness is a good precaution, but as it is the custom throughout the Southeast for all members of a tribe to take a regular morning bath, special baths are scarcely necessary.

To summarize, it can be said that the ailments for which no useful medicines have been discovered are those in which the natives do not fully understand the cause of the complaint. Although they have remedies which help alleviate the effects of some of the ailments, as in tuberculosis, none of these remedies are of use in treating the cause.

The last group (c) are those remedies which have some value as applied by the Indians. Chart I shows the number of useful and useless remedies applied to each ailment. The useful remedies contain certain medicinal properties and these properties are listed below, showing the ailments to which they may be applied.

Astringents-diarrhea, dysentery, sores and wounds, eye trouble and coughs.
Emetics-to cause vomiting, used medicinally and ceremonially.
Tonics-dyspepsia, stomach troubles, and general tonics.
Diaphoretics-to cause sweating in fever and colds.
Demulcents-throat and eye troubles.
Antiperiodics-fevers.
Counter-irritants-cuts, wounds, and aches.
Cathartics-to make the bowels move.
Oxytocics-childbirth.
Anthelmintics-to dispel worms.
Diuretics-urinary ailments.
Anodynes-as a pain killer in toothache.
Antiseptics-sores.
Emolients-soothing application in mumps.
Antispasmodics-apoplexy and "shaking arms. "
Haemostatics-used in lung hemorrhage.

A tribe which has a thorough knowledge of plants containing the above properties would be well fortified against most of their common ailments.

If we assume that the cures enumerated for most of the tribes are representative, though not fully exhaustive, it will be seen that certain medicinal deficiencies exist in each of the tribes (Chart II).
The Cherokee have two cures for fever which would be useful if taken internally, but are worthless when applied externally, the method used by the Cherokee. The misuse of these other valuable remedies leaves the Cherokee with no effective cure for fevers. The Choctaw lack antiperiodics, but have diaphoretics; lack counter-irritants, but use in their stead astringents and anodynes. In the Southeast, the absence of an emetic is unusual, but Choctaw overcome this absence by putting the finger in the throat, a method certainly as effective as any medicine. The Creek lack counter-irritants, anodynes and oxytoxics. The Koasati have diaphoretics and only one useful antiperiodic. The three other fever cures they employ are useless. The Catawba have no antiperiodics but do possess diaphoretics. Since so few Chickasaw remedies are available, it is not possible to consider the data for this tribe representative. Among the Alabama and Natchez, there are recorded complaints for which they do not have at least one useful remedy.

From the foregoing brief discussion, it is apparent that among the southeastern Indians as a whole there is something more than a haphazard use of plants as remedies. Despite the failure of 41% of the medicines to cure or alleviate, it must be conceded that many plant properties are recognized and efficiently applied. Since there is little overlap in the plants used as cures, it would be well to examine the tribes as units. The following table shows how the tribes are ranked according to their useful remedies:

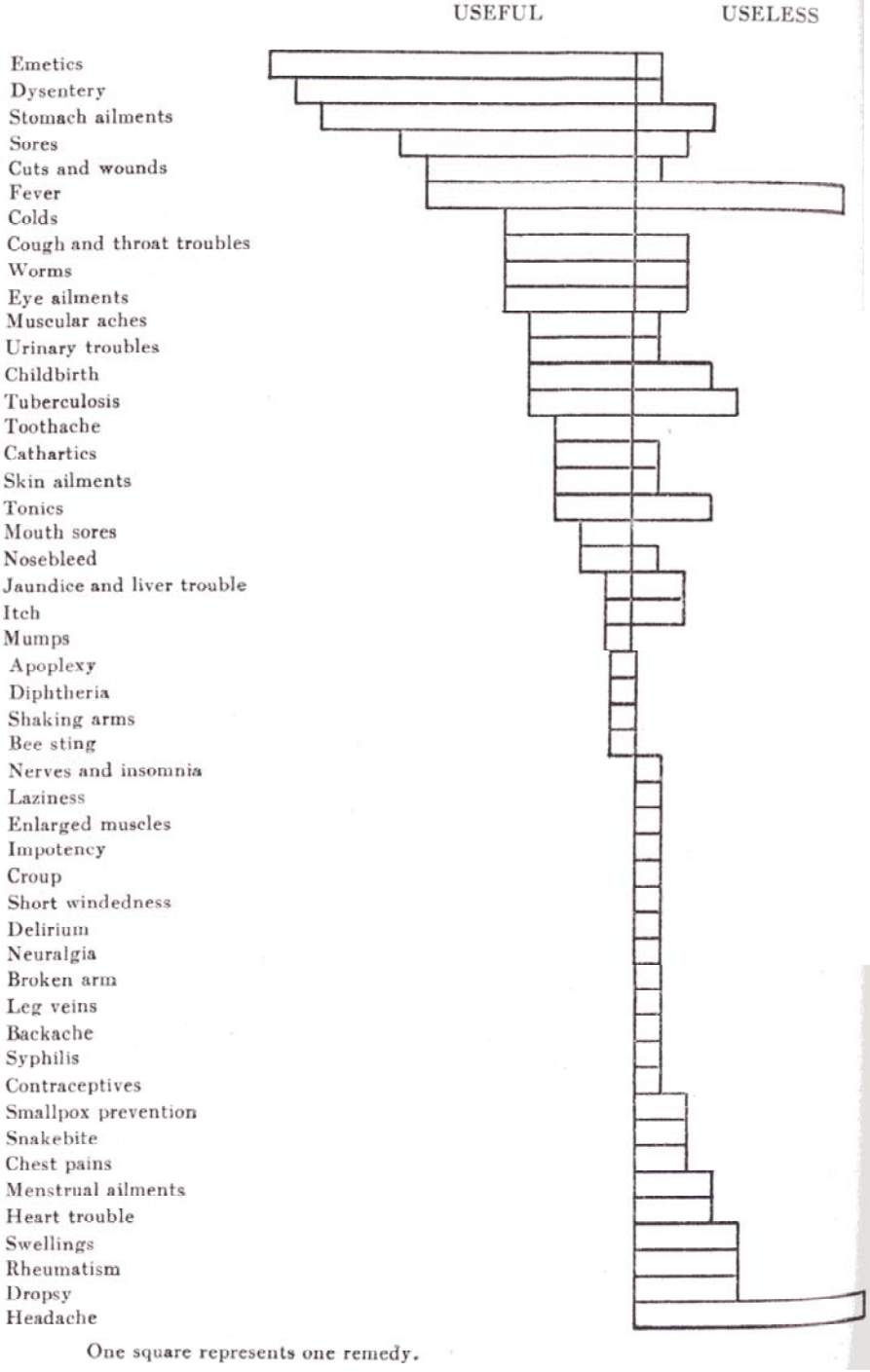
	Total	% Useful	%Useless
Alabama	17	88	12
Cherokee	36	66	34
Catawba	21	66	34
Natchez	12	66	34
Choctaw	38	57	43
Creek	22	52	48
Koasati	32	50	50
Chickasaw	93	36	67

Discounting the Chickasaw because of the small number remedies reported for them, the range between the tribes still remains a large one. Since it has already been suggested that there has been little or no borrowing within the area, that the probability of borrowing from outside the area is slight, and that the main body of each tribe's cures appears to be indigenous; the reason for this great tribal variation need to be more fully studied. There is nothing in the present data that explains this variation and further study of the subject is required. The tribes that have been most closely associated and speak the same languages, the Alabama and Koasati and the Chickasaw and Choctaw, are far apart in the scale of useful medicines. Until further data can be brought to bear on this subject, the fact that certain tribes appear to have a more efficient medical knowledge than others must be accepted, without attempting to explain it.

Since all the tribes, however, with the exception of the Chickasaw and Koasati, show a higher percentage of useful remedies than useless ones, and since, for the area as a whole, 580/c of the remedies are useful, it must be concluded that many plant properties are recognized and effectively applied, and that these Indians have a very real and valuable knowledge of medicinal plants.

CHART I

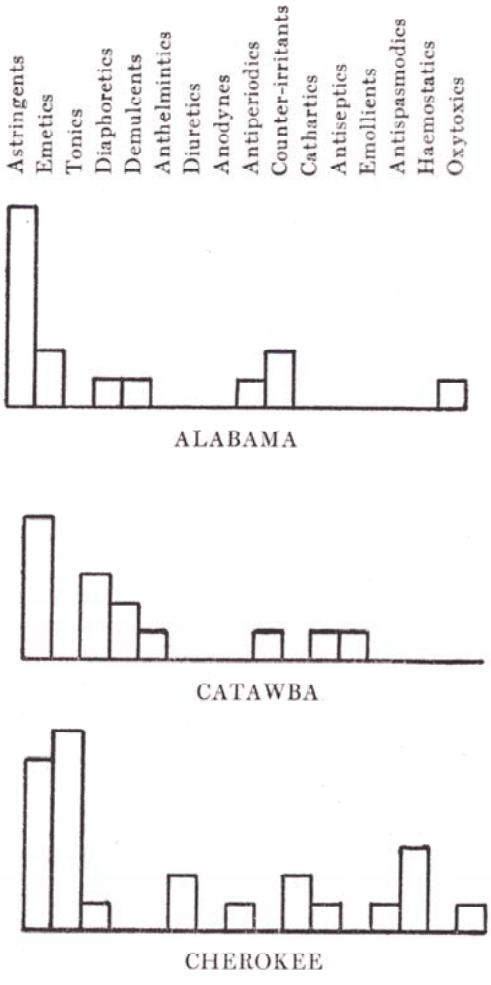
The proportion of useful and useless remedies for each ailment.



One square represents one remedy.

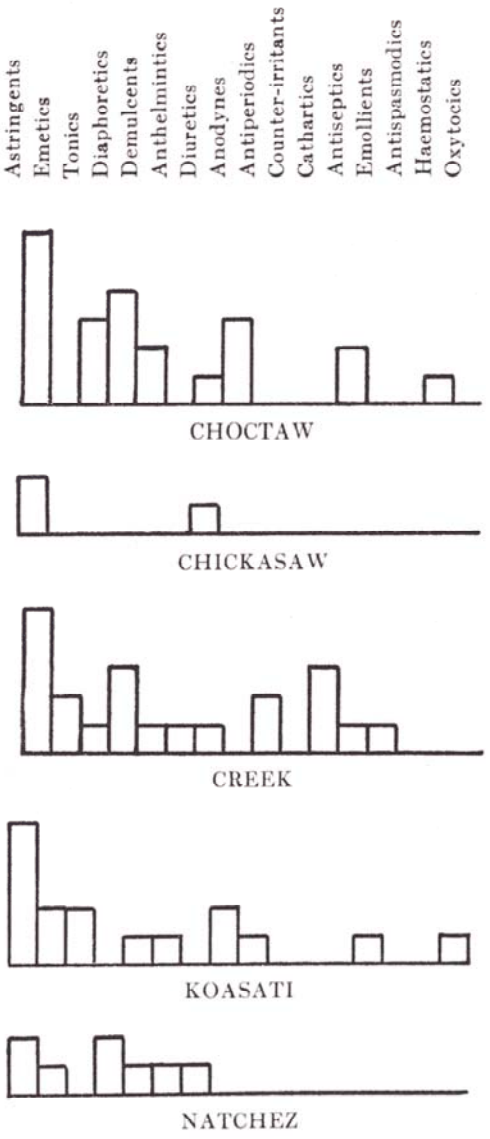
CHART II

The cases in which the remedies are correctly used by each tribe.



One square represents one remedy. A blank indicates that remedies are either lacking or are incorrectly used.

CHART II (concluded)



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INDEX

ERRORS AND CORRECTIONS

On page 17 , line 10, for Ascyrum hypericoides var. multicaule read Ascyrum hypericoides.

On page 26, line 3, for styraciflua read Styraciflua.

On page 26, line 16, for Plant read Plane.

On page 34, line 13, for Gnuphalium polycephalum read Gnaphalium obtusifolium.

On page 36, before Stillingia sp. (line 4) insert

Sebastiania ligustrina (Michx.) Mueller-Argonius in deCandolle Prodr. 15, pt. 2 (1866) 1165.

Sebastian-bush.

ALABAMA-cathartic-The roots are chewed.

MEDICINAL PROPERTIES: No data.

On page 49, line 13, delete all references to Lyonia Ligustrina.

On page 65, line 14, for Chenopodium anthelminticum read Chenopodium ambrosioides var. anthelminticum.