

A BIBLIOGRAPHY OF POLYGALA SENECA

BY

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PHARMACY COURSE

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Ray, J. 1704

Senega,

Historia Plantarum Suppl., p. 640; (Barton's Med. Bot., 2 ,
p. 112).

The author mentions this plant as being Polygala Seneka.

Ray, J. 1704.

Senega,

Historia Plantarum, 3, p. 670; (Woodville's Med. Bot., 3 p. 452.

Author gives a brief description of Polygala Marilandica.

Tennant, J. 1735.

Senega,

Physical Disquisition^s, p. 2; (Woodville's Med. Bot., 3, p. 454.

Rattlesnake root was first introduced to the attention of
physicians by Tennant who discovered its virtues through the
Indian Nations. He gives the different uses ascribed to the
root by Tennant.

Tennant, J. 1736.

Senega Rx

Essay on the Pleurisy; (Woodville's Med. Bot. 3, p. 454; (Pack-
ard Hist. of Med. in the U. S., p. 437)

Author mentions senega in the treatment of pleurisy.

Eouvar, M. P. 1739.

Seneka.

Mem. de'l Acad. Paris, 1734; (Woodville's Med. Bot., 3, p. 454)

The author tries the root in pleurisy.

De Jessieu, A.

1739

Seneka,

Mem. de'l Acad. Paris, 1739; (Woodville's Med. Bot., 3, p. 454;
Barton's Med. Bot., 2, p. 117.

Has tried seneka in pleurisy with good results.

Du Hamel, ____.

1739.

Seneka,

Mem. de'l Acad. de Paris, 1739; (Woodville's Med. Bot., 3, p.
454; Barton's Med. Bot., 2, p. 117.

Has tried this root for the cure of pleurisy with good re-
sults.

Franklin, B.

1739

Senega,

Penn. Gazette No. 573, Dec. 6, 1739, p. 4c. -

Poor Richard Almanac, for the year 1740 containing be-
sides the usual matter Dr. Tennant's infallable method of cure
of the pleurisy by the Seneka Rattle Snake Root.

Note: As the plant is very plainly described, and may be
found in Pennsylvania, the Jerseys, New York and Carolinas and
as the method of using is particularly laid down, it is not
doubted that this almanac may be a means of saving many lives
of thousands.

Sold by B. Franklin at the New Printing Office Market Street,
Price 3 s., 60 per dozen or 50 single.

Linovius
Grancéruis, J.

1739.

Senega,

Flora Virginia, Ed. 1, p. 80; (Woodville's Med. Bot., 3, p. 452).

A brief description of Polygala without giving any further information regarding the botanical name.

Lemery, N.

1739.

Seneka.

Mem. de'l Acad. Paris, 1734; (Barton's Med. Bot., 2, p. 17).

Tried this root in pleurisy with good results.

Trew, C. J.

1741

Senegau,

Comm. Litt. Narimb. Tab. 4; (Woodville's Med. Bot. 3, p. 452).

Author uses Senegau as the name of this plant.

1741.

Senega.

Comm. Naric., p. 362; (Woodville's Med. Bot., 3, p. 455).

The root is used in inflammatory disorders, particularly rheumatism.

Bard, J.

1742.

Senega,

Penn. Gaz. No. 7, Sept. 16, p. 3, c. 3.

Forty-six items imported from London where he may have had likewise most sort of chemical and galenical medicine, genuinely prepared other preparations including Seneka Root, and ~~Seneca Root~~.

Tennant, J.

1742

Senega.

An epistle to Dr. Richard Mead, concerning the epidemical diseases of Virginia, particularly of pleurisy and peripneumony wherein is shown the surprising efficacy of the Seneca rattle snake root in diseases owing to viscosity and coagulation of the blood, such as pleurisies and peripneumonia, these being epidemia and very mortal in Virginia and other colonies of the continent of North America and also of the Lee Ward Islands. To which is prefix a cut of that most valuable plant and appendix, demonstrating the highest probability that this root will be of more extensive use than any medicine in the whole materia medica and of curing the gout, rheumatism, dropsy, and many nervous diseases.

Index catalogue, ^eSurgon Generals Library S.I., 14, p. 303.

No abstract available.

Charlivoix, F. X.

1744.

Seneka.

Hist. et. Descript. Ben. De La. Nour. Prana, 2 p. 35.

Discusses the plant as to names, uses, description and out.

Mentions Tennant and Geoffrey.

Bouvard, _____

1744

Senega.

Observations sur les proprietes du seneka au polygala de Virginie.

Hist. Acad. Ray, d. sc.; (Amst. 1751, me'm., 49; Index catalog.

Surg. Gen. Lib., S.I., 12, p. 873).

Original abstract not available.

Geoffrey, E. F.

1744.

Senega.

Traite de la Matiere Medicale, 2, p. 137; (Barton's Med. Bot. 2, p. 111).

Mentions Seneka, giving the botanical name as Polygala Seneka.

Lem. Duhom and Juss,

1744.

Senega,

Essays and *Asseis* ; (Barton's Med. Bot. 2, p. 111).

Gives the botanical name as Polygala Seneka.

Kiernander, J.

Radix Senega.

1749

(Index Catalog. Serg. Gen Lib., S. I., V. 2, p. 873)

The original article was not available for making an abstract.

Siemerling, _____.

1749

De Seneca.

(Index Catalog. Serg. Gen. Lib., S. I, V. 12, P. 873)

The original was not available for abstract.

Hill, J.

1751

Seneka,

A History of the Materia Medica, p. 630; (Barton's Med. Bot. 2, p. 111)

Author makes mention of the plant as being Polygala Seneka.

Linnae, C. 1753.

Polygala Seneka.

Species Plantarum, p. 704; (Barton's Med. Bot., 2 p. 111; Ibid. Ed., p. 704; Watson Smithson, Misc. Coll., 15, p. 93.

Takes Senega up with the close of Diadelphia Octandria, a botanical description of the plant. Gives habitat as Virginia, Pennsylvania and Maryland.

Linnaeus, C. 1753

Senega.

Genera Plantarum, ; (Woodville's Med. Bot., 3, p. 452; Barton's Med. Bot. 3, p. 111).

Author takes Senega up under the Class Diadelphia order Octandra.

Cartheuser, J. F. 1755.

Seneka.

Materia Medica, 2, p. 435; (Barton's Med. Bot., 2, p. 111).

The author mentions Seneka.

Miller, P. 1759

Senega,

Dictionary, 7 Ed. N. 5; (Woodville's Med. Bot. 3, p. 453; Barton's Med. Bot., 2, p. 111).

This plant is a native of Virginia and other parts of North America. It was first cultivated in England in 1759.

- Vogel, R.A. 1761
 Senega,
 Historia Materia Medica, p. 226; (Barton's Med. Bot. 3, p. 112)
 Gives botanical name of this plant as Polygala Senega.
- Hill, J. 1761.
 Polygala Senega.
 Vegetable System, 23, t. 23, f 1.; (Watson Smithson, Misc. Coll. 15, p. 93; Pritzel Thesour. Lit. Bot., p. 114).
 Original not available.
- Louis, W. 1761.
 Polygala Senega.
 Materia Medica, p. 453; (Woodville's Med. Bot., 3, p. 454).
 Gives synonyms, description of plant, habitat, and its use as a specific for bite of the rattle snake, by the Senegaw Indians. Dr. Tennant describes how it acts against the rattle snake poisoning. It is also used in dropsy, rheumatism and gout.
- Lewis, M. M. 1761.
 Senega,
 Materia Medica, p. 453.
 A description as to the salivatory affect, action on stomach, and best form of taking the drug.
- Bouvard, L. C. 1764?
 Senega,
 Medical Observatory, 3 p. 288; (Woodville's Med. Bot. 3, p. 455)
 Prescribes senega with much success in dropsy.

Mackenzie, ____.

1764?

Senega,

Medical Observation, 2 p. 298; (Barton's Med. Bot., 2, p. 111)

Mentions the senega as Polygala Seneka.

Miller, P.

1768

Senega.

Botanical Dictionary, Ed. 8, p. ____; (Barton's Med. Bot., 2, p. 111).

Polygala Senega mentioned by the author.

Johnson, J.

1769.

Senega,

Georgia Gaz. No. 314, Wed. Oct. 4, p. 3, c-1.

The following advertisement is used: A small quantity of Seneka Snake Root to be sold by the printer of this paper.

Foster, ____.

1771.

Polygala Senega.

Flora Americae Septentrionalis or a catalogue of the plants of North America, etc.

Author gives Latin name, English name, habitat, ~~and~~ author and observation of this plant.

Collin, H. J.

1772.

De Polygala amarae radicis Contra suppurationem pulmonum et phtysin pumonaleum usu.

In Hist. Nasocomii Civ. Pazmonimoni Pars ii, 153; (Index Catalog Surg. Gen. Lib. S. 1, v. 12, pp. 873)

Original not available for an abstract.

- Percival, T. 1773.
 Senega,
 Essays, Medical and Experimental, 2, p. 178; (Woodville's Med. Bot. 3, p. 455; Barton's Med. Bot. 2, p. 111).
 Prescribes senega with much success in dropsy.
- Spielman, J. P. 1774
 Senega,
 Institutiones Materiae Medicae, etc., p. 581; (Barton's Med. Bot. 2, p. 111).
 Botanical name given as Polygala Senega.
- Callisen, _____. 1778.
 Seneka.
 Acta. Sec. Med. Harn. p. 73; (Barton's Med. Bot., 2, p. 111).
 Uses Polygala Seneka as the botanical name of this plant.
- Berguis, P. J. 1781.
 Senega.
 Materia Medica p. 596, No. 38, v. 3; (Woodville's Med. Bot., 3, p. 453).
 This root, of no remarkable smell, has a peculiar kind of of subtle pungent penetrating taste.
- Houteugn, W. 1872.
 Seneka,
 Lin. Pfl. Syst. Pt., 8, p. 490; (Barton's Med. Bot. 2, p. 112).
 Mentions this plant as being Polygala Seneka.

Hellmuth, L. C.

1782.

De Radice Senegae,

Index Catalog. Surg. Gen. Lib., I, v. 12, p. 873.

Original article was not available for abstracting.

1787

Seneka Radix.

Pharmacopocia Edinburgensis, p. 29; (Barton's Med. Bot., p. 112).

Seneka Radix is official in the above book.

Schoepf, D.

1787.

Senega.

Materia Medica, Americana, p. 110; (Barton's Med. Bot., 2, p. 112).

Gives a short description of the plant, part that is official, and use.

Duhamel, ____.

1788.

Polygala Senega.

Nour. Duhm., 3, p. 167; (Pritzel Thesour. Lit. Bot. p. 93; Watson Smithson, Miscel. Coll., 15, p. 93)

The original reference is not available.

Walter, T.

1788.

Senega.

Flora Caroliniana, p. 178; (Barton's Med. Bot., 2, p. 111)

Mentions Polygala Seneka.

Jussieu, De. , T.L.

1789.

Senega.

Genera Plantarum, p. 99; (Barton's Med. Bot., p. 112).

Gives a description of the plant in detail.

Darwin, E.

1791.

Senega.

The Botanic Garden, p. 392 and 398; (Barton's Med. Bot., 2, p. 111).

Gives the botanical name of this plant as *Polygala Seneka*.

Duncan, _____. _____.

1791.

Seneka Radix.

Lewis's Dispens., p. 281; (Barton's Med. Bot., 2, p. 112)

"Seneka grows spontaneously in Virginia and bears the winters of our climate". Short description of the plant.

Used by Senegaro Indians as preventive of fatal affect of the rattlesnake bite. Description of its other therapeutic uses.

Plocquet, W. F.

1793

Senega.

Initia. Bibliothecae, etc., 1, p. 661; (Barton's Med. Bot., 2, p. 112)

Botanical name given as *Polygala Seneka*.

Arches, J.

1798.

Seneka.

Medical Repository, N. Y., V. 1, Art. 7; (Barton's Med. Bot. 2, p.117)

The author was the first to discover the efficacy of the root in the treatment of croup.

Barton, B. S.

1798.

Seneca Snake Root, .

Collection for an essay toward a Materia Medica, 3 Ed. Par, (1)
P. 25; (2) p. 35; (Barton's Med. Bot. 2, p. 112)

- (1) The author makes the statement that Seneca Snake Root is used as a salivating drug.
- (2) Polygala Senega, along with its diuretic properties possesses an emetic, cathartic, expectorant, salivating and diaphoretic power.

(Scott, J.

1799

Senega.

Med. Rev. 3, p. 313; (Barton's Med. Bot., 2, p. 112).

Polygala Seneka mentioned.

Cassell, _____. _____

1801.

Senega.

(Barton's Med. Bot., 2, p. 112).

Mentions Polygala Seneka.

1703

Massie, T.

An experimental inquiry into the properties of Polygala
Senega:

(Index Catalog. Surg. Gen. Lib. S. I, V. 12, p. 873).

The original article was not available for making an abstract.

Michaux, A.

1803.

Polygala Senega.

Flora Boreali - Americana, 2, p. 53; (Barton's Med. Bot., 2, p. 112; Watson Smithson Misc. Col., 15, p. 93).

A short description of the plant and its habitat; also takes up other varieties of *Polygala*.

Barton, B. S.

1804.

Polygala Senega.

Collection for an Essay toward a Materia Medica; (Barton's Med. Bot., 2, p. 112).

- (1.) The author states that an additional instance of the salivating power of this active vegetable has been commemorated to him.

Underwood, J.

1804.

Senega.

Catalogue of Plants, p. 338; (Barton's Med. Bot., 2, p. 111)

Mentions *polygala seneka*.

Cox, J. R.

1806.

Polygala Senega Radix

American Dispensatory, 2 Ed. p. 527.

Discusses the drug as follows: Description of plant, habitat, medicinal uses, and official preparations of *Polygala Senega*.

Elliott, S.

1806.

Sketch of Botany of S. Car., and Ga., Elliott, 2 p. 182; (Watson's Smithson, Misc. Coll., 15, p. 93).

The original reference is not available.

Cullen, W.

1808.

Senega.

Lectures on Materia Medica, 2, p. 532; (Barton's Med. Bot., 2, p. 111; Woodville's Med. Bot., 3, p. 455).

The author states that the bark of the root contains most of the active principle of the plant. Author also treats this plant under the head of cathartics and diuretics; also assigns it a place under emmenagoyues. Its purgative affects thought to be its threue characteristics; also useful when used to produce sweat.

(Committee)

1808.

Seneka.

Pharmacopœic Mass. Med. Soc., p. 26; (Barton's Med. Bot., 2, p. 113)

The root is official.

Murray, J.

1808.

Senega.

Elements of Materia Medica and Pharmacy, 2, p. 436; (Barton's Med. Bot. 2 p. 112).

Author relates the results of an analysis made of the root giving the per cent of different constituents, etc.

Pearson, R.

1808.

Senega.

A practical synopsis of the Materia Alimentaria and Materia Medica; (Barton's Med. Bot. 2, p. 112)

A brief sketch as to the botannical name of the plant.

Proctor, Wm. Jr. 1808
 Senega.

Proc. Am. Pharm. Asso., 7, p. 44.

Thatcher, _____. 1809.
 Polygala Senega.

New Dispensatory, 2 Ed. p. 307.

The author gives synonyms, part used, a description of the plant, when the plant was first introduced into use, and the medicinal uses of the plant.

Barton, B.S. 1810.
 Seneka.

Collections for an Essay toward a Materia Medica, 3 Ed, par. 1, p. 26; par. 2, p. 37; (Barton's Med. Bot., 2, p. 111)

Places much confidence in this drug for the cure of croup. Touches on its salivating, expectorant and known to remove the mucous body or rete, or rete mucosum from the skin. Indians used a decoction of the drug as a cure for syphilis.

Engelman, G. 1810
 Polygala Senega.

Plants of upper Mississippi, p. 188; Watson Smithson, Misc. Coll., 15, p. 93; Pritzel Thesour. Lit. Bot. 43).

Original not obtainable.

Michoux, F. A. 1810.
 Polygala Seneka.

Boreoli, Am. V. 11, p. 53; (Barton's Med. Bot. 2, p. 113)

Mentions Polygala Seneka but describes two distinct varieties which are albida and rosea. Gives difference in the two plants and their habitats.

Thornton, R. J.

1810.

Senega.

A new family, Herbal, p. 629; (Barton's Med. Bot., 2, p. 111).

Author mentions polygala seneka.

Previous to 1810.

Senega.

Amaen. Acad., Paris, 3, p. 12; (Woodville's Med. Bot., 3, p. 452)

Takes up polygala senega.

Woodville, W.

1810.

Polygala Senega.

Medical Botany, 3, p. 452; (Watson Smithson. Misc. Coll., 15, p. 93)

A lengthy description of the senega plant, habitat in the different parts of the United States; also the fact that it is cultivated in England, qualities of the plant and a lengthy description of the medicinal uses. It also has a good drawing of the plant with flowers in colors.

Arton, W.

1811.

Polygala Senega.

Hort. Kew., 3, p. 6; (Watson Smithson. Misc. Coll., 15, p. 93).

The original was not available.

Barton, B. S.

1812.

Seneka.

Cullen's Treatise of the Materia Medica, 2, p. 370; (Barton's Med. Bot., 2, p. 112).

In this edition the author assigns seneka a place under emmenagogues.

Barton, B.S.

1813.

Polygala Seneka.

Collection for an Essay toward a Materia Medica, 11 (1) p. 370; (2), 390; (3), 411; (Barton's Med. Bot. 2, p. 113).

- (1.) Touches on purgative properties of Senega, forms of the proportions used, dose as purgative, how to prepare the preparation. Its early use as a cure for the rattle snake bite, pleurisy and peripneumony.
- (2.) Author states it is entitled to much more attention as a diuretic than a cathartic and gives detail description of its use and affect in the treatment of dropsy using the decoction.
- (3.) The root of this plant has also been recommended as a valuable menagogue along with its cathartic, diuretic and other properties.

Stokes, J.

1813.

Senega.

A Botanical Materia Medica, 3, p. 500; (Barton's Med. Bot., 2, p. 113)

Treats this plant under the botanical name of Polygala Seneka.

Coxe, J. R.

1814.

Senega.

Am. Dispens., 3 Ed., p. 500; (Barton's Med. Bot. 2, p. 113).

The author mentions the fact that Dr. Chapman was the first to discover the emmenagogue powers of the seneka.

Henry, S.

1814.

Senega.

New and Complete American Medical Herbal, p. 221.

Discusses the drug under the headings:

Description,

Habitat,

Medicinal Properties,

Preparation.

A cut of the drug is included.

Drake, D.

1815.

Senega,

Picture of Cincinnati, etc., p. 87; (Barton's Med. Bot. 2, p. 112).

Uses Polygala Seneka as the botanical name of this plant.

Murray, J.

1815.

Senega,

System Materia Med. and Phar. V. 1, p. 331, and V. 2, p. 46; (Barton's Med. Bot. 2, p. 112)

Relates the results of analyses carefully made of the root of this plant by those who have written on it. Aqueous more abundant than resinous extract. Root yields a resin, a mucilage, etc.

Pursh, F.

1816.

Polygala Senega.

Flora Americana Septentrionalis, 2, p. 464; (Barton's Med. Bot. 2, p. 113a; Watson Smithsonian. Misc., Coll. 15, p. 93.

Briefly described two distinct varieties of the plant, and the habitat of each variety. Plant spoken of as being the famous Seneca snake root. Also gives a botanical description of the *Polygala Senega*.

Farnell, C. & C.

Phila. Natl. Gaz. and Lit. Reg., 10, N. 2872, May 3, p. 3, c. 5.

An advertisement lists the following:

Six bales prime Seneca Snake Root.

1816.

Senega.

Pharm. Land. 1809, p. 20; (Barton's Med. Bot., 2, p. 111)

The root of *Polygala Senega* is official.

Bigelow, J.

1817.

Polygala Senega.

Am. Med. Bot., J. 30; Watson Smithsonian. Misc. Coll. 15, p. 93;

Bentley and Trimen Med. Plants, 1, p. 29)

Contains a colored plate of the plant in addition to the other data concerning it.

Chapman, N.

1817.

Seneka.

Discussion of the Elements, Therapeutics and Materia Medica, 1, p. 370; (Barton's Med. Bot., 2, p. 112; Watson Smithson. Misc. Coll., 15, p. 93).

Has assigned it under the head of stimulating diuretics as well as under expectorants and emmenagogues.

1817.

Senegae Radix.

Pharmacopoeia Londensis, Ed. 2, p. 20; (Barton's Med. Bot. 2, p. 111).

Polygala Senega. Radix is official.

Archer, J.

Previous to 1818.

Seneka.

Phys. Jour. I, 83, p. 106; (Barton's Med. Bot. 2, p. 111).

Makes mention of Seneka in this journal.

Bang, _____.

Previous to 1818.

Senega.

Act. Houn., 1, p. 239, 254, 255, V. II, p. 41; (Barton's Med. Bot., 2, p. 111)

Mentions seneka in the above references.

Bouvard, S. C.

Previous to 1818.

Polygala Seneka.

Ac. Soc. Abr. by Santher, V. III, p. 297; (Barton's Med. Bot., 2, p. 111)

This drug was used with success in the treatment of pleurisy and peripneumonic cases by Dr. Bouvard.

Bree, ____.

Previous to 1818.

Seneka.

p. 258; (Barton's Med. Bot., 3, p. 111)

Treates this plant under Polygala Seneka.

Chalmers, ____.

Previous to 1818.

Seneka.

V. 2, p. 115; (Barton's Med. Bot., 2, p. 111).

The author mentions the Polygala Seneka.

Loddiger, C.

1818.

Polygala Senega.

The Botannical Cabinet t. 1380; (Watson Smithson. Misc. Coll.,
15, p. 93; Pritzel Theour. Lit, Bot. p. 194)

Original reference not available.

____, ____.

1818.

Seneka.

Chir. Rev. 6, p. 194; (Barton's Med. Bot., 2, p. 111)

Plant mentioned as Polygala Seneka.

Previous to 1818.

De Haen, ____.

Senega,

Ratio Medicinal p. 4, and 252; (Woodville's Med. Bot. 3, p. 455)

Author counterdicts the statement that this drug has great
power in reducing the siziness of the blood more fluid.

Graing, ____.

Previous to 1818.

Senega Rattlesnake root.

p. 66; (Barton' Med. Bot. P. 112)

The author mentions Seneka rattlesnake root in the above refer-
ence.

Haen, A.

Previous to 1818.

Seneka.

V. 1, p. 357; (Barton's Med. Bot., 2, p. 111).

Mentions Polygala Seneka here.

Hortshorne, ____.

Previous to 1818.

Senega.

Hartus Kiwensis, Dict. Ed. 7, No. 5, v. 3, p. 6; (Barton's Med. Bot., V 2, p. 111).

Given the credit of being the first to discover the emmenagogue properties of this drug by Dr. Barton.

Lewis, W. ____

Previous to 1818.

Senega.

Lew. Materia Medica, p. 240; (Barton's Med. Bot., v. 2, p. 111).

Author gives this plant the name of Polygala Seneka.

Massie, ____.

Previous to 1818.

Seneka,

Chir. Rev. 14, p. 63; (Barton's Med. Bot., V. 2, p. 112).

Mentions Seneka here as Polygala Seneka.

Monro, Senega:

Previous to 1818.

V. iii; p. 257; (Barton' Med. Bot. v, 2, p. 111).

Mentions Polygala Seneka.

____, ____.

Previous to 1818.

Senega,

Mahl, Cat. 66, (Barton's Med. Bot., 2, p. 112)

Percival, T.

Previous to 1818.

Senega.

Med. Jour. 4, p. 67; (Barton's Med. Bot., 2, p. 117).

The author has spoken highly of this plant as a diuretic in dropsies.

Rush, B.

Previous to 1818.

Senega.

V. 2, p. 176; (Barton's Med. Bot., 2, p. 113)

An account of this plant given under polygala seneka.

Sarcone, ____.

Previous to 1818.

Senega.

Geschichte, D. Krankh in Neopel tour I, p. 108; (Woodville's Med. Bot., v. 3, p. 455)

The root used in inflammatory disorders and particularly rheumatism.

Tennant, J.

Previous to 1818.

Rattlesnake root.

Disp. of Virginia, p. ____; (Medical Essays, 6, p. 376; Barton's Med. Bot., 2, p. 112).

An account of the uses of rattlesnake root by the early Senagroo Indians, with a list of its medical properties given.

Barton, W.P.C.,

1818.

Polygala Seneka.

Med. Bot., 2, p. 111.

A lengthy account of Senega, giving common names in three languages, list of references, botanical description, pharmacopoeial uses, chemical properties and medical properties.

Colored drawings of the plant, flowers and root.

Bigelow, J. 1822.

Senega.

Materia Medica, p. 333.

Discusses the plant according to origin and place of growth in the United States, qualities of the plant, uses and exhibition.

Chapman, N. 1823.

Polygala Senega.

Element's Therapeutics and Materia Medica, V. 1, p. 347; (Barton's Med. Bot., 2, p. 112)

Touches on its native habitat, where best grown, and its medicinal uses.

Willdenow, C. A. 1824.

Polygala Seneka.

Species Plantarum, 3 p. 894; (Barton's Med. Bot., 2, p. 112; Watson. Misc. Coll. 15, p. 93)

In the above reference the author lists Polygala Seneka, with description of the plant.

Feneville, H. 1825.

Des raeiner de dompter reuis.

Journ. of Pharm. p. 305; (Pharm. Jour. 38, p. 410; Proc. Am Pharm. Assoc., 27, p. 218)

Discusses several properties of Asclepios Vinceloxicum reported as an adulterant of senega.

Tarry, J. 1826.

A compend. Flora n. & m. U.S. p. 260; (Watson Smithson. Misc. Coll. 15, p. 93.

Original not available.

no 37
27

25.

Brandreth, ____.

1818.

Polygala Seneka.

Dyckman's Edinberg Despear, p. 384; (Barton's Med. Bot., 2, p. 118)

The author has derived great benefit in some cases of lethargy from an extract of seneka combined with carbonate of soda.

Cox, J.

1818

Polygala Senega, Radix

Author gives the synonyms, a description of the plant, and mechanical uses of the plant along with its official preparations.

Dyckman, J.

1818.

Radix Senegae

Edinburg New Dispens., p. 348; (Barton's Med. Bot., 2, p. 112)

The root is official.

Nuttall, T.

1818.

Polygala (Milkwort)

Genera of ^N American Plants, 2, p. 87; (Barton's Med. Bot., 2, p. 112)

Takes polygala up under Diadelphia Octandra. Describes each species of polygala giving the habitat of each.

Thass, C. G.

1820.

De Radice Senega.

(Index. Catalog. Surg. Gen. Lib., S. I., V. 12, p. 873.

The original is not available for an abstract.

Von Ammon, F. A. 1826.

Ueder die Anevendung und den Nutzen der Radix polygalae.

Hooker, W. J. 1827.

Polygala Senega.

Flora Boreali - Americane 1, p. 85; (Watson Smithson. Misc. Coll. 15, p. 93)

Original reference not obtainable.

Mayer & Lahman, 1827.

Senega.

Phil. Nat'l. Gaz. & Lit. Reg., 7, No. 1428; Feb. 20, p. 3, c. 1.

The following advertisement is used:

Five Hundred pounds Seneca Snake root ready, packed and of superior quality just received and for sale.

Cox, J. R. 1827.

Polygala Senega.

Am. Dispensatory 7 Ed., p. 492;

The data is practically the same as the 2nd edition of the dispensatory.

Ness, T.F.L., Weyhe, M. F., Wolton, J. W. & Funke, P. W. 1828-9

Polygala Senega.

Plantae Medicinales t. 412; (Bentley & Trenien Med. Plant V. 1, Original not available.

Patton, J., Jr. 1829.

Senega Snake Root.

Phila. Nat'l. Gaz. and Lit. Reg. Reg. V. 9, No. 2760, Dec. 21, p. 3, c. 5.

The following advertisement is used. "Two thousand pounds Seneca Snake Root. Dec. 25. James Patton, Jr."

Yarnell & Co. E. & C.

1829

Senega

Phila. Nat'l. Gaz. & Lit. Reg. V. 9, No. 2582, May 27, p.4, c.3

In an advertisement of the above firm among nine items,
Seneka Snake Root is listed.

Yarnell & Co., E. & C.

1829

Senega Snake Root

Phila. Nat'l. Gaz. & Lit. Reg. 9, No. 2689, Sept. 30, 828, p. 2
c. 6

The above firm uses the following advertisement:

5 bales Seneka Root (Seneka Snake Root) of fine quality received
and for sale.

Yarnell & Co. E. & C.

1829

Senega Snake Root

Phila. Nat'l. Gaz. & Lit. Reg., 9, No. 2655, Aug. 21, p.3, C.1

In an advertisement listing twenty-eight items with quan-
tities of same, ten bales seneca snake root are included.

8 mo. 21-8.

Yarnell Co., E. & C.

1829

Senega Snake Root

Phila. Nat'l. Gaz. & Lit. Reg. 9, No. 2758, Dec. 18, p.3, c.2

The following advertisement is listed by the above firm:

5 bales Seneca Snake Root of fine quality. E. & C. Yarnell Co.

13 mo. 11-5

Roberts, A. S. & E.

1830

Senega

Phila. Nat'l. Gaz. & Lit. Reg. 10, No. 2889, May 22, p.2, c.-

In an advertisement by the above firm:

15 bales of seneca snake root are listed among 18 items.

Yarnell Co., E. & C.

1830

Senega

Phila. Nat'l. Gaz. & Lit. Reg., 10, No. 2787, Jan. 22, p.3, c.5

The above firm lists for sale:

6 bales seneka root. 1 mo. 22-5.

Angelestein, C.

1831

De senegae radice: remedio ophthalmiatrico proestantissimo

(Index Catalog Surg. Gen's Library, S.I, V.12, p. 873)

No abstract available.

Don, G.

1831

Polygala Senega

Miller's Dictionary, p. 359, (Watson, Smithson Misc. Coll. 15,

p. 93, Pritzel Thesour. Lit. Bot. p. 89)

Original not obtainable.

Don, G.

1731

Gen. Hist. Di. Chlamydeous plants V.1, p. 359,

A brief account of the plant, its properties, uses, etc.

Cultivated in England since 1739.

Stephenson, J. and Churchill, J. M.

1831

Medical Botany, t. 103; (Bentley & Srimen Med. Plants

V.1, No. 29) gives a colored plate of senega.

Roberts, A. S.

1830. ✓

Senega.

Phila. Nat'l Gas. & Lit. Reg. 10, No. 2889, May 22, p. 2, c. ___.

In an advertisement by the above firm:

Fifteen bales of Seneca Snake Root is listed among 18 items.

Yarnell Co., E. & C.

1830.

Senega.

Phila. Nat'l. Gaz. & Lit. Reg., 10, No. 2787, Jan. 22, p. 3, c-5.

The above firm lists for sale:

Six bales of Seneka Root.

Angelestein, C.

1831.

De senegae radice: remedio ophthalmiatrico proestantissimo.

(Index Catalog. Surg. Gen's. Library, S. I, v. 12, p. 873.

No abstract available.

Don. G.

1831.

Polygala Senega.

Miller's Dictionary, p. 359; (Watson Smithson. Misc. Coll. 15, p. 93; Pritzel Thesour. Lit. Bot. p. 89).

Original not obtainable.

Don, G.

1831.

Gen. Hist. Di. Chlamydeous Plants, V. 1, p. 359.

A brief account of the plant, its properties, uses, etc.

Cultivated in England since 1739.

Stephenson, J. & Churchill, J. M.

1831.

Medical Botany, t. 103; Bentley & Trimen Med. Plants, v. 1, No. 29.

Gives a colored plate of Senega.

Trommsdorff, J. B.

1832.

Chemische Analysen der Senegaquurzeln-Rinde.

Centralblatt., June 30, 1832; (Proc. Am. Pharm. Assoc., 24, p. 176).

Result of analysis.

Principal characteristics relative to different solvents. Takes up the different preparation of Senega and their constituents.

Wood, S. B. & Basche, P.

1832.

Senega.

U. S. Dispens., 2 Ed., p. 599.

The drug is discussed as to the pharmacopoeias. It is recognized in synonymy, scientific, technical and common; description of the plant and drug. Uses and preparation.

Action, De l'.,

1836.

Thérapeutique du polygala et de son emploi en pratique.

Bull. Gen. de the rap. XI, p. 142; (Index Catalog. Surg. Co. Lib. S. I., Vol. 12, p. 873).

Abstract not available.

Bluff, _____.

1836.

Ueber Radix Senegae Als.

Diureticum und eine besondere form von Wassersucht. I.D. Chir. U. Augen. Berl. XXIV., 587; (Index Catalog. Surg. Gen. Lib. S.I., Vol. 12, p. 873).

Original not available for an abstract.

Quevenne, _____. 1836.

Exam. Chimique et pharmaceutique de la racine du polygala de Virginie.

Bull. gen. de therap., XI., p. 127; (Index. Catalog. Surg. Gen. Lib. S. I, Vol. 12, p. 873).

Original not available for an abstract.

Darlington, W. 1837.

Polygala Senega.

Flora Cestriceae, p. 403; (Watson Smithson, Misc. Coll., 15, p. 93)

Describes the root of senega in detail; also the leaves, flowers and other parts of the plant. Habitat hilly woodlands along Brandywine, and frequently flowers from May to July. Also states that there are sixteen or seventeen species in the United States.

Hayne, F. G. 1837.

Polygala Senega.

Getrem Diastellung.... arzneykunde Gebrauchlichen Geerachse v. 13, t. 21; (Bentley & Trimin. Med. Plants, Vol. 1, No. 29.

Lindley, J. 1838.

Polygala Senega.

Flora Medica, p. 125; (Watson Smithson. Miscel. Coll. 15, p. 93)
Habitat mountainous parts of U.S. where it is called Seneca snake root. Gives botannical description of the plant; also gives medicinal uses of senega.

Tarry, J.

1838.

Polygala Senega.

Nicollotts Report on the Upper Miss. River, t. 145; (Watson
Smithson. Misc. Coll., 15, p. 93).

No other data available.

Tarry, J. & Gray, A.

1838.

Polygala Senega.

Flora of N. America 1, p. 131; (Watson Smithson. Misc. Coll. 15,
p. 93.

Author gives a detailed description of the plant and its
parts; also the habitat of senega as that of from the Saskat-
chawan River to N. Carolina, west to Kentucky.

Crusell, G. S.

1839.

Aml Arinkon och senegan sosom hvarransan pharmokodynamiskt
motsotta lakemedel.

(Index Catalog. Surg. Gen. Lib. S. I., v. 13, p. 873).

Original not available for abstract.

Wood, G. B. & Basche, F.

1839.

Senega.

U.S. Dispens. 4th Ed., p. 619.

The drug is discussed as to part used, synonymy, properties,
medical properties and uses, official preparations.

Bigelow, _____.

1840.

Flora Bostoninsis, p. 283; (Watson Smithson. Misc. Coll.
v. 15, p. 93; Lindl. Flora Medica, p. 135)

Author describes the plant in detail and gives time of
flowering as July.

Tarry, J.

1843.

Polygala Senega.

Flora New York, 1, p. 151; (Watson Smithson. Misc. Coll., 15, p. 93).

Author gives botanical description of the plant and of the root of Senega; also habitat, time of flowering, and medicinal properties of senega. Author describes in detail six other species of polygala.

Wood, G.B. & Basche F.

1843.

Senega.

U. S. Dispens. 5 Ed., p. 649.

The data is practically the same as the author's 4th Ed.

Hooker, J. D.

1844.

Polygala Senega.

Artic Plants, p. 288; (Watson Smithson. Misc. Coll., 15, p. 93; Fritzel Thesour. Lit. Bot., p. 93)

No other reference available.

Beck, L. C.

1848.

Polygala Senega.

Botany of the United States, p. 45; (Watson Smithson. Misc. Coll., V. 15, p. 93).

The original reference is not available.

Morris, G.

1850.

Observations of the emmenagogue properties of Polygala Senega. Med. Exam. Phila. N. S., V. 1, p. 626; (Index. Catalog. Surg. Gen. Lib. S. 1, v. 12, p. 873.

Original not available.

Berg, O.

1852.

Senega.

Handbush der Pharm. Botanik II, Th. S., 75; (Arch. d. Pharm.,
225, p. 557)

Original not available.

Wood, G. B. and Basche, F.

1854.

Senega,

U.S. Dispens, 10 Ed., p. 667.

The data is practically the same as the author. 4 Ed.

Wigand, A.

1856.

Radix Senega.

Flora No. 43, S. 675; (Arch. d. Pharm. 161, p. 238)

Describes Senega root both macro. and microscopically.

Watson, J. F.

1857.

Senega.

Annals. of Phila. and Penn., v. 3, p. 389.

"About the year 1739 I saw much said in the Gazettes of
the newly discovered virtues of the Seneka Rattle Snake Root,
and while the excitement was high Dr. John Tennant got 100 pounds
for the Virginia Colony for prescribing its use for cure of the
pleurisy.

Berg, O. C. & Schmidt, C.F.

1858-1863.

Polygala Senega.

Diastellung u. Bescheibung officinellen Geirachse t. 10a; (Bent-
ley & Trimen Med. Plants, V. 1, p. 29)

Proctor, W. J.

1858.

Proc. Am. Pharm. Assoc., 7, p. 44.

What is the most eligible process for obtaining Polygalic acid from Senega, in what proportion does it exist, and what are the forms of prescribing it most to be desired as a substitute for the preparations of senega.

Lee, C.A.

1859.

Polygala Senega.

Jour. Mat. Med., 2, p. 37.

Brief discussion of the history and uses of the plant.

Wigand, A.

1862.

Rad. Senegae,

Arch d. Pharm., 1861, p. 238; (Arch. d. Pharm., 225, p. 557).

In a review of O. Berg's Pharmaceutische Waarenkunde, 2 Ed., 1857, comments in detail on the text, with reference to macroscopic and microscopic appearances of Senega.

Committee,

1863.

Senega.

Proc. Am. Pharm. Assoc., 11, p. 184.

"This drug has been unusually scarce and high, though mostly of average quality. In the beginning of the year instead of 35¢, it was selling at 60¢ and by May had risen to \$1.45. From that point it gradually fell off to its present price of 80 to 82¢.

Committee, 1864.

Senega Root.

Proc. Am. Pharm. Assoc., 13, p. 202.

"Receipts of this article small compared with former years.
Quality is very good.

King, J. 1864.

Polygala Senega.

Am. Dispens., 6 Ed., p. 742.

The drug is discussed as to part used, synonyms, description of the plant and drug, history, properties, uses and official preparations.

Wood, G. B., & Basche, N. 1865.

Senega.

U. S. Dispensatory, 12 Ed. p. 765.

The data is practically the same as the author, fourth ed.

Fluckiger, F. A. 1871.

Senega.

Proc. Am. Pharm. Assoc., 19, p. 338.

The drug has been found mixed with cypripedium. It is not rare to see it with considerable of the stem attached, and more dirt adhering to it than ought to be.

Committee. 1871.

Senega.

Proc. Am. Pharm. Assoc., 19, p. 397.

Report on the price of Senega at that time. Stated that large orders had been received from Europe.

Beuford, P. W.

1872.

Essay on the Preparation of Syrup of Seneka.

(Proc. Am. Pharm. Assoc., 20, p. 64).

Advises heating to remove pectin.

Committee.

1872.

Seneka.

(Proc. Am. Pharm. Assoc., 20, pp 127 and 142).

Sold at rather higher rates than usual as supply from interior have been limited. Small quantity received now held at 95 cents. The quality good.

Rother, R.

1872.

The best method for avoiding pectinous principles in the Process of Syrups of Seneka.

Proc. Am. Pharm, Assoc., 20, p. 209.

A lengthy discussion on how to remove pectinous bodies with formulæ for the preparation of the syrup and compound syrup.

1872.

Pharm. Germ., p. 282; (Proc. Am. Pharm., Assoc., 24, p. 176.

Official as:

Radix Senegae,

Senega~~wurzel~~,

Polygala Senega, Linn.

Description of the plant.

Committee.

1873.

Seneka Root.

Proc. Am. Pharm. Assoc., 21, p. 440.

"Has been scarce, high in price and poor in quality and a large demand for abroad, prime root being 1.05.

Committee

1875.

Seneka.

"Has been in fair supply, quality good average, but has fluctuated greatly, owing to the supply on hand to meet the demand than any other reason. Occasionally price has dropped to 62¢.

Christophsohn, J.

1875.

Diastellung des Sapinous - Senegin.

Arch. de. Pharm., 206, p. 503; (Proc. Am. Pharm. Assoc., 23, p. 448).

Some experiments made with senegin seems to indicate that the principle is identical with Saponin obtained by the author. His method was insufficient to make an elementary analyses.

King, J.

1875.

Polygala Senega.

Am. Dispens., 10 Ed. p. 659.

The drug is discussed as to synonymy, a description of the plant and drug, history, properties and uses, and official preparations.

Practrouillard, C.

1875.

Falsification de la racine de polygala de Virginie par la racine d' asclepidae dompta - veinin.

Soc. de Pharm de l' Eure. Bull., Emeux I, p. 37; (Index. Catalog. Surg. Gen. Lib. Sr. I., Vol. 12, p. 873.

Original not available for an abstract.

Potrouillard, M.

1875.

Seneca Root.

Prac. Am. Pharm. Assoc., 23, p. 511.

The author presents a paper to the pharmaceutical society of Paris on the substitution of Senega Root by the root of asclepias.

Schneider, C.

1875.

Über Radix Senegae.

Arch. d. Pharm., 207., p. 395; (Proc. Am. Pharm. Asso., 24, p. 178.

The author makes a series of experiments to determine what part of the root contains the largest amount of active constituents. Gives two tables showing the results of his experiments.

Patrouillard, C.

1876.

Falsification de la racine de polygala de Virginie por la racine of asclepide dompte - venin.

Report S. Pharm., N. S., 3, p. 268; (Zeitsch. Best. Apoth. Ver., 13, p. 474; Prac. Am. Pharm., Assoc., 24, p. 178)

Adulteration of senega with asclepias vincetoxicum L.

Means of distinguishing between the two. Difference in odor and taste. Test with chloride of iron as a method of distinction.

Wells, J. D.

1876.

Senega.

Prac. Am. Pharm. Assoc., 24, p. 516.

Author gives an assay of senega root, history of its introduction, geographical range and its present importance as an article of commerce.

Maish, J. M.

1877.

False Senega Root.

Prac. Am. Pharm. Assoc., 25, p. 525.

The author states that he has been unable to obtain a sample of the drug in question, but that one was obtained by a house in St. Louis from a storekeeper in Green County, Mo., as white senega, and it sold at 25¢ a pound while the true senega was worth 65¢ per pound.

Maisch, J. M.

1877.

False Senega Root.

Am. Journal Pharm., 49, p. 517; (Am. Journal Pharm, 53, p. 377).

The author states that he had tried the so-called white senega root, which occasionally appears in commerce to Green County, Mo., but he is unable to procure specimens of the plant or root.

Greenish, T.

1878.

The Microscope in Materia Medica.

Am. Journ. Pharm., 50, p. 582; (Am. Journ. Pharm., 53, p. 387).

A lengthy discussion on how the true senega can be determined by the use of the microscope giving three diagnosis. Also a lengthy discussion on the percent of active principles in different parts of the root.

Holmes, E. M.

1878.

An adulteration of Senega.

New Remedies, 8, p. 10.

Author takes up the different adulterations of senega which is that of *asclipios vincetoxicum*. Author also gives a diagram of senega and one of *asclepias*.

Watson, S.

1878. 8

Polygala Seneca.

Watson Smithson. Misc. Coll., 15, p. 93.

Lists thirty five botanical references to senega.

Greenish, T.

1879.

Microscopic characteristics of Senega.

Pharm. Am. Pharm. Assoc., 27, p. 214.

Three diagnosis of cross section of the root and keel of Senega. Senegin found in porenchymous tissue of the bark. Chart of amount of porenchymous tissue in three different samples. Comparison of a decoction of the three samples.

Holmes, E. M.

1879.

Senega - Adulteration with *Asclepias Vincetoxicum*.

Proc. Am. Pharm. Assoc., 27, p. 216.

Description of *Asclepias Vincetoxicum*. Drawing of *Asclepias Vincetoxicum* and Senega to show the difference and likeness of the two plants. The author also discusses Valerian as a possible adulteration and gives an outline of the physical properties of the three plants.

Stille' "A. & Maische, J. M.

1879.

Senega, U. S. - Seneka.

National Dispens., 2 Ed., p. 1284.

The drug is discussed as to synonyms, origin, description of the plant and root, constituents, impurities and substitutions, physiological action and medical uses. A drawing of the plant, flowers, and a cross section of the root are also given.

Bentley, R. & Trimen, H.

1880.

Polygala Senega.

Medicinal Plants, V. 1, No. 29.

Gives the botanical synonym, list of references to figures, description, habitat, official part and names, collection, general character and composition, adulterations, medical properties and uses, and a bibliography.

Catzhausen, Von.

1880

A substitution for Seneka Root.

Am. Journ. Pharm., 52, p. 469; (Am. Journ. Pharm. 53, p. 388.

The author states that the substituted root has a general resemblance to senega. Compares the two plants in detail.

Supposed to be a species of polygala indigenous to Central America.

Castle, P. H.

1881.

Polygala Senega.

New Remedies, p. 208; (Am. Journ. Pharm., 53, p. 388).

J. H. Gunn sends in sample of plant said by him to be of Senega family, coming from Alabama. Author states it has been pronounced by Dr. Lawrence to be *Polygala*.

Boykinii also touches on the properties of *P. Nuttallii* and *P. rubella*.

Gunn, J. H.

1881

Polygala Boykinii, Nutt. - occurrence and therapeutic value.

Proc. Am. Pharm. Assoc., 30, p. 226.

The author found this plant to have the virtues of *polygala senega* which it resembles in everything except botanical characteristics.

Langbeck, _____.

1881

(Assay of Senega).

Pharm. Ztg., 26, p. 260; (Pharm. Rev. 16, p. 45).

Assumes that the quality of methyl salicylate increased with the age of the dried specimen. Does not give quantitative determination generally.

Lloyd, J. U. & C. L.

1881.

The Senega of Commerce.

Proc. Am. Pharm. Assoc., 29, p. 453.

The species of *Polygala* that should yield *senegin*. Localities personally known by the author for this plant. That growing South of the Ohio River generally accepted as being southern Senega. Habitat of northern Senega. Comparison of the two species. Remarks as to different names of Northern Senega, false white, etc.

Maische, J. M.

1881.

Polygala Boykinii, Nutt. - Source of "False Senega".

Proc. Am. Pharm. Assoc., 30, p. 226.

Botanical differences in the two plants, as to leaves, size, time of flowering, etc.

Maisch, J. M.

1881(?)

False Senega.

Am. Journ. Pharm., 53, p. 387; (Proc. Am. Pharm. Assoc., 24, p. 457)

A large amount of the false Senega root on the market which was deficient in acidity. One lot traced to Greene Co., Missouri, where it was supposed to have been collected. The root likewise had been noticed in Europe, describes its resemblance to Senega Root. A short report on the use of its infusion in medicine.

Goebel, S.

1882.

Senega.

Proc. Am. Pharm. Assoc., 30, p. 224.

Characteristics of distinction of the two plants. Discusses false senega as Southern Senega. Two large cross sections of the two roots showing the difference in structure. Also two longitudinal cuts for some purpose. Touches on chemical differences of the two plants.

Stille, A. & Maische, I. M.

1884.

Senega.

Nat'l Dispens., 3 Ed., p. 1361.

The drug is discussed as to synonyms, origin, description, of the plant and root, constituents, allied roots and substitution, physiological action, and medicinal uses. Several large diagnosis of a cross section of the root were given.

Robert R.

1885.

Under ein Ersatzmittel der Senega.

Centralbl. F. Klin. Med. Leipz. VI. 505; (Index Catalog. Surg.

Gen. Lib. S. I., Vol. 12, p. 873).

Original was not available for an abstract.

Committee.

1887.

Senega Root.

Proc., Am. Pharm. Assoc., 35, p. 396.

"Quoted 43 cents in August decline to 34 cents. Impossible to arrive at any accurate conclusion as to sources being chiefly that of Minnesota. Large quantities of Manitoba root gathered which is not as suitable for pharmaceutical use as the Western root.

Meyer, V. A.

1887.

Ueber die Bedeutung des eigenthümlichen Baues der Senegawurzel.

Arch. d. Pharm. V. 215, p. 557; (Proc. Am. Pharm. Assoc., 36, p. 370).

Meyer has studied the causes and significance of the abnormal structure of senega root which are due to the following characteristics:

1. Particular firmness of the ligneous position.
2. Ready liability to injury to the cambium and the sieve tube borders carrying the nutrient substances.
3. Particularly strong contraction of the bark parenchyma.
4. Tendency to form particularly broad large celled non-hinous primary medullary rays.
5. Bilinear position of the primary branch roots. This abnormal condition of the roots also provide for other conditions of the plant like pulling it deeper into the ground. Ueber die Beutung des eigenthymlichen Baues der Senegawurzel.

Brendel, F.

1887.

Polygala Senega.

Flora Peoriana . J. W. Franks & Sons, Peoria, Ill., 89 pp.

The author lists Senega as being among the vegetation in the climate of Middle Illinois.

Day, D. T. 1888.

Polygala Senega.

Troy Press Co., pp. 67, p. 18.

A catalogue of the flowering and fern-like plants growing without cultivation in the vicinity of the falls of Niagara. The author lists senega as being one of these plants.

Lloyd, J. U. 1889.

Senega, - Plants yielding the commercial supply.

Proc. Am. Pharm. Assoc., 37, p. 473.

The author has commented on importance of the commercial sources of senega root, which satisfactorily explains the botanical source of the varieties of the drug designated respectively as Southern or Western Senega.

Southern or Western Senega: He observes that the typical species of Polygala Senega L.

Northern Senega: Habitat, size of root.

Picture of the roots of both plants given - five in all.

Reuter, L. 1889.

Zm. Prufung der Senegawurzel auf Identitat und alter.

Archiv. d. Pharm., 227, p. 549; (Pharm. Rev. 16, p. 45; Proc. Am. Pharm. Assoc., 37, p. 477).

Favors using the determination of methyl salicylate as a qualitative test if not a quantitative.

Reuter, L.

1889.

Zur Kenntniss der Senegawurzel.

Archiv. d. Pharm., 227, p. 927; (Pharm. Rev. 16, p. 37; Proc. Am. Assoc., 37, p. 477).

Compares two species of Senega other than the official one as to structure and constituents.

Reuter, L.

1889

Zur Kenntniss der Senegawurzel.

Arch. d. Pharm., 227, pp. 309, 402, 927; (Proc. Am. Pharm. Assoc., 38, p. 465).

In a series of three articles he discusses:

Historical Account of Senega, fixed oil and wax of senega, volatile oil of senega, sugar content of senega, senegin, moisture content, decoction and infusion of senega, radix of senega and its adulterations, false senega (*Polygala alba*) and Japanese Senega (*Polygala tennifolia*).

Reuter, L.

1889.

Weiten Birtlage zur Kenntniss der Senegawurzel.

Archiv. d. Pharm., 227, p. 452; (Pharm. Rev., 16, p. 45; Proc. Am. Pharm. Assoc., 37, p. 447).

Favors the assay of the methyl salicylate as a means of valuing Senega. Work on the resin and fat determination requires further investigation.

Reuter, L.

1889.

Birtrage zur Kenntniss der Senegawurzel.

Arch. d. Pharm., 227, p. 309; Pharm. 16, p. 45; Proc. Am. Pharm. Assoc., 37, p. 477).

Reviews the early history of Senega, giving several references. Examines the root as to:

1. Fatty oil and resin,
2. Volatile oil, a mixture of methyl ester of salicylic and valeric acid,
3. Sugar,
4. Senegin,
5. Moisture,
6. Decoction and infusion of Senega.

Maisch, J. M.

1890.

Senega.

Proc. Am. Pharm. Assoc., 38, p. 465.

Considers the subject under the following heads: False Senega, origin; Polygala Alba; Polygala Beryrichii, limited distribution; False Senega, constituents; and Polygala tennifolia.

A lengthy discussion on these different varieties of Senega and their relations to each other.

Wheelock, W. E.

1891.

Genus *Polygala* in North America.

Memoirs Tarry Bot. Club., V. a, p. 4; (Proc., Am. Pharm. Assoc. 40, p. 703).

A contribution to the geographical distribution, as well as a monograph of the species of *Polygala*.

Dyche, D. R.

?

Northern Senega.

Pharm. Am. Pharm. Assoc., 40, p. 710.

Gives a description as to size of different parts of the plant; also gives the microscopic characteristics.

Lloyd, J. U.

1892.

Das Nichtvorkommen der Wurzel von *Polygala alba* mit der Senega des Handels.

Pharm. Rundsch., N. Y., 10, p. 51; Proc. Am. Pharm. Assoc., 40, p. 703).

The question concerning true senega and other species of *polygala* or so-called "senegas" the object being to wipe out of textbooks any reference to *Polygala Alba* as an accidental or intentional admixture or being mistaken for senega owing to the scarcity of the former.

Maisch, J. M.

1892.

Polygala Alba.

Am. Journ. Pharm., 64, p. 177; (Proc. Am. Pharm. Assoc., 40, p. 704).

The author contradicts Lloyd's statements regarding the scarceness of *Polygala Alba*. He gives the source and methods of obtaining this plant; also a chart by H. H. Busby Company the parts of the two species *Polygala Senega* and *Polygala Alba*.

Millsbaugh, C. F.

1892.

Senega.

Medicinal Plants, V. 1, p. 45.

A list of the Botanical names in use for this plant along with common names, description of the plant and family characteristics, history and habitat, parts used and preparation, chemical constituents, physiological action. A large colored picture of the plant with all the different parts in detail.

Sayre, L. E.

1892.

Northern *Senega*.

Am. Journ. Pharm., 64, p. 113; (Proc. Am. Pharm. Assoc., 40, p. 710).

A lengthy account of the geographical distribution of *Senega* and dwells especially on the so-called Northern *Senega*, which grows in Wisconsin and Minnesota.

An account of its collection by the Indians, shape, size, and characteristics of the plant and root and a short report of same of the constituents of this particular variety of *Senega*.

Committee

1893.

Senega.

Proc. Am. Pharm. Assoc., 42, p. 673.

A sample of senega adulterated with *Asclepius Vincetoxicum* was reported.

Guillaume, G. B.

1894.

Etude Chimique du Polygala Senega.

Schürz) ^{weir} ^{schenschn} Wochenschr. Chem. Pharm., 32, p. 340; (Proc. Am. Pharm. Assoc., 43, p. 876).

Lists the constituents of the root of Senega. Mentions isolating a new compound and gives the method of its isolation.

Wood, H. C., Remington, J. P. & Sadtler, S. P.

1894

Senega.

U. S. Dispens., 17 ed., p. 1212.

Another discusses part of plant used, properties, medicinal properties and uses; also a diagram and transverse section of senega root magnified.

Committee

1894

Senega.

Proc. Am. Pharm. Assoc., 42, p. 923.

Merely a statement of the fact that senega had been adulterated with white ipecac.

Dunnenberger, C.

1895.

Senega.

Schweiz, Wochenschr., Chem. Pharm., 33, p. 197; (Proc. Am. Pharm. Assoc., 43, p. 876).

Comments on the addition of methyl salicylate to senega, as recently reported in the Journals.

1895.

Über eine neue Verfälschung der Senega wurzel.

Pharm. Ziet., 40, p. 242; (Proc. Am. Pharm. Assoc., 43, p. 876; Pharm. Rundsch., N. Y. 13, p. 104.)

Reviews recent work on adulterants of senega.

Hartwick, C.

1895.

Über ein neue Verfälschung der senegawurzel.

Pharm. Zeit., 40, p. 242; (Schweiz, Wochensch Chem. Pharm. 33, p. 197; Proc. Am. Pharm. Assoc., 43, p. 876)

In the roots of senega have this far been found: Senegin, Polygalic acid, Glucose, fatty bodies, and one substance which has been little investigated, though it possesses energetic action. It has been termed as Polygalite. Guillaume - Gentil gives a lengthy description of method of isolating this substance.

Hartwick, C.

1895.

Über eine neue Verfälschung der Senegawurzel.

Arch. des. Pharm., 233, p. 118; (Proc. Am. Pharm. Assoc., 43, p. 876; Pharm. Rundsch., 13, p. 104).

A new adulteration has been used for Senega root by an American firm that of *Triosteum perfoliatum* Linn., N. O. Caprifoliaceae, to the extent of 25 per cent. Another gives place of growth, activities, color, shape and root characteristics, in comparison with that of senega.

Kremer, E.

1895.

Chemical Investigation of Senega.

Proc., Am. Pharm., Assoc., 43, p. 876.

A brief discussion on the chemical constituents of senega and methods of extraction of these constituents.

Rubener, P.

1895.

Parfumerie Radix Senega.

Pharm. Zeit., 40, p. 242.

The author claims to have found a perfume-like extraction from senega by extracting with ether, which is similar to oil of gaultheria.

Sayre, L. E.

1897.

Can Northern Senega, Southern Senega, Euonymus and Quillaja be Distinguished from one another in the Powdered State by the Microscope?

Am. Journ. Pharm. 69, p. 433; (Proc., Am. Pharm., Assoc., 46, p. 837).

Concludes that powdered senega can readily be distinguished from both Enonymus and Quillaja. Also that commercial samples of Powdered senega show practically no adulteration.

Kremers, E. & James, Martha M.

1898.

Criticism of a proposed method for the assay of senega.

Pharm. Rev. 16, p. 45; (Proc. Am. Pharm. Assoc., 46, p. 837).

Review the literature on the assay of Senega and make several determinations themselves. Believe that results do not warrant including an assay at present.

Felter H. W. & Lloyd, J. U.

1900.

Senega.

Kings Am. Dispens. 18th Ed. 3 Rev. V. 3, p. 1744.

The drug is discussed from the standpoint of part used, common names, botanical source, history and description, chemical composition, action, medical uses and dosage; specific indications and uses, related species and substitutes and admistures. A picture of the root of polygala seneca is also given.

1903.

Senega root.

Canadian Drug. 1, 14, p. 333.

The root is obtained from the Canadian territories, New Yorktown, N.W. Winnepeg, in 1901 handled 90,000 pounds, and in 1903 handled 70,000, - 45 to 65 cents f.o.b. Minn.

Boericke, P.A. & Tafel,

1904

Senega.

Hoemopathic Pharmaceutics.

The author gives synonym, natural order and common names along with a description of the plant and the preparation of a homeopathic preparation.

Roeder, P.

1905.

Arzeemittelprüfung - Radix Senegae.

Pharm. Post., 38, p. 391; (Dig. Com. U.S.P., 1905, p. 263).

A sample of powdered senega was found to contain 8.04% of water, 3.37% of ash, and to yield 27.11% of water soluble extract.

1905.

Senega.

Am. Rep. Dept. Agr., 1905, p. 148; (Dig. Com. U.S.P. 1905, p. 263).

The Bureau of Plant Industry reports having senega under observation though as yet they have not succeeded well with its cultivation.

1905.

Polygala Senega

Pharm. Praxis, 4, p. 58; (Dig. Com.U. S. P. 1905, p. 263).

The revisors found senega which yielded as high as 15.96% of ash, and point out that in the more recent literature an ash content of 2.5 to 3.22% is recorded as being normal.

Caeser & Loretz

1906.

(Senega)

C. & S. Geschäfts - Ber. 1906, p. 48; (Dig. Com. U.S.P. 1906, p. 467).

Reports that it is comparatively easy to control the quality of senega, but that it is becoming more difficult to secure the light colored and more desirable.

Naylor, W. H. H.

1906.

Progress in Pharmacopedios.

Pharm. Journ., 77, p. 77; (Dig. Com. U.S.P., 1906, p. 467).

The author discusses the importance of senega in bronchial affectations; reports on a chemical examination, states that a reinvestigation of the constituents of senega should be taken.

Senega.

Oil, Paint and Drug. Reporter, 69, June 4, p. 7, Aug. 27, p. 7; (Dig. Com. U.S.P. 1906, p. 468).

Editorials discussing the outlook for senega root and presents a table giving high and low quotations for the drug during the past five years.

1906.

Seneca.

Ann. Rep. U.S. Dept. Agr., 1906, p. 206: (Dig. Com. U.S.P. 1906, p. 467).

The Bureau of Plant industry reports the studies of Seneca snakeroot (*Polygala Senega*) have begun to show good results.

Dietrich, K.

1906.

Radix Senegae.

(Hälfenberger Annalen 1905, p. 127; (Dig. Com. U.S. P. 1906, p. 467).

Reports study of the extractive yielded by senega to alcoholic and hydroalcoholic menstrua.

Naylor, W.A.N.

1906.

Progress of Pharmacopedics: Drugs and their Constituents - Senega.

Jrbk. B. Pharm. Conf. 1906, p. 217; (Dig. Com. U.S.P., 1906, p. 467).

Reviews the present knowledge of senega and points out that a thorough investigation of the drug is needed.

1906

Senega.

Chem. & Drug., 69, p. 864; (Dig. Com. U.S.P. 1906, p. 467).

Committee of Reference in Pharmacy of the British Pharmacopoeia asserts that no ash limit is necessary for Senega.

Henken, Alice.

1906.

Polygala Senega.

Bull, B.P.I., U.S. Dept. Agr. No. 89, p. 54; (Dig. Comm. U.S.P. 1906, p. 467).

Mentions *polygala senega*, L., commonly called *senega*, and *senega snakeroot*, as found on hillsides and in rocky woods from New Brunswick and Western New England to Minnesota South to North Carolina and Missouri.

Wood, H. C.; Remington, J.C. & Sadtler, S.P.

1907

Senega.

U.S. Dispensatory 19th Ed. p. 1107.

The author gives the official lat. name, off. Eng. name, a list of synonyms and the part of the plant that is official. They also give a description of the plant and its habitat. They discuss the plant from the standpoint of: Properties, Constituents, Uses, Official Preparations, and Dose.

Helm, T.

1907

(*Seneka*)

Merck's Report 16, p. 155; (Dig. Com. U.S.P. 1907, p. 410).

Discusses the history of *Seneka snakeroot* and describes and figures the root and other portions of the plant.

Henkel, Alice,

1907

Senega Snakeroot.

Bul., B.P.J., U.S. Dept. Ag. No. 107, p. 45; (Dig. Com. U.S.P. 1907 p. 410).

Describes and figures *Polygala Senega* L., commonly called Senega snake root, senega, senega snake root, rattle snake root, and mountain flax.

Kenyon, C. B.

1907.

(Senecio)

Tr. Am. Inst. Homoeop., 63, p. 341; (Dig. Com. U.S.P. 1907, p. 410)

Points out that Senecio was called by the late Doctor Streeter the great female regularot. Unlike *pulsatilla*, the causes may be too profuse, premature, but the great indication for this remedy is irregular menstruation or suppressed menstruation followed by various menstruation.

Farwell, O.A.

1907.

Adulteration and Substitution of Crude Drugs.

Merck's Report, 16, p. 221; (Dig. Com. U.S.P. 1907, p. 410).

Asserts that the hard, woody roots of *Polygala Alba* Nutt are often offered as a substitute for official senega. He does not believe that the Manitoba Senega is the product of *Polygala Alba* Nutt., as this drug has the characteristic keel-like bridge of the official senega and is derived from *Polygala Senega*, and the broad leafed, for sometimes is separated as the var. *liligolia* T. & G.

Blome, W. H. 1908.
(Senega)

Proc. Mich. Pharm. Assoc., 1908, p. 95; (Dig. Com. U.S.P. 1908, p. 486).

Reports on two samples of senega and both contained large amounts of stem. The roots were usually small.

Rosler, _____. 1908.
(Senega)

Jahusbericht, wien, 1908, p. 122; (Dig. Com. U.S.P. 1908, p.486).

Reports finding a sample of senega which yielded 14.73% of ash, the maximum of Austrian Pharmacopoeia 8 Ed.

Caeser & Loretz 1908.
(Senega).

C. & L. Geschrifts - Bericht, 1908, p. 49; (Dig. Com. U.S. P. 1908, p. 486).

Report a sample of senega containing upward to 20% of a more or less related root.

Muller, R. 1908.
Polygala Senega.

Pharm. Praxis 7, pp. 309 and 325; (Dig. Com. U.S.P. 1908, p. 486).

Describes and figures senega and a number of drugs, med. as an adulteration of this drug, or occur as occasional contaminations. The illustrations consists of 18 plates made from the original photographs and are usually good.

Robinson, B. L. & Fernand, M. L.

1908.

Polygala Senega.

Grey's Manual of Bot. 7 Ed, p. 539.

A description of the plant and habitat; also time of flowering.

Trimoun, O.

1908.

Über eine Beimenung der Senegawurzel.

Pharm. Zentralh 49, p. 81; (Dig. Com. U.S.P. 1908, p. 486).

Discusses the contaminations that occur in senega and calls attention to difficulty in detecting adulterations in the commercial or ground drug. He describes and illustrates the structural characteristics of the stem and leaf of senega.

Hartwick, C.

1908.

Eine falsche Senegawurzel.

Schweiz Wchsch Chem. Pharm. 48, p. 486; (Dig. Com. U.S.P. 1908, p. 486).

Describes and figures the structural characteristics of a false senega. Author was unable to identify the root positively, but he thinks it belongs to either the Polygalacea or the Rubiaceae. Also describes and figures a second false senega of unknown origin.

1908.

Senega.

Proc. Am. Pharm. Assoc., 56, p. 774; (Dig. Com. U.S.P., 1908, p. 486).

The Inland Rev. Dept., Canada, reports finding Senega mixed with twigs and shoots of *Polygala Senega* and with roots of *Ginseng*, *American Valerian*, etc.

Jones, E. G. 1908.

Senega.

Etetic, Rev. 12, p. 361; (Dig. Com. U.S.P., p. 638).

Asserts that senega is indicated in cough with a great deal of mucous which seem to fill the chest with such rattling wheezing, and difficult breathing, especially in old people.

Hood, S.C. 1908-9.

Senega.

Exp. Sta. Rec., 20, p. 335; (Dig. Com. U.S.P., 1908, p. 486).

Reports that it has been demonstrated that senega snake root can be successfully grown under cultivation.

Henderson, _____ & Taylor _____. 1910.

(Senega)

Jour. Pharm. & Expr. Therp. 2, p. 159; (Dig. Com. U.S.P., p. 692).

Finds that Senega produces bronchial secretion reflexively.

Trenmann, O. 1910.

Der. Drogenhandel Homburgs - Radix Senega.

Apoth. Ztg. 25, p. 476; (Dig. Com. U.S.P., p. 692).

Discusses the economic conditions of the market of senega and presents a table showing the importation of this drug into Hamburg from 1898 and 1909.

Tschrich, A. 1910.

Quelques Etymologies de Noms de Plantes Medicinales et de Drogues.

Hdbk. Pharmakog _____, p. ; (J.d. Pharm. et chim., 2. p. 11; Dig. Com. U.S.P., 1910, p. 692).

The origin of the name Senega is from that of the Seneca Indians of North America.

Caeser & Loretz,

1910.

Senega.

Jahreshonichte Ber., 1910, p. 49; (Dig. Com. U.S.P., 1910, p. 692)

Points out that the price of senega root is steadily increasing.

Schneider, A.

1911.

Southern Senega, Powder.

Pacific Pharm. 5, p. 179; (Dig. Com. U.S.P. 1911, p. 583).

Reports on two samples of senega, one of which was adulterated with sane, dirt, wheat middlings and refuse.

Hartwick, C.

1911.

Die Rohstoffe des neuen Arzneibuches.

Apoth Zeit. 26, p. 84; (Dig. Com. U.S.P. 1911, p. 581).

Points out that the Pharmacopocia Germinica description for the odor of senega is not sufficient as the well know odor is methyl salicylate and this fact should be recognized. The author also states that the plant is devoid of starch.

Thurston, R & Thurston, RN.

1911.

Proc. Ohio Pharm. Assoc., 33, p. 70; (Dig. Com. U.S.P., 1911, p. 582).

In discussing the requirements for powdered vegetable drugs, the author gives data for senega on the following points; water content, ash content, alkalinity of water, soluble ash, and total alkalinity of ash.

Lloyd, J. U.

1911.

Polygala Senega.

Balleton Lloyd Lib. Pharm. series, No. 4, p. 81; (Dig. Com. U.S. 1911, p. 581),

After describing the root the author gives a summary of its history.

True, R. H.

1911.

Senega.

Proc. N. W. D. A., 37, p. 167; (Dig. Com. U.S.P., p. 582).

Reports on the purposes in the cultivation of Senega by the U. S. Dept. of Agr.

Riedel, J.D. & A. G.

1912.

(Senega).

Riedel's Berichte, 1912, p. 50; (Dig. Com. U.S.P., 1912, p. 430).

The ash content of Senega was found to vary from 8.9 to 11.7 per cent; the amount of soluble ash to be 2.9 per cent.

Caeser & Lorenz

1912.

Senega.

Jares - Ber., 1912, p. 80; (Dig. Com. U.S.P. 1212, p. 450).

Senega is an indigenous plant and is found in rocky woods and on hillsides from Canada and Minnesota, South to North Carolina and Missouri.

Kobert, _____. 1912.

Einige Versuche mit der Senegawurzel und dem Senegon.

Ber der Pharm. Gesellsch, 22 pp. 217; (Dig. Com. U.S.P. 1912, p. 430).

Some experiments on the biological determination as saponin in senega.

Rosenthaler, L. 1912.

Bermerkengun Uber Senegawurzel.

Berechte der Pharm. Gesellach 22, p. 267; (Dig. Com. U.S.P. 1912, .p. 430).

The saponin contents of senega corresponds well with estimate made by Kobert and the deterioration of the root is probably due to the presence of enzymes.

Swain, R. L. 1912.

The Significance of Some Plant Names.

Drug Circ., 56, p. 63; (Dig. Com. U.S.P. 1912, p. 430).

Senega takes one back to the Seneca Indians, a tribe of American Savages.

Caeser & Loretz, 1913.

Senega.

Gehe & Co., 1913, p. 113; (Dig. Com. U.S.P., 1913, p. 78; Jahres - Ber. 1913, p. 78).

Senega root appears to be in the hands of speculators, supplies are irregular and the drug usually inferior in quality.

Scoville, W. L.

1913.

Senega.

Bull. Pharm., 27, p. 85; (Dig. Com. U.S.P., 1913, p. 452).

According to Kobert, senega bases its activity on long keeping.

Thurston, A. & Thurston, A.N.,

1913.

Ash and Moisture Content of Powdered Vegetable Drugs.

Journ. Am. Pharm. Assoc., 2, p. 476; (Dig. Com. U.S.P., 1913, p. 452).

Author gives a table of the vegetable drug ash and moisture content. The results for senega root are: Water, 7.6%; Water soluble ash, 3.21%; Total Ash, 4.03%. Also gives the percentage of alkalinity of ash for Senega root.

True, R. H.

1913.

Senega.

Pharm. Era^a 46, p. 68; (Dig. Com. U.S.P., 1913, p. 452).

An illustrated note on Senega root, with a map showing commercial resources in the United States.

Handelsbericht, _____.

1914.

Senega.

Gehe & Co., 1914, p. 112; (Dig. Com. U.S.P., 1914, p. 449).

Reports that Senega root continues to be scarce.

Maines, E. L.

1914.

Senega.

Journ. Am. Pharm. Assoc., 3, p. 426; (Dig. Com. U.S.P., 1914, p. 449).

Senega root was found to contain from 5.04 to 6.97% of ash.

Reich, M.

1914.

Pharm. Zeit., 59, p. 134; (Yrbk. Am. Pharm. Assoc., 3, p. 581).

A study of the localization and micro chemical determination as saponins in different plants including senega root.

Remington, J. P.

1914.

Senega.

Journ. Am. Pharm. Assoc., 3, p. 403.

The proposed changes for the standards and description of the Senega includes a lengthy description of the plant with proposed standards, and which were later adopted by the U.S.P. IX.

Riedel, J. D. & A. G.

1914.

Senega

Riedel's Berichte, 1914, p. 33; (Dig. Com. U.S.P., 1914, p. 449).

Reports on the following points regarding Senega: Ash content of Senega, Water soluble extractive; extractive soluble in two parts alcohol and three parts of water.

Rippletoe, J. R.

1914.

Senega.

Am. Journ. Pharm. 86, p. 442; (Dig. Comm. U.S.P., 1914, p. 449).

Fine samples of Senega were found to contain from 30.56 to 37.96% of alcohol (63%) extract and from 3.98 to 6.74 of ash.

Stockberger, W. W.

1915.

Senega.

N.S. Dept. Agric., Farmers' Bull., No. 667, p. 33; (Dig. Com. U.S.P., 1915, p. 396).

Senega Snakeroot known also as Senega or seneca root (*Polygala Senega*). A small native perennial, occurring in rocky woods in Europe, U.S. & Canada, is not yet grown on a commercial scale, although cultivated extremely in a number of places. The root is used in medicine.

Hare, H. A., Caspari C. & Rusby, H.H.

1916.

Senega.

Nat'l Stand. Dispens., 3 Ed., p. 1462.

Treats senega under the following headings: Gives a list of synonyms; The origin of Senega; Description - with several diagram cross sections of root, also a diagram of entire root; Adulterations; Constituents; Pharmaceutical Preparations; Action and Uses; Allied Products.

Wood, H. C., & Remington, J.P.

1918.

Senega.

U.S. Dispens., 30 Ed., p. 987.

The data given is under the same headings and practically the same as the authors . 19th Ed.

Roberts, J. G.

1918.

Senega.

Prac. Penn. Pharm. Assoc., 41, p. 107; (Dig. Com. U.S.P., 1918, p. 315).

One lot of Senega was unsatisfactory because it contained 30 per cent of stems instead of only 5 per cent as required by the U.S.P. It yielded only 0.22 gm. of either soluble matter from 5 gms of drug instead of 0.3 as required.

Shimizu, _____

1920.

Polygala Senega.

Japanese Med. Lit., 15, p. 39; (Dig. Com. U.S.P., 1920, p. 362).

The root of *Polycondon grandifatum* is found to contain a readily soluble relatively nontoxic saponin and to be a satisfactory substitute for senega in the treatment of coughs.

Steiger, F.

1920.

(Polygala Senega.

Ber deutsche Pharm. Gesellsch., 30, p. 43; (Dig. Com. U.S.P., 1920, p. 362).

An exhaustive study of the morphology of *Polygala Senega* with numerous illustrations of the historical structures and photographs of the plant and drug.

Burnett, _____. _____

Polygala Senega.

Ency. Pl. t. 180; (Watson Smithson. Misc. Coll., 15, p. 93)

No data obtainable for this reference.

De Condolle, _____. _____

Polygala.

D.C. Prodromus, 330; (Watson Smithson. Misc. Coll., 15, p. 93).

No other data available.

Est. _____, _____

Polygala Senega.

Est. & Wr. p. 366; (Watson Smithson. Misc. Coll., 15, p. 93).

No data available.

Gray, A. _____

Polygala Senega.

Illus. Genera. U.S., t. 183; (Bentley & Tumin Med. Plants, V.1, p. 29).

Original reference not available.

Perry, _____. _____

Polygala Senega.

Plants, Minnesota, pl. 610; (Watson Smithson, Misc. Coll., 15, p. 93).

No further reference available.

Richard, _____. _____

Polygala Senega.

Franklin Jour., 16, (Watson Smithson. Misc. Coll., 15, p. 93).

Original not available.

Sims, ____.

Polygala Senega.

Bot. Mag. t. 1051; (Watson Smithson. Misc. Coll., 15, p. 93).

No further reference available.

Sprengel, ____.

Polygala Senega.

Syst., 3, p. 170; (Watson Smithson. Misc., Coll. 15, p. 93).

No further reference available.

____, ____.

Polygala Senega.

Botanical Magazine t. 1051; (Bentley & Trimen; Med. Plants, v. 1,
p. 29.

Polygala Senega.

United States Pharmacopocial History.

Official.

'20p, ^{Phil.}'30ap, ^{N.Y.}'30bp, '40p, '50p, '60; '70p, '80, '90, '00, '10.

Senega. '20p. Polygala Senega. W. 111.894

Seneca Snake Root. B.W., 11.97, Bn 11.111.

Radix, The root.

'30bp.

Senegae Radix

Polygala Senega.

• Seneca Snake Root.

Prop. - Externally, brownish gray, corrugated; internally, white, contorted, of the size of a goose quill or larger; inodorous; taste, at first sweetish, afterwards, hot pungent, acrid; virtues, entirely yielded to alcohol, on a less degree to water. Med. oper. stimulant, sudorifis, expectorant; in large doses, emetic and cathartic. Dose, 1 to 11.

'30ap

Senega

Polygala Senega W 111.894.

Seneka

Bw 11.97, Bn 11.111.

Radix, the root

'40 p.

Senega

Seneka

The root of Polygala Senega.

'50

Seneka,

Senega

The root of Polygala Senega.

'60

Seneka,

Senega

The Root of Polygala Senega.

'70

Seneka

Senega.

The root of Polygala Senega.

'80.

Senega.

The root of Polygala Senega. Linne(Nat. Ord. Polygoloceae).

About 10 cm. long, with a very knotty crown; and spreading, tartuous branches, keeled when dry, fleshy and round after having been soaked in water; externally yellowish gray or brownish yellow; bark thick whitish within, enclosing or irregular, porous, yellowish wood; odor slight, but unpleasant; taste sweetish, after wards acrid.

Preparations; Extraction Senegae Fluidum.

'80, Abstractum Senegae, Syrupus Scillae Comp.

'90.

Senega

The root of Polygala Senega. Linne. (Nat. Ord. Polygoloceae)

About 10 cm. long with a very knotty crown, and spreading, tartuous branches, keeled when dry, fleshy and round after having been soaked in water; externally yellowish gray or brownish yellow; bark thick whitish within, enclosing or irregular, porous, yellowish wood; odor slight, but unpleasant; taste sweetish, af-

terwards acrid.

Preparations; Extraction Senegae Fluidum.

'00.

Senega,

Senega.

The dried root of Polygala Senega. Linne (Fam. Polygalaceae)

Somewhat cylindrical, tapering more or less fluxous, 3 to 15 cm. long and 2 to 8 mm. thick, bearing several similar horizontal branches and a few rootlets; crown nobby with numerous buds and short stem - remnants; externally excentrically developed; odor slight, nauseating; taste sweet, afterwards acrid.

Average dose, 1 gram. (15 grains.)

'10.

Senega.

Senega.

Senega-Seneca Snake root. Sinega Snakeroot.

The dried roots of polygala Senega Linne. (Fam. Polygalaceae) without the presence of admixture of more than 5 per cent of stems and other foreign matter.

Usually in broken pieces, when entire slenderly conecal, more or less tortuous, somewhat branched, from 5 to 5 cm. in length and 2 to 10 mm in thickness and bearing a few rootlets; crown knobby with numerous buds and short stem-boxes; externally brownish, yellow the crown rose tinted, longitudinally wrinkled, frequently worked by a keel; fracture short, wood pale yellow, usually excentrically developed; odor peculiar penetrating; taste sweetish, afterwards acrid.

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Under the microscope, transverse sections of Senega usually show a characteristic excentric development of the wood, the central cylinder varying in outline from elliptical or ovate to irregular fan shaped, and being surrounded by an unevenly developed cortex which is thickest near the broadest strands of wood and where the wood wedges are narrow and the medullary rays are very broad, the cortical parenchyma occupies a very narrow zone of the cross section; in older roots a corky layer of from 4 to 5 rows of tangential elongated light yellow or yellow brown cells; outer layer of about 20 cells on one side of the root and only 10 or less on the other; the cells having slightly thickened walls and containing a colorless or pale yellow, amorphous substance, which is liberated in the form of large globules on the addition of a drop of potassium hydroxide T.S., 1 inner bark, the cells in radial rows, consisting of parenchyma small groups of sieve tubes and medullary rays, the latter from one to three cells wide; all the cells in this zone show a collenchymous thickening of the walls and contain an amorphous substance similar to that found in cells of the outer bark; woody layer of trochoid with bordered pores, wood fibers with oblique simple pores, trochoids and medullary rays, the latter being rather indistinct and resembling the wood fibers; tissues of the central layer of wood colored yellowish or reddish brown on the addition of a drop of potassium hydroxide, T.S.

The powder is yellowish grey to light yellowish brown odor penetrating, slightly stimulatory when examined under the micro-

scope it exhibits a mixture of fragments of parenchyma containing oily globules and wood fibers with tracheae; wood fibers non-lignified and with oblique simple pores, from 0.175 mm. to 0.25 mm^h in length; trochae with bordered and simple pores and about 0.175 in length; medullary cells lignified and with large simple pores.

Extract 10 gm. of powdered Senega by means of a Soxhlet apparatus, using 50 mls. of ether containing 2 drops of hydrochloric acid. Continue the extraction during 4 to 5 hours and then add sufficient ether to make the liquid measure 50 mls. Take 25 mls. of this solution and evaporate it on a water bath to dryness; the residue weighs not less than 0.3 gm. and upon dissolving it in 10 mls. of chloroform, transferring it to a test tube and adding 5 mls of sulphuric acid to form an underlying layer, a reddish brown color is produced at the zone of contact, and the sulphuric acid shows a slightly green fluorescence after the mixture has stood for twenty-four hours. Pour ten mls of the original ethereal solution into a beaker containing 10 mls of water and warm the mixture on a water bath until the ether has evaporated; the aqueous solution, upon filtering and adding a few drops of Ferric chloride T.S., becomes a bright pinkish purple. Senega yields not more than 5 per cent of ash.

Preparations - Fluidextractum Senegae

Syrupus Senegae (from Fluidextract) Syrupus Scillae Compositum (from Fluidextract).

Average dose - metric, 1 gm. Apothecaries 15 grains.

SUMMARY

United States Pharmacopoeial History

Official:

'20 '30a_p '30b_p '40_p '50_p '60_p '70_p '80 '90 '00 '10

Official Latin Title:

Senega '20, '30a '30b '40 '50 '60 '70 '80 '90 '00 '10

Official English Title:

Seneca Snake Root '20

Seneka 30a '30b '40 '50 '60 '70 '80

Senega '90 '00 '10

Abbreviation:

Seneg. '10

Synonym:

Seneca Snakeroot, Senega Snakeroot '10

Botanical Name:

Polygala Senega W .111,894 '30_p

Bw 11.97 Bn 11.111

Polygala Senega '30 S

Polygala Senega W .111,894. '30a

Bw 11.97 Bn 11.111

Polygala Senega '40 '50 '60 '70

Polygala Senega Linne' '80 '90 '00 '10

Family:

(Nat. Ord. Polygalaceae) '80 '90

(Fam. Polygalaceae) '00 '10

Part Used:

Radix The Root '20 '30a

The Root of Polygala Senega '40 '30 '60 '70

The root of Polygala Senega Linne' '80 '90

The dried root of Polygala Senega Linne' '00

The dried root of Polygala Senega Linne' (Fam. Polygalaceae) without the presence or admixture of more than 5 per cent of stems and other foreign matter '10.

Description:

Externally brownish, corrugated, internally white, contorted of the size of a goose-quill or larger; inodorous; taste at first sweetish, afterwards hot. Pungent, acrid; virtues entirely yielded to alcohol, in a less degree to water '30b.

About 10 cm. long, with a very knotty crown and spreading, tortuous branches, keeled when dry, fleshy and round after having been soaked in water; externally, yellowish grey or brownish yellow; bark thick, whitish within; enclosing on irregular, porous yellowish wood, odor slight but unpleasant; taste sweetish, afterwards acrid, '80 '90.

Somewhat cylindrical, tapering more or less fluxous. 3 to 15 cm. long and 2 to 8 mm. thick, bearing several similar horizontal branches and a few rootlets; crown knotty with numerous buds and short stems - remnants; externally excentrically developed, odor slight, nauseating; taste sweet, afterwards acrid '00.

Usually in broken pieces, when entirely slenderly conical more or less tortuous, somewhat branched, from 3 to 5 cm.

in length and 2 to 10 mm. in thickness and bearing a few rootlets; crown knotty with numerous buds and short stem bases; externally brownish yellow, the crown rose tinted, longitudinally wrinkled, frequently marked by a keel; fracture short, wood pale yellow, usually excentrically developed; odor peculiar, penetrating; taste sweetish, afterwards acrid.

Under the microscope transverse sections of senega usually show a characteristic excentric development of the wood, the central cylinder varying in outline from elliptical or oval to irregular fan shaped, being surrounded by an unevenly developed cortex which is thickest near the broadest strands of wood, and where the wood wedges are narrow and the medullary rays are very broad, the corticle parenchyma occupies a very narrow zone of the section. In older roots a corky layer of from 4 to 5 rows of tangential elongated light yellow or yellow brown cells; outer layer of about 20 cells on one side of the root and only 10 or less on the other, the cells having slightly thickened walls and containing a colorless or pale yellow, amorphous substance, which is liberated in the form of large globules on the addition of a drop of potassium hydroxide T.S., inner bark the cells in radial rows, consisting of parenchyma, small groups of sieve tubes and medullary rays, the latter from one to three cells wide. All the cells in this zone show a collenchymous thickening of the walls and contain an amorphous substance similar to that found in cells

of the outer bark; woody layers of tracheae with bordered pores, wood fibers with oblique simple pores, trachoids and medullary rays, the latter being rather indistinct and resembling the wood fibers. Tissues of the central layer of the wood colored yellowish or reddish brown on the addition of a drop of potassium hydroxide T. S.

The powder is yellowish grey to light yellowish brown, odor penetrating, slightly stimulatory; when examined under the microscope it exhibits a mixture of fragments of parenchyma containing oily globules and wood fibers with tracheae; wood fibers nonlignified and with oblique simple pores from 0.175 mm. to 0.25 mm. in length; tracheae with bordered and simple pores and about 0.175 mm. in length; medullary cells lignified and with large simple pores.

Extract 10 gm. of powdered senega by means of a Soxhlet apparatus, using 50 mls. of ether containing two drops of hydrochloric acid. Continue the extraction during four to five hours and then add sufficient ether to make the liquid measure 50 mls. Take 25 mls. of this solution and evaporate it on a water bath to dryness. The residue weighs not less than 0.3 gm. and upon dissolving it in 10 mls. of chloroform, transferring it to a test tube and adding 5 mls. of sulphuric acid to form an underlying layer, a reddish brown color is produced at the zone of contact, and the sulphuric acid shows a slightly green fluorescence after the mixture has stood for twenty-four

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hours. Pour 10 mils. of the original ethereal solution into a beaker containing 10 mils. of water and warm the mixture on a water bath until the ether has evaporated. The aqueous solution, upon filtering and adding a few drops of ferric chloride T.S. becomes a bright, pinkish purple. Senega yields not more than 5 percent of ash, '10.

Preparations:

'80

Extractum Senega Fluidum '90

Fluidextractum Senegae, Syrupus Senegae

(From Fluidextract), Syrupus Scillae Composition (From

Fluidextract) '10

Medical Operations:

Stimulant, sudorific, expectorant; in large doses, emetic and cathartic 20b.

Ash Content:

Not more than 3 per cent of ash '10.

Dose:

↻ 1. to ↻ 11. 30b.

1 gm. (15 grains) '00 '10.

APPROVED:

Name:

W. O. Richtmann.

Date:

asst. Prof. of Chamaecognosy.