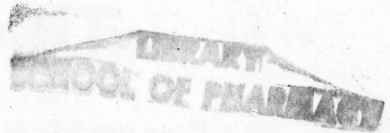


A BIBLIOGRAPHY OF
SANGUINARIA CANADENSIS LINNE

By

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A Thesis Submitted for the Degree of
BACHELOR OF SCIENCE
(Pharmacy)

UNIVERSITY OF WISCONSIN

1 9 4 7

Linne, C.

1753

Sanguinaria

Sp. Plant. Willdenow, 4 ed., v. 2, p. 1140. (Wood & Bache, Dispens. U.S.A., 2 ed., p. 579; Ibid., 3 ed., p. 567; Ibid., 4 ed., p. 597; Ibid., 5 ed., p. 627; Ibid., 6 ed., p. 627; Ibid., 7 ed., p. 627; Ibid., 8 ed., p. 626; Ibid., 9 ed., p. 646; Ibid., 10 ed., p. 645; Ibid., 11 ed., p. 678; Ibid., 12, ed., p. 739; Ibid., 13 ed., p. 769; Ibid., 14 ed., p. 801; Ibid., 15 ed., p. 1266; Ibid., 16 ed., p. 1320; Ibid., 17 ed., p. 1187; Ibid., 18 ed., p. 1187; Ibid., 19 ed., p. 1082.)

Gives the natural history, description and the classification of *Sanguinaria canadensis*.

Cutler, M.

1783

Sanguinaria

An Account of some of the Vegetable Productions, naturally growing in this Part of America; botanically arranged, Am. Acad. of Arts and Science, 1; Lloyd Library Bulletin (1903), Reproductions Series No. 4, p. 455. (Thacher, J., New Am. Dispens., 1 ed., p. 201; Ibid., 2 ed., p. 332; Ibid., 3 ed., p. 347; Ibid., 4 ed., p. 358. Cox, J. R., Am. Dispens., 4 ed., p. 495; Ibid., 6 ed., p. 537; Ibid., 7 ed., p. 552; Ibid., 8 ed., p. 576; Ibid., 9 ed., p. 620.)

Gives a brief description of the plant, its uses, and its habitat in that vicinity.

Schoef, J. D.

1787

Sanguinaria Canadensis

Materia Medica Americana, 1 ed., p. 85; Lloyd Library Reproduction Series No. 3, p. 85 (1903). (West. Drug., 17, p. 222.)

Gave a description of the plant and mentioned a few of its uses.

Barton, B. S.

1798

Sanguinaria

Collections for an Essay Towards a Materia Medica of the United States, 1 Ed., p. 39; Ibid., 2 ed., p. 39, Lloyd Library Reproduction Series No. 1, p. 31 (1900). (Thacher, J., New Am. Dispens., 1 Ed., p. 202; Ibid., 2 Ed., p. 332; Ibid., 3 Ed., p. 347; Ibid., 4 Ed., p. 359; Coxe, J. R., Am. Dispens., 1 Ed., p. 581; Ibid., 4 Ed., p. 495; Ibid., 6 Ed., p. 535; Ibid., 8 Ed., p. 576; Ibid., 9 Ed., p. 620).

Discusses the medicine properties, uses and effects of sanguinaria.

Downey, W.

1803

Sanguinaria Canadensis or Puccoon

An Investigation of the properties of Sanguinaria Canadensis or Puccoon. (Thacher, J., New Am. Dispens., 1 Ed., p. 201; Ibid., 2 Ed., p. 332; Ibid., 3 Ed., p. 347; Ibid., 4 Ed., p. 338; Coxe, J. R., Am. Dispens., 1 Ed., p. 581; Ibid., 6 Ed., p. 536; Ibid., 7 Ed., p. 522; Ibid., 8 Ed., p. 576; Ibid., 9 Ed., p. 620).

Gives a description, natural history, medicinal properties and uses and describes experiments performed on the root, leaves, and seeds.

Coxe, J. R.

1806

Sanguinaria Canadensis

Am. Dispens., 1 ed., p. 581; Ibid., 4 ed., p. 495; Ibid., 6 ed., p. 535; Ibid., 7 ed., p. 551; Ibid., 8 ed., p. 576; Ibid., 9 ed., p. 620.

Gives a description, natural history, and medicinal properties of sanguinaria.

Mease, J.

1806

An account of the Virtues of some American
Trees, Shrubs, and Plants.

Phil. Museum, v. 2, p. 160. (Proc. Am. Pharm. Ass'n., 11,
p. 215).

Among a number of American plants, describes a few uses
of *Sanguinaria*, including the removal of jaundice.

Thacher, J.

1810

Sanguinaria Canadensis

New Am. Dispens., 1 ed., p. 201; Ibid., 2 ed., p. 331;
Ibid., 3 ed., p. 347; Ibid., 4 ed., p. 358.

Gives a description, uses, properties and medicinal
action of *Sanguinaria*.

Henry, S.

1814

Blood Root. *Sanguinaria Canadensis*

American Medical Family Herbal, 1 ed., p. 51.

Gives a description, history, medical virtues, and
preparations of *Sanguinaria*.

Barton, W. P. C.

1817

Sanguinaria Canadensis

Vetetable Materia Medica U.S.A. or Medical Botany, v. 1,
p. 31. (Wood & Bache, Dispens. U.S.A., 2 ed., p. 579; Ibid.,
3 ed., p. 567; Ibid., 4 ed., p. 597; Ibid., 5 ed., p. 627;
Ibid., 6 ed., p. 627; Ibid., 7 ed., p. 627; Ibid., 8 ed., p.
627; Ibid., 9 ed., p. 464; Ibid., 10 ed., p. 645; Ibid., 11
ed., p. 678; Ibid., 12 ed., p. 739; Ibid., 13 ed., p. 769;
Ibid., 14 ed., p. 801; Ibid., 15 ed., p. 1266; Ibid., 16 ed.,
p. 1320; Ibid., 17 ed., p. 1187; Ibid., 19 ed., p. 1082).

Gives a detailed description, natural history, chemical
and medical properties, and the uses of *Sanguinaria*.

Bigelow, J.

1818

(Sanguinaria)

Am. Med. Botany, v. 1, p. 75. (Wood & Bache, Dispens. U.S.A., 2 ed., p. 579; Ibid., 3 ed., p. 567; Ibid., 4 ed., p. 597; Ibid., 5 ed., p. 627; Ibid., 6 ed., p. 627; Ibid., 7 ed., p. 627; Ibid., 8 ed., p. 626; Ibid., 9 ed., p. 646; Ibid., 10 ed., p. 645; Ibid., 11 ed., p. 678; Ibid., 12 ed., p. 739; Ibid., 13 ed., p. 769; Ibid., 14 ed., p. 801; Ibid., 15 ed., p. 1266; Ibid., 16 ed., p. 1320; Ibid., 17 ed., p. 1187; Ibid., 18 ed., p. 1187; Ibid., 19 ed., p. 1082).

(Gives the natural history, description, and medical effects of *Sanguinaria canadensis*.)

Tully, W.

1819

(Properties of Blood-Root)

New Eng. Journ. Med. & Surg., 8, p. 106. (Proc. Am. Pharm. Assn., 11, p. 215; Thacher, J., Am. New Dispens., 4 ed., p. 360).

(Gives a detailed investigation of the therapeutical properties of Blood-Root.)

Bigelow, J.

1822

Sanguinaria
Blood Root

Treatise on the Materia Medica, 1 ed., p. 325.

Gives the natural history, medicinal properties, uses and dosage of *Sanguinaria* with a colored illustration.

Zoelickoffer, W.

1823

Remarks on the Use of *Sanguinaria Canadenis*
in acute Rheumatism

Phil. Journ. Med. & Phys. Sci., v. 6, p. 295. (Proc. Am. Pharm. Ass'n., 11, p. 216).

Discusses the use of the tincture of *Sanguinaria* as a tonic and a cure for rheumatism.

Dana, J. F.

1828

An Account of Some Experiments on the Root
of *Sanguinaria Canadensis*

Annals of Lyceum of Natural History, N.Y., v. 2, p. 245.
(Wood & Bache, Dispens. U.S.A., 2 ed., p. 580; Ibid., 3 ed.,
p. 568; Ibid., 4 ed., p. 598; Ibid., 5 ed., p. 627; Ibid.,
6 ed., p. 627; Ibid., 7 ed., p. 627; Ibid., 8 ed., p. 627;
Ibid., 9 ed., p. 647; Ibid., 10 ed., p. 646; Ibid., 11 ed.,
p. 679; Ibid., 12 ed., p. 740; Ibid., 13 ed., p. 770; Ibid.,
14 ed., p. 801; Ibid., 15 ed., p. 1267; Ibid., 16 ed., p.
1320; Ibid., 17 ed., p. 1188; Ibid., 18 ed., p. 1188; Ibid.,
19 ed., p. 1082; Ibid., 20 ed., p. 967).

Conducted experiments to show the composition, proper-
ties and reactions of the root of *Sanguinaria*.

Tully, W.

1828

(Further Investigation of the Properties of
Blood-Root)

Am. Med. Records, 13, p. 23. (Proc. Am. Pharm. Assn., 11,
p. 215).

(Deals with detailed observations of himself and
others on the effects of *Sanguinaria* in different diseases).

Smith, D. B.

1831

On *Sanguinaria Canadensis*

Journ. Phil. College Pharm., 3, p. 93. (King, J., Am.
Dispens., 18 ed., p. 1710).

Gives a detailed natural history, description, proper-
ties and medical uses of *Sanguinaria*.

Tully, W.

1832

(Active Principle of Sanguinaria)

Boston. Med. & Surg. Journ., ___, p. 247. (Proc. Am. Pharm. Assn., 11, p. 215).

(Describes the effects produced by Sanguinarina or its tartrate when given in large doses).

Wood, G. B. & Bache, F.

1834

Sanguinaria, U.S.

Dispens. U.S.A., 2 ed., p. 579; Ibid., 3 ed., p. 567; Ibid., 4 ed., p. 597; Ibid., 5 ed., p. 626; Ibid., 6 ed., p. 626; Ibid., 7 ed., p. 626; Ibid., 8 ed., p. 626; Ibid., 9 ed., p. 646; Ibid., 10 ed., p. 645; Ibid., 11 ed., p. 678; Ibid., 12 ed., p. 739; Ibid., 13 ed., p. 769; Ibid., 14 ed., p. 800; Ibid., 15 ed., p. 1266; Ibid., 16 ed., p. 1319; Ibid., 17 ed., p. 1187; Ibid., 18 ed., p. 1187; Ibid., 19 ed., p. 1082; Ibid., 20 ed., p. 966; Ibid., 21 ed., p. 949; Ibid., 22 ed., p. 946; Ibid., 23 ed., p. 946.

Gave a detailed discussion on the natural history, description, physical, chemical and medicinal properties, uses and doses of Sanguinaria.

(_____)

1836

Sanguinaria Canadensis

West. Med. Reformer, 1, p. 158. (King, J., Am. Dispens., 18 ed., p. 1710).

Gives a description of Sanguinaria and discusses its uses.

Brice, —

1840

(*Sanguinaria* in Nasal Polypus).

West. Journ. Med. & Surg., 2, p. 237. (Proc. Am. Pharm. Assn., 11, p. 216).

(Suggests that direct application of *Sanguinaria* in the form of a powder or decoction will cure nasal polypus).

Beck, T. R.

1841

Poisoning With Blood Root, (*Sanguinaria Canadensis*.)

Am. Journ. Med. Sic., 2, p. 506. (Wood & Bache, Dispens. U.S.A., 5 ed., p. 628; Ibid., 6 ed., p. 628; Ibid., 7 ed., p. 628; Ibid., 8 ed., p. 628; Ibid., 9 ed., p. 647; Ibid., 10 ed., p. 647; Ibid., 11 ed., p. 679; Ibid., 12 ed., p. 741; Ibid., 13 ed., p. 771; Ibid., 14 ed., p. 802; Ibid., 15 ed., p. 1268; Ibid., 16 ed., p. 1321; Ibid., 17 ed., p. 1188; Ibid., 18 ed., p. 1188; Ibid., 19 ed., p. 1083; Ibid., 20 ed., p. 968; Ibid., 21 ed., p. 950; Ibid., 22 ed., p. 948; Ibid., 23 ed., p. 949: Proc. Am. Pharm. Assn., 11, p. 216.)

Describes its effect as a poison - cites a case incurred by drinking a large quantity of the tincture.

Shanks, L.

1842

Case of Gelatinous Polypus, cured with *Sanguinaria Canadensis* after Extraction had twice failed.

Am. Journ. Med. Sci., 3, p. 368. (Proc. Am. Pharm. Assn., 11, p. 216).

Calls attention to the fact that inhaling the fine powder and gargling with a strong infusion of *Sanguinaria* will remove all symptoms of gelatinous polypus.

Schiel, M.

1843

On Sanguinarine.

Chem. Gaz., 1, p. 145. (Wood & Bache, Dispens. U.S.A., 9 ed., p. 647; Ibid., 10 ed., p. 646; Ibid., 11 ed., p. 679; Ibid., 12 ed., p. 740; Ibid., 13 ed., p. 770; Ibid., 14 ed., p. 801; Ibid., 15 ed., p. 1268; Ibid., 16 ed., p. 1321; Ibid., 17 ed., p. 1188; Ibid., 18 ed., p. 1188; Ibid., 19 ed., p. 1082; Ibid., 20 ed., p. 967).

Describes a method of extracting Sanguinarine and mentions its properties.

Riegel, ____.

1846

Chemical Investigation of Some Papaveraceae

Chem. Gaz., 4, p. 198. (Wood & Bache, Dispens. U.S.A., 9 ed., p. 647; Ibid., 10 ed., p. 647; Ibid., 11 ed., p. 679; Ibid., 12 ed., p. 741; Ibid., 13 ed., p. 770; Ibid., 14 ed., p. 802; Ibid., 15 ed., p. 1268; Ibid., 16 ed., p. 1321.)

Gives the result of a brief analysis of Sanguinarine and Porphyroxine.

Good, P.

1847

Papaveraceae: The Poppy Tribe, Sanguinaria Canadensis.

Fajily Flora, v. 1, No. 2.

Gives a detailed botanical description, natural history, chemical and medical qualities of Sanguinaria.

Thorn, I.

1847

(Sanguinaria as a Sedative).

West. Journ. Med. & Surg., ____, p. 397. (Proc. Am. Pharm. Assn., 11, p. 217).

(Describes the sedateous effects of Sanguinaria).

Hand, W. M.

1849

Sanguinaria Canadensis. Linne.
Blood-Root, Puccoon.

House Surgeon & Physician, 2 ed., p. 247; Ibid., 3 ed., p. 243.

Discusses various uses of *Sanguinaria* which were employed at that time.

Mothershead, J.

(1849)

(Uses of *Sanguinaria*).

Wood's Quart. Retrospect., 2, p. 80. (N.W. Med. & Surg. Journ., p. 369; Proc. Am. Pharm. Assn., 11, p. 217; Wood & Bache, Dispens. U.S.A., 9 ed., p. 648; Ibid., 10 ed., p. 647; Ibid., 11 ed., p. 680; Ibid., 12 ed., p. 741; Ibid., 13 ed., p. 771; Ibid., 14 ed., p. 802).

(Recommends the use of *Sanguinaria* as an alterative or Ieobstruent in jaundice.)

West, H.

1850

(*Sanguinaria* in Croeys and Laryngismus stridulus).

West. Lancet, 11, p. 441. (Proc. Am. Pharm. Assn., 11, p. 216).

(Considers *Sanguinaria* very beneficial in the above diseases due to the emetic action of the drug.)

Jennings, R. S.

(1852)

(*Sanguinaria* in Scarlet Fever)

Stetchescope, 2, p. 182. (Proc. Am. Pharm. Assn., 11, p. 216; Wood & Bache, Dispens. U.S.A., 10 ed., p. 647; Ibid., 11 ed., p. 680; Ibid., 12 ed., p. 742; Ibid., 13 ed., p. 771; Ibid., 14 ed., p. 803.)

(Describes its use as a resolvent in Scarlet Fever.)

Merrell, A.

1853

Sanguinaria Canadensis. Blood Root.

A Digest of Materia Medica and Pharmacy, v. 1, p. 405.

Gives the botanical classification, constituents, preparations, doses and uses of *Sanguinaria*.

Wiggers, A.

1853

Sanguinaria. Blutfraut.

Grundriss der Pharmakognosie, 3 ed., p. 383.

Gives the scientific name, synonyms, habitat, and description of *Sanguinaria*.

Wiegand, T. S.

1854

On Syrup of *Sanguinaria*.

Am. Journ. Pharm., 26, p. 108. (Wood & Bache, Dispens., U.S.A., 12 ed., p. 741; Ibid., 13 ed., p. 771; Ibid., 14 ed., p. 771.)

Gives a formula for preparing the syrup of *Sanguinaria* and some physical properties of the syrup.

Schiel, J.

1855

On the Identity of Sanguinarine and Chelerithrine, and on the direct Determination of Nitrogen.

Am. Journ. Sic. & Arts., 20, p. 220. (Wood & Bache, Dispens. U.S.A., 11 ed., p. 679; Ibid., 12 ed., p. 740; Ibid., 13 ed., p. 270; Ibid., 14 ed., p. 801; Ibid., 15 ed., p. 1268; Ibid., 16 ed., p. 1321.)

Gives a method of identification and preparation of the above alkaloids and also describes a process for the determination of nitrogen.

Dorwault, _____

1856

(Sanguinaria Canadensis Linn.)

Revue Pharmaceutique, __, __. (Pharm. Journ., 17, p. 312.)

(Gives a brief natural history of Sanguinaria canadensis Linne.)

Wayne, E. S.

1856

On a New Proximate Principle from the
Sanguinaria Canadensis.

Am. Journ. Pharm., 28, p. 521. (Wood & Bache, Dispens., U.S.A., 11 ed., p. 679; Ibid., 12 ed., p. 741; Ibid., 13 ed., p. 770; Ibid., 14 ed., p. 802; Ibid., 15 ed., p. 1268; Ibid., 16 ed., p. 1321; Archiv. d. Pharm., 239, p. 409.)

Deals with the extraction of the alkaloid, Sanguinarine and discusses its physical and chemical properties.

Reil, W.

1857

Sanguinarin.

Materia Medica, 1 ed., p. 270.

Gives the scientific name, description, properties, physiological and therapeutic indications, dose, and preparations of sanguinaria.

Campbell, S.

1858

On Fluid Extract of Sanguinaria

Am. Jour. Pharm., 30, p. 221. (Proc. Am. Pharm. Assn., 8, p. 67.)

Describes a method of preparation of a Fluidextract of Sanguinaria.

O'Conner, J. D.

1859

Sanguinaria Canadensis - Its use in
Dysmenorrhoea

Journ. Mat. Med., 1, p. 117. (Cincinnati Lancet & Observer, ___, p. ____; Drug. Circ., 3, p. 111.)

Describes the successful use of the tincture of *Sanguinaria* in the treatment of Dysmenorrhoea.

Scholl, E. H.

1859

Therapeutic Applications of *Sanguinaria*.

Journ. Mat. Med., 1, p. 248. (Ec. Med. Journ., 18, p. 624; King, J., Am. Dispens., 18 ed., p. 1712.)

Recommends the use of *Sanguinaria* for the treatment of carbuncles, pneumonia, spasmodic croup, whooping-cough and chronic diseases of the liver.

Gibb, G. D.

1860

The Description, Composition and Preparation
of the *Sanguinaria Canadensis*.

Pharm. Journ., 19, p. 454. (Wood & Bache, Dispens. U.S.A., 12 ed., p. 741; Ibid., 13 ed., p. 770; Ibid., 14 ed., p. 802; Ibid., 15 ed., p. 1268; Ibid., 16 ed., p. 1321; Proc. Am. Pharm. Ass., 9, p. 95.)

Gives a detailed description, construction, economical uses, preparations and medicinal actions of *Sanguinaria*.

Bentley, R.

1862

Sanguinaria Canadensis Linne.

Pharm. Journ. Trans., 22, p. 363. (Proc. Am. Pharm. Assn., 11, p. 75.)

Gives a detailed Pharmacognostical and Therapeutical account of the plant.

Warneke, T. S.

1862

Veratringruppen.

Laeren om Laegemidlernes, 1, p. 48.

Describes the botanical source and properties of Sanguinaria.

Mayer, F. F.

1863

Assay of Opium and Its Preparations

Am. Journ. Pharm., 35, p. 401. (Proc. Am. Pharm. Assn., 12, p. 96.)

Declares that the alkaloids of Sanguinaria may also be determined by the alkaolimetric method employed in the assay of Opium.

Thomas, R. P.

1863

On the Therapeutic Properties of Sanguinaria, and its Acetate and Sulfate.

Proc. Am. Pharm. Assn., 11, p. 214. (Wood & Bache, Dispens. U.S.A., 12 ed., p. 742; Ibid., 13 ed., p. 772; Ibid., 14 ed., p. 803; Ibid., 15 ed., p. 1269; Ibid., 16 ed., p. 1322; Ibid., 17 ed., p. 1189; Ibid., 18 ed., p. 1128; Ibid., 19 ed., p. 1083.)

Concludes that Sanguinarine produces no alterative effect, and no effect on the liver.

King, J.

1864

Sanguinaria Canadenis (Canadische Blutwurz)

Am. Dispens., 6 ed., p. 835; Ibid., 8 ed., p. 741; Ibid., 10 ed., p. 741; Ibid., 15 ed., p. 741; Ibid., 16 ed., p. 741; Ibid., 18 ed., p. 1708.

Gives a description, natural history, properties and uses of Sanguinaria.

Procter, W.

1864

Remarks on Some Preparations of the
U. S. Pharmaceopoeia, 1860

Am. Journ. Pharm., 36, p. 210. (Wood & Bache, Dispens.
U.S.A., 17 ed., p. 1189; Ibid., 18 ed., p. 1189.)

Comments on the vinegar of blood-root as a basis for
the preparation of syrup of snaguinaria and its unofficial
use for ringworm.

Hollembaek, H.

1865

Sanguinaria Canadensis

American Eclectic Materia Medica, v. 1, p. 337.

Gives the botanical classification, natural history,
description, properties, uses and preparations of Sanguinaria

Newbold, T.

1866

On Sanguinaria Canadensis

Am. Journ. Pharm., 38, p. 496. (Wood & Bache, Dispens.
U.S.A., 13 ed., p. 771; Ibid., 14 ed., p. 802; Ibid., 15
ed., p. 1268; Ibid., 16 ed., p. 1321; Ibid., 17 ed., p. 1188;
Ibid., 18 ed., p. 1188; Ibid., 19 ed., p. 1082; Ibid., 20
ed., p. 967; Kings, J., Am. Dispens., 8 ed., p. 742; Ibid.,
10 ed., p. 742; Ibid., 15 ed., p. 742; Ibid., 16 ed., p. 742;
Proc. Am. Pharm. Assn., 15, p. 173; Ibid., 23, p. 203;
Yr.-Bk. Brit. Pharm. Conf., 12, p. 257.)

Discusses experiments to isolate the acid principle of
the root of Sanguinaria, and enumerates its properties.

Nashold, H.

1869

Ueber das Snaguinarin, seine Eigenschaften und
seine Zusammensetzung

Journ. Prakt. Chem., 106, p. 385. (Am. Journ. Pharm., 42,
p. 322; Proc. Am. Jour. Pharm., 18 ed., p. 267; Yr.-Bk.
Brit. Pharm. Conf., 8, p. 310.)

Describes the preparation of Sanguinarina, its compounds,
and its properties.

Oser, J.

1869

Bildung eines Alkaloids bei der Alkoholgährung

Neues Repertorium f. Perarm., 18, p. 434. (Proc. Am. Pharm. Assn., 18, p. 267.)

Discovered the alkaloid, Sanguinarina, in the distillation residue of fermented liquids.

Brown, O. P.

1870

Bloodroot. *Sanguinaria Canadensis*.

The Complete Herbalist, 1 ed., p. 142.

Gives a description, history and uses of *Sanguinaria*.

Pierpoint, E.

1872

On Some Constituents of the Rhizome of
Sanguinaria Canadensis

Am. Journ. Pharm., 44, p. 349. (Wood & Bache, Dispens. U.S.A., 14 ed., p. 802; Proc. Am. Pharm. Assn., 21, p. 243.)

Relates his observations and reviews the chemical examinations of *Sanguinaria* that had been made by Dana, Schiel, Riegee, Wayne and Newbold.

Hopp, L. C.

1875

On the Alkaloids of *Sanguinaria Canadensis*.

Am. Jour. Pharm., 47, p. 193. (King, J. Am. Dispens., 18 ed., p. 1711; Proc. Am. Pharm. Assn., 23, p. 203; Journ. Am. Pharm. Assn., 2, p. 1302; Yr.-Bk. Brit. Pharm. Conf., 12, p. 256; Archiv. der Pharm., 239, p. 409; Pharm. Journ. & Trans., 41, p. 65.)

Concludes that Sanguinaric acid is a mixture of citric and malic acids.

Smith, R. M.

1876

(Effects of Sanguinaria)

Inaugural Thesis, u. of Penn. (Stille & Maisch, National Dispens., 1 ed., p. 1219; Ibid., 2 ed., p. 1254.)

(Describes the effects produced by Sanguinarine upon the spinal cord, cardiac nerves, and the heart.)

Flückiger, F. A. & Hanbury, D.

1878

Sanguinaire

Historie Des Droques, v. 1 & 2, p. 130.

Give a description, properties and uses of Sanguinaria and describe the properties of Sanguinarine.

Jackson, J. R.

1878

Sanguinaire or The Arabe

Pharm. Journ. 37, p. 521. (Yr.-Bk. Brit. Pharm. Conf., 15, p. 238.)

Gives a description and natural history of Sanguinaria Tea and how it is dispensed.

Parsons, D. J.

1878

Tincture of Sanguinaria Canadensis a Specific for Poisoning by Rhus Toxicodendron

Pharmacist, 11, p. 214. (Zeitschr. des Oesterr. Apoth.-ver., 17, p. 198; Yr.-Bk. Brit. Pharm. Conf., 16, p. 199.)

Gives directions for the application of this tincture in case of poisoning by Rhus Toxicodendron.

Carpenter, F. W.

1879

On Some Constituents of the Rhizome of
Sanguinaria.

Am. Journ. Pharm., 51, p. 171. (Wood & Bache, Dispens.
U.S.A. 16 ed., p. 1321; Proc. Am. Pharm. Assn., 27, p. 223;
Yr. Bk. Brit. Pharm. Conf., 16, p. 201; Pharm. Journ. 41,
p. 65.

Describes the results of experiments made on the rhizome
of *Sanguinaria*.

Sayre, L. E.

1879

Sanguinaria. *S. Canadensis*. Blood Root.

Conspectus of Organic Materia Medical & Pharmacol Botany,
1 ed., p. 81.

Gives of brief description of *Sanguinaria*.

Stille, A. & Maisch, J. M.

1879

Sanguinaria. U.S.

Nat'l. Dispens., 1 ed., p. 1218; Ibid., 2 ed., p. 1253;
Ibid., 5 ed., p. 1408.

Discusses the botanical origin, constituents,
physiological action, medical uses, and a description of
Sanguinaria and its Pharmacopoeia preparations.

Eykman, J. F.

1881

Beitrag zur Kenntniss der Papaveraceen-Alkaloide

Pamphlet _____ (Proc. Am. Pharm. Assn., 30, p. 233; New.
Rem., 10, p. 163.

Shows the presence of Sanguinarine as one of the two
principal alkaloids of *macleya cordata*.

Slocum, F. L.

1881

Sanguinaria Canadensis

Am. Journ. Pharm., 53, p. 273. (King, J., Am. Dispens., 18 ed., p. 1711; Wood & Bache, Dispens. U.S.A., 16 ed., p. 1321; Proc. Am. Pharm. Assn., 29, p. 201.)

A discussion of the microscopical structure of the rhizome and a chemical examination of the resins of *Sanguinaria*.

Merrell, A.

1883

Sanguinaria Canadensis. Blood Root.

A Digest of Materia Medica and Pharmacy, p. 405.

Lists the constituents, preparations, uses, and doses of the rhizome of *Sanguinaria*.

McConn, W. J.

1884

The Precipitate from the Tincture of *Sanguinaria*.

Am. Jour. Pharm., 56, p. 505. (Yr.-Bk. Brit. Pharm. Conf., 22, p. 230.)

Shows that the introduction of a small portion of Potassium Citrate will prevent the precipitation of the active principle of *Sanguinaria*.

American Chemical Institute

1885

Sanguinarin.

Positive Medical Agents, 1 ed., p. 153.

Gives the natural history and scientific name of *Sanguinaria* in addition to describing the uses and properties of the resenoid, *Sanguinarin*.

Bastin, E. S.

1885

Microscopy of the Rhizome of *Sanguinaria Canadensis*

The Pharmacist, 18, p. 201. (Wood & Bache, Dispens. U.S.A., 16 ed., p. 1320; Ibid., 17 ed., p. 1188; Ibid., 18 ed., p. 1188; Ibid., 19 ed., p. 1082; Ibid., 20 ed., p. 967; Ibid., 21 ed., p. 949; Ibid., 22 ed., p. 947; Ibid., 23 ed., p. 949; Proc. Am. Pharm. Assn., 34, p. 448; West. Drug., 7, p. 249.)

Gives a brief description of the plant, and a detailed discussion on the structure of the rhizome.

Dymock, W.

1885

(Plants Related to *Sanguinaria*)

Mat. Med. West. India, __, __. (King, J., Am. Dispens., 18 ed., p. 1713.)

(Mentions their use in gonorrhea, and in the purification of Blood.)

Schmidt, E.

1886

Ueber die Jervsäure, Ein neues Vorkommen der Chelidonsäure

Archiv. der Pharm., 224, p. 513. (Wood & Bache, Dispens. U.S.A., 16 ed., p. 1321.)

Shows that chelidonic acid which occurs in *Sanguinaria*, is identical with Weppen's *Veratria* acid.

Maisch, J.

1887

Sanguinaria. - Bloodroot.

A Manual of Organic Materia Medica, 3 ed., p. 124; Ibid., 5 ed., p. 125; Ibid., 6 ed., p. 118.

Gives a brief account of the botanical origin, habitat, description, structure, constituents and medical properties of the rhizome of *Sanguinaria*.

Parke-Davis & Co.

1890

Blood-Root.

Organic Materia Medica, 2 ed., p. 29.

Lists the synonyms, properties, preparations, formulas, active principle, and the scientific name of Blood-Root.

König, G.

1891

Beiträge zur Kenntnis der Alkaloide aus den
Wurzeln von Sanguinaria Canadensis und
Chelidonium majus

Chem. Centr., 1, p. 321. (Jour. Chem. Soc., 60, p. 843;
Zeit. Naturwiss Halle, 63, p. 369; Pharm. Journ., 51, p.
89; Proc. A. Ph. A., 40, p. 701; Am. Journ. Pharm., 63,
p. 457; King, J. Am. Dispens., 18 Ed., p. 1711; Wood &
Bache, Dispens. U.S.A., 17 ed., p. 1188; Ibid., 18 ed., p.
1188; Ibid., 19 ed., p. 1082; Ibid., 20 ed., p. 967; Ibid.,
21 ed., p. 950; Ibid., 22 ed., p. 948; Ibid., 23 ed., p. 949;
Yr.-Bk. Brit. Pharm. Conf., 28, p. 163.)

Names the various alkaloids of Sanguinaria, describes
their properties and the methods of preparation of them.

Krauss, F.

1891

Deposit from Tinctura Sanguinariae.

Am. Journ. Pharm., 63, p. 473 (Yr.-Bk. Brit. Pharm. Conf.,
29, p. 214.)

Describes the results of experiments performed on the
above precipitate.

Meyer, H.

1892

Ueber die Wirkung Einiger Papaveraceenalkaloide.

Archiv. f. Experim. Path. u. Pharm., 29, p. 397. (Wood & Bache, Dispens. U.S.A., 17 ed., p. 1189; Ibid., 18 ed., p. 1189; Ibid., 19 ed., p. 1083; Ibid., 20 ed., p. 968; Ibid., 21 ed., p. 950; Ibid., 22 ed., p. 948; Ibid., 23 ed., p. 949.

Sanguinarine stimulated and finally paralyzed the spinal-motor ganglia of a frog.

Millspaugh, C. F.

1892

Sanguinaria. Bloodroot.

Medicinal Plants, v. 1, p. 22.

Gives the common names, description, history, habitat, parts used, preparations, chemical constituents, and physiological action including a full page colored plates of Sanguinaria.

Schmidt, E.

1892

Über Papaveraceen-Alkaloide Fünfte
Mitteilung.

Archiv. der Pharm., 231, p. 136. (Yr.-Bk. Brit. Pharm. Conf., 31, p. 47.)

Names the alkaloids of the root of Sanguinaria and describes their physical properties.

Soudder, W. B.

1892

Nitrate of Sanguinarine

Eclectic. Med. Journ., 52, p. 86. (King. J. Am. Dispens., 18 ed., p. 1712.)

Suggests the use of Sanguinarine Nitrate for relieving an allergic condition of the naso-pharynx and throat.

Villers, A. & Thumen, F.

1893

Sanguinaria Canadensis Lin.

Die Pflanzen des Homöopathischen Arzneischatzes, v. 1, p. 388; Ibid., v. 3, plate 160.

Gives the scientific names, synonyms, description, and natural history of *Sanguinaria* including a colored plate in volume 3.

Cully, J.

1894

An Analysis of *Sanguinaria* Seed

Am. Journ. Pharm., 66, p. 189. (King, J. Am. Dispens., 18 ed., p. 189; Yr.-Bk. Brit. Pharm. Conf., 31, p. 166; Proc. Am. Pharm. Assn., 42, p. 922; Pharm. Journ., 53, p. 895.)

Gives the results of an analysis of the seed of *Sanguinaria* and discusses the several substances isolated.

Bastin, E. S.

1895

Some Further Observations on the Structure of *Sanguinaria Canadensis*.

Am. Journ. Pharm., 67, p. 4. (Proc. Am. Pharm. Assn., 43, p. 872; Yr. Bk. Brit. Pharm. Conf., 32, p. 123; Pharm. Journ., 54, p. 644.)

Supplements his previous report on the structure of *Sanguinaria*.

Lloyd, J. U.

1895

Sanguinaria Canadensis as an Emmenagogue.

Western Druggist, 17, p. 222. (Proc. Am. Pharm. Assn., 43, p. 872.)

Offers proof of the effect produced by *Sanguinaria* in causing abortions.

Sayre, L. E.

1895

Sanguinaria - Sanguinaria.
Blood Root. Ger. Blutwurz.

A Manual of Organic Materia Medica and Pharmacognosy, 1 ed., p. 146.

Gives the botanical characteristics, habitat, description, constituents, action and uses of Sanguinaria canadensis.

Waggaman, S.

1895

Sanguinaria Canadensis, Blood Root.

A Compendium of Botanic Materia Medica, 2 ed., p. 107.

Gives the scientific name, natural history, detailed description, constituents, therapeutic activity and dosage of sanguinaria.

Webster, H. T.

1895

Sanguinaria as an Abortifacient.

West. Drug., 17, p. 419.

Describes the effects and dangers sanguinaria produces on the uterus.

Eli Lilly & Co.

1896

Sanguinaria

A Guide to the Organic Drugs of the U.S.P. of 1890 compiled by Wright, J. S., 2 ed., p. 100.

Gives the scientific name, habitat, dose, synonyms, constituents, properties and preparations of Sanguinaria.

Holmes, E. M.

1896

Spurious Blood Root

Pharm. Journ., 57, p. 21. (Yr.-Bk. Brit. Pharm. Conf., 34, p. 128.)

Distinguishes between the rhizome of *Sanguinaria canadensis* and that of *Chaemaelirium carolinianum*.

La Wall, C. H.

1896

A Method of Assay for *Sanguinaria* and Its Preparations

Am. Journ. Pharm., 68, p. 305. (Wood & Bache, Dispens. U.S.A., 19 ed., p. 1083; Ibid., 20 ed., p. 968; Ibid., 21 ed., p. 950; Ibid., 22 ed., p. 948; Ibid., 23 ed., p. 949; King, J. Am. Dispens., 18 ed., p. 1711; Journ. Am. Pharm. Assn., 2, p. 1300; Proc. Am. Pharm. Assn., 44, p. 614; Yr.-Bk. Brit. Pharm. Conf., 33, p. 111; Pharm. Journ., 56, p. 502.)

Discusses and compares several methods employed for the standardization of *Sanguinaria* and its preparations.

Dohme, A. R. L.

1897

The Histology and Pharmacognosy of *Sanguinaria*.

Am. Drug. Circ., 41, p. 149.

Gives a brief account of the natural history, description, and chemical properties of *Sanguinaria*.

Cheatham, H. H.

1898

Further Information Concerning *Sanguinaria* as a Catarrh Remedy.

Bull. Pharm., 12, p. 226. (West. Drug., 20, p. 264.)

Describes the successful use of the nitrate of sanguinarine in an ointment base for treatment of catarrhal conditions.

Stone, W. H.

1898

Sanguinaria Catarrh Ointment Scarcely
Advisable.

Bull. Pharm., 12, p. 84.

Declares the effect of Sanguinaria on the mucous membranes would be very irritating and advises the use of methol instead.

Schlotterbeck, J. O.

1900

The Nature of Commercial Sanguinarine Nitrate.

Pharm. Rev., 18, p. 358. (Wood & Bache, Dispens. U.S.A., 20 ed., p. 967; Ibid., 21 ed., p. 950; Ibid., 22 ed., p. 948; Ibid., 23 ed., p. 949; Proc. Am. Pharm. Assn., 48, p. 256.)

Describes a method of separation of the alkaloids and suggests a correction in the naming of them.

(_____)

1900

(Assay of Sanguinaria Canadensis)

Med. Rev., _____, p. 451. (Wood & Bache, Dispens. U.S.A., 19 ed., p. 1083; Ibid., 20 ed., p. 968; Ibid., 21 ed., p. 950.)

(Describes a method for assaying Sanguinaria.)

Fischer, R.

1901

Ueber die Alkaloide von Sanguinaria Canadensis

Archiv. der Pharm., 239, p. 409. (Yr.-Bk. Brit. Pharm. Conf., 39, p. 137; Pharm. Journ., 67, p. 385; Am. Drug. Circ., 45, p. 229; Pharm. Era, 26, p. 446.

Gives the alkaloidal constituents of Sanguinaria and describes their properties.

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1901

Sanguinariae Rhizoma

Pharm. Journ., 66, p. 258.

Gives a detailed description and natural history of the Rhizome of Sanguinaria.

Kraemer, H.

1902

Sanguinaria (Bloodroot).

A Course in Botany and Pharmacognosy, 1 ed., p. 159.

Gives the botanical origin, scientific name, description and constituents of Sanguinaria.

Blome, W. H.

1903

Preliminary Report on the Assay of Sanguinaria.

Proc. Am. Pharm. Assn., 51, p. 284. (Wood & Bache, Dispens. U.S.A., 20 ed., p. 967; Ibid., 21 ed., p. 950; Ibid., 22 ed., p. 948; Ibid., 23 ed., p. 949.)

Mentions Schlotterbeck's process for the separations of the alkaloids of Sanguinaria.

Koch, G. W.

1905

Percolation and Sanguinaria

Drug. Circ., 49, p. 196.

Suggests mixing powdered Sanguinaria with an equal weight of sand to obtain better results in percolation.

Lloyd, J. U.

1905

Concerning Substitutes and Adulterations.

Pharm. Rev., 23, p. 332. (Wood & Bache, Dispens. U.S.A., 20 ed., p. 967; Ibid., 21 ed., p. 949; Ibid., 22 ed., p. 948.)

Lists Sanguinaria as an adulterant of Hydrastis.

Graber, J. D.

1907

Sanguinaria in Eczema.

Journ. Am. Med. Assn., 49, p. 705. (Wood & Bache, Dispens. U.S.A., 20 ed., p. 968; Ibid., 21 ed., p. 950; Ibid., 22 ed., p. 948; Ibid., 23 ed., p. 949.)

Recommends the use of Sanguinaria in the treatment of obstinate cases of Eczema.

Henkel, A.

1907

Bloodroot. Sanguinaria Canadensis L.

American Root Drugs, 1 ed., p. 40.

Gives the pharmacopoeial name, common names, habitat and range, description, collection, price, and uses of sanguinaria.

Kraemer, H.

1907

Sanguinaria. - Bloodroot.

A Text-Book of Botany and Pharmacognosy, 2 ed., 1907; Ibid., 3 ed., p. 508; Ibid., 4 ed., p. 508.

Gives the scientific name, natural history, description and constituents of Sanguinaria.

Wall, O. E.

1909

Sanguinaria

Notes on Pharmacognosy, 3 ed., p. 261.

Gives the scientific name, botanical origin, habitat, description, constituents and uses of Sanguinaria.

Kozniowski, I.

(1910)

(The Alkaloids of Sanguinaria Canadensis)

Bull. Acad. Sci.-Cracow, __, __. (Drug. Circ., 55, p. 301; Chem. Zentr., 81, 2, p. 1932; Yr.-Bk. Brit. Pharm. Conf., 48, p. 39.)

(Describes a method for the separation of Sanguinarine, Chelerythrine, and Protopine, 3 alkaloids of Sanguinaria canadensis.)

Parke - Davis & Co.

1911

Sanguinaria

Standardized Products, v. 1, p. 44.

Gives general information regarding Sanguinaria canadensis and lists their standardized products.

Zornig, H.

1911

Rhizoma Sanguinariae Canadensis

Arzneidrogen, v. 2, p. 507.

Gives a list of synonyms, habitat, description, constituents, dosage and uses of Sanguinaria.

Mitlacher, W.

1912

Papaveraceae

Die offizinellen Pflanzen und Drogen, 1 ed., p. 27.

Gives the scientific name, habitat, constituents and uses of *Sanguinaria*.

Henry, T. A.

1913

Alkaloids of *Chelidonium Majus*, *Bocconia Cordata*, and *Sanguinaria Canadensis*

Plant Alkaloids, 1 ed., p. 377. (Wood & Bache, Dispens. U.S.A., 23 ed., p. 949.)

Describes the methods of preparation and the physiological action of the important alkaloids of the above drugs.

Homerberg, V. O. & Beringer, G. M.

1913

What Is the Proper Time for the Collection of *Sanguinaria*?

Am. Journ. Pharm., 85, p. 394. (Yr.-Bk. Brit. Pharm. Conf., 51, p. 203.)

Suggest that the drug should be collected just after flowering, in May, when the alkaloidal content is the highest.

Homerberg, V. O., & Beringer, G. M.

1913

An Assay for *Sanguinaria*.

Am. Jour. Pharm., 85, p. 395. (Wood & Bache, Dispens. U.S.A., 20 ed., p. 968; Ibid., 21 ed., p. 950; Ibid., 22 ed., p. 948; Ibid., 23 ed., p. 949; Yr.-Bk. Brit. Pharm. Conf., 51, p. 20.)

Gives a method for the assay of *Sanguinaria* for its alkaloids, and describes the difficulties of its extraction.

Bordas, F.

1914

Coloration des Denrees Alimentaires et des
Boissons Interdiction de l'Emploi de la
Sanguine.

Annales des Falsifications, 7, p. 51. (Yr.-Bk. Brit. Pharm.
Conf., 51, p. 44.)

Declared that the juice of Sanguinaria should not be
used as a food coloring in view of its physiological activity.

Farwell, O. A.

1915

The Proper Time to Collect Sanguinaria.

Am. Journ. Pharm., 87, p. 97. (Wood & Bache, Dispens.
U.S.A., 21 ed., p. 950; Ibid., 22 ed., p. 948; Ibid., 23 ed.,
p. 949; Yr.-Bk. Brit. Pharm. Conf., 52, p. 224.)

Carried out experiments in order to confirm and complete
the findings of Homerberg and Beringer in regard to collecting
the Rhizome of Sanguinaria at the flowering season.

Kraemer, H.

1915

Sanguinaria. - Bloodroot.

Scientific & Applied Pharmacognosy, 1 ed., p. 334; Ibid.,
2 ed., p. 275; Ibid., 3 ed., p. 311.

Gives the natural history, descriptions of the root and
the powder, the structure, constituents, uses and doses of
Sanguinaria, accompanied by illustrations.

Blair, T. S.

1917

Sanguinaria.

Botanic Drugs, 1 ed., p. 298.

Describes the pharmacological and therapeutic actions
of Sanguinaria.

Wall, O. A.

1917

Sanguinaria

Handbook of Pharmacognosy, 4 ed., p. 252; Ibid., 5 ed., p. 301.

Gives the scientific name, botanical origin, habitat, description, constituents and uses of Sanguinaria.

Euwe, G. E.

1920

Sanguinaria.

Journ. Am. Pharm. Assn., 9, p. 410. (Yr.-Bk. Brit. Pharm. Conf., 57, p. 305.)

Proposes a typical "immiscible solvent gravimetric" alkaloidal assay process for Sanguinaria.

Hanzlik, P. J.

1920

The Pharmacology of Chelidonin, a Neglected Alkaloid of Chelidonium, or Tetterwort.

Journ. Am. Med. Assn., 75, p. 1324. (Wood & Bache, Dispens. U.S.A., 21 ed., p. 950; Ibid., 22 ed., p. 948; Ibid., 23 ed., p. 949.)

Discusses the therapeutical and pharmacological effects of Chelidonine.

Spatula Publishing Co.

1920

Blood Root, Sanguinaria Canadensis.

Spatula Herb Book, 1 ed., p. 10.

Gives the popular and botanical names and the therapeutic actions of Sanguinaria.

Hanzlik, P. J.

1921

The Pharmacology of Chelidoneine, the Benzylisoquinoline Alkaloid of Chelidonium (Celandine or Tetterwort) and Stylophorum.

Journ. Pharmacology & Exp. Therapeutics, 18, p. 63. (Wood & Bache, Dispens. U.S.A., 21 ed., p. 950; Ibid., 22 ed., p. 948; Ibid., 23 ed., p. 949.)

Gives, in more detail, an account of the therapeutical and pharmacological activities of Chelidoneine.

Humphrey, J.

1921

Sanguinaria or Blood-Root.

Drugs in Commerce, p. 96.

Gives the botanical source preparation for market and description of sanguinaria.

Lloyd, J. U.

1921

Sanguinaria (Bloodroot).

Pharmacopoeial Drugs, v. 1, p. 282.

Discusses the introduction and early uses of Sanguinaria canadensis.

Reutter, L.

1923

Rhizoma Sanguinariae, Rhizome de Sanguinaire,
De Sanguinaria canadensis L.

Traite de Matiere Medicale et de Chimie Vegetale, 1 ed., p. 458.

Gives the botanical origin, habitat, description microscopical examination, the constituents, preparations, dosage of sanguinaria and describes the characteristic properties and the dose of Sanguinarine.

Wren, R. C.

1923

Blood Root. *Sanguinaria Canadensis* Linn.

Potter's Cyclopedic, 3 ed., p. 38.

Gives the part used, action, preparations and distinctive characters of *Sanguinaria*.

Gadamer, J. & Four Others.

1924

Zur Kenntnis der Chelidonium Alkaloide.

Archiv. der Pharm., 262, p. 249. (Wood & Bache, Dispens. U.S.A., 22 ed., p. 948.)

Discusses the chemical structure of the above alkaloids.

Youngken, H. W.

1926

Sanguinaria, N.F. (*Sanguinaria*).

A Text Book of Pharmacognosy, 2 ed., p. 260.

Gives synonyms, botanical origin, habitat, detailed description, histology, constituents and uses of *Sanguinaria canadensis*.

Greenish, H. G.

1929

Bloodroot.
Rhizome *Sanguinariae*.

Textbook of Materia Medica., 5 ed., p. 301; Ibid., 6 ed., p. 302.

Gives the botanical source, description, constituents, and uses of *Sanguinaria*.

Wasicky, R.

1929

Sanguinaria Canadensis.

Lehrbuch Der Physiopharmackognosie, v. 1, p. 46.

Gives the natural history, description, constituents and uses of *Sanguinaria*.

Rusby, H. H.

1930

Sanguinaria. (Sanguin.) Blood Root, N.F.

The Properties and Uses of Drugs, 1 ed., p. 703.

Gives the botanical origin, habitat, constituents and the external uses of *Sanguinaria*.

Gebner, O.

1931

Chelidonium majus L., Schöckkraut.

Die Gift-und Arzneipflanzen von Mitteleuropa, 1 ed., p. 43.

Mentions briefly the alkaloids contained in *Sanguinaria canadensis*.

Trease, G. E.

1935

Sanguinariae Rhizoma.

Sanguinaria; Bloodroot; F. *Sanguinaire*;
G. Blutwurz.

A Text-Book of Pharmacognosy, 1 ed., p. 343.

Gives the botanical source, microscopical characteristics, constituents and uses of *Sanguinaria*.

Gathercoal, E. W. & Wirth, E. H.

1936

Sanguinaria, N.F. Blood Root.

Pharmacognosy, 1 ed., p. 311.

Gives a detailed description of the plant, its structure, constituents, standards, uses, doses, and allied drugs as well as giving 2 illustrations of Sanguinaria.

Solomon, C.

1936

Sanguinaria

Pharmacology, Materia Medica, & Therapeutics, 1 ed., p. 356.

Describes the botanical source, properties, pharmacodynamics, and therapeutic effects of Sanguinaria.

Fell, ____

(____)

(Cancer and Its Treatment)

(_____, ___, p. ____). (King, J., Am. Dispens., 18 ed., v. 2, p. 1710.)

(Mentions the use of the pulp of the white flowering puccoon).

Felter, H. W.

(____)

(Sanguinaria in Respiratory Disorders)

Eclectic Med. Journ., ___, _____. (King, J. Am. Dispens., 18 ed., p. 1712.)

(Describes the successful use of Sanguinaria as an expectorant, sedative and alterative in respiratory disorders.)

Stevens, —

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(Therapeutic Indications of Sanguinaria.)

N.Y. Journ. Med., N.S., 4, p. 358. (Wood & Bache, Dispens., U.S.A., 9 ed., p. 648; Ibid., 10 ed., p. 647; Ibid., 11 ed., p. 680; Ibid., 12 ed., p. 742; Ibid., 13 ed., p. 771; Ibid., 14 ed., p. 803; Ibid., 15 ed., p. 1269.)

(Describes the use of the powdered Sanguinaria in Coryza.)

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1. Am(eric)an Journ(al of) Pharm(acy).
vol. 1 - 116; 1829 - 1943.
2. Bull(etin of) Pharm(acy).
vol. 7 - 42; 1893 - 1928.
3. Drug(gists) Circ(ular).
vol. 3,- 84; 1859 - 1940.
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Ass(ociation).
vol. 1 - 30; 1912 - 1941.
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vol. 1 - 67; 1887- 1930.
6. Pharm(aceutical) Journ(al).
vol. 1 - 142; 1842 - 1942.
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Ass(ociation).
vol. 1 - 59; 1858 - 1911.
8. West(ern) Drug(gist).
vol. 4 - 50; 1892 - 1928.
9. Y(ea)r-B(oo)k (of the) Brit(ish) Pharm(aceutical)
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1 ed., 1944.
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Arzneipflanzen*, 2 ed., 1925.
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vol. 1, 1889.
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Medica of the United States*, 1 ed., 1798;
Ibid., 2 ed., 1810.
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1914.
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1 ed., 1925.
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Drogues Medicamenteuses*, 1 ed., 1918.

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THE PHARMACOPOEIA OF THE UNITED STATES

OF AMERICA

(O - XII) (1820 - 1940)

and

THE NATIONAL FORMULARY

(I - VII) (1886 - 1942)

History

of

Sanguinaria

U.S.P. 1820

P., p. 45

Sanguinaria

Sanguinaria canadensis w. 11

Bloodroot

1140. Bw. i. 75 Bn. i. 31

Radix. The root.

U.S.P. 1830 (Phil.)

P., p. 22

Sanguinaria

Sanguinaria canadensis w. 11

Blood-root

1140. Bw. i. 75. Bn. i. 31

Radix. The root.

U.S.P. 1830 (N.Y.)

p. 55

Sanguinariae Radix

Sanguinaria canadensis

Blood Root

Prop. Root two or three inches in length, and from three to six lines in diameter; externally, red; emits when/broken in its fresh state, drops of a vermillion-coloured juice; odour,/pungent; tast acrid, vitter, nauseous; virtues extracted in different proportions by water, proof spirit and alcohol. It is most active when/ recently dried, its power becoming much impaired when long kept./

Med. Oper. In small doses, tonic, stimulant, expectorant, alterative,/in larger, narcotic, sedative, emetic. Dose, gra. ii to grs. x, in powder./

U.S.P. 1840

P., p. 34

Sanguinaria.

Bloodroot

The rhizoma of Sanguinaria canadensis.

U.S.P. 1850

P., p. 39

Sanguinaria

Sangu Bloodroot

The rhizoma of *Sanguinaria canadensis*.

(Bloodroot.)

U.S.P. 1860

P., p. 48

Sanguinaria.

Bloodroot

The rhizoma of *Sanguinaria canadensis*.
 short, somewhat waxy, whitish, with numerous small,
 red resin-cells, or of a nearly uniform, brownish-
 red color; bark thin; odor slight; taste persistently

U.S.P. 1870

P., p. 47

Sanguinaria.

Bloodroot

The rhizome of *Sanguinaria canadensis*.

U.S.P. 1880

p. 287

Sanguinaria

Sanguinaria

(Bloodroot.)

The rhizome of *Sanguinaria canadensis* Linne (Nat.
 Ord., Papaveraceae), collected in the autumn.

About two inches (5 centimeters) long, and two-
 fifths of an inch (10 millimeters) thick, horizontal,
 cylindrical, somewhat branched, faintly annulate,
 wrinkled, reddish-brown; fracture short, somewhat
 waxy, whitish, with numerous small, red resin-cells,
 or of a nearly uniform, brownish-red color; bark
 thin; odor/slight; taste persistently bitter and
 acrid.

Preparations: Acetum Sanguinariae. Extractum
 Sanguinariae Fluidum. Tinctura Sanguinariae./

U.S.P. 1890

p. 344

Sanguinaria

Sanguinaria

Sanguin.

(Bloodroot.)

Blood Root.

The rhizome of *Sanguinaria canadensis* Linne (Nat. Ord. Papaveraceae), collected in autumn./

Of horizontal growth, about 5 cm. long, and 1 cm. thick, cylindrical, somewhat branched, faintly annulate, wrinkled, reddish-brown; fracture short, somewhat waxy, whitish, with numerous small, red resin-cells, or of a nearly uniform, brownish-red color; bark thin; odor slight; taste persistently bitter and acrid./

Preparations: Extractum Sanguinariae Fluidum. Tinctura Sanguinariae./

U.S.P. 1900

p. 386

Sanguinaria

Sanguinaria

The dried rhizome of *Sanguinaria canadensis* Linne (Fam. Papavera/ceae), collected after the death of the foliage./

Of horizontal growth, cylindrical, often somewhat branched, 2 to 7 cm. long, 5 to 15 mm. in diameter; externally reddish-brown, slightly annulate; fracture short and somewhat waxy, brownish-red, or yellowish-white with numerous/reddish resin cells; odor slight; the powder sternutatory; taste persistently/acrid and bitter./

Average Dose:--0.125 Gm. (2 grains)./ ovoid, sometimes more or less plano-convex, somewhat resembling those of wheat starch in outline but polarizing light more strongly; numerous/fragments of short latex cells with reddish-brown resinous masses; tracheal/fragments few, having numerous slit-like pores./

Preparation: Tinctura Sanguinariae.

Average Dose: Metric, 0.125 Gm. - Apothecaries, 2 grains.

U.S.P. 1910 1926

p. 365

Sanguinaria

Sanguinaria

Sanguin.

Blood Root.

The dried rhizome and roots of *Sanguinaria canadensis* Linne (Fam. Papaveraceae)./

Of horizontal growth, occasionally branching, more or less cylindrical, somewhat flattened, from 2 to 7 cm. in length, and from 5 to 15 mm. in diameter; externally dark brown, slightly annulate, with a few stem-scars on the upper/surface and numerous, more or less broken filiform roots and root-scars on the/lower surface; fracture short and somewhat waxy, brownish-red, occasionally/yellowish-white, with numerous, small, circular, yellowish fibro-vascular bundles/within about 1 mm. of the epidermis, pith very large; odor slight; taste per/sistently acrid and bitter./

Under the microscope, transverse sections of the rhizome of *Sanguinaria* show/an outer layer of a single row of thin-walled epidermal cells; a cortex of from/10 to 15 rows of thin walled parenchyma cells containing numerous starch/grains, or a small amount of fixed oil; a zone of cambium, most of which is/interfascicular; a narrow circular zone of small collateral fibro-vascular bundles,/separated from each other by parenchyma; pith large, consisting of starch-/bearing parenchyma cells; latex cells containing a red or orange colored secre/tion; either isolated or connected into irregular chains and distributed among/the parenchymatous cells of the middle bark and pith; sections treated with/glycerin show in the secretion cells, after twenty-four hours, spheroidal aggre/gates of crystals which strongly polarize light./

The powder is bronish-red, sternutatory; when examined under the micro/scope it exhibits numerous starch grains, from 0.003 to 0.02 mm. in diameter,/being mostly single, seldom 2 to 3 compound, the indi-vidual grains nearly/spherical or ovoid, sometimes more or less plano-convex, somewhat resembling/those of wheat starch in outline but polarizing light more strongly; numerous/fragments of short latex cells with reddish-brown resinous masses; tracheal/fragments few, having numerous slit-like pores./

Preparation: Tinctura Sanguinariae.

Average Dose: Metric, 0.125 Gm. - Apothecaries, 2 grains.

Preparations: Flaccidum Sanguinariae, Syrupus Feni Albas Compositus, Syr-/upus Feni Albas Compositus cum Morphina, Tinctura Sanguinariae./

Average Dose: Metric, 0.125 Gm.- Apothecaries, 2 grains.

Sanguinaria

Sanguis.

Sanguinaria

Blood Root.

(U.S.P. IX)

Sanguin. Sanguinaria consists of the dried rhizome and roots of

Sanguinaria/canadensis Linne (Fam. Papaveraceae)./

Sanguinaria contains not more than 2 per cent of foreign organic/matter./

Description and Physical Properties.

Unground Sanguinaria: Of horizontal growth, occasionally branching, more or/less cylindrical, somewhat flattened, from 2 to 7 cm. in length and from 5 to 15/mm. in diameter; externally dark brown, slightly annulate, with a few stem/scars or more or less broken filiform/roots on the lower surface; fracture short, most of the rhizomes showing a brown-/ish red internal color, somewhat waxy and with numerous small circular, yellow-/ish fibro-vascular bundles within about 1 mm. of the epidermis and a very large/pith. Odor slight; taste persistently acrid and bitter./

Structure: Rhizome; an outer layer of a single row of thin-walled epidermal cells;/a cortex of from 10 to 15 rows of thin-walled parenchyma cells containing numerous starch grains, or a small amount of fixed oil; a zone of cambium, most of/which is interfascicular; a narrow circular zone of small collateral fibro-vascular/bundles bearing parenchyma cells; latex cells containing a red or orange-colored/secretion, either isolated or connected into irregular chains and distributed/among the parenchymatous cells of the middle bark and pith; sections treated/with glycerin for twenty-four hours show spheroidal aggregates of crystals in the/secretion cells or latex tubes./

Powdered Sanguinaria: Brownish red, sternutatory; exhibits numerous starch/grains, from 0.003 to 0.020 mm. in diameter, being mostly single, seldom 2- to/3-compound, the individual grains nearly spherical or ovoid, sometimes more or/less plano-convex, somewhat resembling those of wheat starch in outline but/polarizing light more strongly; numerous fragments of short latex cells with/reddish brown resinous masses; tracheal fragments few, having numerous slit-/like pores./

Preparations: Fluidextractum Sanguinariae, Syrupus Pini Albae Compositus, Syr-/upus Pini Albae Compositus cum Morphina, Tinctura Sanguinariae./

Average Dose: Metric, 0.125 Gm.- Apothecaries, 2 grains.

Sanguinaria

Sanguinaria

Sanguin.

Blood Root.

Sanguinaria is the dried rhizome of *Sanguinaria canadensis* Linne/ (Fam. Papaveraceae)./

Sanguinaria contains not more than 5 per cent of the roots of the/plant and not more than 2 per cent of other foreign organic matter, and/yields not more than 2 per cent of acid-insoluble ash./

Description and Physical Properties.

Unground Sanguinaria: Of horizontal growth, occasionally branching, often/flexuous, more or less cylindrical, somewhat flattened, from 2 to 7 cm. in length,/and from 5 to 15 mm. in diameter; externally dark brown, slightly annulate, with/a few stem scars on the upper surface, and numerous root scars or occasional/filiform roots on the lower surface; fracture short, somewhat waxy, most of the/rhizomes showing a brownish red internal color. Odor slight; taste bitter and/persistently acrid./

Structure: Epidermis of thin-walled cells; a cortex of from 10 to 15 rows of/thin-walled parenchyma cells; a zone of cambium, most of which is interfascicular;/a narrow zone of small, yellow, collateral fibrovascular bundles; a very large/pith; parenchyma cells of cortex, medullary rays and pith, with numerous starch/grains and occasionally a small amount of fixed oil; latex cells containing a red/or orange secretion, either isolated or connected into irregular chains, and dis-/tributed throughout the cortex and pith. Sections treated with glycerin for/24 hours show spheroidal aggregates of crystals in the secretion cells./

Powdered Sanguinaria: Brownish red; sternutatory; numerous starch grains/up to 0.020 mm. in diameter, mostly simple, seldom 2- to 3-compound, the individual grains nearly spherical or ovoid, sometimes more or less plano-convex,/and polarizing light; numerous fragments of parenchyma bearing short latex/cells with reddish brown, resinous masses; tracheal fragments few, with numerous/slit-like pores./

Preparations: Fluidextractum Sanguinariae, Syrupus Pini Albae Compositus,/ Syrupus Pini Albae Compositus cum Morphina (from the Compound Syrup),/ Tinctura Sanguinariae. (from the Compound Syrup),/ Tinctura

Average Dose: Metric, 0.125 Gm. - Apothecaries, 2 grains.

Average Dose: Metric, 0.125 Gm. - Apothecaries, 2 grains.

Sanguinaria

Sanguinaria

Sanguin.

Bloodroot

Sanguinaria is the dried rhizome of *Sanguinaria canadensis* Linne/ (Fam. Papaveraceae)./

Sanguinaria contains not more than 5 per cent of the roots of the plant/and not more than 2 per cent of other foreign organic matter, and yields/not more than 2 per cent of acid-insoluble ash./

Unground Sanguinaria: Of horizontal growth, occasionally branching, often/flexuous, more or less cylindrical, somewhat flattened, from 2 to 7 cm. in length,/ and from 5 to 15 mm. in diameter; externally brown, slightly annulate, with a/few stem-scars on the upper surface, and numerous root-scars or occasional fili-/form roots on the lower surface; fracture short, somewhat waxy, most of the/rhizomes showing a dusky red to moderate orange internal color with yellowish/fibro-vascular bundles./

Histology: Epidermis of thin-walled cells; a cortex of from 10 to 15 rows of thin-/walled parenchyma cells; a zone of cambium, most of which is interfascicular;/ a narrow zone of small collateral fibro-vascular bundles; a very large pith;/parenchyma cells of cortex, medullary rays and pith, with numerous starch/grains and occasionally a small amount of fixed oil; latex cells containing a/reddish brown or orange secretion either isolated or connected into irregular/chains, and distributed throughout the cortex and pith. Sections treated with/glycerin for 24 hours show spheroidal aggregates of crystals in the secretion cells.

Powdered Sanguinaria: Color light brown to dark orange; odor slight; taste/bitter and persistently acrid; sternutatory; numerous starch grains up to 20/microns in diameter, mostly simple, seldom 2- to 3-compound, the individual/grains nearly spherical or ovoid, sometimes more or less plano-convex, and/polarizing light; numerous fragments of parenchyma bearing short latex cells/with reddish orange to orange, resinous masses; tracheal fragments few, with/numerous slit-like pores./

Preparations: Fluidextractum Sanguinariae, Syrupus Pini Albae Compositus,/ Syrupus Pini Albae Compositus cum Codeina (from the Compound Syrup),/ Tinctura Sanguinariae.

Average Dose: Metric, 0.125 Gm. - Apothecaries, 2 grains.

SUMMARY OF U.S.P. AND N.F. DATA OF

SANGUINARIA

When and where official: --

U.S.P. 1820; '30 (Phil.); '30 (N.Y.); '40; '50; '60; '70;
'80; '90; 1900; '10; N.F. 1926; '36; '42.

Official Latinized Title: --

Sanguinaria, U.S.P. 1820; '30 (Phil.); '40; '50; '60;
'70; '80; '90; 1900; '10; N.F. 1926; '36; '42.
Sanguinaria Radix, U.S.P. 1830 (N.Y.).

Official English Title: --

Bloodroot, U.S.P. 1820; '40; '50; '60; '70.
Blood-root, U.S.P. 1830 (Phil.)
Blood Root, U.S.P. 1830 (N.Y.).
Sanguinaria, U.S.P. 1880; '90; 1900; '10; N.F. 1926;
'36; '42.

Official Abbreviation: --

Bloodroot. U.S.P. 1880; '90.
Sanguin. U.S.P. 1910; N.F. 1926; '36; '42.

Official Synonym: --

Blood Root, U.S.P. 1910; N.F. 1926; '36.
Bloodroot, N.F. 1942.

Part or product used: --

The root, U.S.P. 1820; '30 (Phil.); '30 (N.Y.).
The rhizoma of, U.S.P. 1840; '50; '60.
The rhizome of, U.S.P. 1870; '80; '90.
The dried rhizome of, U.S.P. 1900; N.F. 1936; '42.
The dried rhizome and roots of, U.S.P. 1910; N.F. 1926.

Scientific Name: --

Sanguinaria canadensis, U.S.P. 1820; '30 (Phil.), '30
(N.Y.); '40; '50; '60; '70.
Sanguinaria canadensis Linne, U.S.P. 1880; '90; 1900;
'10; N.F. 1926; '36; '42.

Official description: --

U.S.P. 1830 (N.Y.); '80; '90; 1900; '10; N.F. 1926;
'36; '42.

Official Preparations: --

Acetum Sanguinariae, U.S.P. 1880.

Extractum Sanguinariae Fluidum, U.S.P. 1880; '90.

Tinctura Sanguinariae, U.S.P. 1880; '90; 1900; N.F. 1926; '36; '42.

Fluidextractum Sanguinariae, N.F. 1926; '36; '42.

Syrupus Pini Albae Compositus, N.F. 1926; '36; '42.

Syrupus Pini Albae Compositus cum Morphina, N.F. 1926.

Syrupus Pini Albae Compositus cum Morphina, (from the compound syrup) N.F. 1936.

Syrupus Pini Albae Compositus cum Codenia (from the compound syrup) N.F. 1942.

Official Dose: --

grs. ii to grs. x.in Powder, U.S.P. 1830 (N.Y.).

0.125 Gm. (2 gr.), U.S.P. 1900.

Metric, 0.125 Gm. --Apothecaries, 2 gr., U.S.P. 1910; N.F. 1926; '36; '42.

APPROVED BY W. O. Richtmann
Professor of Pharmacognosy
DATE Jan. 17, 1947