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BIBLIOGRAPHY OF
VERONICA VIRGINICA LINNE

By

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A Thesis Submitted for the Degree of
GRADUATE IN PHARMACY

University of Wisconsin

1926

Pluckenet, L.

1705.

Veronica Virginica.

Almag. Bot., 70, p. 2. (Fl. Amer. Sep., v. 1, p. 10, Sp. pl. v. 1, p. 9.)

The original was not available.

Gronovius, J.F.

1739.

(*Veronica Virginica*).

Flora Virginica, v. 1, p. (Species plantarum, v. 1, p. 9).

The original was not available.

Linneaus, C.

1753.

Veronica Virginica.

Sp. Plant., 1 ed., v. 1, p. 9. (Fl. N. Amer. 2 ed., v. 1, p. 286; Fl. Amer. Sep., v. 1, p. 10; Med. Pl. v. 3, p. 196.)

Gives description, habitat and references.

Forster, J.R.

1771.

Veronica Virginica.

Flora Americae Septem., p. 2.

Listed as a plant of North America, giving the scientific name, common name and habitat.

Schoepf, J.D.

1787.

Leptandra.

Mat. Med., Americana, p. 3; (Bull. Lloyd Library, Bull. 6., Reprod. Ser. No. 3, p. 3.)

Gives scientific name, synonyms, with reference, habitat, part used, properties, uses and preparations of *Leptandra*.

Michaux, F.A.

1803.

Veronica Virginica.

Flora Bos. Am., v. 1, p. 5; (Bot. State N.Y., v. 2, p. 44;
Flora Cestrica, 11 ed., p. 6.)

Gives description and habitat.

Smith, P.

1812.

Culvers Root.

The Indian Doctor's Dispens., p. 26; (Bull. Lloyd Library,
v. , Bull. No. 6; Reprod. Ser. No. 2, p. 26.)

Gives description, and uses. Mentions experiences with
the root of *Leptandra*.

Muhlenberg, H.

1813.

Leptandra.

Catalog. Plant. Am. Septem. p. 2; (Flora Cestria, p. 6.)

The original was not available.

Pursh, L.

1813.

Veronica Virginica.

Flora Am. Septem., p. 10; (Bot. State N.Y., v. 2, p. 44;
Flora Cestrica, 1 ed., p. 6.)

Gives description, habitat, and references.

Nuttall, T.

1818.

Leptandra.

Genera of American Plants, v. 1, p. 7; U.S. Dispensatory, 1
ed., p. 688; *ibid.*, 3 ed., p. 670; *ibid.*, 4 ed., p. 704;
ibid., 12 ed., p. 510; *ibid.*, 13 ed., p. 525; *ibid.*, 14 ed.,
p. 550; *ibid.*, 15 ed., p. 846; *ibid.*, 19 ed., p. 691; Am.
Dispens., 10 ed., p. 484; Bot. State N.Y., v. 2, p. 44.)

Gives synonym, description and habitat.

Elliott, S.

1821.

(Leptandra)

Sketch Bot. S.C. & Ga., v. 1, p. 7; (Flora Cestricea, 1 ed., p. 6.)

Gives a description and habitat of the plant.

Bigelow, J.

1824.

Leptandra.

Plants of Boston, 2 ed., p. 6; (Bot. State of N.Y., v. 2, p. 44.)

Gives titles, description, synonym, and habitat.

Coxe, J.R.

1827.

Veronica Virgenica.

Am. Dispens., 7 ed., p. 651.

Gives part of plant used.

Rafinesque, C.S.

1828.

Leptandra.

Med. Bot., v. 2, p. 21; (U.S. Dispens., 2 ed., p. 688; *ibid.* 3 ed., p. 670; *ibid.*, 4 ed., p. 704; *ibid.*, 13 ed., p. 524; *ibid.*, 14 ed., p. 551; Millspaugh Med. Pl., v. 2, p. 114.)

Gives titles, classification, description and history.

Beck, L.C.

1833.

Leptandra Virgenica.

Bot.U.S., 1 ed., p. 263; (Bot. State of N.Y., v. 2, p. 44; Flora Cestricea, p. 6.)

Gives description and habitat.

Wood, G.B. & Bache, F. 1834.

Leptandra.

U.S. Dispens., 2 ed., p. 688; *ibid.*, 3 ed., p. 670; *ibid.*,
4 ed., p. 704; 5 ed., p. 1270.

Gives synonyms and description of the plant.

Darlington, W. 1837.

Leptandra Virginica.

Flora Cestrica 1 ed., Bot. State of N.Y., v. 2, p. 44.)

Gives etymology, habitat, description and synonyms.

Merat, ___ & de Tens, ___. 1837.

Veronica Virginica.

Mat. Med., v. 1, p. 816; (Resources South Fields & For.
New ed., p. 510).

The original was not available.

Paine, M. 1842.

Culver's Physic.

Mat. Med., p. 50.

Gives official name, habitat and action.

Torrey, J. 1843.

(Veronica Virginica).

Bot. State N.Y., v. 2, p. 44; (Medicinal Plants, v. 2, p. 36).

Gives synonym, description, habitat and references.

Lee, C.A. 1848.

(Leptandra)

Med. Pl. N.Y., p. 42; (Rep. Med. Bot., p. 143.)

Gives use and synonym.

Morsey, W.F.

1848.

Leptandra Virginica.

Med. Plants, p. 373.

Gives family, synonym and action.

Clapp, A.

1852.

Veronica Virginica.

A Synopsis or Systematic Catalogue of Indigenous and Naturalized Medicinal Plants of the U.S., p. 143.

Gives synonyms, medicinal properties and references.

Wood, G. & Bache, F.

1854.

Leptandra.

U.S. Dispens., 10 ed., p. 1355; *ibid.*, 12 ed., p. 510; *ibid.*, 13 ed., p. 524; 14 ed., p. 550.

Gives common names, description of plant, part used, properties with comments on research.

Brenton, T.T.

1855.

Leptandra.

Pharmacol. Therap. & Mat. Med., p. 851.

Gives synonyms, part used, characters, composition, action, and preparation.

Keith & Co.

1855.

Leptandrin.

Pos. Med. Agents, 1 ed., p. 157.

Gives synonyms, description of drug and powder, action and several preparations.

Grover, C.

1856.

Leptandrin.

Ecler. Med. Jour., v. 2, p. 210.

Gives method of preparation, constituents, therapeutic growers, active principles, and uses of the preparation.

Parrish, E.

1856.

Leptandrin.

Pract. Pharm., 1 ed., p. 163.

Discusses "eclective" active principle obtained from Leptandra.

Wayne, E.S.

1856.

(Leptandra).

Am. Jour. Pharm., 28, p. 510; King's Am. Dispens., 18 ed., 3 rev., v. 2, p. 1126.

Gives therapeutic uses, constituents and solubility of constituents of Leptandra.

Gray, A.

1857.

(Leptandra)

Manual of Botany, p. 290; (U.S. Dispens., 12 ed., p. 510; ibid., 13 ed., p. 524; ibid., 14 ed., p. 550; ibid., 15 ed., p. 846; ibid., 19 ed., p. 691.)

Gives synonyms, description of the plant and habitat.

Reil, W.

1858.

Leptandra.

Mat. Med. Der Reinen Chemischen Pflanzenstoffe, p. 209.

Give synonym, physical and therapeutic properties.

Campbell, S.

1858.

Fluid Extract of Leptandra.

Prac. Am. Pharm. Assoc., v. 7, p. 67; (Am. Jour. Pharm. 30, p. 225; Drugg. Circ., v. 2, p. 114.)

Offers a formula for the preparation of the fluid extract of Leptandra, and characteristics of the finished product.

Lee, C.A.

1859.

Leptandra Virginica.

Jour. Mat. Med., p. 227.

Gives active principle and its uses.

Wayne, E.S.

1859.

(Leptandra).

Am. Jour. Pharm. v. 31, p. 557; (U.S. Dispens., 12 ed., p. 511; *ibid.*, 13 ed., p. 525; *ibid.*, 15 ed., p. 846; *ibid.*, 19 ed., p. 691; *ibid.*, 20 ed., p. 1146; King's Am. Dispens., 18 ed., v. 2, p. 1126; Millspaugh Med. Plants, v. 2, p. 114; Proc. Am. Pharm. Assoc., v. 9, p. 117; Bentley & Trimen, v. 3, p. 196.)

Gives properties of mannite, and preparation and occurrence.

Lee, C.A.

1860.

Fluid Extract of Leptandra.

Jour. Mat. Med., v. 2, p. 155; (Medicinal Plants, v. 2, p. 36.)

Gives method of preparation and uses as a tonic chalogogue, and laxative.

Braithwaite, __.

1863.

Leptandra.

Eclec. Med. Jour., v. 22, p. 133.

Gives physical properties, therapeutic properties and source of the drug.

Mayer, F.F.

1863.

Leptandra.

Am. Jour. Pharm., v. 30, p. 298; (King's Am. Dispens., 10 ed., p. 484; *ibid.*, 18 ed., v. 2, p. 1126; U.S. Dispens., 12 ed., p. 511; *ibid.*, 13 ed., p. 525; 14 ed., p. 551; Millspaugh Med. Plants. v. 2, p. 114; Bentley & Trimen, v. 3, p. 196.)

Gives scientific name, part used, and a brief summary of the work done by Wayne.

Procter, Wm. Jr.

1863.

(Leptandra).

Am. Jour. Pharm., v. 35, p. 112; (U.S. Dispens., 12 ed., p. 510; *ibid.*, 13 ed., p. 525; *ibid.*, 14 ed., p. 551.)

Gives method of preparation of the fluid extract.

King, J.

1864.

Leptandra Virginica.

Am. Dispens., 6 ed., p. 549; *ibid.*, 10 ed., p. 479.

Description of plant, flowers, history, habitat, properties, uses and list of official preparations are given.

Allen, P.W.

1865.

Leptandrin.

Eclec. Med. Jour., v. 25, p. 447.

Gives an account of the disagreeable properties of Leptandrin and a method of correcting them.

(Bates, J. & Tilden, H.A.)

1866.

Leptandra.

Jour. Mat. Med., v. 2, p. 155.

The preparation, dose, action and solubility are discussed.

Bentley, R. & Warrington, R. 1866.

Leptandrin.

Mat. Med. & Therap., p. 504.

Gives generic character, specific character, habitat, part used, therapeutics and chief constituent.

(Bates, J. & Tilden, H.A.) 1867.

Leptandra.

Jour. Mat. Med., v. 6, p. 3.

The dose of Leptandra as an extract is one to ten grains, while Leptandrin a reseroid is one-half to two grains.

Hale, E.M. 1867.

Leptandra Virginica.

Hom. Mat. Med. & New Rem., 2 ed., p. 653.

Gives synonyms, analogues, botanical description, official preparations, medical history, general effects, detailed actions on various parts of the body.

Mann, H. 1868.

Veronica Verginica.

Phaenogamous Plants of N. Am., p. 30; *ibid.*, 2 ed., p. 29.

Listed as a flowering plant of North America.

Wood, G.B. 1868.

Leptandra.

Therap. Pharmacol. & Mat. Med., 3 ed., p. 701.

Gives description, part used, habitat, principle constituent, action and uses.

Bates, J. 1869.

Leptandra Virginica.

Jour. Mat. Med., v. 8, p. 321.

Gives synonyms, official title, plant order and classification, generic and specific character of plant, history, part used, number of active principles, medicinal properties and the therapeutic employment. Leptandra is mentioned as a cure for typhoid fever, haemorrhoids, intermittent fever, syphilis and cutaneous affections. There are six preparations mentioned.

Porcher, F.P. 1869.

(Veronica Virginica)

Resources of Southern Fields and Forests, new ed., p. 510;
(Medicinal Plants, v. 2, p. 36.)

Gives synonyms, habitat, active ingredient, uses and bibliography.

Aiton, W.T. 1810.

(Leptandra)

Hort. Kew., v. 1, p. 26; (Flora Cestrica, 1 ed., p. 6.)

The original was not available.

Brown, P.O. 1870.

Blackroot.

Complete Herbalist, p. 177.

Gives description, history, government and virtues.

Scudder, J.M. 1870.

Leptandrin.

Eclec. Med. Jour., v. 30, p. 205.

Leptandrin is the dried alcoholic extract of the drug. Claimed to be worthless as a resin.

Biddle, J.B. 1876.

Leptandra.

Mat. Med., 7 ed., p. 265.

Gives part used, synonyms, description of rhizome and preparation.

Woollen, L.J. 1876.

Leptandra.

New Remedies, v. 5, p. 84.

States that the fluid extract of Leptandra gives very gratifying results, when used as a purgative.

Castle, F.A. 1879.

Leptandra Virginica.

New Rem., v. 8, p. 31.

The resin varies in appearance and sensible properties.

Hale, E.M. 1879.

Leptandra.

Condensed Mat. Med., 2 ed., p. 533.

Gives action on all parts of the body and their results.

Sayre, T.E. 1879.

Leptandra.

Org. Mat. Med. & Pharm. Bot., 1 ed., p. 83.

Gives synonym, size, part used with description, and constituents.

Stille, A. & Maisch, J.M. 1879.

Leptandra.

Natl. Dispens., 2 ed., p. 821; *ibid.*, 3 ed., p. 878.

Comments on origin, gives description, constituents, medical action, uses and dose. Seven common names are mentioned.

Jessen, H.C.

1880.

Leptandra.

Ther. Mat. Med., p. 202.

Gives action of Leptandra on the mind, cutaneous system, sensorium, and trunk.

Bentley, R. & Trimen, H.

1880.

(Leptandra).

Med. Plants, v. 3, p. 196; (King's Am. Dispens., 18 ed., v. 2, p. 1126.)

Gives a description, synonyms, habitat, official part, name, general characteristics, properties, uses and colored plate, with references.

Lloyd, J.U.

1880.

(Leptandra)

Am. Jour. Pharm., v. 52, p. 491; (King's Am. Dispens., 18 ed. 3 rev., v. 2, p. 1126).

Gives description of the resin, sensible properties, and best method for the preparation of the resin.

Lloyd, J.U.

1880.

Resin of Leptandra.

Proc. Am. Pharm. Assoc., v. 28, p. 421.

Gives variations of appearance of the drug, and other sensible properties, also gives history of the resin, and formula for its preparation. Makes note of the therapeutic value of the drug. Gives precautions for the preservation of the drug.

Newton, T.V.

1880.

Compound Powder of Leptandrin.

Drugg. Circ., v. 22, p. 49.

Gives a formula for and methods of preparation.

Johnson, A.M.

1881.

Leptandra.

Med. Form., 1 ed., p. 245.

Gives titles, part used, habitat, constituents, dose and preparations.

Lloyd, J.U.

1881.

Resin of Leptandra.

Drugg. Circ., v. 25, p. 84.

Describes the sensible properties and method of preparation of the resin.

Hedges, H.I.

1884.

Leptandra.

Polygot Index, p. 70.

Gives the name of Leptandra in six long pages.

Johnson, L.

1884.

Veronica Virginica.

Med. Bot. of N. Am., p. 206.

Gives a description, common names, habitat, and part used of Leptandra.

Oldberg, O. & Wall, O.

1884.

Leptandra.

Companion to the U. S. Pharmacopoeia, p. 646.

Gives origin, habitat, part used, description, constituents, medicinal uses and dose of Culver's Root.

Wood, G.B., Remington, J., & Sadtler, S.

1886.

Leptandra.

U.S. Dispens., 15 ed., p. 846.

Gives, properties, history, origin and references.
Also gives description and medicinal properties.

Gray, A. 1886.

Veronica Virginica.

Synoptical Flora of North America, v. 1, p. 286; (Medicinal
Plants, v. 2, App., p. 36.)

Gives description, habitat and synonyms of Deptandra.

Bartholow, R. 1887.

Leptandra.

Mat. Med. & Therapeut., 2 ed., p. 704.

Gives synonyms, composition, action, uses, and prepara-
tions of Leptandra.

Diehl, C.L. 1887.

Leptandra.

Proc. Am. Pharm. Assoc., v. 35, p. 114.

Gives method of obtaining the bitter principle and the
resin of Leptandra.

Steinmann, G. 1887.

Leptandra.

Am. Jour. Pharm. v. 59, p. 229; (King's Am. Dispens., 18 ed.,
v. 2, p. 1126; U.S. Dispens., 13 ed., p. 525; *ibid.*, 19 ed.,
p. 691; *ibid.*, 20 ed., p. 1466; Proc. Am. Pharm. Assoc.,
v. 35, p. 114.)

Gives solubility of the constituents. Also gives methods
of extraction of the bitter principle.

Bennet, A.R. 1888.

Leptandrin.

West. Drugg., v. 10, p. 249.

Gives reasons why the drug is not subject to adultera-
tions, also gives percent and composition of ash.

Goss, J. M.

1889.

Leptandra Virginica.

Mat. Med. & Pharmacol., 2 ed., p. 346.

Gives synonyms, definition, medicinal properties, and constituents.

Brunton, L.T.

1890.

Culvers Root.

Diseases and Remedies, p. 175.

Gives synonym, constituents and three preparations.

Millspaugh, C.F.

1890.

Leptandra.

Medicinal Plants, v. 2, p. 114, & app. v. 2, p. 36.

Gives eight scientific names, and nine common names. Describes the drug, gives history and habitat, part used and preparation, comments on chemical constituents and physiological action. Gives a full page colored illustration with explanations, also 14 bibliographic references in the appendix.

O'Connor, J.H.

1890.

Leptandra.

Am. Hom. Pharm., 2 ed., p. 289; *ibid.*, 4 ed., p. 289; (Med. Plants, v. 2, app. p. 36.)

Gives synonyms, common names, description, and preparations.

Parke Davis & Co.

1890.

Culvers Root.

Orig. Mat. Med., 2 ed., p. 68.

Gives synonyms, titles, properties, and preparations of Leptandra.

Weber, W.

1890.

Extractum Leptandrae Fluidum.

Am. Drugg., v. 19, p. 120.

Gives its menstruum to be used in this preparation, also gives solubility and percent of resin obtained.

Maisch, J.M.

1892.

Leptandra.

Org. Mat. Med., 5 ed., p. 146.

Gives origin, habitat, description, structure, constituents and properties of the drug.

Rusby, H.H.

1892.

Leptandra.

Bull. Pharm., v. 6, p. 309.

The U.S.P. name (Leptandra Virginica) is derived from Latin Veronica Virginica.

Bastin, E.S.

1893.

Leptandra Starch.

Am. Drugg., v. 23, p. 251.

Gives a description of the starch grains, also gives an illustration as to shape and comparative size.

Brachen, H.M.

1893.

Leptandra.

Mat. Med., p. 327.

Gives definition, synonym, chief constituent, action and three preparations with doses.

Guttingen, A.

1893.

Veronica Virginica.

Med. Pl. of Tenn., p. 50.

Gives synonym, description, habitat, part used and time of collection.

Remington, J.P.

1894.

Leptandra.

Pract. of Pharm., 3 ed., p. 955.

Gives constituents, synonyms and the preparations.

Sayre, L.E.

1895.

Leptandra.

Org. Mat. Med. & Pharmacog., 1 ed., pp. 334 & 401.

Gives synonyms, titles, parts used, botanical characteristics, habitat, description of drug, constituents, action, and uses, also a list of official preparations.

Scudder, J.K.

1895.

Leptandra Virginica.

Eclectic Med. Jour., v. 55, p. 683.

Classified as an old Eclectic remedy. Gives therapeutic value, also gives good and bad points of the drug.

Culbreth, D.M.

1896.

Leptandra.

Mat. Med. & Pharmacol., p. 377.

Gives part used, etymology of name, description of plant, commercial use, constituents, preparation, properties and allied plants.

Weicher, T.

1896.

(Leptandra)

Merck's Rept., v. 5, p. 87.

Gives part used and its action.

Breithaupt, A.P.

1897.

Leptandra.

Am. Jour. Pharm., v. 69, p. 235; (King's Am. Dispens., 18 ed., 3 rev., v. 2, p. 1126; U.S. Dispens., 19 ed., p. 691; ibid., 20 ed., p. 1466.)

Gives structure of the plant, with six drawings, also a description of plant and fruits.

Guareschi, I.

1897.

Leptandra.

Farm. Italana, v. 2, p. 428.

Gives synonyms, part used, habitat, active constituent, and use as emetic and cathartic.

White, W.H.

1897.

Leptandra.

Mat. Med. Pharm. Pharmacol. and Ther., 3 ed., p. 422.

Gives synonyms, part used, characters, composition, action, uses, preparations, and habitat.

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

1900.

Leptandra.

King's Am. Dispens., 18 ed., 3 rev., v. 2, p. 1126.

Botanical source, history, description and chemical composition are discussed.

Nelson, B.E.

1901.

(Leptandra)

Merck's Rept., v. 10, p. 287.

Gives synonyms and drawing of the structure of parts of the drug, also gives constituents.

Sollmann, T. 1901.

Leptandra.

A Text on Pharmacol., 1 ed., p. 725.

Gives synonym, part used, active principle, and a list of preparations.

Kraemer, H. 1902.

Leptandra.

Bot. & Pharmacog., p. 155.

Gives synonym, parts used, description, size and constituents.

Potter, S.L. 1903.

Leptandra.

Hdbk. Mat. Med. Pharm. & Therap., 9 ed., p. 366.

Gives part used, constituents, also a list of preparations.

Stevens, A.A. 1903.

Leptandra.

Mat. Med. & Therap., 3 ed., p. 197.

Gives synonym, official definition, action, uses and preparations.

Whitla, W. 1903.

Leptandra.

Pharm. Mat. Med. & Therap., 8 ed., p. 537; *ibid.*, 11 ed., p. 588.

Gives synonym, action, and color of the active ingredient.

Henkel, Alice 1906.

Leptandra.

Wild. Med. Plants U.S., p. 42; Bull. Bur. Plant Ind., U.S. Dept. Agric., No. 89, p. 73; (Dig. Com. U.S.P. & N.F. 1906, p. 336.)

Gives six synonyms and habitat.

Parsons, C.W.

1906.

Leptandrin.

Pharm. Era, v. 26, p. 23.

Gives price of the drug as thirty-five cents an ounce.

Henkel, Alice

1907.

Leptandra.

Am. Root Drugs, p. 59; Bull. Bur. Rlt. Ind., U.S. Dept. Agr., No. 107, p. 59; (Dig. Com. U.S.P. & N.F., 1911, p. 285).

Gives synonyms, pharmacopoeial name, habitat, description of plant, description of rootstock, collection, prices and uses.

Kraemer, H.

1907.

Leptandra.

Bot. & Pharmacog., 3 ed., pp. 376, 501, 763.

Gives description of plant and powder, also the constituents of the drug.

Wood, G.B., Remington, J. & Sudtler, S.P.

1907.

Leptandra.

U.S. Dispens., 19 ed., p. 691; *ibid.*, 20 ed., p. 1466.

Properties, uses, official preparations and dose of Leptandra are given.

Gray, A.

1908.

Veronica Virginica.

Flowering Plants and Ferns, 7 ed., p. 726.

Gives synonyms, description of plant, habitat and adaptness to soil.

Hare, H., Caspari, C. & Rusby, H. 1909.

Leptandra.

Natl. Stand. Dispens., 2 ed., p. 909.

Gives origin, illustrations, description, constituents, pharmaceutical preparation, actions and uses.

Burnett, J.A. 1910.

Leptandra.

Ecl. Med. Jour., 70, p. 483.

Leptandra is useful as an appetizer and increases the antiperiodic action of quinine. Gives a list of preparations containing Leptandra.

Crance, A.J. 1910.

Leptandra Virginica.

Ecl. Med. Jour., 70, p. 483.

Leptandra has a cathartic action, also a stimulant; is a cure of condition and not of a disease. It leaves no after effects.

Kraemer, H. 1910.

Leptandra.

Bot. & Pharmacog., 5 ed., pp. 376, 419, 501, 763.

Gives synonyms, definition, description and constituents, also gives description and constituents of the powder and two illustrations of the plant.

Power, F.B. 1910.

Constituents of Leptandra.

Jour. Chem. Soc. 97, p. 1944; (Scientific and Applied Pharmacognosy, 1 ed., p. 73).

Give constituents, synonyms, habitat and description of Leptandra.

Rosenberg, D.H. 1910.

Leptandra Virginica.

Elec. Med. Jour., v. 70, p. 583.

Used as a cure in vilious and malarial fevers. Scudder in his fight against fraudulent preparations has advocated the use of Leptandra.

Boericke, __. & Tafel, __. 1911.

Leptandra.

Am. Hom. Pharm., 9 ed., p. 289.

Gives synonyms, common names, description and preparations.

Lilly, J.K. 1911.

(Leptandra).

Proc. N.W.D.A., v. 37, p. 158; (Dig. Com. U.S.P. & N.F., 1911, p. 410).

"Leptandra continues to be a favorite vehicle for soil, gravel, and chicken feathers."

Lloyd, J.U. 1911.

Leptandra.

Bull. Lloyd Libr., No. 18, p. 54; (Dig. Com. U.S.P. & N.F. 1911, p. 410).

Gives history of the drug and synonyms.

Dohme, A.R.S. & Engelhardt, G. 1912.

Leptandra.

Jour. Am. Pharm. Assoc., v. 1, p. 102; (Dig. Com. U.S.P. & N.F., 1912, p. 321.)

Qualities of samples of this drug found to be very poor during this year.

McEwan, D.

1912.

Leptandrin.

Pharm. Jour., v. 88, p. 331; (Dig. Com. U.S.P. & N.F., 1912, p. 180.)

The use of this drug is very limited, being scarcely if ever, prescribed.

Mitlacher, W.

1912.

Veronica Virginica.

Die Offizinellen Pflanzen und Drogen, p. 75.

Gives synonyms, habitat, parts used, constituents and action.

Wanderkleed, C.E.

1912.

Leptandra.

Proc. Penn. Pharm. Assoc., v. 35, p. 180; (Dig. Com. U.S.P. & N.F., 1912, p. 321.)

Gives assay of seven samples of this drug, the resin varied from 2.890 to 3.970 percent, all below standard.

Diehl, L.C.

1913.

Leptandra Virginica.

Yrbk. Am. Pharm. Assoc., v. 2, p. 504.

Gives titles, parts used and description of the rhizome.

Holm, T.

1913.

Leptandra Virginica.

Merck's Rept., v. 22, p. 61; (Dig. Com. U.S.P. & N.F. 1914, p. 328).

Gives illustrations of rhizome, leaves, flowering organs, and sections of rhizome with an account of the same.

Pearson, W.A. 1913.

Leptandrin.

Jour. Am. Pharm. Assoc., v. 2, p. 160; (Dig. Com. U.S.P. & N.F., 1914, p. 328.)

Two samples of Leptandrin were found to contain 3.1 and 1.175 percent of ash, and to be 79.95 and 94.13 percent soluble in alcohol.

Thurston, A. & Thurston, A.N. 1913.

Culvers Root.

Jour. Am. Pharm. Assoc., v. 2, p. 475; (Dig. Com. U.S.P. & N.F., 1914, p. 328.)

Two samples of Leptandra contains 9.77 and 6.61 percent of moisture and 11.97 and 30.79 percent of total ash.

(Editor) 1913.

Leptandra.

Ellingwood's Therap., v. 7, p. 141; (Dig. Com. U.S.P. & N.F., 1914, p. 328.)

Give use of Leptandra and its action on the heptic nerve.

Kennedy, E.J. 1914.

Leptandra.

Pharm. Era, v. 47, p. 261.

Gives the pharmacopoeial definition of the drug.

Osborne, O.T. 1914.

Leptandra.

Jour. Am. Med. Assoc., v. 60, p. 142; (Dig. Com. U.S.P. & N.F., 1914, p. 328.)

States that the extract and fluidextract are useless preparations.

Remington, J.P. 1914.

Leptandra.

Jour. Am. Pharm. Assoc., v. 3, p. 388; Abstr. Prop. Changes, 1914, p. 30; (Dig. Com. U.S.P. & N.F., 1914)

Gives amount of impurity present in the official drug.

Beringer, G.M. 1915.

Leptandra.

Jour. Am. Pharm. Assoc., v. 4, p. 1135.

Gives synonyms, definition, description, of plant; also properties, description and composition of the powder.

Corunna, J.T. 1915.

Leptandra.

Spatula, v. 22, p. 245.

Used in a preparation of a spring tonic, with ten other ingredients.

Ellingwood, F. 1915.

Leptandra.

Am. Jour. Clin. Med., v. 22, p. 32; (Dig. Com. U.S.P. & N.F., 1915, p. 294).

Leptandra was used as a liver remedy with good results, also used satisfactorily in treatment for malaria.

Kraemer, H. 1915.

Leptandra.

Scientific and Applied Pharmacognosy, 1 ed., p. 729.

Gives synonyms, habitat, description and constituents.

Farwell, O.A.

1917.

Leptandra.

Drug. Circ., 1917, v. 61, p. 231; (Dig. Com. U.S.P. & N.F. 1917, p. 232).

The proper name for plants producing this drug is *Veronicataum Virginicum* (Linne).

Sayre, L.E.

1917.

Leptandra.

Org. Mat. Med. & Pharmacog., 4 ed., p. 391.

Gives characteristics, habitat, description of drug and powder, constituents, action and uses, also gives the preparation of Leptandrin.

Wall, O.A.

1917.

Leptandra.

Hdbk. of Pharmacog., 5 ed., p. 233.

Gives synonyms, habitat, size of plant, description of parts used, constituents and an illustration.

Anderson, G.A.

1918.

Leptandra.

Proc. N.W. D.A. 1918, p. 234; (Dig. Com. U.S.P. & N.F., 1918, p. 244.)

One lot of Leptandra examined contained 30 percent of dirt.

Lilly, J.K.

1918.

(Leptandra)

Proc. N.W.D.A., v. 44, p. 235; (Dig. Com. U.S.P. & N.F., 1918, p. 244.)

One lot of Leptandra contained 30% dirt.

Bastedo, W.A.

1918.

Leptandra.

Mat. Med. Pharmacol. & Therap., 2 ed., p. 136.

Described as a slow and mild in action.

Bruntz, J. & Jaloux, M.

1918.

Veronica Virginica.

Plants Officinales, p. 98.

Rhizome and roots are official in the first edition of the Argentine and the first and fifth to ninth revisions of the United States Pharmacopoeia.

Felter, H.W.

1919.

Leptandra.

Ecler. Med. Jour., v. 79, p. 452; (Dig. Com. U.S.P. & N.F. 1919, p. 260)

Gives a description of the plant, with illustrations, also uses, classification and cases where Leptandra may be used.

Marshfield, W.

1919.

Leptandra.

Squibb's Atlas of Official Drugs, p. 135.

Gives synonyms, botanical origin, part used, impurities, assay, ash, habitat, description, constituents and preparations.

Grant, E.H.

1920.

Leptandra.

Jour. Am. Pharm. Assoc., v. 9, p. 763; Pharm. Era, 53, p. 295.

Gives test for Leptandra and states that it is used as a purgative.

Kraemer, H.

1920.

Leptandra.

Scientific and Applied Pharmacognosy, 2 ed., p. 629.

Gives synonyms, inner structure, description, constituents and five illustrations.

Lloyd, J.U.

1921.

Leptandra.

Origin and History of Pharmacopoeial Vegetable Drugs, Chemicals and Preparations with Bibliography, v. 1, p. 180.

Gives history and habitat of the plant.

Reutter, L.

1923.

Leptandra.

Traile de Matiere Medicale, p. 265.

Gives titles, parts used, description of plant, synonyms, constituents and action.

Wren, R.C.

1923.

Leptandra.,

Potters Cyclopaedia, 3 ed., p. 37.

Gives synonyms, part used, action, preparations and distinctive character.

Greenish, H.G.

1924.

Leptandra.

Mat. Med., 4 ed., p. 409.

Gives synonyms, part used, description, constituents and action.

Allen, L. F.

Veronica Virginica.

The Encyclopedia of pure Materia Medica, v. 5, p. 556;
(Medicinal Plants, v. 2, app., p. 36.)

The original was not available.

U.S.P. (O-X) 1820-1920

and

N.F. (I-V) 1888-1916

History of

Veronica Virginica. Linne.

U.S.P. 1830 (Phila.) P. - p. 38

Veronica.

Veronica Virginia W.I.54

Veronica.

Radix. The root.

U.S.P. 1860 P. - p. 34.

Leptandra. Leptandra.

The root of Veronica Virginia (Linn.) Lep-/tandra
Virginia (Nuttall).

U.S.P. 1870 P. - p. 35.

Leptandra. Leptandra./

The root of Leptandra Virginia (Nuttall)./

U.S.P. 1880 P. - p. 190.

Leptandra.

Leptandra.

(Culver's Root)

The rhizome and rootlets of Leptandra virginica Nuttall
(Veronica vir-/ginica Linne - Nat. Ord. Scrophulariaceae).

Horizontal, from four to six inches (10 to 15 centi-
meters) long, and about a/ quarter of an inch (6 millimeters)
thick, somewhat flattened, bent and branched,/ deep blackish
brown, with cup-shaped scars on the upper side, hard, of a
woody/ fracture, with a thin, blackish bark, a hard, yellow-
ish wood and a large, purplish-/brown, about six-sided pith;
rootlets thin, wrinkled, very fragile; inodorous;/ taste
bitter and feebly acid.

Preparations: Extractum Leptandrae. Extractum Leptan-

drae Fluidum./

U.S.P. 1890 P. - p.222.

Leptandra

Leptandra.

(Culver's Root)

The rhizome and roots of Veronica virginica Linne (nat. ord. Scrophu-/larineae).

Of horizontal growth, from 10 to 15 cm. long, and about 5 Mm. thick, some-/what flattened, bent and branched, deep blackish-brown, with cup-shaped/ scars on the upper side, hard, of a woody fracture, with a thin, blackish/ bark, a hard, yellowish wood, and a large purplish-brown, about six-rayed/ pith; roots thin, wrinkled, very fragile; inodorous; taste bitter and feebly/ acrid.

.Preparations: Extractum Leptandrae. Extractura Leptandrae Fluidum./

U.S.P. 1900 P. - p. 254.

Leptandra

Leptandra

The dried rhizome and roots of Veronica virginica Linne (Fam.) (Scrophularinceae).

Rhizome of horizontal or oblique growth, somewhat bent and branched,/ from 4 to 15 cm. long and 3 to 8 Mm. in diameter; externally gray-brown to/ blackish-brown, with cup-shaped scars on the upper side; annulate, the inferior/ and lateral surfaces

with coarse roots and root scars; fracture tough and/ woody, branches readily separable from the main rhizome; internally, bark/ dark brown; 0.3 to 1 Mm. thick, wood hard yellowish, pith large, purplish-/brown; roots slender, longitudinally wrinkled, fragile; odor slight; taste bitter,/ slightly acrid.

Average dose - 1 Gm. (15 grains).

N.F. IV - p. 312.

Leptandra

Leptandra

Leptand

Culvers Root

The dried rhizome and roots of Veronica virginica, Linne (Fam.) Scrophulariaceae), without the presence of more than 5 per cent of/ stems or other foreign matter./

Rhizome usually of horizontal growth, nearly cylindrical, somewhat branched;/ branches readily separable from the main rhizome, from 4 to 10 cm. in length and/ from 4 to 13 Mm. in diameter; externally grayish-brown to a dark reddish-brown,/ annulate from circular scars of bud-scales, upper surface with short remnants,/ occasionally with buds, and numerous circular stem-scars; from under and lateral/ portions arise numerous coarse roots, fracture very tough and woody; internally, bark/ rather thin, dark brown and resinous, wood about the same thickness as the bark,/ light brown and porous, pith large, more or less hollow, the color being similar to that/ of the bark. Roots from 1 to 10 Cm. in

length and from 1 to 2 Mm. in diameter;/ externally dark brown to purplish-brown, smooth and faintly longitudinally wrinkled;/ fracture short; internally with a thick brownish-black bark and small light brown/ central cylinder. Nearly odorless; taste very bitter and acrid.

The powder is brown to yellowish-brown; odor strong, penetrating; consisting of/ numerous irregular fragments, many of them being colored pink or violet upon the/ addition of hydrated chloral T.S.; starch grains numerous, mostly in the parenchym-/atous cells, the individual grains nearly spherical or more or less polygonial, and/ from 0.002 to 0.008 Mm. in diameter; tracheae with spiral thickenings or with simple/ or bordered pores; wood fibers with thick lignified walls, with simple pores or with/ bordered pores, resembling tracheids; fragments of parenchyma containing a light/ brown or brownish-black resin, the latter frequently closely coherent with the starch/ grains in the cells thus preventing the separation of the individual starch grains;/ mounted in hydrated chloral T.S., occasional elongated cells with a lemon-yellow/ oily substance are observed.

Leptandra yields not more than 12 per cent of ash.

.Average Dose - Metric, 1 Gm. - Apothecaries, 15 grains.

Leptandra

Leptandra

Leptand.

Culver's Root.

Leptandra consists of the dried rhizome and roots of *Veronica virginica* (Linne) (Fam. Scrophulariaceae)/.

Leptandra contains not more than 5 per cent of its stem bases or/ other foreign organic matter and yields not more than 6 percent of acid insoluble ash.

Description and physical properties.

Underground Leptandra. Rhizome usually of horizontal growth, nearly cylindrical/ somewhat branched; branched readily separable from the main rhizome, from/ 4 to 10 cm. in length and from 4 to 13 cm. in diameter; externally grayish brown/ to dark reddish brown, annulate from circular scars of bud-scales, upper surface/ with short stem remnants, occasionally with buds, and numerous circular stem/ scars; from the under and lateral portions arise numerous coarse roots, fracture/ very tough and woody; internally, bark rather thin, dark brown and resinous,/ wood about the same thickness as the bark, light brown and porous, pith large,/ more or less hollow, the color being similar to that of the bark. Roots from/ 1 to 10 cm. in length and from 0.5 to 2 Mm. in diameter; externally dark brown/ to purplish brown. smooth and faintly longitudinally wrinkled; fracture short;/ internally with a thick brownish black cortex and small light brown central cylin-/er. Odor characteristic, taste

very bitter and acrid./

Powdered Leptandra. Brown to yellowish-brown; consisting of numerous irregular/ fragments, many of them being colored pink or violet upon the addition of/ chloral hydrate T.S.; starch grains numerous, mostly in the parenchyma cells/ the individual grains nearly spherical or more or less polygonal, up to 0.009 mm./ in diameter; tracheae, with spiral thickenings or with simple or bordered pores;/ wood fibers with thick lignified walls with simple pores or with bordered pores/ resembling tracheids; fragments of parenchyma containing a light brown or/ brownish-black resin, the latter frequently closely coherent with the starch grains/ in the cells thus preventing the separation of the individual starch grains;/ mounted in chloral hydrate T.S. occasional elongated cells with a lemon/ yellow oily substance are observed.

Preparation: Extractum Leptandrae, Fluidextractum Leptandrae, Pilulae Catharticae Vegetabiles.

Average Dose: Metric, 1 Gm. - Apothecaries, 15 grains.

Summary of Data U.S.P. 1820-1920 and
N.F. 1888-1916.

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Leptandra.

Official in U.S.P. 1830 (Phila.), '60, '70, '80, '90, 1900,
N.F. IV.

Official Latin Titles.

Veronica U.S.P. 1830 (Phila.)

Leptandra U.S.P. 1860, '70, '80, '90, 1900, N.F.IV.

Official English Titles.

Veronica U.S.P. 1830 (Phila.)

Leptandra U.S.P. 1860, '70, '80, '90, 1900, N.F.IV.

Official Abbreviation.

Leptand. N.F. IV.

Official Synonym.

Culver's Root U.S.P. 1880, '90, 1900, N.F. IV.

Scientific Name.

Veronica Virginica U.S.P. 1830 (N.Y., Phila.), '60,
'90, 1900, N.F. IV.

Leptandra Virginica 1870, '80.

Natural Order

Scrophulariaceae U.S.P. 1880, '90.

Family Name.

Scrophulariaceae U.S.P. 1900, N.F.IV.

Part Used.

The root U.S.P. 1830 (N.Y., Phila.), '60, '70,

Rhizome and roots. 1890 (Rhizome and Rootlets
1880; Dried rhizome and roots U.S.P. 1900, N.F.
IV.

Description

See U.S.P. & N.F. data 1880, '90, 1900 & N.F.IV.

Official Preparation.

Extractum Leptandrae 1880, '90, 1900, N.F. IV,
N.F.V.

Extractum Leptandrae Fluidum 1880, '90, 1900, N.F.
IV, N.F. V.

Pilulae Catharticae Vegetabiles N.F. IV, N.F. V.

Dose.

1 Gram 1900, N.F. IV, N.F. IV.

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1886; 19 ed., 1907; 20 ed., 1918.

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New Rem.	1876-1883
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Pharm. Rec.	1884-1893
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