

BIBLIOGRAPHY
OF
ARNICA MONTANA LINNE

By

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SCHOOL OF PHARMACY

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

UNIVERSITY OF WISCONSIN

1 9 4 1

Cortheuser, F. J.

1749

Arnica

Fundamenta Matericae Medicae, 1, ed., p. 419.

Discusses the root of Arnica and in some detail the flowers.

Lewis, W.

1761

Leopard's Bone

Experimental History of Mat. Med., 1 ed., p. 248.

Gives a general description of plant.

(Sinne, C.)

1772

Arnica

Mat. Med., 2 ed., p. 187.

Gives the scientific name, parts used, dosage and habit of Arnica.

Nonvo, D.

1788

Arnica Flores e. Radix

A Treatise on Medical and Pharm. Chem. and Mat. Med., V. 3, p. 23.

Discusses the root and flower of Arnica as to their usage.

Wildenow, C. S.

1805

Arnica montana

Linne's Species Plantarum, 4 ed., v. 3, p. 2106, (Wood & Bache, Dispens. U.S.A.), 2 ed., p. 110; *ibid.*, 3 ed., p. 110; *ibid.*, 4 ed., p. 112; *ibid.*, 5 ed., p. 120; *ibid.*, 6 ed., p. 120; *ibid.*, 7 ed., p. 120; *ibid.*, 7 ed., p. 120; *ibid.*, 8 ed., p. 121; *ibid.*, 9 ed., p. 119; *ibid.*, 10 ed., p. 120; *ibid.*, 11 ed., p. 125; *ibid.*, 12 ed., p. 138; *ibid.*, 13 ed., p. 147; *ibid.*, 14 ed., p. 150; *ibid.*, 15 ed., p. 253; *ibid.*, 16 ed., p. 257; *ibid.*, 17 ed., p. 228; *ibid.*, 18 ed., p. 231; *ibid.*, 19 ed., p. 231; Electec & General Dispens., 1 ed., p. 140.

Gives several botanical synonym of *Arnica montana* Linne with references.

Berg, O.

1806

Arnica Flores

Waarenkunde Pharmcevtische, 1 ed., p. 265, *ibid.*, 2 ed., p. 322.

Gives a description of *Arnica* flowers.

Berg, O.

1806

Arnicae Herba

Waarenkunde Pharmcevtische, 1 ed., p. 65.

Gives a description of the herb of *Arnica*.

Berg, O.

1806

Arnicae Radix

Waarenkunde Pharmcevtische, 1 ed., p. 225, *ibid.*, 2 ed., p. 82.

Gives a description of the root of *Arnica*.

Coxe, J. R.

1806

Arnica Montana

Am. Dispens., 1., p. 197; *ibid.*, 6 ed., 105; *ibid.*, 7 ed., p. 103; *ibid.*, 8 ed., p. 103; *ibid.*, 9 ed., p. 115.

Gives the pharmacopical synonym, common synonym, description of the plant, properties and uses of several pharmacopial parts of Arnica.

Skecut, J.

1806

Arnica

Flora Carolinaunis, 1 ed., p. 206.

Gives parts used, sensible properties, medical virtues and domestic uses of Arnica.

Monelot, S.

1807

Arnique

Dictionnaire Des Drogues, 1 ed., p. 114.

Gives a description of Arnica Montana.

Flückiger, F. A.

1816

Flores Arnicae

Grundriss Der. Pharmkognosia, 1 ed., p. 231.

Describes the flowers of Arnica montana L. in detail.

Chevallier, A., Tassaigne, T. J.

1819

Des Fleurs d'arnica, arnica montana.

Jour. d Pharm. et d Chimie, p. 2148: (N. Jahrbuch of Pharm. 23, p. 79.

Discuss the structure of Arnica flower, and several experiments performed on it.

Bigelow, J.

1822

Arnica

Treat. Mat. Med., 1 ed., p. 87.

Describes the plant with uses in Europe and United States.

An American Physician

1827

Arnica

Eclectic and Gen. Dispens., 1 ed., p. 104.

Gives pharmacopial synonym, common synonym, official names, medicinal properties and uses of Arnica.

Murray, J.

1827

Arnica Montana

System of Mat. Med., 6 ed., p. 114.

Discusses the therapeutic properties of the flowers and roots of Arnica.

Murray, J.

1828

Arnica Montana

System of Mat. Med. and Pharm., 1 ed., p. 97.

Describes the structure of the flowers of Arnica, their action on system, use and dose.

Wheeler, J.

1830

Arnica

Plantarum Medicinalium, p. 98.

Gives the general botanical characteristics of Arnica.

Jourdan, A. J. S.

1832

Tinctura Arnicae and Arnicae Alcoholica.

Pharm. Univers. 2 ed., v. 1, p. 284; (Wood & Bache, Dispens. U.S.A., 9 ed., p. 119; *ibid.*, 10 ed., p. 120; *ibid.*, 11 ed., p. 126.

Discusses the preparation of tincture of Arnica Flowers and explains its uses.

Wood, G. B. and Bache, F.

1834

Arnica. Secondary

Dispens., U.S.A., 2 ed., p. 110; *Ibid.*, 3 ed., p. 110; *Ibid.*, 4 ed., p. 112; *Ibid.*, 5 ed., p. 120; *Ibid.*, 6 ed., p. 120; *Ibid.*, 7 ed., p. 120; *Ibid.*, 8 ed., p. 121; *Ibid.*, 9 ed., p. 119; *Ibid.*, 10 ed., p. 120; *Ibid.*, 11 ed., p. 125; *Ibid.*, 12 ed., p. 138; *Ibid.*, 13 ed., p. 125; *Ibid.*, 14 ed., p. 150.

Gives the Pharmacopial synonym, common synonyms, description of the plant, the properties, and uses of several pharmacopial parts of Arnica.

Stephenson, J., Churchill, J.

1835

Arnica Montana

Med. Bot., 2 ed., p. 123.

Gives the classification, natural order, specific characters and synonyms of Arnica.

Winkler, E.

1840

Arnica

Real Lexikon, 1 ed., p. 137.

Describes the root, leaves and flowers of *Arnica montana* L. in detail.

Lee, C.

1848

Arnica Mollis

Med. Plants, 1 ed., p. 33.

Mentions the fact that some American species of *Arnica*, according to Hooker, approach very closely to *Arnica Montana*, as to be considered as varieties of it.

Bastick, W.

1851

Arniciana

Pharm. Journ., 11, p. 387; (Wood & Bache, Dispens. U.S.A., 9 ed., p. 119; Ibid., 10 ed., p. 120; Ibid., 11 ed., p. 125; Ibid., 12 ed., p. 139; Ibid., 13 ed., p. 148; Ibid., 14 ed., p. 151; Ibid., 15 ed., p. 254; Ibid., 16 ed., p. 259; Ibid., 17 ed., p. 229; Ibid., 18 ed., p. 232; Ibid., 19 ed., p. 196; Ibid., 20 ed., p. 190; Neues Jahrb. of Pharm., 14, p. 80; Am. Journ. Pharm. 23, p. 242.

Reports that *Arnica Montana* held in high esteem in Germany as a remedial agent, and describes the isolation of *Arniciana*.

Bastick, W.

1850-1

Arniciana

Pharm. Jour., 10, p. 386. (King J. Am. Dispens., 6 ed., p. 135; Ibid., 8 ed., p. 134; Ibid., 10 ed., p. 134; Ibid., 15 ed., p. 133; Ibid., 16 ed., p. 133.

Reports the finding of a new organic base in *Arnica Montana* which he named *Arniciana*.

Cobb, J. S.

1850-1

Preparation of Vegetable Alkaloids

Pharm. Jour., 10, p. 491. (Am. Jour. Pharm., 23, p. 243.)

Reports that Mr. Bostick is mistaken that Arniciana is a new base because in 1848, Mr. Lebourdois published an account of Arnicina with similar properties.

Hamilton, E.

1852

Arnica Montana

Flora Homocephathica, 1 ed., p. 37.

Gives Synonyms, foreign names, general characteristics, specific characteristics, history, description, medical use, comparison of true root, false root, clinical observations, used as a remedy against the effects of Blaus, contusions etc., its characteristic peculiarities and antidote.

King, J. and Newton, R.

1852

Arnica Montana

Eclectic Dispens. 1 ed., p. 77.

Gives the history, properties and uses of several parts of Arnica.

Zöeffel, B.

1852-53

Verfälschung der Arnicablätter

Archiv. der Pharmacie, 121, p. 116. (Pharm. Journ. 12, p. 450; Am. Journ. Pharm., 35, p. 276.)

Zöeffel states that he received from a drug dealer under the name of Arnica, leaves which were altogether different from those of the Arnica plant.

Weissenbuger, W.

1853

Arnica

Wiggers' Pharm. Acognsic, 2 ed., p. 202. N. Jahrb. Pharm., 14, p. 80.

Gives the chemical constituents of Arnica Root and also describes Arnica Herb and flowers.

Wiggers, A. V.

1853

Arnica

Grundriss Des Pharmacognosie, 1 ed., p. 202.

Gives a detailed description of Arnica root.

Wiggers, A. V.

1853

Flores Arnicae

Grundriss Des Pharmacognosie, 1 ed., p. 202.

Describes Arnica flowers.

Wiggers, A. V.

1853

Herba Arnicae

Grundriss Des Pharmacognosie, 1 ed., p. 223.

Gives a description of the herb of Arnica Montana L.

Wiggers, A. V.

1853

Radix Arnicae

Grundriss Des Pharmacognosie, 1 ed., p. 224.

Gives a description of the root of Arnica.

Gordon, W. M.

1857

Arnica

Prac. Am. Pharm. Assoc., 6, p. 127.

States that Arnica is not cultivated in America.

Gordon, W. M.

1857

Arnica

Proc. Am. Pharm. Assoc., 6, p. 127.

Arnica is not cultivated in the Americas.

Maisch, J. M.

1857

Fluidextract of Arnica

Am. Journ. Pharm., 29, 292, (Prac. Am. Pharm. Assoc., 6, p. 68.)

Discusses a method for the preparation of the fluid-extract of Arnica.

(Editor)

1859

Botanical Calender for June.

Chem. & Drugg., 1, p. 42.

Among other things describes Arnica Montana in its detail, with directions for its propagation.

Buchanan, J.

1860

(The Therapeutical Properties of the Arnica)

Eclectic Medical Journ. 19, p. 439, (Drugg. Circ., r, p. 124).

Discusses the therapeutic uses of Arnica.

Henry, M.

1860

Arnica

Proc. Am. Pharm. Assoc., 9, p. 94.

Expresses great satisfaction in the use of Arnica as an application to bruises and wounds.

Walz, F. S.

1860

Uber die Arnica Montana L.

Wittstein Vrierteljaknseln f. Pharm., 10, p. 188. (N. Jahrb. 8 Pharm., 14, p. 175; Wood and Bache Dispens. U.S.A., 15 ed., p. 254; Ibid., 16 ed., p. 258; Ibid., 17 ed., p. 229; Ibid., 18 ed., p. 332; Ibid., 19 ed., p. 196; Ibid., 20 ed., p. 190; Ibid., 21 ed., p. 184; Am. Journ. Pharm., 33, p. 453.)

Reports that the extracts of the roots and flowers are different substances and gives a description of the two extracts.

Walz, F. S.

1860

Uber die Arnica Montana

Buchner's N. Jahrbuch, 14, p. 29. (Buchner's N. Jahrbuch 15, p. 22; Ibid., 23, p. 1; Proc. A. Ph.A., 22, p. 117.)

Reports that he examined Arnica Montana chemically and found it to contain an acid, in the aques distillate and a neutral volatile oil.

(Druggis t.)

1862

Arnica Hair Wash

Am. Jour. Pharm., 33, p. 473. (Proc., Am. Pharm. Assoc., 10, p. 85.)

Gives a formula for an Arnica hair wash that he claims stops hair from falling.

Toyave, T. M.

1862

Substitution Du Senecis Doronicum L. a' L'Arnica
Montana L.

Rep. de Pharm., 18, p. 457. (Am. Jour. Pharm. 34, p. 395.)

States that Senecis Doronicum is being substituted for Arnica Root and tells how they may be distinguished from each other.

Walz, F. G.

1862

Chemesche Untersuchung der Arnica Montana

Buchner's Neues, Jour. fur Pharm., 10, p. 529. (Am. Journ. Pharm., 9, p. 450; Proc. Am. Pharm. Assoc., 10, p. 112.)

Describes the isolation of the bitter principle arnicina, $C_{10}H_{14}O_4$, a yellow volatile oil, two resins, fat and waxy matter from Arnica.

King, J.

1864

Arnica Montana

Am. Dispens., 6 ed., p. 135; Ibid., 8 ed., p. 134; Ibid., 10 ed., p. 134; Ibid., 15 ed., p. 133; Ibid., 16 ed., p. 133.

Gives a description and history of the root and herb. Also a description of Arnicians with its properties and uses.

Orth, F. C.

1865

Arnica Plasters

Am. Jour. Pharm., 37, p. 286. (Proc. Am. Pharm. Assoc., 13, p. 109.)

Gives several formulas for the preparation of Arnica Plasters; and recommends a small portion of Burgundy pitch in the preparation.

Bently, R.

1866

On the Adulteration of Saffron with the
Stamen of Crocus.

Am. Journ. Pharm., 38, p. 226.

Discusses the adulteration of saffron with the flowers
of Arnica.

Marnae, W.

1866

Arnicae Flores

Tehrbuch Der Pharmacognosie, 1 ed., p. 268.

Gives a detailed description of the flowers and their
chemical behavior with various reagents.

Henkel, J. B.

1867

Flores Arnicae

Pharmakognosie, 1 ed., p. 251.

Gives the botanical characteristics and chemical consti-
tuents of Arnica flowers.

Henkel, J. B.

1867

Folia Arnicae

Pharmakognosie, 1 ed., p. 231.

Gives the botanical characteristics and chemical consti-
tuents of Arnica leaves.

McKesson, J.

1871

Report of Committee on Drug Market

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

States that there is much Arnica available and the price is low.

McKesson, J.

1872

Reports of Committee on Drug Market

Proc. Am. Pharm. Assoc. 20, p. 122.

States that there is much Arnica available and the price is low.

Frestedt, F. R.

1873

Arnica Montana L.

Organisk Pharmakologi, 1 ed., p. 20.

Gives the habitat, description and uses of the root and flowers of Arnica.

Pocklington, H.

1873

Arnicae Rodex - Microscopical Characters

Pharm. Jour., 32, p. 302; (Yrbk. PBr. Ph. Conf., 9, p. 82.)

Describes the microscopic structure of the rhizome of Arnica.

Allen, F. T.

1874

Arnica

Ency. of Pure Mat. Med., vol. 10, p. 476.

Gives a method of preparation of the tincture, and discusses the action of the drug on various parts of the body.

Fluckiger, F. A. and Hanburg, D. 1874

Flores Arnicae

Pharmacographia, 1 ed., p. 351; Ibid., 2 ed., p. 360.

Discuss the chemical constituents and physical characteristics of Arnica Flowers.

Fluckiger, F. A. and Hanburg, D. 1874

Radix Arnicae

Pharmacographia, 1 ed., p. 351, Ibid., 2 ed., p. 390.

Give the Botanical origin, history description, microscopic structure, chemical constituent, and adulterations of Arnica Root.

Fluckiger, F. A. and Handburg, F.R.S. 1874

Radix Arnicae, Flores Arnicae

Pharmacographia, 1 ed., p. 431; Ibid., 2 ed., p. 391; (Wood and Bache, Dispens. U.S.A., 15 ed., p. 254; Ibid., 16 ed., p. 258; Ibid., 17 ed., p. 229; Ibid., 18 ed., p. 232; Ibid., 19 ed., p. 196; Ibid., 20 ed., p. 191; Ibid., 21 ed., p. 184; Kings, Am. Dispens., 18 ed., v. 3, p. 279.

Discuss the botanical origin, history, description, microscopic structure, chemical composition and uses of the root and under flowers of Arnica.

Holmes, E. M. 1874

Some Adulterations of Crude Drugs - Arnica Root

Pharm. Journ., 33, p. 810; (Proc. A.Ph.A., 22, p. 306.)

Reports that on examining a package of Arnica Root he found only 50% real Arnica root and in another only 1%.

These roots reached England through Germany.

Holmes, E. M.

1874

Some Adulterations of Crude Drugs

Pharm. Jour. 33, p. 810. (Pharmacographia, 2 ed., p. 391;
Wood and Bache Dispens. U.S.A., 14 ed. p. 195; Yrbk. B.
Ph. Conf. 10, p. 115.)

Reports that in a specimen of Arnica root sent to him
only 50% of the genuine Arnica root was found.

Holmes, E. M.

1874

Spurious Arnica Root.

Yrbk. British Pharm. Conf., 11, p. 115. (Pharm. Journ.,
4 s., 4, p. 811; Am. Journ. Pharm., 46, p. 248.)

Found Arnica Root to be adulterated with the root
Geum Vrbanum Linne.

White, R.

1875

The Poisonous Action of Arnica Upon the Skin

Boston Med. and Surg. Journ. 21, p. 75. (New Rem., 4, p. 178.)

Among other substances capable of producing eczema Arnica
is listed.

Dinand, B.

1876

Arnika - Arnica Montana L.

Taschenbuch Der Heilpflanzen, 1 ed., p. 25.

Gives a general description of Arnica.

Minton, P. I.

1876

Synonym for Arnica and Aconite

Gull. Pharm., 23, p. 344.

States that the U.S.P. 1870 gives Wolfsbane as synonym for both of the above drugs. (Did not find it to be so).

Patze,

1876

The use of Arnica

Pharm. Journ., 36, p. 73.

States that Arnica flowers and roots are used very extensively in Germany both internally and externally.

Carvet, D.

1877

Arnica.

D'Histoire Naturell, 2, ed., p. 692.

Describes the various parts of the flowers of Arnica and gives an analysis of them.

Patze,

1877

The Therapeutic Properties of Arnica

New Remedies, 5, p. 183. (Yrbk. Br. Ph. Conf., 13, p. 156).

Discusses the internal and external use of Arnica.

Bohn, W.

1878

Arnika.

Herlwerte Der Pflangen, 1 ed., p. 32.

Gives a description of Arnica flowers.

Fluckiger, F. A. and Hanburg, D.

1878

Fleurs D'Arnica

Histoire Des Drogues, 1 ed., v. 2, p. 20.

Give a description of Arnica Flowers.

Berg, O.

1879

Flores Arnicae

Wohlverlich - oder Wolferlerblüther, Gemsbluten,
Faelkrautbluther.

Arnica Montana L.

Pharmazentisch Waarenkunde, 3 ed., p. 311.

Describes the flowers discusses their constituents and gives several synonyms.

Berg, O.

1879

Radix Arnicae.

Wohlverluchurzel, Stichwizel, Arnica Montana L.

Pharmazentische Waarenkunde, 3 ed., p. 83.

Describes Arnica root of botanically and discusses it chemically.

(Editor)

1879

Rashes produced by Drugs in Daily Use.

Chem. and Drugg., 21, p. 50.

Mentions a number of drugs causing rash and the possible cure of that produced by Arnica.

(Editor)

1879

Arnica

New Remedies, 8, p. 164.

"Arnica flowers is one of the articles of which the demand for the American market is larger than the supply."

Sayne, L.

1879.

Arnica

Organic Mat. Med., 1 ed., p. 141.

Gives the physical characteristics of Arnica.

Stille, A. and Maisch, J.

1879

Arnica

Nat. Dispens., 1 ed., p. 242; Ibid., 2 ed., p. 240.

Gives several synonyms for the flowers of Arnica Montana, L.

Stille, A. and Maisch, J.

1879

Arnica Radix

Nat. Dispens., 1 ed., p. 243; Ibid., 2 ed., p. 244.

Gives origin, description, constituents, adulterations, substitutions, Pharmaceutical uses, preparations, physiological action, and medicinal uses of Arnica Root.

Weckham, W. H.

1879

Report of Committee on Drug Market

Prac. Am. Pharm. Assoc., 27, p. 558.

Reports that the price of Arnica flowers has fluctuated considerably and the prospects are that higher prices will rule for the new crop.

Campbell, M. and Crawford, J.

1880

Arnicae Flores at Radix

Syn. of Nat. Orders, p. 5.

Gives common names, official names, Botanica origin, part used, medical properties, dose and habitat.

(Editor)

1881

Arnica Flowers.

New Remedies, 10, p. 177.

"The non-arrival of the usual large orders from the United States has caused an accumulation of stock in the hands of speculators, which they are now compelled to get rid of at a loss.

Flückiger, F. A.

1884

Rhizome Arnicae - Arnica Wurzel

Pharmokognosie Des Pflangenreiches, 1 ed., p. 434.

Gives a description, and physical and chemical properties of the rhizome.

Planat, Dr.

1881

Arnica in Furunculosis

Chicago Med. Review, p. a, v. 5. (Am. Journ. Pharm.,
54, p. 88).

(Claims very good results from the use of Arnica paste in the treatment of furuncles of a purely inflammatory character. The formula is: Extract of fresh flowers of Arnica, two drachms and a half; honey, five drachms.)

Menier, C. H.

1882

Sur une falsification de l'Arnica

Journ. Pharm. et chem., s. 5, v. 5, p. 611. (Am. Journ. Pharm., 54; p. 458; Pharm. Journ., 42, p. 799; Yrbk. Br. Ph. Conf., 18, p. 205.)

Examined a commercial sample of Arnica flowers and found them to be those of *Imula Britannica* Linne.

Merrel, A.

1883.

Arnicae Radix

Digest of Mat. Med. and Pharm., 1 ed., p. 113.

Gives the constituents preparations, uses, and dosage of Arnica Root and Flowers.

Merrell, A.

1883

Arnicae Flores

Digest of Mat. Med. and Pharm., 1 ed., p. 113.

"The flowers of Arnica Montana". Gives date of flowers under root.

Wood, G. B. and Bache, F.

1883

Arnicae Radix

Dispens. U.S.A., 15 ed., p. 253; Ibid., 16 ed., p. 257;
Ibid., 17 ed., p. 228; Ibid., 18 ed., p. 231.

Gives the pharmacopial synonym, common synonym, description of the plant, properties and the use of several pharmacopial parts of Arnica.

(Editor)

1884

And Octogenarians' Pharmaco-Medical Reminiscences
of Sixty Years Ago

Chem. and Drugg. 26, p. 521.

Discusses how old German Doctors used Arnica for gangrene, external applications and to exite nausea and vomiting.

(Editor)

1884

Trade Reports

Chem. & Drugg., 26, p. 245.

"At present low rates it is to be feared the collection of Arnica will not be thought worth making."

Flückiger, F. A.

1884

Rhizoma Arnicae.

Grundriss Der Pharmakognosia, 1 ed., p. 230.

Discusses the habitat of the Rhizome arnical plant and gives a description and use of the rhizome.

Stille, A. and Maisch, J.

1884

Arnica

Nat. Dispens., 3 ed., p. 268; Ibid., 4 ed., p. 289.

Gives the official parts, botanical origin, description, constituents, physiological action and medicinal uses of Arnica.

Maisch, M. J.

1885

Materia Medica of the New Mexican Pharmacopie

Am. Jour. Pharm., 57, p. 340.

The roots, leaves and flowers of Arnica are official and are employed. Heterothesa inuloedis casseni is frequently substituted for the former. The chemical constituents of the latter plant have not been investigated.

Mason, A. H.

1886

Report on the Drug Market

Proc. Am. Pharm. Assoc., 35, p. 378.

Reports that there has been increase in the price of Arnica flowers in the early months of the year.

Murray, J.

1886

History of Names.

Pharm. Record, 6, p. 275.

"The origin of the name Arnica is unknown."

(Editor.)

1887

Arnica.

Pharm. Journ., 46, p. 556.

Cautions the use of Arnica in the form of tinctures because of discouraging results.

(Editor.)

1887

Arnicae Flores and Arnicae Radix

Pharm. Record, 7, p. 371.

Give a description of the plant and uses of arnica flowers and roots.

Jackson, R. I.

1887

The Cultivation of Medicinal Plants as a Home Industry

Chem. and Drugg., 31, p. 421.

"Arnica or mountain tobacco, a perennial herb, native of moist meadows in northern and central Europe. The rhizome is official, and its uses are well known."

Maisch, J. M.

1887

Arnica - Arnicae Radix

Organic Mat. Med., 3 ed., p. 132.

Gives the botanical origin, habitat, description, structure, constituents and properties of Arnica root.

Maisch, J. M.

1887

Arnica - Arnica Flowers

Organic Mat. Med., 3 ed., p. 309.

Gives the botanical origin, habitat, description, constituents and properties of Arnica flowers.

(Editor.)

1889

Practical Memoranda

Chem. and Drugg., 35, p. 579. (Digest of Criticisms of the U.S.P. part 2, p.).

"Arnicae Flores - the roy-florets and provided with sixteen nerves, which distinguish them from admixtures."

Parke - Davis Co.

1890

Arnica

Organic Mat. Med., 2 ed., p. 12.

Gives the latinized title, English name, synonym and properties.

(Editor.)

1891

Foreign and Colonial News

Chem. and Drugg., 39, p. 333.

Arnica flowers are grown in the Alps and is used for sprains.

Maisch, M. J.

1891

Notes on Vegetable Drugs used in Mexico

Am. Journ. Pharm., 63, p. 5.

Flowers known as Arnica del pais are employed in Mexico in place of Arnica flowers.

Meyer, A.

1891

Fores Arnicae

Wissenschaftliche Drogenkunde, 2 ed., p. 294.

Gives a description of Arnica flowers with one illustration.

Börner, B.

1892

der Blüten von Arnica Montana.

Apoth. Ztg., 7, p. 441. (Am. Jour. Pharm., 65, p. 12; Dispens U.S.A. 22ed., p. 185; Am. Dispens., 18 ed., p. 279; Prac. Am. Pharm. Assoc., 4, p. 637.)

Flowers of Arnica contain fat, composed of glyceridis of lauris and palmitic acid with a hydrocarbon of the marsh gas series.

(Editor.)

1892

Spurious Arnica Flowers

Pharm. Record, 13, p. 31.

States that flowers claimed to be Arnica are being shipped into the United States.

Maisch, J. M.

1892

Arnicae Radix

Organic Mat. Med., 5 ed., p. 133; Ibid., 6 ed., p. 126.

Gives the botanical origin, habitat description, structure, constituents, and properties of Arnica Root.

Maisch, J. M.

1892

Arnica, Arnica Flowers

Organic Mat. Med., 5 ed., p. 317; Ibid., 6 ed., p. 300.

Gives the botanical origin, habitat, description, constituents, and properties of Arnica Flowers.

Wood, S. B. and Bache, F.

1892

Arnicae Flores

Dispens. U.S.A., 16 ed., p. 258; Ibid., 17 ed., p. 238;
Ibid., 18 ed., p. 231; Ibid., 19 ed., p. 195.

"The flower heads of Arnica Montana Linne."

Sayne, L.

1895

Arnica - Leopard's Bone

Organic Mat. Med. and Pharmacogony, 1 ed., p. 282.

Describes botanical characteristics of Arnica Montana Linne.

Sayne, L. B.

1895

Arnica - Arnica Root

Organic Mat. Med. and Pharmacog., 1 ed., p. 283.

Gives a description of the constituents, actions and uses of Arnica root.

Waggamen, S.

1895

Arnica

Bot. Mat. Med., 1 ed., p. 85.

Describes the flowers, rhizome and roots of Arnica.

(Editor.)

1897

Arnicae Rhizomia

Pharm. Journ., 58, p. 269.

Gives the microscopic characteristics of the rhizome of Arnica.

True, R. H.

1899

Arnica Root

Pharm. Review, 17, p. 348. (Proc. Am. Pharm. Assoc., 48, p. 600).

Reports that upon an examination of roots claimed to be that of Arnica, found that there was no Arnica root present.

True, R. H.

1899

Arnica Root.

Pharm. Review, 17, p. 346.

States upon examining roots supposed to that of Arnica found many other roots but none of Arnica.

(Editor.)

1900

Arnica Rhizome

Pharm. Jour., 64, p. 141.

Describes the rhizome of Arnica and mentions uses of it.

Felter, W. H. and Lloyd, V. J.

1900

Arnica.

Kings'. Am. Dispens., 18 ed., v. 1, p. 278.

Discusses parts used, common names, Botanical source, history and description of Arnica Radix root and flowers, Chemical Composition, constituents medicinal action, use, and dosage.

Kock, T. and Gilg, E.

1901

Flores Arnicae

Pharmakognostisches Praktikum, 1 ed., p. 250.

Describe the flowers discuss three properties, composition and usage.

Schemper, J.

1901

Arnica Montana L.

Rep. Der Pflanz Pharm und offic Bot., 1 ed., p. 36.

Gives the known constituents of several parts of Arnica Montana.

Gadd, W.

1904

Arnica.

Drugs, 1 ed., p. 27.

Discusses the "rhizome" of Arnica as to habitat medical properties, and method.

Klobb, T.

1904

L' Arnisterine, phybosterine de l'Arnica montana L.

Bull. D. Science Pharmacol., 9, p. 196. (Pharm. zeitg., 50, p. 846; Proc. Am. Pharm. Assoc., 54, p. 686.

Reports that earlier investigations were in error as the compound contains 2 OH groups. He proposes the name arnidial.

Hood,

1905

Pure Arnica Scarce

Pharm. Era. 33, p. 591.

Mr. Hood in a talk discussed Arnica as to cultivation. He stated that there was less than 50 pounds of Arnica in this country (U.S.A.)

(Correspondent.)

1905

American Notes on Arnica.

Chem. & Drugg., 67, p. 8.

Mr. Hood of the Vermont State Agriculture College states that there is not 50 pounds of pure Arnica in the United States.

(Editor.)

1905

Arnica Flowers

Chem. & Drugg., 67, p. 816.

Comments on how Klobb obtained from the flowers of Arnica montana, a vegetable cholesterol, which he has named Arnidiol.

Klobb, T.

1905

Sur une phytostérine - alcool bivalent

Compt. Rend., 140, p. 1700. (Pharm. Jour. 76, p. 361; Proc. Am. Pharm. Assoc., 54, p. 752.)

The Phytosterol contains 2 alcohol groups and is a bivalent phytosterin alcohol.

Klobb, T.

1905

L'arnidiol phytostérine Alcool -bivalent

Bull d. Sc. pharm., 12, p. 154. (Ph. Ztg., 50, p. 846; Dispens. U.S.A., 20 ed., p. 191; Ibid., 21 ed., p. 184; Ibid., 12 ed., p. 185.

Reports isolating a new phytosterine which he first named armisterin, and later Arnidiol.

Caldwell, P.

1906

Arnica and Witch Hazel Lotion

Drugg. Circ., 50, p. 241. Proc. Am. Pharm. Assoc., 55,
p. 666.

Criticizes the formula for arnica and witch hazel lotions previously published. He recommends a formula of this because of its simplicity.

Fullerton, J.

1906

Arnica and Witch Hazel Lotion.

Drugg. Circ., 50, p. 162. Proc. Am. Pharm. Assoc., 54,
p. 680.

Gives a formula for a lotion containing extractive matter for arnica flowers and Witch Hazel for winter use.

Hartwich, C. and Bohny, P.

1906

Beiträge zur Kenntnis des Digitalisblattes und seiner Verfälschungen mit Berücksichtigung des Pulvers

Apoth. Zeit., 21, p. 276.

Among 15 adulterants of Digitales' leaves. Name the leaves of Arnica Montana as one.

Wood, G. B. and Bache, F.

1907

Arnicae Rhizomae Br.

Dispens. U.S.A., 19 ed., p. 195.

Gives the pharmacopial synonym, common synonym, description of the plant, properties, and uses of several pharmacopial parts of Arnica.

Minton, P. I.

1909

Synonym for Arnica and Aconite

Bull. Pharm., 23, p. 344.

Calls attention to the synonyms found in U.S.P. as it gives Wolfsbone as synonym for each of the above drugs.

Wall, O.

1909

Arnicae Radix

Notes on Pharmacogony, e ed., p. 228.

Gives the name botanical origin, habitat, description, constituents; and use of Arnica Root.

Wall, O.

1909

Arnica Flores

Notes on Pharmacogony, 3 ed., p. 418.

Gives the name, botanical origin, habitat, description, constituents, and use of Arnica Flowers.

Webb, E. A.

1909

The adulteration of Arnica

Pharm. Journ. 83, p. 656.

Points out that the root Senecio Doronicum is very similar to that of Arnica.

Stokvis, B. J.

1909

Flores Arnicae.

Voordrachten Geneesmiddelen, 3 ed., p. 449.

Reports the composition of the flowers and discusses the tincture and oil of Arnica flowers.

Zornig, H.

1909

Flores Arnicae.

Arznei drogen, vi., p. 111.

Describes the flowers of Arnica.

Zornig, H.

1909

Radix Arnicae.

Arznei drogen, v. 1, p. 443.

Gives a description of Arnica (radix) root.

(Editor.)

1910

False Arnica.

Pharm. Journ., 84, p. 51.

Upon submitting roots supposed to be Arnica to Mr. B. Cockburn for examination they proved to be false.

Silg, E.

1910

Arnicae Flores.

Pharmokognosie, 2 ed., p. 355.

Discusses the flowers of Arnica as to their botanical characteristics and uses.

Silg, E.

1910

Rizomia Arnicae.

Pharmakognosae, 2 ed., p. 356.

Gives a description of the rhizome of Arnica.

Holmes, E. M.

1910

Arnica False.

Pharm. Journ. 30, p. 51. (Yrbk. Br. Pharm. Conf. 46, p. 193).

States that Arnica is scarce and other roots are mixed with it. Also gives characteristics of the false and true Arnica rhizome in powdered form.

Holmes, E. M.

1910

False Arnica Rhizomes.

Pharm. Jour. 84, p. 51. (Proc. Am. Pharm. Assoc., 53, p. 190.)

Reports that the rhizome of Arnica is scarce, with the results that underground roots parts of other plants are mixed with Arnica in considerable proportions.

Zornig, H.

1911

Herba (Folio) Arnicae.

Arznei drogen, v. 2, p. 272.

Gives a description of the above ground parts of Arnica Montana Linne.

Herail, J.

1912

Fluors D'Arnica

Traite De Mat. Med., 1 ed., p. 468. Ibid., 3 ed., p. 233.

Gives the botanical origin, characteristics, constituents, and usage of Arnica Flowers.

Mitslacher, W.

1912

Arnica Montana.

Die offizenellen Pflanzen und Drogen, 1 ed., p. 98.

Gives a description of the rhizome, roots, leaves and flowers of Arnica.

Schneider, A.

1912

Arnica Montana L.

Pharmacal Plants and their Culture, 1 ed., p. 70.

Arnica is well known, the rhizome and roots are used mechanically and the plant can be cultivated in the United States.

(Editor.)

1914

Unfamiliar Drugs

Chem. & Drugg., 85, p. 53.

Among other drugs considered, stated that "Arnicae Flores, replaces the rhizome and is used as a tincture."

Kraemer, H.

1915

Arnicae Radix

Scientific and Applied Pharm., 1 ed., p. 803.

Describes the microscopic structure, constituents and adulterants of Arnica Root.

Kraemer, H.

1915

Arnica Flowers

Scientific and Applied Pharm., 1 ed., p. 772; *ibid.*, 2 ed., p. 666.

Gives a description of the powerd, constituents and adulterations of Arnica flowers.

(Editor.)

1917

Ruling on Arnica Flowers.

Pharm. Era, 50, p. 251.

Discusses the fact that *Inula britannica* L has been substituted for true Arnica flowers.

Blair, T.

1917

Arnica.

Botanic Drugs, 1 ed., p. 93.

Describes therapeutic value of Arnica Flowers.

Sarton, G.

1917

Adulteration of Arnica

Chem. & Drugg., 89, p. 557. (Yrbk. Am. Phar. Assoc., 6, p. 174).

Reports the adulteration of Arnica flowers with those of *Inula britannica*.

Wall, O.

1917

Arnicae Flores.

Handbuck of Pharmacogony, 4 ed., p. 388.

Gives the botanical origin, habitat, description, constituents and use of Arnica flowers.

Wall, O.

1917

Arnica Rhizoma.

Handbook of Pharmacogony, 4 ed., p. 224.

Gives the botanical origin, habitat, description, constituents, and use of Arnica rhizome.

Gugnard, M.

1918

Arnica Montana L., Arnica des Montagnes

Plantes officinales, 1 ed., p. 86.

Discusses the rhizome and flowers of Arnica.

Wood, G. B. and Bache, F.

1918

Arnica.

Arnica Flores

Dispens., U.S.A., 20 ed., p. 189; Ibid., 21 ed., p. 184;
Ibid., 22 ed., p. 185.

Gives the pharmacopial synonym, common synonym, description of plant, properties and uses of several pharmacopial parts of Arnica.

Coupin, H.

1920

Arnica

Les Plantes Medicinales, 1 ed., p. 84.

Gives general botanical characteristics, habitat, culture, physiological action, parts used, use and dosage of Arnica flowers.

Compain, M.

1920

Arnique Des Montagnes

Guid De L'herbonste Droguste, 1 ed., p. 48.

Discusses the physiological properties and incompatibilities of Arnica.

Youngkèn, W. H.

1920

Arnica N.F. (Arnica).

Textbook of Pharmacogony, 2 ed., p. 615.

Gives synonym, botanical origin, part used, habitat, production and commerce, description, powdered drug, constituents, used, and adulteration of Arnica.

Wilson, B. O. and S. C.

1920

Arnica Root

Catalogue of roots, herbs and barks, 1 ed., p. 5.

Gives the common name, botanical name and properties of Arnica root.

Wilson, B. O. and S. C.

1920

Arnica Flowers

Catalogue of roots, herbs and barks, 1 ed., p. 5.

Gives the common name, botanical name and properties of Arnica flowers.

Lloyd, J.

1921

Arnica

Pharmacoepial Vegetable Drugs, Chemicals and Preparations, 1 ed., p. 18.

Gives a short Bibliography of Arnica.

Silg, E.

1922

Rhizomia Arnicae.

Pharmakognosne, 3 ed., p. 393.

Discusses the rhizome as to parts used, physical makings and history.

Silg, E..

1922

Arnicae Flores

Pharmokognosie, 3 ed., p. 391.

Discusses the flowers of Arnica as to history, parts used, and to physical characters.

Richaud, M.

1922

Sur, l'action pharmacodynamique de l'Arnica

Jour. Ed. pharm. et. d. chim., s. 7, v. 25, p. 403; (Yrbk. Am. Pharm. Assoc., 11, p. 212.)

Neither a 10% infusion nor fluidextract of Arnica produce convulsive phenomea, but cause a rapid and total paralysis.

Schlickum, R.

1922

Arnicae Flores

Pharmokognosie, 1 ed., p. 41.

Gives habitat, method preparation of the tincture, microscopic characteristics, taste and use of Arnica flowers.

Wren, R. C.

1923

Arnica

Potter's cyclopaedia of Bot. drugs. and Prep., 3 ed., p. 16.

Discusses the action, preparation and distinctive characteristics of Arnica.

Schlickum, R.

1924

Radix Arnicae

Pharmakognosi, 2 ed., p. 23.

Gives the habitat and microscopic characteristics of the parts used of Arnica root.

(Editor.)

1924

Verfälschung Von Wurzeln

Pharm. Zentralk, 66, p. 170. (Pharm. Journ., 115, p. 312).

("Arnica root was adulterated with the root of asclipeas Vincetoricum which is easily detected by the yellow color and presence of calcium oxalate crystals are small strach grains, whereas Arnica contains Inulin and no starch.")

Wallis, T. E.

1924

Arnica Rhizome.

Prac. Pharmacog., 1 ed., p. 32.

Gives a description of how to prepare the rhizome microscopic work and to sketch it.

Wallis, T. E.

1925

Arnica Flowers

Prac. Pharmacog., 1 ed., p. 31.

Gives directions for dissecting and preparing parts of Arnica flower for microscopic work.

Zorney, H.

1925

Rhizoma (Radix) Arnicae

Tabellen fur das pharm. Praktikum, 2 ed., p. 22.

Gives a description of the microscopic structure of Arnica.

Dinand, V.

1926

Arnika, Arnica Montana L.

Taschenbuch Der Hulpflangen, 1 ed., p. 25.

Describes the root and flowers of Arnica with an illustration.

Silg, E. Brandt, W. and Schurkoff, P.

1927

Rhizoma Arnicae

Pharmakognosie, 4 ed., p. 454.

Describes the rhizome as to its microscopic structure and history.

Wiebilitz, H.

1927

Ein, Erstaz fur Flores Arnicae

Pharm. Zeit., 72, p. 1508. (Yrbk. Am. Pharm. Assoc., 16-17, p. 224.)

Due to a crop failure during the past growing season one could expect to find adulterants in Arnica, and one has appeared on the market but had not been identified.

Kraemer, H.

1928

Arnica

Scientific and applied Pharm., 3 ed., p. 782.

Gives an account of the constituents of Arnica Root and the dosage of the root.

Kraemer, H.

1928

Arnicae Radix

Scientific and Applied Pharmacy, 3 ed., p. 886.

Gives a description of the constituents adulterants, and dosage of the root of Arnica.

Wall, O. and Suppan, L.

1928

Arnicae Rhizome.

Handbook of Pharmacogony, 5 ed., p. 276.

Gives the name, botanical origin, habitat, description, constituents, and use of Arnica rhizome.

Wall, O. and Suppan, L.

1928

Arnicae Flores

Handbook of Pharmacogony, 5 ed., p. 80.

Gives the name, botanical origin, habitat, description, constituent, and uses of Arnica flowers.

Greenish, H.

1929

Arnica Flowers.

Mat. Med., 5 ed., p. 82; Ibid., 6 ed., p. 84.

Gives the botanical source, a description, constituents, uses and substitutes of Arnica flowers.

- Rusby, H. Bliss, R. and Ballard, C. 1930
 Arnicae Flores
 The Properties and Uses of Drugs, 1 ed., p. 101.
 Gives the botanical origin, constituents, and use of
 Arnica Flowers.
-
- Rusby, H., Bliss, R. and Ballard C. 1930
 Arnica Root.
 The Properties and uses of Drugs, 1 ed., p. 364.
 "Arnica root exerts a silagogue effect."
-
- Trease, E. 1931
 Arnica Montana
 Pharmacogony, 1 ed., p. 913.
 States that the growing of Arnikia has always been
 more or less of a failure.
-
- Trease, E. 1931
 Arnica Flores
 Pharmacogony, 1 ed., p. 592.
 Gives the botanical source, physical characters,
 constituents, uses and allied drugs of Arnica flowers.
-
- Coulter, S. 1932
 Arnica
 Pharmacology of the Medicinal Agents in Common Use,
 1 ed., p. 23.
 Gives parts of Arnica used, dose, action and uses.
-

Kroeber, L.

1934

Arnika - Arnica Montana

Das Newzeitliche Krauterbuch, 1 ed., p. 47.

Gives a history of Arnica.

Juillet, A. and Susplugas, J.

1938

Arnica, a False

Bull. d. Pharm. d. Sud-Est., 42, p. 242. (Yrbk. Br. Ph. Conf., 74, p. 785).

Lists the various flowers that are used in adulterating Arnica flowers.

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Assoc(iation) (1 - 23) (1912 - 34).

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1889; 18 ed., 1900 V. I & II.
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THE UNITED STATES PHARMACOPEIA (O-XI)

1820 - 1930

and

THE NATIONAL FORMULARY (I-VI)

1888 - 1935

HISTORY

OF

ARNICA PLANT

ARNICA ROOT

and

ARNICA FLOWERS

U.S.P.-1820, P. 51

Arnica,

Arnica Montana.

Synonym given is Leopards bane. Part used - Planta.
The Plant.

U.S.P.-1830, P. 29 (Philadelphia)

Arnica,

Arnica Montana.

Synonym given is Leopards bane. Part used: Planta - The Plant.

U.S.P. - 1830, P. 20

Arnica; Arnica Montana

Leopards bane.

The Plant

Property odour, when rubbed slighty aromatic; taste bitterish and/ acrid; virtuis yielded to water. Med. oper. narcotic, stimulant, diaphoritic. Dose, of the pow/der, gros. v. to grs. x.

U.S.P.-1840, P. 41.

Arnica Leopards bane.

Parts used: The roots and herb of Arnica Montana.

U.S.P.-1880, P. 48.

Arnicae Radix

Arnica Root

The rhizome and rootlets of Arnica Montana Linne (Not and Compo/setae).

Rhizome about two inches (5 cm.) long, and one-eighth or one-sixth of an inch (3 or 4 millimeters) thick; externally brown, rough from leaf scars; internally whitish with a rather thick bark containing a circle of resin cells, surrounding the short-wood wedges, and large, spongy pith. The rootlets numerous/ thin, fragile, grayish brown, with a thick bark containing a circle of resin-cells/. Odor somewhat aromatic and bitter./

Preparations: Extractum Arnicae. Radicis Extractum Arnicae. Radicis Fluidum/. Tinctura Arnicae Radicis./

U.S.P.-1890, P. 58.

Arnica Radix

Arnica Root

The rhizome and roots of Arnica montana Linne (not. ord. composition)/.

Rhizome about 5 cm. long, and 3 or 4 mm. thick; externally brown, rough/ from leaf scars; internally whitish, with a rather thick bark, containing a/ cicle of risin cells, surrounding the short, yellowish wood-wedges, and large/, spongy pith.

The roots numerous, thin, fragile, grayish-brown, with a thick/ bark containing a circle of resin cells. Odor somewhat aromatic; taste pungently aromatic and bitter./

Preparations: Extractum Arnicae. Radicis. Extraction Arnicae. Radicis Fluidum./ Tincturn Arnicae Radicis./

U.S.P.-1860, P. 18.

Arnica, Arnica

The flowers of Arnica Montana.

U.S.P.-1870, P. 19.

Arnica, Arnica

The flowers of Arnica Montana.

U.S.P.-1880, P. 48.

Arnicae Flores

Arnica Flowers

The flower heads of Arnica Montana, Linne (not. ord. compositae).

About one and one-fifth inch (3 centimeters) broad, depressed-roundish consisting of a scaly involucre in two rows, and a small, flat, hairy receptacle, bearing/ about sixteen yellow, strap-shaped ray-florets and numerous yellow, five toothed,/ tubular disk-florets, having slender, spindle-shaped achenes crowned by a hairy/ pappus. It has a feeble aromatic odor, and a bitter acrid taste./

Preparation: Tinctura Arnicae Florum.

U.S.P.-1890, P. 58.

Arnicae Flores

Arnica Flowers

The flower heads of Arnica montana Linne (not. ord. compositae.)/

Heads about 3 cm. broad, depressed roundish, consisting of a scaly involucre/ in two rows, and a small, nearly flat, hairy recetacle, bearing about sixteen/ yellow, strap shaped, ten-nerved ray-florets, and numerous yellow, five toothed,/ tubular disk florets, having slender, spindle shaped achenes,

crowned by a/, hairy pappus. Odor feeble, aromatic; taste bitter and acrid./

Preparation: Tinctura Arnicae Florum.

U.S.P.-1900, P. 60

Arnica

Arnica

(Arnicae Flores)

The dried flower - heads of Arnica montana Linne (Fam. compositor)./

Subglobular, about 2 cm. long; involucre companulate-turbinate; bracts in 1/ to 2 ranks, oblong, dark green, pubescent; receptacle slightly convex, deeply/ pitted, densely short-hairy; rays about 16, bright yellow, the ligulat portion/ 2 to 2.5 cm. long, nearly 6 mm. broad, 3-toothed, 7- to 9 nerved, pistillate; disk/flowers perfect five-toothed, of a deeper yellow, their akenes nearly 6 Mm long,/ slender, tapering sharply to the base, flattened, 5-ribbed pubescent, the pappus/ nearly a half longer than the akene, of a single circle of nearly white barbellate/bristles; odor characteristic and agreeable; taste better./

Average dose - 1 Gm. (15 grains).

U.S.P.-1910, P. 63

Arnica

Arnica

Arnic. - Annica Flowers.

The dried flower-heads of Arnica Montana Linne (Fam. Compositae).

Consisting chiefly of the tubular and liguate flowers, occasionally with the/ involucre and receptacle present; involucral bracts narrowly lancevalte, about/ 1 cm. in length, dark green and pubescent; receptacle slightly convex, deeply/ pitted and densely short-hairy; ray flowers bright yellow, the legulate portion/ 2 cm. in length, more or less folded lengthwise, 3-toothed 7- to 12 veined/ pistellate; tubular flowers perfect, reddish yellow, stamens without a tail-like/

appendage (distinguished from anthers in flowers of Inula Helenum Linne/ which have two bristles or long tails at the base); the achenes spindle-shaped,/ from 5 to 7 mm. in length, dark brown, finely straited, glandular-pubescent and sur/mounted by a pappus a little longer than the achene and composed of a single/circle of nearly white barbellate bristles; odor characteristic and agreeable;/ taste bitter and acrid./

The powder is yellowish-brown; pollen grains numerous from 0.025 to 0.035/ mm. in diameter, spherical, triangular in section and sponose; non-glandular/ hairs of three kinds; either unicellular, 4- to 6-celled, or consisting of a pair of/ unecellar hairs with numerous pores on the dividing wall; glandular hairs of/ three kinds, either with a large unicellular and a unicellular glandular/ head, or with a 4-celled stalk and a unicellular, glandular head, or a stalk of a/ double row of 5 cells and a 2 celled, glandular head; pappus consisting of a/ multicellular axis with unicellular branches/ arnica yields not more than 9 per cent of ash.

Preparation: Tinctura Arnicae.

N.F.-1926, P. 285

Arnica

Arnica

(U.S.P. IX)

Arnic,

Arnica Flowers

Arnica is the dried flower head of Arnica montana Linne (Fam./ Compositae).

Arnica contains not more than 3 per cent of foreign organic matter./

Description and physical properties/ Underground Arnica: consisting chiefly of the tubular and ligulate flowers, usually/ with the involucre end receptacle present; involucral bracts narrowly lanceolate/, about 1 cm. long, dark green and pubescent; receptacle slightly convex, deeply/ pitted and densely short hairy; ray flowers yellow, the legulate portion up to/ 2 cm. long more or less 8lded lengthwise 3-toothed, 7- to 12- veined pistellate;/ tubular flowers perfect, reddish yellow stamens without a tail like appendage/, the achenes spindle-shaped 5 to 7 mm. long, dark brown finely

strait, glandular - pubescent and surmounted by a pappus a little longer than the achene and/ composed of a single circle of nearly white barbellate bristles, odor characteristic and agreeable; taste bitter and acrid./

Powdered Arnica: yellowish brown, pollen grains numerous, 0.025 to 0.035 mm. in diameter, spherical triangular in section and spinose; non-glandular hairs/ of three kinds, either unicellular, 4- to 6- celled, or consisting of a pair of unicellular hairs with numerous pores on the dividing wall; glandular hairs of three kinds, either with a large unicellular stalk and a unicellular glandular/ head, or with a 4 celled stalk and a unicellular, glandular head or a stalk of a/ double row of five cells which may be more or less broken and a 2-celled, glandular/ head; pappus consisting of a multicellular axis with unicellular branches.

Preparations: Fluidextractum Arnicae, Tinctural Arnicae.
Average Dose: Metric, 0.1 Gm. - apothecaries 15 gms.

N.F.-1936, P. 56

Arnica

Arnica

Arnic,

Arnica Flowers

Arnica is the dried flower head of Arnica Montana Linne (Fam. Compositae./

Arnica contains not more than 3 per cent of foreign organic matter,/ and yields not more than 2 percent of acid-insoluble ash./

Description and physical properties./ Underground Arnica: chiefly the tubular and legulate flowers, usually with the/ involucre and receptacle present; involucre bracts narrowly lanceolate, about 1 cm. long, dark green and pubescent; receptacle slightly convex deeply pitted/ and densely short hairy; ray flowers yellow, pistillate, the legulate corolla up to/ 2 cm. long, more or less folded lengthwise, 3-toothed, 7- to 12-veined; tubular/ flowers perfect, reddish yellow, stamens without a tail-like appendage; achenes/spindle-shaped, 5 to 7 mm. long, dark brown, finely striate, glandular pubescent/, with a single circle of nearly white, barbellate, pappus bristles a little longer than/ the achene. Odor characteristic agreeable; taste bitter acrid./

Powdered Arnica: Yellowish brown; pollen grains numerous, 0.025 to 0.035 mm. in diameter, spheroidal, somewhat 3-sided, spenose; non-glandular hairs of three kinds: unicellular, or 4- to 6- celled, or consisting of a pair of unicellular hairs with numerous pores on the dividing wall; glandular hairs of three kinds: with a large unicellular stalk and a unicellular head, or with a 4-celled stalk and a unicellular head, or with a stalk of a double row of five cells, which may be more or less broken, and a 2-celled head; pappus bristles with a multicellular axis and unicellular branches.

Preparation: Fluidextractum Arnicae, Tinctura Arnicae.
Average Dose: Metric, 0.2 gm. - apothecaries, 3 grain.

SUMMARY OF U.S.P. AND N.F. DATA OF ARNICA MONTANA
LINNE ROOTS AND OTHER PARTS

When official:--

U.S.P., 1840, 80, 90.

Official Latin Title:--

Arnicae Radix, U.S.P., 1880, 90.

Official English Title:--

Arnica U.S.P., 1840.

Arnica Root U.S.P., 1880, 90.

Official Abbreviation:--

Official Synonym:--

Leopard's Bane, U.S.P., 1840.

Scientific Name:--

Arnica Montana Linne, U.S.P., 1840, 80, 90.

Official Parts Used:

The roots and herbs of U.S.P. 1840.

The rhizome and rootlets of U.S.P., 1880.

The rhizome and roots of U.S.P., 1890.

Official Description:--

U.S.P., 1880, 90.

Official Preparation:--

Extractum Arnicae, U.S.P., 1880, 90.

Extractum Radicis Arnicae, U.S.P., 1880, 90.

Radicis Fluidum, U.S.P., 1880, 90.

Tinctura Arnicae Radicis, U.S.P., 1880, 90.

Official Dose:--

FLOWERS

When Official:--

U.S.P. 1860, 70, 80, 90, 1900, 10,
N.F., 1920, 30.

Official Latin Title:--

Arnica U.S.P., 1860, 70, 1900, 10.
N.F., 1920, 1930.
Arnicae Flores, U.S.P., 1880, 90.

Official English Title:--

Arnica, U.S.P., 1860, 70, 1910.
N.F., 1920, 30.
Arnica Flowers, U.S.P., 1880, 90.

Official Abbreviation:--

Arnic, U.S.P., 1910.
N.F., 1920, 30.

Official Synonym:--

Arnicae Flores, U.S.P., 1900, 10.
N.F., 1920, 30.

Scientific Name:--

Arnica Montana Linne, U.S.P., 1860, 70, 80, 90, 1900, 10.
N.F., 1920, 30.

Official Parts Used:--

The flowers of Arnica Montana U.S.P., 1860, 70.
The flower-heads of Arnica Montana, U.S.P. 1880, 90, 1900, 10.
N.F., 1920, 30.

Official Description:--

U.S.P., 1880, 90, 1900, 10.
N.F., 1920, 30.

Official Preparation:--

Tinctura Arnicae Florum, U.S.P., 1880, 90.
Tinctura Arnicae, U.S.P., 1910.
N.F., 1920, 1930.
Fluidextractum Arnicae, N.F., 1920, 30.

Average Dose:--

1 Gm. (15 gr.) U.S.P. 1900. N.F. 1920.
Metric, 0.1 gm. apothecaries, 1½ gm. N.F. 1930.
Metric, 0.2 gm. apothecaries, 3 gr. N.F. 1930.

PLANT

When Official:--

U.S.P., 1920, 30 (Philadelphia), 30 (New York).

Official Latin Title:

Arnica, U.S.P., 1820, 30 (Philadelphia,) 30 (New York).

Official English Title:--

Arnica Montana U.S.P., 1820, 30 (Philadelphia), 30 (New York).

Official Abbreviation:--

Scientific Name:

Arnica Montana, U.S.P., 1820, 30 (Philadelphia), 30 (New York).

Official Parts Used:

Planta - The plant U.S.P., 1820, 30 (Philadelphia), 30 (New York).

Official Description:--

U.S.P., 1830 (New York).

Official Preparation:--

Official Dose:--

U.S.P. 1830 (New York), grs. v. to grs. x.

APPROVED BY W.O. Richtmann

Prof of Pharmacology

DATE May 29, 1941