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BIBLIOGRAPHY
OF
GLYCYRRHIZA GLABRA
BY
CASIMIR ALEXANDER ZIELINSKI

A THESIS SUBMITTED FOR THE DEGREE OF
GRADUATE IN PHARMACY

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Theophrastus, --.

(3 c B.C.)

(*Glycyrrhiza glabra*)

Hist. Plant., lib. ix, c. 13; (Fluckiger, & Hansbury, Pharmacographia, 1 ed., v. 1, p. 156; *ibid.*, 2 ed., v. 1, p. 180; Fluckiger, & Hanbury, Histoire des Drogues, 1 ed., v. 1, p. 316.)

(Comments on the taste of different roots; writes that the sweet Scythian root growing in the neighborhood of Lake Maeatis is good for asthma and dry cough. Probably referring to liquorice root.)

(14 c A.D.)

Liquiricia

Alphita, A Medico-Botanical Glossary, 1887, 1 ed., p. 99.

The following is thought to refer to licorice:
"Gliconia, glicoricia *idem.*, *ge. regarice, ae licoris.*"

Pliny, C., Sec.

(77 A.D.)

The Nettle

Natural History of Pliny, Bostock & Riley ed., 1856, v. 4, p. 351; (Pharm. Rec., 6, p. 171; Ainslie, Materia Medica, 1826, v. 1, p. 199.)

Gives the derivation of *Glycyrrhiza* and speaks of *Glycyrrhiza* as being a prickly plant. It is believed that *Glycyrrhiza echinata* is the plant.

Pliny, C., Sec.

(77 A.D.)

The *Glycyrrhiza* or Adipsos: Fifteen Remedies.

Natural History of Pliny, Bostock & Riley ed., 1856, v. 4, p. 399.

Clears up the assumption that *Glycyrrhiza echinata* is prickly (*ibid.*, 4, p. 351), and describes the plant mentioning a large number of uses.

 (Glycyrrhiza glabra).

Libro della. Agricoltura, Venet., v. 1, p. 62; (Fluckiger & Hanbury, Pharmacographia, 1 ed., v. 1, pl 157; *ibid.*, 2 ed., v. 1, p. 181; Fluckiger, Hanbury, Histoire des Drogues, 1 ed., v. 1, p. 316.)

(Liquorice is said to be described as being cultivated in Italy by Pietro Crescentio of Bolagno who lived in the 13th century.)

 Dioscorides, P.

1537

Dulcis radix.

De Medica Materia, J. Ruellio ed., p. 107; (Fluckiger & Hanbury, Pharmakographia, 1 ed., v. 1, p. 156; *ibid.*, 2 ed., v. 1, p. 180; Fluckiger & Hanbury, Histoire des Drogues, 1 ed., v. 1, p. 316.)

Gives a description of the plant, uses, and properties of a sweet root, probably Glycyrrhiza.

 Matioli, P.A.

1586

Dulcis radix.

Deplantis Epitome utilissima, 1 ed., p. 423.

Gives the botanical name, synonyms, description of the plant with an illustration, habitat, constituents, and uses of Licorice.

 Dodonaeus, R.

1616

Glycyrrhiza vulgaris.

Pemptades stirpium, p. 341; (Willdenow, Linne's Spec. Plant., 4 ed., v. 3, p. 1144; Linne, Spec. Plant., 1 ed., v. 2, p. 742.)

The original was not available.

Glycyrrhiza siliquosa et germanica.

Pinox et Prodromus, 1 ed., p. 352; (Linne, Materia Medica, 1 ed., p. 173; Willdenow, Linne's Spec. Plant., 4 ed., v. 3, p. 1144; Linne, Spec. Plant., 1 ed., v. 2, p. 742.)

Gives several synonyms of Glycyrrhiza with references.

Du Chesne, J.

1679

Radices officinales hae sunt.

Quercetanus Redivivus, 1 ed., p. 753.

Liquorice is listed as one of the roots found in drug shops.

Ludovici, D.

1685

Hypnotica, Anodyna, Epicerastica.

De Pharmacia Moderno Seculo, 1 ed., p. 542.

Gives a brief description of licorice, its properties, & preparations.

Wedel, G.W.

1717

De glycyrrhiza.

Dissert. Jenae Respones, J.A.Schmid, 34 pp., 1 tab.; (Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 88.)

("hier die erste, allerdings sehr primitive mikroshopische untersuchung.")

Lemery, N.

1721

Glycyrrhiza.

Materialien-Lexicon, Germ. ed., p. 496.

Lists several pre-Linnean names, with names of authors, description of the plant, part used, properties, and an illustration of the licorice plant.

Linne, C.

1737

Glycyrrhiza glabris, stipulis nullis, foliolo impari petiolato.

Hortus Cliffatanus, p. 494; (Linne, Materi Medica, 1 ed., p. 173; Willdenow, Linne's Spec. Plant., 4 ed., v. 3, p. 1144.)

The original was not available.

Chomel, J.B.

1739

Reglisse.

Abrege, De L'Histoire des Plantes Usuelles, 1 ed., v. 1, p. 88; (ibid., 2 ed., v. 2, p. 120.)

Gives botanical sources, constituents, preparations, and uses of Glycyrrhiza.

Royen, A van.

1740

Glycyrrhiza leguminibus glabris, stipulis nullis, foliolo impari petiolato.

Florae Leydensis Prodomus, etc., p. 386; (Willdenow, Linne's Spec. Plant., 4 ed., v. 3, p. 1144; Linne, Spec. Plant., 1 ed., v. 2, p. 742)

The original was not available.

Short, T.

1747

Liquorice.

Medicina Britannica, 2 ed., p. 167; (ibid., 3 ed., p. 167.)

Gives the uses of Liquorice and methods of administration.

Cartheaser, F. I.

1749

De Radice Polypodii et Glyzyrrhizae.

Fundamenta ^Materiae Medicae, 1 ed., part 1, p. 452.

Gives the botanical source, description of the plant, discusses the constituents, uses and administration of Glycyrrhiza.

Linne, C.

(1749)

(Glycyrrhiza leguminibus glabris, stipulis nullis, foliolo impari petiolato.)

Materia ^Medica, 1 ed., p. 173; (Willdenow, Linne's Spec. Plant., 4 ed., v. 3, p. 1144; Linne, Spec. plant., 1 ed., v. 2, p. 742.)

(Gives several pre-Linnean names of Glycyrrhiza glabra.)

De Dauvages, F.B.

1751

Glycyrrhiza leguminibus glabris, stipulis nullis foliolo impari petiolato.

Flora monspeliensis, etc., p. 232; (Willdenow, Linne's Spec. Plant., 4 ed., v. 3, p. 1144; Linne, Spec. Plant., 1 ed., v. 2, p. 742.)

The original was not available.

Gmelin, J. G.

1751

Glycyrrhiza leguminibus glabris, stipulis nullis foliolo impari petiolato.

Reise durch Silivien von dem Jahre, v. 1, p. 155; (Willdenow, Linne's Spec. Plant., 4 ed., v. 3, p. 1144.)

The original was not available.

Linne, C.

1753

Glycyrrhiza glabra.

Species Plant., 1 ed., v. 2, p. 742; (Linne, Materia Medica, 2 ed., p. 173; Fristodt, Organisk Pharmacologi, 1 ed., p. 353; Griffith, Medical Botany, 1 ed., p. 236; Lindley, Flora Medica, 1 ed., p. 243; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 77.)

Gives several pre-Linnean names of *Glycyrrhiza glabra* with references.

Kniphof, J.H.

1757-1764

Glycyrrhiza leguminibus glabris, stipulis nullis, foliolo impari petiolato.

Botanica in originali, etc., cent. 4, n. 29; (Willdenow, Linne's Spec. Plant., 4 ed., p. 1144.)

The original was not available.

Luding, C.G.

1760

Glycyrrhiza leguminibus glabris, stipulis nullis, foliolo impari petiolato.

Ectypa vegetabilium, etc., t. 64; (Willdenow, Linne's Spec. Plant., 4 ed., v. 3, p. 1144.)

The original was not available.

Lewis, W.

1761

Glycyrrhiza.

An Experimental History of the Materia Medica, 1 ed.,
p. 290; (ibid., Ziegler, Germ. ed., p. 293.)

Lists the Pharmacopoeias Licorice is official in
gives synonyms, a description of the plant, its original
uses, medicinal uses, properties and preparations.

Militer, P.

1769

*Glycyrrhiza leguminibus glabris, stipulis nullis,
foliolo impari petiolato.*

Allgemeines Gaertner lexicon. etc., n. 1; (Willdenow,
Linne's Spec. Plant., 4 ed., v. 3, p. 1144.)

The original was not available.

Pallas, P.S.

1771

Glycyrrhiza laevis.

Reise durch verschiedene Provinzen des russischen
Reichs, v. 1, app. n. 120; (Willdenow, Linne's Spec.
Plant., 4 ed., v. 3, p. 1144.)

The original was not available.

Linne, C.A.

1772

Glycyrrhiza glabra.

Materia Medica, 2 ed., p. 173.

Gives the botanical source, habitat, prepa-
rations, properties, action, and uses of *Glycyrrhiza*.

Houttuyn, M.

1777-1788

Glycyrrhiza leguminibus glabris, floribus racemosis, stipulis nullis, foliolis ovatis, subretusis sublutinosi.

Linne's Pflanzlichen System, v. 8, p. 637; (Willdenow, Linne's Spec. Plant., 4 ed., v. 3, p. 1144.)

The original was not available.

Monro, D.

1788

Glycyrrhiza.

A Treatise on Medical Chymistry, 1 ed., v. 3, p. 119.

Gives the botanical source, habitat, properties of the root, uses and preparations of Licorice.

Laureiro, J. de

1790

(*Glycyrrhiza.*)

Flora Cochinchinensis, etc., 1 ed., p. 543; (Jour. Royal Asiatic Soc., 29, p. 13; Pharm. Jour., 111, p. 113.)

(A record of the various species of *Glycyrrhiza* found in China.)

Willdenow, E.

1801

Glycyrrhiza glabra.

Linne's Spec. Plant., 4 ed., v. 3, p. 1144; (Wheeler, Catalogus Rationales Plantarum Medicinalium, 1 ed., p. 91.)

Gives several pre-Linnean names with references, habitat, and description of parts of the plant.

Malcolm, W.

(1805)

(Glycyrrhiza.)

Compendium of Modern Husbandry, v. 3, p. 116; (Pharm. Jour., 10, p. 299.)

(On the authority of Mr. Moore, one of the growers, gives statistics concerning the cultivation and marketing of Glycyrrhiza in Syria.)

Coxe, J. R.

1806

Glycyrrhiza glabra.

Am. Dispens., 1 ed., p. 357; *ibid.*, 4 ed., p. 263; *ibid.*, 6 ed., p. 306; *ibid.*, 7 ed., p. 316; *ibid.*, 8 ed., p. 347; *ibid.*, 9 ed., p. 319.

Gives the habitat of the plant, the physical properties, and the preparations of the root; the adulterations, description of the preferred powdered licorice, and medicinal uses of Glycyrrhiza.

Lemery, D.

1807

Reglisse.

Nouveau Dictionnaire Des Drogues, 1 ed., v. 1, p. 347.

Gives the botanical source, description of the plant, habitat, uses, and preparations of Glycyrrhiza glabra and other species of Glycyrrhiza.

Committee.

1808

Glycyrrhiza.

Pharm. Mass. Med. Soc., p. 16.

Glycyrrhiza is listed in the materia medica of the above pharmacopoeia.

Thacker, J.

1810

Glycyrrhiza glabra.

New Am. Dispens., 1 ed., p. 128; *ibid.*, 2 ed., p. 225; *ibid.*, 4 ed., p. 232.

Gives the habitat of the plant, physical properties, and uses of the root. The preparations and uses of the extract, and the main constituents of the extract of Liquorice.

Woodville, W.

1810

Glycyrrhiza.

Medical Botany, 2 ed., v. 3, p. 420; (Griffith, Medical Botany, 1 ed., p. 236.)

Gives common synonyms, botanical source, description of the root with illustrations, habitat, properties, constituents and uses of *Glycyrrhiza*.

Thornton, R.J.

1814

Common Liquorice.

A Family Herbal, 2 ed., p. 645.

Gives an illustration of a flowering branch, a description of the plant, history of the drug, its medicinal uses, and preparations of *Glycyrrhiza*.

Murray, J.

1815

Glycyrrhiza glabra.

System of Materia Medica and Pharmacy, 1 ed., p. 382; *ibid.*, 3 ed., p. 270; *ibid.*, 6 ed., p. 387.)

Gives the botanical source, description of the root, its constituents, uses and official preparations of Liquorice.

De Candolle, A.P.

1816

Legumineuses.

Essai sur les Proprietes medicales des Plantes, 2 ed.,
p. 131.

Mentions the root of liquorice as being sweet
and mucilaginous, and being employed commonly as a
pectoral. Comments on an analysis and lists common
alterants and substitutes of Glycyrrhiza.

Committee.

1816

Glycyrrhiza.

Pharm. N. Y. Hos., 1 ed., p. 19.

Glycyrrhiza is listed in the materia medica
of the above pharmacopoeia.

Bigelow, J.

1822

Glycyrrhizae Radix.

Materia Medica, 1 ed., p. 198.

Gives habitat of the plant, time of collection
of the root, description of the whole root and powdered
root, constituents, and uses of Glycyrrhiza.

Trommsdorff, J.B.

1822

Liquiritiae seu Glycyrrhizae radix.

Handbuch der pharmaceutischen Waarenkunde, 2 ed., p.
108; *ibid.*, 3 ed., p. 121; (Fluckiger, Pharmakog-
nosie Pflanzenreiches, 3 ed., v. 1, p. 385.)

Gives a description of the root, description of
commercial varieties, botanical source, and habitat of
Glycyrrhiza.

Ainslie, W.

1826

Liquorice Root.

Materia Indica, v. 1, p. 199.

Gives the synonyms, botanical source, habitat, uses, and preparation of Glycyrrhiza.

An American Physician.

1827

Glycyrrhiza.

Eclectic Dispens., 1 ed., p. 178.

Gives the habitat of the plant, the physical properties, and uses of the root. The doses of the powder and decoction, the official preparations of the root are listed.

Nees, von Esenbeck.

(1828)

(Glycyrrhiza glabra.)

Plantae medicinalis, v. 1, plate 327; (Luessen, Die Pflanzen der Pharmacopoea germanica, 1 ed., p. 531.)

(Gives the botanical source, description of the plant, several pre-Linnean names with authors, habitat, and cultivation of Glycyrrhiza.)

Chevallier, A.

1829

Reglisse.

Dictionnaire Des Drogues, v. 4., p. 388.

Gives the botanical origin, habitat, description of the parts of the plant, discusses importance of the root in commerce, properties of the root, gives the dose, description of the powder, pharmaceutical uses, substitutes of, and an analysis of the root of Glycyrrhiza.

Radix Liquiritae.

Pharmaceutische Waarenkunde, v. 2, p. 197.

Gives the botanical source, description of the plant, habitat, description of several commercial varieties, constituents, and an explanation of the illustration of Licorice in table 27.

Wheeler, J.L.

1830

Glycyrrhiza.

Catalogus Rationalis Plantarum Medicinalium, 1 ed., p. 91.

Gives the botanical source, synonym, general characteristics, habitat, use and preparations of Glycyrrhiza.

Bunge, A. von.

(1831)

(Glycyrrhiza.)

Enumeratio plantarum, quos in China boreali collegit, p. 97; (Jour. Royal Asiatic Soc., 29, p. 13; Pharm. Jour., 111, p. 113; Fluckiger, Pharmakognosie des Pflanzenreiches, 3 ed., v. 1, p. 384; Meyer, Wissenschaftliche Drogenkunde, 1 ed., v. 1, p. 230; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 80.)

(Records Glycyrrhiza glandulifera from the neighborhood of Peking.)

Esenbeck, L.N., & Ebermaier, C.H.

1832

Glycyrrhiza.

Handbuch der medicinisch-pharmaceutischen, v. 3, p. 168.

Gives the botanical source, habitat, description of the plant, description of the root, constituents and preparations of Glycyrrhiza glabra.

Kunth, K.S.

1834

Glycyrrhiza.

Officinelle Gewachse D. Pharmacopeia Borussica, 1 ed.,
p. 429.

Gives the habitat, botanical source, and description of the roots of *Glycyrrhiza glabra*.

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

1834

Glycyrrhiza.

U.S. Dispens., 2 ed., p. 334; *ibid.*, 3 ed., p. 324;
ibid., 4 ed., p. 325; *ibid.*, 5 ed., p. 354; *ibid.*,
6 ed., p. 354; *ibid.*, 7 ed., p. 354; *ibid.*, 8 ed., p.
354; *ibid.*, 9 ed., p. 365; *ibid.*, 10 ed., p. 369;
ibid., 11 ed., p. 385; *ibid.*, 12 ed., p. 421; *ibid.*,
13 ed., p. 433; *ibid.*, 14 ed., p. 450; *ibid.*, 15 ed.,
p. 717; *ibid.*, 16 ed., p. 737; *ibid.*, 17 ed., p. 659;
ibid., 19 ed., p. 593; *ibid.*, 20 ed., p. 525; *ibid.*,
21 ed., p. 528.

Gives the description and physical properties of Spanish and Russian Licorice. The habitat of the plant, the constituents, medicinal properties, uses, and official preparations of *Glycyrrhiza*.

Guibourt, B.G.

1836

Racine de Reglisse, Radix Liquiritiae.

Histoire Abregee des Drogues Simples, 3 ed., v. 1,
p. 555.

Gives the botanical source, habitat, description of the plant, constituents, analysis, commercial varieties of *Glycyrrhiza*.

Stephenson, J., & Churchill, J.

1837

(*Glycyrrhiza glabra*.)

Medical Botany, new ed., v. 3, p. 134; (Griffith,
Medical Botany, 1 ed., p. 236.)

The original was not available.

Demulcents.

Syllabus of the Course of Lectures on Materia Medica and Pharmacy, delivered in the Univ. of Pennsylvania, 1 ed., p. 60.

Mentions Licorece as a demulcent giving its botanical source, habitat, description of the root, constituents, and uses.

Lindley, J.

1838

Glycyrrhiza.

Flora Medica, 1 ed., p. 243; (Griffith, Medical Botany, 1 ed., p. 236.)

Gives a description of the plant, habitat, constituents, properties and uses of Glycyrrhiza.

(Otto, W.F.)

(1838)

(Glycyrrhiza glabra.)

Lindemanns Corpus grammaticorum Latinorum, v. 3, p.--; (Fischer, Mittelalterliche Pflanzenkunde, 1 ed., p.8.)

(In a works of Isidorus the 17 th book Glycyrrhiza is mentioned.)

Duhamel, A.

1839

Remarks on Brown Mixture.

Am. Jour. Pharm., 11, p. 287.

Gives the constituents of the licorice root, and the proper treatment of the root in order to obtain the greatest percentage of glycyrrhizin without undesirable properties.

Winkler, E.

1840

Glycyrrhiza.

Real-Lexikon, v. 1, p. 665.

Gives the botanical source, habitat, several synonyms, of 2 species of Glycyrrhiza and the variety glandulifera.

Culpeper, N

1843

Liquorice.

The Complete Herbal, new ed., p. 106.

A description of the plant, its ecological habitat, properties and uses of Glycyrrhiza are gives. (p.222)States that the best liquorice grows in England.

Hedges, H.T.

1844

(Glycyrrhiza glabra.)

Hedges Polyglot Index, 1 ed., p. 60.

Gives the names for Glycyrrhiza in 6 different languages.

Ingenohl, M.

1844

Ueber das kaufliche Sussholzpulver.

Arch. der Pharm., 87, p. 93; (Chem. Gaz., 2, p. 497; Am. Jour. Pharm., 16, p. 319.)

Lists the adulterants of Glycyrrhiza, and records experimental evidence proving the presence of these adulterants.

Griffith, R.E.

1847

Glycyrrhiza.

Medical Botany, 1 ed., p. 236.

Gives the botanical source, common names, foreign names, description with illustrations, habitat, part used, commercial facts, medical properties and uses of Glycyrrhiza.

Neill, J.

1848

Liquorice Root.

A Handbook of Materia Medica and Therapeutics, 1 ed., p. 104.

Gives the botanical source, habitat, description of commercial products, constituents, uses, and preparations of Glycyrrhiza.

Redwood, T.

1849

On Drug Grinding.

Pharm. Jour., 8, p. 227; (Am. Jour. Pharm., 21, p. 31.)

Gives the average loss of Liquorice in the course of grinding.

(Editor)

1850

Alleged Adulteration of Tobacco with Liquorice.

Pharm. Jour., 9, p. 241.

A summary of a case tried in Gloucester giving the plaintiff's and defendant's arguments.

Berg, O.K.

1851

(Glycyrrhiza.)

Pharm. Waarenkunde, v. --, p. 49; (Pabst, Kohler's
Medizinal-Pflanzen, 1 ed., v. 2, p. 441.)

The original was not available.

Winkler, E.

1851

Glycyrrhiza.

Getreue abbildung, etc., officinellen gewaesche,
v. 2., No. 93 & 94.

Gives colored drawings of the various parts of
Glycyrrhiza glabra.

(Editor.)

1851

Liquorice.

Pharm. Jour., 10, p. 299.

Discusses the species of Glycyrrhiza and the
one grown at Mitcham, also the cultivation and
marketing of Glycyrrhiza.

Schleiden, M.J.

1852

Glycyrrhiza.

Handbuch der Medicinisch-pharmaceutischen Botanik,
1 ed., p. 301.

Gives a description of the plant and the habitat
of 2 commercial varieties.

Wiggers, U.

1853

Glycyrrhiza.

Grundriss der Pharmakognosie, 3 ed., v. 1, p. 503.

Gives the botanical source, habitat, description on several commercial varieties, and constituents of the varieties of Glycyrrhiza.

Hayne, F.G.

1855

Glycyrrhiza.

Darstellung und Beschreibung der Arzneigewächse, v. 5, p. 41; (Luessen, Die Pflanzen der Pharmacopoeia germanica, 1 ed., p. 531.)

Gives the botanical source, synonyms, and description of different plant parts, and the preparations of the roots of Glycyrrhiza glabra.

(Prince, W.R.)

(1856)

(Cultivation of Licorice in this Country.)

New York Times, V.--, p.--; (Boston Med. and Surg. Jour., 54, p.--; Am. Jour. Pharm., 28, p. 183.)

(A letter stating that the United States could cultivate licorice in the Western States and thereby save a large percentage of the money paid Europe.)

Berg, O.K.

1857

Radix Glycyrrhizae Glabrae.

Pharmakognosie des Pflanzen- und Thierreichs, 1 ed., p. 21; *ibid.*, 4 ed., 51; *ibid.*, 5 ed., p. 49.

Gives the botanical source, a description of the plant, and discusses the cultivation and constituents of Glycyrrhiza glabra.

Schleiden, M.F.

1857

Radix liquiritiae (Sussholz.)

Handbuch der Botanischen Pharmacognosie, 1 ed., p. 86.

Gives the botanical origin, description of the plant, and habitats of *Glycyrrhiza glabra*.

James, T.P.

1858

On *Glycyrrhiza glabra*.

Proc. Am. Pharm Assoc., 7, p. 378.

An essay on the cultivation of *Glycyrrhiza glabra* in the United States.

Lessing, M.B.

1859

Liquiritia.

Kurzer Abriss der Materia Medica, 1 ed., p. 91.

Gives the botanical source of *Glycyrrhiza* together with the habitats of several species, A short description of the root, its constituents, preparations, and uses.

Henkel, J.B.

1862

Glycyrrhiza.

Botanik nebst Atlas, 1 ed., p. 65.

Gives a description of *Glycyrrhiza glabra*, its habitat, constituents of the root, and uses.

(Simmonds, P.L.)

(1862)

(The Trade in Liquorice.)

The Grocer, v.--, p.--; (Pharm. Jour., 21, 623; Chem. & Drugg., 3, p. 193; *ibid.*, 3, p. 226; Am. Drugg. Circ., 6, p. 150.)

(Remarks on liquorice concerning the consumption in England, the cultivation, uses, and the current cost.)

Versmann, H.J.

(1862)

(*Glycyrrhiza glabra.*)

-----, v.--, p.--; (Proc. Am. Pharm. Assoc., 10, p. 104.)

("Found Sicily (extract of) liquorice adulterated with the extract of *Triticum repens*, Linne.")

Berg, O., & Schmidt, K.

1863

(*Glycyrrhiza.*)

Offic. Gewaeschse, 1 ed., plate, 12; (Luerssen, Die Pflanzen der Pharmacopoea germanica, 1 ed., p. 530.)

The original was not available.

Pranter, J.

1863

Ueber den Anbau der Liquirita.

Zeits. d. Oester. Apoth. Ver., 8, p. 158; (Pharm. Centrhl., 4, p. 794; Proc. Am. Pharm. Assoc., 11, p. 82; Pharm. Cent. Halle, 4, p. 794.)

Demonstrates that liquorice root may be advantageously raised on a small scale.

Berg, O.

1865

Radix Glycyrrhizae glabrae.

Anamotischer Atlas zur Pharmazeutischen Waarenkunde, 1 ed., p. 94

Gives the botanical source, description of the plant, the structure of the plant, and a full plate of illustrations with explanations.

Holleboek, H.

1865

Glycyrrhiza glabra.

The American Eclectic Materia Medica, 1 ed., p. 444.

Gives the history, properties, uses, and preparation, of Liquorice root.

Berg, O.

1866

Glycyrrhiza.

Pharmazeutische Botanik, 5 ed., p. 366.

Gives the botanical source, description of the rhizome and roots of glycyrrhiza glabra, together with the habitat.

Regel,--, & Herder,--.

(1866)

(Enumer. plant. in regionibus ciset transiliensibus, etc.)

Bulletin de la societates imp. des Naturalistes des Moscou, v.---, p. 527; (Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 1, p. 80.)

The original was not available.

(Arten und Formen von Glycyrrhiza in der russischen Flora.)

Bulletin de la Societe imp. des Naturalistes de Moscou, v.---, p. 563; (Meyer, Wissenschaftliche Drogendunde, 1 ed., v. 1, p. 230; Fluckiger, Pharmakongosie des Pflanzenreiches, 2 ed., v. 1, p. 347; ibid., 3 ed., v. 1, p. 273; Real-enzyklopadie der Gesamten Pharmazie, 1 ed., v. 5, p. 706.)

The original was not available.

Carson, J.

1867

Glycyrrhiza.

Synopsis of the course of Lectures on Materia Medica and Pharmacy, 4 ed., p. 97.

Mentions that the root of Glycyrrhiza glabra is official in the U.S.P.

Henkel, J.B.

1867

Radix Liquiritiae.

Handbuch der Pharmacognosie, 1 ed., p. 107.

Gives the botanical source, history, description of the plant, anatomy, constituents, substitutes and preparations of Glycyrrhiza.

Peckolt, T.

1867

Die brasilianische Sussholzwurzel, Periandra dulcis Mart.

Ztschr. oestr. Apoth. Verein., 5, p. 49;
(Drugg. Circ., 12, p. 278.)

Periandra dulcis is a substitute for Glycyrrhiza in Brazil. A description of the root, proximate constituents, and other experimental data are given.

Racine de réglisse officinale.

Histoire Naturelle des Drogues Simples, 6 ed., v. 3,
p. 325.

Gives the botanical source, description of the plant, with illustrations of twigs, habitat, constituents, analysis, uses, commercial varieties, and substitutes of Glycyrrhiza.

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(1870)

(Licorice.)

House of Commons, v.---, p.--; (Fluckiger, & Hanbury, Pharmacographia, 1 ed., v. 1, p. 159; *ibid.*, 2 ed., v. 1, p. 180; *ibid.*, Histoire des Drogues, 1 ed., v. 1, p. 315.)

(Liquorice root is used extensively in China and is largely produced in some northern provinces.)

Texidor, D.J.

1871

Glycyrrhiza.

Flora Farmaceutica de Espana y Portugal, 1 ed., p. 954.

Gives the genus, species, common Spanish names, description of the plant, uses, and some history of Glycyrrhiza.

Boissier, --.

(1872)

(Glycyrrhiza.)

Flora orientalis, 2 ed., p. 202; (Fluckiger, Pharmakognosie des Pflanzenreiches, 3 ed., v. 1, p. 376; *ibid.*, 2 ed., v. 1, p. 347; Fluckiger, & Hanbury, Pharmacographia 1 ed., v. 1, p. 156; *ibid.*, 2 ed., v. 1, p. 180; Fluckiger, & Hanbury, Histoire des Drogues, 1 ed., v. 1, p. 315; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 77; Meyer, Wissenschaftliche Drogenkunde, 1 ed., v. 1, p. 230; Real-encyklopadie der Gesamten Pharmazie, 1 ed., v. 5, p. 706.)

(The botanical origin, habitat, and description of Glycyrrhiza glabra are given.)

Hoadley, --, & Leckler, --.

1872

Licorice Root.

Catalogue of Medicinal Plants, 1 ed., p. 12.

Gives the common name, current price, botanical name, and properties of Glycyrrhiza.

King, J.

1872

Glycyrrhiza Glabra.

Am. Dispens., 1 ed., p. 194; *ibid.*, 6 ed., p. 457; *ibid.*, 8 ed., p. 397; *ibid.*, 10 ed., p. 396, *ibid.*, 15 ed., p. 397; *ibid.*, 16 ed., p. 397; *ibid.*, 18 ed., v. 2, p. 946.

Gives a description of the plant and its history. The description, properties, uses of the root, its constituents, the preparation of the extract, and the official preparations of Glycyrrhiza.

Pocklington, H.

1872

The Microscope in Pharmacy.

Pharm. Jour., 31, p. 820; (Yrbk, Brit. Pharm. Conf., 9, p. 38.)

The results of a microscopic examination of Glycyrrhiza, describing the principal adulterants of the powdered root.

Pollock, A.

1872

(Glycyrrhiza.)

A Botanical Index, 1 ed., p. 89.

Gives the common and botanical names of Licorice.

Rodin, H.

1872

La Reglisse.

Les Plantes medicinales et usuelles, 1 ed., p. 72.

Gives the botanical source description of the plant with an illustration of a fruiting branch, habitat, constituents and uses of Glycyrrhiza.

Fristedt, R.F.

1873

Glycyrrhiza glabra.

Organisk Pharmakologi, 1 ed., p. 353.

Gives the botanical source, European pharmacopoeias in which the root and products are official, habitat, description of the plant, commercial varieties, constituents uses, and price of Glycyrrhiza glabra.

Freyberger, H.M.

1874

(Glycyrrhiza.)

Die Organischen Drogen., 1 ed., p. 40.

(Gives the botanical source, synonym, description of the plant, constituents, habitat, preparations, and uses of Glycyrrhiza glabra.)

Fluckiger, F.A., & Hanbury, D.

1874

Radix Glycyrrhizae.

Pharmacographia, 1 ed., v. 1, p. 156; *ibid.*, 2 ed., v. 1, p. 180; (Fluckiger, Pharmakognosie des Pflanzenreiches; 2 ed., v. 1, p. 350; *ibid.*, 3 ed., v. 1, p. 376; Barton, & Castle, The British Flora Medica, 2 ed., p. 261; Pabst, Kohler's Medizinal-Pflanzer, 1 ed., v. 2, p. 44; Meyer, Wissenschaftlichen Drogenkunde, 1 ed., v. 1, p. 230.)

Gives the botanical origin, habitat, description, structure, constituents, and history of Spanish Licorice.

Liquorice.

Chem. & Drugg., 15, p. 296; (Am. Jour. Pharm., 46, p. 473; Wood, & Bache, U.S. Dispens., 14 ed., p. 450; *ibid.*, 15 ed., p. 718; *ibid.*, 16 ed., p. 737; *ibid.*, 17 ed., p. 660; *ibid.*, 19 ed., p. 594.)

Gives a description of the plant, an outline of the methods of cultivation, statistics concerning exportation and the uses of Liquorice.

Roussin, Z.

1875

Sur la nature de la matiere sucee de la racine de reglisse. Combinaison ammoniacale de la glycyrrhizin.

Jour. de Pharm. et de Chim., 101, p. 6; (Wood & Bache, U.S. Dispens., 15 ed., p. 719; *ibid.*, 16 ed., p. 739; *ibid.*, 17 ed., p. 661; *ibid.*, 19 ed., p. 595; *ibid.*, 20 ed., p. 527; Yrbk. Brit. Pharm. Conf., 13, p. 93.)

The sweetness of the liquorice root is not due to glycyrrhizin, but to an ammoniacal compound of glycyrrhizin. Gives evidence supporting this point, a process for the preparation of ammoniated glycyrrhizin, and suggests uses for it.

Fluckiger, F.A.

1876

Contributions toward the History or some Drugs.

Pharm. Jour., 35, p. 1022; (New Rem., 5, p. 261.)

Gives the history of Licorice of which the first mention was made in 1561.

Barton, B.H., & Castle, T.

1877

Glycyrrhiza glabra, L.

The British Flora Medica, new ed., p. 261.

Gives the botanical origin, synonyms, description, habitat, etymology, history, cultivation, preparations, properties, and uses of Glycyrrhiza.

Cauvet, D.

1877

Reglisse officinale.

Nouveaux elements D'Histoire Naturelle Medicale,
v. 2, p. 412.

Gives the habitat, description of the plant,
commercial varieties, constituents, and chief sub-
stitutes of *Glycyrrhiza glabra*.

Wigand, A.

1877

Zur Verstandigung uber das "Hornprosenchym".

Flora, v. 60, p. 369; (Fluckiger, Pharmakognosie des
Pflanzenreiches, 3 ed., v. 1, p. 376; *ibid.*, 2 ed.,
v. 1, p. 349; Tschirsch, Handbuch der Pharmakognosie,
1 ed., v. 2, p. 88.)

Describes the inner structure of the root of
Glycyrrhiza glabra.

Fluckiger, F.A., & Hanbury, D.

1878

Racine de Reglisse.

Histoire Des Drogues, 1 ed., v. 1, p. 315.

Gives the synonyms, botanical origin,
history, cultivation, description, microscopic
structure, composition, commercial statistics,
use, and illustrations of *Glycyrrhiza glabra*.

Palmer, E.

1878

Plants used by the Indians of the United
States.

Am. Jour. Pharm., 50, p. 587; (Yrbk. Brit. Pharm.
Conf., 16 ed., p. 192.)

Glycyrrhiza lepidota tastes very much like
liquorice and is sometimes used in place of tobacco
for chewing.

(Editor).

1878

The Month.

Pharm. Jour., 37, p. 64.

Gives a description of the plants *Glycyrrhiza glabra* and *Glycyrrhiza glandulifera* in bloom at Kew.

Fluckiger, F.

1879

Pharmacognotische Umschau in der Pariser Ausstellung und den Londoner Sommlungen.

Archiv. der Pharm., v. 214, p. 4; (Bericht der Chinesis diem Zoll verwaltung, v.--, p.--; Fluckiger, Pharmakognosie Pflanzenreiches, 2 ed., v. 1, p. 385; ibid., 3 ed., v. 1, p. 355.)

Describes the cultivation of *Glycyrrhiza* in China.

Gehe & Co.

(1879)

(Notes on Commercial Drugs & Chemicals.)

Circular of, April, p.--; (New.Rem., 8, p. 164.)

("Licorice Root.-- The Spanish sorts are well-known to contain more saccharine matter, but for pharmaceutical purposes the Russian is preferable, as the latter alone furnishes a yellow powder.")

Sayre, L.E.

1879

Glycyrrhiza.

Conspectus of organic Materia Medica, 1 ed., p. 73.

Gives a description of the root, time of collection, odor, taste, and constituents of Licorice root.

Sulla radice di liquirizia.

Gazz. Chim. Ital., 8, p. 131; (Yrbk. Brit. Pharm. Conf., 16, p. 165; Fluckiger, Pharmakognosie des Pflanzenreiches, 2 ed., v. 1, p. 349; *ibid.*, 3 ed., v. 1, p. 376; Meyer Wissenschaftliche Drogenkunde, 1 ed., v. 1, p. 230; Tschirsch, Handbuch der Pharmakognosie, 2 ed., v. 1, p. 80.)

Comments on the cultivation of liquorice and presents the results of analysis on the constituents of fresh and dried root of *Glycyrrhiza glabra*.

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

1879

Glycyrrhiza.

Nat. Dispens., 1 ed., p. 675; *ibid.*, 2 ed., p. 688; *ibid.*, 3 ed., p. 740; *ibid.*, 5 ed., p. 786.

Gives the botanical origin of the root, description, and constituents, allied drugs, pharmaceutical preparations, action, uses, and dose of *Glycyrrhiza*.

Wigand, A..

1879

Radix Liquiritiae. Sussholz.

Lehrbuch der Pharmakognosie, 1 ed., v. 1, p. 27; (*ibid.*, 4 ed., v. 1, p. 37; Tschirsch, Handbuch der Pharmakognosie, 2 ed., v. 1, p. 88; Fluckiger, Pharmakognosie des Pflanzenreiches, 2 ed., v. 1, p. 349; *ibid.*, 3 ed., v. 1, p. 376.)

Gives the botanical source, description with illustrations, microscopic examination of structure, constituents, and adulterants of the powder of *Glycyrrhiza*.

(Editor).

1879

Foreign Items.

Chem. & Drugg., 22, p. 457.

"Liquorice:-Eleven thousand cases of 2 cwt. each were produced in 1878 by the Calabrian manufactures."

Glycyrrhiza glabra.

Medicinal Plants, v. 2, p. 74; (Stille, & Maische, Nat. Dispens., 1 ed., p. 676; ibis., 2 ed., p. 689; Pabst, Kohler's ^{Medizinal}-Pflanzen, 1 ed., v. 2, p. 441; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 77; Luessen, Die Pflanzen der Pharmacopoea germanica, 1 ed., p. 531; Real-enzyklopadie der Gesamten Pharmazie, 1 ed., v. 5, p. 706.)

Gives the botanical source, a description of the plant, habitat, official parts & names, general characters and varieties, constituents, medicinal properties and uses of *Glycyrrhiza* with a full page of colored illustrations.

Wilson, B.O., & G.C.

(1880)

(Licorice).

Catalogue of Roots, Herbs, Barks, Leaves, etc., 1 ed., p. 16.

Gives the common name, botanical source and properties of *Glycyrrhiza*.

(Editor).

(1880)

(Suffocated by a piece of Licorice.)

Western morning news, --, p.--; (Pharm. Jour., 39, p. 657.)

(An account of the death of Mr. Absolom Bennett, as the result of a piece of licorice sticking in his windpipe.)

(H.M.)

(1880)

(China).

House of Commons, v.--, p.--; (Fluckiger, Pharmakognosie, des Pflanzenreiches, 2 ed., v.1, p. 355.)

The original was not available.

Liquorice Root.

U.S. Consul. Rep., v. 3, p. 294; (Wood, & Bache, U.S. Dispens., 16 ed., p. 737; *ibid.*, 17 ed., p. 650; *ibid.*, 19 ed., p. 594; Pharm. Era, 7, p. 37; Pharm. Jour., 41, p. 727; *ibid.*, 42, p. 264; New Rem., 11, p. 16; Proc. Am. Pharm. Assoc., 30, p. 243; Oil & Drug News, ---, p.---.)

A report on the production of liquorice in several districts in Spain.. Gives the localities and comments on the quality of the root grown in the various areas.

(Editor).

1881

The Month.

Pharm. Jour., 41, p. 278.

An account of the attempts made in New Zealand in the cultivation of liquorice.

Fluckiger, F.A.

1882

Radix Liquiritiae russicae. Russisches Sussholz.

Pharmakognosie des Pflanzenreiches, 2 ed., v. 1, p. 384; *ibid.*, 3 ed., v. 1, p. 355.)

Gives the botanical origin, description, structure, constituents, and history of Russian Licorice.

Fluckiger, F.A.

1882

Radix Liquiritiae hispanicae, Radix Glycyrrhizae Spanisches Sussholz. Lakrizwurzel.

Pharmakognosie des Pflanzenreiches, 2 ed., v. 1, p. 348; *ibid.*, 3 ed., v. 1, p. 378; (Zornig, Arzneidrogen 1 ed., v. 1, p. 469; Meyer, Wissenschaftlichen Drogenkundes, 1 ed., v. 1, p. 230.)

Gives the botanical origin, habitat, description, structure, constituents, and history of Spanish Glycyrrhiza.

Hance, --.

(1882)

(*Glycyrrhiza*).

Jour. Bot., 41, p. 259; (Index Kwensis, v. 2, p. 1039;
Pharm. Jour., 111, p. 113.)

(*Glycyrrhiza paucifoliolata* is recorded as growing in China.)

Campbell, M., & Crawford, J.

1883

A chart of *Materia Medica*.

Synopsis of Natural order, 1 ed., p. 9.

Gives the natural order, sub-order, common name, official name, botanical origin, part used, medicinal properties, dose, and habitat of *Glycyrrhiza glabra*.

Dennis, A.P.

1883

Smyrna.

House of Commons, v. 73, p. 1057; (Pharm. Jour., 43, p. 162.)

The export of liquorice root is increasing each year. Gives the habitat of the plant, and a description of its preparation for market.

Luerssen, C.

1883

Glycyrrhiza.

Die Pflanzen der Pharmacopoea germanica, 1 ed., p. 530.

Gives a description of the genus *Glycyrrhiza*, and the specie *glabra*, an illustration of a flowering and fruiting branch, references, and parts of Licorice used.

Glycyrrhiza glabra.

Digest of Materia Medica and Pharmacy, 1 ed., p. 235.

Gives the part used, botanical source, constituents, preparations, and uses of Licorice.



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(1883)

(Cultivation of Licorice in New Zealand.)

Colonies and India, ---, p.---; (Deutsch-Amerikanische Apotheker-Zeitung, 4, p.--; Arch. der Pharm., 221, p. 854; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 81; Jahresbericht der Pharmazie, v. 41, p. 208; ibid., v. 43, p. 268; Pharmaceutische Zeitung, 28, p. 681.)

(Comments on the cultivation of Glycyrrhiza in New Zealand which has been going on for some time and gives the preparation of the extract, glycyrrhizin, and syrup.)



(Editor).

(1883)

Powdered Licorice.

Drugg. Circ., 27, p. 8.

"Powdered Licorice, when called for, means the finely powdered root of Glycyrrhiza glabra, and this should be dispensed."



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(1883)

(Radix Glycyrrhizae.)

Pharm. Zeit., 28, p.--; (Drugg. Circ., 27, p. 14; Pharm. Rec., 3, p. 168.)

(Gives the places of cultivation in Spain, and a description of the Licorice root, the time of collection, and chief centers of exportation.)



Barker, T.R. (1884)
(Glycyrrhiza glabra--Microscopic Examination.)
-----; (Proc. Am. Pharm. Assoc., 32, p. 186.)
(A description with illustrations of the bast
bundles of Glycyrrhiza glabra.)

Fluckiger, F.A. 1884
Radix Liquiritae--Sussholz.
Grundriss der Phamakognosie, 1 ed., p. 143.
Gives the habitat, description of commercial
product, constituents, and history of Glycyrrhiza
glabra.

Husemann, A., Hilger, A., & Husemann, T. 1884
Glycyrrhiza.
Die Pflanzenstoffe, 2 ed., v. 2, p. 1043.
Glycyrrhizin is recorded as found combined
with Calcium and Magnesium in Glycyrrhiza glabra.

Nixon, C.F. 1884
Glycyrrhiza and Its Official Preparations.
Pharm. Rec., 4, p. 300.
In a thesis presented at the Massachusetts
College of Pharmacy the history of Liquorice is
outlined.

Glycyrrhiza glabra.

Comp. U. S. Pharm., 1 ed., p. 537.

Gives the botanical origin, habitat, impurities, constituents, medicinal uses, and preservation of *Glycyrrhiza*.

Rothrock, J. T.

1884

Laboratory Contributions from the course preparatory to medicine in the University of Pennsylvania.

Am. Jour. Pharm., 56, p. 129; (Wood, & Bache, U.S. Dispens., 16 ed., p. 738; *ibid.*, 17 ed., p. 660; *ibid.*, 19 ed., p. 594; *ibid.*, 20 ed., p. 526; *ibid.*, 21 ed., p. 529; Dig. Comm. U.S.P. & N.F., 1880, p. 227.)

Gives a description with illustrations of the root of *Glycyrrhiza glabra* as observed under the microscope.

Marston, H.C.

1885

The Licorice Plant.

House and Miscell. Doc., 8, p. 10; (Pharm. Jour., 45, p. 647; Am. Drugg., --, p.--; (?); Wood, & Bache, U.S. Dispens., 16 ed., p. 737; *ibid.*, 17 ed., p. 650; *ibid.*, 19 ed., p. 594.)

A consular report of the Licorice industry in Spain. Gives the botanical habitat of the plant, and information concerning its cultivation.

Morrison,--

1885

Plants used in Medicine in Manchuria.

Pharm. Jour., 45, p. 268; (Proc. Am. Pharm. Assoc., 34, p. 368; Yrbk. Brit. Pharm. Conf., 23, p. 213.)

"*Glycyrrhiza glabra* used medicinally. Properties: alexipharmic, tonic, and alterative."

The Licorice Plant.

(U.S.) House & Miscell. Doc., 8, p. 10; (Pharm. Jour., 45, p. 647; Amer. Drugg., --, p.--; Wood, & Bache, U.S. Dispens., 16 ed., p. 737; *ibid.*, 17 ed., p. 660; *ibid.*, 19 ed., p. 594.)

In accordance with the request of the Department of State, Consul Poche submits a report on the cultivation of Licorice in the vicinity of Aleppo, Syria.

Whitman, C.W.

1885

The Licorice Plant.

(U.S.) House and Miscell. Doc., v. 8, p. 5, (Chem. and Drugg., 27, p. 671; Am. Drugg., 15, p. 12; Proc. Am. Pharm. Assoc., 36, p. 457; Christy, New and Commercial Plants and Drugs, No. 9, p. 16; Zeitschrift des osterreichischen Apotheker-Vereines, 24, p. 277; Fluckiger, Pharmakognosie des Pflanzenreiches, 3 ed., v. 1, p. 376; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 77.)

Upon the request of the (U.S.) Department of State, Consul Whitman gives detailed information on the cultivation of Glycyrrhiza in England, and the approximate cost of producing an acre of Licorice from new land.

Wilbor, J.B.

1885

The Licorice Plant.

(Brit.) House Miscell. Doc., 8, No. 2413; (Chem. & Drugg., 27, p. 706.)

A report on the cultivation of licorice in Portugal.

Woodcock, A.

1885

The Licorice Plant.

(U.S.) House Miscell. Doc., 8, No. 2413; (Chem. & Drugg., 27, p. 706.)

A report on the cultivation of licorice in Sicily.

(A Farmer in California.)

(1886)

(Licorice--Cultivation in California.)

Crescent City Drug and Trade Rev.,--, p.--; (Nat. Drugg., 9, p. 317; Proc. Am. Pharm. Assoc., 35, p. 166.)

(Reports on the cultivation of licorice mentioning the conditions necessary for the best yield.)

Ahern, W.

1886

A Pharmaco-Philological Medley.

Pharm. Rec., 6, p. 171.

In a paper read before a meeting of the Montreal Drug Clerk's Association the entomology of "Licorice" is discussed.

Aitchison, J.E.

1886

Some Plants of Afghanistan and their Medicinal Products.

Pharm. Jour., 46, p. 467; (Am. Jour. Pharm., 59, p. 45; Proc. Am. Pharm. Assoc., 35, p. 166; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 80; Meyer, Wissenschaftliche Drogenkunde, 1 ed., v. 1, p. 230.)

Gives the habitat, description and products of the licorice plant; also local names for the plants and products.

Dickson, J.

1886

Damascus.

House of Commons, v. 66, p. 729; (Pharm. Jour., 46, p. 49.)

Calls attention to the increase in the exports of liquorice root as the result of negotiations of an American firm.

Eickler, A.W.

1886

Papilionaceae.

Syllabus der Vorlesungen uber specielle und medicinisch-pharmaceutische Botanik, 1 ed., p. 57.

Mentions *Glycyrrhiza glabra* with reference to cultivation and general family characteristics.

Kreuz, C.

1886

Liquiritia.

Pharmakognosie fur der Erstunterricht, 1 ed., p. 193.

Gives the botanical origin, synonyms, description of the plant, constituents, uses, preparations, and properties of *Glycyrrhiza*.

Marme, W.

1886

Radix Liquiritiae.

Lehrbuch der Pharmacognosie, 1 ed., p. 34.

Gives the botanical source, description of the plant, structure, microscopic description, preparation of root for examination, constituents, and commercial statistics for the years 1881 and 1882.

Wiegand, T.S.

1886

Minutes of the Pharmaceutical Meeting.

Am. Jour. Pharm., 58, p. 105; (Dig. Comm. U.S.P.X
1880, p. 82.)

Mentions an exhibit of Turkey Licorice Root,
known as *Glycyrrhiza glabra*, formerly believed to be
procured from *Glycyrrhiza echinata* which was the
source of Russian licorice root.

(Editor).

1886

Pharmakognostischer Bericht aus dem Auslande.

Pharm. Zeit., 31, p. 129; (Tschirsch, Handbuch der
Pharmakognosie, 1 ed., v. 2, p. 81; Meyer, Wissen-
schaftlichen Drogenkunde, 1 ed., v. 1, p. 230.)

Discusses the licorice culture in Syria and
Spain, giving the cultivation, with export figures
for the years 1882-1884.

Becker, A.

1887

Taraxacum-und Glycyrrhiza-Arten und Alhagi
Camelorum.

Bulletin de la Societe imp. des Nat. des Moscou,
v. 1, p. 222; (Fluckiger, Pharmakognosie des
Pflanzenreiches, 3 ed., v. 1, p. 384.)

Mentions that the botanical source of Russian
Licorice is uncertain.

Culin, S.

1887

Chinese Drug Stores in America.

Am. Jour. Pharm., 59, p. 595.

Gives the Chinese name for, and mentions
Glycyrrhiza as a Chinese drug.

Glycyrrhiza.--Licorice Root.

A Manual of Organic Materia Medica, 3 ed., p. 88; *ibid.*, 5 ed., p. 89; *ibid.*, 6 ed., p. 85.

Gives the Latin name, botanical source, habitat, description of the rhizome & root with illustrations, structure, commercial varieties, constituents, properties and dose of Glycyrrhiza.

(Editor).

1887

Notes and News.

West. Drugg., 9, p. 67.

"The California licorice plantations are flourishing, and will soon be an important source of supply."

Dickson, J.

1888

Turkey.

House of Commons, v. 103, No. 417; (Chem. & Drugg., 33, p. 215.)

The value of liquorice root has decreased as a result of the accumulation of stocks in America.

Eldridge, G. J.

1888

Turkey.

House of Commons, v. 103, No. 290; (Chem. & Drugg., 33, p. 185.)

"The liquorice trade has completely died out as far as the Acre district is concerned. The export in 1887 being too small to be worth mention. The cause of this is the heavy fall in the price in America."

Über das Sussholz.

Arch. d. Pharm., 226, p. 473; (Wood, & Bache, U. S. Dispens., 17 ed., p. 660; Proc. Am. Pharm. Assoc., 36, p. 390; Pharm. Jour., lll, p. 113; Dig. Comm. U.S.P., 1880, p. 227; Tschirsch, Handbuch der Pharmakognosie, 2 ed., v. 1, p. 88; Zornig, Arzneidrogen 1 ed., p. 469; Fluckiger, Pharmakognosie de Pflanzenreiches, 3 ed., v. 1, p. 376.)

A detailed microscopic description, with illustrations, of the anatomical structure of the roots and rhizomes of *Glycyrrhiza glabra*; also characteristics, and distinctions of different commercial sorts of *Glycyrrhiza*.

(Editor).

1888

The liquorice Industry in Asia Minor.

Chem. & Drugg., 33, p. 189.

Gives statistics showing that a large amount of licorice is obtained from Asia Minor and describes the industry.

(Editor).

1888

Liquorice Culture in Russia.

Drugg. Cir., 32, p. 273.

Describes the development of the licorice industry and the average prices on the spot of production and at the seaport.

Casser,--, & Loretz,--.

1889

(Glycyrrhiza.)

Preis-Verzeichnis von--, p.--; (Meyer, Wissenschaftlichen Drogenkunde, 1 ed., p. 230.)

The original was not available.

Osterferien im Suden.

Archiv d. Pharm., 227, p. 1059; (Am. Drugg., 19, p. 26; Brit. & Col. Drugg., 17, p. 288.)

Comments on the conditions ideal for licorice culture, and gives a detailed description of the process of licorice manufacture.

Holfert, J.

1889

Glycyrrhiza glabra.

Archiv der. Pharmacie, 227, p. 495; (Fluckiger, Pharmakognosie des Pflanzenreiches, 3 ed., v. 1, p. 376; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 88.)

Gives a description of the structure of licorice root.

Tschirsch, A.

1889

Glycyrrhiza.

Angewandte Pflanzenanatomie, 1 ed., v. 1, p. 284 & 345; (Fluckiger, Pharmakognosie des Pflanzenreiches, 3 ed., v. 1, p. 376.)

Gives the histology of *Glycyrrhiza glabra*, with illustrations of a cross-section of the root (p. 284) and individual structure (p. 345).

(Editor).

1889

Spanish Licorice.

Chem. & Drugg., 34, p. 129; (Am. Drugg., 18, p. 59.)

Gives the habitat of the plant, a description of preparation for shipment, and a description of the various commercial roots.

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(1889)

(Glycyrrhiza.)

House of Commons, v.--, No.--; (Chem. & Drugg., 38, p. 834.)

(Gives an account of the monopolisation of the root supply in Asia Minor, and describes the different grades of extract manufactured by the company which is located in Turkey.)

(Editor).

1889

(Liquorice.)

Pharm. Jour., 48, p. 613; (Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 81.)

Gives the habitat of Russian liquorice, and data concerning the exportation of liquorice from Batoum.

(Editor).

1889

(Licorice.)

West. Drugg., 11, p. 173.

"Nearly 3 million pounds of licorice root arrived at the port of New York during 1 week, recently from Smyrna. The largest share of licorece now comes from Asia Minor, one American having almost a monopoly of it, and having branches for manufacturing the extract in this country."

(Editor).

1889

Licorice Raising.

West. Drugg., 11, p. 173.

A detailed account of the process employed in the successful cultivation of licorice in California.

Jago, T.S.

1890

Turkey.

House & Commons, v. 77, No. 745; (Brit. & Col. Drugg., 18, p. 167.)

A report of the conditions in the Licorice areas around Antioch, Killis, and Marash.

McCullough, M. L.

1890

Glycyrrhiza *Lepidota*.

Am. Jour. Pharm., 62, p. 388; (Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 1, p. 88; Wood, & Bache, U. S. Dispens., 17 ed., p. 660; *ibid.*, 19 ed., p. 594; *ibid.*, 20 ed., p. 526; *ibid.*, 21 ed., p. 524; Filter, & Lloyd, King's Am. Dispens., 18 ed., v. 2, p. 947; Pharm. Jour., 50, p. 250; Yrbk. Brit. Pharm. Conf., 28, p. 158.)

Described *Glycyrrhiza lepidota* and compares it with *Glycyrrhiza glabra* for which it is often substituted.

Muller, C.

1890

Glycyrrhiza.

Medicinal flora, 1 ed., p. 443.

Gives the habitat, description of the plant with illustration, several botanical species and their characteristics, and official preparations of *Glycyrrhiza*.

Parke, Davis, & Co.

1890

Licorice.

Organic Materia Medica, 2 ed., p. 113.

Gives the botanical source, synonyms, properties, active principle, and preparations of *Glycyrrhiza*.

(Editor).

1890

American Liquorice Root.

Brit. & Col. Drugg., 18, p. 288.

Comments on Glycyrrhiza Lepidota found in America, and gives the results of an analysis carried out by Mr. M. L. McCullough.

Vasey, G.

1890

Cultivation of Licorice Root in the United States.

Pharm. Era, 4, p. 354.

In a letter the possibilities of cultivation of Glycyrrhiza in California are discussed.

(Editor).

1890

Note on New German Pharmacopoeia.

Pharm. Rec., 10, p. 437.

Comments on the licorice root official in the German Pharmacopoeia 3 ed., and gives the official Latin title of the licorice as used in the German Pharmacopoeia.

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1890

(Glycyrrhiza.)

Pomona Progress, v.--, p.--; (Pharm. Era, 4, p. 30.)

(Gives the statistics with reference to the amount of Licorice consumed in the United States, and the commercial source of the licorice. An argument favoring the home cultivation of Glycyrrhiza.)

Chenevix-Trench, G.

1891

Turkey.

House of Commons, v.84, No. 208. (Pharm. Jour. 51, p. 247; Am. Jour. Pharm., 63, p. 547; Proc. Am. Pharm. Assoc., 40, p. 639; Pharm. Rec., 12, p. 275; Pharm. Era, 6, p. 197; Chem. & Drugg., 39, p. 223; Brit. & Col. Drugg., 20, pp. 184 & 265.)

Describes the liquorice plant and discussed its cultivation on the banks of the Tigris, and Euphrates.

Meyer, A.

1891

Radix Liquiritiae.

Wissenschaftliche Drogenkunde, 1 ed., v. 1, p. 230. (Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 1, p. 88.)

Gives the synonyms, references, botanical source, habitat, cultivation, commercial varieties, description, anatomy, microscopic description with illustrations, constituents, and history of Glycyrrhiza.

Mohideen, K. B.

1891

Hibiscus esculentus.

Materia Medica of Madras, v. 1, p. 55.

Mentions that Hibiscus esculentus can be used as a substitute for Liquorice root.

Peacock, D. R.

1891

Russia.

House of Commons, v. 87, No. 871; (Chem. & Drugg., 39, p. 837.)

A report on the increase of exports of Liquorice from the Caucasus.

Pike, N.

1891

Licorice.

Scientific American, 65, p. 56; (Am. Drugg., 20, p. 245; Proc. Am. Pharm. Assoc., 40, p. 639; Pharm. Era, 25, p. 389; Can. Drugg., 13, p. 114.)

Gives the methods successfully employed in England in the cultivation of Licorice.

Tweedie, W.

1891

Turkey.

House of Commons, v. 81, No. 921; (Pharm. Jour., 52, p. 288.)

A report of the licorice situation at Bussorah.

(Editor).

1891

Liquorice.

Chem. & Drugg., 38, p. 405.

Discusses the various commercial brands of liquorice in regard to cultivation and preparation for market.

(Editor).

1891

Liquorice in Southern Europe.

Chem. & Drugg., 39, p. 333.

Points out the varying qualities of liquorice obtained in different countries. Gives the habitat, description, and describes the cultivation of Liquorice.

(Editor).

1891

The Liquorice Season.

Chem. & Drugg., 39, p. 646.

An editorial discussing the various grades of liquorice on the market.

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1891

(Liquorice Manufacture in France.)

Droguiste, ---, p.--; (Chem. & Drugg., 39, p. 869.)

(A description of a liquorice manufactory in the town of Uzes. The source of liquorice and the extent of manufacture are given.)

Murray, A.

1892

Russia.

House of Commons, v. 83, No. 1027; (Pharm. Jour., 51, p. 1004.)

A report of acting-consul at Batoum on the licorice industry in the Caucasus.

Eyres, H.C.

1893

Turkey.

House of Commons, v. 97, No. 1121; (Chem. & Drugg., 42, p. 687.)

"A small export of liquorice (8,400 cwt., worth 2,000 L) was effected in 1891 from Damascus whereas in 1890 the article does not figure at all in the returns."

Hartwich, C.

1893

Historisches uber die Cultur der Arznei-
pflanzen.

Schweizerische Wochenschrift, v. 31, p. 459; (Tschirsch,
Handbuch der Pharmakognosie, 1 ed., v. 2, p. 81.)

Mentions that Glycyrrhiza has been known since
ancient times, was cultivated in Italy in the middle
ages and in Bamberg, Germany in the 11 century, with
details.

Jago, T.S.

1893

Turkey.

House of Commons, v. 97, No. 1200; (Pharm. Jour.,
53, p. 67; Brit. & Col. Drugg., 24, p. 126.)

A survey of the development of the licorice
industry in Aleppo.

Karsten, H.

1893

Glycyrrhiza.

Flora von Deutschland, Oesterreich und der Schweiz.,
2 ed., v. 2, p. 248; (Pabst, Kohler's Medizinal
Pflanzen, 1 ed., v. 2, p. 441.)

Gives the botanical source, description of
the plant, with illustrations, and the habitat of
Glycyrrhiza.

Stevens, P.

1893

Russia.

House of Commons, v. 96, No. 1191; (Pharm. Jour.,
52, p. 974.)

A report of the licorice production in the
Caucasus and shipment from Batoum.

(Editor).

1893

Liquorice Sweetmeats.

Chem. & Drugg., 42, p. 98.

An account of court judgement dealing with the adulteration of Liquorice.

(Editor).

1893

The liquorice-root Trade.

Chem. & Drugg., 43, p. 38.

An account of the development of the export trade from Aleppo, Asia Minor.

(Editor).

1893

A Few Facts about Licorice.

Pharm. Era, 10, p. 430; *ibid.*, p. 477.

An article compiled from information presented by Mr. A. Mellor, giving the habitat, methods of cultivation, and describing the manipulation of the Licorice plant for the market.

1893

(Liquorice in Caucasus.)

Kew Bulletin, 80, p. 223. (Pharm. Jour., 53, p. 326.)

(A survey of the development of the liquorice industry in the Caucasus with statistics on the production, exportation, and price of the raw liquorice.)

Lucas, E.W.

1894

Laboratory notes with comparative observations on some British and United States Pharmacopoeial Preparations.

Pharm. Jour., 53, p. 665.

"Liquorice Root (Dried).- This may be used in either the peeled or unpeeled condition, Would it not be well to insist on its being peeled, as is the cortical portion which contains an acrid principle is included, the sweetness is somewhat impaired?"

Mockler, E.

1894

Turkey.

House of Commons, v. 96, No. 1142; (Pharm. Jour., 54, p. 276.)

A report on the licorice trade of Baghdad & Bussorah.

Simmonds, P. L.

1894

The trade in Liquorice.

Bull. Pharm., 8, p. 205; (Drugg. Circ., 38, p. 151.)

Gives many uses for liquorice, and methods of administration, the value of Glycyrrhiza in China, a comparison of extracts of liquorice obtained in different countries, a note on the cultivation and data concerning the commercial aspects of Glycyrrhiza.

Stevens, P.

1894

Russia.

House of Commons, v. 96, No. 11315; (Pharm. Jour., 54, p. 234.)

A report on the liquorice root grown in the vicinity of Elixvetpol and Boku in the Caucasus.

(Editor).

1894

Licorice Root.

Bull. Pharm., 12, p. 425.

Comments on the botanical source of licorice, and briefly describes the licorice industry in Mesopotamia.

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1894

(Liquorice.)

Kew Bulletin, 87, p. 141; (Drugg. Circ., 38, p. 282; Pharm. Jour., 54, p. 192; Pharmaceutische Zeitung, 92, p. 79; Jahresbericht der Pharmacie, 54, p. 156; Tschrisch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 81.)

(The cultivation of Glycyrrhiza in England is discussed.)

(Editor.)

1894

Adulterated Licorice & Ginger.

Pharm. Era, 11, p. 60.

A general statement concerning the adulteration of the above drugs and mentions samples found to contain as much as 70% of adulteration.

Jensen, B.P.

1895

Medicinal Plants to which the climate and soil of our state are adopted.

Proc. Wash. State Pharm. Assoc., 6, p. 22; (Am. Drugg. & Pharm. Rec., 27, p. 258.)

In an address presented before the sixth annual meeting of the association the results of experiments conducted for the purpose of determining the possibilities of cultivation of *Glycyrrhiza glabra* in Washington were presented.

Glycyrrhiza.

Die Officinellen Pflanzen der Pharmacopoeia Germanica,
1 ed., p. 41.

Gives the botanical source, habitat, description of the plant, official preparations of the German Pharmacopoeia, constituents and a explanation of an illustration of Glycyrrhiza.

Nickham, J.W.

1895

Anatolian Licorice Root.

Am. Jour. Pharm., 67, p. 306; (Proc. Am. Pharm. Assoc., 43, p. 865; Dig. Comm. U.S.P., 1897, p. 87; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 81.)

Records the results found by subjecting Anatolian Licorice root to different solvents, and a comparison with various commercial varieties.

Rittenhouse, H..N.

1895

The Cultivation of Licorice Root in the United States.

Am. Jour. Pharm., 67, p. 72; (Bull. Pharm., 9, p. 120; Pharm. Era, 13, p. 200; Dig. Comm., 1897, p. 86; Proc. Am. Pharm. Assoc., 43, p. 865; Nat'l. Drugg., 25, p. 71.)

In a paper presented at the Pharmaceutical meeting of the Philadelphia College of Pharmacy held at Philadelphia on Jan. 15 (p. 119) gives the habitat of the plant, describes the licorice industry in the various centers, and comments on the possibilities of growth in United States after considering the economic aspects.

Glycyrrhiza.

A Manual of Organic Materia Medica and Pharmacognosy,
1 ed., p. 198.

Gives the botanical source, botanical characteristics, habitat, description of the drug, constituents, actions, uses, and official preparations of Glycyrrhiza, with illustrations.

Waggaman, S.

1895

Glycyrrhiza glabra.

A Compendium of Botanic Materia Medica, rev. ed., p.
53.

Gives the botanical history, habitat, description of the plant, part used medicinally, constituents, use and preparations of Glycyrrhiza.

(Editor).

1895

The Cultivation of Licorice Root.

Am. Jour. Pharm., 67, p. 105.

Comments on the paper The Cultivation of the
Licorice Root in the United States by Rittenhouse.

(Editor).

1895

Liquorice at Pontefract.

Chem. & Drugg., 46, p. 367.

An account of the development of the Licorice
industry, presented by Consul Taylor at a Confectioner's
dinner.

(Editor).

1895

Liquorice.

Chem. & Drugg., 47, p. 97.

Records the exports of liquorice from Smyrna in 1894.

(Editor).

1895

Anatolian Liquorice-root.

Chem. & Drugg., 47, p. 170.

A summary of a paper presented by Mr. J.W. Nickum before the Philadelphia College of Pharmacy comparing Anatolian licorice to other commercial varieties.

Bretschneider, --.

(1896)

(Glycyrrhiza).

Bull. Royal Kew Gardens, v.--, p.--; (Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 80.)

The original was not available.

Kanny, L.D.

1896

Abrus Precatorius.

Indigenous Drugs of India, v. 1, 2 ed., p. 2.

The leaves of the plant contain a large amount of glycyrrhic acid, and the root seems to be a good substitute for liquorice.

Stevens, P.

1896

Russia.

House of Common, v. 88, No. 1717; (Brit. & Col. Drugg., 29, p. 622.)

Comments on the deplorable condition of the liquorice industry in the Caucasus in 1895.

(Editor).

(1896)

(Lectures on Licorice).

The Grocer, v.--, p.--; (Chem. & Drugg., 49, p. 654.)

(Discusses the growth and preparation of licorice and accounts for the failure met by Great Britain farmers in attempting to cultivate it.)

1896

Examination of Licorice Roots.

Agric. Expre. Sat. of the Univ. of Calif., Report for 1894-5, p. 185; (Am. Jour. Pharm., 68, p. 637; Dig. Comm. U.S.P., 1898, p. 78; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 81.)

The results of the analysis of a sample of licorice received from Ant. C. Denotovich and grown in the San Joaquin valley near Fresno California are recorded.

Dohme, A.R.

1897

The Histology and Pharmacognosy of Licorice, Arnica, and Turpeth.

Drugg. Circ., 41, p. 54; (Dig. Comm. U.S.P., 1898, p. 70.)

Gives the history of licorice, comments on the quality of varieties grown in different areas, description of the cross section of the rootlet with illustration, and direction for the extraction of the constituents of Glycyrrhiza.

(Finselbach, W.)

(1897)

(Licorice root grown in New South Wales.)

Northern Star, v.--, p.--; (Pharm. Jour. of Australia, v. --, p.--; Am. Jour. Pharm., 69, p. 643.)

(It appears that conditions of the Lesmore district N.S.W. are favorable for the cultivation of licorice.)

Hansen, A.

Radix Liquiritiae oder Glycyrrhizae. Sussholz.

Drogenkunde, 1 ed., p. 23.

Gives the botanical source, description of the plant, habitat, cultivation, and exportations, constituents and uses of Glycyrrhiza.

Kraemer, H.

1897

Examination of Powdered Vegetable Drugs.

Am. Jour. Pharm., 69, p. 530; (Dig. Comm., U.S.P., & N.F., 1898, p. 70; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 88.)

"In Glycyrrhiza the characteristic fibers with calcium oxalate crystals adjoining them, or the starch grains, are employed."

LaWall, C.H.

1897

Estimation of Ash in Various Drugs.

Am. Jour. Pharm., 69, p. 140; (Dig. Comm. U.S.P., & N.F., 1898, p. 70.)

Glycyrrhiza root yielded 8.58% moisture and 4.26% ash.

Rittenhouse, H.N.

1897

The Commercial Sources of Liquorice Root.

Am. Jour. Pharm., 69, p. 13; (Drugg. Circ., 41, p. 54; Proc. Am. Pharm. Assoc., 45, p. 556; Am. Drugg. & Pharm. Rec., 29, p. 387; Pharm. Era, 17, p. 134; Dig. Comm. U.S.P. & N.F., 1898, p. 70.)

Gives the geographical sources of commercial liquorice root, and qualities of the various kinds.

Indian Licorice.

Bull. Pharm., 11, p. 401; (Dig. Comm. U.S.P., & N.F., 1901, p. 89.)

Describes the plant *Abrus precatorius* native to India and valuable as an excellent substitute for *Glycyrrhiza glabra*.

Stevens, P.

1897

Russia.

House of Commons, v. 93, No. 1903; (Pharm. Jour. 58, p. 568a; Brit. & Col. Drugg., 31, p. 721.)

"The Licorice root exported from the Consular District of Batoum during the year 1896 decreased by 5,752 tons." Assigns reasons for the decrease.

Waring, E.J.

1897

(Licorice).

Remarks on the use of some of the bazaar medicines and common medicinal plants of India, etc., 1 ed., p.--; (Chem. & Drugg., 53, p. 907.)

("This root possesses many of the sensible properties and medical qualities of true licorice-root.") Referring to *Abrus precatorius*.

(Editor).

1897

Caucasian Licorice

Chem. & Drugg., 51, p. 905.

An account of the licorice-root industry in Caucasia for the years 1896-7.

Licorice in Asia Minor.

Pharm. Rev., Milw., 15, p. 45, Supp.

Reports the revival of the project of construction of a railway from the Mediterranean coast to Aleppo for the transportation of Licorice.

Dragendorff, G.

1898

Glycyrrhiza glabra.

Die Hielpflanzen die verschiedenen Volker un Zieten, 1 ed., p. 319; (Zornig, Arzneidrogen, 1 ed., v. 1, p. 469.)

Gives the cultivation, synonyms, constituents and uses of Glycyrrhiza glabra.

Kraemer, H.

1898

Qualitative Examination of Powdred Vegetable Drugs.

Proc. Am. Pharm. Assoc., 46, pp. 310 & 315. (Dig. Comm. U.S.P., & N.F., 1901, p. 89; Tschrisch, Handbuch der Pharmakognosie, 1 ed., v. 1, p. 88.)

Describes the microscopical characteristics of Russian & Spanish Glycyrrhiza.

(Leech, D.J., Chairman.)

1898

The British Pharmacopoeia.

Chem. & Drugg., 53, p. 907.

"Glycyrrhizae Radix- India wishes the root of Abrus precatorius recognized as liquorice-root, but the Pharmacographia Indica view being against this, the B.P. Committee says, 'it would seem better not to recognize this root.'"

Glycyrrhiza.

Kohler's Medizinal-Pflanzen, 1 ed., v. 2, p. 441.

Gives the botanical source, description of the plant, structure, anatomy, time of flowering, commercial sources, synonyms, history, part official, constituents, adulterations and an illustration of Glycyrrhiza.

Stevens, P.

1898

Russia.

House of Commons, v. 98, No. 2017; (Chem. & Drugg., 52, p. 1030; Pharm. Jour., 60, p. 63.)

A report giving the reasons for the decline in exports of liquorice root from Batoum for the year 1897.

Tschirsch, A.

1898

Kleine Beitrage zur Pharmakobotanik und Pharmakochemie.

Schweiz. Woch. f. Chem. u. Pharm., 36, p. 189; (Am. Jour. Pharm., 70, p. 525; Dig. Comm. U.S.P., & N.F., 1901, p. 89; Zornig, Arzneidrogen, 1 ed., p. 469.)

Discusses the constituents of Glycyrrhiza.

Huber, E.

1899

Adulteration of Drugs.

Proc. Wis. Pharm. Assoc., 19, p. 35; (Dig. Comm. U.S.P., & N.F., 1901, p. 89.)

"Licorice Root: Judging from color A & B are evidently made from peeled Russian root. The lightness of color are large presence of starch in B is probably due to the peculiarity of the stock used in producing the powder. C. is produced from Spanish root."

(Glycyrrhiza glabra.)

Pharmacognostische Karte, 1 ed.

A map on which the habitat of licorice is indicated.



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1899

(Sussholzol).

Bericht von Haenrich Haesel, --, p.--; (Pharm. Cent., 40, p. 533; Proc. Am. Pharm. Assoc., 48, p. 645; Dig. Comm. U.S.P., & N.F., 1901, p. 89.)

(Traces of volatile oil have been found in Russian and Spanish licorice.)



(Editor).

1899

Liquorice Root.

Chem. & Drugg., 55, p. 38.

An account of the increase in the exports of liquorice root from Batoum in 1898.



(Paris Correspondent).

1899

French News.

Chem. & Drugg., 55, p. 577.

A report of the importation of liquorice in Marseilles.



Reglisse.

Atlas de Photomicrographie des Plantes Medicinales,
1 ed., p. 41.

Gives an account with photographs of the
structures found in the roots of *Glycyrrhiza glabra*.

Jelliffee, S. E.

1900

Liquorice Root.

Drugg. Circ., 44, p. 112; (Dig. Comm. U.S.P., & N.F.,
1901, p. 89.)

Gives the habitat of the plant, description and
histology of the root and powder, and constituents of
Glycyrrhiza glabra.

Moor, C.G. & Priest, M.

1900

The ash of British Pharmacopoeia Drugs.

Yrbk. Brit. Pharm. Conf., 37, p. 403; (Pharm. Jour.,
65, p. 109; Dig. Comm., U.S.P., & N.F., 1901, p. 89.)

Licorice root was found to contain 3.3% ash.

Schneider, A.

1900

Special Discussion of the Senses.

General Vegetable Pharmacognosy, 1 ed., p. 54.

Glycyrrhiza is reported to have a faint peculiar odor.

Rad. et Stolones liquiritiae.

Anatomischer Atlas der Pharmakognosie und Nahrungsmittelkunde, 1 ed., p. 29; (Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 88.)

Gives the synonyms, a detailed account of the structures found in the roots and runners of *Glycyrrhiza glabra* together with an addition on Russian Licorice and a full page of illustrations with explanations.

Wiesner, J.

1900

Sussholz.

Rohstoffe des Pflanzenreiches, v. 2, p. 526; (Zornig, Arzneidrogen, 1 ed., v. 1, p. 469.)

Gives the botanical sources and description of the structure of several varieties of *Glycyrrhiza*, with illustrations.

Wratislaw, --.

1900

Turkey.

House of Commons, v. 96, No. 2428; (Chem. & Drugg., 59, p. 626.)

A report of the licorice exports from Bussorah during 1900.

(Editor).

1900

Killed by Licorice-root.

Chem. & Drugg., 57, p. 3.

A boy, 9 years old, died as a result of chewing licorice root and swallowing the curde fibers.

(Editor).

1900

Russian Liquorice Root.

Chem. & Drugg., 57, p. 1014.

An account of the liquorice situation in Trans-Caucasus during 1900.

(Editor).

1900

Glycyrrhizae Radix.

Pharm. Jour., 64, p. 661.

Gives the botanical and geographical sources, descriptions of the plants with illustrations, distinctive characteristics, constituents, and preparations official in the British Pharmacopoeia using Glycyrrhiza.

Finn, --.

1901

Spain.

House of Commons, v. 84, No. 2636; (Chem. & Drugg., 59, p. 189.)

The export of liquorice root from Spain fell 80 tons in 1900 as compared with 1899.

Gawalowski, A.

1901

Liquorice Culture in Austro-Hungary.

Am. Drugg. & Pharm. Rec., 39, p. 354.

Gives the botanical source of the liquorice, and a description of conditions most favorable for successful cultivation.

Allgemeines über die in der Praxis angewandten Achsen und Wurzeln des Monokotyledon und Dikogyledon.

Die Grundlagen und Methoden für die mikroskopische Untersuchung von Pflanzenpulvern, 1 ed., p. 230. (Zornig, Arzneidroge, 1 ed., v. 1, p. 469.)

Mentions the root of Glycyrrhiza as used in medicine.

Schimper, A.F.

1901

Glycyrrhiza glabra.

Repetitorium der Pflanzlichen Pharmacognosie und Officinellen Botanik, 3 ed., p. 27.

Gives a description of Glycyrrhiza glabra together with methods of cultivation.

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(1901)

(Italy).

House of Commons, v.--, p.--; (Chem. & Drugg., 59, p. 1062.)

("The export of liquorice root was about 1/3 less in 1900 than in 1899, being only 383 quintols.")

(Editor).

1901

A big licorice shipment.

Pharm. Era, 25, p. 296; (Brit. & Col. Drugg., 39, p. 339,)

An account of a licorice shipment received at Camden, imported from Nineveh.

Barnham, --.

1902.

Turkey.

House of Commons, v. 110, No. 2285. (Pharm. Jour.,
70, p. 690.)

A slight decrease in the liquorice exported from
Alexandrette is reported.

Berendes, J.

1902

Sussholz.

Des Pedanios Dioskurides aus anazarbos Arzneimittellehre,
1 ed., p. 265.)

Gives synonyms, description of the plant, habitat
and uses of *Glycyrrhiza glabra*.

Kraemer, H.

1902

Glycyrrhiza (Licorice Root).

A course in Botany and Pharmacognosy, 1 ed., p. 143;
ibid., 2 ed., p. 472; ibid., 3 ed., p. 472; ibid., 4 ed.,
p. 472.)

Gives the botanical origin, habitat, commercial
varieties of *Glycyrrhiza*, a description of the rhizome
and root, the constituents and allied plants.

Wratislow, --.

1902

Turkey.

House of Commons, 110, No. 2835. (Chem. & Drugg., 61,
p. 465.)

The causes of the decline of licorice root ex-
port from Bussorah are given.

(Editor),

1902

Liquorice Root Condemned.

Brit. & Col. Drugg., 42, p. 356 (noted) & p. 374.

"At Thames Police Court nearly 70 tons of licorice were ordered destroyed as being unfit for food.

(Editor),

1902

That Liquorice root.

Chem. & Drugg., 61, p. 673.

70 tons of liquorice root were destroyed because the roots were moldy and wet.

(Dieterich, K.)

1903

Radix Liquiritiae russica.

Helfenberger Annalen, 16, p. 195; (Pharm. Jour., 76, p. 475.)

Reports results of the analysis of 37 satisfactory samples of Glycyrrhiza.

Jackson, R.J.

1903

Ornamental Medicinal Plants.

Pharm. Jour. 71, p. 455.

A description of Glycyrrhiza glabra, with comments on the use of the plant as an ornamental.

Radix Liquiritiae Rossica.

Die mikroskopische Analyse der Drogenpulver, v. 2, p. 187; (Zornig, Arzneidrogen, 1 ed., v. 1, p. 469; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 88.)

Gives a detailed description of the structures found in powdered licorice together with illustrations and directions for the preparation of samples for examination.

Palikin, --

(1903)

(Glycyrrhiza).

Schrift. der Russ. Geogr. Gesellschaft, 4, p. 7; (Farmatsevticheskii zhurnal, --, p. 1063; Pharm. Jour., 111, p. 113.)

(Gives the characteristics of Glycyrrhiza uralensis and compares it with Spanish and Russian liquorice.)

True, R.J.

1903

Cultivation of Drug Plants in the United States.

Yrbk. U.S. Depart. of Agr., 1903, p. 337; (Proc. Am. Pharm. Assoc., 53, p. 273; Dig. Comm. U.S.P., & N.F., 1905, p. 178; Pharm., Era, 34, p. 188.)

Comments on the possibilities of growing licorice on a commercial scale in the United States as it already thrives in various localities. An illustration of the licorice plant is included.

(Xrayser).

1903

Pharmaceutical words.

Chem. & Drugg., 62, p. 165.

Gives the etymology of the word 'liquorice'.

Radix Liquiritae russica.

Helfenberger Annalen, 17, p. 145.

Records the results of the analysis of 23 samples of Glycyrrhiza.

Gadd, W.

1904

Liquorice Root.

Drugs, Their Production, Preparation and Properties, 1 ed., p. 13.

Gives the part used, botanical source, etymology, action, use and official preparations of Glycyrrhiza.

Greenish, H.G. & Collins, E.

1904

Powdered Rhizome & Roots.

An Anatomical atlas of Vegetable Powders, 1 ed., p. 244; (Pharm. Jour., 72, p. 283.)

A description with illustrations of the structural characteristics of Glycyrrhiza glabra.

Mitlacher, W.

1904

Die Ergebnisse der Apothekenvisitationen einiger Jahre in Wein bezüglich der Arzneidrogen.

Zeitschrift des All. Osterr. Apotheker-Vereines, 42, p. 1516; (Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 88.)

Powdered licorice was adulterated with extracted drug.

Greece.

House of Commons, v. 99, p. 3156; (Pharm. Jour., 72, p. 737.)

An account of the development of the liquorice industry in Greece.

(Editor).

1904

Liquorice

Chem. & Drugg., 64, p. 527.

Mentions the habitat and use of Liquorice root.

(Dieterich, K.)

1905

Radix Liquiritae russica.

Helpfenberger Annalen, 18, p. 126; (Dig. Comm. U.S.P., & N.F., 1906, p. 301.)

Records the results of the analysis of 16 samples of Glycyrrhiza.

(Duckerts, M.)

(1905)

(Liquorice and Galls in Asia Minor.)

Chem. & Drugg., 67, p. 593.

As Belgian Consul general at Smyrna reports the liquorice root industry has benefited by the purchases of land by the Anglo-American Syndicate.

Gadd, W. H., & Gadd, S. C.

1905

The Testing of Drugs, Chemical, and Galenicals
by Dispensing Chemists.

Pharm. Jour., 75, p. 438; (Dig. Comm. U.S.P., & N.F.,
1905, p. 178.)

Gives simple instructions for the examination
and analysis of powdered liquorice root.

Moeller, J. & Thoms. H.

1905

Glycyrrhiza.

Real-enzyklopadie der Gesanten Pharmazie, 1 ed., v. 5,
p. 706; (Tschrisch, Handbuch der Pharmakognosie, 1 ed.,
v. 2, p. 80.)

Gives the derivation of Glycyrrhiza, the habitat,
description of the plant, botanical sources, and consti-
tuents of Glycyrrhiza glabra.

(Newmarch,--.)

(1905)

(The Cultivation of Liquorice in Mesopotania).

House of Commons, v.--,p.--; (Brit. Med. Jour., 1905,
v. 1, p. 317; Am. Drugg., & Pharm. Rec., 46, p. 202.)

(Gives the localities where Glycyrrhiza is found
and reports on the cultivation of liquorice root.)

Reclu, M.

1905

Reglisse.

Guide de L'Herbariste, 1 ed., p. 112.

Gives a description of the plant, the habitat,
cultivation, part used, constituents, medicinal proper-
ties, & uses of Glycyrrhiza.

Radix Liquiritiae---Sussholzwurzel.

Pharmakognosie des Pflanzen- und Tierreiches, 1 ed., p. 13.

Gives the botanical source, habitat, description of the structure, powder and constituents of Glycyrrhiza.

(Editor).

1905

A Sleigh-Load of Licorice.

Bull. Pharm., 19, p. 60.

An account, with illustration, of a licorice-window display installed by J.T. Pepper of Woodstock, Ontario.

(Editor).

1905

Liquorice root.

Chem. & Druggl., 66, p. 219.

Discusses the liquorice root trade in Mesopotamia .

(Editor).

1905

(Liquorice.)

Chem & Drugg., 66, p. 948.

An account of the liquorice-root industry in Bussorah during 1904.

(Editor).

1905

(Beirout exports).

Chem. & Drugg., 67, p. 261.

1904. 7,500 bales of liquorice root were exported in

(Editor).

1905

Drug Trade Jottings.

Pharm. Era, 34, p. 69.

An account of a licorice shipment received from Alexandria, Africa.

(Editor).

1905

(Licorice Statistics).

Pharm. Era, 34, p. 450.

Gives the exports from Turkey in Asia and the licorice imports into the United States.

Gawalowski, A.

1906

Sussholzsuccus, Extract und Reinglycyrrhizinate.

Pharm. Post., 33, pp. 130 & 362; (Dig. Comm. U.S.P., & N.F., 1906, p. 301, Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 81.)

Discusses the cultivation of glycyrrhiza in Austria-Hungary and enumerates the districts in which the durg is grown extensively.

(Hills, W. Chairman.)

1906

The British Pharmacopoeia.

Chem. & Drugg., 69, p. 863; (Dig. Comm. U.S.P., & N.F., 1906, p. 310.)

Gives a summary of the recommended changes of the monograph of Glycyrrhiza radix for the next revision of the British Pharmacopoeia.

Perrot, E., & Fravin, H.

1906

Reglisse.

Les Matieres Premieres Usuelles, 2 ed., p. 37.

Gives the botanical source, habitat, and commercial varieties of Glycyrrhiza.

True, R.H.

1906

(Glycyrrhiza).

Oil, Paint, & Drug Rep., 70, p. 37; (Wood & Bache, U.S. Dispens., 20 ed., p. 526; Dig. Comm. U.S.P., & N.F., 1906 p. 301.)

(The Department of Agriculture has a half an acre of Spanish Licorice under cultivation in South Carolina.)

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1906

(Glycyrrhiza).

Techn. sbornik., 17, p. 19; (Chem.-Tech. Repert., Cothen, 30, p. 234; Dig. Comm. U.S.P., & N.F., 1906 p. 301.)

(Comments on the development of the licorice industry in the Caucasus.)

Crow, ---.

1907

Turkey.

House of Commons, v. 93, No. 3865; (Chem. & Drugg., 71, p. 453.)

A report on the exports of licorice from Basra (Persian Gulf) for the year 1906.

Licorice Root.

(U.S.) Month. Cons. & Trade Rep., No. 325, p. 192;
 (Meyer Bros.' Drugg., 30, p. 144; Proc. Am. Pharm.
 Assoc., 57, p. 214; Dig. Comm. U.S.P., & N.F., 1909,
 p. 401; *ibid.*, 1907, p. 259; Pharm. Jour., 79, p. 393.)

A description of the licorice industry in Asiatic Turkey, giving the habitat of the plant, and data on the exports of the root.

(Knovaleu, S.G.)

(1907)

(Glycyrrhiza Uralensis).

Diss. St. Petersburg, ----; (Chem. Zeit., Rep., 32, p. 589; Pharm. Zentralh., 49, p. 533; Pharm. Jour., 81, p. 169; Wood, & Bache, U.S. Dispens., 20 ed., p. 525; *ibid.*, 21 ed., p. 529; Chem. & Drugg., 71, p. 975; Zornig, Arzneidrogen, 1 ed., v. 1, p. 469; Chem. Rep. Cothen, 31, p. 588; Dig. Comm. U.S.P., & N.F., 1907, p. 259; Proc. Am. Pharm. Asso., 57, p. 214; Pharm. Ztg., 54, p. 78; Am. Drugg. & Pharm. Rec., 53, p. 256; Farmatsevticheskii zhurnal, v.--, p. 1063; Tschirsch, Handb. der Pharmakognosie, 1 ed., v. 2, p. 80.)

(A thesis on *Glycyrrhiza uralensis* found in Asia & said to be of better quality than the best Spanish Licorice.)

Koch, L. & Gilg, E.

1907

Radix Liquiritiae Rossica.

Pharmakognostisches Practicum, 1 ed., p. 121.

Gives directions for mounting sections of the above mentioned drug, for examination, a detailed description of the structure, together with illustrations, a description of the powder with illustrations, commenting on each of the structures present.

Minutes of the Section on Scientific Papers.

Proc. Am. Pharm. Assoc., 55, p. 336. (Dig. Comm. U.S.P., & N.F., 1907, p. 259.)

Discusses the occurrence of the licorice plant, its collection, and the production of the extract of licorice in the valley of Meander and Hermes in Asia Minor.

Rittenhouse, S.D.

1907

Cultivation of Licorice.

Am. Jour. Pharm., 79, p. 39, (Dig. Comm. U.S.P., & N.F., 1907, p. 259; Wood, & Bache, U.S. Dispens., 20 ed., p. 226.)

Discusses the cultivation of Glycyrrhiza and describes a specimen grown in a back yard in Philadelphia.

(Roeder, P.)

1907

(Glycyrrhiza).

Jahersber. Wein., --, p. 106; (Dig. Comm. U.S.P., & N.F., 1907, p. 254.)

(Reports on the analysis of 6 samples of Glycyrrhiza.)

Stokvis, B.J.

1907

Protectiva.

Voordrachten over Geneesmiddelleer, 2 ed., v. 2, p. 343.

Glycyrrhiza glabra is mentioned as an emollient; and in v. 3, p. 164, it is mentioned as an expectorant.

Glycyrrhiza glabra.

Arch. d. Pharm., 245, p. 54; (Dig. Comm., U.S.P., & N.F., 1907, p. 259.)

Describes and illustrated the fruit of *Glycyrrhiza glabra* and its structural characteristics, also describes the development of the seed and of the root.

(Editor).

1907

Proposed Liquorice-root Monopoly.

Chem. & Drugg., 68, p. 9.

Mentions the licorice monopoly a project submitted to the Ottoman Government in Mesopotamia.

(Editor).

1907

Caucasian Liquorice.

Chem. & Drugg., 70, p. 381.

"The English Caucasian Co. for the production and preparation of liquorice has received official permission to operate at Elizabethpool and other places in Russia."

Gawalowski, A.

1908

Ueber Sussholz.

Deut. Am. Apoth. Ziet., 29, p. 143; (Dig. Comm., U.S.P., & N.F., 1908, p. 287.)

Reports on experiments made in the cultivation of *Glycyrrhiza* and suggests that similar experiments be made in the United States.

Harvey, T.F.

(1908)

(Glycyrrhiza).

P. Roder, Jahresber., Vein, ---, p. 170; (Dig. Comm., U.S.P., & N.F., 1908, p. 287.)

(Records the results of the analysis of 4 samples of Glycyrrhiza.)

Iljin,--

(1908)

(Glycyrrhiza).

Farmatsevticheskii zhurnal,--, p. 1063; (Pharm. Jour., 111, p. 113.)

(A comparison of Glycyrrhiza uralensis with other varieties of Glycyrrhiza.)

Kowalewew, S.G.

(1908)

(Glycyrrhiza).

Farmatsevticheskii zhurnal, ---, p. 1063; (Pharm. Jour., 111, p. 113; Proc. Am. Pharm. Assoc., 57, p. 214; Dig. Comm. U.S.P., & N.F., 1908, p. 287; Tschirsch, Handbuch der Pharmakognosie, 1 ed., v. 2, p. 81.)

(The results of a pharmacognostical and chemical examination of Asiatic Glycyrrhiza and a comparison with other varieties of Glycyrrhiza are given.)

Ozmun, E.H.

1908

Licorice.

(U.S.) Mon. Cons. & Tr. Rep., No. 339, p. 124; (Paint, Oil, & Drug Rev., 46, p. 22; Dig. Comm. U.S.P. & N.F., 1908, p. 287; Oil, Paint, & Drug Rep., 75, p. 28H; Dig. Comm. U.S.P., & N.F., 1909, p. 401.)

Reports on the Turkish licorice industry and gives statistics as to exports.

The Native and Introduced Poisonous and Medicinal plants of California, with Suggestions on Drug Plant Culture.

Pacific Phar., 2, p. 144; (Dig. Comm. U.S.P., & N.F., 1908, p. 287; LaWall & Wood, U.S. Dispens., 20 ed., p. 526; ibid., 21 ed., p. 529.)

Glycyrrhiza lepidota glutinosa Pursh, a native of California, seems to be of such quality that it can be substituted for true licorice.

Stevens, P.

1908

Russia.

House of Commons, v. 115, No. 3996; (Chem. & Drugg., 72, p. 915.)

A report of the developoement of the liquorice industry at Batoum for the year 1907, with a discussion of the possibilities for greater expansion.

(Editor).

1908

Russian Liquorice-root.

Chem. & Drugg., 72, p. 351.

"The exports from Batoum During 1907 amounted to 9,841 tons against 8,450 tons in the previous year."

(Editor).

1908

Persian Drugs.

Chem. & Drugg., 73, p. 29.

"The Turkish authorities facilitated the digging of licorice, and the high river enabled merchants to bring down the root with ease. The exports increased by 15,860 bales."

The Liquorice Trust Fined.

Chem. & Drugg., 73, p. 641.

A summary of the court judgement against MacAndrews & Forbes Co., of New York, and the J.F. Young Co., of Baltimore for violation of the Sherman Anti-Trust Law.

Dohme, A.R. & Engelhardt, H.

1909

Purity of some Official & Non-Official Drugs and Chemicals.

Proc. Am. Pharm. Assoc., 59, p. 716; (Dig. Comm. U.S.P., & N.F., 1909, p. 401.)

"Licorice.-One shipment contained an excessive amount of ash."

Holmes, E.M.

1909

The Materia Medica of Perak.

Proc. Am. Pharm. Assoc., 57, p. 757; (Dig. Comm., U.S.P., & N.F., 1909, p. 401.)

Glycyrrhiza glandulifera is used in the form of a decoction for cough, colds, etc. Describes the root.

Karsten, G. & Oltmanns, F.

1909

Rad. Liquiritiae.

Lehrbuch der Pharmacognosie, 1 ed., p. 61; *ibid.*, 3 ed., p. 66; (Zornig, Arzneidrogen, 1 ed., v. 1, p. 469.)

Gives the botanical origin, commercial varieties, history, anatomy with illustrations, and constituents of Glycyrrhiza.

Italian Liquorice.

House of Commons, --, p. --; (Chem. & Drugg., 74, p. 241.)

A report of the liquorice industry of Italy compared to that 10 years ago. A few details concerning the cultivation and preparation of liquorice are included.

Rusby, H.H.

1909

Glycyrrhiza.

Pharm. Era, 42, p. 634; (Wood, & Bache, U.S. Dispens., 20 ed., p. 526; *ibid.*, 21 ed., p. 528; Midl. Drugg., 43, p. 690; Dig. Comm. U.S.P., & N.F., 1909, p. 401.)

"We have seen ground licorice imported which apparently consisted of the peelings of Russian licorice. There should certainly be descriptions of the powders of drugs subject to such contingencies."

Schneider, A.

1909

Drug Plant Culture in California.

Pac. Pharm., 3, p. 193; (Dig. Comm., U.S.P., & N.F., 1909, p. 401.)

Conditions for the cultivation of licorice are most favorable in certain parts of California.

Wall, O.A.

1909.

Glycyrrhiza.

Notes on Pharmacognosy, 3 ed., p. 173; *ibid.*, 4 ed., p. 173; *ibid.*, 5 ed., p. 226.

Gives the botanical source, habitat, description with illustrations and explanations, constituents, uses, and dose of Glycyrrhiza.

Glycyrrhiza.

Notes on Pharmacognosy, 3 ed., p. 173; *ibid.*, 4 ed., p. 172; *ibid.*, 5 ed., p. 226.

Gives the botanical source, habitat, description with illustration and explanation, constituents, uses, and dose of Glycyrrhiza.



Zornig, H.

1909

Radix Liquiritiae.

Arzneidrogen, 1 ed., v. 1, p. 469.

Gives the synonyms, botanical origin, history, derivation, commercial varieties, microscopic examination, powder, assay, uses and bibliography of Glycyrrhiza.



(Editor).

1909

(Licorice root.)

Chem. & Drugg., 75, p. 187.

Gives data on the exports of licorice from Alexandretta during the year 1908.



(Editor).

1909

Gewinnung der Sussholzwurzel in der
Bacharei.

Pharm. Ztg., 54, p. 859; (*Proc. Am. Pharm. Assoc.*, 58, p. 213; *Dig. Conn. U.S.P.*, & *N.F.*, 1909, p. 401.)

Comments on the distribution and methods of collection of Licorice root in the Caucasus.



Turkey.

House of Commons, v. 103, No. 4513; (Chem. & Drugg., 77, p. 36.)

A report accounting for the increase in exports of liquorice from Basra.

 Gilg, E.

1910

Radix Liquiritae. Sussholz.

Lehrbuch der Pharmakognosie, 1 ed., p. 170; *ibid.*, 3 ed., p. 185; *ibid.*, 4 ed., p. 220.

Gives the botanical source, habitat, description of the plant, anatomy, microscopic characteristics, with illustrations, microscopic examination of the powder, constituents, assay, history, and a preparation of Glycyrrhiza.

 Holmes, E.M.

1910

Liquorice Root.

Pharm. Jour., 84, p. 52; (Proc. Am. Pharm. Assoc., 58, p. 213; Pharmakognostische Rundschau uber das Jahr 1910, p. 139.)

Describes the root as received in English commerce and the preparation of Glycyrrhiza for market; identifies Glycyrrhiza uralensis as Glycyrrhiza glandulifera.

 LaWall, H., & Bradshaw, H.A.

1910

Ash Standards in Drugs.-Are they Necessary?

Proc. Am. Pharm. Assoc., 58, p. 753; (Dig. Comm. U.S.P., & N.F., 1910, p. 470.)

A sample of Spanish licorice contained 3.85% ash, and a sample of Russian contained 4.75% ash.

(Pharmacopoeia Revision Committee).

1910

British Pharmacopoeia Revisions.

Brit. & Col. Drugg., 58, p. 13; (Dig. Comm., U.S.P., & N.F., 1910, p. 476.)

The proposed modified monograph for *Glycyrrhiza radix* is given.

Schneider, A.

1910

The Microscopical Examination of Drugs, Foods, & Textile Fabrics.

Merck's Rep., 19, p. 191; (Dig. Comm. U.S.P., & N.F., 1910, p. 476.)

Structural characteristics of *Glycyrrhiza* are pointed out. These should make the drug not easily adulterated.

Tunmann, O.

1910

Der Drogenhandel Hamburgs.

Apoth. Ztg., v. 25, p. 465. (Pharmakognostische Rundschau uber das Jahr 1910, p. 139; Dig. Comm., U.S.P., & N.F., 1910, p. 476.)

Gives statistics on the licorice root handled in Hanburg for a period of 11 years from 1897 to 1908.

(Editor).

1910

Russian Liquorice root.

Chem. & Drugg., 76, p. 911.

Gives data on the liquorice industry at Batoum for the year 1909.

(Editor).

1910

Liquorice root.

Chem. & Drugg., 77, p. 855. (Dig. Comm. U.S.P.,
1910, p. 476.)

Comments on the liquorice industry in the
Northern Caucasus.

Hartwich, C.

1911

Surrogate des Tees: Europa, Asien.

Die Menschlichen Genussmittel, 1 ed., p. 445.

Glycyrrhiza hirsuta and Glycyrrhiza asperima
leaves have been used as substitutes for Tea in China.

Henkel, Alice.

1911

The Cultivation of Medicinal Plants.

International Clinics, Series, 21, v. 2, p. 20;
(Drugg. Circ., 56, p. 131; Dig. Comm. U.S.P., & N.F.,
1912, p. 296.)

Discusses the possibilities of home cultivation
of Glycyrrhiza glabra, and gives the economic circum-
stances preventing such procedure. Experimental
cultivation is outlined.

Holmes, E.M.

1911

Glycicirrhiza.

Pharmakognostische Rundschau uber das Jahr 1910, p. 139.

Comments on the cultivation, production, comm-
ercial varieties, and exportation of Glycyrrhiza from
Asia to Hamburg, Germany.

Lloyd, J.U.

1911

Glycyrrhiza.

Bull. Lloyd Libr., No. 18, p. 43; (Dig. Comm. U.S.P., & N.F., 1911, p. 373.)

Licorice was mentioned by Dioscorides, and has long been an article of domestic use.

Meyer, T.

1911

Glycyrrhiza glabra.

Arzneipflanzenkultur und Krauterhandel, 1 ed., p. 101.

Discusses the botany, growing of plant, methods of cultivation, harvesting, yield, and price of licorice.

Mitlacher, W.

1911

Uber die Sussholzkultur in Mahren.

Pharm. Praxis., 10, p. 289; (Pharm. Ztg., 56, p. 576; Jour. Amer. Pharm. Assoc., 1, p. 63; Dig. Comm. U.S.P., & N.F., 1911, p. 373; Pharm. Post. 44, p.--; Drugg. Circ., 56, p. 667; Pharm. Jour. 89, p. 344; Pharmakognostische Rundschau ubed das Jahr 1911, p. 141.)

Gives detailed information on the cultivation of Licorice, describes the runners of the plant, and the plant at different stages of growth, the collection of the root, and its preparation for market.

Rosenthaler, L.

1911

Der pharmakognostische Teil des V. Deutschen Arzneibuches.

Pharm. Centrhl., 52, p. 30; (Dig. Comm. U.S.P., & N.F., 1911, p. 373.)

The botanical source of licorice for the Pharmacopoeia Germ. V is no longer restricted to the Russian variety.

Stuart, G. A.

1911

Glycyrrhiza.

Chinese Materia Medica, 1 ed., p. 196.

Gives the Chinese synonyms, its value in the Chinese pharmacy, species used, habitat, uses, and administration of Glycyrrhiza.

(Editor).

1911

(Liquorice root).

Chem. & Drugg., 79, p. 147.

Gives data concerning the licorice root export from Seville.

(Editor).

1911

Senna & Licorice Culture in California.

Pac. Pharm., 5, p. 223; (Dig. Comm. U.S.P., & N.F., 1911, p. 373.)

Call attention to the excellent conditions for the cultivation of liquorice in California.

Herail, J.

1912

Racine de Reglisse.

Traite de Matiere Medicale, 2 ed., p. 17; *ibid.*, 3 ed., p. 12.

Gives the botanical source, description of the plant with an illustration of the twig, microscopic examination with illustrations, chemical composition, use, and substitutes of Glycyrrhiza.

The constituents of Licorice Root and of
Licorice Extract.

Am. Jour. Pharm., 84, p. 531; (Yrbk. Am. Pharm. Assoc.,
1, p. 225; Dig. Comm. U.S.P., & N.F., 1912, p. 296.)

Gives the constituents of licorice root obtained
with various solvents under different conditions, a
method for the analysis of the licorice mass, and the
loss of flycyrrhizin when hot water is used for extrac-
tion.

Mitlacher, W.

1912

Glycyrrhiza glabra.

Die officinellen Pflanzen und Drogen, 1 ed., p. 57.

Gives the habitat, botanical source, commercial
varieties, pharmacopoeias official in, and constituents
of *Glycyrrhiza*.

Mitlacher, W.

1912

Ueber Kulturversuche mit Arzneiplanzen in
Kornenburg im Jahre 1911.

Ztschr. Allg. oesterr. Apoth.-ver., 50, p. 400; (Dig.
Comm. U.S.P., & N.F., 1912, p. 296.)

Observations on the experimental cultivation of
Glycyrrhiza.

Rovndal, G. B.

1912

Commercial Review of Turkey.

(U.S.) Bureau of Foreign and Domestic Commerce, No. 156,
p. 33; (Dig. Comm. U.S.P., & N.F., 1912, p. 296.)

The third largest American business establish-
ment in Turkey is maintained by a New York concern
exporting licorice.

Schneider, A.

1912

Pharmaceutical Plants and their Culture.

California State Board of Forestry Bull. No. 2, p. 104.

Glycyrrhiza glabra has been cultivated with more or less success in the United States.

Tschirsch, A.

1912

Rad. liquiritiae.

Handbuch der Pharmakognosie, 1 ed., v. 2, p. 77; (Pharm. Jour., 111, p. 113; Am. Jour. Pharm., 84, p. 538; *ibid.*, p. 545.)

Gives the synonyms, etymology, botanical source, description of several species of *Glycyrrhiza* literature, pathology, cultivation and harvesting, commercial varieties with illustrations, structure of the rhizome and roots with illustrations, anatomy, constituents, taste, adulterants of the powder, substitutes for the rhizome and roots, history and allied drugs.

(Editor).

1912

Russian Liquorice root.

Chem. & Drugg., 80, p. 809.

Gives data concerning exports from Novorossisk and Batoum.

(Editor).

1912

Exploitations of Russian Liquorice Resources.

Chem. & Drugg., 81, p. 152.

"The Exchange Committee of Uralsk, Russia, seeks to have the railway tariff lowered for liquorice-root, which grows in great abundance in the Uralsk territory. It is celebrated for its high quality, and the quantity obtained amounts to many million pounds."

(Editor).

1912

Basra(Persian Gulf) Exports.

Chem. & Drugg., 81, p. 499.

"Licorice 44,530 bales, against 47,476 bales in 1910 (to U.S.A., France, and U.K.)."

Bretschneider, E.

1913

Botanicon Sinicum.

Jour. Chinese Branch Royal Asiatic Soc., 29, p. 13;
(Pharm. Jour., 111, p. 113.)

Gives the habitat and description of Chinese licorice which is equal to the Spanish licorice of first quality.

(Caesar, & Loretz).

1913

Radix Liquiritiae mundata.

Jahres-Ber. von, Sept., 1913, p. 77; (Dig. Comm. U.S.P., & N.F., 1913, p. 300.)

The amount of Glycyrrhiza available is below the average, and the drug on the market is of poor quality.

(Caesar, & Loretz).

1913

Tabellarische Zusammenstellung einer Anzahl bei uns erhaltener Untersuchungsergebnisse.

Jahres-Ber. von, Sept., 1913, p. 107; (Dig. Comm. U.S.P., & N.F., 1913, p. 300.)

Two samples of Russian Licorice were found to contain 5.71 and 8.96, respectively, per cent ash.

Glycyrrhiza glabra Linne.

Beknopt Overzicht der meest gebruikte Geneesmiddelen in Nederlandsch Oost-Indie, 1 ed., p. 65.

"The root comes from China in bundles for flavor.

Greenish, H.G., & Bartlett, D, J.

1913

Powdered Licorice Root and Senna of Commerce.

Pharm. Jour., 90, p. 365, & p. 370; (Yrbk. Am. Pharm. Assoc., 2, p. 247; Pharm. Era, 46, p. 276; Brit. & Col. Drugg., 63, p. 224.)

Tabulates and discusses the results of an examination of commercial powder of various grades of Glycyrrhiza.

(Hooper, D.)

(1913)

(Notes on Indian Drugs).

Annual Report of the Industrial Section of the Indian Museum, Calcutta, v.--, p.--; (Pharm. Jour., 91, p. 369.)

("Glycyrrhiza glabra.-A sample of liquorice root, grown as an experimental measure in Baluchistan, was tested for solid aqueous extract. This amounted to 27.75% which is well above the Pharmacopoeia requirement of 20%.)

Kebler, L.F.

1913.

Licorice.

Jour. Am. Pharm. Assoc., 2, p. 1098.

"Two lots.-Ash 5.05% and 5.40%; Moisture 6.07% and 8.35%; Extractive 26.32% and 27.88%. One consignment was mouldy and unfit for use."

Miller, A.W.

1913

Report on the Progress of Botany.

Proc. Penn. Pharm. Assoc., 36, p. 55; (Dig. Comm. U.S.P., & N.F., 1913, p. 30.)

The English term licorice is a corruption of the Greek glycyrrhiza, meaning sweet root, the name by which it is commonly known in the orient.

Mitchell, E.

1913

Glycyrrhiza in Arizona.

Meyer Bros. Drugg., 34, p. 264; (Dig. Comm. U.S.P., & N.F., 1913, p. 300.)

"A few roots of licorice, obtained from Sicily some years ago and planted in the Salt River Valley of Arizona have grown until they bid fair to cover the whole valley."

Ravndal, G. B.

1913

Commercial Review of Turkey.

(U.S.) Bureau of Foreign and Domestic Commerce, No. 175, p. 545; (Dig. Comm., U.S.P., & N.F., 1913, p. 300.)

"Thousands of tons of licorice root, an article that by the natives is generally esteemed a pest and worse than worthless are annually gathered in Turkey for exportation to America."

Rusby, H. H.

1913

Licorice Root.

Jour. Am. Pharm. Assoc., 2, p. 1098.

"Large quantities of the cut root have arrived and the quality has been very good."

Smith, P.F.

(1913)

(Glycyrrhiza).

Contributions towards the Materia Medica & Natural History of China, p.---; (Pharm. Jour., 111, p. 113.)

(Gives the habitat of Glycyrrhiza echinata and Glycyrrhiza glabra, a description of the root, and its position of importance in Chinese Pharmacy).

(Editor).

1913

Turkish Liquorice Industry.

Chem. & Drugg., 82, p. 551.

Comments on the great amount of licorice stated to be present in the valley of the Tigris and Euphrates.

(Editor).

1913

Liquorice Root.

Chem. & Drugg., 82, p. 773; (Am. Jour. Pharm., 85, p. 467; Yrbk. Am. Pharm. Assoc., 2, p. 245; Bull. sci. pharmacol., 20, p. 560; Pharm. Ztg., 58, p. 592; Pharmakognostische Rundschau uber das Jahr 1913, p. 116.)

From information obtained from Mr. J.D. Whitney, Jerusalem, the liquorice industry of Turkey and Russia is described. Details concerning cultivation and preparation for market are brought out and illustrations of points of interest are included.

(Editor).

1913

Turkish Liquorice.

Chem. & Drugg., 83, p. 468.

A summary of the exports from Turkey for the year 1912 is given.

(Editor).

1913

Ground Liquorice Root.

Pharm. Jour., 102, p. 177.

A complete account of an unsuccessful prosecution in Birmingham for the sale of ground licorice root.

Berendes, J.

1914

Sussholz.

Paulos' von Aegina Des Besten Arztes, 1 ed., p. 635.

Mentions the root of *Glycyrrhiza glabra*, L.

(Remington, J.P., Chairman).

1914

Abstract of proposed changes in U.S.P. IX with new standards and descriptions.

Jour. Am. Pharm. Assoc. 3, p. 358; (Dig. Comm. U.S.P., & N.F., 1914, p. 295; Abstr. Prop. Changes, pt. 2, p. 24; Pharm. Era., 47, p. 269).

Submits the proposed monograph of *Glycyrrhiza* for the text of the U.S.P. IX.

Whiting, J.D.

1914

The Licorice Trade in Syria.

Sci. Am., 110, p. 96; (Spatula, 20, p. 227.)

Discusses the cultivation and marketing of *Glycyrrhiza* grown in Syria, with illustrations.

Youngken, H.W.

1914

Liguminosae.

Pharmaceutical Botany, 1 ed., p. 78.

Gives the part used and botanical source of *Glycyrrhiza*.

(Xrayser II).

1914

The History of Licorice.

Chem. & Drugg., 85, p. 251; (Dig. Comm. U.S.P., & N.F., 1914, p. 295.)

Mentions the fact that in olden times the English supply of licorice came from the East although the plant is indigenous to the south of Europe.

(Editor).

1914

Liquorice root.

Chem. & Drugg., 85, p. 59.

Statistics with reference to liquorice exports from Tripoli (Syrian coast) are given.

(Editor).

1914

(Liquorice root).

Chem. & Drugg., 85, p. 754.

Comments on the liquorice imported into Baltimore Maryland.

(Editor).

1914

Notes on Imported Drugs.

Pharm. Era, 47, p. 245.

Comments on the liquorice imported into the United States during 1912 and 1913.

(Editor).

1914

(Glycyrrhiza).

Pharm. Jour., 103, p. 47.

An account of a lawsuit in Lord Mayor's Court, London, over the alleged short weighing in a shipment of liquorice root.

Durier, E.

1915

Glycyrrhiza glabra.

Pharmakognostische Rundschau uber das Jahr 1913, p. 116.

Discusses the cultivation of Licorice root in Syria, production, gives a description of the plant, and exportations from Aleppo, Bagdad, and Damascus.

Stockberger, W.W.

1915

Drug Plants under Cultivation.

U.S. Dept. of Agric. Farmer's Bull., No. 663, p. 28;
(Dig. Comm. U.S.P., & N.F., 1915, p. 268).

The licorice plant grows well in the arid Southwest & threatens to become a weed. It is mostly in demand for a tobacco flavor.

(Editor).

1915

Spanish Licorice root.

Chem. & Drugg., 86, p. 411; (Yrbk. Am. Pharm. Assoc.,
4, p. 134.)

Gives data concerning the licorice exports from Tarragona and Aliconte during 1912 and 1913.

(1915)

(Licorice in W. Indies).

Depart. Agricul. Barbados, v.---, p.---; (Chem. & Drugg.,
86, p. 159)

(Seeds of *Glycyrrhiza glabra* have been obtained from Kew by the Imperial Department of Agriculture for Experimental Cultivation in the West Indies).

1915

Licorice Production in the United States.

Pac. Pharm., 9, p. 26; (Spatula, 21, p. 241.)

A good crop of licorice is expected in Sutter County, California.

Housemann, P.A.

1916

The constituents of Licorice root and Licorice extract.

Am. Jour. Pharm., 88, p. 97; (Wood & Bache, U.S. Dispens., 21 ed., p. 529; Yrbk. Am. Pharm. Assoc., 5, p. 195; Dig. Comm. U.S.P., & N.F., 1916, p. 195.)

Gives a summary dealing with the constituents of Licorice root and Licorice extract, processes for the preparation of cane sugar, and Glycyrrhizin from the licorice root, methods for the detection of Saponins in the root, products of oxidation of glycyrrhizic acid, and the isolation of a yellow dye from licorice root.

Linz, A.

1916

Vergleichende Untersuchungen der zur Bestimmung des Glycyrrhizins in der Sussholzwurzel und im Succus Liquiritiae vorgeschlagenen Methoden.

Archiv. der Pharm., 254, pp. 65 & 204; (Am. Jour. Pharm., 93, p. 388; Dig. Comm. U.S.P., & N.F., 1917, p. 215.)

Gives the results of researches on the methods proposed for the estimation of glycyrrhizin in licorice root.

Parry, E.J.

1916

The U.S.P. IX.

Chem. & Drugg., 88, p. 986; (Dig. Comm. U.S.P., & N.F., 1916, p. 195.)

Argues that there is a difference between Spanish and Italian or Turkish liquorice.

Farwell, O.A.

1917

Botanical Nomenclature of the U.S.P.IX.

Drugg. Circ., 61, p. 173; (Dig. Comm. U.S.P., & N.F., 1917, p. 215.)

A suggestion for the alteration of the nomenclature of Glycyrrhiza to render it consistent with the code accepted by the nomenclatorial committee.

1917

(Glycyrrhiza).

Oil, Paint, and Drug Rep., 91, p. 72; (Dig. Comm. U.S.P., & N.F., 1917, p. 215.)

(Data showing the liquorice import into the United States for the years 1914-16 isogiven.)

1917

Dohme, A.R.

Report of Committee on Prevention of Adulteration.

Proc. N.W.D.A., 43, p. 513; (Dig. Comm. U.S.P., & N.F., 1917, p. 216.)

Comments on the gross adulteration of licorice root as found in the market.

1917

Hurst, C.B.

Spanish Production of Licorice Root.

Bureau of Foreign & Domestic Commerce, No. 108, p. 516; (Dig. Comm. U.S.P., & N.F., 1917, p. 215.)

Comments on the licorice industry in Spain and compares it to that of the 3 years previous.

(1917)

(Russian Licorice Industry).

Weekly Bull., Can. Depart. of Tr. & Com., Ottawa,
May 14, p.---; ((U.S.) Bureau of Foreign and Domestic
Commerce, No. 126, p. 804; Dig. Comm. U.S.P., & N.F.,
1917, p. 215.)

(It appears as if Russia supplies the world's
Consumption of licorice.)

Bruntz, L. 1918

Legumineuses.

Plantes Officinales, 1 ed., p. 103.

Gives the Pharmacopœial history of *Glycyrrhiza
glabra* var. *typica*, in all national Pharmacopœias.

Lea, E.J. 1918

Report of the Bureau of Foods & Drugs.

Calif. State Board of Health, Mon. Bull., 13, p. 564;
(Dig. Comm. U.S.P., & N.F., 1918, p. 228.)

Glycyrrhiza uralensis an unofficial species of
Glycyrrhiza has been substituted for the official.

Lilly, J.K. 1918

Crude Drugs.

Proc. N.W.D.A., 44, p: 235; (Dig. Comm. U.S.P., & N.F.,
1918, p. 228.)

Japanese or Manchurian licorice has been substi-
tuted in the market for the U.S.P.IX drug.

Tschirsch, A.

1918

Können wir Medizinalrhabarber und Sussholz in der Schweiz kultivieren?

Schweiz. Apoth. Ztg., 56, p. 257; (Pharm. Jour., 102, p. 134; Pharm. Era, 52, p. 123.)

The possibilities of the cultivation of Glycyrrhiza in Switzerland are discussed.

Editor.

1918

A Shortage of Licorice.

Nat'l. Drugg., 36, p. 75, Apr.

The world war has created a shortage of licorice in the United States.

(Editor).

1918

Licorice Root in South Africa.

Pharm. Era, 51, p. 94; (Dig. Comm. U.S.P., & N.F., 1918, p. 228.)

Mentions the discovery of licorice root in various parts of the Province of Cape Good Hope and discusses its possibilities as an industry.

Alsberg, C.L.

1919

Report of the Chemist.

Annual Reports of the (U.S.) Department of Agric., p. 211; (Jour. Am. Pharm. Assoc., 8, p. 467; Wood & Bache, U.S. Dispens., 21 ed., p. 529; Dig. Comm. U.S.P., & N.F., 1919, p. 243.)

Comments on the effect of the war on the supply of licorice, and on the use of a new specie of Glycyrrhiza, namely, uralensis.

Bruntz, L. & Jaloux, M.

1919

(Glycyrrhiza).

Catalogue Methodique des Plantes officinales et des plantes a Drogues medicamentenses dresse d'apres editions de la Pharmacopie francaise, 2, p. 45.

Gives the French Pharmacopial History for several species of Glycyrrhiza.

Goris, A. & Demilly, J.

1919

Reglisse.

La Culture des Plantes Medicinales, 1 ed., p. 64.

Gives the botanical source, description and a discussion on the cultivation and propagation of Glycyrrhiza.

(Editor).

1919

Liquorice in the Abruzzi.

Chem. & Drugg., 91, p. 66.

Speaks of the decline of the liquorice industry in the Abruzzi, and outlines conditions necessary for its recovery.

Compain, M.

1920

Reglisse.

L'Herboriste-Droguiste, 1 ed., p. 112.

Gives the botanical source, properties and uses of Glycyrrhiza.

Coupin, H.

1920

Reglisse officinale.

Les Plantes Medicinales, 1 ed., p. 255.

Gives the botanical source, characteristics, habitat, culture, part used, action and uses of Glycyrrhiza.

Dennis, A.P.

1920

Licorice Industry in Sicily.

(U.S.) Bureau of Foreign & Domestic Commerce, No. 135, p. 1423; (Am. Jour. Pharm., 92, p. 679.)

Gives the habitat of licorice in Italy, and comments on the amount exported. Describes the utilization of the macerated pulp left over from the production of licorice extract.

Rusby, H.H.

1920

Suggestions for the Revision of the U.S.P.

Am. Drugg., March, p. 24; (Jour. Am. Pharm. Assoc., 9, p. 242; Dig. Comm. U.S.P., & N.F., 1920, p. 269.)

Claims that Glycyrrhiza glandulifera is not a variety of Glycyrrhiza glabra, but a separate and distinct species of Glycyrrhiza.

Spatula.

(1920)

(Glycyrrhiza glabra)

Herb Book, 1 ed., p. 30.

Gives the botanical source and uses of licorice.

(1920)

(Licorice and Gum).

House of Commons, v.--, No.--; (Am. Drugg. & Pharm.
Rec., 69, No. 2, p. 34.)

(A report of the licorice industry of and export
from Mesopotamia.)

(Editor).

1920

Licorice Industry in Sicily.

Pharm. Era, 53, p. 241.

Gives statistics with reference to the import-
ation of licorice into the United States in 1919.

(Editor).

1920

U.S. Consumption of Licorice Root.

Pharm. Jour., 105, p. 295.

Figures are given, showing the marked reduction
of licorice consumed after the war as compared to the
amount consumed before the war.

Houseman, P.A.

1921

Studies on Licorice Root and Licorice Extract.

Am. Jour. Pharm., 93, p. 481; (Pharm. Era, 54, p. 413.)

Explains procedures followed in previous work
on Glycyrrhiza, and explains his method for determination
of Glycyrrhizin in Licorice root and Licorice extract as
contrasted to the Linz method.

Lloyd, J.U.

1921

Glycyrrhiza (Licorice Root).

Origin and History of all the Pharmacopoeial Vegetable Drugs, etc., v. 1, p. 153.

Gives the Pharmacopoeial history, botanical history, habitat, and a few notes on cultivation of Glycyrrhiza.

Marzell, H.

1921

Wurzeln und Wurzelstocke.

Neues illustriertes Krauterbuch, 1 ed., p. 538.

Gives the botanical source, habitat, part used, and uses of licorice; the moisture loss on drying (p. 588); a comparison of prices for natural and peeled root in 1914 and 1919 (p. 582.)

Ottersbach, G. & Dorftewitz R.

1921

Sussholz.

Drogenkinde, 2 ed., p. 11.

Gives the botanical source, description of the plant, and uses of Liquorice root.

Rogers, C.H. & Newcomb, E.L.

1921

Notes of Ash Yield of Glycyrrhiza.

Jour. Am. Pharm. Assoc., 10, p. 607; (Yrbk. Am. Pharm. Assoc., 10, p. 240.)

Gives the results of total ash and acid insoluble ash determinations made on Glycyrrhiza samples obtained from various sources.

Sabalitschka, T.

1921

Über den Verbrauch Deutschlands vor dem Kriege und in der Zukunft an im deutschen Gebiet gewinnbaren Drogen.

Über die Notwendigkeit des Arzneipflanzenanbaus in Deutschalnd, 1 ed., p. 12.

Gives the amount of Licorice root handled by 7 companies in Germany, and the price of Licorice of one company in January 1914 and July 1914, and the amount handled by that company.

(Editor).

1921

Licorice Root.

Am. Drugg. & Pharm. Rec., 69, Sept., p. 46.

Gives the commercial source of Licorice, comments on American cultivation, and the uses of licorice.

Lehamau, P.F.

1922

Reglisse.

Plantes Remedés et Maladies, 1 ed., p. 249.

Gives the botanical origin, constituents, uses and properties of Glycyrrhiza.

Weekley, E.

1922

Folk-Etymology.

The Romance of Words, 4 ed., v. 1, p. 137; (Pharm. Jour., 107, p. 363; Pharm. Era., 55, p. 57.)

Gives an account of the "derivation and divagations" of the word "liquorice".

(Editor).

1922

Here and There.

Perf. & Ess. Oil Rec., 13, p. 54.

"Synthetic liquorice root exactly the same odour as the natural root is one of the latest products of Lautier Fils."

(An Analytical Chemist).

1923

Detection and Estimation of Masticogni Root:
A dangerous Liquorice Adulterant.

Pharm. Jour., 111, p. 363.

Mentions the use of various adulterants of Glycyrrhiza especially *Atracylis gummifera*, and calls attention to its particular undesirability.

Fahmy, I.R.

1923

Manchurian Liquorice Root.

Pharm. Jour., 111, p. 113; (Chem. & Drugg., 99, p. 139.)

It appears that several species of *Glycyrrhiza* are the source of Manchurian liquorice; all are mentioned.

Reutter, L.

1923

Radix et Succus Liquiritiae, Racine et Jus
de Reglisse, de *Glycyrrhiza Glabra*, L.

Traite de Matiere Medicale, 1 ed., p. 671.

Gives the botanical source, habitat, cultivation, commercial varieties, description of the drug, microscopic examination with illustration, description of the powder, adulterants, properties, dose, constituents, uses, preparations, and history of *Glycyrrhiza*.

Wren, R.C.

1923

Liquorice Root.

Potter's Cyclopaedia of Botanical Drugs and Preparations,
3 ed., p. 196.

Gives the botanical source, synonym, part used,
action, preparation and description of Glycyrrhiza.

(Editor).

1923

Chinese Liquorice Root.

Chem. & Drugg., 98, p. 525.

Outlines the places in China wher liquorice root
grows abundantly.

Schlickum, R.

1924

Radix Liquiritiae (mundata). Sussholz.

Pharmakognosie, 3 ed., v. 2, p. 30.

Gives the botanical source, habitat, description
of the plant, microscopic description, odor, taste,
constituents, uses, preparations and commercial sources
of Glycyrrhiza.

Casparis, P.

1925

Masticogna, eine interessante Verfälschung
von Succus Liquiritiae.

Schweiz. Apoth. Ztg., 63, p. 121; (Chem. & Drugg.,
102, p. 459; Nat'l. Drugg., 55, p. 242.)

The root of *Atracylis gummifera* is used as a
liquorice adulterant. Methods for detection and
illustrations of characteristics parts are given.

Radix Liquiritiae.

Tabellen für das pharmakognostische Prakticum, 1 ed., p. 18; *ibid.*, 2 ed., p. 13.

Gives the synonyms, botanical source, habitat, description of the plant, microscopic description of the plant and powder, constituents and uses of Glycyrrhiza.

(Editor).

1925

Chinese Licorice Root.

Chem. & Drugg., 103, p. 124; (Yrbk. Am. Pharm. Assoc., 14, p. 80; Nat'l. Drugg., 55, p. 494.)

Outlines the methods employed in China for the collection of licorice, and comments on the life of a licorice digger.

(Editor).

1925

Liquorice root.

Chem. & Drugg., 103, p. 628.

The export of licorice root from Smyrna is now controlled almost entirely by Americans.

(Editor).

1925

Chinese Licorice Root.

Pharm. Jour., 114, p. 560.

Gives the habitat of licorice in China, and statistics on the export trade.

Emmanuel, E.

1926

Das griechische Sussholz und dessen Succus.

Festschrift für Alexander Tschisch, 1 ed., p. 288; (Chem. & Drugg., 108, p. 940.)

Discusses the cultivation of liquorice and production of liquorice juice in Greece and Asia Minor, and gives the results of analysis of liquorice from both sources.

Leyel, C.F., Mrs.

1926

The History of some Remedies in our Pharmacopoeia.

The Magic Book of Herbs, 1 ed., p. 276.

Mentions liquorices as one of the constituents of confection of senna originating as Lenitive Electuary, (p.279) Elixir Asthmaticum official in the London Pharmacopoeia 1721, contained liquorice (p. 269). The use of liquorice is mentioned in Matthew's or Starkeys' Pills the uses of which are not known.

Mayo, C.A.

1926

A Rotary Address for Drugists.

Am. Drugg., 74, Oct., p. 38.

Gives data on source, preparation for market, and the history of licorice with reference to Brown Mixture.

Youngken, H.W.

1926

Glycyrrhiza U.S.P.

A Text Book of Pharmacognosy, 2 ed., p. 297.

Gives the synonyms, botanical source, part used, habitat, descriptions of commercial varieties, constituents, uses, allied drugs, and illustrations of Glycyrrhiza.

(Editor).

1926

Grubstaking Licorice Diggers in China.

Am. Drugg., 74, May, p. 28.

Describes the methods of collection of Glycyrrhiza employed in China, by advancing supplies.

(Editor).

1926

Turkish Liquorice.

Chem. & Drugg., 104, p. 280.

Gives trade statistics on Turkish liquorice and comments on the possibilities of the expansion of this industry.

(1926)

(Iraq liquorice Root Export to U.S.A.)

(U.S.) Bureau of Foreign and Domestic Commerce, No.--, p.--; (Chem. & Drugg., 105, p. 382.)

(6,506,210 pounds of liquorice root, valued at \$121,928 was imported from Iraq into the United States.)

Heraud, A.

1927

Reglisse officinale.

Nouveau Dictionnaire des Plantes Medicinales, 6 ed., p. 519.

Gives a description, with illustrations, the habitat, cultivation, part used, anatomy, constituents, dose, pharmaceutical preparations, physiological action, uses, and substitutes of Glycyrrhiza.

Himmelbaur, W.

1927

Radix Liquiritiae.

Drogenweltkarte, 1 ed., p. 27.

Gives the habitat of *Glycyrrhiza*.

Nadkarni, K.M.

1927

Glycyrrhiza glabra.

The Indian Materia Medica, 1 ed., p. 396.

Gives the botanical origin, synonyms, habitat, part used, constituents, action, preparations and uses of Liquorice.

Schamelhaut, A.

1927

Extract value of Liquorice Root.

Jour. de Pharm. Belge., 9, p. 610; (Pharm. Jour., 119, p. 494.)

Comments on the directions for the assay process of *Glycyrrhiza* according to the New Dutch Pharmacopoeia.

Chamings, R.G.

1928

(Licorice).

Pharmacognosy map for students, 1 ed.,

Indicates the habitat of licorice.

Falck, A.

1928

Glykoronide.

Die officinellen Drogen und ihre Ersatzstoffe, 1 ed., p. 71,

Gives a list of modern Pharmacopoeias *Glycyrrhiza* is official in, and synonyms used in all parts of the world.

Lacey, H.T.

(1928)

(Liquorice Lore)

Confectioner's Journal, 54, p. 2--; (Pharm. Jour., 120, p. 568.)

(A short article on *Glycyrrhiza glabra* giving a description of the plant, its habitat, and uses.)

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1928

Palestine.

Bull. Imper. Instit., 26, p. 83; (Chem. & Drugg., 108, p. 507.)

The possibilities of developing a liquorice trade between Transfordan and England are outlined.

(Editor).

1928

Liquorice Company in Jehol.

Chem. & Drugg., 108, p. 802.

Comments on the liquorice company with headquarters in Jehol organized by General Tang Vu-lin.

Fischer, H.

1929

Synonymschlüssel.

Mittelalterliche Pflanzendunde, 1 ed., p. 270.

Lists some of the synonyms used for *Glycyrrhiza glabra*.

Liquorice root.

A text Book of Materia Medica, 5 ed., p. 308, *ibid.*,
6 ed., p. 309.

Gives the botanical source, description of the
plant, habitat, description of the structure with illus-
tration, microscopical characters, constituents, uses, and
varieties of Glycyrrhiza.

Lloyd, J.U.

1929

Licorice.

Am. Jour. Pharm., 101, p. 805.

Gives a short history, geographical and ecolo-
gical habitat of the plant, a summary of the cultivation
of licorice for commercial purposes and a number of
photographs taken by the author on his travels through
Asia Minor.

Rusby, H.H., Bliss, R.A., & Ballard, C.W.

1930

Glycyrrhiza (Glycyrrh.) Licorice Root U.S.P.

The Properties and Uses of Drugs, 1 ed., p. 279.

Gives the botanical source of commercial
varieties, habitats, description of the plant, consti-
tuents, action and use, dose and preparations of Licorice.

(Editor).

1930

Spanish Liquorice Root.

Chem. & Drugg., 112, p. 407.

Gives statistics concerning the exportation of
liquorice from Seville to the United States.

(Editor).

1930

Licorice used in preparing beverages in Algeria.

Jour. Am. Pharm. Assoc., 19, p. 1037.

Gives the French export of Licorice in 1928 to Algeria, the habitat, and the principal uses of Licorice.

Geszner, O.

1931

Anhang: Glykuronide:

Die Gift-und Arzneipflanzen von Mitteleuropa, 1 ed.,
p. 176.

Gives the botanical habitat, chief constituents of *Glycyrrhiza glabra*, grown in southern Spain.

Hooper, D.

1931

Soap-root for Licorice.

Chem. & Drugg., 114, p. 215.

Species of *Gypsophila* have been substituted for liquorice obtained from Russia. The adulterant in no way resembles liquorice.

(Editor).

1931

Sicilian Licorice.

Chem. & Drugg., 114, p. 51.

Mentions localities in Sicily, where liquorice is collected, the parts used and gives data on the manufacture and exportation of the products of liquorice.

Coulter, S.

1932.

Glycyrrhiza.

Pharmacology of the Medicinal Agents in common Use,
1 ed., p. 107.

Gives the botanical source, synonyms, dose,
standard of strength, constituents, and physiological
action of the root of *Glycyrrhiza glabra*.

Gehe, & Co.

(1932)

Glycyrrhiza glabra.

Arzneipflanzen-Tafeln, Series 19, No. 5.

A natural color photograph of the plant and
root of *Glycyrrhiza glabra* with a detailed descrip-
tion of the plant.

Wasicky, R.

1932

Liquiritia.

Lehrbuch der Physiopharmakognosie für Pharmazeuten,
1 ed., v. 2, p. 404.

Gives the botanical source, habitat, descrip-
tion of the root with illustrations, structure,
constituents, preparations, adulterants, and a comment
on the history of *Glycyrrhiza*.

Klein, G.

1933

Systematische Verbreitung und Vorkommen der
Enzyme.

Handbuch der Pflanzenanalyse, 1 ed., v. 4, part 2, p. 866.

The following enzymes are reported as having
been found in *Glycyrrhiza glabra*: Saccharase (p. 866),
Urease (p. 888), and Peptidase (p. 891).

LIST OF JOURNALS CONSULTED.

Am(ericana) Drugg(ist), v. 13-21; 1884-1892; v. 73-81;
1925-1930.

Am(ericana) Drugg(ist) & Pharm(aceutical) Rec(ord),
v. 22-72; 1892-1924.

Am(ericana) Jour(nal of) Pharm(acy), v. 1-103; 1825-1932.

Am(ericana) Perf(umer), v. 3-27; 1908-1933.

Am(ericana) Pharm(icist), v. 1; 1882.

Bull(etin of the) Am(ericana) Pharm(aceutical) Assoc(iation),
v. 1-6; 1906-1911.

Bull(etin of) Pharm(acy), v. 5-42; 1891-1928.

Brit(ish) & Col(onial) Drugg(ist), v. 12-84; 1887-1931.

Can(adian) Drugg(ist), v. 11-21; 1899-1909.

Chem(ist) & Drugg(ist), v. 1-118; 1859-1933.

Dig(est of) Comm(ents on the) U(nited) S(tates) P(harm-
acopoeia), & N(ational) F(ormulary), 1880-1921.

Drug Bull(etin), v. 50-53; 1928-1930.

Drugg(ist's) Bull(etin), v. 2-4; 1888-1890.

Drugg(ists') Circ(ular and Chemical Gazette), v. 1-76;
1857-1932.

Jour(nal of the) Am(ericana) Pharm(aceutical) Assoc(iation),
v. 1-21; 1912-1932.

Mid(land) Drugg(ist), v. 1-10; 1900-1909; v. 60; 1926.

Mid(land) Drugg(ist) & Pharm(aceutical) Rev(iew),
v. 43-59; 1909-1925.

New Eng(land) Drugg(ist), v. 5-12; 1893-1900.

New Rem(edies), v. 1-12; 1872-1883.

Perf(umer) & Ess(ential) Oil Rec(ord), v. 1-22; 1910-1931.
Pharm(aceutical) Era, v. 1-68; 1887-1931.
Pharm(aceutical) Jour(nal), v. 1-127; 1841-1931.
Pharm(aceutical) Rec(ord), v. 3-15; 1883-1893.
Pharm(aceutical) Rev(iew) Balt(imore), v. 1-2; 1892-1893.
Pharm(aceutical) Rev(iew) Milw(aukee), v. 14-28; 1896-1905.
Pharm(aceutische) Runds(chau), v. 1-13; 1883-1895.
Pharm(acist) & Chem(ist), v. 3-18; 1870-1885.
Prac(tical) Drugg(ist), v. 1-50; 1897-1932.
Proc(eedings of the) Am(eric)an Pharm(aceutical) Assoc-
(iation), v. 1-59; 1851-1911.
(The) Pharm(acist), v. 1-2; 1868-1869.
West(ern) Drugg(ist), v. 2-50; 1880-1928.
Y(ea)rb(oo)k (of the) Am(eric)an Pharm(aceutical) Assoc-
(iation), v. 1-18; 1912-1929.
Y(ea)rb(oo)k (of the) Brit(ish) Pharm(aceutical) Conf-
(erence), v. 4-37; 1867-1900.

LIST OF BOOKS CONSULTED.

- Ainslie, W., *Materia Medica*, 1 ed., v. 1 & 2, 1826.
- Allen, T.F., *Encyclopedia of Pure Materia Medica*, v. 1-10, 1876.
- Allison, T.P., & Gathinger, A., *Medicinal Plants of Tennessee*, 1 ed., 1894.
- An American Physician, *Eclectic Dispensatory*, 1 ed., 1827.
- Anshutz, E.P., *New, Old, and Forgotten Remedies*, 1 ed., 1900.
- Arends, G., *Volkstumliche Anwendung der einheimischen Arzneipflanzen*, 1 ed., 1925.
- Baillon, H., *Botanique Medicale Cryptogamique*, 1 ed., 1889.
- Bankinius, B.D., *De Lapidis Bezaar*, 1 ed., 1613.
- Barton, B.S., *Collections for an essay towards a Materia Medica of the United States*, 3 ed., 1810.
- Barton, W.R., *Vegetable Materia Medica of the United States*, v. 1 & 2, 1817.
- Berendes, J., *Die Hausmittel des Pedanios Dioskurides*, 1 ed., 1908.
- Berg, O.C., & Schmidt, A., *Atlas der Officinellen Pflanzen*, 1 ed., v. 1, 2, 3, & 4, 1899.
- Berge, F., *Giftpflanzenbuch*, 1 ed., 1855.
- Berger, F., *Biene, Honig, und Wachs*, 1 ed., 1916.
- Bigelow, J., *Mat(eria) Med(ica)*, 1 ed., 1822.

- Blair, T.S., Botanic Drugs, 1917.
- Bocquillon, H.L., Les Plantes Alexiteres, 1 ed., 1891.
- Bocquillon, H.L., Etudes des Plantes, 1 ed., 1895.
- Bohm, W., Die Heilwerte heimischer Pflanzen, 1 ed.,
1839.
- Boorsma, W.G., Bulletin de L'institut Botanique de
Buitenzorg, No. 1-4, 1902.
- Broch, H., Die Tierwelt in Heilkunde und Drogenkunde,
1 ed., 1925.
- Brown, P.O., The Complete Herbalist, 1 ed., 1870.
- Budge, W.E., The Divine Origin of the Craft of the
Herbalist, 1 ed., 1928.
- Campagne, P.J., Handbuch voor Droogisten en Apothekers-
Leerlingen, 1 ed., 1854.
- Carpenter, G.W., Essays of the Materia Medica, 1 ed., 1831.
- Carson, J., Synopsis of the Course of Lectures on Materia
Medica and Pharmacy, 4 ed., 1867.
- Cauvet, D., Nouveaux Elements D'Historie Naturelle
Medicinale, v. 1 & 2, 1877.
- Chamings, A.R., Pharmacognosy Map for Students in Pharm-
acy, 1928.
- Chevallier, A., & Richard, A., Dictionarie des Drogues,
v. 1, 1827; v. 2, 1827; v. 3-4, 1827; v. 5, 1828.
- Chomel, J.B., Abrege de L'Historie des Plantes Usellus,
v. 1 & 2, 1639.
- Christy, T., New Commercial Plants, Nos. 1-10, 1878.

- Comfort, C.L., Thomsonian and botanical preparations,
1 ed., 1875.
- Commelin, C., Praeludia Botanica, 1 ed., 1703.
- Committee, Pharm(acopoeia) Mass(achusetts) Med(ical)
Soc(iety), 1 ed., 1808.
- Committe, Pharm(acopoeia) N(ew) Y(ork) Hos(pital),
1 ed., 1816.
- Coxe, J.R., Am(ericana) Dispens(atory), 1 ed., 1806;
4 ed., 1817; 6 ed., 1825; 7 ed., 1827; 8 ed.,
1830; 9 ed., 1831.
- Cuba, J., Hortus sanitatus, 1 ed., 1485, (1924).
- Davis, G., The Pharmacology of the Newer Materia Medica,
1889.
- Dieterich, K.H., Die wichtigsten medizinischen Drogen,
1 ed., 1911.
- Dinaud, U., Taschenbuch der Heilpflanzen, 31 ed., 1926
- Dodoens, R., Purgentium Aliarunque eo Facientium, 1 ed.,
1574.
- Doneldey, A., Das Bremer mittelniederdeutsche Arzneibuch,
1 ed., 18 ed., 1932.
- Dorveaus, P., Le Livre des Simples Medicines, 1 ed.,
1913.
- DeChesne, J., Quercetanus redivivus, 1 ed., 1679.
- Dufour, P.S., Traités du Cafe, du The' et du Chocolate,
2 ed., 1688.
- Dufour, P.S., Dreu Neue Curieuse Trackakgen von dem
Tranck Cafe, Sinesischen The, und der Chocolate,
11 ed., 1701.

- Ellis, D., Medicinal Herbs and Poisonous Plants, 1 ed.,
1918.
- Esser, P., Die Giftpflanzen Deutschlands, 1 ed., 1910.
- Ewell, J., Med(ical) Comp(anion), 1 ed., 1817; 2 ed., 1827.
- Flint, M., Classification of the Materia Medica of the
U.S. National Museum, No. 19, 1883.
- Flora Danica, Icones Plantarum Officinalium Scandinaviae,
1 ed., 1-365, ---.
- Fluckiger, F.A., Grundlagen der Pharmaceutischen Waaren-
kunde, 1 ed., 1873.
- Fluckiger, F.A., The Principles of Pharmacognosy, Eng.
ed., 1887.
- Fluckiger, F.A., & Hanbury, D., Pharmacographia, 1 ed.,
1874; 2 ed., 1879.
- Fluckiger, F.A., & Hanbury, D., Histoire des Drogues,
1 ed., v. 1 & 2, 1878.
- ., Travau de L'office National des Matieres
Premieres vegetales, Nos. 1-25, 1919-1926.
- Garsault, D., Plantes et Animaux, 1 ed., v. 1 & 2, 1765.
- Gehe & Co., Arznei-Pflanzen, Series 1-3, ----.
- Gehe & Co., Arzneipflanzen-karten, Project B, Series
1-20, ----.
- Gehe & Co., Arzneipflanzen-Tafeln, Series 1-20, ----.
- Gehe & Co., A rzneipflanzen-Taschenbuch, 1 ed., ----.
- Gmelin, F.J., Allgeneine Geschichte der Pflanzengifte,
1 ed., 1803.
- Good, P.P. Materia Medica Animalia, 1 ed., 1853.

Good, P.P., Family Flora, 1 ed., v. 1 & 2, 1845; 2 ed.,
v. 2, 1854.

Guibourt, N.J., *Histoiria Natural des Las Drogas Simples*,
4 ed., v. 2, 1852.

Hanbury, D., *Beitrage zur Materia Medica China's*, 1 ed.,
1863.

Hamilton, E., *Flora Homoeopathica*, 1 ed., v. 1 & 2, 1852.

Hand, W.M., *The House Surgeon & Physician*, 2 ed., 1820.

Harding, A.R., *Ginseng and other Medicinal Plants*, 2 ed.,
1908.

Henry, S., *American Medical Family Herbal*, new ed., 1814.

Hessen, H., *Neue Garten Lust*, 1 ed., 1714.

Hill, J., *Virtues of British Herbs*, 3 ed., 1770.

Hollberg, E., *Flora Americana*, 1 ed., 1763.

Itallie, L. van., *De Verneerding onzer kennis omtrent
geneesmiddelen in de 19 de Eeuv.* 1 ed., 1907.

Johnson, L., *A Manual of the Medical Botany of North
America*, 1 ed., 1884.

Kannglessner, F., *Vergiftungen durch pflanzen und pflanzen-
stoffe*, 1 ed., 1910.

Kennedy, L.B., *Neue Philosophische abhandlungew*, 1 ed.,
v. 1, ----.

King, J., *Am(eric)an Dispens(atory)*, 1 ed., 1852; 6 ed.,
1864; 8 ed., 1872; 10 ed., 1875; 15 ed., 1881;
16 ed., 1889; 18 ed., v. 2, 1900.

Klein, G., Handbuch der Pflanzenanalyse, 1 ed., v. 1 & 2,
1931.

Kobert, A.R., Beiträge zur Kenntnis der vegetabilischen
Hamagglutinine, 1 ed., 1913.

Koch, L., Pharmakognostischer Atlas, v. 1, 1911.

Kromayer, A., Die Bitterstoffe und kratzend-schmeckenden
substanzen des Pflanzenreichs, 1 ed., 1861.

Kunth, K., Anleitung zur Kenntnis pharmacopoea Borussica
aufgefohsten officinellen Gewachse, 1834.

Kunz, K.H., Der Krautersammler, 1 ed., 1924.

Kunzle, J., Chrut und Uchrut, imp. ed., 1926.

Lehamare, P.F., Plantes Remedes et Maladies, 1922.

Leclerc, H., En Marge du Codes, 1 ed., 1924.

Lessing, B., Kurzer Abriss der Materia Medica, 1859.

Lewis, W., Experimental History of Materia Medica.

Lewis, W., Materia Medica over Besichrubung, 1771.

Leycl, C.F., The Magic of Herbs, 1926.

Lindley, J., Flora Medica, 1838.

Linne, C., Materia Medica, 1 ed., 2 ed., 1749.

Lloyd, J.U., Drugs and Medicines of North America, v.
1 & 2, 1884.

Lloyd, J.U., & C.G., Lloyd Brothers' Bulletin, 1910-1913.

Lloyd, J.U., Drug Treatise, v. 1-33, 1904-1928.

Long, H.C., Poisonous Plants on the Farm, Miscell.

Public., U.S. Report, No. 57, 1927.

Mansfield, W., Microscopic Pharmacognosy, 1 ed., 1929.

Marchand, L.N., Botanique Cryptoganique, 1 ed., 1922.

- Marme, W., Lehrbuch der pharmacognosie des pflanzen
und Theirreichs, 1886.
- Marzell, H., Unsere Heilpflanzen, 1 ed., 1922.
- Marzell, H., Alte Heilkrauter, 1 ed., 1926.
- Mattioli, A., Des Plantes Epitome, 1586.
- Maveric, J., La Medicine, Hermetique Des Planted,
1 ed., 1919.
- Merrele, C., A Digest of Materia Medica and Pharmacy,
, 1883.
- Mesue, J., Opera Divi, 1 ed., 1541.
- Meyer, A., Anatomische Charakteristic officineller
Blatterund Krauter, 1 ed., 1882.
- Millspaugh, C.F., Medicinal Plants, v. 1 & 2, 1892.
- Monro, D., A Treatise on medical and pharmaceutical
chemistry and Materia Medica, v. 1-4, 1788.
- Morelot, S., Nouveau Ditionnaire General des Drogues,
Simples it composes de Lemery, v. 1 & 2, 1807.
- Mowat, J.H., A Medico Botanical Glossary, v. 1, 1887.
- Mueller, C., Medicinal Flora, 1890.
- Murrays, J., A System of Materia Medica and Pharmacy,
1 ed., 1815; 2 ed., 1821; 4 ed., 1828; 6 ed.,
1832.
- Nicolai, E.A., Systema Material Medicae, 1 ed., 1751.
- Oldberg, O., & Wall, O., Comp(anion to the) U(nited)
S(tates) P(harmacopoeia), 1 ed., 1884.
- Pacheco, M.L., Discurso Leido ante el Claustro de la
Faulstad de Farma cia de la Universidad Central,
1 ed., 1889.

Parke, Davis, & Co., Pharmacology of the Newer Materia
Medica, reprints, 1889.

Parke, Davis, & Co., Standardized products, 1 ed., 1911.

Pecholt, T., Volksbenennungen Brazialischen Pflanzen,
1 ed., 1907.

Perrot, T., Plantes Medicinales de France, 1 ed., 1928.

Pobequin, H., Les Plantes Medicinales de le Guinee, 1 ed.,
1912.

Pool, J. F., Kolonial Instituut, 1 ed., 1928.

Pvrgantium, G., Alinrvmone Libii, 1574.

Ranchin, F., Oevvres Pharmacevtiqves, 1 ed., 1628.

Reichenbach, H.T., Flora Lipziensis, 1 ed., 1817.

Reil, W., Materia Medica der Reinin Chemischen
Pflanzenstoffe, 1 ed., 1857.

Rosemont, R., de., Comment nos Pires se Soignaient,
1 ed., 1917.

Rotheram, J., Medicamenta Purgantia, 1 ed., 1775.

Sabalistischka, T., Heil--, Genuss--, Gewurz--, und
Farbstoffee aus den Tropen und ihre Veredelung,
1 ed., 1923.

Sayre, L.E., Conspectus of organic materia medica
and pharmacal botany, 1879.

Ssyre, L.E., A Manual of organic materia medica and
pharmacognosy, 1895.

Schreiber, J.F., Kleiner Atlas der wichtigeren Heil-
pflanzen, 1 ed., ----.

Schroter, F., Schutzkustlein der Pflanzenheilkinde,
2 ed., 1911.

- Schroter, F., Goldens Krauterbuch, 1 ed., 1913.
- Schulz, H., Vorlesungen uber Wirkung und Anwendung
der deutschen Arzneipflanzen, 1 ed., 1919.
- Springer, J., Arzneipflanzen Merkblätter das Kaiser-
lichen Gesundheitsamts, 1 ed., ----.
- Step, E., Herbs of Healing, 1 ed., 1926.
- Stille, O., & Maisch, J.M., Nat(ional) Dispens(atory),
1 ed., 1879; 2 ed., 1879; 3 ed., 1884; 5 ed.,
1894.
- Thacker, J., New Am(ericana) Dispens(atory), 1 ed.,
1810; 2 ed., 1813; 4 ed., 1821.
- Thomas, J.B., The Medicinal Plants of the Philippines,
1 ed., 1901.
- Thompson, R.C., The Assyrian Herbal, 1 ed., 1924.
- Tournefort, J.P., Histoire des Plantes, cultives, 1 ed.,
1698.
- Tournefort, J.P., Materia Medica, Eng. trans., 2 ed.,
1716.
- Trillero, O.H., Dispensatorium Pharmaceuticum, 1 ed.,
1764.
- Tschirsch, A., Handbuch der Pharmakognosie, 1 ed.,
v. 1 & 2, 1909.
- Tschirsch, A., Les Problemes modernes de la Pharmakog-
nosie, 1 ed., 1911.
- Ulsamer, J.A., Haus-Apotheke, 1 ed., 1929.
- Vigier, F.L., Gommess Resines des Umbellifères, 1 ed.,
1869.
- Villiers, A., & Thumen, F., Die Pflanzen des Homoo-
pathischen Arzneischatzes, 1 ed., v. 1, 1893.

Voda, G., Anatomishentwicklungeschichtliche Untersuchungen einiger pharmakognostisch wichtiger Pflanzen, 1 ed., 1912.

Wallis, T.E., Practical Pharmacognosy, 1 ed., 1925.

Warncke, T.S., Laerem am Laegemidlernes, 1 ed., 1862.

Weiss, G., Beitrage zur Anatomie des Laubblatter, 1 ed., 1925.

Willman, M., Die Schrift des Dioskurides, 1 ed., 1914.

Winkler, L., Animalia als Arzneimittel einst und jetzt, 1 ed., 1908.

Wood, G.B., & Bache, F., U(nited) S(tates) Dispens(atory), 2 ed., 1834; 3 ed., 1836; 4 ed., 1839; 5 ed., 1843; 6 ed., 1845; 7 ed., 1847; 8 ed., 1849; 9 ed., 1851; 10 ed., 1854; 11 ed., 1858; 12 ed., 1869; 13 ed., 1870; 14 ed., 1879; 15 ed., 1883; 16 ed., 1892; 17 ed., 1894; 19 ed., 1907; 20 ed., 1918; 21 ed., 1926.

-----., Heulsame Hauss-Apothecken, 1 ed., 1807.

-----., Naturgeschichte der Giftpflanzen, 1 ed., 1807.

UNITED STATES PHARMACOPOEIA (O-X)
(1820-1920)

and

NATIONAL FORMULARY (I-V)
(1888-1926)

HISTORY

of

GLYCYRRHIZA GLABRA LINNE

U.S.P.-1820, P. p. 37.

Glycyrrhizae Radix

Liquorice root.

Glycyrrhiza glabra W. III. 1144

Radix. The root.

W--Willdenow

U.S.P.-1830. (N.Y.). P. p. 37.

Glycyrrhizae Radix

Liquorice Root

Glycyrrhiza glabra

Prop. Inodorous; taste, sweet, mucilaginous; virtues yielded to/ water.

Med. Oper. Demulcent.

U.S.P.-1830. (Phil.). P. p. 13.

Glycyrrhiza

Liquorice Root

Glycyrrhiza glabra W. III. 1144

Radix. The root.

W--Willdenow

U.S.P.-1840. P. p. 22.

Glycyrrhiza.

The root of Glycyrrhiza glabra.

Liquorice Root.

U.S.P.-1850. P. p. 25.

Glycyrrhiza.

The root of Glycyrrhiza glabra.

Liquorice Root.

U.S.P.-1860. P. p. 30.

Glycyrrhiza. Liquorice Root.

The root of Glycyrrhiza glabra.

U.S.P.-1870. P. p. 32.

Glycyrrhiza. Liquorice Root.

The root of Glycyrrhiza glabra.

U.S.P.-1880.-p. 171.

Glycyrrhiza

Glycyrrhiza

(Liquorice root)

The root of Glycyrrhiza glabra Linne (Nat. ord.,
Leguminosae, Papilio-/naceae.)/

In long, cylindrical pieces, from one-fifth of an
inch to one inch (5 to 25 milli-/meters) thick, longi-
tudinally wrinkled, externally grayish-brown, warty;
inter-/nally tawny-yellow; pliable tough; fracture
coarsely fibrous; bark rather thick;/ wood porous,
but dense, in narrow wedges; medullary rays linear;
taste sweet,/ somewhat acrid.

The underground stem, which is often present,
has the same appearance but,/ contains a thin pith.

Preparations: Extractum Glycyrrhizae. Fluidum
Extractum Glycyrrhizae Purum./ Glycyrrhizinum
Ammoniatum. Pulvis Glycyrrhizae Compasitus.

Glycyrrhiza

(Glycyrrhiza

(Liquorice Root)

The root of *Glycyrrhiza glabra* Linne, and of the variety *glandulifera* (Waldstein et Kittaibel) Regel et Herder, (Nat. ord., Leguminosae)./

In long, cylindrical pieces, from 5 to 25 mm. thick, longitudinally wrinkled, externally grayish-brown, warty; internally tawny-yellow; pliable, tough; fracture coarsely fibrous; bark rather thick; wood porous, but dense, in narrow wedges; medullary rays linear; taste sweet, somewhat acrid./

The underground stem, which is often present, has the same appearance, but contains a thin pith./

The drug derived from the variety *glandulifera* (so-called Russian Liquorice) consists usually of the roots or root branches, 1-4 Cm. thick, 15 to 30 Cm. long, frequently deprived of the corky layer, the wood rather soft, and usually more or less cleft.

Preparations: *Extractum Glycyrrhizae*, *Fluidum Extractum Glycyrrhizae*, *Purum Glycyrrhizinum Ammoniatum*, *Pulvis Glycyrrhizae Compositus*./

Glycyrrhiza

Glycyrrhiza

Licorice Root.

The dried rhizome and root of *Glycyrrhiza glabra* Linne (Spanish Licorice), or of *Glycyrrhiza glandulifera* Waldstein and Kitaibel (Russian Licorice). (Fam. Leguminosae)./

Spanish Licorice. Cylindrical, usually cut into pieces, 4 to 20 cm. or more long, 5 to 15 mm. thick; longitudinally wrinkled, grayish-brown or dark brown, pliable; fracture coarsely fibrous; internally tawny-yellow; bark 1 to 3 mm. thick; wood porous, in narrow wedges; odor slight, taste sweetish and slightly acrid.

Russian Licorice. Somewhat tapering frequently 1 M or more in length, 1 to 5 cm. in diameter, deprived of the outer corky layer, when it is externally pale

yellow; internally of a lighter yellow; wood rather soft; taste less sweet/ than that of Spanish Licorice. Any blackened, knotty, bitter portions should/ be removed.

Average dose--2 Gm. (30 grains).

U.S.P.-1910.-p. 206.

Glycyrrhiza

Glycyrrhiza

Glycyrrh.--Licorice, Liquorice Root.

The dried rhizome and roots of *Glycyrrhiza glabra* *typica* Regel et/ Herder, known in Commerce as Spanish Licorice, or of *Glycyrrhiza glabra/ glanulifera* Regel et Herder known in commerce as Russian Licorice/ (Fam. Leguminosae).

Preserve powdered and whole *Glycyrrhiza* in a tightly-closed container/ to which a few drops of chloroform or carbon tetrachloride are added/ from time to time to prevent attack by insects./

Spanish Licorice (also known as Italian, Levant, Persian, Turkish, or Arabian/ Licorice)--Nearly cylindrical, upper portion more or less knotty; usually in/ pieces from 14 to 20 cm. or more in length and from 5 to 20 mm. in thickness;/ externally yellowish-brown or dark brown, longitudinally wrinkled, the thinner/ rhizomes often having prominent alternate buds, the thicker rhizomes having/ distinct corky patches; fracture coarsely fibrous; internally lemon-yellow, radiate;/ bark from 1 to 3 mm. in thickness; wood porous in narrow wedges, rhizome with/ small pith; odor distinctive; taste sweetish and slightly acid./

Under the microscope, transverse sections of pieces of the older rhizome of/ Spanish Licorice show a periderm of numerous layers of yellowish-brown cork/ cells, a phellogen and one or more rows of cells of the phellogen thickenings and with occasional monoclinic/ prisms of calcium oxalate; a middle bark of starch bearing parenchyma and whitish/ groups of bast-fibers surrounded with crystal-fibers; inner bark with very char-/acteristic radial arrangement of phloem and medullary rays, the phloem con-/sisting of wedges of small groups of bast-fibers and parenchyma, separated by an/ almost continuous, obliterated sieve tissue, the cells of the latter being

very irreg-ular in outline and with thick, highly refracting walls; medullary rays from 1 to 8/ cells wide; wood characterized by broad wedges consisting of large tracheae/ with yellowish walls, small compact groups of wood-fibers and starch-bearing/ parenchyma alternating with the broad medullary rays; pith composed of paren-/chyma the cells being large, more or less polygonal in outline and containing/ numerous starch grains, or prisms of calcium oxalate. In sections of roots the/ pith is absent.

Russian Licorice.--Nearly cylindrical, somewhat tapering, sometimes split/ longitudinally, from 15 to 30 cm. in length and from 1 to 5 cm. in diameter; when/ deprived of the outer corky layer, ti is externally pale-yellow; fracture coarsely/ fibrous; internally lemon-yellow; wood radially cleft; odor distinct; taste sweetish./

, Under the microscope, tranxverse sections of the rhizome and roots of Russian/ Licorice somewhat resemble those of Spanish Licorice, but the cork cells are/ absent.

Powdered Glycyrrhiza is pale brownish-yellow (Spanish Licorice) or pale/ yellow (Russian Licorice); starch grains numerous, mostly single and elliptical/ or oval, and from 0.002 to 0.02 mm. in diameter; trachae mostly with bordered/ pores; wood- and bast-fibers numerous, strongly lignified, very long, much/ attenuated at the ends and about 0.01 mm. in width; crystal-fibers with mono-/clinic prisms of calcium oxalate, the latter from 0.01 to 0.02 mm. in diameter;/ occasional fragments of reddish-brown cork cells occur in Spanish Licorice, but/ are practically absent in the Russian Licorice.

Add 10 Gm. of powdered Glycyrrhiza to 100 mils of distilled water, allow the/ mixture to macerate for fifteen minutes with occasional stirring; and then heat/ it for one-half hour on a water bath. Filter the mixture and add through the/filters enough water to make the filtrate measure 100 mils; not less than 0.2 Gm. of/ residue remains on eyaporating 10 mils of this filtrate and drying it at 100°C./

Glycyrrhiza yields not more than 7 per cent of ash.

Preparation.--Extractum Glycyrrhizae Purum, Fluidextractum Glycyrrhizae/ Elixir Glycyrrhizae (from Fluidextract) Mistura Glycyrrhizae Composita/ (from Extract) Pulvis Glycyrrhizae Compositus.

Average Dose-Metric, 2 Gm.----Apothecaries, 30 grains.

Glycyrrhiza

Glycyrrhiza

Glycyrrh.--Licorice Root

Glycyrrhiza is the dried rhizome and roots of *Glycyrrhiza glabra* Linné var. *typica* Regel et Herder, known in commerce as Spanish/Licorece, or of *Glycyrrhiza glabra* Linne var. *glandulifera* Regel et Herder, known in commerce as Russian Licorece, or of other varieties of *Glycyrrhiza glabra* Linne yielding a yellow and sweet wood (Fam. Leguminosae)./

Glycyrrhiza yields not more than 2.5 per cent of acid-insoluble ash./

Description and physical properties.

Unground Spanish Licorice--Nearly cylindrical, the upper portion more or less/ knotty; usually in pieces from 14 to 20 cm. or more in length, and from 5 to/ 20 mm. in thickness; externally yellowish-brown or kark brown, longitudinally/ wrinkled, the thinner rhizomes often having prominent alternate buds, the/ thicker rhizomes having distinct corky patches; fracture coarsely fibrous;/ internally yellow, radiate; odor distinctive; taste sweetish and slightly acid./

Unground Russian Licorice--Nearly cylindrical, somewhat tapering, sometimes/ split longitudinally, from 15 to 30 cm. in length and from 1 to 5 cm. in diameter; when deprived of the outer corky layer, it is externally pale yellow;/ fracture coarsely fibrous; internally pale yellow; wood radially cleft; odor/ distinct; taste sweetish./

Structure--Rhizome with numerous layers of yellowish-brown cork cells, absent/ in the peeled drug; one or more rows of cells with a tendency to collenchymatous thickening; a middle bark of starch bearing parenchyma and groups of/ bast fibers surrounded with crystal-fibers; inner bark with radial arrangement/ of phloem and medullary rays, the phloem consisting of wedges of small groups/ of bast-fibers and parenchyma separated tangentially by sieve tissue, and cells/ of the latter with thick, highly refracting walls, medullary rays from 1 to 8/ cells wide; wood bundles characterized by broad wedges consisting of large/ tracheae with yellowish walls, small compact groups of wood fibers and starch-/ bearing parenchyma; pith of large, more or less polygonal starch-bearing/ parenchyma or occasionally containing prisms of calcium oxalate. In the roots the/ pith is absent.

Powdered Glycyrrhiza--Brownish yellow (unpeeled Licorice) or pale yellow (peeled/ Licorice); starch grains numerous, mostly single and elliptical or oval, from/ 0.002 to 0.020 mm. diameter; trachaea mostly with bordered pores; wood- and bast-fibers numerous, very long, much attenuated at the ends and about/ 0.010 mm. in width; crystal-fibers with monoclinic prisms of calcium oxalate/ the latter from 0.010 to 0.030 mm. in length; occasional fragments of reddish- brown cork cells which are practically absent in the powder prepared from/ peeled Licorice.

Preparations--Elixir Glycyrrhizae (from Fluidextract), Extractum Glycyrrhizae/ Purum, Fluidextractum Glycyrrhizae, Mistura Glycyrrhizae Composita (from/ Fluidextract), Pulvis Glycyrrhizae Compositus.

Average Dose--Metric 2 Gm.--Apothecaries, 30 grains.

SUMMARY OF U.S.P. & N.F. DATA OF GLYCYRRHIZA GLABRA

Official in: U.S.P. 1820, '30 (N.Y.), '30 (Phil.), '40,
'50, '60, '70, '80, '90, 1900, '10, '20.

Official Latin Title:

Glycyrrhizae Radix U.S.P. 1820, '30 (N.Y.).

Glycyrrhiza U.S.P. 1830 (Phil.), '40, '50, '60,
'70, '80, '90, 1900, '10, '20.

Official English Title:

Liquorice Root U.S.P. 1820, '30 (N.Y.), '30 (Phil.),
'40, '50, '60, '70.

Glycyrrhiza U.S.P. 1880, '90, 1900, '10, '20.

Official Abreviation:

Glycyrrh. U.S.P. 1910, '20.

Official Synonym:

Liquorice root U.S.P. 1880, '90, 1910.

Licorice root U.S.P. 1900, '10, '20.

Natural Order:

Leguminosae, Papilionaceae U.S.P. 1880.

Leguminosae U.S.P. 1890

Official Family:

Leguminosae U.S.P. 1900, '10, '20.

Scientific Name:

Glycyrrhiza glabra U.S.P. 1820, '30 (N.Y.),
'30 (Phil.), '40, '50, '60, '70, '80, '90,
1900.

Glycyrrhiza glandulifera U.S.P. 1900.

Glycyrrhiza glabra typica U.P.P. 1910.

Glycyrrhiza glabra glandulifera U.S.P. 1910.

Glycyrrhiza glabra var. typica U.S.P. 1920.

Glycyrrhiza glabra var. glandulifera U.S.P. 1920.

(*Glycyrrhiza glabra*) and of the variety *glandulifera*

U.S.P. 1890

other varieties of *Glycyrrhiza glabra* yielding a
yellow and sweet wood U.S.P. 1920

Part Used:

Root U.S.P. 1820, '30 (N.Y.), '30 (Phil), '40,
'50, '60, '70, '80, '90.

Dried rhizome and root U.S.P. 1900.

Dried rhizome and roots U.S.P. 1910, '20.

Description:

U.S.P. 1830 (N.Y.), '80, '90, 1900, '10, '20.

Purity Rubric:

U.S.P. 1920

Glycyrrhiza yields n.m.t. 2.5 per cent of
acid-insoluble ash.

Habitat:

Russian U.S.P. 1890, 1900, '10, '20.

Spanish U.S.P. 1900, '10, '20.

Preservation:

Medicinal Operations:

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

Official Preparations:

Extractum Glycyrrhizae Fluidum U.S.P. 1880, '90.

Extractum Glycyrrhizae Purum U.S.P. 1880, '90,
1910, '20.

Glycyrrhizinum Ammoniatum U.S.P. 1880, '90.

Pulvis Glycyrrhizae Compositus U.S.P. 1880, '90,
1910, '20.

Fluidextractum Glycyrrhizae U.S.P. 1910, '20.

Elixir Glycyrrhizae (from fluidextract) U.S.P.
1910, '20.

Mistura Glycyrrhizae Composita (from Extract)
U.S.P. 1910.

Mistura Glycyrrhizae Composita (from Fluid-
extract) U.S.P. 1920.

Dose:

2 Gm.--30 grains U.S.P. 1900, '10, '20.

APPROVED BY W. O. Richtmann
Assoc. Prof. of Pharmacology.