

Bitters in North America

Dr. Arthur O. Tucker
Department of Agriculture & Natural Resources
Delaware State University
Dover, DE 19901-2277
atucker@desu.edu

1. Bitters in North America: Moxie & Angostura (and then some....)

2. The supporting cast: Bitter gentian (*Gentiana lutea*) and seco-iridoid glycosides (*e.g.*, gentiopicroside, sweroside, and swertiamarin)

http://www.floracyberia.net/spermatophyta/angiospermae/dicotyledoneae/gentianaceae/gentiana_lutea.jpg

http://content.herbalgram.org/seelecttea/Herbalgram/images/HG72/HG72_Gentiana_lutea81105.jpg

<http://www.itmonline.org/image/gentian5.jpg>

G. lutea is native from much of Europe to Turkey

3. The supporting cast: Angostura bark (*Cusparia trifoliata*, alias *Angostura trifoliata*, *Cusparia febrifuga*, *Galipea officinalis*) and 2 cyclopentanes (3,5-dihydroxy-5-ethoxy-2-syringoyl-1-methyl-4-O- β -D-glucopyranosyl-cyclopentane and 3,5-dihydroxy-5-ethoxy-2-vanilloyl-1-methyl-4-O- β -D-glucopyranosyl-cyclopentane) (not the apocryphal “angosturin,” reported in 1891 and not found since) and alkaloids (*e.g.*, cuspareine, cusparine, and galipine)

http://bib11p1.rz.tu-bs.de/docportal/servlets/MCRFileNodeServlet/DocPortal_derivate_00000726/00000094.jpg

Brieskorn, C. H., and V. Beck. 1971. *Phytochemistry* 10:3205-3211.

C. trifoliata is native to Venezuela

4. The supporting cast: Cinchona bark (*Cinchona* spp., esp. *C. calisaya*) and quinine

<http://www.hear.org/starr/images/full/starr-020518-0002.jpg>

http://www.edinformatics.com/math_science/science_of_cooking/Quinine.gif

C. calisaya is native to Peru and Bolivia

5. The supporting cast: Quassia wood (*Quassia amara*) and nortriterpenes (*e.g.*, quassin, neoquassin, similakilactone D), alkaloids (*e.g.*, canthin-6-one), and coumarins (*e.g.*, scopoletin)

<http://www.medicinescomplete.com/mc/herbals/current/images/HrbQuassiaC001.gif>

Q. amara is native from Mesoamerica and the Caribbean to Brazil

6. Bitter value: inverse of dilution in which bitterness still detectable

<u>Herbs</u>	<u>Relative bitterness</u>
Quassia wood	40,000-50,000
Gentian roots	10,000-30,000
Cinchona bark	~1,000

Schultz, V. 2004. *Rational phytotherapy*. Springer, New York.

Simple bitters (gentian roots, bogbean, centaury)

Aromatic bitters (angelica root, blessed thistle, bitter orange peel, wormwood)

Astringent bitters (cinchona bark, cundurango bark)

Acrid bitters (ginger, galangal)

7. Moxie (originally ME, now owned by Cornucopia Beverages of Bedford, NH, a subsidiary of Coca-Cola)

http://i1.trekearth.com/photos/57882/moxie_in_gabon.jpg

dates from 1876 by Dr. Augustin Thompson

8. Angostura Bitters (originally Venezuela, now Trinidad & Tobago)

<http://spiritsandcocktails.files.wordpress.com/2007/06/bitterlabels.jpg>

<http://trinigourmet.com/wp-content/angostura.jpg>

dates from 1824 by Dr. Johann Gottlieb Benjamin Siegert

essential ingredient of the Manhattan, Pisco Sour, and Champagne Cocktail

9. Angostura Orange Bitters (Trinidad & Tobago)

courtesy Nigel Bissoon, Angostura Ltd.

dates from 2008

10. Peychaud's Bitters (originally New Orleans, LA, now Frankfort, KY)

http://www.sweetppromotions.com/blog/uploaded_images/coctail-sazerac-713466.jpg

dates from 1830 by Antoine Amédée Peychaud, a Creole apothecary from Haiti

essential ingredient in the Sazerac cocktail

11. Fee Brothers Bitters (Rochester, NY)

<http://www.uncrate.com/men/images/2008/12/fee-brothers-bitters.jpg>

dates from 1950s

12. Regan's Orange Bitters No. 6 (Frankfort, KY)

http://www.ardentspirits.com/ardentspirits_old/Newsletter/images/ROB5%20Martini%20by%20Rafael%20-%20Copy.jpg

dates from 1990s

13. Campari (Milan)

http://www.aceshowbiz.com/images/news/evamendes_campari2.jpg

http://www.beverageworld.com/images/stories/camparibottle_large.jpg

dates from 1860 by Gaspare Campari

essential ingredient in the classic Negroni cocktail

14. Fernet-Branca (Milan)

http://kuking.net/pictures/section/18/18_2528.jpg

dates from 1845 by Fratelli Branca of Milan

15. Amer Picon (Marseille)

<http://www.cocktaildb.com/static/imagecache/208.1.jpg>

dates from 1835

16. Niiho, Y., et al. 2006. J. Nat. Med. 60:82-88.

“These results suggest that the therapeutic effects of Gentian root on gastric lesions are associated with enhanced mucosal defensive factors via the prostaglandin pathway in the cell membrane, and that the secoiridoid glycosides contribute to this activity.”

17. Drink Moxie

Appendix I
Some brands of bitters that are available today
(courtesy of Wikipedia)

- Alpenbitter (from Switzerland)
- Amargo Chunchu (from Peru)
- Amaro Cora (from Italy)
- Amaro Erbes (from Italy)
- Amaro Jannamico (from Italy)
- Amaro Lucano (similar to Unicum but only 30% alcohol rather than 40% from Italy)
- Amaro Montenegro (from Italy)
- Amer Picon (from France)
- Amaro Quintessentia
- Angostura bitters (originally from Venezuela, currently from Trinidad and Tobago)
- Angostura Orange Bitters (from Trinidad and Tobago)
- Aperol (orange, less bitter than Campari, from Italy)
- Araucano (From Chile)
- Averna (from Italy)
- Becherovka (from Czech Republic)
- Beerenburg (from the Netherlands)
- Boonekamp's (various brands from the Netherlands, its country of origin, and from Germany)
- Borsci San Marzano
- Cappellano Chinato (from Italy)
- Campari (from Italy)
- Carpano Antica
- Carpano Punt e Mes
- Cio Ciare (from Italy)
- Cocchi Chinato (from Italy)
- Cock Drops (from Cyprus)
- Collins Orange (US)
- Cynar (artichoke based liqueur from Italy)
- Dimitri (from Costa Rica)
- Martini & Rossi ChinaMartini (from Italy)
- Fee Brothers bitters (aromatic, orange, mint, lemon and peach), from Rochester, New York; the aromatic bitters contain Angostura bark
- Echt Stonsdorfer (originally from Silesia now made in Germany, imitations from other German producers available under the name Stonsdorfer)
- Fernet Branca (from Italy)
- Fernet Stock (from the Czech Republic)
- Fernet 1882 (from [Córdoba - Argentina])
- Gammel Dansk (from Denmark)
- Hermes Orange
- Hermes Regular
- Hoppe Orange (from Holland)
- Jägermeister (from Germany)
- Killepitsch
- Kuemmerling (from Germany)
- Lauterbacher Tropfen (from Germany)
- Luxardo Amaro
- Luxardo Bitters (somewhat similar to Campari)

- Luxardo Fernet
- Marcarini Chinato
- Meletti
- Mint bitters
- Nardini Amaro
- Nijmeegs Neutje, a kruidenbitter available only in Nijmegen (in the Netherlands)
- Orange bitters
- Par-D-Schatz (from Germany)
- Peach bitters
- Peychaud's Bitters (from Louisiana, United States)
- Pimm's No. 1
- Quinquina (from France, originally from South America)
- Ramazzotti (from Italy)
- Ratzeputz (from Germany)
- Regans' Orange Bitters No.6 (Gary Regan's recipe)
- Riemerschmid Angosträ (from Germany)
- Riga Black Balsam (from Latvia)
- Santa Maria al Monte Amaro (from Italy)
- Schrobbele (From Southern Netherlands)
- Schwartzhög (from Germany)
- St. Vitus (from Germany)
- Sirop de Picon (from France)
- Suze (from France)
- Swedish bitters
- Torani brand Amer
- The Bitter Truth-Aromatic-,Orange-and Lemon Bitters (from Germany)
- Underberg (sometimes sold in health food stores, from Germany)
- Unicum (from Hungary)
- Wurzpeter and Wurzpeter Bitter Orange (from Germany)
- Zucco (from Italy)

Other brands or types

- Appenzeller (from Switzerland)
- Boker's
- Calisaya bitters (containing cinchona/quinine)
- Hartwig-Kantorowicz (from Germany)
- Hostetter's (American)
- Kabänes (from Germany)
- Kina Lillet
- Maraschino bitters
- Meinhard's Bitters Dr. Teodoro Meinhard's Angostura Bitters (From Venezuela)
- Meyer's Bitter (from Germany)
- Flimm's (from Germany)
- Reichs-Post Bitter (from Germany)
- West Indies
- New York (Australian)
- Boston (Australian)
- St Louis (Australian)
- Frisco (Australian)
- Lupulins (Australian)
- Dr Grants (Australian)

- Philadelphia (Australian)
- Kent (Australian)
- Dixons (Australian)
- Milwaukee (Australian)
- Gippsland (Australian)
- Utica (Australian)
- Steanes (Australian)
- Ralays (Australian)
- Bairnsdale (Australian)
- McDonalds (Australian)

