

# Herbal Cordials and Liqueurs: Ancient Herbal Medicine

Herbal Mixology  
February 2016  
Glen Nagel, ND



# M.E.E.T The Herbs

## My herbal philosophy

- ➔ Medicine making is a medicine.
- ➔ Experience is the best teacher, make it something to remember and experience
- ➔ Everyday practice your craft, your art.
- ➔ Taste is the teacher, the new active ingredient is Taste, smell, sight.



# Herbal Mixology: The New Paradigm

- The problem with herbal medicine
- The problem with Mixed drinks
- Taste is the active ingredient
- Alcohol as medicine?
- Organoleptics: the way of senses
- Herbs as medicine
- The Bitters
- The Shrubs: Vinegar extracts
- Cordials and Herbal Elixirs
- Recipes



# Herbal Mixology : Defined as

- The power of herbal phytochemicals driven into the blood stream by alcohol and wrapped in an organoleptically rich sensual experience: This is the magic and power to Herbal Mixology.
- The art and science of adding medicinal value and action to the world of tasty alcoholic drinks
- Bringing the value of medical tonics back to the roots of botanical medicine
- My path as an herbalist, naturopathic doctor
- Making medicine is medicine, DIY



# What is a Cordial , Elixir or Liqueur?

It's also called an elixir or Liqueur the distinction lies in the way that these various flavors of these drinks are obtained liqueur cordial is a spirit-based drink which flavor elements have been added you should buy in fusion and the vast majority are enhanced by sweeteners.

These usually vary from 20% alcohol to 50% alcohol.

The word cordial come some from the heart and are often associated with brandies and medicinal herbs

Essentially they can be used inter changeably





# History of Liqueurs, Cordials

- ▶ Cordials and the cores have their origins in practice of adding aromatic ingredients such as herbs fruits seed spices nuts roots flowers to the earliest distilled spirits in order to unmask an unappealing flavor or impurities the end result was something that had medicinal value.
- ▶ The base spirit in many of liqueurs was neutral which meant that many of these could be concocted in domestic kitchens used for cooking drinking and medicine as various proprietary liquid or a scam on the market to them course of the early 19th century homemaking liqueurs declined




# History of Liqueurs, Cordials

- ▶ The science of distillation was still at its beginning in Europe there was a movement steeping certain medicinal herbs and alcohol extracted their beneficial qualities this was a very logical progression of the nonalcoholic distilling of essential oils which is practiced its ancient Egypt in classical Greece.
- ▶ Distilling as an offshoot of alchemical arts was attached with the doomed enterprise of attempting to turn metals into gold. Many of the religious orders of the time created traditional liqueurs with medicinal ingredients often with monastery gardens but a late Middle Ages the Italians had created of many liqueurs and the French made Benedictine and Chartreuse




# History of Liqueurs, Cordials

- ▶ Liqueurs of the last century had an air of soothing palatability often used as dinner digestifs, often with women who are not fond of the stronger alcoholic alternatives.
  - ▶ Many these liqueurs were indeed seen as more ladylike drinks enhanced by the induction of small tiny glasses.
  - ▶ They started shedding their health claims and started producing them more for flavors and alcoholic effects
- 



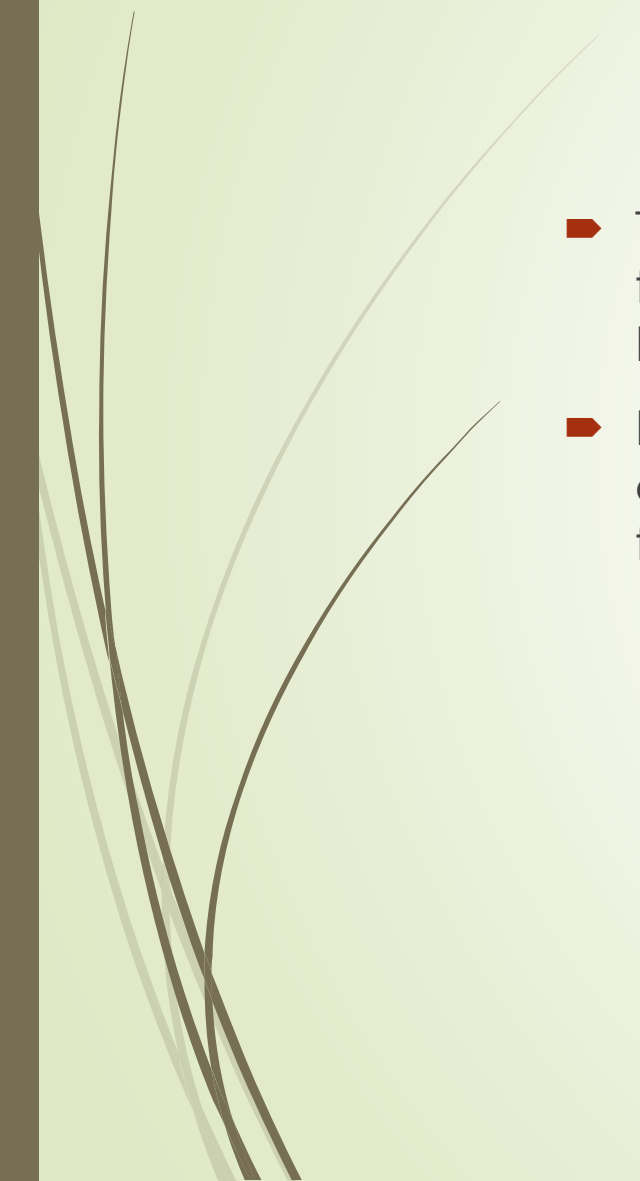


# History of Liqueurs, Cordials

- ▶ The important cocktail air of the 1920s and 1930s coincided with their universal prohibition of alcohol United States but there was no such problem in London Berlin Paris.
  - ▶ They were freed from the strait jacket of cultural politeness and liqueurs stoked a transformation of drinks such as punches and sours and fizzes this brought into the great cocktail era, this couldn't of happened without the homemade liqueurs and drinks.
  - ▶ We are essentially rediscovering the medicinal aspect of the original creators of the elixirs and Cordials. Bringing back the beauty the mystery and the medicine. This is what I call herbal mixology
- 



# Common Liqueurs, Cordials Available

- ▶ There are many types of commercially available liqueurs are generally flavored by many things including fruits, nut liqueurs, medicinal herb Liqueurs, the cream liqueurs and a few other famous drinks.
  - ▶ But the beauty of the liqueur is actually with the home herbalist and farmer creating unique fresh vibrant ideas with locally sourced ingredients made fresh that's what were going to cover today.
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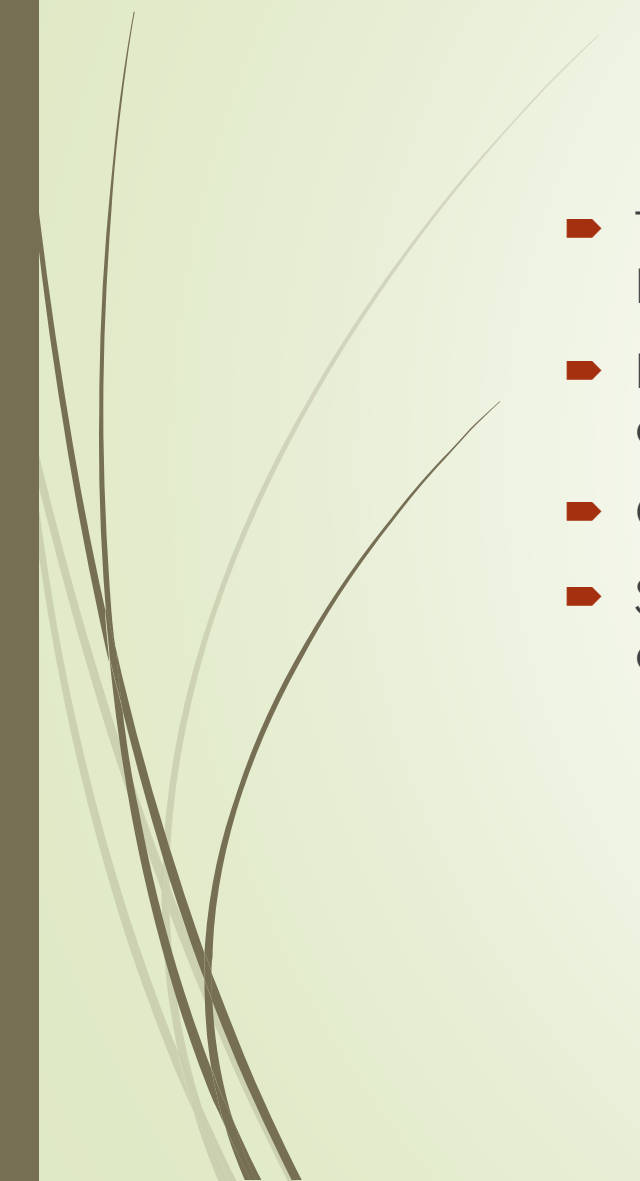


# Famously Know Liqueurs

- ▶ AMARETTO: Almond flavor liqueur, made with sweet Apricot pits
- ▶ Anis or Anisette a sweet liqueur from anise seed
- ▶ Benedictine: A Bright golden herbalists pantheon of plants and spices potentially containing 75 ingredients
- ▶ Chartreuse the greener the yellow variety rated Italy and Switzerland up to 130 herbs used to flavor grape brandy
- ▶ Cream Liqueurs: Bailey's Irish cream , Cream de cacao, Cream de menthe and Cream de Cacao or Kahlua.
- ▶ Kummel: or Caraway seed digestiff.



# Famously Know Liqueurs

- ▶ The famous nut liqueurs: derived from hazelnuts walnuts almonds. Frangelico, Nocino are couple examples.
  - ▶ Herbal Liqueurs are the famous Pernod, Absinthe which will talk about into detail
  - ▶ Ouzo: Which is a strong form of aniseed which will form of white precipitate
  - ▶ Sambuca: Made in Italy it is quite popular is made from the flowers of elderberry goes really well almonds lemons and citrus.
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# The Famous Damiana Liqueur from Mexico

Is thought off to be a famous invigorating Aphrodisiac. Is used for strengthening the nervous system and people are tired and depressed comes in a seductive feminine bottle.

Made with *Turnea diffusa* a wild growing plant in Mexico which is aromatic



# Liqueurs Recipes

- Generally liqueurs are made with taking 40% alcohol like five to infusing herbal flavors straining the Herbs out adding approximately 20% sugar starting dissolving and filtering
- We are going to make a classic Shiitake, Astragalus, Carrot savory cordial and a twist on Limoncello by using Bergamot oranges and hops.





# Today's Projects

- ▶ **Sir Earl Grey Cordial:** A stimulating blend of fresh seasonal bergamot orange, combined with aromatic bitter Hops, with a Chinese black tea. Especially good after a rich or heavy meal, for a carminative and stimulating the feeling of wellbeing.
- ▶ Other ingredients, caraway, anise, passionfruit. Vodka 88
- ▶
- ▶ **Dark Forest Immune Elixir:** A blend of savory shiitake and Reishi mushrooms, with immune building Astragalus root, with sweet carrot and burdock root for digestive support. To be taken as a daily tonic thru out the winter. With Sesame seeds, Ginger, chipotle pepper. Alcohol Rum and Vodka or some Cacao also.

# An alembic still







# Alembic Still

- ▶ The Alembic moonshine still is a simple apparatus used for distilling. It has been used for many hundreds of years, very often related to the study of alchemy. The Egyptians were the first people to construct stills, and images of them adorn the ancient temple of Memphis. It is from Arabic that we get the word 'alembic' (al ambic) and alcohol (al cohol).
- ▶ The first means the distillation vessel, and the second, while it was used to describe a very hard lead or antimony based powder, expresses the idea of delicacy and subtlety, as in distillation vapor. The still was developed in 800 AD by the Arab alchemist Jabir ibn Hayyan. The word 'alembic' is derived from the metaphoric meaning of 'that which refines; which transmutes', through distillation.



# Glyconda (Neutralizing Cordial)

➔ A combination of *Rheum palmatum* (Turkey Rhubarb), *Potassium bicarbonate*, *Cinnamomum cassia* (Cinnamon), *Hydrastis canadensis* (Goldenseal root), *Mentha piperita* (Peppermint oil), and vegetable glycerin, alcohol and water.



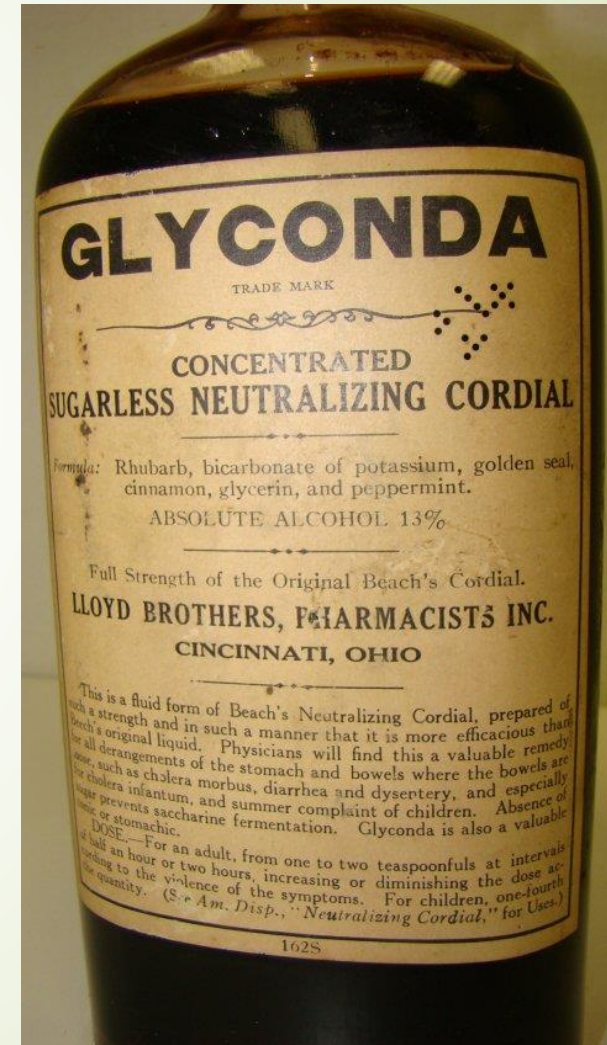


# Glyconda (Neutralizing Cordial)

- *“Neutralizing cordial is the very best corrective yet devised for disorders of stomach and bowels” (Harvey Wickes Felter M.D. 1907)*
- **Traditional Clinical Uses:** Stomach upset, dyspepsia, nausea, gas, bloating, diarrhea. Adjunctive to disguise the taste of bitter medicines.
- **Dosing Directions:** Adults: 1 to 3 teaspoons as needed, Children: ½-1 teaspoon every 30 to 60 minutes as needed. As a Flavoring agent: Mix up to 25% of formula.

# Neutralizing Cordial Recipe

- NEUTRALIZING CORDIAL (Modified)
- Rhubarb Tincture 80 ml
- Cinnamon Tincture 64 ml
- Hydrastis Tincture 40 ml
- Spirit of Peppermint 8 ml
- Potassium carbonate 16 grams
- Simple Syrup 250 ml
- Diluted alcohol (50%) 550 ml
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- Step 1. Dissolve 16 grams of potassium carbonate in 250 ml Simple Syrup
- Step 2. Mix the tinctures, spirit and diluted alcohol.
- Step 3. Mix both liquids, stirring or blending until  $KCO_3$  is dissolved.
- Step 4. Add additional diluted alcohol to the total (if necessary) to bring the
- total volume to 1000 ml.



# Strega, The Witch

- ▶ **Strega** (or *Liquore Strega*), is an Italian herbal liqueur produced since 1860 by the S. A. Distilleria Liquore Strega in Benevento, Campania, Italy. Its yellow color comes from the presence of saffron in its recipe. Liquore Strega is 80 proof (40%) and among its approximately 70 herbal ingredients are mint and fennel. Strega is considered a digestif, meant for drinking after meals.
- ▶ *Strega* has a similar appearance to Galliano (though less vibrantly yellow). It is slightly sweet, semi-viscous, and has a bold, complex flavor with strong minty or coniferous notes. Strega is used for flavoring *torta caprese*, a type of cake.



# Nocina: Green Walnut liqueur

- ▶ Green Walnut liqueur
- ▶ Nocino (no-CHEE-no) is the traditional walnut liqueur made throughout Italy and Southern Switzerland. The base ingredients of nocino have changed very little through the centuries. They include unripe walnuts, alcohol (typically grape brandy or grappa), sugar and spices. It is the mix of spices, which varies widely from family to family, and village to village, that gives each nocino its unique character



# Bergamot Orange , *Citrus bergamia*

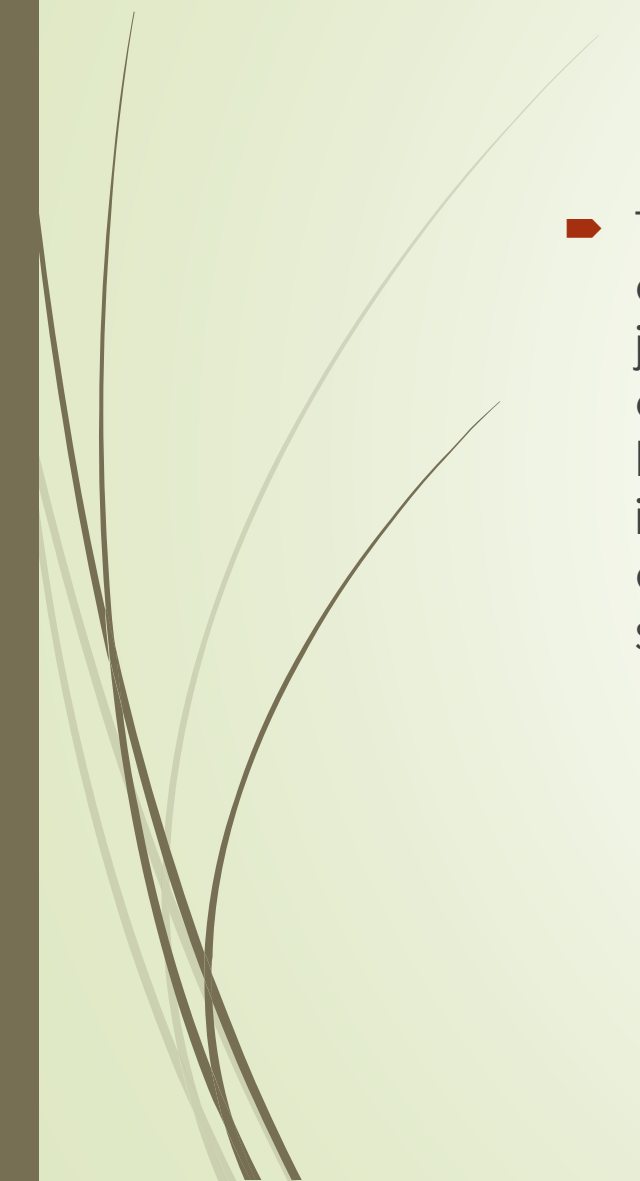
- ▶ Bergamot is a citrus fruit whose rind is used for extracting the Bergamot Essential Oil. The scientific name of bergamot is *Citrus Aurantium* var. or *Citrus Bergamia*. It is a tropical plant, but thrives in Europe as well. Its powerful aroma makes it a popular component in many perfumes, and it is often used as the all-important “top note”. It is derived through cold compression, opposed to the steam distillation of many other essential oils. One of the most common applications that you may not be aware of is its use in black tea. The inclusion of bergamot essential oil in regular black tea is then given a different name – Earl Grey!
- ▶ The chemical composition of Bergamot Oil includes Alpha Pinene, Alpha Bergapten, Alpha Terpineol, Limonene, Linalool, Linalyl Acetate, Nerol, Neryl Acetate, Beta Bisabolene, Geraniol, Geraniol Acetate and Myrcene.







# The oil of bergamot

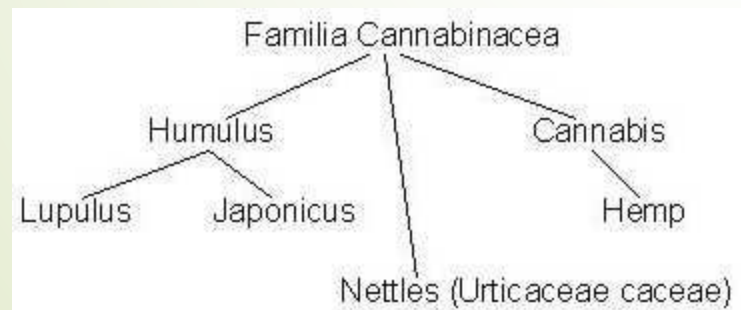
- ▶ The components of Bergamot Oil, like Alpha Pinene and Limonene, are antidepressant and stimulating in nature. They create a feeling of freshness, joy and energy in cases of sadness and depression by improving the circulation of the blood. They also stimulate hormonal secretions, thereby helping to maintain proper metabolic rates. This stimulating effect also increases the secretion of digestive juices, bile and insulin, thereby aiding digestion, proper absorption of nutrients, assimilation and decomposition of sugar and the resultant lowering of blood sugar.
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# Bergamotto

- The liquor Bergamot
- Bergamot Calabro is made with organic bergamot from Calabria, in January, the fresh fruits are washed and peeled, the fragrant peel is then immersed in alcohol for maceration, the fruits instead are immediately pressed and the juice added to the essence of alcoholic base.
- **It is the first of Bergamot liquor which provides for the addition in the preparation of fresh juice of Bergamot.**
- Bergamot has relaxing qualities, anti-stress, digestive and purifying the skin.
- You should drink Bergamot Calabro as a digestive alone or as an ingredient in cocktails and long drinks.



# Wild, Wild, Wild Weeds



# Humulus Lupulus: Wolf plant



As the ancients said, hops grew "wild among willows, like a wolf among sheep," hence the name *Humulus Lupulus*



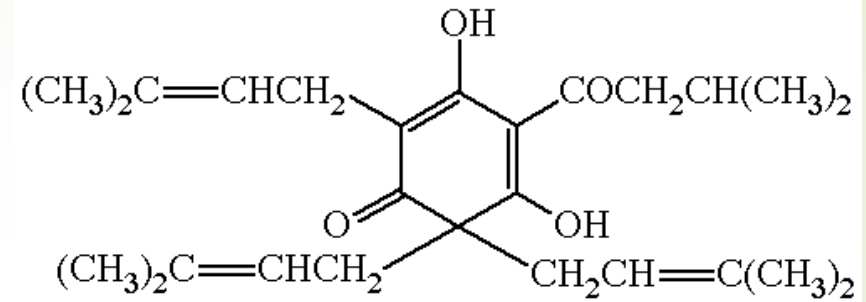
The plants are unisexual.  
Male and female,  
Fruit is a cone  
Strong Climber



# Aromatic Bitter with a bite!



contain a resin that has strong physiologic properties.



Lupulon



# Hops Signatures

- Wild vine grows like nervous system. Intoxicating smell, Grows up over other plants shows strong action.
- Its strong climbing action will strangle and kill trees it is growing on, hence a sedating action.



Bitter, Anti inflammatory,  
anti-oxidant, phyto estrogen





# Humulus lupulus: Hops

- **Family: Canabinaceae**
- **Same family as Cannabis**
- **Part Used: Female Strobiles**
- **The plants are unisexual. Both plants contain a resin that has strong physiologic properties.**
- **Marijuana contains THC ( tetrahydrocannabinol ) and hops contains Lupulin.**



# Hops: Chemistry

Volatile oil (humulene, myrcene, caryophylline, farnescene);

15-25% resinous bitter principles

Organic Acids known as alpha acids and beta acids

estrogenic substances (Phytosterols),

8- prenylnaringenin,

6 prenylnaringenin and isoxanthohumol

The oil and bitter resins together are known as lupulin. Lupulin is a yellow powder





# Hops: Action

- *Humulus* is stated to possess sedative, hypnotic, diuretic ( like beer) and topical bactericidal properties. Phytoestrogenic.
- The German Commission E approved use for mood disturbances such as restlessness and anxiety as well as sleep disturbances. Has a high level of phytosterols. Has been used like soy and flax for hot flashes and menopausal symptoms. In men it may be a anaphrodisiac (lowers sex drive)



# Specific Indications

- Nervousness, irritability, insomnia, irritation of bladder, fermentative indigestion with acid eructation's. (Lloyd Dose Book)
- Impairment of the digestive organs, resulting from abuse; exhaustion and irritability of the stomach; flatulent colic; incontinence of urine; priapism and involuntary seminal emissions; deranged conditions of the brain and nervous system. ( Fyfe)

# Reishi: Panacea Polypore

- "The anti-everything polypore"
- (The polypore that gives you more)



# Reishi: *Ganoderma lucidum*

- Name: Reishi mushroom, Herb of Immortality, Ling Zhi
- Botanical description: This wood-decomposing fungi has a circular kidney-shaped cap divided by concentric growth rings, resembling a ram's horn. The fruiting body is very woody as is the stem.
- Family: Ganodermataceae



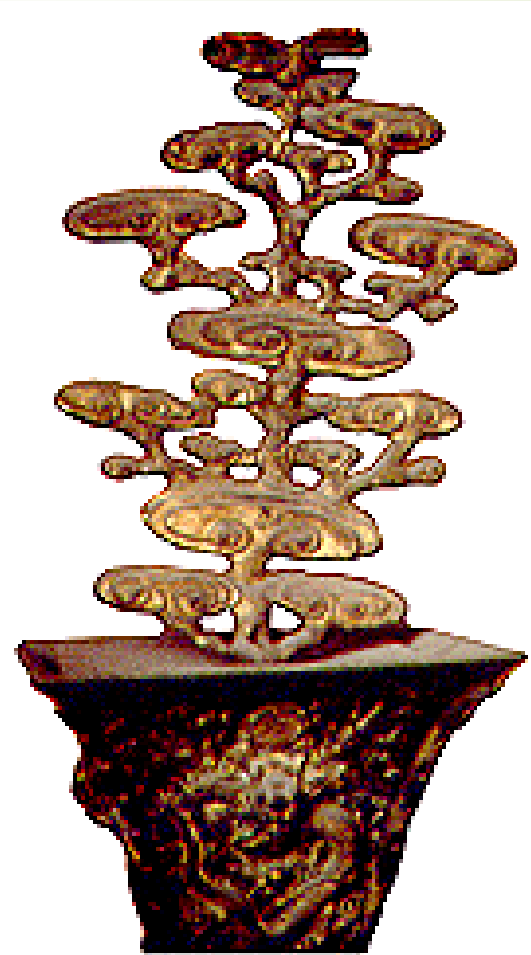
# Reishi: *Ganoderma lucidum*

- Habitat: Ling Zhi mushrooms grow wild on decaying logs and tree stumps in the coastal provinces of China and in
- Commercially cultivated in North America, China, Taiwan, Japan, and Korea.
- Part Used: Mushroom, mycelium.
- Taste: Bitter
- Temperature: Neutral



# Herb of Immortality: Reishi

- Used by Taoist monks 2000 years ago
- Listed as Superior Tonic in Shen Nung Ben Cao Jing (206 BC)
- Most highly regarded herb for prolonging life, preventing aging and boosting qi
- Rare and prized by Royalty.





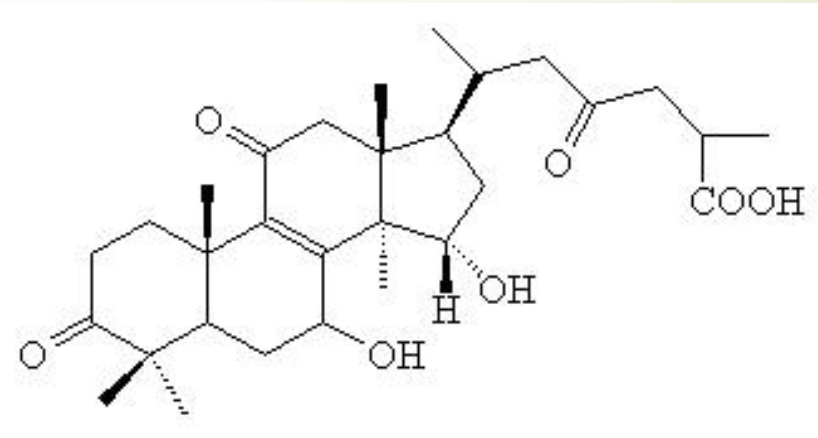
# Herb of Immortality: Reishi

- To find Ling-zhi in ancient times, people had to go high up on the mountains and deep into the forests to harvest this most valuable medicine.
- Cultivation was attempted since ancient times in China but did not give satisfactory results both quality wise and quantity wise.
- It is only in 1971 that a Japanese researcher Yukio Naoi from the Kyoto University found ways to cultivate Ling-zhi or Reishi in quantity.



# Reishi: Chemistry

- Specific Polysaccharides - which occur in the form of Beta-D-glucans bound to amino acids.
- Triterpene compounds - known as ganodermic acids A-Z. More than 100 different triterpenes have been found.
- Other major active constituents – Amino acids, sterols (Ergosterol),



Ganodermic Acid A



# Reishi: Pharmacodynamic

- Polysaccharides: Beta D glucans: Enhance protein synthesis and nucleic acid metabolism
- Hypoglycemic, anti tumor, immunostimulating
- Triterpenes: Ganodermic Acids A-Z. Inhibit histamine, antihepatotoxin, anti hypertensive, Inhibit cholesterol synthesis.
- Steroid: Ganodosterone, Antihepatotoxin
- Whole Fruiting body Extracts: Anti allergy, antioxidant, Adrenal tonic, Radiation protective.

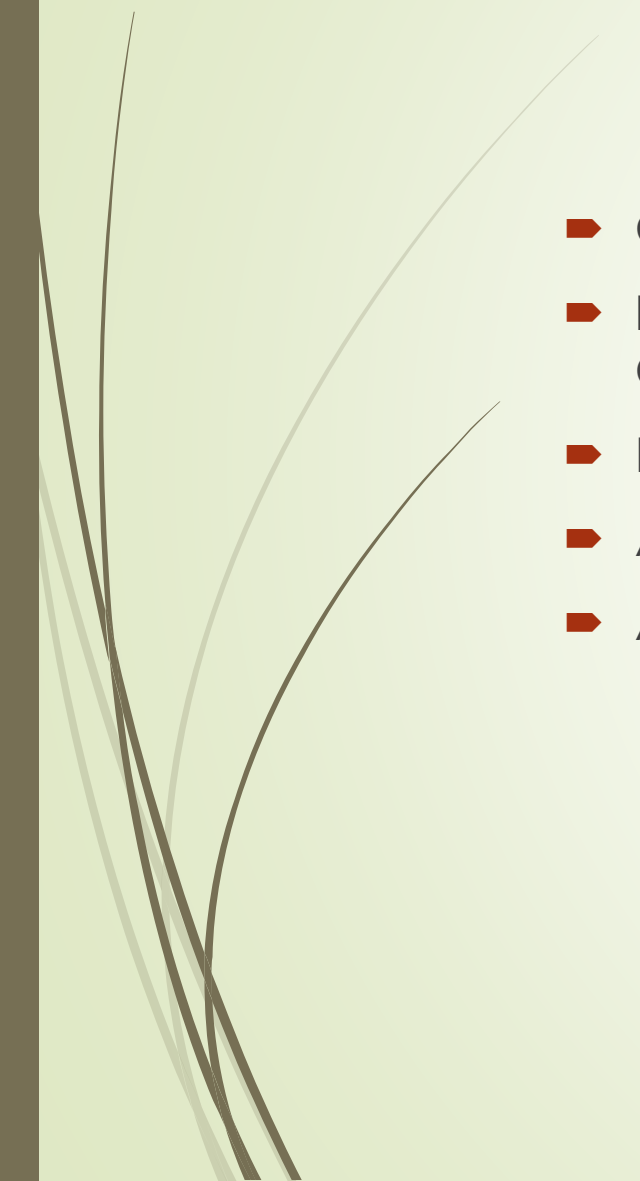
# Reishi: Actions

- Adaptogen
- Deep immune activator
- Anti- allergenic
- Anti-hepatotoxin
- Anti-inflammatory
- Hypotensive
- Antibacterial
- Antiviral
- Cardiac tonic
- Expectorant





# Reishi: Indications and effects:

- ▶ Cancer therapy: Immune Amphoteric
  - ▶ Immune System Enhancement: (Bronchitis, Asthma, Allergies, Herpetic Conditions and HIV Infection)
  - ▶ Hypertension
  - ▶ Anxiety and Stress
  - ▶ Anti allergy
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# Astragalus: Part Used: Root

- Astragalus Pea like Flowers



**Figure 2b** *Astragalus membranaceus*

Photograph courtesy of Bill Brevoort East Earth Herb, Eugene, OR



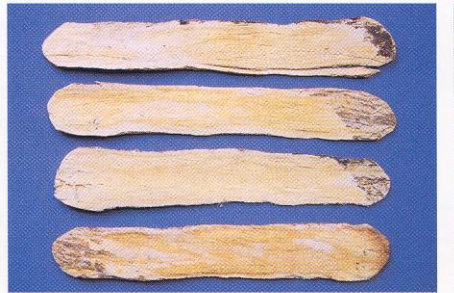
Herbal Tongue Depressors

# Astragalus Root Processing

- Traditionally Bake root or soaked with Honey
- Makes more Nourishing and Tonifying
- More food like.



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# Astragalus Constituents

- **Triterpenoid glycosides:**  
Astragalosides  
1,11,111,1V
- **Polysaccharides:**  
Astragaloglucans
- **Flavonoids:**  
afromosin, ordoratin,  
calycosin, quercetin
- **Triterpenoid Saponins**
- Phytosterols, essential  
oil, amino acids, GABA

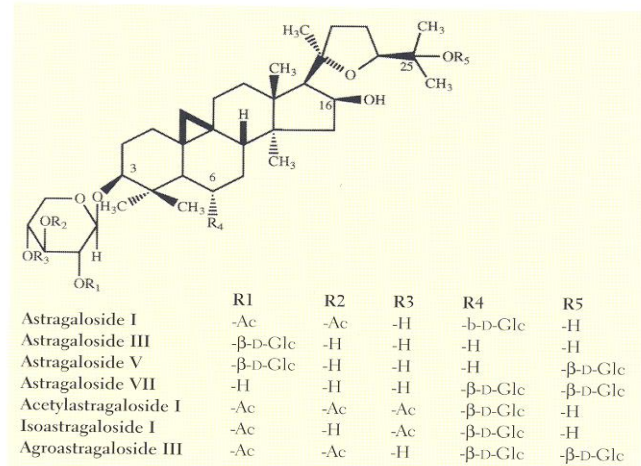


Figure 8a Triterpenoids of *Astragalus membranaceus*

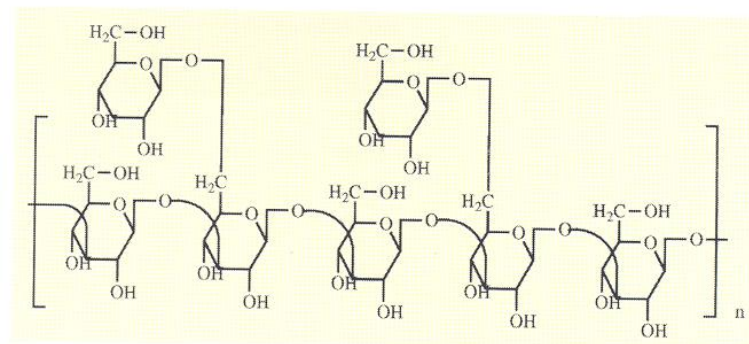


Figure 7 Astragaloglucan of *Astragalus membranaceus*



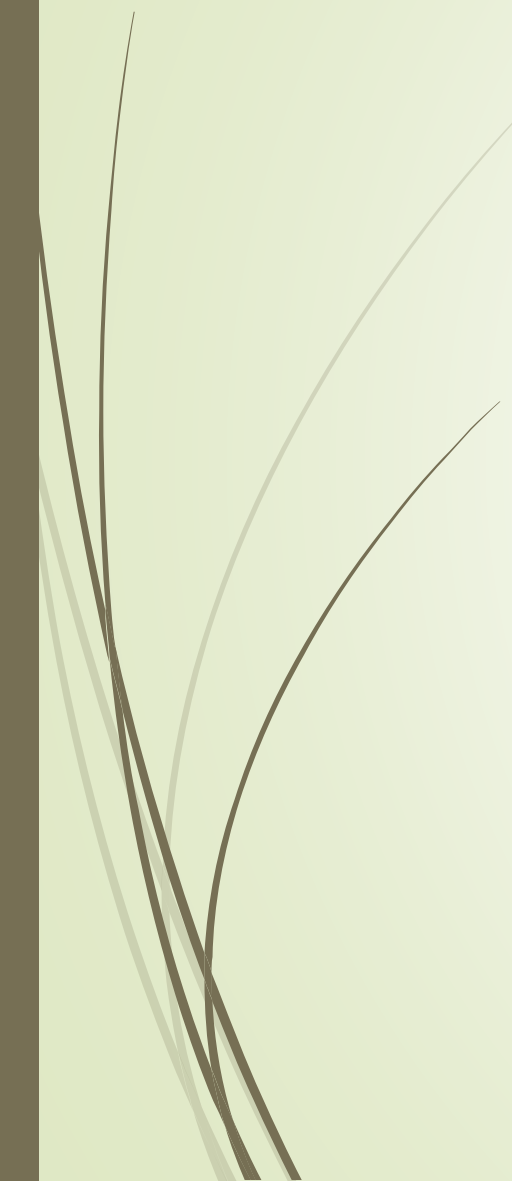
# Astragalus: Therapeutic Actions

- Adaptogenic
- Immune stimulant
- Diuretic
- Vasodilator
- Antiviral
- Hepatoprotective
- Antioxidant
- Cardiotonic





# Astragalus: Indications and effects:

- ▶ **Classic Energy Tonic.** Perhaps even superior to Panax ginseng for young people.
  - ▶ **Improves physical endurance.** Helps the body to adapt to external influences such as heat and cold.
  - ▶ General debility with decreased appetite and sweating
  - ▶ Astragalus **raises immune resistance.** Valuable for viral infections.
- 



# Astragalus: Indications and Effects:

- Ischemic heart disease and angina pectoris
- Used in treatment of prolapsed organs
- May be used in uterine bleeding
- Used as a blood tonic in anemia

# Astragalus: Pharmacodynamics

- Main areas of Study
- Immune Enhancement (Astragaloglucans)
- Anti Viral/ Cancer/ Post Radiation
- Cardiovascular Effects
- Hepatoprotective Effects
- Antioxidant Effects
- Tonic (Adaptogen) Effects



# Astragalus: Immune Effects

- ▶ Human Studies
- ▶ Prophylactic effect against the common cold (n=1000) decrease length and incidence
- ▶ Levels of IgA and IgG in nasal secretions increased after 2 months
- ▶ Increases Interferon (n=28) 2 months on Extract of 8 gm a day



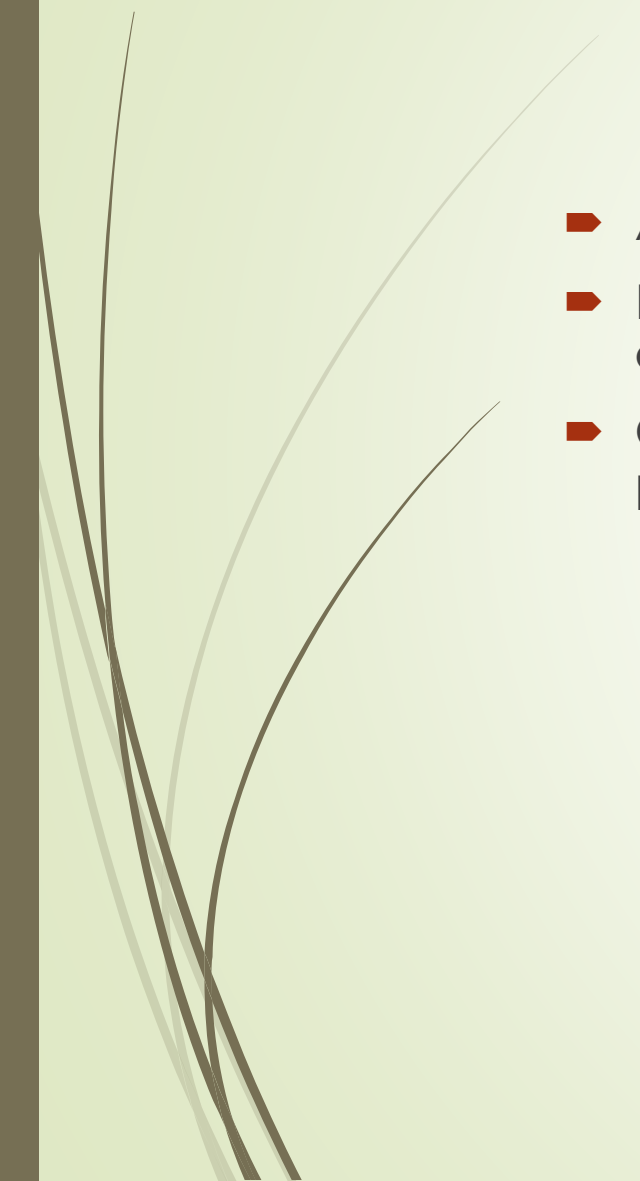
# Astragalus: Immune Effects in Cancer

- Widely used in China with Cancer in Combinations
- Commonly Used with Ligustrum lucidum
- Breast Cancer used as adjunct to radiation. Statistically significant decrease from 1 in 2 to 1 in 10.
- Lung Cancer adjunct to chemotherapy. Increase in mean survival from 204 days to 465 days (Morazzoni, Bombardelli 1994)



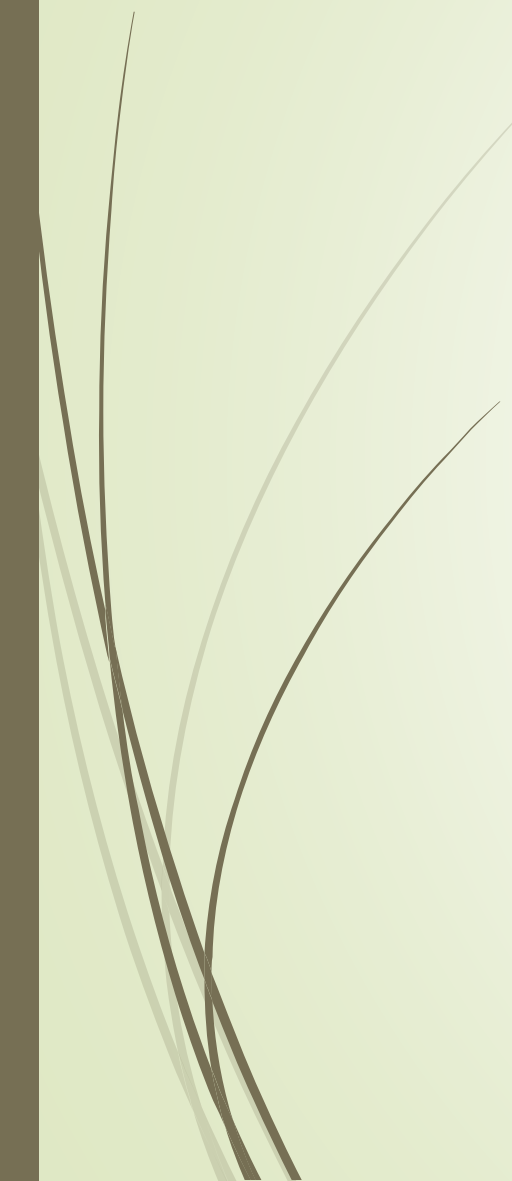


# Astragalus: Immune Effects

- ▶ Animal or In Virto Studies
  - ▶ **Restores immune function in immunosuppression by radiation, aging, cycloposphamide.**
  - ▶ **General Immune enhancement:** increase stem cells, lymphocyte proliferation, increased anti-bodies, increased activity of NK cells.
- 



# Astragalus: Cardiovascular

- ▶ **Summary of Cardiovascular Effects**
  - ▶ Inhibition of lipid peroxidation mitochondrial heart cells
  - ▶ Positive inotropic action
  - ▶ Hypotensive action
  - ▶ Vasodilator
  - ▶ Antiarrhythmic and Ca<sup>2+</sup> channel blocker
  - ▶ Diuretic (increased urine output and Na<sup>+</sup> excretion)
  - ▶ Cardioprotective and anti-inflammatory
- 





# Astragalus: Hepatoprotective

- ▶ Lowers Elevated SGPT in 1-2 months treatment with Hepatitis (unknown amount)
- ▶ Normalization of SGPT levels in 80% patients ( Injected form) Tang 1992, Zhung 1995
- ▶ Enhanced interferon production in Hepatitis by oral astragalus preparation. Zhung 1995

# Astragalus: Antioxidant

- ▶ Astragalus flavonoids demonstrated a protective effect on mammalian cell damage caused by the hydroxyl radical, inhibited lipid peroxides and increased superoxide dismutase activity in vitro. Wang 1996
- ▶ Three Astragalus saponins demonstrated superoxide anion scavenging activity in vitro. Wang 1995



# Astragalus: Adaptogenic

- ▶ Astragalus meets the criteria to be classified as a **true tonic or adaptogen**.
- ▶ **Modulation of the HPA** axis has also been observed. The body's ability to recognize and utilize the correct group of constituents within Astragalus, perhaps helps to explain its clinical diversity.



# Astragalus: Doses

- • The dried root by decoction, as a powder, tincture, tablets or capsules. 4 to 8, 500 mg capsules daily
- • 10-30g per day by hot water decoction.
- • Tincture: 1/5, 30% ETOH, 4-8 mls a day
- • Liqueur: one ounce a day



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# Resources:

- ▶ Glen Nagel, [gsnagel@msn.com](mailto:gsnagel@msn.com)
- ▶ Books
- ▶ Encyclopedia of Spirits and liqueurs, Stuart Walton, Norma Miller
- ▶ Homemade liqueurs and infused spirits; Andrew Schloss
- ▶ Grossmans, Guide to wine, spirits and beers, Classic 1955 edition.