The Herbal Medic

Field Manual

(using primarily plants of southwestern USA)

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Introduction

This field guide is designed to be usable by anyone who has had a very basic introduction to herbal field first aid. At my school "The Human Path" we offer several types of herbalism and wilderness first aid courses. They come together in an entry-level course called "SHTF (Sh*t Hits The Fan) Herbalism: Field Medicine in a Post-Disaster World.

However, even if you have never had any herbal training at all, this field guide will be very helpful to you. I briefly discuss the background information necessary to use and prepare herbal medicine, as well as of course identify and describe the plants and their uses.

In this first edition, I am limiting myself to just over 24 plants, as well as information on the very important subjects of plants for field hygiene, and use of activated charcoal. These plants are all found abundantly throughout Central Texas. The same or similar (medicinally) species can be found throughout many other parts of North America and Mexico as well.

There are literally hundreds, if not thousands of medicinal plants in the Central Texas and Southwest region of the USA. The purpose of this herbal medic field guide is to help the user work with 24+ of the most common and yet also most medicinally powerful and useful plants that grow prolifically in these regions.

Plant medicine is not the same as orthodox, western (allopathic) medicine. As the master herbalist Michael Moore used to say, "Drugs tell your body what to do. Plants ask your body what to do." It is important to realize this, even at the very basic level that this field guide is written toward. There is much more to healing than orthodox medicine understands, and there is much more to plant medicine than anyone on the planet understands. There are many modalities of healing with herbs. From energetics of Ayurvedic, Traditional Greek and Chinese Medicine to the spiritual aspects of Shamanism worldwide, to

the Western Wise Woman traditions, to Western Biochemical Medicine, and more, there are many different ways to approach herbalism and the effect of medicinal plants on the human body.

Even though this field manual is presented using a largely "symptomatic" approach (i.e. giving an herb or formula based primarily on assessment of symptoms in a mostly biochemical approach, bear in mind that all of the plants in this manual have other layers of healing modality to them.

Every plant has specific tastes, smells, moisture, heat, energetic qualities and much more.

Each plant and plant part also has an ideal time that is best to harvest for maximum efficacy in the way that you may want to use it. Some plant parts need to be dried first before being taken or prepared. Some need to be prepared fresh. Where mostly relevant, this kind of basic preparation information is given for each medicinal plant in this book.

In general, this book is aimed mostly at acute conditions in the field. This can be trauma (injury) or illness. Secondarily, the conditions this book is directed toward can also be environmentally caused illness (e.g. Giardiasis) or chronic illness. However, for illnesses that are chronic, long-term and probably more complex treatment protocols are usually indicated. In other words, nutrition, lifestyle, taking into account medications and previous treatments, etc., become very important. In contrast to this, if you are in a remote or post-disaster situation and someone has contracted severe dysentery – possibly from contaminated water – you are most concerned with the acute care of this person. Stop the diarrhea and fluid loss. Get rid of the infection as quickly as possible. Purify the water so that it doesn't happen again.

Along with this "acute care" approach, it is important to note that all medicinal plants fall somewhere on the spectrum between power food

and poison. Usually the plants we work with for acute care are closer to the "poison" end of that spectrum (and remember that all medicine is poison, depending on dose), mainly because these are the plants that effect the most change quickly in our bodies. If we have a staph or strep infection, we are concerned with clearing the pathogenic bacteria out of the tissue and supporting the tissue to give it strength to heal, as quickly as we can. This takes a pretty powerful herbal treatment protocol.

Remember to wildcraft (harvest) herbs ethically. Don't strip out all of one species from a given area, don't harvest the largest (mother) plant and don't harvest the smallest. The best is to wildcraft in areas that are overgrown, where your harvesting will prune and thin, helping the plant to better abundance.

Try to be aware not only of how many plants are in a given area that you are wildcrafting, but also how prolific and abundant/scarce a plant is in a larger region than just the small area you are working in.

Take care not to wildcraft along edges of agricultural fields (due to pesticides), major roadways and other areas where there may be toxins and pollutants built up in or on the plants you are harvesting.

Finally, if you can harvest medicinal plants that are being torn out anyway due to landscaping, farming, construction, etc., this is an ideal way to make use of and respect the plants that are going to help your body heal itself.

I hope you enjoy and use this book!

Sincerely,

Sam Coffman
June, 2014

Algerita, Agarita, Agarito, Desert Barberry

Botanical Name: *Berberis trifoliolata*

Plant Description & Notes

Trifoliate evergreen leaves, red berries (edible). Small, yellow flowers (6 petals, 6 sepals).

Root and lower stem cambium and wood bright yellow.

Roots of large plants can be broken off from outside w/o having to kill the plant.

Medicinal Uses:

Root: Very useful anti-bacterial. Also anti-viral, anti-protozoal, anti-helminthic, mucosal vulnerary, digestive bitter, cholegogue (congested gall), astringent. Very effective if taken immediately at the first sign of gastroenteritis of any type – such as the onset of traveler's diarrhea.
Externally can be powdered and applied to infections on the skin
Leaf: Effective anti-nauseal internally. Motion sickness, morning sickness, AMS, anxiety, dyspepsia and general nausea. Leaf also contains 5'-Methoxyhydnocarpin (MHC) and is very useful when mixed with the root for specific bacterial infections (1:4 leaf to root should be adequate), such as Methicillin Resistant Staphylococcus Aureus (MRSA) as well as any type of bacteria (usually gram positive) using the NorA type of efflux pumping mechanisms.

Preparation:

Root can be tinctured fresh or dried, (~40% alc.), dried and used externally or internally (extremely bitter – helps to take in a sour drink). Difficult to powder (very hard wood)
Leaf can be tinctured dry or fresh (~40% alc.), eaten or chewed fresh (watch for the spikey tips), infused dried or fresh as a tea, slightly sweet.

Antelope Horns, Inmortal, Spider Milkweed

Botanical Name: *Asclepius asperula*

Plant Description & Notes

Lance-shaped, alternate (or grouped) leaves. White and green flowers (5 white "balls" inside each flower, 5 petals). 2" – 4" long seed pods. Long tap root that likes packed soils and can be hard to dig up. Best to find it on a hillside and dig from the lower side.

Medicinal Uses:

Root: One of the most potent relaxing expectorants in N. America. Anti-microbial, lymph mover, cardiac tonic (increases heart contractility). Extremely good respiratory herb for an upper and lower respiratory infection, dry (or even wet) cough, cold & flu with a bad cough or chronic respiratory illness (COPD) and even lower respiratory infections (pneumonia, whooping cough, pleuritis, etc.). Also an effective herb for chronic heart weakness (e.g. Congestive Heart Failure). Can be used to stimulate labor or menses. *See contraindications.*

Externally (**root**) useful as a wound healer and anti-infective.
White Sap from plant stem useful as an anti-fungal (e.g. ringworm).

Preparation:

Root should be dried before tincturing, (~40% alc.). Root can be tinctured or chopped/ground and eaten after being dried Cold infusion is best if making a water preparation. Root can also be preserved as a syrup (cold infusion base). Externally, it can be applied as a poultice for wound healing.

Artemisia, Mugwort

Botanical Name: *Artemisia vulgaris.*

Plant Description & Notes

Deeply lobed, greyish or (blueish-green), alternate, perennial, evergreen leaves, distinct "sagey" smell when crushed, Plant is usually between 6" and 18" high and found in large clusters. Rarely flowers.

Medicinal Uses:

Leaf: Internally an extremely useful medicinal plant for the "gut" in a variety of ways. Digestive bitter that is useful for dyspepsia but also has anti-inflammatory effects on the gut lining and is useful for ulcers, gastritis, ulcerative colitis, etc. It is also anti-parasitic and works well in formula with Algerita and Prickly Ash (as well as other herbs not listed in this guide) for such.

Artemisia is also diaphoretic and diuretic – decent cold & flu herb - as well as anti-nauseal. It is useful for herpes (HSV1 and 2) virus outbreaks both topically and internally.

Externally: Minor fungal infections, minor anti-microbial astringent, poison ivy/oak, allergic skin reactions. I also use mugwort specifically (Artemesia vulgaris) in bruise, strain and sprain formulas for external tissue healing.

Preparation:

Leaf can be used fresh or dried and used in an infusion, tinctured dry or tinctured fresh (~40% alcohol), used externally as poultice, infused into oil for a salve or alcohol for a liniment.

Camphorweed

Botanical Name: *Heterotheca subaxillaris*

Plant Description & Notes

Alternate, stem-clasping leaves, sticky with a "camphor" smell. Several yellow flowers per plant, daisy-looking. Plant is usually between 12" and 5 feet high. Annual. Stems and flowers sticky and camphor-smelling.

Medicinal Uses:

Leaf, Flower, Stem: External use as an anti-microbial, anti-fungal wound wash for open wounds. More commonly used externally for bruises, sprains, strains and other soft-tissue injuries. Promotes tissue healing and soothes inflammation and pain in joints, muscles, connective tissue from injury. Works well with Juniper and Prickly Ash as a sprain/strain external formula.

Internally, Camphorweed has also been used traditionally as a diaphoretic for fevers and chills, as well as for upper respiratory infections. See contra-indications page for internal use.

Preparation:

Leaf and Flower: For external use, Camphorweed can be infused into water (as a tea wound-wash), an oil or salve for, or made into a liniment using 50%+ isopropyl alcohol.

Echinacea, Coneflower

Botanical Name: *Echinacea spp.*

Plant Description & Notes

Perennial with alternate, rough, hairy leaves and purplish inflorescence. Although they contain different constituents and medicinal effects, roots, leaves and flowers can generally all species can be harvested and used.

Medicinal Uses:

Whole Plant: Echinacea is, among other things, a superlative immune booster (raising WBC count) and tissue healer as well as a tissue detoxifier. Use Echinacea internally to help the body against onset of illness (especially upper respiratory), as an immune-booster and especially in formulas for bacterial infection. Use externally on the mucosa or skin itself to detoxify and heal infections of the mucosa or skin (e.g. infected or ulcerated wounds, infected insect or animal bites, strep throat, etc.).

The roots of *angustifolia* are overall more useful as a medicine. Whether in a water decoction or alcohol tincture (or both), they are highly anti-bacterial, assist in wound healing and work very well internally and externally. Mix *angustifolia* root (fresh or dried) with purpurea flowers and leaves (fresh preferred) for effectiveness.

Preparation:

Root, leaf and flower of this plant contain different medicinal constituents that can be extracted more potently by both making an 90%+ alcohol tincture as well as a water decoction of the same material and mixing them for a final tincture around 50%. However, Echinacea can be ingested raw, dried, as tea or simple 40% alcohol tincture and is still very effective.

Gumweed, Curlycup Gumweed

Botanical Name: *Grindelia squarrosa*

Plant Description & Notes

Annual with alternate, course-toothed leaves. Waxy, gummy resin on stem, leaf and flower bud that has a strong, aromatic and very distinctive smell.

Usually found in large amounts and is best harvested once it is starting to flower.

Preparation:

Leaves, buds & Flowers are best tinctured fresh or dry in ~70% alcohol for internal use. Grindelia can also be infused into an oil for salve on the skin. This is best done by making an ethyl or isopropyl salve (soaking in high % alcohol, then blending with oil and heating to evaporate off the alcohol). Grindelia can also be applied raw or dried as a poultice.

Medicinal Uses:

Leaf, buds, flowers: Internally, Grindelia is a superlative upper respiratory herb. It is a potent bronchodilator, diruetic and circulatory stimulant (similar to Antelope Horns). Very useful for spasmodic coughing, urinary tract infections (mild diuretic as well) and general fever, upper respiratory infections with pulmonary involvement (bronchitis, strep, cold/flu related coughing, dry coughs and wet coughs).

Externally, Grindelia is an excellent herb for contact dermatitis (e.g. poison oak, etc.), eczema, burns, skin sores/ulcers.

Juniper, Ashe Juniper, Mountain

Botanical Name: *Juniperus spp.*

Plant Description & Notes

Coniferous trees (Ashe Juniper), or shrubs and ground cover in some species with scale-like, aromatic leaves (needles) and very aromatic berries (cones) that are generally round and bluish. Berries are ready to harvest when they are purple under the grey dust on the surface.

Preparation:

Berries (and **needles**, although they are not as potent) can be made into tea fresh or dried, eaten fresh or dried, or (best) tinctured in ~ 70% alcohol fresh or dried. Can also be infused into oil (salve) or isopropyl alcohol (liniment).

Medicinal Uses:

Berry (and/or needle): Internally, Juniper is a very potent anti-bacterial for urinary tract and respiratory tract infections. It is effective against a wide-spectrum of gram+ and gram- bacteria, as well as an inhibitor of bacterial defense mechanisms that make it also an effective synergistic herb when used with other anti-bacterial herbs. Although there are some cautions (see contraindications page), this is one of the potent anti-bacterial and diaphoretic, diuretic N. American herbs.

Externally, Juniper is also very useful against bacterial infections and wounds/ ulcers that heal slowly, as well as soft tissue injury (sprains, strains) healing.

Milk Thistle

Botanical Name: *Silybum marianum*

Plant Description & Notes

Annual, spiny, waxy, alternate leaves with a milky, spider-web type pattern on them. Purple flower head. Harvest the seeds by cutting off the flower heads after they have opened and putting into a paper bag. Allow them to dry a few days first and then separate seeds.

Preparation:

Seed: Milk thistle seeds can be easily dried and ground in a coffee grinder, encapsulated or used like a powdered tea. Or tinctured in ~40% alcohol dried or fresh.

Medicinal Uses:

Seeds: Milk Thistle is a very powerful liver restorative, protector and detoxifier. Considered one of the classic "blood cleansers," it helps the liver perform its job of filtering and metabolizing the contents of the blood that flows in through the portal vein. It is highly useful to help the body heal itself from poisoning (food poisoning, chemical toxins, poisonous plants, etc.), as well as liver damage such as cirrhosis, chronic alcoholism, hepatitis, etc. Milk thistle is also a diuretic and stimulates cardiovascular circulation. It has mild expectorant qualities and is very useful both by itself or in formulas for liver congestion or damage with herbs such as Algerita, Wafer Ash, White Horehound and Artemisia.

Monarda, Bee Balm, Lemon Bee Balm

Botanical Name: *Monarda spp*

Plant Description & Notes

Annual mint family with opposite, serrated, lance-like leaves, purple flowers and square stem. Leaves and flowers very aromatic with a strong almost "medicinal" lemony-oregano taste

Preparation:

Leaf and flower of Monarda can be used fresh or dried, as tea, decoction, wound wash or in an alcohol (~40%) tincture. It can also be infused into an oil or salve alone or in a formula for wound care.

Medicinal Uses:

Leaf and Flower: Monarda is highly useful as an anti-microbial for bacterial and viral infections internally. It is popularly used in cold and flu formulas and is a good diaphoretic. However, it is also very useful at the onset of any type of upper respiratory, mucous membrane (sinus, throat, mouth sores, etc.) infection or illness such as strep throat, mono, etc., as well as UTI's and yeast infections. In the mint family, Monarda also is a decent carminative for indigestion and can be used for tooth and gum care.

Externally, Monarda can be used in the same manner on wound infections, yeast infections and ulcerated wounds.

Mullein

Botanical Name: *Verbascum Thapsus*

Plant Description & Notes

Biennial with a rosette of very soft, pubescent, large leaves in the first year and produces a stalk with small, yellow flowers in the second year. Mullein flowers, leaf and root can all be harvested for a variety of uses, and is found throughout the USA.

Preparation:

Root can be used dried or fresh. Powered, chopped and infused in water or tinctured in ~50% alcohol. **Leaves** can be used fresh or dried, powdered, chopped and infused in water or ~40% alcohol. **Flowers** can be used fresh or dried and infused into oil.

Medicinal Uses:

Root: Internally, Mullein is useful for UTI's – especially in a formula. It is a diuretic. Mullein root also helps soften connective tissue and ease pain, especially lower back.

Leaf: Internally, Mullein leaf is very useful as a respiratory expectorant and mucosal vulnerary during upper respiratory infections. Externally, Mullein leaf is very good at drawing out infection from abscesses, splinters, etc., as heated poultice

Flower: Infuse in oil and apply as an ear oil for ear infections. Can be formulated with Garlic for this purpose.

Oak

Botanical Name: *Quercus spp.*

Plant Description & Notes

Deciduous (aside from live oaks) tree with a wide variety of leaf shapes between species, spirally arranged along the stem. The fruit is an acorn contained in a cup. Oaks contain different amounts of tannins and other medicinal constituents in the bark, galls, leaves and acorns.

Preparation:

Inner Bark, leaves & galls (the round balls formed when wasps burrow and nest into bark) can be prepared and/or used fresh or dried. Tea, decoctions, alcohol tinctures (~40%), infused oils/salves and isopropyl alcohol (liniment) are all effective preparations. Acorn water (first leaching) can be used also.

Medicinal Uses:

Oak Bark, Leaves & Galls can be used very effectively internally (see contra-indications if ingesting) and externally as an anti-bacterial (esp. staph & strep) gargle, spray or external wound wash/poultice for even severely infected wounds, a powerful astringent (diarrhea, burns, cuts, abrasions), pain relief (headaches, soft tissue injuries), eye wash, mouth sores, hemorrhoids, post-partum care and vaginitis. Historically, Oak bark as a wash or bath was used very successfully for Impetigo (staph or strep infection on the face). I mix it 1:1 with Pomegranate rind as a potent antibacterial for gram positive bacteria like staph and strep.

Plantain, Red-Seed Plantain

Botanical Name: *Plantago spp.*

Plant Description & Notes

Annual herb with a basal rosette, leaves that have parallel veins and seed stalks. Plantain leaves can be harvested throughout its lifespan and the plant is generally very prolific – growing in a wide range of soils and ecosystems. There are over 200 species of plantain, all of which are useable as medicine and food.

Preparation:

Leaf of Plantain can be used fresh or dried, eaten or used raw, as tea, decoction, wound wash or in an alcohol (~40%) tincture. It can also be infused into an oil or salve alone or in a formula for wound care.

Medicinal Uses:

Leaf: Plantain has a wide variety of medicinal uses. It is probably first and foremost an excellent vulnerary both on the skin as well as the mucosal tract. This makes it useful internally for upper respiratory illness and in0jury, stomach ulcers, acid reflux, sore throat, and infections of the upper respiratory system (to include sinus and throat). Plantain is also a decent relaxing expectorant. Additionally, Plantain contains baicalin which makes it an excellent adjuvant herb in staph and strep anti-bacterial herb formulas. Externally, Plantain is famous for insect and animal sting and bite relief. It works well in salve formulas with herbs like Gumweed for poison ivy/oak relief.

Prickly Ash, Toothache Tree, Hercules Club, Tickletongue

Botanical Name: *Zanthoxylum spp.*

Plant Description & Notes

Deciduous, substory tree with pinnate, alternate leaves, thorns and dark red – to black berries. The leaf is aromatic. All parts of the tree will cause the tongue to tingle, and testing a leaf this way will teach you the taste and feel of this plant for identification. This is a tree that is extremely good medicine and should be cultivated whenever possible.

Preparation:

Bark, Berry, Root Bark can all be used interchangeably. The berry and bark are best to use as they can be harvested without damaging or killing the tree. The plant materials can be used directly, fresh or dried. Water preparations (teas, decoctions) can be made with fresh or dried plant materials. Tinctures (~50% alcohol) are generally more useful and concentrated.

Medicinal Uses:

Bark, Berry, Root Bark are all extremely (and for the most part equivalently) good medicine. Internally, Prickly ash is an excellent diaphoretic (cold and flu, fevers, chills), diuretic (UTI's), antimicrobial (esp. anti-viral), analgesic (esp. back and nerve pain, sciatica, etc.), peripheral vasodilator, analgesia and healing for gum and mouth sores, lymph mover and "carrier herb" in a formula – especially for the upper respiratory tract. Externally, Prickly Ash is a superb carrier herb for soft-tissue injury formulas as well as a counter-irritant for non-healing wounds/ulcers.

Prickly Pear, Nopal

Botanical Name: *Opuntia spp.*

Plant Description & Notes

Cactus with flat pads, needles and glochids (hair-like, barbed, fine needles), oblong fruits and yellow to red (and anywhere in between) colored flowers. Prickly Pear is prolific and grows in even the worst soils (although it likes a lot of sun) and droughts, and will grow if a pad (or part of a pad) is left on top of the ground.

Preparation:

Flower can be used fresh or dried with water or directly. If dried, can be reconstituted with water and used again. Flower could conceivably be tinctured in a low (~20%) percentage alcohol, but water-based preparations are preferable. **Pad** can be filleted, and the gooey mucilage in the center scraped out as a base for poultices, or by itself. This goo can be dried, stored and reconstituted later with water. **Fruit** can be pulped and used as a syrup base or nutritious smoothie by itself.

Medicinal Uses:

Flower is a superb mucosal vulnerary for any kind of infection or injury to the mucosa from the mouth to the GI tract to the urinary and respiratory tracts. **Pad** is as good as, if not better than, Aloe vera for burns, abrasions and other external skin injuries. Pad (especially heated) is also superb material for pulling/draining abscessed tissue (infections under the skin) and helping drain and heal gum infections.

Prickly Poppy

Botanical Name: *Argemone spp.*

Plant Description & Notes

Annual herb with alternate, spiny leaves. This plant is often mistaken for a thistle, and can be identified by the 4-6 petaled flower (when in flower) and the white veins that can be seen on the front of the leaves. Not to be confused with milk thistle, the whitish pattern only runs along the veins in straight lines. Contains orange sap.

Preparation:

Stem, Leaf, Flower: The plant (stem, leaf, flower) should be gathered and macerated fresh when plant is in flower, used in tea or decoction, or tinctured fresh (~40% alcohol). To tincture, blend with whatever amount of alcohol you are using, and add plant matter until it is so thick that it is barely supersaturated. **Seeds** can be ground fresh and infused into an oil for external use.

Medicinal Uses:

Stem, Leaf, Flower are best used for pain relief. Prickly Poppy is a very effective nervine that will provide a soporific pain relief from injury, burns, etc., as well as relief from insomnia (especially if pain related). Prickly Poppy also works as an effective smooth muscle relaxant for intestinal cramping (e.g. dysentery), spasmodic coughing (e.g. asthma), hernia pain and other cramping, smooth muscle pain. The **seeds** (aside from being edible) can make a good, external analgesic wash for minor burns and abrasions.

Queen's Delight, Stillingia

Botanical Name: *Stillingia texana*

Plant Description & Notes

Perennial herb with alternate (spiral) leaves that are lance-like and serrated. Flowers are yellow and fruits usually in pairs at the base of the flower spike. Stems have a milky sap. Stillingia is fairly drought resistant and can be found in all kinds of soils. If established in an area, it is easy to find and thin out areas through harvesting, without negatively affecting growth of the species.

Preparation:

Root of Stillingia should be tinctured in alcohol (~60% or greater) fresh or freshly dried. If dried, tincture it within a few months of harvest at most, as it will lose its efficacy rapidly.

Medicinal Uses:

Root: Stillingia is a plant that has an affinity for moving the lymph - especially in the lower part of the body. It is very good at reducing inguinal lymph node swelling, secondary (for instance) to infections in the genitourinary system (STD's, HSV2, UTI's, etc.). Stillingia is also an excellent herb to use in acute or chronic respiratory conditions, as well as infections of the upper respiratory system. It helps loosen laryngeal and pharyngeal secretions in the case of a dry cough, and is also helpful in stimulating lymph flow in the upper body nodes (sub-mandibular, sub-axillary), as well as eczema, allergic dermatitis and skin issues secondary to (among other things) congested lymph. It is better used in a formula rather than as a simple.

Red Root, New Jersey Tea

Botanical Name: *Ceanothus spp.*

Plant Description & Notes

Shrub with alternate or opposite, rough leaves containing palmate veins and finely serrated margins. Inflorescences contain white flowers with 5 petals and 5 stamens. The root is red in color and the root system of Ceanothus spp. can grow to be quite extensive over years. Red Root was used extensively and effectively in Native American herbalism and gained popularity (due to its effectiveness) in the 20th century in America.

Preparation:

Root: Although the leaves can be used, they are not nearly as effective (or effective in the same way) as the root. The root can be used fresh or dried (traditionally used dried) as a cold or warm tea or decoction, or tinctured (~60% alcohol).

Medicinal Uses:

Root: Red Root fulfills many different medicinal functions very well. First of all, internally it is an excellent lymph mover and immunostimulant. From a more energetic (e.g. Eastern) standpoint it would be said to "move congested blood" and support the lymph through the function of the spleen. This makes Red Root good for anemia and building cellular health. Red Root also supports the liver and is very useful for mouth and gum infections, tooth and gum health and upper respiratory infections. Externally it makes an excellent wound powder as it is hemostatic, anti-inflammatory and anti-microbial.

Rosemary

Botanical Name: *Rosemarius officinalis*

Plant Description & Notes

Evergreen, spikey, needle-like, opposite leaves with purple flowers. Rosemary is a shrub that is fairly drought tolerant and once established produces a large amount of growth yearly. The leaves are very aromatic (mint family) and can be harvested year-round.

Preparation:

Leaf: Leaf can be used fresh or dried in water (tea, decoction) or tinctured fresh or dried. Leaf can also be infused into oil, salve or liniment. Stems are fairly hard wood, but I use them as tooth sticks. The stem bark has some medicinal value similar to the leaves as well.

Medicinal Uses:

Leaf: Internally, Rosemary leaf is usually considered a culinary herb, but it is also an extremely potent medicinal plant. It is a heating herb and makes a superlative diaphoretic for fever/chills states. It works very well to dilate peripheral blood vessels in cold/numb fingers and extremities (Raynaud's syndrome, poor circulation). Rosemary opens sinuses and helps expectorate mucous, making a very effective cold and flu herb. It also decongests the liver and assists digestion and dyspepsia or indigestion. Externally, Rosemary is a counter-irritant and promotes tissue repair in cuts, sores and burns. Rosemary is also an effective "mental nervine" for type A personalities or people who multi-task everything in their lives. It helps a person focus on one thing at a time.

Skullcap

Botanical Name: *Scutellaria spp.*

Plant Description & Notes

Annual (or perennial), square stemmed, opposite leafed mint-family plant with varying leaf shapes and flowers with upper and lower lips. The lower shield on the calyx looks like a "skull cap" which is the origin of the common name. *Scutellaria wrightii* shown in the picture.

Preparation:

Root, Leaf and flower: Skullcap can be prepared in water (tea, decoction) fresh or dried, or tinctured in alcohol (~40%). The herb should be tinctured within 4 or 5 months of harvest (whether dried or not) as it will fairly quickly lose its efficacy.

Medicinal Uses:

Root, Leaf and flower: Skullcap is a very effective nervine – having a calming and relaxing effect on the body and mind. Although not an analgesic per se, it is very useful in cases of shock (after trauma), lessening anxiety from drug or other addiction, insomnia and depression. It is useful for anxiety or stress related cardiovascular issues such as hypertension, palpitations and spasmodic angina. Skullcap also mildly stimulates digestion and is a mild diuretic. It is effective alone but also works very well in formulas. *Scutellaria laterifolia* is the herb of choice, but many if not most other species have similar (if less powerful) effects.

Wafer Ash, Hop Tree

Botanical Name: *Ptelea trifoliolata*

Plant Description & Notes

Citrus family, deciduous understory tree/shrub which contains berberine as well. Wafer Ash has trifoliate, smooth leaves (leaflets of 3) and seed clusters that look like wafers. White, aromatic flowers with 4-5 petals. Wafer ash grows well in shaded areas and can be harvested without damage.

Preparation:

Leaf and bark of Wafer Ash can be used dried or fresh in a tea or decoction. More useful is generally to tincture either or both together in ~40% alcohol. The leaves can be dried, powered and used as a wound powder, or macerated and used fresh as a wound wash.

Medicinal Uses:

Leaf: Wafer Ash leaf is a very effective digestive herb and stimulates the gallbladder in cases of digestive issues either emanating from or exacerbated by gallbladder congestion (poor digestion of meat and fats, bloating, heartburn and acid reflux). The leaves also contain berberine (you can taste it) which makes them an effective antimicrobial and a good adjuvant herb when taken with other anti-bacterial herbs. Also effective as a wound wash or wound powder as noted above.

Bark: Wafer Ash bark has many or most of the same properties as the leaf and is also an excellent diaphoretic for fevers, chills and general "body flu" symptoms.

White Horehound

Botanical Name: *Marriubium vulgare*

Plant Description & Notes

Perennial herbaceous plant with greenish-gray, opposite, soft, slightly rough, hairy leaves. Square stem (mint family), white flowers in clusters on the upper portion of the stem. White Horehound usually spreads prolifically and thrives in even poor soils and drought conditions. Some consider it invasive, and it usually easy to find nearby, large stands to harvest from if you find one plant.

Preparation:

Leaf and flower can be used dried or fresh. Powered, chopped and infused in water (tea) or tinctured in ~40% alcohol. Leaf and flower can also be infused into oil, honey (syrup) or salve. It can be applied dried or fresh to external wounds for tissue healing.

Medicinal Uses:

White Horehound is the classic cough-syrup medicine for upper (and lower) respiratory infections. It is a superb relaxing and stimulating expectorant and it also opens bronchial passages during respiratory congestion from infection or chronic obstructive pulmonary disease. White Horehound is also a superlative digestive bitter which is very useful for digestive issues such as dyspepsia (especially when eating fats and meat), esophageal reflux and low stomach acid secretion & lack of appetite. It can mildly increase the contractility strength of the heart. It is also an excellent vulnerary and tissue healer for skin and mucosa.

Wireweed

Botanical Name: *Sida acuta/ rhombifolia*

Plant Description & Notes

Perennial, woody plant with alternate leaves that are serrate on the apical half of the rough leaf (the non-apical half being a smooth margin. Sometimes annual, mallow family with 5-petaled flowers that are whitish-yellow in color. Both Sida acuta and Sida rhombifolia can be used interchangeably – as well as (likely other sida species also).

Preparation:

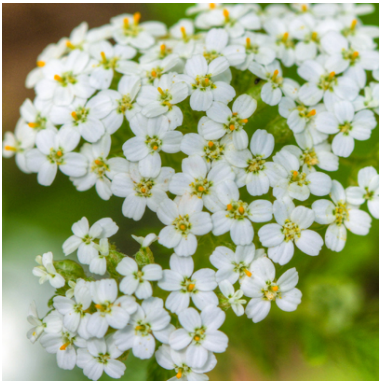
Root, leaf, flower and seed can all be used fresh or dried – internally and externally. They can also be tinctured fresh or dried. Best quality tincturing requires both hot-water decoction and alcohol. Start with the plant in a pot of acidic water/vinegar (pH ~5.0) and simmer at low temperature until about 50% has evaporated. Then allow to cool and add enough alcohol to bring the total alcohol content to about 30-40% alcohol and finish as you would finish an alcohol maceration tincture.

Medicinal Uses:

Root, leaf, flower and seed are all usable for a wide variety of issues. Wireweed is a very powerful antibacterial plant for a wide spectrum of bacteria. Additionally, wireweed is a typical mallow and is a highly effective mucosal vulnerary. This makes it a superlative herb for upper respiratory infections (esp. bacterial), sore throats, strep throat, gum and mouth infections. Externally as an excellent wound powder on infected wounds, burns and abrasions.

Yarrow

Botanical Name: *Achillea millefolium*



Plant Description & Notes

Perennial flowering plant with angular, rough stems, alternate, bipinnate, finely cut, soft leaves that appear almost fern-like, and white flowers. Yarrow spreads both by seed as well as rhizome and can be found throughout N. America. It can be harvested any time of year and grows prolifically in disturbed and well-drained soils.

Preparation:

Root, leaf, flower and seed: Yarrow can be used fresh or dried. In a tea, decoction or tincture (~40% alcohol). It can be infused in and oil, salve or liniment, or used in a sitz bath or any other method of soaking an injured part of the body.

Medicinal Uses:

Root, leaf and flower: Yarrow is superlative in its effect on the body in a number of ways: Internally, it is a diaphoretic (excellent cold & flu herb, fever and chills), opens skin eliminative channels, heats the body during lack of circulation, tones and relieves irritation and congestion in the genito-urinary tract (diuretic, urinary incontinence due to UTI or inflammation, urinary stones, congestive dysmenorrhea, PMS, fibroids) and other mucous membrane (mouth and gum infections). Externally it is a superior wound and tissue healer, hemostatic and breaks up congested or congealed blood (bruises, sprains, strains, inflammation around soft tissue injury). A yarrow bath will effectively stimulate circulation and initiate sweating.

Yucca, Buckley's Yucca, Twist Leaf Yucca

Botanical Name: *Yucca spp.*

Plant Description & Notes

Evergreen, usually spiny, lance-shaped leaves emanating from a basal rosette.

Yuccas are "caulescent" – producing a long stem or stems from the center of the rosette usually, that terminate in panicles of white or whitish flowers. All yuccas are fairly interchangeable in regards to their medicinal qualities.

Preparation:

Root: To use the root for soap (hygiene) keep the root bark intact and it can be chopped up and agitated in water fresh or dried.

If using the root medicinally, peel the root bark and use the root in tea once dry, or tincture in ~50% alcohol. Alternatively, the root can be ground fresh and applied externally to soft tissue injury as a poultice.

Medicinal Uses (see hygiene, cleanliness and vascularization on page 29 as well)**:**

Root: Internally, Yucca root is very effective as an anti-inflammatory. It contains a high amount of saponins that bind with bacteria in the gut that contribute to inflammatory conditions such as rheumatoid arthritis and even osteoarthritis, reducing systemic inflammation and chronic muscle/joint pain. Traditionally, the fresh root was ground to pulp, boiled in water for about 15 minutes and applied warm to soft tissue injuries and even non-healing wounds.

Charcoal

Activated charcoal is made by burning wood with low or no oxygen. This forms a very porous, microscopic "carbon sponge." There is a US Pharmaceutical /Food grade of charcoal which is the kind of charcoal to use for medical applications. Activated charcoal from coconut hulls is best for medical applications due to its larger number of micropores for removing microscopic organic material. Making highly activated charcoal involves adding steam and acid to the process. This highly activated, USP grade charcoal can be bought online.

Preparation:

Externally, Charcoal can be mixed with water for a thinner mix (which will dry faster) or with flax seed or even cornstarch which will hold the moisture longer. However, I feel it is most effective to mix with water (distilled, if possible). If you think of activated charcoal as a carbon "sponge" you want the cleanest form of that sponge when you use it.

Internally, mixing with water is the fastest and easiest way to ingest it.

Medicinal Uses:

Externally, activated charcoal is the first choice in the field for pulling infected tissue and pathogenic bacteria out of an infected wound. It should be mixed as described above and put as a paste directly onto infected tissue. It is necessary that the charcoal come in contact with whatever it is cleaning (like a sponge).

Internally, charcoal is extremely useful to soak up poison throughout the entire digestive tract. See contraindications.

Honey

Plant Description & Notes

Honey is the product made by bees from flower nectar. It is stored and used as a primary food source by bees, inside of honeycombs made from beeswax. Locally harvested honey is preferable if possible, and should be unpasteurized and unheated, as heating over about 115^{o} F will neutralize many of the antimicrobial properties of honey.

Preparation:

Honey can be a base for many preparations itself. Poultices, syrups, lozenges and honey extracts all use honey as a preservative, sweetener and restorative, anti-microbial base for an herbal preparation.

Medicinal Uses:

Honey is anti-microbial and can be used very effectively on wounds and burns. The flower that the honey is made from can have an effect on its anti-microbial properties. For instance, “Manuka” Honey from Manuka trees in Australia and New Zealand has a high degree of anti-microbial properties to it. Neem honey is another highly effective anti-microbial. Honey can be used as a poultice by itself or as a base for a poultice mix. For instance, a honey poultice using Yarrow, Plantain, Echinacea, Oak and Wireweed makes a very useful burn poultice. Monarda, Juniper and Wireweed make a good formula to infuse into honey for a throat or upper respiratory infection.

Propolis

Plant Description & Notes

Propolis is the resinous substance that is obtained by bees from resins and oils of certain trees (elms, poplars, birch, etc.) and secreted in order to help seal in the hive as a sort of biological cement that protects not only from environmental conditions but also from viruses, bacteria and other pathogens, as well as several other anti-microbial uses by the bees themselves.

Preparation:

Propolis is highly resinous and not water soluble. It must be tinctured in very high percentage alcohol. At least 80%, and I prefer pure grain alcohol (95%).

Medicinal Uses:

Propolis is best used in the same way that bees use it: To seal and protect. In this way it can be used over wounds and mucous membrane infections, sores or wounds, following the application of other herbs first (or by itself). It is useful, for instance, as a "liquid bandage" on top of an infection like strep throat, after using an herbal, anti-bacterial throat spray or gargle. It is useful in the same way over the top of an abrasion, laceration or burn after the application of other herbs. It will create a sticky glue patch that will metabolize in through the skin, providing anti-fungal, anti-viral and anti-bacterial support, as well as salicylic and organic (not the same as inorganic) benzoic acid.

Hygiene, Sanitation and Vascularization

In the field, and especially in a post-disaster setting, where the environment is richly loaded with grime, garbage, waste, sewage, infectious disease and body fluid, field hygiene and sanitation are absolutely paramount. In regard to any type of healing, but especially relating to wounds, if you can keep the area clean and vascularized and perfused (i.e. healthy blood supply to and from the tissue), the body will heal on its own quickly and efficiently.

Hygiene:

"The solution to pollution is dilution," is a saying that describes the easiest and best method for cleaning a laceration or wound in the field. Using saline solution with some kind of mild soap or one of the saponin-containing plants such as Yucca (pg. 25), Soapberry or Soapwort, is best. Normal saline can be created by adding 1 teaspoon of non-iodized salt to a quart of water.

However, any clean water, preferably warm (to help break up and wash oils) is fine. Use pressure such as a syringe, to apply enough force to the water stream to clean out debris. Alternatively, wound wash solutions that are sterile and isotonic can be carried in the first aid kit.
Although it is not necessary, there are many good herbs that work well as a wound wash. Some of the best herbs for this purpose that are in the materia medica for this field guide are: Yarrow, Monarda, Wafer Ash (leaf) and Plantain.

Sanitation:

Keeping human waste, garbage, waste water, body fluids and other pollutants away from living, cleaning and cooking areas is crucial to the health of any field or post-disaster environment – especially a field clinic. For the short term, burying human waste no closer than 250 feet from any living, food prep, water or clinic areas is a good start. With human waste, it is very helpful to separate liquids from solids – which is best done by having separate areas for each. This is not a satisfactory long-term solution, however. There are many sustainable long-range alternatives which all generally fall under the concept of "composting toilets" in one way or another.

Vascularization:

Vascularization refers to maintaining micro blood and lymph circulation to damaged tissue, which greatly speeds healing. This is most effectively done through the use of herbs and herbal preparations that can directly affect an infected, keratinized, ulcerated or other type of non-healing wound and wound area – whether internal or external.

One of the important concepts of health is that where there is stagnation, disease will often follow. Our bodies work on the concept of movement and flow of fluids between compartments, cells, organs, organ systems and more. When that movement is impeded – through a physical or other blockage – we find that it is a perfect stagnant environment for bacterial growth, for inflammation, for tissue damage and scarring and for an unhealthy general state of tissue.

So aside from the first aid approaches (for instance cleaning out a wound or hydrating as part of the care of a UTI) that adhere to this precept of flow vs. stagnation, we can also affect the internal environment or "tissue terrain" greatly by striving for better circulation. For instance, if there is an injury, there are white blood cells, dead tissue, micro-clots and other debris that are impeding the normal flow of fluids to the area. The faster we can restore normal flow of fluids, the faster our body will lower inflammatory reactions and heal tissue, overcome infection and so forth.

Externally to stimulate circulation, we can use herbal counter-irritants such as Juniper and Prickly Ash. Internally we can use those to and also we can (in the case of damaged or infected mucosa) also soothe and increase fluidity to using mucosal vulneraries such as Plantain, Horehound, Antelope Horns and Wireweed.

Fresh – Use the part of the plant that you need, freshly after picking. Alternatively you can freeze, juice and freeze (ice cubes) and any other way you would normally take a fresh plant as food.

Dried – Dry the leaves, flowers, and stems by clipping stems and hanging plant upside down in the house or in the shade (never in the sun). Or you can place these plant parts on screens, or in a food dryer on a very low (~90o F) heat. Peel inner bark and hang to dry in the same manner as aerial parts. Slice roots lengthwise. The important concept to remember when drying is to dry without allowing any moisture to form mold.

Tincture – Maceration tinctures are made by soaking the fresh or dried herb in alcohol or vinegar (or glycerine for a "glycerite") for approx. 2 -3 weeks and shaking at least a few times per day. The ratio of the weight of herb (per gram) to the volume of liquid (in mL) gives you a ratio of strength such as 1:4, 1:2, etc. A good ratio for dried-herb maceration tinctures would be around 1:4 (any stronger and the dried herb clumps too much) and for a fresh-herb tinctures it would be around 1:2.

Oil/Salve – Oils can be infused in various ways. The simplest is to place the herb material (fresh/wilted or dried) into the oil and heat the oil for several hours at approximately 110o F, while stirring occasionally. Once the oil has been infused, it can be strained and used this way, or hardening material (beeswax, paraffin, etc.) can be added in order to create a salve. Oils that are generally more stable such as olive oil, coconut oil, etc., will last, but it helps to add preservatives and carrier oils (closed tissue only) such as vitamin E oil, tincture of benzoin, essential oil of camphor, eucalyptus, clove, etc. Infused oils can be rubbed on the skin, used as ear oil, etc. Salves can be used for open wounds (anti-microbial) – although that is not recommended in a field environment – or more useful in the field (less infection worry) for sprains, strains, poured into molds while hot for lip balms, suppositories, etc.

Infusion/Decoction – Infusion is another word for "tea." For a hot infusion, add boiling water to the herb and let it steep, then strain as desired. For a cold infusion, add cold water and let it steep. A decoction is a tea that has been simmered until the water volume has been reduced by a significant percentage such as 50%. Add the amount of herbs desired, based on strength, to a stainless steel pot of water and simmer the pot until the water content has been reduced by around 50%. Then strain and use, store for up to several days in a refrigerator, or use as a base for syrup.

Syrup – To make a syrup, start with a decoction as your base, then strain. Return the decoction to the heat and add honey, blackberry brandy and/or other alcohol as desired. The finished syrup should be about 1/8 honey by volume (or more if needed for taste) and about 20% alcohol. This will preserve it for over a year, especially if stored in a refrigerator.

Poultice – A poultice is a way to allow an herb (or moisture from the herb) to seep into the skin. This may be for skin that is broken (e.g. laceration) or for closed-skin injury (e.g. sprain or strain). The herb(s), mixed with fluid that has water and/or oil content to it, becomes metabolized through direct contact with broken or unbroken skin, and helps the body heal locally. The solutions that can be used to mix the herb with are water (a minimum of clean, preferably purified or distilled), aloe vera gel or juice, prickly pear gel, honey (slightly heated to allow it to mix more easily), olive oil, castor oil and anything else that is viscous and contains oils and/or water to allow it to metabolize through the skin.

For open wounds, the poultice should generally not be pushing the herb itself into the wound (with the exception of charcoal poultices), but providing more of a "tea bag" effect with the herb and poultice soaked in solution, wrapped in gauze and dripping the "herb tea" into the wound or onto the injury over time.

Charcoal poultices are different in that the charcoal has to come into contacted with infected tissue in order to work (think of it as an extremely fine sponge). By my own personal definition, this is really a "plaster" (see below)

After mixing the herb material (could be fresh, or dried, the more finely macerated the better, the greater the amount the better) with the solution to a wet paste consistency, then place on the affected area and wrap in place with ACE wrap or bandage, etc.

Plaster – A plaster is a mixture of herb usually with some water-containing solution that is then directly applied to the skin, to the mucosa or even to an open wound or burn. This can be dangerous in some cases because you are introducing more particulate matter into an area that your body may have to deal with if it is an open wound.

However, plasters are very safe and useful when applied to unbroken skin in order to help strains, sprains and even to loosen up phlegm or mucous in the lower respiratory tract.

A plaster can be made by mixing a thick paste of ground herb with a vegetable oil, water, aloe or prickly pear juice or honey (especially good for burns). This is then applied directly on the skin or injury. There is more detail to observe depending on specific use, that I will not address in this book, as every specific injury has something to watch for and be aware of when using a plaster.

Liniment – A liniment is similar to a tincture, except usually isopropyl alcohol is used as the menstruum. A liniment is normally created as a maceration tincture, then strained and filtered, and can then be applied directly on (unbroken) skin. Isopropyl alcohol is also a rubefacient and increases the absorption by dilating peripheral blood vessels while also evaporating quickly.

Preparations: Advantages & Disadvantages

Alcohol Tincture: Fresh or dried herb preserved in alcohol or vinegar.

- **Advantages:** A tincture will last longer than the dried or fresh herb. It is more convenient. The dosages can be easily calculated. It can be taken sublingually, affecting a faster and more effective result. It can be used topically, on mucous membranes, diluted greatly in water for sinus, ear and eyewashes, and nearly used in every application that the fresh or dry herb can be used.
- **Disadvantages:** Not all of the constituents may make it into the alcohol. It can be hard to take (taste). It is not as versatile used topically as the fresh or dried herb is. It may be less potent than fresh herb. Alcohol may be a problem for some people.

Fresh Herb:

- **Advantages:** The fresh herb can be very powerful. If it is in season and abundant when needed, it is a very fast way to acquire medicine in the field without having to carry it with you or spend the time creating preparations from it. Fresh medicinal plants are arguably the most potent form of most plant medicines.
- **Disadvantages:** Sometimes the fresh herb is too powerful and has constituents that are toxic in the raw form. Drying the herb will (in this case) often get rid of these constituents. Availability of fresh herbs is limited to season and location. It is vital that a person have good botany and identification skills if using the fresh herb.

Analgesia/Anxiety/Shock/Pain:

GOALS: There are many different types of pain and whether using pharmaceuticals or plant medicine, there's rarely a "one size fits all" solution. However, in general – after dealing with any conditions that are directly causing pain (inflammation, injury, etc.), we are trying (with plant medicine) to ease anxiety, relax muscular spasms and provide some general or local analgesia.

- General Pain Formula (**Internal**):
  - Prickly Poppy, Skullcap, Passionflower (1:1)
- Shock & Anxiety (**Internal**):
  - Skullcap, Passionflower (1:1)
- **External** Pain & Inflammation (strains, sprains, soft tissue injury, etc.) – one or more of the following in roughly a 1:1 ratio:
  - Camphorweed (external)
  - Plantain (external)
  - Juniper (external)
  - Prickly Ash
  - White Horehound
- Musculoskeletal pain and inflammation (injury, osteo- and rheumatoid arthritis, back pain, etc.) – one or more of the following herbs taken **internally** in roughly a 1:1 ratio except prickly ash (berry, bark or root bark):
  - Yucca root
  - Mullein root
  - Prickly Ash (1/4 – 1/2 ratio)
  - Skullcap

Burns(Sunburn, 1st degree, 2nd degree blisters)

GOALS: Ease pain, soothe burn area, promote healing, avoid infection.

- **External** burn formula should preferably include:
  - Prickly Pear by itself or…
- **External** burn formula can also include Prickly Pear plus one or more of the following:

- Plantain
- White Horehound
- Oak Bark (especially if the burn is "weeping")
- Red Root
- Mullein

- General **internal** pain or shock/anxiety formula can be taken as well.

Cold and Flu:

GOALS: Manage symptoms (congestion, cough, sore throat, fever, aches, sinus, etc.), assist body in clearing the illness as quickly as possible (open channels of elimination, restore mucous membrane and tissue vitality), and support lymph flow and immune system.

- General Cold and Flu Base Formula (**internal**) with one or more of the herbs below mixed in roughly a 1:1 ratio with the exception of Prickly Ash:
  - Rosemary
  - Echinacea
  - Prickly Ash (1/4 – 1/2 part)
  - Yarrow
- Respiratory symptoms (cough, labored breathing, etc.) add one or more of the following (internal):
  - Antelope Horns
  - White Horehound
  - Mullein
- Painful sore throat, painfully swollen lymph, add one or more of the following (internal):
  - Monarda
  - Red Root
  - Queen's Delight
- Fever/Chills – combine the following herbs (internal)
  - Rosemary (1 parts), Prickly Ash (1 part), Yarrow (2 parts), Wafer Ash bark (2 parts)

Cuts/Lacerations/Abrasions/Wound Treatment/Infection (External)

GOALS:

1. Clean tissue of any and all debris.
2. Clean tissue of pathogens to the greatest extent possible using a drawing substance such as activated charcoal, Prickly Pear, Mullein leaf or Echinacea
3. Keep area bandaged and clean and observe tissue state (warm and moist is best for tissue proliferation, but also for bacterial growth).
4. Watch carefully for signs of infection and re-clean with drawing substances.
5. Use antimicrobial, vulnerary and tissue proliferating herbs to help the tissue heal quickly and infection-free.

General, **external** drawing herbs and substances:

- Activated Charcoal (preferably USP grade) – use with water only. If possible do not mix with herbs or other substances.
- Prickly Pear cactus (inside of pads)

Herbs for external anti-microbial wound wash (One or more could be added to a wound wash "tea" – hot or cold infusion – as desired):

- Wafer Ash leaf
- Monarda leaf
- Red Root
- Oak Bark/Leaf/Gall
- Wireweed
- Mullein leaf/flower
- Horehound
- Yarrow
- Echinacea
- Artemisia
- Algerita root
- Camphor weed

Cuts/Lacerations/Abrasions/Wound Treatment/Infection (cont'd)

- Anti-microbial, tissue-healing, **external** wound poultice could be made of one or more (1:1 ratio) of the following herbs:
    - Echinacea
    - Red Root
    - Yarrow
    - Plantain
    - Wireweed
    - White Horehound
    - Monarda
    - Mullein leaf
    - Echinacea (preferably augustifolia species)

Digestive/Intestinal Infections and Issues

GOALS: Remove source of health issue (e.g. bad water, food, etc.), monitor and deal with fluid loss (diarrhea/vomiting) as necessary, use herbs to help the body overcome the source of the problem if possible.

- Nausea – motion sickness, morning sickness, anxiety-induced nausea:
    - Algerita leaf **(internal)**
- Digestive upset after meals (especially fat- or protein-rich meals), general dyspepsia, one or more of the following, in roughly 1:1 ratio:
    - White Horehound **(internal)**
    - Wafer Ash leaf or bark **(internal)**
    - Algerita root **(internal)**
    - Milk Thistle **(internal)**
- Gastroenteritis – infections from virus (e.g. stomach flu), bacteria (e.g. E. coli) or protozoan (e.g. Giardia). The key to proper herbal treatment is in early treatment if possible (at the very earliest sign of infection). Preferably all of the below herbs in a 1:1 ratio, taken **internally**:
    - Algerita root
    - Artemisia
    - Wireweed
    - Plantain
    - Wafer Ash leaf

Digestive/Intestinal Infections and Issues(cont'd)

- Parasite Infection – Combine all herbs in a 1:1 ration for internal use:
    - Artemisia, Wafer Ash leaf, Algerita root, Prickly Ash
- Traveler's diarrhea (diarrhea of unknown etiology) - One or both of the following (**internal**):
    - Algerita root and Wafer Ash leaf , 1:1 ratio
- Constipation - One or more of the following (**internal**):
    - Yarrow and/or Yucca 1:1 ratio

Ear & Sinus Infections

GOALS: Support underlying (mucosal) tissue, use anti-microbial herbs either directly on tissue or taken internally (orally), move lymph

- **Sinus infection** – Use one or more of the following herbs (internally). Alternatively, an infusion (tea) can be made, enough salt added to make the tea isotonic, and the tea can be cooled and sprayed or irrigated through the sinus using a neti-pot. Use one or more of the following herbs in approximately a 1:1 ratio:
    - Plantain
    - Echinacea
    - Monarda
    - Red Root
    - White Horehound
    - Oak
- **Middle/Outer ear infection** – Make an ear oil with one or more of the following herbs in a 1:1 ratio. Drop the oil into the ear (external)
    - Mullein flower, Juniper berry, Echinacea, Oak

Respiratory (cough) infection – cold, bronchitis, COPD

GOALS: Soothe mucous membrane of the respiratory tract, remove any irritants (smoke, etc.), apply anti-microbial herbs, and stimulate immune and lymph.

Respiratory (cough) infection – cold, bronchitis, COPD (cont'd)

- Dry cough – Use one or more of the following herbs in an approximate 1:1 ratio:
    - White Horehound
    - Antelope Horns
    - Mullein
    - Plantain
    - Wireweed
    - Gumweed
- Spasmodic, severe cough (Dry or wet) – Use all of the following in a 1:1 ratio, in addition to formulas for dry or wet cough:
    - Skullcap
    - Passionflower
    - Queen's Delight
- Wet (chronic) cough
    - White Horehound
    - Queen's Delight
    - Rosemary
    - Gumweed

Skin Irritations (poison oak/ivy, bug bites, fire ants, stings, etc).

GOALS: Soothe skin, pull out toxins, relieve itching and pain

- For contact dermatitis (poison oak, ivy, etc.) a mixture of the following two herbs provides relief from irritation and itch (external):
    - Plantain and Gumweed (1:1 ratio). These can be applied as an oil, salve or water infusion (wash).
- To pull the sting or irritation from sting/bite toxins, any of the following herbs or substances work well:
    - Prickly Pear
    - Mullein
    - Bentonite Clay
    - Plantain

Sore Throat

GOALS: Support mucosa in the throat (pharynx and naso-pharynx), apply anti-microbial herbs directly to tissue and internally (orally).

- Possible strep throat or severe viral infection - Use one or more of the following herbs and try to apply directly to the throat (i.e. don't swallow right away, but rather spray or drop the herbs onto the throat tissue and allow them to sit) before ingesting (internal):
    - Echinacea
    - Red Root
    - Prickly Ash
    - Monarda
    - Plantain
- FOLLOWED BY:
    - Apply Propolis to the back of the throat after applying all other herbs. Allow it to sit as a natural "bandage" over the top of the other herbs you have let soak into the throat mucosa.

Tooth Care

GOALS: Gum health and circulation, anti-bacterial care for tooth care and plaque reduction, mild abrasion along and between teeth, reduction of cavities at any stage.

Tooth Powder

- There are many astringent and anti-bacterial herbs that work well for tooth and gum care as a fine powder. Any or all of these herbs can be mixed together in a 1:1 ratio Some very good ones are:
    - Myrrh – not in this guide's materia medica
    - Prickly Ash
    - Elecampane – not in this guide's materia medica
    - Rosemary
    - Red Root
- In addition, a good abrasive herb to add to the powder that also promotes tooth enamel growth is
    - Horsetail (Equisetum arvense) – not in this guide's materia medica

Finally, an essential oil of peppermint or spearmint can be added to the tooth powder. Just enough to make it barely damp. This powder will last for a few years if stored out of heat and light.

Urinary Tract Infections

GOALS: Soothe smooth muscle of ureter/bladder/urethra, introduce anti-microbial plant constituents to the urinary tract, and increase urination (diuresis).

Lower urinary tract infection (to include bladder infection), combine all of the following herbs for internal use in a 1:1 ratio:

- Plantain
- Juniper – Note: Be certain that this is a LOWER urinary tract infection if using Juniper. If this infection is in the upper urinary tract (kidney) then Juniper is highly contraindicated. It will irritate the kidneys and cause inflammation, exacerbating the infection.
- Mullein root
- Yarrow
- Algerita Root
- Wireweed

Upper Urinary Tract Infection:

This is a serious infection that can be life threatening. Lower back pain (Costo-vertebral Angle tenderness), Fever/Chills, Pain on urination, Bloody or cloudy urine are all signs and symptoms of possible kidney infection. If plant medicine is the only alternative, using the plants in the materia medica for this field guide, a 1:1 ratio of the following herbs would be helpful:

- Wireweed
- Algerita Root
- Wafer Ash Bark
- Plantain
- Echinacea
- Prickly Pear Flower

Herbal First Aid Kit

SUGGESTED BASELINE KIT Part 1*

Trauma and First Aid Treatment Kit

Item	Count
1½“ White Athletic Tape Roll	2
Bandage Roll	1
3" Ace Wrap	1
2" Ace Wrap	1
4 x 4	5
2 x 2	5
Cravat	3
Wound Wash	1
Assorted Band-Aids (Small to Large)	1 pack
SAM Splint	1
Hand/Alcohol Wipes	10
Metal, fine point tweezers	1
Ultra-Thick Ziplocks 4 x 4 (for bandaids, etc.)	4
Metal 7” Bandage Scissors	1
Metal Hemostats	1
#10 and #11 Scalpels	2 ea
18 ga. needle	2
20cc Syringe (irrigation)	1
16 ga. catheter/needle	1
USP grade Charcoal, 4 oz. (high medical grade for both external infection poultices and internal poisoning)	1

*First Aid Kit and Components can be ordered through the store link found at **http://herbalmedics.org**

Herbal First Aid Kit
SUGGESTED BASELINE KIT Part 2*

Herbal First Aid Sub -Kit

The preferred preparations are alcohol tincture (in narrow-mouthed, leak-proof bottles), powders (for external application), syrup (expectorant) and salve.

Tincture	Amount
Chaparral	2 oz
Algerita	2 oz
Andrographis	2 oz
Cold/Flu Formula	2 oz
Lymph Formula	2 oz
UTI Formula	2 oz
Anti-helminthic/Protozoan Formula	2 oz
Analgesic Formula	2 oz
Nervine Formula	2 oz
Deep Anti-Infective Formula	2 oz
Digestive Aid Formula	2 oz
Liniment/Salve/Oil	Amount
Bruise/Sprain & Inflammation	4 oz
Superficial Skin Healing	2 oz
Deep Wound Healing	2 oz
Other	Amount
Respiratory Aid (Cough Syrup)	4 oz
Tooth Care Sticks & Powder	4 oz
Wound Care Poultice Powder	4 oz
Burn Care Poultice Powder	4 oz

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Cautions and Contraindications of all Herbs in the Field Guide

Herb	Contraindication/Caution
Algerita Leaf	None known
Algerita Root	Use with caution in the case of gallstones or blockage.
Antelope Horns	Do not use during pregnancy, caution if combining with cardiac pharmaceuticals
Artemisia	Do not use during pregnancy or breastfeeding, avoid using longer than 3 -4 weeks at a time without a break for a few weeks. Best used internally in a formula, not alone.
Camphorweed	Externally: No contraindications known. Internally: Use with caution and no more than a few weeks. Can cause irritation to the stomach lining and gastro-intestinal distress.
Charcoal	Externally: No known contraindications, change poultice every few hours and monitor wound health. Internally: Can cause constipation depending on amount used. Does not work as well with strong acids/bases, some petroleum distillates and alcohols.
Echinacea	Excess use can cause nausea or dizziness, Recommended use is no longer than 3-4 weeks at a time
Gumweed	Do not use for more than 2-3 weeks at a time. Do not use if there is any type of kidney disease or weakness present
Juniper	Do not use in the case of kidney disease or infection. Best used internally in a formula, not alone.
Milk Thistle	None known
Monarda	Avoid use during pregnancy and breastfeeding
Mullein	None Known
Oak	Do not use for more than 2 weeks internally. Excessive use can cause irritation to the stomach lining. Best used internally in a formula, not alone.
Passionflower	Roots only contraindicated in pregnancy
Plantain	None known

Cautions and Contraindications of all Herbs in the Guide (cont'd)

Prickly Ash	High doses can cause a "feeling" of mouth or throat swelling, numbness, excessive tingling. Use dropwise dosages if using it along. Otherwise, best used internally in a formula, not alone.
Prickly Pear	None known externally. Rarely, some people can present with allergic reaction internally to the pad, causing nausea, diarrhea and vomiting.
Prickly Poppy	Avoid use during pregnancy or breastfeeding. Do not use more than 2-3 weeks at a time.
Propolis	Use with caution if allergic to bees or bee products.
Queen's Delight	Avoid use during pregnancy or breastfeeding. Do not use if there is a stomach ulcer present. High doses can cause vomiting.
Rosemary	Use with caution (dropwise dosage) during pregnancy. Best if used in a formula.
Red Root	Use with caution during pregnancy and breastfeeding
Skullcap	Root only: Avoid use during pregnancy. If buying Skullcap online, ensure that the supplier has not adulterated the herb with Germander (which can build up toxicity over time). Know your supplier.
Wafer Ash	Avoid use during pregnancy.
White Horehound	Extremely (and unrealistically) high doses can cause heart arrhythmias.
Wireweed	Use with caution in first trimester of pregnancy.
Yarrow	Can cause skin sensitivity (photosensitivity, etc.) in a small percentage of people. Avoid use during first trimester of pregnancy.
Yucca	Large amounts of root can cause gastric upset and diarrhea or vomiting. Seeds cause diarrhea.

Helpful Mnemonics

In the world of medicine, the use of mnemonic devices can assist you in remembering important information. Information relating to how you assess a medical situation, how you interact and communicate with a person who needs your aid, and how you actually physically assist that person. A mnemonic is usually a word or phrase that spells something easy to remember, with each letter of the word or phrase being the first letter of a procedure or step in a set of questions, procedures, etc.
For instance, one of the most well known mnemonics in the world of emergency medicine is: **ABC**
Airway
Breathing
Circulation

The following mnemonics are simple ways to remember important information as an herbal medic:

ABCDE
Airway – Is the person able to inhale and exhale without obstruction?
Breathing – Does the person have any injury to the upper or lower airway?
Circulation – Does the person have any bleeding (internal or external)?
Disability – What is the person's level of consciousness (LOC)?
Expose – Expose all injuries and wounds within the limitations of shock and temperature

DOTS
Deformities – Visualize and palpate to check for any deformities in bone or joints*
Open Wounds – Visualize and palpate to check for any bleeding or open wounds
Tenderness – Palpate or ask to determine any tenderness and local pain
Swelling – Visualize and palpate to check for swelling*

*Always compare extremities next to each other (arm next to arm, leg next to leg, etc.) when checking for deformities and swelling.

When inquiring about history of an injury or illness, and needing to gain more assessment information while helping someone either with trauma or any kind of illness.

SAMPLE
Signs and Symptoms – What are their chief complaints and what can you observe?
Allergies – Seasonal, food and to any medication
Medications – Are they on any, legal or illegal (including alcohol and tobacco)
Previous illness or injury – Any relevant past injury or illness like this?
Last known intake or menstrual period* - Last time they ate or drank anything and what?
Events Leading up to – What events led up to the existing condition?
*Question about last known menstrual period if appropriate (abdominal pain, fever, etc.) when working with a woman in child-bearing years.

OPQRST - Use "**OPQRST**" to tell you about pain if pain is a part of the "**S**" in "**SAMPLE**".
Onset – Time and event that occurred or was related to the onset of the pain
Provoke/Palliate – What makes the pain feel worse? Feel better?
Quality – Describe the pain – Dull ache? Sharp and sudden? Etc.
Radiate – Does the pain radiate to any other part(s) of the body?
Severity – On a scale of 1 – 10 with 10 being the worst pain ever experienced
Time – As it relates to all the previous letters. Have the other aspects of the pain changed over time?

For treatment of open wounds:
"Treat every wound **AS IF** a life depended on it"
Amount of bleeding – Arterial? Venous? Capillary? Respond accordingly
Shock – treat for psychogenic and hypovolemic (if appropriate) shock
Irrigate the wound assuming it was not an arterial bleed
Further/Functional damage – Inspect the wound and test for nerve, connective tissue, bone, etc., damage

Dosages, Weights, Measures and Conversions

The concept of “dosage” when using herbs is a very loose concept, as it must be. The dosage of an herb that was wildcrafted in perfect conditions with the maximum amount of possible efficacy cannot be compared to the same dosage of the same herb that was grown in poor conditions, dried improperly and left in a warehouse for 2 months before reaching your mailbox.

It is more common to consider two basic types of dosages when taking an herb internally as a tincture: Drop-wise dosage and “normal” dosage. Drop-wise dosage means that you are literally taking the herb by the drop (e.g. “5 drops,” “12 drops,” etc.). Normal dosing of a tincture means we are taking the herb as measured in droppers, not drops. However, using a normal dropper, the best you can usually do is about a half to ¾ of a dropper when you squeeze the bulb, so “2 droppers” really means more like “2 half-filled droppers” which actually means about one 1 full dropper (see conversions below).

In general, most of the tincture formulas being given in this field manual are normal dosages that range between 1 and 3 droppers (not drops) 2 to 3 times per day. As a tea or infusion, this is roughly the equivalent of a cup of strong tea a at least 2 -3 times per day.

Fluid Measurements

8 ounces = 1 cup
4 cups = 1 quart
4 quarts = 1 gallon
1 gallon = approx. 3.8 L
1 fluid ounce = approximately. 30 mL
5 mL = approximately 1 Teaspoon
15 mL = approximately 1 Tablespoon
20 drops = approximately 1 mL
1 “typical” 2 ounce dropper (usually about half of a dropperful – the amount you can pull up with one squeeze of the bulb) = just a little more than 1 mL
1 full dropper from a 2-ounce bottle bulb and dropper = approximately 2 mL

Weight Measurements

1 ounce = approx. 28 grams
16 ounces = 1 pound
1 kilogram = approx. 2.2 pounds

Glossary

Adaptogen: Enhance the adaptation response to uncompensated stress (adrenals).
Antihelminthic: Kills parasites (worms)
Antimicrobial: Kills pathogenic microbes – general description that usually refers to virus and bacteria.
Antiprotozoan: Kills single-celled parasites (e.g. Giardia, Cryptosporidium)
Astringent: Tightens tissue – assists in conditions like bleeding and diarrhea.
Carminative: Relieves intestinal (digestive) discomfort, flatulence, etc.
Cholagogue: Decongests bile flow. Enhances bile quality and quantity. Assists digestion.
Counter-Irritant: Stimulates peripheral and micro vasodilation.
Decoction: Dry or fresh herb simmered for a long period in water (very strong tea)
Diaphoretic: Opens skin elimination channel and promotes sweating.
Diuretic: Opens urinary elimination channel and promotes urination.
Dyspepsia: Gastric upset, pain, bloating
Expectorant: Promotes phlegm creation and expulsion.
External: Using on the outside of the body (not taking internally)
Glycerite: Dry or fresh herb soaked in glycerine, strained (i.e. glycerine tincture).
Hemostatic: Reduces or stops bleeding
Immune Enhancer/Stimulant: Increases the effectiveness and activity of the immune system
Internal: Herb taken internally
Mucosal Vulnerary: Promotes tissue healing and protection to the mucosal tracts.
Nervine: Having an affinity for the nervous system – usually calming and relaxing, anti-anxiety.
Vasoconstrictor: Tightens blood vessels.
Vasodilator: Expands blood vessels.
Vulnerary: Protecting tissue and promoting tissue healing

About the Author

Sam Coffman started his interest in medicine as a U.S. Special Forces Medic (18D), a.k.a. "Green Beret" medic, in the late 80's. At that time he became very interested in plant medicine as a way to to have treatment possible in the field that might otherwise be unavailable due to logistics. The typical special forces medic concept is sometimes referred to as "ditch medicine," which means making do with what you have ("adapt, improvise, overcome"), sometimes in horrendous conditions.
Sam spent thousands of clinical hours in emergency rooms, as the medic on his team, sick call (troop medical clinics) and other field experience, which lended him a good overall viewpoint of medicine from the western, orthodox (allopathic) standpoint.

However, very quickly (on his own time, outside of the military), Sam began to understand and use herbs for things he had never imagined they could heal: Serious trauma – broken bones, partially torn connective tissue, cellulitis, strep throat and other infections in the field. Sam's interest has always been working with plant medicine in remote environments or post-disaster environments where there is no "higher definitive care." This is a situation that he feels is very important to be prepared for medically, as it could easily happen anywhere in this country or in the world – whether through natural disaster (e.g. "Hurricane Katrina"), economic collapse, civil war, drought & famine, pandemic, terrorist attack, etc. Additionally, medical care and supplies are quite often the first luxury that disappears in a post-disaster situation.

Sam has been studying herbalism as well as teaching and working as a clinical herbalist since 1989. The more he learns, the more he realizes how little we all know (and how much we have forgotten, as a species) about plant medicine.
Sam founded and directs a survival and herbalism school called "The Human Path" in Central Texas. He also helped found a non-profit organization called "Herbal Medics" that works with herbal medicine and off-grid engineering to create sustainable health care solutions in remote areas of the world.

Sam is currently working on a book that is specifically oriented toward post-disaster and remote herbalism.