## Advanced Treatise in HERBOLOGY

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Co-published by Trinity Center Press and CSA Press The proteins will be frequently referred to when we consider those rbs which contain them. They are not, strictly speaking, either hydrorbons or carbohydrates, because they all contain the element nitrogen d some of them also contain sulfur. So, we'll take a quick glance at the is, which seem to be very little understood. All animal and vegetable fats e composed of glycerin and fatty acids.

Remember, these elements and compounds we are considering are I contained in herbs, and a little knowledge of them will show us plainly by herbs are what they are and why they do what they do. Beef and utton contain giveerides of stearic acid: pork contains a glyceride of oleic id butter containes a glyceride of butyric acid. Of the vegetable fats and ls, olive oil contains oleic acid; flaxseed oil contains linoleic acid; castor Decontains ricinoleic acid, and so forth through the whole range of fats id oils. Glycerine is a triatomic alcohol and one of the greatest curative ompounds in nature. It is not toxic and is the greatest solvent known Its aried and versatile action upon various cells and tissues of the human rganism makes it, if not the greatest, at least one of the greatest curative rinciples in nature. Alone, glycerine is laxative, solvent, emollient (when iluted), nutrient, lubricant, antifermentative, parasiticide, and vermicide n ascarides). Externally it is most valuable in skin diseases (eczema, rpes, leprosy, pityriasis, psoriasis, lichen, prurigo), in lotion for encrusted pus, chapped skin, excoriated surfaces, fissures of anus and nipple, ounds, boils, carbuncles, abscesses, coryza, pharyngitis, otorrhea, deafness, lays itching, dryness of mouth, and so forth. Internally, it is most valuable phthisis, diabetes, typhoid fever, dysentery, hemorrhoids, leucorrhea, onstipation, and so forth. It is a solvent of iodine, bromine, tannin, kaloids, salicin, alkalies, and so forth. It prevents extracts from moulding, seps them soft, and does not evaporate.

Glycerides) of stearic, oleic, palmitic and other acids are so important the human body that in health, they amount to nearly five percent of the stal body weight. The percentages of fats and oils found in different parts f the healthy living adult, according to Dr. R. A. Witthaus, A.M., M.D. recognized as one of the greatest chemists of our time) are as follows:

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Bone marrow	96%	Crystalline lens	2.0%
Spinal cord	23.6%	Bile	1.4%
Nerve tissue	22.0%	Bone	1.4%
White brain matter	20.0%	Cartilage	1.3%
Brain	8.0%	Blood	.4%
Cortex of brain	5.5%	Mucus	.4%
Milk	4.3%	Chyle	.3%
Hair	4.2%	Amniotic fluids	.2%

Muscle	3.3%	Synovial fluids		.6%
Liver	2.4%	Lymph	1	.5%

They are also found in minute quantities in saliva, perspiration, vitreous humor, urine, and so forth. It will be very plainly seen how vitally important it is for us to understand something about the chemistry of the herbs we use in the treatment of disease, and particularly glycerides, of the many different acids which compose the oils and fats contained in them.

We shall meet many pathological conditions which, without an adequate knowledge of these vital substances, oils and fats, we shall not be able to cure, or even in some cases, to alter or change their morbidity in the least.

The amount of fat, under normal conditions, is usually greater in women and children than in men. In wasting disease and in starvation, the fats are rapidly absorbed and are again rapidly deposited when normal conditions are restored.

Many people have a tendency to corpulence which, in some cases, amounts to a pathological condition. As a result of morbid changes, fat accumulates in certain tissues, which is due to either degeneration or to infiltration.

Muscular tissue degenerates from long disuse, or lack of exercise. The muscular tissue disappears and fatty acids take its place. In fatty infiltration of the heart, oil globules are deposited between the natural morphological elements. The oil globules may be of an unstable nature and subject to rancidity. If so, then more acids are formed than can be held by the glycerine contained in them with the result that these acids attack the metals, calcium, magnesium, and so forth, in the surrounding tissues, and so, form insoluble soaps. In this way, fatty degeneration of the heart takes place. Inflammation, pyemia, perhaps embolus. There is a very large number of people who are suffering with some form of heart disease, and it behooves us to know what to do in that case. And now, we go back to the herbs that remedy these and other conditions.

The Great Teacher once said, "Consider the lilies." Let us consider one or two of them.

Allium savitum. Natural order. Liliaceae Common Names. Garlic poor man's treacle.

Part used, Bulb.

Description. The leaves are long, narrow, and much like grass. The bulb (the only part used) is compound, consisting of numerous bulblets, commonly called "cloves," grouped together between the membrane scales, and enclosed within a whitish skin which holds them as in a sac. The whitish flowers are located at the end of stalks growing directly out of the



n a hot place for 5 to 10 minues. Strain and drink either hot or cold. The isual method is to drink a teacupful with each meal, hot, just as tea is lrunk at meals.

1s Injection for Hemorrhoids and Prolapsus Ani: A teacupful injected and etained as long as possible.

is Douche for Leucorrhea, Gonorrheal Discharge, and so forth: Use  $1\frac{1}{2}$  ints of a strong decoction made as follows:

ORMULA 34. (Compound of Raspberry Leaves.)

ut 2 ounces raspberry leaves (cut) into  $1\frac{1}{2}$  pints distilled water. Boil for 5 minutes while closely covered. Strain and add 1 ounce of glycerine, 15 rops of sandalwood oil (Santalum album), add 8 ounces of mucilage of ish moss (Lesson 2, Page 37). Shake all together thoroughly, and use as douche. Use once, twice, or three times a day, according to the severity the case. Make fresh each time. This is a most remarkable and speedy medy for leucorrhea, gonorrhea, inflamed mucous membranes, prolapsed enlarged uterus, and so forth. It should be adopted by every woman who exires to retain youth, health, and strength in the genitalia, as well as to event possible contagion. For those purposes, once a week is considered be a sufficient application, though that is left to the discretion of the dividual.

Another wonderful member of this family is the well known and licious berry producing bush.

ACKBERRY. (Rubus villosus) Natural Order (Rosaceae)

us natural order of plants (Rosaceae) is a very large one, comprising me 1,200 species, in which are found some of nature's greatest and most tent remedies.

This particular blackberry is commonly called the American blacktry, though it grows in almost all parts of the world, but far more undantly in Australia than in any other country.

It is used in every country for its succulent and deliciously flavored ry, though its virtues as a medicinal plant have been known for s. A modern English herbalist states: "We read of it as far back the days of Jonathan, when he upbraided the men of Shechem for their ratitude to his father's house, relating to them the parable of the trees osing a king, the humble bramble (blackberry) being finally selected, it the olive, fig tree, and vine had refused the dignity."

The ancient Greeks knew the blackberry well and considered it a nedy for gout, which no doubt it is.

Even the regular United States Pharmacopeia recognizes this plant and other varieties, Rubus nigrobaccus and Rubus cuncifalius, but according the U.S.P. authorities, it is dependent upon tannic acid for its virtues.

We do not criticize any truthful statement made by any authority but when compilers of standard medical works, either willfully or ignorantly overlook, or do not mention, the principal medicinal ingredients of a plant which we know to be there, we feel it our duty to both the doctors and the people to point out the oversight or error, no matter how great is the reputation of that authority.

Tesson A

So, right here we give you some very valuable chemical information about this remarkable plant (blackberry) and other acid fruits, together with astringents, herbs, barks, roots, and leaves generally. This information is probably the most valuable, therapeutically, of all the information contained in this entire course. It is inserted here because we are right in the midst of studying astringents which are nature's greatest curative herbs.

All acid fruits contain an abundance of oxygen and as stated before, oxygen is the greatest of all life-giving elements. Citrus fruits contain card acid (lemons, limes, grapefruit, and so forth). In 21 parts of citric acid, apart from its water, there are about 7 atoms of oxygen or exactly one third of available oxygen. In apples, blackberries, raspberries, dewberries, thimbleberries, and so forth, we find, among other acids, malic acid, which gives us one-third of oxygen. That is why "An apple a day keeps the the doctor away." In grapes, elderberries, cherries, prunes, plums, sloes, and so forth, we find tartaric acid, which gives us 6 in 16 parts of available oxygen, together with potassium, calcium, magnesium, and iron.

In almost all astringent herbs (leaves, berries, nuts, barks, and roots) we find cannic achd which carries slightly less oxygen that the preceding acids. Tannic acid, however, is converted into gallic acid. This tones and astringes the mucous membrane and is therefore very virtuous as a preservative, but it is not to be compared with any of the preceding acids as a curative agent because it does not contain as much available oxygen. Furthermore, tannic and gallic acids do not contain any iron, but fall the berries, plums, cherries, and so forth, do contain various percentages of from which, as we have previously pointed out, is so necessary to the building of the blood, functioning of the lungs and carrying oxygen to every cell, to clean up or burn up waste matter and debris, and sweeten and renew the life of every cell in the whole organism.) So, though you may not immediately see how vital and all important this chemical information is, by a little study and comparison you will at last see that a knowledge of these important chemical facts will enable you to understand why certain herbs perform apparent miracles in the organism which would otherwise be impossible to know. And now, back to --

BLACKBERRY.

Parts Used. Bark, leaves, bark of the root and berries.

LUCOSUII I L

atural Order: Boraginaceae. This is one of nature's great masterpieces, id one of the most important therapeutic agents ever discovered by man. has been used for thousands of years, and during that time, by millions people.

YNONYMS: Comfrey, consound, knitbone, bruisewort, yalluc (Saxon), ippery root, black root, and so forth.

ABITAT: A native of Europe, but has become naturalized in America and grows in moist soil and low ground in almost all parts of United States. ARTS USED: Roots and Leaves.

ONSTITUENTS: Mucilage 70 to 80 percent, tannin, asparagine, sodium, otassium, calcium, phosphorous, and from 0.5 to 0.7 percent of allantoin, on, and a little starch.

pregnant women and animals, and also in the urine of newborn babies. has been found in wheat germ, in French peas, and several other gumes. Allantoin is undoubtedly a cell proliferant, having something to with the formation of cells, and it seems to act upon both animal and getable cells. It has been injected into hyacinth bulbs and causes them flower more rapidly.

ROPERTIES: Demulcent, nutrient, astringent, vulnerary, expectorant, emostatic.

The reputation of comfrey as a vulnerary from ancient times to the esent is unique, and it will be well worth our while to spend a few minutes glancing at the history and folklore of that most important plant. In a rry old book by the English herbalist, Baker (1567), occurs the following ference to comfrey: "The water of the greater comfrie druncke helpeth ich as are bursten and have broken the bone of the legge."

The world-famous English herbalist, Culpepper, of the Middle Ages, sys,

Thse great comfrey root boiled in water or wine and the decoction drink, heals inward hurts, bruises, wounds, and ulcers of the lungs and causes the blegm that oppresses him to be spit-forth. A syrup made thereof is very effectual in inward hurts, and the distilled water for the same purpose also and for outward wounds and scores in the fleshy or sinewy parts of the body and to abate the fits of agues and to allay the sharpness of humours. A decoction of the leaves is good for those purposes, but not so effectual as the roots. The roots being outwardly applied, cure fresh wounds and cuts immediately, being bruised and laid thereto and is especially good for ruptures and broken noses. So powerful to consolidate and knit together that if they be boiled with dis-

severed pieces of flesh in a pot, it will join them together again. The roots of comfrey taken fresh, beaten small and spread upon leather and laid on any place troubled with the gout, presently gives ease and applied in the same manner, it eases pained joints and tends to heal running ulcers, gangienes, mortifications for which it hath by often experience been found helpful.

So, all through the Middle Ages and up to the present, comfrey has been extolled for its great curative properties. Dr. MacAlister, an English chemist and scientist was quoted in the *British Medical Journal*, January 6th, 1912, as saying "Allantoin (from com / root) in aqueous solution in strengths of 0.3 percent, has a powerful action in strengthening epithelial formations and is a valuable remedy not only in external ulceration, but also in ulcers of the stomach and duodenum."

The discovery of allantoin in comfrey root and the investigation of its cell proliferating action has led to the belief that comfrey root owes its powerful healing virtues to allantoin. The *Chemist and Druggist* of August 13th, 1921, published an interesting article of comfrey as follows:

Allantoin is a fresh instance of the good judgement of our rustics especially of old times with regard to the virtues of plants. The great comfrey or consound, though it was official with us down to the middle of Eighteenth Century, never had a prominent place in professional practice but our herbalists were loud in its praise and the country cullers of simples held it almost infallible as an external and internal remedy for wounds, bruises and ulcers for phlegm, for spitting of blood, ruptures hemorrhoids, for ulcers of the stomach, and liver, especially, the root was regarded as of sovereign virtue. It is precisely for such complaints as these that the allantoin obtained from the rhizome of the plant is now prescribed.

In his book the world-famous English herbalist, Henry Box says, "A question often asked: 'What is the best thing for spitting of blood from the lungs?' (The answer is) Comfrey root. I have never known it to fail. I am glad to learn that several private persons are distributing it among those suffering from bleeding of the lungs and stomach, or the bursting of other blood vessels, and they too state it never fails." Again he says, "My consumptive mother had a large cavity in her left lung. The hemorrhage was often alarming, and there was no hope. I had the happiness of curing her with comfrey root and clown's woundwort, a strong decoction almost as thick as treacle was taken freely. It wrought a complete cure."

The following short quotations are from the English medical publication The Lancet: (1899-1910) "Symphytum officinale: The comfrey plant and