INTRODUCTION

Alcuin: “What is an herb?”
Charlemagne: “The friend of the physician and the praise of cooks.”

Alcuin was an Irish monk famous for learning and Charlemagne was the king of the Holy Roman Empire. The dialogue is probably apocryphal.

I have normally used “herbs” in the broadest sense, meaning any plant used for healing. This includes mushrooms, trees, bushes and grasses. Herbal Scraps draws the definition even wider, for it is a study of unusual ideas and uses of plants.

The word ethnology entered the English language around 1830, as the study of races, tribes or groups of people with common behavior. This spawned a series of words such as ethnohistory and ethnometeorology. In 1896 John Harshberger became the first to use the word ethnobotany.

Harshberger believed that ethnobotany could tell us a lot about early people. People who were primarily hunters and gatherers didn’t have agriculture, so they used plants in a different way. People who became agriculturists stayed in one area and developed more elaborate homes; they invented farming implements and new tools. The Colorado cliff dwellers invented cedar forceps for picking prickly cactus fruits. They used yucca fibers to bind the crosspieces to their ladders to reach their cliffhomes. They wove cedar bark headbands and rugs.

Harshberger found that ethnobotany shed light on the distribution of plants. Corn (Maize) originally came from Mexico and was traded into North and South America. Catlonite was a soft stone from western Minnesota, which was traded into the southwest for making pipes to smoke the native tobacco. The dwelling areas of prehistoric people are marked by the plants they used for food and fiber. Sometimes their trails were marked with pine trees. They ate pine seeds as they traveled, and a few fell from their sacks and sprouted.

John Harshberger believed that ethnobotany should be a living subject in museums. He advocated planting gardens of Native Ameri-
can crops, so we could appreciate the origins of corn, beans, sunflow-
ers and tobacco. A pond could contain the food plants arrowleaf *Sagittaria latifolia* = *S. variabilis*, the yellow lotus *Nelumbo lutea* = *Nelumbium luteum* with wild rice *Zizania aquatica*. A nearby planting of basswood *Tilia americana*, sumac *Rhus* spp., willow *Salix* spp. and the *Yucca brevifolia* would stimulate interest in their weaving and clothing plants.

During my research for my medicinal book series I ran across many items on the nonmedical uses of plants. At first I ignored them, then I began saving these scraps, and turned them into two books. When I found something that interested me I wrote a short chapter about it.

I do not have a strong central theme in these two books. I began this book by focusing on how animals use herbs. Cats love certain plants for reasons that are unclear to us. Birds pluck certain plants to make nests. Most of these plants decrease the mites and lice—which decrease the vitality of birds. Birds which are successful in raising young, pass on these traits.

I have discussed many strange episodes of medicine. Tobacco, strychnine and many unusual things were used as medicine. I surveyed the first million patents to try to understand the old patent medicines. New medicines are constantly being found, and individuals can participate in the search for cures from the plant kingdom. This process is called screening, for it is the separation of effective remedies from ineffective ones.

In the old Sanskrit language of India, the word “herb” is “bharv.” In the Hindu scriptures known as the *Vedas*, it is “bharvatai.” The Indo-European people who spread this word into many languages are now believed to come from the mountainous area of Armenia. Through ancient migrations these people spread out to the northwest and carried the mutations of the word “herb” into the European languages, and they also carried it to the southeast into India.

In Roman times the word “herb” was used in a wide general sense. In *Psudopeolus* (-200) the word is used generally to mean plants as well as the culinary herbs such as coriander, fennel and garlic. Marcus Varro uses the word herb 25 times in *De Re Rustica*. It
means grass 17 times, weeds 3 times, trees 3 times and herbs twice. Pliny used the word many times in his *Natural History*. It is translated as herbs, plants, weeds and herbaceous plants.

In a similar manner, our word “book” comes from the Anglo-Saxon “boc,” which meant “birch.” Birch bark was the “paper” of northern Europe of ancient times.

No matter how we view our green friends, we realize that they are responsible for life on our watery planet. If plants did not capture the energy of sunlight and the nutrition of minerals, nobody could survive for long in our world. Plants stabilize our soils and prevent water from ripping away the thin film over earth’s rocky core.

We don’t really know what the first forms of life were, but we do know that the earliest forms of life in the fossil record were stromatolites. These were basically large clumps of single-celled algae. Slow changes in the sea and climate produced mutations for three billion years. Plants changed in response to earth changes. Now our planet has more than 250,000 species of higher plants with every form of diversity.

The great changes that created our present world are believed to be combinations of huge volcanic eruptions and meteor splashes. The last great splash ended the dinosaurs some 62 million years ago, and made flowering plants the kings of the land. Forms preserved in coal beds show us that ferns and cycads once populated the earth. The great meteor splash allowed the earth to repopulate with plants that used sex in reproduction. This mixing of genetic matter produced the wealth of green life that is present today.

People interested in herbs for health should consult a knowledgeable practitioner. This book is not produced for self-doctoring. The medical information does provide a basis for knowledge of certain plants. All medical information should be used with proper caution and professional help.
1. THE HERBS OF THE CAT

“Al-baqla al-farsiya- Known also as tarah dahan, meaning the slave-girls’ vegetable. It is also known as tarah qurba [Nepeta cataria or N. hindostana] that is, the cat’s vegetable, as the cat falls in love with the herb, eats it, sits in its shade and rolls on its leaves and boughs.”

Al-Biruni c. +1000

“The whole plant has a very penetrating, but pleasant smell, and an aromatic taste. Cats are fond of this plant [Tecucrium marum] and will rub it to pieces in their fondness. It is good for all disorders of the head and nerves; it may be given in powder, but the most common way is to take it in snuff.”

John Hill 1812

Around -3,000 the Ethiopians tamed Felix maniculata and introduced it into Egypt. The first “house cat” appears on the Egyptian monument of Beni Hasan in -2,500. The symbol of the goddess Bast was the lion, but only a Pharaoh could keep lions. The smaller cat became the symbol of Bast and was an honored divinity in the temples. It kept pests under control for the small peasant farmers.

The Greek historian Herodotus called the cat “aielouros.” The Greeks knew it as “gale,” and kept it as a pet as early as -500. Around +350 the Roman agriculture writer Palladius became the first to call it “cattus.” He advised keeping them to catch moles in artichoke beds.

Cats are meat eaters, so their relationship with herbs is quite unusual. Cats have long been observed to eat grass, and perhaps this aids in nutrition and digestion. I had a cat that was quite fond of lima beans. In India tigers compete with wild dogs and buffalo for the aromatic fruit of Careya arborea.

Richard Spruce was one of the first botanists to explore the Amazon Basin and catalogue the plants. He remarked: “It is well known how fond all animals are of the Alligator pear [avocado], which is the fruit of a large laurel Persea americana = P. gratissima. I have seen cats prefer it to every other kind of food; and the wild cat-like animals are said to be all passionately fond of it. I have been told by an Indian that in the forests between the Uaupes and the Japura, he once came on four jaguars under a wild alligator pear tree, gnawing the fallen
fruits and snarling over them, as so many cats might do.”

A study was made of leopard scat in the Tai National Park in the Ivory Coast of West Africa. The study showed the leopards eat a large amount of grass and two species *Isachne buettneri* and *Streptogyna crinita* make up 90% of the plant content. The leopards selected the furriest grasses and swallowed them without chewing them. This may provide needed vitamins, and perhaps roughage mixed with antelope helps digestion.

Tiger hunters in India have long known that tigers delight in climbing certain trees and ignore others. When hunters make tiger traps, they always choose the bija *Pterocarpus marsupium* tree. There is an interesting theory that since tigers are hunters, they get particles of decaying flesh in their paws. The red gum of the bija tree acts as a healing disinfectant for them.

Cats react to odor in two ways. The first is known in scientific literature as “flehmen,” which is a German word meaning “grimacing.” The cat sniffs an odor, lifts its head high and pulls its nose and upper lips back to bar its teeth and then briefly holds that position. We think of this as “dislike,” but it seems to be just a response to strange odor.

In 1891 experiments at the London Zoo with lavender water produced an example of flehmen. “The first leopard to which it was offered stood over the ball of cotton, shut its eyes, opened its mouth and screwed its nose. It then lay down and held it between its paws, rubbed its face over it and finished by lying down upon it. The lion and lioness, when their turn came, tried to roll upon it at the same time. The lion then gave the lioness a cuff, with his paw, which sent her off to the back of the cage, and having secured it for himself, laid his broad head on the morsel of scented cotton and purred.”

The catnip response involves sniffing, licking and chewing, cheek rubbing and then rolling and body rubbing. The cat also salivates, rubs against objects, rolls on its back and becomes very playful. Generally kittens up to about the age of two months do not react to catnip. Most of the big cats including lions, tigers, jaguars, ocelots, leopards and pumas react to catnip. Cheetahs, swamp cats, fishing cats and the jaguarondi apparently do not react to the herb.
Traditional literature associates rue *Ruta graveolens* with repelling cats. Vinegar and onions are also supposed to repel cats. Pliny, the Roman naturalist, first mentioned supposed cat repellent properties of rue in his encyclopedia.

The first mention of the catnip response in literature is found in the books of the Arab pharmacologist Al-Baruni. He called *Nepeta ruderalis* the cat’s vegetable, and noted the reaction. Henry Lyte translated Doden’s herbal into English in 1578. He is the first to remark: “The third kind [catnip] is now called in English neppe and cat mint.” John Ray, an early English botanist (1627–1705), was the first to write about catnip in English.

Why catnip should excite cats is a matter of speculation. It was once believed to be a sexual stimulant, but this idea has been scrapped. It is known that catnip is a fairly strong insect repellent. If enough of the active chemicals were applied to the cat’s coat, it would repel fleas. Catnip does seem to be a “friendliness stimulant,” and circus trainers have long used it for training lions and tigers. They become much more cooperative after smelling it.

There is an interesting belief in English herbals that catnip makes cats friendly and men hostile. Catnip used as a tea seems to be a mild sedative. It has been used in treating colic in babies.

Popular names associate a number of plants with the cat. There are about eight plants known as “cat’s claw,” four plants known as “cat’s thorn,” and ten plants known as “cat’s foot.” We also have cat-bells, cat’s ear, cat’s cradle, and of course cat tails. The cat tree *Euonymus europaeus* is named because it is said to smell like a tomcat.

Catnip and catmint usually refer to either *Nepeta cataria* or *N. mussinii*. The term is also used for *Calamintha sylvatica ssp. ascendens, Anisomeles malabarica, Salvia serotina* and *Agastache nepetoides*. The cat-chop is botanically named *Mesembryanthemum felinum*. The cat-attracting properties of these herbs have not been studied.

An old English verse speaks of catnip: “If you set it the cats will eat it; if you sow it, the cats don’t know it.” The verse refers to the fact that drying or bruising catnip attracts attention from cats, but if it just grows, the cats don’t bother it.
Catnip doesn’t produce a sexual response, but the roots of valerian *Valeriana officinalis* do produce sexually related behavior in both male and female cats. The odor is caused by the high concentrations of n-valeric and iso-valeric acids. Males become aroused and start to look around, while females began to lick themselves.

The strong smelling valerian is popularly known as a sedative. Around the year +1670 Edward Topsell wrote in his animal book: “Cats dig it up for love thereof, as I myself have seen in my own garden, for it smelleth moreover like a cat.” There is a German legend that the pied piper of Hamelin lured the rats from town with valerian roots hidden in his shoes. When he failed to get paid, he lured the children from the town with his music.

*Teucrium marum* is a bitter strong smelling mint often called Cat thyme, which is used in Southeastern Europe for liver and gall bladder problems. The fresh green plant has a weak attractive response, but the dried herb is a strong cat attracter.

When the British India Company controlled India, they established plantations for tea and cinnamon. They observed tigers coming out of the forests and smelling *Acalypha indica* and then rubbing and rolling just like an ordinary housecat would over catnip. The native name is “cuppa maynya.” meaning “enchanter of the cat.” The leaves and roots of it are used in India as a laxative.

The kiwi fruit [*Actinidia polygama* and *A. arguta*] is now becoming a popular salad item. Some seeds of this vine were sent to a Boston greenhouse in 1906. The new plants kept getting shredded and the keeper wondered what was happening until he found the greenhouse cat tearing them apart. The next year he set out fifty of the young plants in the garden. In weeks, nearby cats discovered them and ate them to the ground. The strongest cat attracting members are said to be *Actinidia kolomikta* or *A. purpurea*.

This plant is used as one of the ingredients of a popular incense in Japan and when it is burned, cats come. Japanese scientists experimented with the herb at the Osaka zoo. When they brought the plant, the big cats would leave anything they were doing, and would roll on their backs and purr in ecstasy. The behavior was so addictive, that the zookeepers ordered it stopped, because they believed that the plant was causing brain damage.
**Boschniakia rossica** is a parasitic plant that grows on the roots of alders. It has chemicals that make it attractive to cats. **Tecoma stans** is a semitropical shrub that grows in Florida, which has cat-attracting chemicals. **Valeriana phu** from Turkey, **Lippia javanica** and **Acacia farnesiana** also contain cat-attracting substances. The Portugal mint **Sideritis angustifolia** is known as “cuna de gato” [bed of the cat].

In the Western United States tarweed **Hemizonia fitchii** is known to attract cats. The plant has a strong aroma which repels insects and spiders. It was suspected of killing mosquito larvae in the ponds where it grew, but a study showed that it was not particularly active.

Nearly all of the cat herbs have related chemicals. They provide the common response that give our cats happiness and joy. The many species of catnip or exotic plants such as spikenard **Nardostachys grandiflora = N. jatamansi** induce the catnip response.

The California baby blue eyes **Nemophila maculata** has large showy lilac-colored flowers. This plant with **N. maculata** and **N. menziesii** are said to attract cats. I tested one of them on my cat and found a weak response.

It is curious that “man’s best friend” by numbers (there are more cats than dogs in the U.S.) does not have a verbal expression for its love of the cat herbs. There are dozens of proverbs relating to the cat, but the only one involving a plant goes, “To love someone as a cat loves mustard.” It means that you don’t love them at all!
2. THE DOG PLANTS

“That dogs Physicians are, thus I infer;  
They are never sick, but they know their disease . . .  
When humors rise, they eat a sovereign herb,  
Whereby what cloys their stomachs they cast up;  
And as some writers of experience tell,  
They were the first who invented vomiting.”

*Summer’s Last Will and Testament* Thomas Nashe +1600

“Qui me amat, amat et canem meum.” In English: “Love me, love my dog.”

First put in print by St. Bernard around +1140

“A love of cats is the sign of a democratic spirit, but a love of dogs shows a servile nature.”

John-Jacques Rousseau

Cats are well-known for their love of certain plants, but it is less known that dogs react to several plants by sniffing and rolling about. The plants with this reputation are *Chenopodium berlandieri*, *C. watsonii* and *C. vulvaria*. The smell of these plants has been described as resembling fish, dirty socks or manure. It has long been observed that dogs will sniff manure and then begin rolling in apparent ecstasy.

In 1756 Linnaeus named *Chenopodium vulvaria* and mentioned the fact that dogs become excited by its fishy odor. The odor of the plant comes from trimethylamine, which is found in the anal gland secretion of the fox. It is interesting to find the domestic dog is reacting to a trail marking pheromone made by its wild ancestors. Trimethylamine causes frogs to shed their skin prior to mating and acts as a sex hormone.

The presence of trimethylamine explains why dogs are attracted to a number of other plants. For example, mercury was once considered a prime human medicine, and “dog’s mercury” is the plant *Mercurialis annua*. Other plants known to contain this are *Chaerophyllum aromaticum*, *Heracleum sphondylium*, and *Cotyledon erectus* or *C. rupestris*. 
The “dogwood” *Cornus sanguinea* may be named from small amounts of trimethylamine in the bark. The hawthorns *Crataegus* species all contain small amounts of this chemical.

In South Africa the tribes tan the skins of animals. They don’t want the native dogs tearing up the leather. The Lobedu tribe uses the leaves of *Pachycarpus schinzianus*, or *P. rigidus* to repel dogs. It is rubbed on the skins before they are set out to dry.

While cats live almost exclusively on meat and insects, dogs can live well on vegetable foods. Dogs will thrive on a vegetable diet, but cats won’t. In Samoa, the indigenous wild dog feeds mostly on breadfruit and yams, and tame dogs were fed on coconuts. The Hawaiians fed their dogs on the starchy paste of taro roots known as “poi.”

The dogs of the American Indians were descendants of coyotes and wolves. In the wild they lived on rodents, rabbits and dead animals. In the northern U.S. they ate serviceberries *Amelanchier canadensis* when they became ripe in June. In Texas, their main diet in mid-April is the berries of *Ziziphus obtusifolia*. Trappers put rotten eggs with fish oil on their traps. Trappers also found that coyotes were attracted to the cheap perfume known as “A Night in Hong Kong.”

Perhaps the closest a dog gets to loving plant foods is the competition for the fruit of the blackwood tree *Dalbergia latifolia*. In the jungle areas of India, wild pigs, dogs and tigers compete for the fruit.

Although morning glories *Convolvulus* species do not attract dogs, the oil of these plants is a strong dog attractant. Dog catchers once put the oil on their pant cuffs. They would be followed through town by stray dogs, which they captured.

In ancient legend, the mandrake *Mandragora officinarum* has such magic power that a dog was tied to the plant to uproot it. The idea was that the powerful magic of the plant would kill the dog, but not the herb gatherer. It may have been a legend that kept ordinary gatherers from the market for the expensive plant, allowing a few people to command high prices.

Here is an old description of mandrake gathering: “If one tries to dig it up, there is great danger, because when it is pulled out, it groans and wails and screeches so horribly that he who digs it must die. In order to obtain it, therefore one must get up on a Friday at
sunrise or daybreak, and plug the ears with cotton, wax or pitch. Take an entirely black dog and go to the place where the mandrake grows, make a cross over it three times, and dig around it until the root remains attached to the soil by only a few strands. Then he must wind one end of a rope around the mandrake and tie the other to the dog’s tail. Show a piece of bread to the dog and run away as quickly as possible. Being hungry, the dog runs for the bread and pulls out the root. He soon falls dead, struck down by the unearthly screeching of the plant.”

In *Wars of the Jews*, the Jewish historian Josephus wrote: “There is one way in which the taking up of the root can be done without danger. This is as follows: they dig all around the root, so that it adheres to the earth only by its extremities. Then they fasten a dog to the root by a string. The dog striving to follow his master, who calls him away, easily tears up the plant, but dies on the spot. The master can then take this wonderful root in his hand without danger.”

The mandrake *Mandragora officinarum* had a great legend as an aphrodisiac in love medicine. In addition to the narcotic alkaloids hyocyamine and hyoscine, there is a chemical known as (-methoxy-methyl piperidin. The chemical is a sex attractant for dogs. The sexual attractant is the basis of the dog legend.

There are about a hundred plants associated with dogs by name. They are nearly all derogatory. In disgust we say “dog-gone-it,” or a disagreeable woman is called a “bitch.” When we get a bad car we say “it’s a dog.” Nearly all of the dog plants are unattractive and worthless.

The dog violet *Viola silvatica* has no odor. The dog stinkhorn *Mutinus caninus* has a bad odor. The dog cabbage *Theligonum cynocrambe* and the dog’s dinner *Hudsonia tomentosa* are edible only in times of famine. The later is also known as poverty grass. The dog berries *Sorbus aucuparia*, *Sorbus americana* and *Cornus sanguinea* are commonly named, because they are not fit to be eaten. In contrast to the “true nettle,” the “dog nettle” is a mere small summer annual.

The dog is also known for some interesting medicinal plants. Pliny, the Roman naturalist, preserved the story of how a soldier serving in the Roman Army in Spain was bitten by a mad dog. At the
same time his mother had a dream that her son was sick and she was
to send him the roots of the local rose. She did and the tea of rose
roots cured his case of rabies. The plant has been known every since as
the dog rose and Linnaeus gave it the name of Rosa canina in honor
of the story.

Until the time of Louis Pasteur one of the most feared diseases
was rabies from a mad dog. There are about 30 plants that were once
believed to cure rabies. Most of them were known as “mad-dog weed”
at one time. The name “hoarhound” really means “mad-dog,” and
that is what the herb was once used for.

There is an old belief that sick animals known which herbs will
heal them. As a boy I often watched the farm dogs eat from a patch of
chives. After eating it, they would vomit. This behavior was probably
done to control intestinal parasites.

There are at least five species of “dog-grass” named because they
are eaten by dogs. These are rye grass *Lolium perenne*, quack grass
*Elytrigia repens*, *Cynosurus cristatus*, *Elymus caninus* as well as *Agrostis
canina*. Perhaps the last grass is the one Nicholas Culpeper wrote
about under the name of dog grass: “If you know it not by this
description watch the dogs when they are sick and they will quickly
lead you to it.” Quack grass *Elytrigia repens* is known to contain both
antibacterial and antifungal compounds.

Around 1870 Count Mattei’s preparations became the most
famous patent medicine in Europe. He claimed that he learned about
herbs by watching his neighbor’s sick dog wandering about and eat-
ing plants. He made a fortune selling homeopathic pills based on the
dog’s eating habits. He claimed to cure cancer and the Pope placed a
hospital at his disposal. He did everything possible to avoid a scien-
tific trial of his remedies. Eventually a real trial was carried out. His
reputation ended when they didn’t work.

The dogwood tree *Cornus sanguinea* may have been named for
its properties. It was once used as a wash to cure fungal infection or
mange. The tree contains some bitter alkaloids. Other “dogwood” or
“bitchwood” trees were the *Piscidia piscipula = P. erythrina* or *Euony-
mus europaeus*. Both trees were used as washes to kill lice and ticks.
Some of the dog plants received their names from bad smells. The cowboys called burning sagebrush *Artemisia tridentata* “dogwood,” because it emitted an odor like a dog’s wet coat. The “dog’s tongue” *Cynoglossum* came from the bad odor and a tongue-like shape. Dog fennel or dog-buttons *Anthemis cotula* is a strong smelling common chamomile cousin.

A series of plants received their names from poisoning dogs. Dog-bane is *Apocynum androsaemifolium* or *Aconitum septentrionale*. Dog parsley is *Anthriscus sylvestris* and the dog’s cherry was the legendary mandrake.

We do grow catnip, but we don’t grow the stinking plants that attract dogs. Unfortunately nearly all plants ascribed by name to *Canis familiaris* are real “dogs.” They are toxic, they stink, or they are generally useless.
The journals in this bibliography are listed in alphabetical order. Most large medical libraries shelve them in this manner. All foreign titles of articles have been translated for the benefit of my English readers. The authors of books are listed after the journals.

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Save your herb and vegetable scraps to blend with a grapeseed or vegetable oil to make aromatic finishing oils, said Zach Hunter, executive chef at the soon-to-open Austin, Texas eatery, The Brewer’s Table. These finishing oils may be used as a secondary seasonings to enhance the final flavors of a dish, Hunter said, but adds that you can also use fruit and herbal scraps to make cleaning oils and soaps. Wow!