

Healing Civilizations:

The Search for Therapeutic Essential Oils and Nutrients

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Editors Note:

This article recalls and presents a purposeful, lifetime, erudite global journey seeking the mysteries of essential oils. It presents a riveting integration of the history, use and application of long past generations of ancient mentors. It highlights the origins and evolution-to-modern times of the impact and opportunities that essential oils hold for the cosmetic and fragrance industries.

The use of plants to cure diseases and soothe the body has been practiced throughout history. Ancient Egyptians were quite advanced in the implementation of natural medicine. Archeologists are far from uncovering the full extent of this ancient civilization's knowledge of botanical medicine, and, no doubt, some secrets have been irretrievably lost. The threat of losing this ethnobotanical knowledge forever looms large. We need to revisit the art and science of natural healing.

By traveling the globe and delving into our collective past, we can review the lore of forgotten plants and talents that ancient civilizations drew on in their healing practices. These remedies, which could sometimes be luxuries in their day, are mentioned in the ethnobotanical records of the ancient civilizations of the Mediterranean basin, including ancient Egypt, Greece, and Rome, derived from plants mentioned in the Bible and Koran, and found along the trade routes of the Silk Road to the Far East and the New World in the Far West.

Depictions of many ancient products used to treat most common illnesses are recorded on papyrus and on temple walls. Botano-therapeutic information has also been passed orally from one generation to the next, providing us with an extensive repertoire of folkloric medicine. Many products used by the ancients are still used today in folk medicine. Folkloric medicine is tried and true and available in local markets. Ingredients include herbs, seeds, essential oils, fixed oils, extracts, powders, resins, and gums.

The ancient Egyptians burned incense made from herbs, spices, and aromatic woods. Its smoke rose-up to the heavens in honor of their gods and carried their prayers and wishes. In the Third Dynasty, Egyptians used myrrh, frankincense, cinnamon, and cedarwood in embalming and mummifications, and women wore cones on their heads soaked with essential oils for protection from the sun and also to rejuvenate their skin and hair. When Julius Caesar returned to Rome with Cleopatra in 48 BC, they tossed bottles of Egyptian perfume to the crowds as a symbol of their domination of Egypt.

The ancient Greeks initially viewed illness as divine retribution and healing. The ancient Greeks based their medical therapies on the conceptual triad of mind/body/spirit (a healthy spirit with a healthy mind in a healthy body), still enmeshing the spiritual and physical world, but in a manner similar to the modern consideration of psychological as well as physical factors in modern medicine.

Modern-day medical and aromatherapeutic practitioners stand on the shoulders of giants past. Egyptian, Greek, Roman, Chinese, East Indian, Aztec, Inca, Mayan, and other civilizations utilized essential oils and therapeutic nutrients in their daily lives and their ancient medical and spiritual practices. Accordingly, many discoveries concerning various civilizations' use of essential oils and therapeutic ingredients were unearthed by explorers during their travels. Numerous examples of such natural remedies have modern applications, including natural morphine for pain, curare for anesthesia, and quinine for malaria.

Our modern-day Silk Road trip took us from Egypt to Jerusalem, Turkey, Greece, Italy, France, Spain, Morocco, Uzbekistan, Kazakhstan, India, China, Japan, and eventually, of course, North, Central and South America, by air and in luxury accommodations, and spanned a period of twenty years. We enjoyed our trips in comfort! We took extensive photographs and compiled volumes of information on plants grown in the regions by the cultures we visited, viewed methods of extraction and distillation, and sampled essential oils, aromatic nutrients, fixed oils, and herbs that have contributed greatly to our knowledge of local cultures and their current modern usage of botanical therapies.

I toured the world over exploring and evaluating the botanical practices of our past civilizations and assessing the current modern resources of essential oils and therapeutic nutrients. I have visited many cultivated fields of flowers and herbs, witnessing firsthand the physical and detail-intensive labor involved in harvesting and extracting their essences. I met with farmers, laborers, scientists, and machine operators involved in all aspects of producing prized essential oils and therapeutic nutrients.

In my travels, I have not only unearthed wonderful therapeutic ingredients but also some very interesting stories concerning our ancient civilizations. Take, for example, the amazing pomegranate, which is a fruit from both heaven and hell!

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We have access today to information about pomegranates recorded on papyrus in ancient Egypt. Back then, the peel of the fruit was boiled and used as an antiseptic for the treatment of wounds, coughs, and cold symptoms. As a skin-care product, the extract was used as an emollient for soothing the skin. The fruit was popular for making wines and thirst-quenching drinks. The bark of the tree was used as a natural dye. And, in ancient India, pomegranate seeds mixed with opium were used to treat extreme dysentery.

The pomegranate's other worldly association as the tempting fruit from Hell, may have some roots in ancient Greek mythology. According to the myth, when the god of the underworld, Hades, fell in love with Persephone, the daughter of the god Zeus and Demeter (the goddess of the earth and agriculture), he abducted her and took her to the underworld to be his wife. Sick with worry, Demeter neglected the earth's agriculture, and there was drought and famine. Before Persephone could escape her husband, Hades enticed her to eat some luscious pomegranate seeds. After tasting the fruit, she was compelled forever to return to the underworld during each winter season as Hades' wife, during which time the land above became barren. Persephone's emergence from the underworld realm each year symbolizes the renewal of nature in spring. Thus, since ancient times, pomegranates have signified decadent, sensuous enjoyment that ultimately leads to revitalization. Therefore, the forbidden fruit in Greek mythology is the pomegranate, not the apple!

Below is a review of two examples of essential oils that we encountered during our travels:



Chamomile Blue Oil (*Chamomilla recutita*)

Derived from a Greek word meaning "ground apple," chamomile is one of the gentlest essential oils. Growing wild in the Mediterranean, chamomile was used as an antimalarial by the ancient Egyptians, who dedicated this flower to the sun god, Ra. Chamomile is renowned for its calming effects, and its oil is extracted by steam distillation of its flowers.

Chamomile is one of the most well-known medicinal plants. The pharmacological and therapeutic properties of chamomile

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floral oil and leaf extracts are globally acknowledged, and both the oil and extracts are employed in popular medicine and medicinal therapies. Chamomile extracts in cosmetics are prophylactic, preventing and soothing dry, inflamed skin that cracks easily and is susceptible to seborrhea. Chamomile creams are effective skin-care agents, especially in frigid weather. Chamomile scalp-treatment ingredients are integral to several hair lotions and shampoos, especially for the care of blond hair.

The most important constituent of chamomile blue is chamazulene, an azulene named as such to distinguish it from azulenes present in other essential oils. Azulenes are blue-to-violet compounds of varied structures with the parent base consisting of a bicyclic hydrocarbon. Other varieties of chamomile, notably German and Roman chamomiles, exhibit different chemical profiles.



Geranium Oil (*Pelargonium graveolens*)

The ancient Egyptians used geranium to treat growths and tumors. Europe imported geraniums in the seventeenth century, during which time the English botanist Nicholas Culpeper noted their powerful healing properties, and they became highly popular during the Victorian era. North American Indian tribes currently use geranium tisanes to alleviate dysentery and heal ulcers.

Geranium oil has historically been an essential oil of key importance owing to its highly pronounced, rose-like odor. This oil is almost a perfume in and of itself and blends well with a multitude of fragrance varieties. The Grasse region of southern France initiated commercial oil production from cultivated geraniums, and this process was subsequently exported to the fertile plains of Algeria, Egypt, and Reunion Island. Egypt is the second-largest global producer of geranium oil from sources in Upper Egypt, including Beni Suif and Fayoum. After harvesting, plants undergo regular steam distillation, with steam generated in separate boilers. There are two harvests annually, the first between May and the end of August and the second between October and the middle of November, depending on growing conditions. The plants then cease flowering, and their leaves yellow slightly.

Another variety of geranium oil is that of rose geranium from Madagascar. The island of Reunion distills geranium oil through-

out the year, but the bulk of distillation occurs in September and January. There is also sporadic production in India, Kenya, Tunisia, Morocco and South Africa. Bourbon-type geranium oil is also produced in the Chinese provinces of Yunnan, Szechuan, and Guangzhou.

It was in my hometown of Alexandria where Queen Cleopatra grew up and took the helm of the Ptolemaic Dynasty. She fell in love with Julius Caesar and was present in Rome when he was assassinated on the Ides (fifteenth) of March, 44 BC. She then mesmerized Mark Antony by sailing to Tarsus in a flotilla of ships that had purple sails soaked in neroli and a full band playing on deck. Historical references differ on the other oils that soaked the sails. Some mention jasmine, clove, geranium, rose, and cinnamon oils as well. The most likely formula was a blend of them; Cleopatra is reputed to have concocted mixtures of essential oils for aromatic use. Following her majestic entrance into Tarsus, Mark Antony was emotionally moved and immediately reinstated Cleopatra as queen of Egypt and followed her to Alexandria, where they lived until their armies were defeated by Octavian Caesar in the Battle of Actium and both committed suicide and Cleopatra became a symbol of beauty and elegance.

Today, Egypt is one of the foremost essential-oil producers in the world. Egyptian products, which include jasmine absolute, neroli, petitgrain, geranium, anise, basil, chamomile blue, marjoram, fennel, violet-leaf absolute, bitter-orange absolute, and carnation absolute, have set the standard in the fragrance industry.

In India, we were privileged to observe the distillation and extraction facilities, including the technologically advanced supercritical CO₂ (carbon dioxide) extraction facility. The seeds, herbs, and flowers from which many of the CO₂-extracted essential oils were derived and evaluated included Alpina galanga oil, ambrette-seed oil, black-pepper oil, carrot-seed, coriander-seed, coffee, ginger, juniper-berry, nutmeg, and turmeric oils. We learned a great deal from the locals and farmers about their eating habits, their Ayurvedic practices, and the value of the herbs, spices, and flowers in their daily lives.

Essential-oil distillation and aromatic ingredient use commenced early in Chinese history, and technology involving these materials advanced rapidly during the Eastern Han Dynasty (first to second century AD). Chinese Taoists were convinced that extracting a plant's essence symbolized liberating its soul. Today, China is the largest producer of essential oils and aromatherapeutic ingredients in the world!

Our trip through Europe started, naturally, in Greece, the birthplace of the Greek political system, philosophy, and mythology, where Hippocrates, the father of medicine, issued his oath for the ethical practice of medicine and Theophrastus, the father of botany, analyzed and classified botanical herbs and plants throughout the Hellenistic world. The ancient Greeks initially viewed illnesses as divine retribution and healing as a divinely bestowed gift. The use of precious oils and fragrant herbs in ceremonies honoring the gods was also evident at many of the religious festivities of ancient Greece. Athletes at the ancient Olympic Games, the

oldest and most prestigious of the religious Panhellenic Games of ancient Greece (dating to 776 BC) and held in honor of Zeus, anointed themselves with olive oil. Olive oil was employed not only as a cleansing aid for bathing but also as a skin emollient and to enhance the Olympian appearance of the glistening contestants. The only prizes awarded at the Panhellenic Games were fragrant wreaths or garlands worn about the head.

France led the reinstatement of naturally fragrant substances in medical therapies. The history of this region is filled with references to, and historical advances in, the field of aromatherapy. The term "aromatherapy" was first used by French chemist René-Maurice Gattefossé in 1928. His hand was severely burned in an explosion in his family's perfume laboratory. He immersed the injured hand in a container of lavender oil and was astounded by how quickly it healed. This phenomenon stimulated his interest in employing essential oils therapeutically. By the 1960s, several individuals, including the French physician Jean Valnet and Austrian-born biochemist Madame Marguerite Maury, were inspired by Gattefossé's research. Dr. Valnet experimented with treating wounds and burns with essential oils, including thyme, clove, lemon, and chamomile, in his practice as an army surgeon in World War II and subsequently discovered that some fragrances were psychotherapeutic. Europe's impact on the fragrance and aromatherapy industry today is indelible and unmatched.

Columbus's first point of contact in the New World was an island in the Caribbean, in the present-day Bahamas. Currently, over two-thirds of all varieties of globally cultivated food crops originated in the Americas, including maize, avocados, beans, blackberries, blueberries, cacao, chili peppers, papaya, peanuts, pineapples, potatoes, pumpkins, quinoa, raspberries, squash, strawberries, sweet potatoes, tomatoes, and vanilla. In addition, several nonfood plants with food and medical uses were cultivated or harvested from the wild throughout the Americas for ceremonial and medicinal purposes.

In Minnesota, I was introduced to Tis Mal Crow, a Native American of Cherokee and Hitchiti descent. He is internationally known as a root doctor, herbalist, and artist. He worked with other indigenous healers to promote herbal medicine. We would sit together in Minneapolis and converse at length. Before he passed away at a relatively young age, he gave me a copy of his book entitled *Native Plants, Native Healing: Traditional Muskogee Way*. He had autographed and inscribed it with the words: "Nadim, hear the plants! Tis Mal Crow." He told me that plants have audible sound and that this type of communication is called *ko-fumu*. The plants would call on him to find them, even when they were covered by ice and snow. He had a deep respect for the land, its plants, and all living things. His vocation and teachings were concerned with giving back to, and living in balance with, nature.

While in the United States, we visited the most important regions for flower, herb, and fruit cultivation. Our travels took us to Florida and California, which produce the best American citrus products, including oranges, lemons, and grapefruit, and to the

valleys of Yakima, Madras, and Willamette in the Northwest, which produce the best peppermint in the world. We visited Canada, Texas, and Virginia, which produce cedarwood; Mexico (limes and lemons); El Salvador, Honduras, and Haiti (vetiver and lime); Guatemala (cardamom and aloe); the Dominican Republic (aloe and the best tobacco outside of Cuba); and the island of Dominica, where artisan distillers produce the best bay-leaf oil. Finally, we visited South America, where Argentina produces the Tucuman lemon; Brazil, produces orange-oil products; and Uruguay, Chile, and Venezuela, produce various essential oils.

In the modern world, our sense of smell is bombarded with, and exhausted by, all the aromas that surround us. Upon awakening, we take baths and showers, lathering ourselves with scented shampoos, soaps, and conditioners, followed by hairspray, gel, and deodorant application, oral hygiene involving toothpastes and mouthwash, and finally, doses of our favorite colognes or perfumes, all of which are scented—mostly with products containing synthetic ingredients. This list goes on throughout the day while cooking, cleaning, in dry-cleaned clothing, in gasoline fumes, and in indoor and outdoor pollution. At the end of the day, the overwhelmed olfactory system is stressed out and in need of rejuvenation. Aromatherapy is a particularly effective means of supplying it. The medical community has recently begun to evaluate the merits of aromatherapeutic practices employing natural substances. Studies with essential oils have been extensively conducted concerning many common medical issues, including pain management, pregnancy and labor pain (gynecological), anxiety management, dementia, sleep disorders, stress, nausea, and depression. In these studies, medical issues were treated with essential oils, either as aromas or topical applications, to alleviate the associated symptoms. It was a pleasant surprise for me to discover numerous credible citations in some of the most recent scientific articles, concerning medical aromatherapy as treatment(s).

Our journey throughout the world has raised my awareness of the complexities of producing essential oils, absolutes, and aromatherapy ingredients and nutrients. I felt compelled to write a book on the topic entitled "Healing Civilizations: The Search for Therapeutic Essential Oils and Nutrients" (Cameron Books, Petaluma California, 2017) to catalog those healing botanical ingredients that our ancient civilizations discovered and are still commercially available today. I recite historic developments and how humanity has progressed so that we may learn from the past and apply its lessons to improve our future. Medical scientists and university laboratories are beginning to conduct serious and unbiased aromatherapy research, and hospitals and clinical researchers are beginning to use these oils and ingredients in their daily medicinal practices. Currently, aromatherapy has surpassed its New Age role as a meditative component for inducing relaxation and overcoming stress; aromatherapy has become a mainstream practice affecting every aspect of daily life. ■