White Sage Gone Viral: Its Smoldering Affects and How Its Guardians Are Working to Conserve It



White Sage © Eva Bronzini/Pexels

Michelle Dionne Montgomery, BA, IAC, MIFPA, RYT200

The tribal members of the Juaneno Band of Mission Indians, Acjachemen Nation, walked to their historical place in Southern California where the California White Sage (Salvia apiana) had grown for generations. Their parents and their grandparents had taken them there to gather White Sage when they were small children. They fondly remember when the White Sage grew tall above their waists, sometimes higher than their shoulders. The Sage was full and abundant. However, today told a different story, one of illegal poaching and its decimation of a sacred plant species. Now in the stand of White Sage, they saw mowed-down plants and even plants that had been pulled entirely out of the ground with chains attached to trucks. Their hearts grew heavy with sadness over the death and butchering of these plant ancestors. Their ancestors taught them the importance of harvesting the White Sage with care and gentle restraint. Their ancestors taught them that the White Sage was a grandmother to be cherished for food, medicine, ceremony, and spiritual relationship. A haunting question went through their minds, "Would you pull your grandmother out of the ground?"

Introduction

Poaching. For some people, the word conjures up the slaughtering of elephants for their ivory tusks and other African wildlife. More recently, it's become an ecological crisis in Southern California and the Northern Baja region where California White Sage grows. As a resident of Southern California and a professional Aromatherapist, I believe I have a sense of duty to educate people about the endangerment of White Sage. To provide an informative cross-section on White Sage, I interviewed a Native American Tribal Elder, pioneering organic growers of White Sage, and the president of Tree of Life

Nursery and a expert in endangered medicinal and aromatic plants, Dr. Kelly Ablard. While all three have different perspectives and experiences with White Sage, they are all sounding the alarm to alert and educate people around the world about its threatened status caused by insatiable demand. Illegal harvesting by poachers is supplying the black market with White Sage. While on the websites of Amazon, Walmart, Alibaba, or many boutiques on Etsy you will find thousands of sellers of bundles of White Sage and White Sage essential oils. Amazon alone features over 2,000 listings for White Sage. An extremely large percentage of these sellers claiming their White Sage is "wild-crafted" likely buy it from sources who, at one point or another in the supply chain, are poachers. White Sage is a lucrative commodity. In the summer months of June and July when White Sage is at its peak to harvest, poachers illegally harvest thousands of pounds of White Sage. One pound of White Sage is worth about \$30 USD at current wholesale prices. Retail prices are higher at \$40 USD to \$60 USD. An illegal haul of 1,000 pounds amounts to \$30,000 USD sold wholesale, or ~\$50,000 USD at market value (de Greef, 2020).

The future projection for global demand for medicinal and aromatic plants (MAPs) is shockingly staggering. This reflects world population increases, the relatively lower cost of using plant-derived medicines instead of processed synthetic drugs, pharmaceutical industry growth, the mainstreaming of integrative health, and the medical field focus shifting from disease treatment to disease prevention. In 2020, the global trade value of MAPs reached US \$800 million per year and is projected to grow at a rate of 15-25%, with an estimated value of US \$50 trillion by 2050 (Volenzo and Odiyo, 2020).

Botany

White Sage is an attractive, silver-green-colored shrub native to the southwestern United States and northwestern Mexico. These evergreen perennial shrubs grow throughout many plant communities between sea level and up to 7,000 feet. *Salvia apiana* is a member of the Mint family (Lamiaceae) and grows up to five feet tall or about 152 centimeters.



White Sage (Salvia apiana) © H LWolfe/WikiCommons

White Sage produces clusters of white, silver-green leaves that have a pleasant and distinct aroma. The scent of Sage is earthy and soothing. Whitish, purple flowers bloom in the summer. These tiny flowers are pollinated by Bumble Bees (*Bombus* species), and a variety of Bee species (*Apidae* family), predominately the Carpenter Bee (*Xylocopa* species) (Curran, 2020).

This desert herb thrives in heat, sunlight, and low-nutrient sandy soil from San Luis Obispo in the North and Northern Baja, Mexico in the South.

Traditional uses

California Native American tribes, including the Juaneño/Acjachemen, Tongva, Chumash, Cahuilla, Gabrielino-Tongva, and Kumeyaay, revere White Sage as a sacred plant, and it is used for food, traditional medicine, and Indigenous ceremonies.

Its leaves are used as a spice, and its seeds are ground into flour and used to make mush, or eaten alone, or mixed with other grains and eaten as a dry cereal. Its young stalks or peeled ripe stem tops are eaten raw (Moerman, 1998).

Among the Cahuilla, Kumeyaay and Kiowa tribes White Sage leaves are used to make infusions and decoctions for use as a cold remedy, blood tonic, cough medicine and to treat Poison Oak (*Toxico-dendron pubescens*). The seeds are used to clean the eyes, and the leaves are burned to clear the air of microbes. The United States Pharmacopeia lists its usage as a mouthwash and gargle and to help with bleeding gums and sore throats. Today it is used as a form of natural medicine as an essential oil (Moerman, 1998).

Smudging

In recent years, illegal poaching has increased dramatically with the popularity of smudging White Sage. Smudging is the act of burning White Sage bundles made of stems and leaves to cleanse/purify a space and rid it of negativity. Social media has gone viral with smudging, depicting it in videos posted by a plethora of people, many



Smudge © M. Montgomery

whom have no idea about the origins of it, how it was harvested, or its cultural significance to Indigenous people. For example, in the popular television series *Succession*, the wily character Roman Roy sent an attaché-carrying agent to burn some Sage in the boardroom, announcing, "I was sent by Roman to burn some Sage."

The Indigenous perspective

On a hot southern California afternoon, I sat under the cool shade of an oak tree - a.k.a. Great Grandmother Oak Tree – with tribal elder Jerry Nieblas, who is the historian and member of the Juaneño Mission Indians Acjachemen Band. Before us stood the Village of Putuidem, an ancestral site and sacred gathering site for the descendants of the Juaneño and Acjachemen people in San Juan Capistrano, California. It was at this ancestral village in 1776 that his great grandmother five generations removed, Chigilia (Maria Bernarda, baptized name) was forcibly removed by the Spanish who built the mission system. Chigilia was enslaved as a 14-year-old girl and would never return to her native way of life. Our discussion would cover the tribe's sacred reverence of White Sage and the act of saging as well as the disappearance of White Sage in the local area. Jerry began, "When we burn/smolder dry Sage, we call it 'saging.' We view it as a gift from Mother Earth and have a reverence

for it as our ancestors did. I use my great grandfather's abalone shell to hold the Sage as it burns. The ashes are spiritually placed back into Mother Earth or scattered around a tree," he explained. He added that the ash marks left in the abalone shell had never been washed off. He fondly recounted his grandmother who emphasized the importance of harvesting White Sage with respect for Mother Earth and doing so judiciously, to a certain height, so it would continue to grow.

I mentioned that commercial farms were growing White Sage. Jerry reacted to this by gently shaking his head and saying that he and his tribe could not bring themselves to use Sage from outside his ancestral lands. He stressed, "It is essential to have the ancestral connection to White Sage from our lands." The energetics held by the local White Sage holds the tribe's ancestral history of harvesting White Sage. It's important at this point to underscore that the sustainability of White Sage also directly impacts the sustainability of cultural practices of Indigenous Peoples in Southern California and Northern Baja. He adamantly stated, "I want people to know that we (the Indigenous people and their tribes) are still here. It's important to make people aware that we are still here and why White Sage is vital to our culture; it's a way of life for us. Because of the abuse of White Sage, we are paying the price. We are the protectors of Mother Earth and are taking a stand to conserve it."

Our conversation turned to the illegal poaching of White Sage and practices that the tribe is taking to conserve it. "We are educating our tribal members to conserve White Sage by using less of it," he said. Within his lifetime White Sage once grew along the Oso River and throughout the northwestern part of San Juan Capistrano. Today that is no longer the case. To help conserve White Sage, he and other tribal members are taking a few branches from the Sage bundle rather than using the whole bundle (Nieblas, 2022).

Organic White Sage growers

For my next interview, I traveled close to the border of Mexico to Jacumba Hot Springs in San Diego County, California, to visit Sagewinds Farms. The temperature was hot, indeed – 102° F (nearly 39° C). My Jeep traveled down a rugged dirt road, and upon turning a bend I beheld a majestic natural boul-

der formation that features the shape of an eagle's head. I was struck by its natural beauty. Some of the rocks bear petroglyphs (rock carvings) that Indigenous Peoples created. A wagging canine committee greeted me as I drove through the entrance. Ellen Woodward-Taylor and Ken Taylor (2022), who claim to run the first organic White Sage farm in the world, warmly greeted me. Sagewinds Farms is located on 40 acres and includes about two acres of White Sage. Ellen grew the Sage from local seedlings that grew on the property. It took three years to successfully learn how to grow White Sage. Ellen pointed out that it is a slow-growing plant. Natural predators of White Sage include gophers and rabbits that eat lower leaves. Native American Indians, Ellen noted, harvest White Sage when the plant is about 1-1/2 years old.

Products and markets

Sagewinds Farms products include loose dry White Sage, dry Sage bundles, White Sage essential oil, White Sage hydrolat and a White Sage body cream. According to Ellen, Japan is their largest overseas market, representing approximately 50% of their sales. She explained that White Sage sales to Japan increased dramatically following the Fukushima nuclear disaster in 2011. The herb's known microbial properties propelled sales. Ken said much of the White Sage is used to make incense in Japan.

The big question remained...Can your farm keep pace for the huge demand for White Sage? They shared that, each year, their sales increased, and they had recently partnered with an organic White Sage grower in Baja to help fulfill orders. This is a favorable business opportunity for the Mexican grower, as the distribution system in Mexico is non-existent. Ken, a former organic grower of micro-sprouts and exotic lettuce, explained to me that an authentic organic designation requires that the produce be certified by two agencies, namely the United States Department of Agriculture (USDA) and the California Certified Organic Farmers (CCOF). According to Ken, "Most consumers do not know that an organic certification requires being approved by these two agencies."

On the topic of illegal poaching, Ellen said that poachers sometimes set up distillery equipment to distill White Sage in preserves and private lands. To speed up the process of poaching, sometimes they use chains to rip out the White Sage plants.

This comes as no surprise, as ranger authorities in White Sage preserves have pointed out organized groups involved in illegal poaching. Poachers who are organized enterprises typically use undocumented workers who earn a minimal wage to illegally harvest White Sage. The top management behind the poaching are not the ones who are arrested and/or fined by authorities.

Conservation practices

I explored a few conservation practices engaged by Sagewinds Farms; one involves the usage of Sage branches and leaves that fall off during the process of making hand-tied Sage bundles. Ken uses these remnants to distill White Sage essential oil. Another practice relates to enriching the potassium-deficient soil that their White Sage grows in. To fertilize White Sage plants, Ellen makes worm castings with the manure from her miniature horses. "It's simple magic!" she exclaimed, "You just add water to the manure and add a spell of time." A worm casting made from horse manure is considered a premium garden fertilizer.

Tenents of buying White Sage

Ellen emphatically said, "You've got to know where the White Sage you buy is sourced. Chances are if it is being described as 'wild-crafted' it [is] mostly likely illegally poached. If it's advertised as 'organic,' you need to make sure you verify that it has been certified by both the USDA and the CCOF. Consumers beware! Yes, our prices are higher. As a commercial grower, our process is more labor intensive since we handpick the White Sage and grow it organically."

Plant a garden to reflect your local ecosystem

The Tree of Life Nursery has been in San Juan Capistrano for 40 years and primarily focuses upon propagating California native plants, and supplying a line of over 500 plant species and varieties for landscaping and ecological restoration. I spoke with President Mike Evans aboutf poaching and ways to conserve White Sage. He stressed that the commercial growers of White Sage cannot compete with the significantly lower price of black-market Sage. We must address illegal poaching through educational programs and by informing people about ethically sustainable production. The Tree of Life Nursery hosted a Sage Festival in November of 2022 to educate people about White Sage and other varieties of Sage.

"Are you familiar with *Dudleya*?" Mike asked me. I responded that I was aware that these plants were being illegally poached in California. *Dudleya* are a genus of succulents that grow on coastal cliffs. Ten of California's *Dudleya* are classified as threatened or endangered under the Federal and/or California Endangered Species Acts (CNPS, 2021). International poaching operations are reducing their numbers on the California coastline, and a large amount is sent to Korea. The Tree of Life began the *Dudleya* propagation project and is hopeful that its success will reduce poaching by making it commercially available.

The planting of a garden calls for an artistic selection of plants, and as Mike pointed out, "White Sage can be a component in a group of native plants; you are in effect, telling stories in your natural garden and creating a local ecosystem right outside your door" (Evans, 2022). Hearing it described this way has inspired me to plant White Sage in my garden.

The conservation of White Sage and its ecosystem

Turning to the endeavor of MAPs conservation, I spoke with Dr. Kelly Ablard (2022), the founder and CEO of Airmid Institute, a non-profit organization based in California whose mission is to safeguard MAPs facing extinction worldwide while promoting and protecting the use of traditional medicine with Indigenous communities. Dr. Ablard, who is also a registered Aromatherapist and essential oil therapist, explained that White Sage is threatened by habitat destruction, climate change, invasive species, increasing wildfires, and illegal poaching. "The earth is undergoing its sixth mass extinction whereby over I,000,000 species are facing extinction," she said, "and White Sage was added to the United Plant Savers Species At-Risk List."

Dr. Ablard discussed the Airmid Institute's White Sage Project: "It focuses upon not only the White Sage plant but also on its whole ecosystem, the species of plants, insects and animals that are connected to it. Pollinators such as bees play a crucial role in the reproduction and genetic diversity of White Sage." She paused and interjected, "The species name of White Sage, 'apiana,' loosely translates to belonging to the bees and the common name for White Sage is 'Bee Sage.' One specialist pollinator is a large bee known as the Carpenter Bee whose heavier weight triggers

Your education and products should not be one size fits all.

Our essential oils are never pre-poured and stored.

Each order is hand-poured with intention for every customer.

Certification Programs, Master Classes, and Workshops are taught live and never pre-recorded.

They are revised every time they are taught, recorded and accessible forever.



Each class is unique to the students in attendance!



The School at Stillpoint ... Integrative Aromatics & Energetics

www.stillpointaromatics.com

a pollination mechanism in the White Sage flower." Several bee species are now endangered with the demise of White Sage. She added that an integral part of the White Sage Project includes developing a relationship with Native American tribes in Southern California to create educational programs about White Sage and its pollinators.

According to Dr. Ablard, saging increased in popularity in 2007 when it was publicized that the smoke released from smudging effectively cleared airborne microbes (Ablard, 2020). This study burned only "wood and a mixture of odoriferous and medicinal herbs, havan samagri that contains a mixture of wood, herbs fruit and seeds used in Vedic Hindu tradition." Sage was not included in the study's ingredient list (Nautiyal et al., 2007). In 2020, when cases of the COVID-19 coronavirus surged in the United States, the demand for White Sage dramatically increased as people sought to find preventative measures.

What is the status of the wild population of White Sage? The largest White Sage population is located in the Northern Etiwanda Preserve (San Bernardino County). Dr. Ablard said, "This 1200-White-Sage dense region faces formidable opponents – encroaching development, climate change, the threat of intense wildfires, and rampant illegal poaching. Currently, we do not have comprehensive data on the population of White Sage in the Northern Etiwanda Preserve to provide a baseline." A vital component of the White Sage Project is public education, and community gardens will play an important role. Dr. Ablard continued, "I'm collaborating with Amanda Plunket, certified clinical Aromatherapist, owner and lead beekeeper of Bee Rooted, to spearhead this community outreach." She added, "Amanda brings her bee expertise and the vital importance of pollinators for the conservation of White Sage." The White Sage Project will encompass an entomological study on this ecosystem's variety of insects as well as working with local Indigenous tribes.

During the interview, I had a sobering thought that caused me to freeze mid-sentence. Are the energetics of White Sage being altered or even damaged by its overexploitation? Give this some serious thought. We, humans, are injured or compromised with exposure to pandemics, pollution, and pesticides while being stressed by climate change and societal inequali-

ties. This poignant description offered by Dr. Ablard (2022) provides us with a deeper understanding of White Sage's plight to survive:

Imagine the negative impact this has on the essence of White Sage; and therefore, its gifts of healing the body, spirit, and mind. Imagine the energy it yields as a result of this misalignment as 'one.' What can we learn through her challenges? When someone is so badly treated and all sit idly by, what becomes of that someone? If not treated properly we run the risk of losing this someone — this beautiful sacred plant. She is already dwindling in numbers whereby Native Americans who rely on her energetics find wild White Sage difficult to come by. Due to this, cultural sustainability is also threatened.

Essential oil analogs

These are some key factors to take into consideration when choosing an analog:

- An essential oil's fragrance profile
- Key chemical constituents
- Therapeutic activity
- Safety
- The plant's conservation
- Trade status

Conservation/trade statuses are available through online resources provided by well-established and respected organizations such as the International Union for Conservation of Nature (IUCN), Convention on International Trade in Endangered Wild Fauna and Flora (CITES), World Wildlife Fund, US Fish and Wildlife Service, and the United Plant Savers (UpS).

The following essential oils are suggested as alternatives to White Sage essential oil based on the analog factors listed above (Ablard, 2020):

Spanish Sage (Salvia lavandulifolia)

Chemical profile: I,8-cineole (12.0-40.3%), β -pinene (3.3-7.3%), α -pinene (4.7-10.9%), β -myrcene (1.0-4.9%).

Fragrance profile: fresh green, camphoraceous. Therapeutic benefits: antibacterial, airborne antimicrobial, and analgesic.

Precautions: contraindicated in pregnancy and breastfeeding (all routes). Abortifacient: suggested maximum dermal use level of 12.5%.

Conservation status: Least Concern.

Blue Gum (Eucalyptus globulus)

Chemical profile: 1,8-cineole (65.4-83.9%) and α -pinene (3.7-14.7%).

Fragrance profile: fresh-camphoraceous.

Therapeutic benefits: antibacterial, analgesic, and antifungal.

Precautions: essential oils high in 1,8-cineole can result in breathing difficulties in young children and should not be applied near the face of infants and children under ten years of age. The maximum dermal use level is 20%.

Conservation status: No apparent threat.

Rosemary (Salvia rosmarinus ct. cineole)

Chemical profile: 1,8-cineole (39.0-57.7%), camphor (7.4-14.9%), β -pinene (5.5-7.8%), α -pinene (9.6-12.7%), and β -myrcene (0.7-1.6%).

Fragrance profile: fresh-camphoraceous, green and sweet herbaceous.

Therapeutic benefits: antibacterial, analgesic, and antifungal.

Precautions: do not apply to, or near, the face of infants or children. May be neurotoxic, based on camphor content.

Conservation status: Least Concern.

Smudge sticks

Rosemary (Salvia rosmarinus) is not only an excellent analog in the form of an essential oil, but the dried plant material, too, is therapeutically and spiritually a good alternative for use in smudging. Dried Texas Cedarwood (Juniperus ashei) and Virginian Cedarwood (Juniperus virginiana) leaves are also used in this way. And the best part of utilizing these plants is that their conservation status is of Least Concern; as a matter of fact, in the case of Juniperus spp.* generally populations are considered so abundant that they are deemed pests.

Summary

When we examine a complex ecological issue, we must consider its scope and breadth — and ecosystem connectivity. The overexploitation of White Sage is threatening its delicate ecosystem in which bees, butterflies, birds, insects, and mammals such as the pocket mouse reside. We must take into respectful consideration the Indigenous tribes and their cultural connection to White Sage; their ceremonial ways of life are endangered with the disappearance of White Sage. Each of my interviewees stressed the

importance of education: public lectures, festivals and community gardens.

We must look at what has led to the overexploitation of White Sage in the last decade. What is at the core of this worldwide demand? Many hold the belief it is being driven by a global need for healing on a deep level, a humanistic need to be nurtured by nature amid global climate change. Environmental activists are achieving progress with the United Nations body passing a resolution recognizing access to a healthy and sustainable environment as a universal right in 2021 (UN, 2022). As holistic Aromatherapists, we can make choices to help conserve White Sage, whether it be choosing to make sustainable purchasing choices, choosing to use an analog, planting a White Sage plant, posting articles about White Sage on social media or our websites, or becoming members of an organization that is dedicated to White Sage conservation. 🙉

*Note that Juniperus communis in Albania is indicated as Vulnerable and Juniperus communis in the United Kingdom is indicated as Near Threatened on the IUCN Red List (www.iucnredlist.org).

References and bibliography

Ablard K. (2020). White Sage: A sustainable vision Quest Aromatika. 7 (3.1).

Ablard K. (2022). Interview with Dr. Kelly Ablard. August 26, 2022.

California Native Plant Society (CNPS). (n.d.). Protect California Dudleya. Available: https://www.cnps.org/conservation/dudleya.protection. Last accessed 3 April 2023.

Curran K. (2020). Ethnobotany of Southern California Native Plants: White Sage (*Salvia apiana*). Available: http://www.ethnoherbalist.com/southern-california-native-plants-medicinal/white-sage-plant/. Last accessed 3 April 2023.

de Greef K. (2020). The White Sage Black Market. VICE Magazine. Algorithms Issue. Available: https://www.vice.com/en/article/m7jkma/the-white-sage-black-market-v27n3. Last accessed 3 April 2023.

Evans M. (2022). Interview with Mike Evans. September 13, 2022.

Moerman D E. (1998). *Native American Ethnobotany*. Portland, OR: Timber Press Inc.

Nautiyal C S, Chauhan P S, Nene Y L. (2007). Medicinal smoke reduces airborne bacteria. *J Ethnopharmacol*. 14 (3), p446-451.doi: 10.1016/j. jep.2007.08.038.

Nieblas J. (2022). Interview with Jerry Nieblas.

United Nations. (2022). UN General Assembly Declares Access to Clean and Healthy Environment a Universal Human Right. Available: https://news.un.org/en/story/2022/07/1123482. Last accessed 3 April 2023

Volenzo T and Odiyo J. (2020). Integrating endemic medicinal plants into the global value chains: The ecological degradation challenges and opportunities. *Heliyon*. 6 (9). doi: 10.1016/j.heliyon.2020.e04970.

Woodward-Taylor E and Taylor K. (2022). Interview with Ellen Woodward-Taylor and Ken Taylor. August 31, 2022.

Michelle Dionne Montgomery is the principal of Botanical Blends and Balance in Southern California. She was mentored by Valerie Gennari Cooksley, RN, OCN, FAAIM, CERT, and was certified as an Integrative Aromatherapist

by the Institute of Integrative Aromatherapy. In 2021 she completed a specialization in Integrative Health & Medicine with the University of Minnesota and is studying Aroma Point Therapy with Angela Sidlow, CHAPT. www.botanicalblendsandbalance.com



A Call to Action: How Can I Help to Protect White Sage?

Help to protect White Sage through an Airmid Institute membership by emailing: info@airmidinstitute.org.
Use the code 'PROTECTWHITESAGE.'
Your membership will go directly toward funding the White Sage Project and your name will be added to Airmid Institute's White Sage Project page to show your support.

Purchase from a sustainable grower/supplier. You can purchase organic White Sage from Sagewinds Farms: https://Sagewinds.us or email: ellen@Sagewinds.us

When buying White Sage, ask the retailer/supplier for evidence that the White Sage was legally and sustainably harvested from the wild.

Urge California state legislators to take action to commit more resources to conserve and protect White Sage. To contact legislators, go to: https://www.calcpa.org/government-relations/contact-the-california-legislature.

Watch the award-winning film "Saging the World." This short documentary was produced by Rose Ramirez, Deborah Small, and the California Native Plant Society. View the official trailer at: https://www.youtube.com/watch?v=OwvnBKFMGGc.

Plant White Sage in your garden. (Although it is a desert plant, it has been known to grow in other unlikely places in the world.) In Southern California you can purchase White Sage from The Tree of Life: https://californianativeplants.com/

Gifts for you!

Plant White Sage in your garden! Seeds courtesy of Jessica Manchester of Earthbeat Seeds.



Use Use code 'IJPHA10' and receive 10% off your order.

Send her a Thank You by visiting her website and leaving a message!