

de Materia Medica

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Until the development of conventional medical practices, more commonly known as Western Medicine, or Allopathy, the practice of herbalism has been used for thousands of years throughout many cultures around the world. Herbalism supports the human body and encourage balance between the body, mind and spirit. While not as "quick and easy" as more conventional forms of medicine, the action of preparing a salve, tincture, decoction, or even a simple cup of herbal tea can also be a form of medicine. The process of creating an herbal preparation with care and purpose can also relate to the action of fabricating a tool meant to prepare or administer that preparation. The tools and jewelry pieces I make as a metalsmith and an herbalist, along with the research and evidence provided in this paper will work to describe what herbalism is and how we can use herbal methods to incorporate wellness into daily life.

de Materia Medica

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by

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GLOSSARY

Allopathic Medicine: the treatment of disease by conventional or mainstream means.

Antispasmodic: prevents or eases spasms or cramps in the muscles of the body.

Areal Plant Material: the leaves, stems, or flowers of a plant

Bitter: herbs that have a bitter taste. Typically taken before a meal to stimulate the production of saliva, bitter herbs aid in digestion of foods.

Champlevé: an enameling technique in which recesses are etched, sawed and soldered, die struck, or otherwise created onto the surface of a metal object and filled with vitreous enamel.

Energetics: use the spectrum (cool, warm, dry, damp) and the properties (such as astringent) associated with herbs as a framework of understanding how best to match herbs to the individual.

Herbal Actions: refer to the specific effects the herbs have on the body.

Herbal Constitution: the unique blend of the four constitutions (hot, cold, moist, warm) within an individual.

Mucilaginous: herbs that have viscous or gelatinous consistencies

Nervine: An herb that tones the nervous system through nourishment and calming. Used for anxiety, panic, nervous tension, headaches, etc.

Plant Monograph: the systematic organization or profile of a plant. Often includes the plant's common names, the Latin name or binomial, the family, planting guidelines, botanical description, safety precautions, uses, history, taste, energetics, constituents and a botanical drawing.

Poultice: A soft mass of plant material that has been crushed and macerated, applied directly to the skin and held in place with a wrap, cloth, or bandage.

Simple Preparation: a preparation that includes no more than one or two herbs

Solvent: the liquid by which plant material is dissolved to extract its medicinal compounds.

Volatile Oils: another term for the essential oils within plants.

INTRODUCTION

Until the development of conventional medical practices, better known today as Western Medicine, or Allopathic medicine, the practice of herbalism had been used for thousands of years throughout many cultures around the world to support the human body and encourage balance between the body, mind and spirit.

Herbalism strives to create this balance, not simply by treating symptoms of an underlying cause, but by investigating what might be causing these symptoms. Professional herbal practitioners investigate the client's daily living habits, the environments they are exposed to, and the types of food they consume. It is also not uncommon to ask questions such as "Do you prefer colder or warmer weather?" or "What are your energy levels usually like?" or even, "Is your tongue bright red or more of a pale color?" (Forêt, 2017). Hints like these are used to determine the body's energetics, which are unique to each individual and can change throughout a person's life. Herbalism evaluates the energetics of both the person and the plants, and looks to support health by bringing these energies into balance.

The idea of living a healthy life is not a new one. William Buchan, a physician and an author in the 1700's wrote a book "designed to render the medical art more generally useful by showing people what is in their own power." For those families who did not have easy access to a doctor, Buchan stressed the importance of what could be done daily as a prevention of disease and injuries. He starts with an examination of how children were raised during that time and what steps parents could take to prevent their children from developing the bad habits that would be kept into adult hood.

"Few things are more hurtful to children than the common method of sweetening their food. It not only makes them grow fat and bloated but entices them to take

more food than they ought to do. It is pretty certain, if children's food were quite plain, that they would never take more than enough. (Buchan, 24)"

In many instances, a simple change in lifestyle is needed, and can go a long way in improving our way of life. The use of herbs and herbalism concepts can help support these changes. Some herbs, such as chamomile and dandelion, can aid in digestion because of their bitter qualities and others, like lavender, passion flower, and other nervine herbs can help to promote a restful sleep.

Most illnesses and imbalances are well within our power to address, and most people respond well to simple changes in diets and lifestyles. This can be aided with gentle natural remedies, however, it can be difficult, especially for those new to the concept of herbalism or healing plants, to know what works, why, and when to use them.

CHAPTER 1: Implements

It is important to state that it is inadvisable to choose healing plants over conventional medicine. Contemporary medicine has come far in treating symptoms of serious conditions and repairing the body in ways herbalism simply cannot. You certainly would not go to an herbalist for a broken bone in this day and age, nor would you seek herbal remedies for any other serious injury or illness. The goal of herbalism is not to turn people away from conventional medicine but to encourage a collaboration between the two, as well as promote self-care and a healthier living and state of mind.

I believe part of this can be held, not just in the preparation, but in the action of preparing as well.

With the proper research into the herbs being used, it is possible to create salves, tinctures, infused oils, infusions, poultices, and other such preparations at home with the kitchen tools many of us already have. Bowls, measuring cups, colanders, strainers, and spoons, are some of the tools one needs to get started. However, I believe there can be a stronger



relationship not only between the maker and the plants and preparations, but also between the maker, the plants, the preparations and the tools being used.

Especially during the Victorian Era, emphasis was put on the ritual of dining and etiquette. Simple actions we do without thinking today, like scooping out ice cream with the biggest spoon we can find or leaving our chicken bones on the edge of our plate or napkin, would be horrific to a Victorian. Instead, one might use an ice cream saw or bone plates (fig. 1). As new luxury foods were invented,

Figure 1: Bone Plate

many serving utensils were created to go along with them or to emphasize other expensive foods. Dining itself was a ritual, held at a certain time with specific place settings and a frightening amount of silverware and dishes. By attaining a large collection of silver utensils, a hostess was able to show off not only her wealth, but her taste and knowledge of high society.

The design of these implements referenced the Rococo, Neoclassical, Art Nouveau, and the Arts and Crafts movement. Ornamental inspiration also came from interior design and architecture, as well as plant leaves and scrollwork (Rau, 2017).

Referencing this time period, I chose to make implements that might promote not only a sense of wellness, but also a sense of ritual.

As one first begins their journey in learning about herbalism and incorporating it into their lives, they are encouraged to start with simple preparations. More specifically, simple teas or infusions.

These two words are inherently different; an infusion is the action of extracting chemical compounds or flavors from plant material with a solvent such as water or alcohol. The tea tree, native to southern China, was related to early botany and medicine (Kakuzo, 1956). The word "tea" in herbalism commonly refers to all infusions, though technically refers to the *camellia sinensis* tree that all tea leaves come from.

Starting with simple infusions allows the budding herbalist to give a deeper look into the herb that they are using and study its actions, uses, and which precautions, if any to be aware of.

A simple preparation that I started with was a lavender infusion. The action of making a cup of lavender tea is simple enough; add a portion of dried or fresh lavender to a tea ball or pour-over infuser, heat desired amount of water, and pour hot water over the lavender into a heat safe mug. However, after going through this motion a few times, I wanted a more

meaningful experience. In my study of lavender, I used elements from the dried flower's shape to design the first in a series of herbal serving spoons.

Because I was primarily working with the dried flower heads as the ingredient for my simple infusion, I used colors that visually represented those flowers. The edges of the spoon also reference the shape of the dried flower heads and are used repetitively to give symmetry to the design. The process of *champlevé* (see chapter on Techniques) allowed me to highlight the silhouetted form I was picturing while also providing a contained recess for the enamel, emphasizing the idea that this is a spoon used to serve dried lavender (fig. 2).

The Japanese Tea Ceremony is a recognizable ritual amongst tea lovers and most others, although China was where tea originated and where it evolved into some of the customs we see today



Figure 2: Lavender Spoon

Developed in Japan during the 15th century, "The Way of the Tea" or *Chado* is "...founded on the love of beauty in even the most basic pursuits of our daily life (Kakuzo, 1956)."

The Japanese Tea Master Sen No Rikyu (who at the time adapted *Chado* so that it had less utensils), defined the basic principles that summarized the spirit of The Way of Tea. He prioritized harmony, respect, purity and tranquility, and incorporated a philosophy that transcends materialism through human interaction. This philosophy sees imperfections as beautiful and makes The Way of Tea more accessible to those who believe tea to be a way of

life (Gascoyne, 2014). In this, I believe herbalism follows the same spiritual logic to those who choose to incorporate the practice into their way of life.

A traditional Japanese tea ceremony consists of hundreds of steps, but only a few essential tools: the tea bowl (chawan), the tea whisk (chasen) and the teaspoon (chashaku) (Gascoyne, 2014). Each of these tools are specific in their design and material, and without them, the ceremony is unable to be completed (fig. 3).



Figure 3: Tools of the Japanese Tea Ceremony

The simple infusion method most use at home requires putting a tea bag or tea ball in a mug and steeping the tea, which is the most convenient way to brew tea aside from purchasing



Figure 4: Infuser Set

it already made. Since a key part of herbalism is learning about the materials, it requires more time than convenience allows. *Infuser Set* (fig. 4) was made with the idea of time, or taking time, in mind.

There are three individual parts that

make up this piece: the infuser bowl, the cradle, and the stand, each fitting within the other (fig. 5).

In lieu of filling a tea ball up with herbs or plopping a tea bag into a mug, the user is meant to carefully fill the infuser bowl with loose leaf herbs or tea. Then being mindful of the stand that it sits on, lift the cradle from the stand and place it on top



Figure 5: Infuser Set Components

of a mug so that the cradle is being supported by the rim of the mug.

Hot water can then be poured over the tea leaves in the infuser bowl. The mug should be filled with enough water to rise through the holes in the infuser bowl, so the herbs still sit in water. This allows the water to extract more of the nutrients from the herbs as they steep. Steeping time always depends on the types of herbs being used. Leafy or floral herbs, such as raspberry leaves, lavender, or hibiscus, typically should not be steeped more than a few minutes, whereas berries and the hardier parts of herbs, such as elderberries or rose hips, should be steeped for ten minutes or more. This is because the areal parts of herbs are more delicate in nature.

The looping design elements that make up the cradle of *Infuser Set* derive from my research on Art Nouveau and the way it influenced Victorian silver. The colors are an extension of the palette seen in *Lavender Spoon* but are balanced by the neutral color of the infuser bowl and stand, indicating that the set is meant to be used with any herb.

The three Tea Blend Vessels that I created also followed the idea of bringing ritual to an otherwise mundane task (fig.6). Four components make up each of these vessels: the bowl, the lid, the serving spoon, and the base.

The rounded shapes of each of these vessels, though relatively simple, have unattached bases. This means that to effectively use this vessel, the user must lift the entire vessel



Figure 6: Tea Blend Vessels

up off the base and cradle it in their palm, bringing the user in direct contact with not only the vessel, but the herbs that are contained within. The user can then lift the lid off the vessel, detach the small serving spoon from the hook riveted onto the vessel and scoop out the contents.

To incorporate more of the illustrations found in other pieces and give the user a better idea of the herbs that the blend contains, small sketches are revealed on the underside of the lids of *Energizing Blend* and *Nutritive Blend* (see chapter on Techniques).

Placing the vessel back onto the base, the user must be mindful that it is balanced, otherwise the lid might slip to the side or the serving spoon might touch the surface of the counter or table that the piece rests on. This further drives the ideals of balance that herbalism strives to introduce.

CHAPTER 2: Herbal Energetics

As mentioned above, when one goes to visit an herbalist, it is not uncommon for the herbalist to sit with the client in a long session asking questions about all aspects of the client's life, before any remedies, suggestions, or preparations are given. The herbalist will try to get a read on the current energetics of the client, in order to better introduce balance back into the client's life.

Herbal energetics describe how the plant will act when taken internally or externally. Each person is unique in their constitutions and imbalances based on their environment, living habits, and even states of mind. Knowing the energetics of a plant goes a long way in determining which herb is appropriate for the individual and their needs.

In Western herbalism, which originated from Greek and Roman medicine, energetics are linked to concepts like the Doctrine of Signatures and the Four Humors.

Simply stated, the Doctrine of Signatures states that the plant's physical appearance correlates directly to which part of the body it is most useful for, or which ailment it would treat. For example, in the 12th century, because it resembled an eye, *Euphrasia officinalis*, syn, or Eyebright was used for issues relating to the eyes, such as cataracts (Leffler et al., 2014). Today, Eyebright is used as an eyewash or compress, as well as to treat sinus issues and even coughs and sore throats. While we have better evidence and ways of studying plant uses today, the Doctrine of Signatures was and has continued to be a useful tool in Western Herbalism.

The Four Humors system was developed by Galen, a Greek physician in the 2nd century based on the Hippocratic theory of the four bodily fluids, or humors which are: Yellow bile, Black bile, Phlegm, and Blood. These are also related with their counterparts, the four seasons. When an individual became sickened, it was seen as an imbalance in their humoral system. "Hot"

herbs were applied to balance “cold” conditions, “moist” herbs were used to balance “dry” conditions, and so on.

Just like the Doctrine of Signatures, the Four Humors system works less on a literal sense and on more of a “metaphor of balance,” effectively grouping herbs together based on their energetics and applying that theory to the imbalances of an illness. For example, when an individual is suffering from a cold and has a phlegmy cough, which would be categorized as “moist,” herbs that are “dry” and “hot” are used, such as ginger and cayenne, to try and correct the imbalance. Towards the end of the cold, a cough might become “dry,” in which case herbs like marshmallow root, a “moist,” “cool” herb that might be used to help soothe that dry itch.

Energetic Earrings is a visual, wearable representation of this system (fig. 7). Each color represents one of the energetics: yellow (dry), green (cold/cool), blue (moist), and red (hot/warm). As indicated by the center disc in figure 7, the backs are hand pierced to show symmetry and

represent balance. Any of the four are interchangeable and might be worn with another, just as human energies change based on our environments, moods, and lifestyles.



Figure 7: Energetic Earring Set

CHAPTER 3: Preparations

Rosemary Gladstar, renowned herbalist and author, points out that herbs are ideal for their ability to build and strengthen the body's immune system and help us adapt to our continuously changing external and internal environments. Minor issues like colds, bruises, cuts, allergies, mild burns, and the like, respond well to herbal remedies. When it comes to more serious issues such as cancer, surgeries, heart issues, or broken bones, herbs serve well as secondary and supplemental treatments to support and rebuild the body's defenses and energies (Gladstar, 2014).

Different methods of preparations are more effective for different ailments and can help us address some of these minor issues.

Infusions

Infusions are the most common form of herbal preparation, not only because they are likely the first type of preparation any herbalist first practices, but because it is often the most accessible to make. An infusion uses any type of solvent such as oil, vinegar, alcohol, glycerin, or water to extract chemical compounds and nutrients found in plant material. In herbalism, the term infusion refers to using water to extract these compounds from delicate plant materials such as the leaves, flowers, and stems. As mentioned in a previous chapter, steeping time will vary depending on the type of herb and the part of the herb being used. Some herbs, such as chamomile and lavender which are quite aromatic and have delicate compositions, should not be steeped more than a few minutes. This is to help retain the important volatile oils that escape with the steam and keep the infusion from becoming bitter. There are also hot and cold-water infusions. While hot water is most commonly used, cold-water infusions are preferable for mucilaginous herbs, such as marshmallow (Herbal Academy, Lesson 3).

Decoctions

Decoctions are like infusions but are best used when the tougher plant materials, such as most roots and barks, are called for in a recipe. Exceptions such as cinnamon, licorice or valerian, work just as well as infusions. Decoctions involve simmering the herbs in water for an extended period to extract the components from these tougher forms of plant material.

Tinctures

The specific name for an infusion that uses alcohol as a solvent to extract plant material constituents is a tincture. Alcohol extracts a wider range of these constituents and has a much longer shelf life than infusions or decoctions because the alcohol acts to preserve the preparation. While they take much longer to make, tinctures do not need to be refrigerated and can be added to beverages on the go or used as concentrated washes for example to rinse a wound.

Tinctures can use either fresh or dried herbs. They are made by first removing extra parts of the plant material that will serve no purpose to the preparation. This includes washing dirt off fresh materials or removing the stalks. The plant material is then chopped up into smaller pieces to expose as much surface area as possible. If dried herbs are used, a clean jar is filled with the herbs and enough alcohol is poured in to cover the herbs by about an inch to an inch and a half. This is because the dried herbs will expand as the solvent soaks through them. Fresh herbs should be covered by one inch as well. This leaves enough room in both types of preparations for the herbs to move around when shaken. The jar is shaken to ensure that the solvent mixes thoroughly with the herbs, then is stored in a cool, dry, and dark space for 4-6 weeks. Every few days, the jar should be taken out and shaken to circulate the herbs in the alcohol.

The liquid is then strained with cheesecloth to remove the plant material from the alcohol. If additional straining is desired, the liquid can be placed in a cool, dark place overnight, then strained again through a coffee filter to remove any sediment.

Salves

Salves use infused oils and beeswax to create a stable, topical preparation, and many salve recipes frequently include essential oils.

The base of a salve is an oil, usually olive, coconut, or almond, that has been infused with any one or several herbs using the double boiler method (which is a gentle, but effective heat source) on low for at least one hour. The oil is strained through a sieve and cheesecloth to remove any left-over plant material, then placed back into the double boiler. Beeswax is then added to the oil, left to melt, and thoroughly stirred. At this point, it is possible to add essential oils to the mixture which can increase not only the potency of the salve, but also the aroma. The hot mixture is poured into jars or tins then left to cool and solidify. When used, mixture works to soothe, soften, and nourish the skin, seeping through the skin and allowing the herbs do their work.

Recipe Brooches

As they progress through training, many herbalists develop their own methods of tracking their progress and the types of preparations and recipes they try. Symbols are a common form of differentiating between preparations and can be a useful cue to when the same recipe can be prepared or used in different ways.

In designing symbols that would be easy for me to reference throughout my personal notes, I studied the shapes of the containers and the visual elements of each preparation (fig.8).

Infusions, when prepared with hot water, give off steam; decoctions are simmered over heat in a pan; tinctures are kept in bottles which usually have a dropper lid; salves are kept in tins, jars, or pots.

These symbols are translated into a series of brooches that convey the base herbal ingredients in such preparations (fig.9). The symbols I have developed to keep track of preparations I studied, are repeated in the silhouette of the back plate of the brooch. Each herbal ingredient is added in outline form using a modified version of champlévé that I developed during this series. Further illustrations are sketched in graphite to tie this series in with other pieces (see chapter on Techniques).

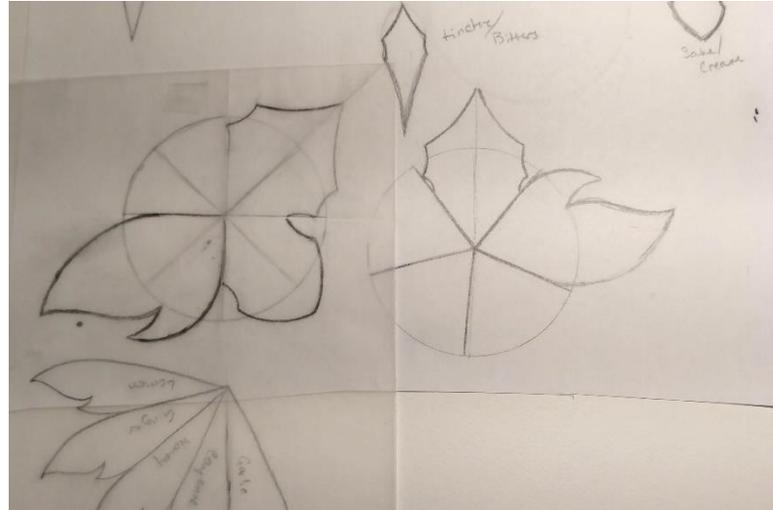


Figure 8: Sketches of Preparation Symbols

These brooches become wearable reminders as to what herbs go in a specific preparation. For example, the ingredients found in a basic arnica salve can help increase blood flow, relieve pain, and promote healing. By referencing the *Arnica Salve* recipe brooch, one can see that the herbs that are needed are lavender, St. John's Wort, calendula, and arnica.



Figure 9: Arnica Salve Recipe Brooch

CHAPTER 4: *Materia Medica*

“There is an Egyptian papyrus written sixteen centuries before Christ containing one hundred and ten pages portraying medical life.” (Parker, 650).

Materia medica, which translated from Latin literally means “healing materials” are sources of information describing the medicinal uses of plants and how to implement them. There are records of texts from Egypt, India, China, and Greece that date back centuries and serve as the foundations of modern medicine. These manuscripts are recorded throughout history under many names: herbals, botanicals, dispensatories, pharmacopoeias, recipe books, or even “receipt” books.

The name *de Materia Medica* was first used by Dioscorides, a 1st century Greek physician, botanist and pharmacologist. The manuscript, copied by hand, was not listed in alphabetical order. Instead, it was comprised of five books listing hundreds of plants organized by category or class followed by the physiological effect on the body. The five volumes are *Aromatics*, *Animals to herbs*, *Roots, seeds and herbs*, *Roots and herbs continued*, and *Vines, wines and minerals* (Goodyear, 1934).

Many herbalists compile and build their own as they progress through their studies. Common entries in a include botanical plant monographs, recipes, historical or



Figure 10: *De Materia Medica*, Vienna Dioscurides

traditional information, clinical and contemporary studies, and safety and precaution on each herb.

The *materia medica* I have created is the physical manifestation of my herbal studies and serves as a reference and a companion piece to the metal works in the exhibition. Similar to Dioscorides, the information in my manuscript is not in alphabetical order, but rather in the order I studied. For example, there are several plant monographs in a row followed by a recipe, then a list of terms, followed by another monograph and so on.

While each metal piece has its own ambiguous context hinting at the medicinal qualities of each plant, the *materia medica* goes much more in-depth as to each plant featured. Each herb that I have studied has a two-page spread with information on the botanical description, harvesting, safety, dosage, and use, among other things.

CHAPTER 5 : Techniques

Champlevé is an enameling technique by which recesses in a metal form are etched, pressed or engraved away. In a small bowl, fine particles of glass are mixed with water to form a mixture which is then carefully laid into the recesses in the metal and left to dry. The piece is then fired in a kiln, which fuses the glass to the metal. Depending on the depth of the recess and the effect desired, multiple layers of opaque and transparent glass can be fused to the piece.



Figure 11: Sketches



Figure 12: Pierced elements

In recent years, the saw and solder technique has been developed, in which the recesses are created with two layers of metal. A design is drawn onto the metal and pierced by hand to create an outlined form (fig. 11 & 12).

These pierced elements are then laid onto another layer of metal and soldered using hard solder. All extra solder must be cleaned away to prevent discoloration of the enamel over time. Traditionally, the shapes are always contained within

a framework of metal that provides stability for the enamel over time and less possibility of cracking or other surprises.

I've chosen to challenge this framework in certain pieces, instead soldering the contours to the edges of the back plate so they are extending beyond the edges of the piece (fig. 13).

As with traditional *champlevé*, glass particles are carefully laid in and around the recesses. Special care is taken during this step to ensure that every part of metal is covered with enamel, right up to the edges of the piece. Along with the layer of counter enamel on the back of the piece, this helps to decrease the likelihood of cracking or separation between the layers of metal and glass.

After the second layer of enamel on these pieces is fused, I use a combination of alundum stone and diamond grit sanding pads to carefully sand away the surface of the piece, removing the glossy finish. On this matted

surface, I can now use a graphite pencil to sketch tiny additions that complement or add to the



Figure 13: Elements are soldered down



Figure 14: Enamel is applied, and graphite is sketched on

metal outlines of the herbs (fig. 14). One more layer of clear enamel is applied over these drawings and fused. Because I prefer a soft matted surface texture in most of my work, this layer of clear will protect the drawings as I sand away the gloss for the final time.



Figure 15: Patina is applied, and elements are formed

At this point, the mechanism is riveted to the back, the piece is oxidized using a liver of sulfur bath to give the copper a darker color, and the extended pieces of metal are curled inwards to give dimension and organic movement to the piece (fig. 15).

Another unconventional technique that I exploit in my work is torch-firing or using a torch as the heat source to enamel versus a kiln. Not widely used with champlevé because of the uneven heat and unpredictability of the flame, I employ these

uncertainties to my advantage and am able to create interesting shades and speckled effects by applying the tongue of the flame directly to the glass surface. This method essentially oxidizes the surface of the glass, leaving a dark, muddy layer. It is possible at this point to remove this layer by using an alundum stone to sand off the oxidation. However, I have discovered that if another layer of enamel is applied directly onto this oxidized surface, fired, then stoned down, the oxidation will reveal itself in unpredictably wonderful ways. Additionally, by under and over-firing, and generally playing around with the temperature and placement of the torch, it is possible to achieve a great many variations in the same type of enamel.

Using these unconventional, unpredictable, organic methods of working allow the material to not simply be controlled and confined to one outcome, but to contribute to the

finished piece as much as the maker. In this, it echoes working with plant materials to develop an individualized, new way of living.

CONCLUSION

“No one knows how the medicinal properties of plants and minerals were first discovered. It has been suggested that man first learned them by observation of wild animals who, when sick, search out special grasses or leaves to eat. The art of healing is as old as man and it is a disputed question whether it is oldest in China, India or Egypt. (Parker, 650)”

In Europe and Britain, physicians will often prescribe herbal medicines along with or instead of pharmaceuticals but in America, most physicians remain skeptical and even hostile to this practice. It is argued that the reason for this difference of treatment is because medical schools in America often ignore the history of healing and as a result, many physicians have little to no idea that until this century, most medicines were herbal. (Castleman, 1995).

Western Society's views are changing, and our different cultures are becoming more accepting and open minded in how we live. Herbalism and other forms of natural medicine are gradually making their way back to the realm of health. This is partly because of the accessibility of the trade and the contemporary scientific research that is slowly but surely proving the effectiveness of plants as medicine.

By collecting the knowledge and recipes that were used before mainstream medicine became prevalent and using that research as fuel for my work, I can provide a visual explaining exactly why and how natural ways of healing are so useful. The work I create is meant to give value back into the healing traditions that have almost been forgotten. As an artist and metalsmith, I look forward to bringing something else to the table in this conversation of health circulating today.

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