# GLOBAL TEA HUT



TEA & TAO MAGAZINE *May 2018* 









## CLOUD TEMPLE

This month, we are excited to dive into the world of tea bowls, exploring how to choose bowls for tea and the history of China's most famous bowls, called "tianmu." And we have a great green tea to drink as we discuss the history, production and lore of tianmu as well as some modern artists making tianmu bowls.

love is changing the world bowl by bowl

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n May, Taiwan really warms up and we start turning more to lighter teas like green teas, white teas and sheng puerh. Sometimes it seems contradictory to drink tea when the weather is hot, but teas like these are actually wonderful in this weather and often make you feel cool, especially if you create a *chaxi* with cool colors, some fresh water in a bowl or other decorations that inspire a sense of coolness. The samples for this year's Light Meets Life fundraiser teas start arriving and it is a joyous chance to start thinking about the teas we want to make this year. We are working on some amazing Dian Hong, shou and sheng teas for this year.

We just got back from this year's epic Annual Global Tea Hut Trip. Each year it seems as if the previous year's trip cannot possibly be topped as it was such a great time, and then somehow, in some magic way, we do just that, having the time of our lives. This year was no different. We made lifelong memories, learned a ton about tea and had a moving tea retreat through the tea mountains of China. Very soon we will devote an issue to our trip, as we do every year, so that all of you can travel with us.

This month, I will be facilitating a Tea, Zen and Qigong retreat in Japan. I plan to stay there afterwards and scout some organic tea and do some research to lay the groundwork for including some Japanese teas in future issues. This opportunity brings up an important point, which is that we really hope to include more Korean and Japanese tea and tea wisdom in future issues of Global Tea Hut. The only reason we haven't done so thus far is due to the financial, linguistic and geographical barriers to doing so. We live in Taiwan and have much more access to Chinese articles, authors and tea makers. We are also limited in what we can reinvest in these issues. As membership has grown, we have committed a percentage of our finances to improving this experience. Obviously, as that percentage increases, so shall these envelopes improve. I still remember the days when Global Tea Hut was black and white, and how happy we were when we could afford a color cover. Eventually, we reached a large enough membership base to start translating more Chinese authors, increasing the scope of these issues and covering many topics in greater depth than have ever been published in English. Very soon, we'd like to start another new chapter in Global Tea Hut history, translating Japanese and Korean articles and searching for clean and beautiful teas from these regions. If any of you feel you could contribute to this in any way, please contact us.

Speaking of goals, I'd also like to talk about the past goals we've realized this year, as this issue is a celebration of one. Last year, we hoped to offer another in the Classics of Tea series (which we hope to do very soon) offer more journalistic issues like March's issue on Mengsong and to

cover teaware in at least one issue, which we are presenting in this very issue. We hope to continue to offer at least one issue a year covering a type of teaware in great depth, from its history to how it's made, why we love it to how it is used.

As more and more people worldwide are preparing bowl tea, influenced by our tradition, we are often asked about how to choose bowls. Also, many potters in the West are finding tea and looking to start making teaware for us, including bowls. For a long time, we've wanted to write about what makes a great bowl for bowl tea ceremonies. In this issue, we will dive into that topic in great detail. We hope this helps those of you searching for bowls or the means to make them.

While we were discussing bowls, we thought we could also explore the world of tianmu (天日) pottery—the most famous of all tea bowls in Chinese history. Someday I will write a list of the ten "Greatest Experiences for a Tea Lover," but for now, trust me when I say that one of them is a few leaves of some fine, clean and organic, freshly plucked, spring, striped green tea in a tianmu bowl! Tea lovers have been using tianmu bowls to drink green tea for centuries, and there really is nothing like the experience. In this issue, we'll explore the history, creation and use of these amazing bowls, which connect tea lovers of today with the long lineage of past tea masters. We have crafted a very unique green tea for this month. If you don't have a tianmu bowl, you can drink yours in any bowl while studying what makes a bowl great for tea and why tianmu bowls are unique and especially suited to drinking green tea leaves in a bowl...



### –Further Reading–

This month, we recommend rereading the bowl tea guide on leaves in a bowl ceremony in the February 2017 issue. Then, it may be great to read the green tea issue from May 2016. There are also some great issues and articles on bowl tea in other issues, like June 2016. We will soon update our past issues to .html for easier search-ability.

# TEA OF THE MODIFIED

ver the course of this month, we will explore one of the oldest and most famous types of teaware: tianmu. Nowadays, potters make tianmu vases, cups and bowls, but traditionally this type of pottery is famous for tea bowls (chawan, 茶碗). Since the Song Dynasty (960-1279), tea lovers have treasured this magical type of pottery, appreciating the gorgeous glazes and the effect the smooth dark surface has on tea liquor, especially green tea. Tianmu and green tea are married. Like Yixingware and oolong, the two seem to be a star-crossed match made of pure destiny. There is a short list of wonderful tea experiences every tea lover should have, like visiting the birthplace of tea to see the old trees in Yunnan or wandering the bluffs of Wuyi drunk on Cliff Tea, and, also on this list: drinking a striped green tea in a gorgeous tianmu bowl. We know that not all of you have a tianmu bowl, but we thought we could provide a gorgeous, striped green tea that would suit this warm weather and help us relax into the middle of the year as we raise whatever type of bowl we have to the art, heritage and history of tianmu-ware.

Green tea is one of the purest kinds of tea, and the least processed. It is often a Chajin's first love—the tea whose aroma carries us to the places where names like "Temple Mist" and "Jade Peak" make perfect sense. Green teas often taste of such vistas as well, recalling clear stream water singing over

stones, forest pines, or sometimes the lightest fragrance of a flower caught on the breeze, though not for long enough to identify... There is a magic in these light aromas, and in the uplifting Qi that often sweeps us up off our cushions. Sometimes it is nice to return to our roots, remembering Nature through perfect fragrance. The freshness of green tea also reminds us of the weather, though it can also be great when it is aged. Let us all celebrate the poetry of tea fragrances this month, as we stray into old dreams of bright leaves floating around a cracked bowl...

They say the official beginning of spring in ancient China was the day the emperor sipped the first cup of the first flush of green tea, heralding the arrival of the New Year. Preserving the freshness is the key to all green tea processing. This is done by intruding but minimally. The two most important aspects of green tea production are to reduce the withering/oxidation as much as possible and to shape the leaves in a way that suits their nature, color and fragrance.

Green tea has been the most popular tea in China since the Song Dynasty. In the beginning, it was made into cakes that were formed of green tea powder, which were then ground and whisked, like matcha. As we learned in the April 2017 Classics of Tea issue, the Ming Dynasty (1368–1644) emperor Taizu outlawed these cakes and people began producing and consum-

ing loose-leaf green tea. In the early days, green tea was steamed, as it still is in Japan, but as new varietals evolved, so did unique processing methods. To this day, China produces almost two million tons of green tea a year. Sadly, the most mainstream genre of tea, with such high demand, is also the least environmentally friendly or sustainable, but there are many projects beginning that aim to change this. If Chinese green tea could go organic, it would be a great example to tea producers around the world!

Green tea is lighter than other teas because the processing is minimal. Plant cells have thick walls, and so without cellular breakdown, the tea does not release as much of its essence. It is impossible for tea to be processed without some oxidation; it begins oxidizing the moment it is picked. Also, the water content of fresh leaves is too high to process. If you fired or shaped such tea, it would break, being brittle from the water in the leaves. During the trip from the field (or forest if it's living tea) to the processing area, the tea naturally withers, losing moisture and becoming soft enough for processing. Ideally, green tea should be processed quickly, on the same day as plucking.

Traditionally, the best green teas were made from buds only. It takes tens of thousands of buds to make one *jin* (600 grams) of tea. The buds can also be processed with far less oxidation occurring.















# Ten of the Month



🌣 Traditionally green tea is made exclusively of buds. It takes anywhere from 20,000-50,000 buds to make one jin (500/600 grams). Our Tea of the Month is made of bud-and-leaf sets. This is done to increase yield and/or create a lower grade of green tea. However, we have intentionally chosen to include leaves, resulting in a bolder flavor and stronger Qi. The tea passes through different processing than all-bud green tea. Cloud Temple was processed much like a lightly oxidized Baozhong tea (包種茶): plucked, briefly withered, de-enzymed in a pan, rolled and dried. The final result is a green tea that is simultaneously light and sweet and bold and deep.









This retains more of the essence of the fresh leaf. They are also young and Yang in energy, which contributes to the magic of green tea. Over time, a greater demand for green tea has led to many kinds of green teas that are combinations of buds and leaves, or even just leaves. In many instances, such blends or leafy green teas are inferior in quality. But as green tea has gained popularity, more regions are producing it and using many different varietals that weren't traditionally used in green tea production. Sometimes, depending on the varietal and terroir, a leaf/bud blend can actually be better than just buds, adding depth and Qi to a particular green tea. Our Tea of the Month is one such tea.

There are many ways of processing green tea, based on local varietals and terroir—especially if we include the mastery of tea production handed down generation to generation within the umbrella of "terroir." Remember, "terroir" is a French word that is generally used in discussions of wine, but it is so applicable to tea as well that

most tea lovers have adopted it into their discussions of the Leaf. Terroir denotes the special characteristics of a place, found in its geology, geography, climate and even cultural heritage, which interact with a cultivated plant species to create unique expressions. Terroir is the soil and weather of a particular region, the geography and culture of the people and their relationship to the plant; and even the local microorganisms. Every place has a unique soil composition, pH, minerals and climate—all of which create a distinctive tea. When we talk about a tea's "terroir," we are speaking to the unique environment that created it, one which couldn't be reproduced elsewhere. Even if you took a grafting of a tree and cloned it elsewhere, it wouldn't be the same since the sun would be weaker or stronger, the soil composition different, and so on.

Green tea is most essentially defined by a lack of oxidation. The aim is to arrest oxidation as quickly as possible, and thereby preserve the freshness of the tea. Green tea is picked

and then goes through some form of heat to arrest oxidation. This could be steaming, baking or most commonly pan firing. It is then dried. If the green tea has leaves along with buds, then after firing, it is rolled/shaped before drying. The rolling shapes the tea. The rolling for a green tea will always be significantly less than for other teas. All-bud green teas are not rolled, however. They are shaped in the drying. The most common method of drying green tea in China is to use a hot wok. Sometimes, with pan-fired green tea, the firing/rolling will be repeated a few times until the desired shape and color is achieved. The liquor of green tea can be clear to yellow or even vibrant green, depending on local variations. The Qi often enters the body through the aroma and/or mouth.

Whether or not the green tea is allbud, bud-and-leaf sets or just leaves will also determine how it is processed, as the three differ greatly.

The basic kinds of traditional hand-processed green tea are: pan firing, basket firing, oven baking and





# THE PROCESSING OF CLOUD TEMPLE GREEN TEA

祥雲寺綠茶製作工序

Plucking

Withering

De-enzyming

Rolling

Drying

Glory in a Bowl



steaming. With the introduction of modern machinery, however, many of these steps have changed. Pan firing to arrest oxidation and de-enzyme the tea, for example, is often done in large, heated tumblers nowadays. Steaming tea is only done in Japan, which is how they arrest oxidation/de-enzyme their tea. The result is the dark green color of Japanese teas, as well as the bright green liquor and distinct flavors such tea offers.

There is great skill in processing green tea, since it is so simple. Sometimes we assume that mastery is in the more refined of the arts, but it is often the simplest things that take the greatest effort and skill. Great chefs don't need to cook with tons of spices all the time; they can also bring out the natural flavors of ordinary ingredients in unexpected ways. We once had a vegetarian chef stay at the center and he cooked up the carrots we eat regularly, only they tasted somehow more "carroty" than usual! They were delicious. And it was only carrots, oil and salt—nothing else! Similarly, green tea

at its finest is an expression of simple tea leaves as they are in Nature: bitter, astringent with a transforming sweetness that lingers on the palate. And the simplicity shines when a green tea is good, like ours this month!

#### All-Bud vs. Bud-&-Leaf Green Tea

Usually, when discussing the production of green tea, we have to start by saying that green tea is processed with the goal of arresting oxidation completely. As we have discussed in previous issues, oxidation is an enzymatic process: basically, cellular breakdown due, of course, to the exposure to oxygen, like when a banana or apple turns brown on the counter. While that works as a general description of green tea processing, the truth is much more complicated, like most things in tea. To start with, it is actually impossible to prevent all oxidation in tea. If bugs bite the tea leaves—and let's hope they do, because otherwise it means our tea was made with pesticides, which are unhealthy for the environment, the farmers and us tea lovers—the tea starts to oxidize, and once the leaves are plucked they will also oxidize some. Even if the pickers ran at a break-neck speed to rush each and every leaf to the processing facility one by one in an absurd attempt to prevent any and all oxidation, the leaf would *still* oxidize some before it reached the heat that will eventually arrest the oxidation. Consequently, saying that green tea is "unoxidized" isn't really accurate.

Some authors then choose to say that green tea is defined as "un-withered," since withering is the stage where most oxidation occurs in tea processing. Withering traditionally meant spreading the leaves out on round bamboo trays suspended from racks so they had upward air flow from beneath, but nowadays large-scale mass-produced tea is often withered on the ground (or even the road) on large plastic tarps, which offers no airflow from underneath.

# Ten of the Month

Saying that green tea is un-withered is a bit more accurate than saying it is un-oxidized, but it still doesn't complete even a basic, general understanding of green tea production. For that, we have to make another distinction of our own: all-bud and bud-and-leaf green teas.

This distinction is important because all-bud green teas are un-withered, while green teas made from bud and leaves require some withering. Green teas that are made exclusively from buds can go straight from harvest to the heat that will arrest oxidation, but if there are leaf sets with the buds, the leaves will have to be withered to reduce their moisture content. Freshly-plucked leaves, full of water, are brittle and would crumble if processed immediately, so they have to be withered to withstand processing. Most often, all-bud green teas are also shaped in the firing, but bud-and-leaf green teas also have some rolling to break the cells down more and also shape the tea.

The distinction between all-bud and bud-and-leaf green teas also opens the door to some interesting quality discussions with regard to green tea in general. Some people might dismiss bud-and-leaf green teas, thinking that they are later, market-driven innovations to increase quantity and therefore retreat to the idea that true green tea is un-withered, but that would be misleading. It is true that in many kinds of green and white tea, a demand for greater quantities of famous teas has resulted in the production of lower grades of the same tea that include leaf sets, so the best grade will still be allbud, in other words, while some cheaper grades made with leaves, and often of later flushes, are also sold alongside the traditional tea. There is a big "but" that we have to place rather emphatically next to this statement, however. But not all bud-and-leaf green tea is produced just to increase quantity and/or profit margins. There are also bud-and-leaf green teas that have al-

ways been made that way because the varietal demands that it be so.

It is important to remember that in tea production, the previous step is always more relevant to the overall quality of the tea than the next-in part because in mastered tea production, the earlier stages will determine how the later stages are done, if at all, to bring out the best in the tea. Ultimately, this means that the terroir will always be the most influential factor in determining the quality of a tea. Like all plants, tea is a product of its environment; it is the sun, the mountain, the fog and mist and the weather, so the better the environment, the better quality the tea. And the terroir will determine the varietal most suitable to grow there, which is, frankly, always going to be the varietal that evolved naturally to suit that environment. (Farmers in Pinglin can grow nice Tieguanyin varietals, for example, since the environment is slightly better than Muzha, but such tea will always



lack the "Muzha character" that makes Muzha Tieguanyin special.) The varietal will then determine the harvest time, which will determine the next stage and so on. What this means, in the end, is that in the best of tea processing, the terroir, varietal and weather/harvest time will determine how the tea is best processed to bring out its best qualities. And sometimes, with some green teas, this means that the tea is actually better as bud-and-leaf sets than it is as all-bud tea.

It is true that all-bud green teas tend to be higher quality, as the buds of most small-leaf varietals are sweeter and far less astringent, having less chlorophyll and fewer tannins. Such teas are also more valuable as they demand hand-picking so that the buds are not damaged, and it usually takes thousands, or even tens of thousands of buds to make a single *jin* (600 g in Taiwan and 500 g in China). In general, all-bud teas are much more conducive to better green and white

tea production, but there are natural exceptions like our Tea of the Month, which we'll discuss in a bit. We say "natural" because, once again, the best teas are always made in harmony with the nature of the leaf. In other words, the best of the best in tea is always made in a way that brings out the best in the varietal of tea used, which was in turn "chosen," which means evolved by and through the environment it is found within.

The famous Anhui green tea "Taiping Houkui (太平族魁)," literally "Peaceful Monkey Chieftain" is a great example of a green tea that is better as a leaf. In fact, the leaves are left to grow quite large in this unique green tea. Traditionally, Taiping Houkui grew in valleys, which meant that the tea trees received less sunlight and therefore produce much less chlorophyll, which means the larger leaves are still quite sweet and lack the astringency and bitterness of most teas. This unique green tea is also made from a large- or medi-

um-leaf varietal called "shi da (神大)." They are also quite beautiful, especially since they were traditionally produced one leaf at a time (yes, every single leaf). When you find some authentic Taiping Houkui (there are oh-so-many fakes), brew it in a dark rabbit's fur bowl and you'll have found one of the many doorways to the Heavenly realms through tea! Also, Taiping Houkui is the absolute best green tea to drink in a tianmu bowl. The pinnacle of the "green tea in a tianmu bowl" experience is Taiping Houkui in a bowl!

In the meantime, Cloud Temple is an amazing substitute, with a similar blend of boldness and gentleness, depth and simplicity, and offers gorgeous green freshness that can bring a taste of spring into our lives, shining like the first warm rays of the season, as all things awaken. This helps align our beings with Nature. Spring is, after all, a time of beginnings: cleaning out the old and ushering in the new, kicking off the dirt to start down new roads.



# Ying & Ming

n the Chinese lunar calendar, Qing Ming (清明) is an important holiday. People pay a visit to their family tombs and clean them up before making prayers. It usually falls on April 5th each year, though it wavers like the moon. The highest quality spring green teas are often pre-Qing Ming (明前茶). The leaves that sprout just before this time are more tender and sweeter, often with less bitterness and astringency. For that reason, they are valued in the market as the highest grades of green tea. The next highest grade is that which is produced a couple weeks after Qing Ming, which is called "pre-rains tea (雨前茶)." The buds from this flush are also often tender, but not as much so as pre-Qing Ming teas.

With climate change, agrochemicals and other human influences, much of the meaning and premium of "Qing Ming" is lost nowadays. Even leaving aside the many fakes, different regions have very different terroirs, which means different qualities of tea. Also, what is valued by the mainstream is often based on different standards than those of the tea lover. Sometimes we value the energy (Qi) of the tea more than the flavors, especially when viewing tea as medicine. And all of this does not take into account the changes that have started due to climatic fluctuations and agro-chemicals, especially chemical fertilizers, which change the time and manner that tea bushes flush with fresh buds.



### SIMPLICITY & TEA

In this day and age, simplicity and emptiness have become the rarest of commodities. Finding the space to be free from clutter, noise or disruption is challenging indeed. In Chinese, the word for a sage, a holy man, is "mountain person (xian ren 仙人)", because there was a time where the only thing one had to do in order to seek isolation and peace was to head up into the mountains. The Chinese cliffs and crags were above the clouds and free of the dust of the city. It was assumed that the only reason someone would retire from civilization was to seek spiritual insight, and so anyone you encounter ed in the mountains would likely be holy. Also, "holy" in Daoist philosophy could not be other than Nature itself—sagehood by definition is a harmony with Nature. And where better to find such peace and harmony than in the pristine mountains?

These days, things are different. We must seek the mountain within. Ultimately, the sages of old looked inside too. There is an old saying that it "is easy to be a sage in the mountain, greater still in the city; but the highest master is at peace in the palace." External quietude helps us to achieve inner stillness, but in the end, it is much more beneficial to rest in a stillness that is not dependent upon external circumstances—a peace that can weather the storm. Otherwise, our peace is fragile, shattered by the first airplane that flies overhead.

In the Daoist way, peace is about stillness and simplicity. Turbid water is still clear in nature; it is only because it has been upset that it has become muddied. To still the water we have only to leave it for some time. Our true nature is bright and serene. And it is often the simplest things that bring the most joy and lasting peace: sitting in meditation, quietly walking in Nature or drinking tea. These are also the gifts that bring us closer to each other. In the material world, we compete and arm ourselves. We get busy achieving and accumulating, but in the spiritual world it is necessary to let go, step back and find the space to appreciate the simple, and the simpler the better when it comes to tea.

All too often we are looking for the rare, exclusive and special experience; as our brother Alec Bridges sings it, we are "looking for a sign." But then we often miss out on what's right in front of our faces—the preciousness of life itself. Our exploration of tea can be the same: we seek out great, fine teas and forget to learn how to really savor them in our hearts; how to make the time and space to sit down and fully drink in the tea-into our hearts. Teas like this month's are important now and again. They take us back to the foundation. Cloud Temple helps ground and center us, with a purity that even poetry cannot intrude upon. Such tea sessions wash clean the previous ones and restore our beginner's mind.

Sometimes we all get intense in our practice, and in various ways. We can become intense in our focus on the ceremonial side of tea, forgetting that tea is also social, that it is also a healthy beverage as much as it is a ceremony. We forget to simplify and have a mug of tea while we work or in the kitchen while chatting with our moms. Other times, we get too serious in the pursuit of the perfect cup, collecting fancy and often expensive teaware and growing snobby about quality in tea, teaware and the refinement of our gongfu brewing. The cure for all of this is a simple bowl full of the simplest leaves possible: clear like water, bitter like life and sweet like our Mother Earth who nurtures us. In this way, we return to what tea really is when all the quality, culture, ideas, history and folklore are stripped away: heat, leaves and water in a simple earthen vessel.

A The tianmu glaze enhances the green of the tea and allows you to enjoy the tea in all its magnificence. It also has the uncanny ability to make green tea sweeter and smoother. The liquor seems to penetrate more, growing in the back of the throat and with Qi that spreads through the body.







# Floyd Temple

This month's tea is technically more of an oolong tea than a green tea. Cloud Temple is very much like a very lightly oxidized oolong. It comes from the more biodiverse gardens of our dear friend Mr. Xie Yuanzhai (謝元在), who also has several organic plantations. (For those of you who haven't been in the Hut long, you can read about Mr. Xie in many previous issues. He is one of our oldest friends and a real hero in the world of organic tea farming, helping to educate and encouraging dozens of other farmers to make the change for the Earth!) This tea is from larger, richer leaves. The tea is partially hand-processed, since the delicate striped leaves could not withstand too much machine processing.

As we discussed, traditional green tea was made only from buds, which were either plucked, de-enzymed and dried if they have no shaping, or shaped in the de-enzyming for some pan-fired tea. Green tea is meant to be unoxidized, capturing the fresh, Yang energy of the newly-sprouted bud in its nascent form. This results in a delicate, fragrant brew with the bright energy of Nature. Traditionally, the best green teas were also only harvested in the spring, which meant that the bud itself was the tree's fresh shoot at the time when the world was also becoming green. The vibrancy of the Yang bud at the time when the world is Yang was considered to be a delicacy, a medicine for connecting to Nature and the seasons and itself a herald of the change in weather.

Cloud Temple has to be withered, as it is made up of bud-and-leaf sets. This means that it is not really green tea in the strictest sense. These leaves are the first of spring, and therefore contain Nature's essential awakening from the winter, as well as the tree's first and strongest buds, but the larger leaves in the set have also matured a bit and moved more to Yin. Since the larger leaves are full of moisture, they have to be withered as they are too brittle to work with. This light oxidation means that this tea is semi-oxidized and therefore has one foot in green tea and one in oolong. It is also rolled (rou nian, 揉捻), which is not a step in traditional green tea production. The rolling breaks the cells down and brings the juices to the surface. This means that Cloud Temple will be far less delicate than an ordinary green tea, with a more robust, deeper liquor that has more breadth and a greater balance of Yin and Yang. However, on the scale of all teas in general, Cloud Temple is still very soft and delicate—even though it is a bolder green tea. There is a lot to be said for this balance. It creates a pleasant drink and is great for the body as well.

Cloud Temple is a very powerful tea, but it is also very simple, especially if you brew it leaves in a bowl. Just a few leaves of this magical tea in a bowl are enough to wash the spirit clean and bring a sense of spring into your life, rising up like a breeze from under your arms. There is nothing flashy or extravagant about it. It boldly offers bitterness, sweetness and astringency, like Nature and life. There is a magic in passing the seasons with such a tea. And if you can share it on a warm morning with some people you love, perhaps outdoors, you will find that though it is the least interesting and simplest tea we will send out this year in Global Tea Hut, it may also be your favorite.











Leaves in a bowl

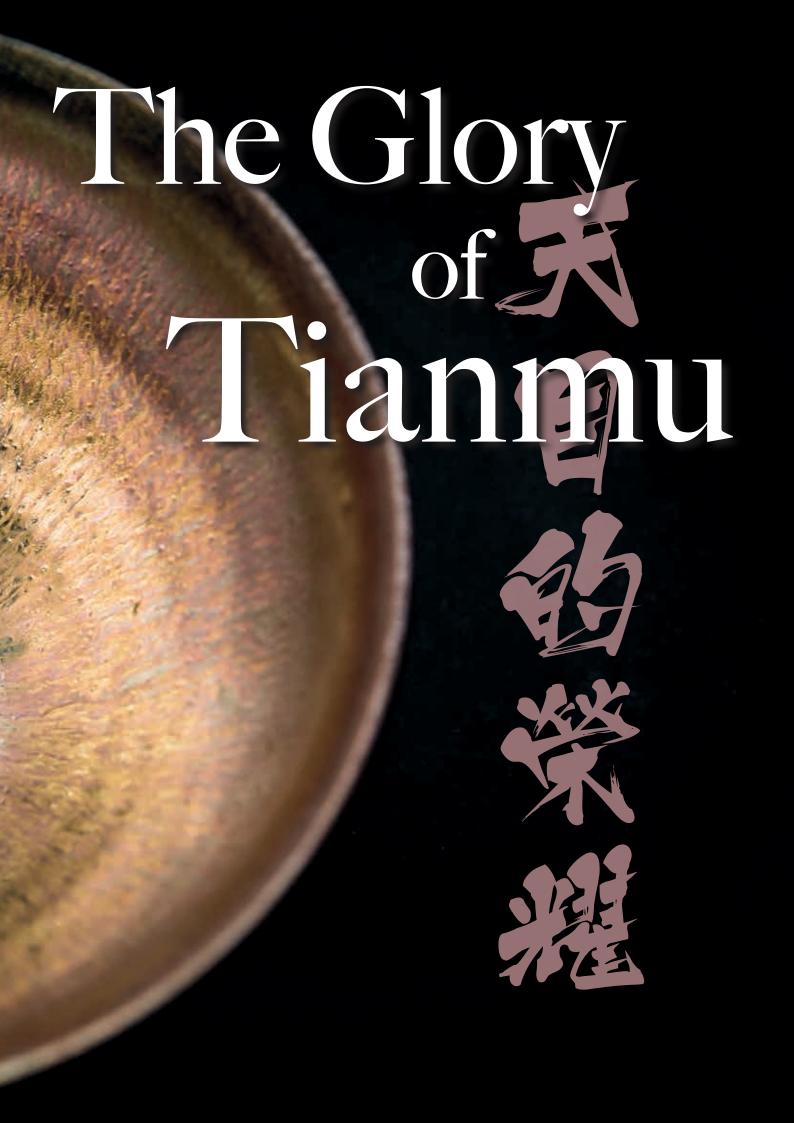
Water: spring water or best bottled Fire: coals, infrared or gas *Heat:* string of pearls/crab-eye 85-90 °C Brewing Methods: leaves in a bowl or sidehandle (leaves in a bowl is better) Steeping: a few leaves in a bowl (flash, flash and longer if sidehandle) **Patience:** five to ten steepings/pours

Sidehandle

A For this month we recommend using dark bowls. If possible, use tianmu. The dark color will highlight the fresh green color and make this month's tea more enjoyable.







Tianmu-ware is ancient, beginning in the Song Dynasty (960–1279). Sometimes called "Jian-ware (建盞)," this black glaze is at the forefront of the great Asian ceramic traditions like porcelain, celadon and others, spreading from the Middle Kingdom to Japan, Korea and beyond in the modern world. One of the magic qualities of tianmu is how unique each and every piece is, created by the magic of the kiln. Even in ancient times, we can imagine the excitement of opening the kiln and finding a treasure worth thousands of times more than an average piece. We start our journey through the history, production and lore of tianmu-ware with a deep dive into the technicalities of this amazing glaze. It is fascinating to explore the science of this ancient method, especially as so many modern artists have devoted their lives to resurrecting this ancient style, which was lost to the world for some time. We must also remember, however, that tianmu was invented to create bowls for tea. This whole journey began because of the effect this glaze has on tea liqour, especially green tea. While the beauty is a part of this, as it is with all teaware, we shouldn't forget to honor the Leaf it is all devoted to.



蒸A: Wang Duozhi (王多智)

f we take a look at the history of ceramic glazing, oil spot tianmu-ware glaze belongs to the category of black glaze, with iron as the main colorant. Black glaze had its origin in the Eastern Han Dynasty, enjoyed a golden age during the Song, and declined to the point of disappearing after the Yuan Dynasty. From textual records, we can see that the people of the era used various names to describe the unique patterns this type of glaze can display, including "oil spot (you di, 油滴)," "rabbit's fur (tu hao, 兔毫)" and "partridge (feather) speckle (zhe gu ban, 鷓鴣斑)." This style of glaze made its way to Japan and has continued to evolve until the present day; the Japanese call it "tenmoku," which is the Japanese pronunciation of "tianmu (天目)" in Chinese.

In the course of my research on *tianmu* glaze, I noticed that a principle characteristic of this type of glaze is its extreme sensitivity; variations in all sorts of factors throughout the production process will lead to different end results. This is a summary of the major factors, including the composition of the glaze, the firing process, and the base clay.

The patterns seen on oil spot or tianmu glaze are caused by the excess

saturated iron in the glaze separating out. However, these initial iron spots do not manifest directly on the surface of the glaze; rather, they cause a lot of air bubbles to form in the glaze during the fusion process. The excess iron adheres to the inner walls of the air bubbles. The air bubbles rise and then burst when they reach the surface of the glaze, depositing the iron on the surface.

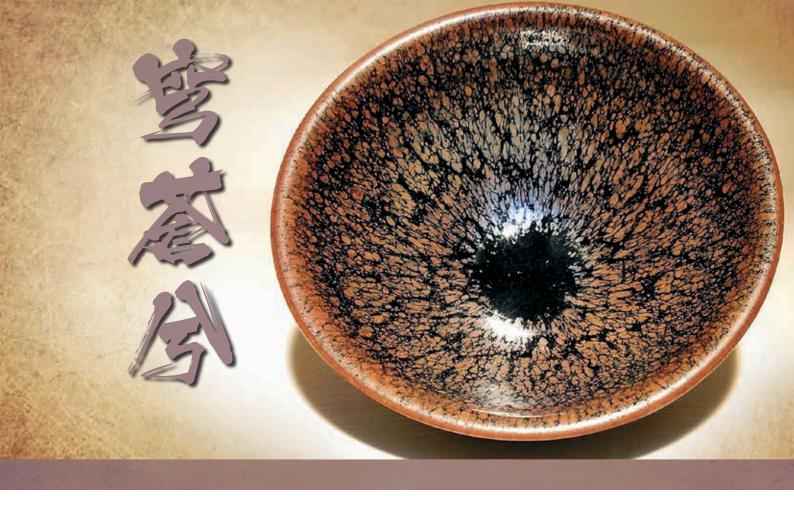
For a better understanding of this phenomenon, we can take a look at the layer of glaze visible on the edge of a broken piece of ceramic. This allows us to observe the iron that collects in the air bubbles and in the small indentations left where the air bubbles emerged on the surface of the glaze.

The aforementioned information can be gleaned from classic texts on ceramic glazes, from which we can analyze the raw materials used for the glaze. A basic summary of these ingredients includes feldspar, quartz and kaolin clay, which provide the aluminum silicate component; calcium carbonate (limestone) and magnesium carbonate, which serve as fluxing agents; and iron oxide, which acts as the main pigment and creates the patterns in the glaze. The role of these three groups of ingredients is not significantly different

from their function in ordinary glazes, so in theory, it shouldn't be too difficult to produce one of these oil spot pieces. In the initial stages of my experiments, however, I ran into a great deal of difficulty. It wasn't until I had a better understanding of the formation of the oil spot markings that I was able to grasp the nature of the glaze and achieve success in firing.

### The Role of Silica & Aluminum

The raw materials that provide silicon oxide and aluminum oxide in the glaze formula mainly include feldspar, quartz and kaolin clay. The quantity of silicon and aluminum has a decisive effect on the character of the oil spot glaze. For example, the amount of silicon influences the viscosity and sintering (fusing) temperature of the glaze. A higher silicon content increases the sintering temperature of the glaze and decreases the viscosity, which can cause cracking on the surface of the glaze after firing. The amount of aluminum also affects the same two factors: a higher aluminum content increases the sintering point and also increases the



viscosity. Since the proportions of silicon and aluminum in the glaze formula influence the sintering temperature and viscosity, they also have an effect on the speed at which the air bubbles rise to the surface, and hence the flow of the markings that form on the surface of the glaze.

# The Role of Calcium & Magnesium

Calcium and magnesium act as fluxing agents. Fluxes are substances, usually oxides, used in ceramic bodies to lower the melting point of the glass constituents. The main components of the glaze that are affected are aluminum silicates, which contain silicon oxide and aluminum oxide. These both have high melting points and so do not fuse easily within the glaze. The addition of calcium and magnesium is necessary for these elements to fuse, and for all the components of the glaze to be bound together. Although calcium and magnesium aid the fusion of the glaze, the degree of fusion must be controlled; otherwise, the desired oil spot markings will be unable to form or will not remain visible on the surface of the glaze. The raw materials most often used as a source of calcium and magnesium include calcium carbonate, magnesium carbonate, dolomite and talc.

#### The Role of Iron

According to the traditional system of glaze classification, oil spot tianmu uses iron as the main colorant. However, modern research has shown that the oil spot markings can also be formed when cobalt or manganese are used as pigments. If iron alone is used as a colorant, the glaze can have many different color manifestations due to the chemical activity specific to the iron itself; these include yellow, grayish-brown, dark brown, greenish-blue, and black. Since iron is one of the most common elements in the earth's crust, after aluminum, and is easily extracted, it has been widely used in glazes from ancient times until today. Black glazes generally require an iron content of more than 5%, while to achieve oil spot-type markings, the iron content must be between 8-12%. The usual choices for raw material are red-colored iron trioxide or black iron monoxide, with red iron trioxide being the more suitable choice for oil spot *tianmu* glaze.

#### The Influence of Phosphoric Acid & Lead

The three groups of elements described above form the foundation of oil spot tianmu glaze. In addition to those three major groups, the texts also specifically discusses the influence of lead and phosphoric acid on the oil spot patterns. Phosphoric acid and lead also act as fluxing agents in the glaze. In early times, phosphoric acid generally came in the form of calcium phosphate from the ash of animal bones. The phosphoric acid from the bone ash combined with the iron to form iron phosphate. The ancient "iron red" style of glaze resulted from this process. According to current research, phosphoric acid or lead in oil spot glaze can promote liquid phase separation, aiding the formation of the oil spot patterns. However, it's important not to add too much, as this will result in over-fusion of the glaze and hinder the smooth formation of oil spots, which is the glory that tianmu artists seek.



#### THE FIRING PROCESS

The important factors in the firing process include the firing temperature (peak temperature), rate of heating, temperature retention, and the manipulation of the atmosphere inside the kiln (oxidizing or reducing).

#### Firing Temperature

One of the most common questions that people ask about ceramics is, "How do you know when a piece is sufficiently fired?" Those who often fire ceramics likely know from experience that firing a piece to the same peak temperature but over differing lengths of time can produce very different results. Most kilns are equipped with a thermocouple (temperature indicating stick), which is linked to the thermometer in the controller; pyrometric cones or rings (designed to melt at a specific temperature range) may also be used to gauge the temperature after firing.

The thermometer measures the temperature point, while pyrometric cones or rings give a temperature reference point by comparing them against the reference table provided by the manufacturer. It's worth noting that the data provided by the manufacturer includes varying heating rates, so the reference temperature read using pyrometric cones will be different depending on the rate of heating.

This can be understood in terms of temperature and heat content. The temperature point is simply a temperature reading that can be taken by the thermocouple. The reading from pyrometric cones or rings, on the other hand, takes into account the temporal aspect of the heating process. The longer the cone or ring is heated, the greater the total amount of heat it absorbs, which influences the way it changes. In this way, it is similar to the ceramic pieces in the kiln: differences in the overall amount of heat they absorb produce differences in the fin-

ished piece. That is the glory and natural beauty of *tianmu*.

#### **Heating Rate**

In the early days of my oil spot glaze experiments, I tested two different heating rates, measured using pyrotechnic cones and the associated reference tables: a heating rate of 100 °C per hour, and a rate of 20 °C per hour. Observing the glaze on the resulting pieces, I noticed that black tianmu glaze produces a lot of air bubbles during high-temperature fusion. By breaking some of the fired pieces, I was able to closely observe a cross-section of the glaze, revealing the bubbles that had reached the surface and those contained deeper in the glaze, as well as the un-fused iron collected in the bubbles. From this, I concluded that a lower rate of heating produces a better result. So, my advice to those starting



# 燒窯實務

out in their research is that once the kiln has heated to 1000 °C and some of the elements in the glaze have begun to fuse, it's best to select a heating rate of no more than 20 °C per hour for this type of glaze, then adjust as you see fit after observing the results.

#### Holding the Temperature

This involves maintaining a stable internal temperature in the kiln for a period of time, when it reaches peak temperature or another designated temperature. During the course of my experiments I tried maintaining the peak temperature for increasing 30-minute increments, then observing the differences in the resulting glaze. After several tests I noticed that when combined with a slower rate of heating, maintaining the temperature did not produce great results; maintaining it for too long often resulted in

the glaze dripping down and sticking to the bottom. With a rapid rate of heating, on the other hand, holding the peak temperature produced much better results.

## Internal Atmosphere of the Kiln

The internal atmosphere of the kiln usually refers to the levels of oxygen and carbon monoxide inside the kiln throughout the firing process. When the kiln has sufficient oxygen, it's said to have an oxidizing (or oxidation) atmosphere; when there's a shortage of oxygen, this is called a reducing (or reduction) atmosphere. In electric kilns, for example, raising and lowering the temperature does not consume any of the oxygen inside the kiln, allowing the glaze and base material ample opportunity to react with the oxygen in the air; hence, it's called an oxidizing at-

mosphere. However, using firewood or gas to adjust the kiln temperature will consume the oxygen inside the kiln, and on top of that, the lack of oxygen may lead to incomplete combustion of the fuel, producing carbon monoxide gas. The type of chemical reaction this produces in the base and glaze is called reduction, hence this is generally called a reducing atmosphere.

According to the concentration of the carbon monoxide gas, reduction atmospheres can be classified as light, moderate or heavy. This can be judged based on the appearance of the flames: if full combustion is underway and the flames are bluish in color, it's a light reduction atmosphere. If combustion is slightly incomplete and the flames appear yellow or produce white smoke, this indicates a moderate reduction atmosphere. When oxygen is severely deficient, the fuel will not burn and the flames will be reddish and accompanied by black smoke; this indicates a heavy reduction atmosphere.





Because black-glazed tianmu-ware fell out of favor and was not produced for a long time, there is a lack of textual records regarding the firing method, and scholars disagree on whether an oxidizing or reducing atmosphere is preferable. My initial thoughts on the topic were that since ancient kilns were all fueled with firewood, and burning wood consumes the oxygen inside the kiln, it would be unlikely for the pieces inside the kiln to be exposed to a completely oxidizing atmosphere during firing; however, if the kiln cooled relatively slowly after the fire was put out, this could indeed create an oxidizing atmosphere.

From my experiments, I discovered that an overly heavy reduction can cause the oil spot patterns to fuse together or change color, so if your focus is on achieving three-dimensional oil spot patterns with a raised texture, it's better to choose a lighter reduction. However, if your emphasis is on the color changes in the glaze, you can choose a method that involves stages of heavy reduction. For a lot of my current pieces, I use a method that involves heating in several intervals; for each interval I use different oxidation or reduction techniques to get the best results from each piece.

#### Base Clay

We generally make a distinction between earthenware and porcelain clay; however, there are also other types of clay with various functions, such as grog (also known as firesand and chamotte) and a specific type of clay that is used for making oil spot *tianmu* glaze. Generally speaking, in order to research oil spot glazes, the basic factors for consideration are the degree of fire resistance, the iron content, and the granularity (particle size).

#### Fire Resistance

When selecting the fire resistance of the base clay, it's important to consider the firing temperature required for your chosen glaze. When using clay with a relatively low fire resistance, if the firing temperature is higher than the piece can withstand, the piece will

tend to blister, become misshapen or even collapse. Generally speaking, porcelain clay can withstand higher temperatures than pottery clay. When I was beginning my research, I conducted an experiment comparing commercially available earthenware with No. 26 Japanese porcelain clay to observe the change in the glaze at different temperatures as well as the influence that the base clay and the glaze have on each other. As a result, I noticed that since the range of firing temperatures for oil spot tianmu is quite wide, the glaze displays different changes at different temperatures; however, at the high-temperature point when the spots crystallize, the temperature range becomes narrower.

So, if your temperature range is between 1200 °C and 1260 °C, using ordinary potter's clay should be sufficient, and if it is above 1280 °C, then you should perhaps consider using porcelain clay, or a blend of porcelain and pottery clay.

#### Iron Content

In researching black-glazed *tianmu*, it's common to use ancient *Jian*-ware bowls as a point of reference, and their high iron content is often used as a standard. When the base clay is deficient in iron, it's common to try increasing the iron oxide in the clay to boost the iron content. I myself experimented with commercially available pottery clay and porcelain clay, adding different concentrations of iron oxide before glazing and firing. I noticed that the iron content can easily interfere with the firing of the glaze.

Breaking a finished piece after glazing and firing will reveal some layering: a layer of base clay, a layer of glaze, and in between them, another layer where the glaze and clay have blended together. So, in practice, the iron content of the base will also influence the changes in the glaze at high temperatures. The results of my experiments indicate that if the base has a high iron content, you can reduce the iron content in the glaze. These days, I tend to adapt the composition of the base clay to best suit each individual glaze formulas, in search of the best possible results, creating gorgeous tianmu bowls that

catch the eye and make really great tea as well. The glaze and clay work in harmony to make a piece that draws the viewer in.

#### **Granularity**

Since the patterns in the glaze are the primary aesthetic consideration for oil spot tianmu, the base generally needs to have as smooth a surface as possible so that when the spots form they can spread out in a regular pattern, or even form lovely streaks as the glaze drips downwards. Commercially available grog (chamotte) clay contains coarse grog particles and is generally considered unsuitable as a base for oil spot tianmu pieces. However, I once tried using grog clay as a base and then sanding it after bisque firing to smooth away the rough particles from the surface. Although this resulted in a few minor indentations, it didn't affect the expression of the oil spot patterns in the glaze at all; however, it did take rather more time and effort.

#### Conclusion

The above discussion of various aspects of firing oil spot tianmu glazed ceramics is offered based on my personal experience and research; there are a great many other facets that are impossible to explore at length in these pages. For example, what is the influence of trace elements found in ancient examples of oil spot Jian ware, such as manganese, chromium and titanium? Also, at what kiln temperature is reduction best conducted, and for how long? Should the degree of reduction be altered throughout the process? Additionally, many authors on the subject fire their pieces a second time; are the required conditions the same for twice-fired pieces? What effect does a second firing have on the oil spot patterns? How many times can one fire a piece? Is it possible to perform several repeat firings in only one heating curve? These are all complex questions and worthy of discussion; we shall just have to leave them for another day...







Tha Dao Series

# How to Hold

# The Bowl



本A: Jing Ren (淨仁)

et's put the kettle on the stove and sit down for some tea...
Today, I'd love to share with you some leaves of Cloud Temple, placing them into a bowl, adding hot water and watching them unfold as we take sips and discuss holding the bowl. Hopefully you'll be just as inspired by the deep lessons hidden in this practice as the many guests that visit the Center every year. We have a lot to talk about, but first, let us share a bowl or three in silence...

Imagine your ancestor wandering through the woods in a time so long ago that we could not even call it history: the sound of twigs breaking underneath bare feet, the whispering of the leaves as the winds blow through the trees and the sound of flowing water approaching as she continues to walk. Arriving at a clear stream coming straight from the mountains, she kneels down, shapes her hand into a scoop and ladles the water to take a drink, quenching the thirst of a long bike

Now imagine the first ceramics, wooden tools or other objects that our ancestors ever used to drink water out of, other than their hands. What shape would they form such vessels into? And how would they hold them? Wouldn't those very first water vessels have been form-shaped to the cupped hands? And wouldn't they have held the bowl

like they ladled water from the mountain streams with their bare hands? This evolution from hand to bowl isn't hard to imagine, and it forms the basis of how we craft bowls for our tea ceremonies, as well as the proper way to hold the bowl in our lineage.

So much went into the creation of this bowl of tea. Thousands of years of heritage in the processing of these leaves and making of this bowl, countless generations of Chajin in order to refine the brewing methods that we use today—all of this had to come together in order to make this bowl of tea. This already is quite magical, but this doesn't yet include the sun, the mountains, the rain, the rivers and everything else that went into forming these leaves. Mother Nature, her rivers, mountains, forests and valleys are part of our tradition and lineage just as well as all the generations of Chajin that came before us. As I hold this bowl of Cloud Temple, I feel like giving thanks by honoring this bowl of tea that arose from both Nature and tradition, and using it with the greatest care, attention and respect I can muster.

#### Function & Experience

Respect is at the core of how tea ceremony becomes transformative. It is one of the Four Virtues of Tea. If we have respect for this plant as medicine for the soul, the coming together of this ceremony and the people we share this moment with, then healing can take place. When you hold the bowl properly and you sit up straight, with all your intention and focus on the tea, you show this respect. The more you approach the tea with this kind of respect, the more She will tell you the tales She has to tell. More importantly, respect is at the core of all relationships and communication. The more we respect Tea and the process of brewing, the more we listen and learn. This then teaches us to respect our lives and listen to our bodies, to Nature and to all our experience.

#### Balance: Using Two Hands

A large part of how we show our respect for tea is by using two hands to hold the bowl. When we drink tea with one hand it is very easy to get distracted. It is easy to move one's attention away from the tea—even slowly migrating the arms away from the center as the attention moves in a different direction.

It is true that not every tea session has to be so focused on the tea. Sometimes occasions may arise where the tea is more in the background, and Her role is to facilitate communication with each other rather than through



ceremony and silence. In other words, we use tea to connect to each other. Tea is also social. But in those times when we want tea to be the focal point of the session, it helps greatly to use two hands.

Our hands are one of the most sensitive parts of our bodies, so whatever they are doing influences where our mind's focus is. Holding the bowl with two hands naturally guides our minds towards the bowl and helps us to get our whole bodies involved. In doing this, we make this bowl of tea the center of our universe. There are no distractions, everything is centered right in front of us and all of our attention is focused on the bowl.

This applies not only to tea; it applies to everything. Wu De often gives the example of shaking someone's hand with two hands instead of one. We all know the difference when someone shakes our hands with attention and respect rather than out of formality and necessity. This kind of handshake involves two hands, the right amount of tension and the whole body to participate, all the way up to the eyes.

#### Off-Hand: The Foundation

The off-hand is the base, the foundation. This hand holds the bowl and is the basis on which it stands. We hold the foundation hand flat and the fin-

gers together. If you look at the inside of your hand, you will see that there is a natural indentation where the fingers meet the hand. For most people, this is where the base of the bowl most comfortably rests. It is better not to curl up the fingers around the bowl, instead using the thumb on the rim to hold it in place.

One of the most common mistakes is to loosen some of the tension of the foundation hand. Keeping the foundation hand straight when raising the bowl requires a tiny bit of tension. It is the kind of tension we need in order to maintain a proper meditation posture as well. If we are in a comfortable, slouching posture, we start to get sleepy and our minds start to wander. Holding the foundation hand straight, and with a slight, straight tension facilitates a mind that is present onto the tea.

#### Strong Hand: The Guide

The strong hand is the guide. It curls over the side of the bowl like a crab's claw, holding the rim between the outstretched thumb and index finger. The rest of the fingers are gently together, just as with the foundation hand. The strong hand guides the movement of the bowl, tilting it gently towards your mouth and bringing the liquor to you. Not tilting the bowl and keeping it

straight will force us to slurp the tea up strongly, which distorts the tea liquor. When we tilt the bowl, slurping ever so gently and only to control the temperature in our mouths, we don't disturb the tea and we leave the structure of the liquor intact. The tea will move into our bodies much more smoothly. This is something that is easier to experience once you take the last few sips. Pay attention to the movement of both hands. Try to feel the momentum of the tea when you tilt it. Does the movement stop where the bowl meets our lips? Or does it continue further on, influencing the way the tea integrates into the subtler parts of our bodies and minds as well?

#### Picking Up and Setting Down

Holding the bowl like this is very useful for picking it up, setting it down and passing it on to someone else. Many people, especially those in the West, often begin their practice picking up the bowl with both hands on both sides of the bowl while cupping it symmetrically. The problem with holding the bowl like this is that the surfaces where our hands are touching become very hot. Another problem is that it becomes very difficult to set the bowl down comfortably and safely. When you set the bowl down like this, the hands will be in the way.



This method demands hand acrobatics in order to place the bowl down safely.

When picking up and setting down the bowl, the fingers of the foundation hand function like a gentle slope or ramp. The guide hand then comes up over the bowl, lifts it up and guides the bowl onto its base of the foundation hand. When setting the bowl down, the bowl gradually moves back out towards the fingers of the foundation hand until they touch the side of the bowl near the rim. In this way, both hands maintain contact with the bowl throughout the process of setting it down. Oftentimes, we neglect to use two hands when picking up or setting down bowls, missing the opportunity to foster mindfulness and respect.

We encourage you to pay very close attention to the process of setting down the bowl. The moment that something touches a surface is actually not the moment to let go of it! You have to wait, touch, sense and feel until the bowl "tells" you it's balanced fully on the surface of the table or ground. All of us (including me) have broken something in our lives because we let go of it too early after setting it down. When we set down the bowl carefully with two hands, the bowl is respected and protected for many generations to come—just like the past generations of Chajin respected the treasured antique bowls we use today!

#### From Heart to Mouth

When holding the bowl, you might wonder what to do with the elbows. If the elbows are too scrunched, it's uncomfortable, and likewise if they are too outstretched, movement is awkward. Fortunately, we have a beautiful, practical and poetic gesture that solves

this problem: if you hold the bowl near your heart, and bring it from heart to mouth, you will find that the elbows and shoulders find their place naturally and comfortably. This doesn't involve only the elbows! When we hold the bowl near our hearts, our whole posture naturally becomes upright. And, as we often mention, being upright is where meditation begins.

#### Stay with the Tea

Staying with the tea is one of the Five Basics of Tea Brewing; this is equally true for drinking tea as well. Try to practice not setting the bowl down until you are finished. Stay with the tea, watch the leaves open, notice its aroma and the warmth coming from the bowl, which is a kind of communication in itself. We can listen to Tea with our hands.

#### The Foundation



#### The Guide



#### Using Two Hands



Learning to work in harmony with our teaware and listening to how it "wants" to be used increases our sensitivity to the world around us. We learn that there is a smoother way to use things and become more like water, finding the smoothest road to the sea. We learn to adapt to obstacles through our listening skills. We also cultivate reverence, even for ordinary objects and activities, which teaches us to appreciate our lives more, be more present, grateful and fully embodied in our experience. We honor Tea, ourselves, Nature and others in this practice.

When we hold the bowl properly, we can hold the bowl for a long time without it becoming too hot. However, if you do find the bowl too hot at some point, just use you guide hand to pull it out onto the finger ends of the foundation hand. If it is still too hot, you can go to the tips of your fingers. And as a last resort, you can start to "dance," as Wu De often jokes: twinkling the fingertips on and off the bowl. The more you drink tea, the less you have to do this. Try to have the bowl resting where the fingers meet the hand whenever possible, as holding the bowl quietly in the center of the hand will definitely enhance your experience.

Through this practice, we learn that the bowl does have a way that it "wants" to be held. It "speaks" to us of how to use it, and learning that language can change our lives.

#### The Path Continues

We hope you will experiment with holding the bowl in different ways, paying close attention to the influence this has on your experience. As you continue to practice holding the bowl with awareness and respect, you will discover deep and profound ways in which this influences your tea practice. And you can start to experience in what ways this practice of holding the bowl influences your life in areas other than drinking tea. You may find that you become more balanced in the movements between left and right hands, Yin and Yang, for example; or you may find yourself more centered as you go about your day. Let us know what you experience as you try this method out. There is so much to discover in this bowl of tea-it truly contains the whole Universe!

We are learning non-verbal communication through our practice, which teaches us how to understand our own bodies and minds. We learn that the evolution of a functional tool like a tea bowl is worth understanding, as the way it is used and held determines how it is created—a process that is then refined over time. If the maker is producing the bowl to be held in a different way than the brewer intends or doesn't fully understand how it is used herself, the bowl will never function well. This is wisdom that can be applied to all the tools we use in our lives and teach us to listen more—listen with our whole beings!



From Heart to Mouth



Picking Up and Setting Down



Stay with the Tea



# TIANMUKILNS \*\*\*SET TO THE SET TO

# FUJIAN



This article is a deep plunge into the history of tianmu. We translated this from one of the leading books in the field. The entire book is only about the "Jian (建)" kilns, which is another name for tianmu (or you could think of tianmu as a kind of blackglazed Jian-ware), of which there were thousands. We have only included a survey of the kilns in northern Fujian, leaving the south for a future issue. The history of tianmu is fascinating and the article shows how vast and important tianmu is.



茶△: Li Jian'an (栗建安)

he province of Fujian is situated on the south eastern coast of China. The terrain is largely made up of hills and low- to medium-altitude mountains, and the subtropical monsoon climate means that most of Fujian enjoys warm temperatures and plentiful rainfall. The whole province is covered with chains of mountains, lush forests and babbling streams that flow between the mountains. It is also abundant in the natural resource of kaolin clay. All these natural conditions combine to make Fujian an ideal environment for building kilns and firing ceramics.

Because of this, ceramics have been produced in Fujian for a long time: current knowledge places the earliest production at the time of the Northern and Southern Dynasties (220-589). Remains of kilns dating to the Northern and Southern Dynasties have been found at Huai'an in Fuzhou and at Cizao in Jinjiang. A large amount of green-glazed celadon has been unearthed from tombs dating to the Western and Eastern Jin Dynasties (265-420), some of which was probably produced locally. Additionally, Fujian's long, winding coastlines and the many rivers that weave their way across the province provided the locals with ample opportunity for transporting goods by boat, and for overseas maritime trade. From the Tang Dynasty (618-907) onwards, the ceramics industry in Fujian gradually began to flourish, with a steady flow of porcelain being shipped overseas. During the Song (960–1279) and Yuan (1271–1368) dynasties, we can observe from factors such as the surge in activity at the port of Quanzhou that the opening of the Maritime Silk Road and the expansion of overseas trade stimulated a major boom in Fujian's ceramics industry.

## The Development of Fujian's Ceramics

From the Northern and Southern Dynasties through to the Song and Yuan, the production of green-glazed porcelain (also known as celadon or greenware) continued to steadily grow and improve. By the time of the Five Dynasties (907-960), black-glazed ceramics began to appear in Fujian. In 1992, excavators at the tianmu kiln site at Mount Anwei discovered the remains of a kiln used to fire blackglazed tea bowls (field excavation number 92S/Y8). Directly underneath this kiln was an older one, used to make celadon in the Five Dynasties era (field excavation number 92SJY10). The newer kiln was built by adding modifications directly onto the existing Y10 kiln, which indicates that the two were not far apart in terms of age.

Black-glazed ceramics, and the green-white *qingbai*-ware (青白瓷器) that would appear later, went on to surpass their predecessors, and together with the earlier celadon they formed three legs of a tripod that sustained the

ceramics industry in Fujian during the Song and Yuan dynasties. The rapid development of black-glazed ceramics also contributed to the custom of "tea contests (dou cha, 鬥茶)," popular in the society of that era. This style of tea consumption had already existed in the Tang Dynasty and began to flourish during the Song. Experts in the art of tea contests were particularly fond of black-glazed tea bowls from the tianmu kilns in Fujian, as can be seen in this excerpt from Tao Gu's Qingyi Records (荈茗錄): "In Fujian province, they make tea bowls with partridge speckle patterns, which are prized by tea content experts." These black-glazed bowls were highly esteemed by the imperial court and high-ranking scholars and officials. During this era, the tianmu kilns were already producing blackglazed tea bowls with enchanting patterns such as "rabbit's fur (tu hao, 兔毫)," "oil spot (you di, 油滴)," "partridge (feather) speckle (zhe gu ban, 鷓鴣斑)," and "magnificent change (yao bian, 曜變)," which represented the pinnacle of accomplishment in black-glazed ceramics. Under the powerful influence of both societal trends and the success of the tianmu kilns, other kilns all over Fujian scrambled to begin producing black-glazed ceramic ware, all vying to imitate the famed rabbit's fur tea bowls. In no time, this resulted in a wide-reaching region that produced black-glazed ceramics, with many large-scale kilns. The bowls and other wares made there were used throughout the empire and beyond.



#### THE MINBEI (NORTHERN FUJIAN) REGION

This region is located to the south of the Wuyi mountain range, surrounding the upper reaches of the Minjiang River's three major tributaries: the Tianmu River, the Futun River, and the Sha River. Aside from the original *tianmu* kilns in Jianyang County's Shuiji Village, this area is home to a number of other known kiln sites, listed below (this includes kiln sites that produced brown-glazed ceramics, but also made tea bowls imitating the *tianmu* kiln style).

There are three main regions for tianmu kilns: the Fujian Region, the Southern Fujian Region (Minnan, 閩南) and the Northern Fujian Region (Minbei, 閩北). The following is a brief introduction to some of the more important kiln sites from the Northern Fujian Region, as well as the black-glazed tea bowls excavated from the respective sites.

#### Dakou Kiln, Pucheng County

The kiln site is located at Huangbi Village in the Shuibeijie Township area, Pucheng County. It was discovered in 1958 and has been surveyed several times over the years. The remains of a dragon kiln measuring 36 meters long by 2 meters wide were discovered at the site. The Dakou kiln mainly produced *qingbai* porcelain, along with some celadon and brownglazed ware (*jiang you ci*, 醬釉瓷).

The brown-glazed tea bowls seen at this site are of the "indented-mouth" variety, with a fairly thick or blunt lip that slants slightly outwards. On the inside surface, there is a shallow groove running around below the lip; the sides of the bowl are slanted, and the center is flat. They have a short circular foot ring at the base, which is flat on the bottom; the edges are beveled, and the base of the foot ring is neat and even. The hollow on the underside of the foot is deeper on some bowls and shallower on others; the deeper ones have a knob-like protrusion on the underside of the base with obvious cut marks, while the shallow ones are simply flat on the bottom. The upper parts of the

outside of the cup tend to be quite smooth with several layers of glaze, while on the lower half the natural surface of the ceramic base is exposed. This part displays visible markings from the potter's tools, suggesting that they were somewhat roughly made. The base ceramic is grayish-white in color, with a fine texture that resembles that of green and green-white porcelain. On the glazed half of the bowls, the glaze is a grayish-brown color, applied in quite thin layers. The light gray color of the base shows through the thinnest patches of the glaze. The edge of the glazed part is uneven, with no obvious pooling of the glaze. The tea bowls are 10-11 centimeters in diameter at the mouth, about 5.2 cm tall, and around 4-4.5 cm in diameter at the foot.

#### Banlu Kiln, Pucheng County

This kiln site is situated in Banlu Village, also in Shuibeijie Township area, Pucheng County. It was discovered in 1954 and has been surveyed several times. It mostly produces greenware, as well as some black-glazed and *qingbai*-ware. The black-glazed ceramics produced here were mainly bowls, which came in three shapes:

#### 1. "Indented-mouth" (shu kou, 東口)

These tea bowls are straightmouthed with a pointed lip and a slight indentation along the mouth. Beneath the inside edge of the mouth is a shallow groove; the sides are slanted and the center is indented. They have a round foot ring with a flat underside. The edge is beveled and the base of the foot is straight and even. Near the foot ring, there is an inclined surface that slants inward toward the sides of the bowl, about 0.4 cm in width. The diameter is 9.6 cm at the mouth and 3.8 cm at the foot, with a height of 5.2 cm.

#### 2. Slanted-mouth (pie kou, 撇口)

"Slanted-mouth" bowls curve slightly outward at the top of the mouth; they have a rounded body and are flat at the center, with a slight upward bulge. They have a small, short foot ring with a flat bottom and a beveled edge. There is a fairly deep hollow on the underside of the foot, with visible tool marks. The diameter is 15 cm at the mouth and 4.7 cm at the foot, and the height is 6.8 cm.

#### 3. "Inverted-mouth" (lian kou, 斂口)

These bowls have a pointed lip and turn slightly inwards at the rim, with slanted sides and an indented center. They have a short foot ring with a slanting surface on the bottom, higher on the outside than the inside. The base of the foot is straight and even, with a shallow hollow on the underside. This shape of bowl tends to be a bit smaller, with a diameter of 9.2 cm at the mouth and 3.7 cm at the base, and a height of 3.8 cm.

The black-glazed tea bowls at the Banlu kiln are made from a grayish-white, relatively fine ceramic. The top half of the bowls are glazed both inside and out with a brownish-black glaze and the bottom half exposes the base. The glaze is applied quite thickly, but a tawny dark brown color shows through in the thinner areas around the mouth. The edge of the glaze is uneven, with some signs of pooling and dripping. The unglazed part of the outer surface shows that the bowls are quite neatly made, with some showing traces of the potter's wheel. The shape of the foot rings is also uniform.

The kiln sites at Dakou and Banlu have not undergone formal archaeological excavation. Because of this, we don't have a clear idea of the relationship between black-glazed, green-glaze and green-white *qingbai* glaze ceramics in terms of soil strata—unlike the black-glazed and qingbai pieces found at the Yingzhangqian tianmu kiln site, for example, which show clear stratification. In the 1992 excavation of that site, the remnants of a qingbai kiln (field excavation number 92SJY6) were found in a layer directly on top of a black-glazed kiln (field excavation number 92SJY7), crushing the older kiln. The Dakou kiln mainly produced qingbai porcelain, the typical style being bowls with indented flower pat-

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terns and unglazed rims, made using a double-firing technique. This style probably came from the late Southern Song through to the Yuan Dynasty. Although the brown-black glazed indented-mouth bowls made at this kiln imitated the black-glazed tea bowls from the *tianmu* kilns, they still have some clear differences, and appear to be from a slightly later period than the *tianmu*-ware bowls. Therefore, the brown-glazed tea bowls from the Dakou kiln likely also date to the late Southern Song and the Yuan Dynasty.

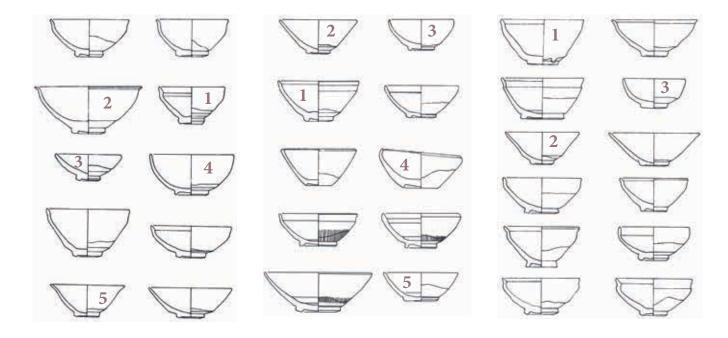
The Banlu kiln also produced *qingbai*-ware, probably up until the Yuan Dynasty. However, the three shapes of black-glazed tea bowls produced here closely resemble those unearthed at a number of different *tianmu* kiln sites, and the glazing style was also the same. The Banlu kiln also produced greenware, including bowls with finely engraved patterns, a style that was also popular in Fujian during the Southern Song Dynasty. From this, we can infer that the black-glazed tea

bowls from the Banlu kiln come from a slightly earlier period than those from the Dakou kiln, falling some time during the Southern Song.

#### Oulin Ting Kiln, Wuyishan City

The Oulin Ting kiln site is situated on the northern side of Xing Village, in the Wuyishan City area. It was discovered in 1958 and has been surveyed a number of times. The Oulin Ting kilns mainly produced black-glazed ceramics, as well as some celadon. The blackglazed pieces recovered from the site include bowls and dishes with a gray or light gray base, somewhat coarse in texture yet evenly formed. The areas where the base is exposed appear quite rough, but the bottom of the bowls and the foot rings are all very neat and uniform in shape. The foot rings are short, and the base and center of the foot are very neat, made with precise and careful technique. The glaze on the outside does not reach the bottom of the cup; the edge of the glaze is uneven and displays some pooling and dripping. The glaze has a luster to it, and the color ranges from greenish-black to brownish-black and dark brown. The area of thinner glaze along the rim is usually dark brown. Some of the pieces display faint streaks or irregular speckles of brown on the glaze.

Of the tea bowl specimens discovered, the exposed part of the ceramic (the lower half of the outside surface, including the foot) are all basically the same in terms of shape and crafting method. Between the lower part of the body and the base of the foot ring, they all have a slanting surface that inclines inward toward the sides of the bowl, with a width of 0.9-1.3 cm. The foot ring is generally short, with a slanting surface on the bottom: higher on the outside and lower in the middle. The foot ring is hollowed out at an angle on the underside, with the center being flat and shallow, or displaying a slight protrusion with visible marks where the bowl was cut away.









Left is a map of Fujian Province in the modern day, with the Taiwan Straight running off the side. There were more than 1,000 tianmu kilns back in the dynastic days in Fujian! The shards above were excavated from several different kilns dating from the Song Dynasty (960–1279) to the Yuan Dynasty (1271–1368). Many of the kilns were active into the last Qing Dynasty (1644–1911), still producing tianmu-ware until that time.

There are four different shapes of bowl: indented-mouth (shu kou), slanted-mouth (pie kou), inverted-mouth (lian kou) and "alms bowl-shaped" (bo xing, 鉢形) bowls. The latter, which we haven't discussed, have an inward-turning lip and an outward curve to the body, with a short foot ring. The exposed parts of the base are quite fine and smooth. The diameter is 11.6 cm at the mouth and 4.6 cm at the base, with a height of 5.8 cm.

The Oulin Ting kiln site has yet to undergo archaeological excavation. From the black-glazed tea bowl specimens gathered here, we can make the following analysis: the bowls found at the Oulin Ting site fall into three main shape categories: indented-mouth, slanted-mouth and inverted-mouth. This is consistent with the shapes of black-glazed tea bowls found at the Luhua Ping, Dalu Houmen and Yingzhangqian tianmu kilns. The Oulin Ting kiln bowls have quite uniform foot rings, the glaze is relatively thick, with pooling and dripping along the edge. The color of the glaze is generally greenish-black or brownish-black. These characteristics are also similar to the products of the tianmu kilns. The

three aforementioned *tianmu* kilns date from the mid- to late Northern Song Dynasty until the late Southern Song, after which they were superseded by the production of *qingbai*-ware. No *qingbai*-ware has been found at the Oulin Ting kiln site; it dates to the same era as the black-glazed *tianmu*-ware kilns, namely around the Northern Song to late Southern Song dynasties.

#### Maodian Kiln, Guangze County

This kiln site is situated to the west of Maodian Village in Huaqiao Township, Guangze County. It was discovered in 1955 and underwent an archaeological excavation in 1956. The Maodian kiln mainly produced *qingbai*-ware, as well as some celadon and black-glazed bowls.

The base of the black-glazed bowls is white or grayish-white with a fine, dense texture, the same as that used for the *qingbai*-ware and celadon produced at this kiln site. The black-glazed bowls are uniform in style, with neat craftsmanship displayed on the exposed parts of the base. There are no

obvious traces of joining on the outside of the bowl where the upper and lower parts meet. On the outside surface, the glaze is not applied right to the bottom; the edge is uneven. Although there is some visible running on the surface of the glaze, there is very little pooling or dripping along the edge. The colors of glaze include brownish-black, blue-green, reddish-brown and white-lipped or light-lipped (a style sometimes called "white-covered ring"). Some of the tea bowls display greenish-gray spots on the glaze from kiln transmutation, while some have faint rabbit's fur streaks. There are three shapes of tea bowl: indented-mouth (shu kou), inverted-mouth (lian kou) and alms-bowl shaped (bo xing).

There are some differences between the black-glazed tea bowls from the Maodian kiln and their equivalent from the *tianmu* kilns. The style is not quite the same, and this type of white or green-white rimmed bowl, whether the color is achieved by extra glazing or by removing the glaze, has not been found at any of the *tianmu* kilns. Most of the *qingbai*-ware produced at the Maodian kiln site is glazed in the rawlipped *mang kou* style, with engraved

flower patterns; this style dates to the mid-late Southern Song (1127–1279) at the earliest, and possibly to the Yuan Dynasty. So, the black-glazed tea bowls from the Maodian kilns date to the same time period: the late Southern Song through to the Yuan Dynasty.

#### Sidu Kiln, Shaowu City

Also called the "Blue Cloud (Qing Yun, 青雲)" kiln, this site is located near Sidu Village in Shuibei Township, Shaowu City. Several archaeological excavations have been carried out here, showing that this kiln site produced mostly white, qingbai and brown-glazed ceramics, with both tea bowls and other bowls being found among the specimens. The body is grayish-white with a relatively fine texture, and the pieces are quite uniform in shape. The bowls and tea cups have glaze applied to half of the outer surface; the glaze is fairly thin with uneven edges and no pooling. The glaze colors include brownish-black and grayish-brown. The exposed base shows obvious traces of tool work, and the foot rings are mostly beveled. The tea bowls appear in two shapes, indented-mouth and inverted-mouth. The regular bowls also appear in two different shapes, inverted-mouth and open-mouth.

#### Baimaqian Kiln, Jianyang County

The Baimaqian kiln site lies to the east of Dabai Village, Masha Township, Jianyang County. Discovered in 1982, it has been surveyed several times. The piles of ceramics found at the site contained mostly greenware, as well as some black-glazed pottery. Among the black-glazed vessels were tea bowls, jars, teapots, lamps and dishes, with tea bowls being the most numerous.

The body of the tea bowls is grayish-black or dark gray, with a coarse yet dense texture and a heavy, solid feel. The exposed parts of the base are quite rough. However, the foot rings are quite uniform in shape, with an inward-slanting surface 1.0–1.5 cm wide near where the body meets the foot. Most of the bowls are glazed starting from above this slanted ring. The glaze

colors include black, brownish-black, brown and greenish-back. The areas of thinner glaze around the mouth are generally brown in color, and some of the tea bowls have quite clear rabbit's fur markings. Most of the bowls display pooling and dripping along the edge of the glaze. The tea bowls come in the following shapes: indented-mouth (shu kou), inverted-mouth (lian kou) and open-mouth (chang kou, 敞口). Open-mouth bowls have a pointed lip while others have a blunt lip. They are open-mouth with slanted sides and a concave center. The shape resembles that of "bamboo rain hat bowls." They are 9.8-13 cm in diameter at the mouth and 3.3-4 cm at the foot. They are 4.1-4.9 cm tall.

The Baimaqian kiln site is located about 55 kilometers west of the tianmu kilns, and the tea bowls produced here were similar to the ones made at the *tianmu* kilns in terms of shape, material, glaze color and type. Some of the indented-mouth tea bowl specimens from Baimaqian are even hard to distinguish from the tianmu kiln tea bowls or tianmu zhan. From this, we can see that the tianmu kilns had a direct and strong influence on the Baimaqian kiln site. However, among the open-mouth bowl specimens discovered at Baimagian, there appear some examples glazed in the "white-covered ring" (bai fu lun, 白覆輪) style with greenish rims, a style that has not been seen at the tianmu kilns. So, they probably date to a slightly later period than the black-glazed ceramics from the tianmu kilns.

#### Yushan Kiln, Jianzhen City

The kiln site is located at Yushan Village in Xiaosong Township, Jianzhen City. It was discovered in 1981 and has undergone archaeological investigation. This kiln mainly produced *qingbai* porcelain, as well as some black-glazed pieces. The ceramic base for the black-glazed pieces is graywhite or pure white, with a fine, dense texture. The main type of vessel made here was tea bowls, which were very neat and regular; they prided themselves on their pottery skills.

The upper part of the outside of the bowls was quite smooth and usually covered in glaze, while the bottom half displayed traces of various tools: some of them are disorganized wheel markings, while some of them are clearly knife marks. The foot rings are mostly flat on the bottom and beveled on the edge, with a neatly formed base. The hollow on the underside of the foot varies in depth, with the deeper ones displaying a protruding bump in the center with visible cut marks. There is a slanted surface around 0.8 cm wide near the foot, sloping in toward the sides. The glaze on the outside doesn't reach the bottom and is a brown or reddish-brown in the thinner areas near the mouth. Along the bottom border it is thicker and displays a brownish-black or greenish-back color, with some pooling and dripping. Some of the specimens have brown rabbit's fur streaks below the mouth, but the lines are not very well defined. There are also some "white-covered ring" tea bowls with white glaze along the lip.

All the tea bowl specimens gathered at this site were of the indented-mouth *shu kou* variety, some with fairly vertical lips and some that curve slightly outward. They all have a crease or shallow groove beneath the mouth. They have angled sides and a slightly concave center. Their diameter ranges from 9.2–11.2 cm at the mouth, and from 3.7–4.9 cm at the foot. They are between 4.5–5.7 cm tall. These bowls are more open than some tianmu bowls found at other sites in Fujian, with more room for whisking.

The Yushan kiln site lies around 20 km to the south of the tianmu kilns. Due to its proximity, the black-glazed tea bowls produced here were naturally influenced by those from the tianmu kilns. This kiln site has not yet been formally excavated, so there is no clear stratification recorded between the back-glazed and qingbai ceramics. However, this site has fewer varieties of black-glazed tea bowl than the tianmu kilns and has some examples of whiterimmed tea cups, which tells us that the black-glazed ware at Yushan was likely produced slightly after the golden age of the tianmu kilns. We can estimate, then, that the Yushan site was from a somewhat later era, probably dating to the late Southern Song through to the Yuan Dynasty. There will need to be more research and proper dating of samples in the future to determine the dates more accurately.



#### Jihui (or Xietun) Kilns, Shunchang County

This kiln site is located near Xietun Village in Jihui Township, Shunchang County. The site encompasses two locales, Liankeng and Xietun. The ceramics found here include celadon, white porcelain and black-glazed ceramics. The black-glazed wares are the least common and include tea bowls and dishes. They are made with a grayish-white base, fairly fine in texture and uniform in shape. The glaze on the outside doesn't go all the way to the bottom, and the border is uneven, with pooling visible on some pieces. The glaze varies in color from brown to brownish-black, with some pieces displaying brown rabbit's fur markings.

All the tea bowls are of the indented-mouth *shu kou* shape, with a rounded or square-edged lip, slanted sides and an inward-inclining surface on the outside near the foot. The center of the bowl is flat or slightly convex, and they have a short foot ring that is slanted on the bottom. Some of them are hollowed out on the underside of the foot. The diameter at the mouth is 10.4 cm, while at the foot it is 4.4 cm. The bowls stand 4.7 cm high.

Some have a deeper hollow on the underside of the foot, with a protrusion in the center bearing cut marks. The diameter is 11.7 cm at the mouth and 4.2 cm at the foot, and the height is 6.1 cm. Others have the glaze removed along the mouth in the *mang kou* style, with a thicker layer of glaze in the center of the bowl and on the lower part of the outside surface. The glaze has rabbit's fur streaks, with some pooling and running at the edges. The diameter is 11.4 cm at the mouth and 4.2 cm at the bottom. The height is 5.1 cm (affected by damage).

Similar *mang kou* tea bowls show pooling at the edges below the white rim, and the center and outer sides all have thin glazing. This was likely the result of a second firing. The diameter is 11.4 cm at the top and 4.8 cm at the bottom, and the height is 4.9 cm.

From analyzing the specimens discovered at the Jihui kiln site, some scholars have estimated that this site was likely in operation from the mid-Southern Song Dynasty to the early Yuan, which makes it a long-lasting kiln.

#### Chayang Kilns, Nanping City

This kiln site is located behind Chayang Village in Taiping township, Nanping City. It has undergone several archaeological excavations since its discovery in 1982. The piles of ceramics at the kiln site turned out to contain qingbai-ware, celadon, black-glazed ware and green-glazed porcelain (distinct from the light green-colored greenware or celadon). There was also a pile of blue-and-white porcelain, indicating that the Chayang kiln site has a long, continuous history of producing ceramics; even today there is still a porcelain factory in the vicinity of the kiln site. The black-glazed ceramics discovered at Chayang are made from a gray or grayish-white base, with a fine, dense texture. However, some of the gray-colored pieces have a quite coarse, loose base. The body of the cups is made with quite a narrow inward-slanted plane near the foot, only about 0.4 cm wide. The foot rings are short and not particularly uniform; the underside of the foot is slanted, high on the outside and low on the inside. The hollows on the underside of the foot ring are fairly shallow, with some of them just barely indented. The glaze on the outside stops before the bottom and has an uneven border. There is visible pooling, but very little dripping. The glaze colors include black, brownish black and brown, with the thinner areas of glaze along the mouth showing a brown color. There are also some tea bowls in the "white-covered ring" style, with white glaze applied by hand along the mouth. A small number of mang kou style black-glazed dishes were also discovered here, with the glaze scraped off along the rim to reveal the white clay beneath. The types of tea bowl included: indented-mouth (shu kou), inverted-mouth (lian kou) and large open-mouthed (chang kou) bowl with a squared lip, an open mouth, slanted sides and a shallow arch-shaped bot-

The Chayang kiln site is also yet to undergo formal archaeological excavation. From the samples already collected at the site, we can observe that the indented-mouth tea bowls from the Chayang site lack the heaviness of their equivalent from the *tianmu* kilns, and their body is slightly more open in shape. There haven't been any slant-

ed-mouth (pie kou) tea cups found here; the inverted-mouth tea bowls that have been discovered also have fairly shallow bodies and wide mouths. There are also examples of mang kou and "white-covered ring" style white-rimmed vessels. The era of this site is likely somewhat later than that of the black-glazed tianmu kiln ware; these pieces are emulating the products of the tianmu kilns. This puts the era of the Chayang site at around the late Southern Song to the Yuan Dynasty.

#### Shangyao Kiln, Jiangle County

The Shangyao kiln site can be found at Shangyao Village, Nankou Township, in Jiangle County. It was discovered during an archaeological excavation in 1988. Samples collected here include *qingbai*-ware, celadon and brown-glazed ceramics, with the *qingbai*-ware appearing in larger quantities, and fewer brown-glazed pieces. The brown-glazed implements are all tea bowls. They are made from a white or grayish-white clay with a fine, dense texture. The tea bowls are all quite uniformly shaped.

All the bowls are of the indented-mouth variety, with a deep indentation or crease around the mouth. They have slanted sides and a concave center. The foot ring is a flat disk shape with a neatly-formed base, featuring a slightly concave underside with a small protruding bump in the center.

There are also some "white-covered ring" tea cups. They have reasonably deep hollows on the underside of the foot ring, with a slight outward swell. In terms of crafting technique, the top and bottom parts of the outside surfaces exhibit some differences: the bottom parts have some obvious knife markings that have not been covered with glaze. The glaze is brownish-black in color, with a light brown color or the gray-white of the glaze showing through in the thinner areas around the mouth. The edges of the glaze display some pooling. The "white-covered ring" style tea bowls all have white glaze applied around the rim; on some of the cups, one can see the white glaze layer showing through along the edges that haven't been covered by the brown-black glaze. The white and brown highlight each other nicely.

From this, we can infer that their manufacturing technique involved first applying a layer of white glaze to the rim of the tea cup, then applying the brown glaze afterwards. Because the brown (or black) glaze melts and runs downwards at high temperatures during firing, it reveals the white glaze underneath, creating the "white-covered ring" style. The tea bowls from the Shangyao kiln have a mouth diameter of 10.6–10.8 cm, a foot diameter of 3.8–4.8 cm and a height of 5.1–5.2 cm.

There are noticeable differences between the brown-glazed tea bowls of Shangyao kiln and their equivalent from the *tianmu* kilns; plus, this kiln also made "white-covered ring" bowls. There isn't too much imitation of the *tianmu* kiln style among the pieces produced here, and the shapes are not very uniform, indicating that black-glazed ceramics were probably already in decline by the time these ones were made. At the same time, the kiln was producing a lot of *qingbai*-ware,

such as *mang kou* style exposed-rim bowls with inset flower patterns, which come from a slightly later era. So, the brown-glazed tea bowls from the Shangyao kiln site are estimated to be from the late Southern Song to the Yuan Dynasty.

#### Zhongcun Kiln, Sanming City

This kiln site is situated on Mount Shezhong, at Zhongcun Xiangyao Village, Sanming City. The brownglazed ceramic specimens gathered at the investigation of the site in 1994 were all tea bowls. They are made from a grayish-white base, with a relatively fine texture and uniform shapes. The glaze was generally only applied about halfway down the outside surface, exposing the base on the lower half and the foot. The glaze is thin and brown or brownish-black in color. The exposed parts display noticeable circular marks from the crafting tools. The tea bowls are glazed in the

mang kou style, with glaze scraped off at the rim. The foot rings have flat bottoms or a slightly indented underside, and the center of the bowls is indented. A small number of the bowls have an inward-slanted surface at the bottom of the body. The mouth shapes include indented-mouth, straight-mouth and inverted-mouth.

Aside from brown-glazed ware, the most abundant product of the Zhongcun kiln site was *qingbai*-ware. The *qingbai* bowls, plates and other vessels have a thick, solid body, with a deep hollow beneath the foot; they are loosely crafted and are typical of Yuan Dynasty style. During the excavation in September of 1993, the surveyors uncovered the foundations of a dragon kiln as well as a ceramic workshop area. Initial estimates traced these relics to the Yuan Dynasty. So, the Zhongcun kiln site most likely dates from the Southern Song to the Yuan Dynasty.







\*\* Black-glazed tianmu from the Song Dynasty (960–1279), excavated from the Oulin Ting kiln.





# TIANMU ARTISANS 英寶藝術家

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Along with our exploration of tianmu history, the challenging production of the magnificent pieces of teaware and how we use them in tea, we wanted to make it personal. A large part of what we feel makes coverage holistic is when you move from the general to the specific and include the people and examples of their work, whether discussing tea or teaware. For us, this brings the discussion down to earth and actualizes it, which is how we ourselves like to learn. In this issue, we introduce two tianmu potters, a young and passionate artist full of verve and devotion, Wang Xi Rui (王希瑞), who is covered starting on p. 53, and a more experienced master, Ling Jinzhong (林錦鐘) covered here. Oftentimes, it is all too easy to get lost in abstract philosophy and generalities—covering a tea-growing region and the cultures there without introducing the individuals, discussing environmental philosophy without introducing the farmers whose lives are touched or talking about ceramics without exploring the lives of the artists. But this is Global Tea Hut, the exception to the rule!

**本A: Wu De (**無的)

in Jinzhong (林錦鐘) is one of the most unique and brilliant artists we have ever met. The first time we went to interview him, we felt like students at one of the universities he lectures at. Within a week of his classes being announced, they are full with waiting lists. We understand why. His research into glazes and wood-firing is unprecedented and his experience priceless. After several hours of conversation, we left understanding tianmu bowls, wood-firing and ceramic art much better than when we'd arrived, and all of us a bit awed by spending time with such genius. His profound knowledge, incredible skill, integrity and devotion to art for its own sake and his gorgeous artworks are each, on their own, enough to inspire admiration, while the combination of all of these aspects of Master Lin together is overwhelming. His art tells his life story, but it is a whole series of long books that this article can only sculpt a crude model of. Fortunately, there are other articles about Master Lin and a documentary set to have a global release in the coming year.

When we arrived to interview Master Lin, he pulled out some gorgeous tianmu bowls, tossed some wild red tea into them and showered the tea with steaming water. He said that he has been brewing tea leaves in a bowl for thirty years, and that it's the only way he drinks tea. We had a laugh together, sharing our experience with leaves in a

bowl brewing and why we also love it so much.

Master Lin was born in the Year of the Rooster, 1957, in Zhang Hua, Taiwan. As a child, he was very interested in whittling, and after the thenmandatory two to three years' service in the Taiwanese army, he studied wood-carving. He pointed to his beautiful studio and simple house in a quiet grove in Puli, Taiwan and proudly told us that he used wood-carving tools to build it. He also showed us a statue of a Buddhist sage he carved back in the 1980s. Not surprisingly, it was gorgeous-well-carved, innovative and in harmony with the lines and curves of the wood. Around that time, he also became interested in ceramics and began making pottery: teaware, dishes, plates, vases and sculptures.

Master Lin told us that when he started this journey, it was difficult to learn about ceramics, "even practical things like kiln temperatures or glaze compositions." He said that most potters would keep their techniques secret, unwilling to take on students who might copy their style. He also mentioned to us something we find common in tea production as well, which is that great masters who produce exquisite artisanal oolong teas do not understand even the basic science of what is happening to the leaves. They are farmers, after all, and not educated. They know tea through the senses, not the intellect. Master Lin said that

potters of the time were often in a similar position, knowing how to create their art but unable to teach it or explain the science behind the processes. There was only one university teaching ceramics at all, which was coincidentally in Miaoli where our Center is located. "I had a friend who graduated from that program, so I was enthusiastic to learn from him. Even though he passed through the program, he wasn't able to explain even basic things to me, like how to make and fire a clear glaze, which is arguably the simplest of glazes. I ended up borrowing all his textbooks and studying them myself."

The next two decades were ones of learning, starving for art and slowly abandoning wood-carving as his passion for ceramics grew. In particular, Master Lin was drawn to the research, exploration and understanding of glazes on all levels, theoretical and practical. We find that this is a common thread in the stories of potters who ended up exploring *tianmu*. He began dabbling in *tianmu* in the 1990s as part of his glaze research and quickly fell in love with the complexity and challenge of *tianmu*-ware.

The 1999 earthquake changed his life, like so many Taiwanese. The earthquake measured 7.7, and its epicenter was Nantou County, where Master Lin lives. The disaster completely destroyed his home, which he said was a very harrowing experience and one that completely changed his life.



At that time, his home was elsewhere and his studio was in the place it is to-day. After the earthquake, he built his current home on the studio land. He said that the experience shook him to his core. "It made me understand how short and precious life is and forced me to ask the big questions, like what was important to me in this life. What do I really want to achieve?" He said that his whole worldview was shifted, and that the inspiration and motivation of that time have not left him.

It was at that point that he realized that making money was not why he got into art and not important in life. He saw that many artists stop researching, growing and improving commensurate to their success. Once they begin making some money, all their time and energy will have to be spent making financially fruitful artwork, leaving little time for research, exploration, classes and other kinds of self-improvement. He wanted to take the opposite approach, focusing exclusively on research and development of his understanding of the craft. "Other people work for money. I work for time!" He exclaimed, wagging his finger at us, "For time is far more precious." He meant the time to explore and grow, evolving the craft forward. He said that this not only improves himself and his understanding, but, if passed on, elevates the craft itself, especially in Taiwan. Master Lin knew that even focusing on glazes was not enough, for the field was too vast and one lifetime not enough. It was in 1999 that he decided to devote himself completely to tianmu pottery, and to the exploration of the ever-elusive yao bian (曜變) bowls in particular.

After building his new house, Master Lin threw himself into his research. He took out a 100,000 USD mortgage on his land and used the money to build wood-fire kilns and begin doing research. After three years of working seven days a week, testing, firing, recording, studying and writing, Master Lin's money ran out. An old friend who had watched the process and understood the importance of Master Lin's work decided to help. His friend is an architect and saw that many of the guest houses that were popping up all over Nantou were asking for nice fireplaces in their building designs. He knew his friend would be able to do

this job, as his expertise in designing and constructing kilns was essentially the same. He began contracting Master Lin to build fireplaces on his project. Master Lin worked out just how much work he would need to do in a year to afford spending the rest of his time in research, essentially "working for time" as he puts it.

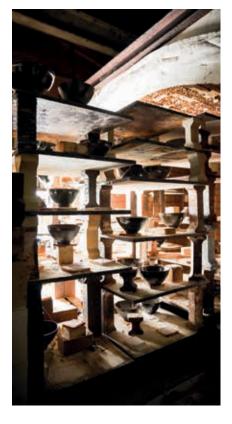
It is important to note that throughout this entire period, Master Lin was creating gorgeous works of art that collectors and tea lovers were more than willing to buy, all of which he refused to sell. He knew that as soon as he began that process, all his time would be spent making pieces for friends, acquaintances and other collectors, holding exhibits, promoting and dealing with the financial aspect of selling his work, etc. "I'd rather make fireplaces and spend the rest of the time researching and improving my skill."

In 2005, the hard work and devotion Master Lin had put into his research began to pay off, as more people took notice of his brilliance, incredible work ethic and the potential importance of his research to change Taiwanese art and history. Through the same architect friend who got him contracts building fireplaces, Master Lin was introduced to three wealthy businessmen who loved his art. In that year, they decided that they would like to support his research, fully funding him so that he could devote all his time to his art. They believed in him and viewed the contribution as a charity that was meaningful to them, as they believed in supporting the arts and especially the advancement of Taiwanese art. To this day, these wealthy donors have offered Master Lin an unlimited budget to conduct his research! He is in one of the most unique positions of any artist throughout history: he has unlimited funds without selling a single piece of his work!

Master Lin has not betrayed the trust of his donors, whom he says have never taken a single piece of his art or put any conditions on the money he receives. They let him do what he will. He still lives simply and has not invested in personal property, travel or any other leisure. We suspect that his work ethic helped inspire the philanthropy. He works seven days a week on his research into glazes, wood-firing and *tianmu*-ware in particular.

Master Lin has built fourteen wood-fired kilns, all with different designs, though he abandoned seven of them and currently has seven active kilns, with an eighth on the way. He also has an electric and a gas kiln, but he says he hasn't used them in more than a decade. He throws bowls for one month straight and then spends the following six months firing. He fires three kilns twice a week, more than twenty a month, hundreds a year and in the thousands so far in his life! Each of these kilns is filled with test pieces, cones, glazes and unending research. There were thousands of small test pieces on shelves in his studio and when we opened his largest kiln, which is enormous, to look inside, there were still bowls on all the various shelves. He said, "I leave them there so that when I use the kiln next I will have a rough





idea of what effect the various locations in the kiln create." Master Lin is as meticulous as he is genius. He has a command of chemistry strong enough to teach it and records every glaze and firing. He designs his kilns in unique ways to measure and explore heat and fire, keeping detailed drawings of every kiln—how it is loaded and fired and the results.

Early on, Master Lin made a decision to share his research with other artists in Taiwan. He has written three very thick and detailed textbooks: *Ceramic Glazes* (釉藥系統), which explores all the traditional and modern Chinese glazing techniques, including recipes and detailed instructions for use and firing; *Kilns for Ceramics* (陶藝窯爐學), which explores all the different kinds of kilns in the world in great detail, including how to use them; and

his greatest passion Yao Bian Tianmu (曜變天目), which covers his lifelong exploration of yao bian bowls (we'll discuss this later on). He has a fourth book that will be released this year, which is a Q & A based on his work with students. He applies his almost four decades of experience firing more than 1,000 kilns to answer practical questions potters encounter. He is also working on a fifth book all about how to toss wood into a wood-fired kiln. "There is enough in that for a book?" we asked. "Yes, a very thick one!" he exclaimed. "That is the most important part of wood firing. If you really want to test the level and understanding of a ceramicist who uses a woodfire kiln, ask them why and when they add wood. If they say 'to increase the temperature,' they still have a lot of progress to make... Understanding which kind of wood, its composition, its shape and which side of the kiln you throw it in and from what angle at what period in the firing—all of these create very different and unique effects on one's pieces in the kiln!"

For the last three years, Master Lin has been teaching a class at a ceramics college in Taipei. As we mentioned, his classes fill up as soon as they are announced. The university has commented that no one in Taiwan could teach the class the he teaches, let alone do it as well! Though the donors who support Master Lin have put no conditions on him, he does feel a responsibility to pass his research and experience on to the next generation and improve the field of ceramics in Taiwan and quite possibly the whole world of ceramic art. Master Lin's genius is changing the lives of ceramicists.









Master Lin Jinzhong has one of the strongest work ethics we have ever encountered. His brilliance and devotion to his craft have earned him a unique situation among artists: he can work without promoting or selling his work. He throws for a month and then fires for six months. Making tianmu pieces is very hard work, and very few artists are doing so in wood-fired kilns. Master Lin showed us bags upon bags of broken pieces where the glaze had run down onto the kiln shelf. He showed us other pieces that he had learned from. We even drank tea from those.





One of three yao bian pieces found from the Song Dynasty (960–1279).

#### Yao Bian Tianmu (曜變天目)

In order to understand the evolution of Master Lin Jinzhong's art, we have to explore yao bian tianmu. Called "yohen" in Japanese, yao bian literally means "magnificent change." In the Song Dynasty (960-1279), tianmu craft was in its heyday, with kilns all over China firing a tremendous amount of tianmu-ware—mostly bowls for whisked tea. Tea lovers of the time preferred tianmu, as the dark color accents the whisked green tea and has an effect on the smoothness, sweetness and aesthetic enjoyment of tea drinking. In those days, potters didn't fire their own work. It was fired by kiln masters with generations of experience. They used long, winding kilns that went up a hill, which are called "dragon kilns" because of their shape.

These masters were very skilled at loading these kilns, knowing the effects of different areas of the kiln, which types of pieces to put where, how to load the wood and, of course, how to toss pieces of wood in. But the magic of ceramics lies, in part, in the uncertainty of every firing, creating unique and sometimes glorious accidents.

Each long kiln could be loaded with up to 100,000 bowls, and there were many such kilns in Fujian Province alone! There are some records of the kinds of bowls in the average firing and even how much they would cost at the time. Almost all the bowls would be simple, black and not beautiful. These "wu zhan (鳥 臺)" bowls sold for 1 kuai (Chinese currency) and were used as tea bowls or even rice

bowls by simple people throughout the empire. Many of the bowls at the edges of the kiln would end up underfiring and go through a second, smaller firing to finish them. This would cause the famous "rabbit's fur (tu hao, 兔毫)" patterns. These bowls were 1,000 kuai. The more gorgeous oil spot you di, 油滴) bowls with gorgeous, cosmic patterns were reserved for wealthy collectors and sold for 3,000 kuai. Very rarely, when the magic was just right, the kiln master would open the kiln to find the greatest treasure in tianmu: yao bian, which sold for 5,000 kuai. Yao bian bowls remind you of the stars at night, reflecting Heaven back to the tea lover just beneath their tea, mirroring the cosmos in the micro, the Dao in our daily lives.



\* Master Lin's attempt to make yao bian are getting closer.

Until now, only three *yao bian* pieces from the Song Dynasty have been discovered. The potters and kiln masters of the time didn't understand science in the way we do, and just saw the creation of *yao bian* bowls as a divine gift—good joss! They had no way of knowing what caused these rare pieces. And to this day, no one has cracked the *yao bian* code and figured out what creates these gorgeous pieces, though every *tianmu* maker is pursuing this goal. Master Lin has devoted his life to the pursuit of this, which he will share if he discovers it.

Around five years ago, a famous Japanese *tianmu* master created a bowl that he claims is *yao bian* and several books and magazines have heralded it as such, but Master Lin is a

purist. He argues that the bowl this man made is not a true yao bian for three important reasons: first, the artist used an electric kiln, while Song Dynasty kilns were obviously wood-fired, creating very different results; second, the artist used a kind of crystal glaze that was not used by tianmu potters, creating a similar effect, but not the same (the spots are more uniform and are also convex-Master Lin showed us some of his own crystal glaze experiments and you can definitely feel the crystals when you rub the piece, whereas tianmu is smooth); and finally, Master Lin argues that the entire theory behind the Japanese artist's work is completely different than the original yao bian pieces, which from start to finish were approached with a different clay, glaze, firing, composition and aesthetic. "What this artist achieved is a fine tribute to *yao bian*, rather than a true *yao bian* piece," he says. Looking at the pictures of the original and the modern piece, you can indeed tell the difference.

Throughout Master Lin's quest to unlock *yao bian tianmu*, which we couldn't help comparing to the medieval grail quests, he has explored many roads and created several entirely new glazes and firing techniques, each of which could have made him a famous artist in on their own. First, he perfected the other styles of *tianmu*-ware to such a degree that collectors were begging him to purchase his bowls, which are absolute stunning. He would have no problem selling his bowls.

# Steamare Artisans

Eventually, he realized that the glorious halo and glow of the spots in yao bian bowls had to do with metals, so he literally found a local blacksmith who was retiring and purchased his entire foundry—all his tools, materials, furnaces, and so on-and taught himself blacksmithing. He showed us all the tools he created, including knives, axes, etc., many of which were as beautiful as they were useful. He spent years exploring metallurgy and the changes in the metal when exposed to different kinds of fire and heat. Eventually, he was able to recreate yao bian spots in metal, proving his theory that the spots were caused by specific types of metal and heat. When he applied this discovery to tianmu firing, it created the works he calls "Northern Lights (Ji Guang, 極光), which offer glorious swirling patterns of rainbow glory. This type of pottery reminds you of the wind, fire, patterns in wood and other natural beauty. His Northern Lights pieces are incredibly gorgeous and the

technique could have easily made him famous throughout Asia had he started selling, exhibiting and promoting it, but then he wouldn't be Master Lin. He abandoned Northern Lights work in 2015, viewing it as a stepping stone in his research.

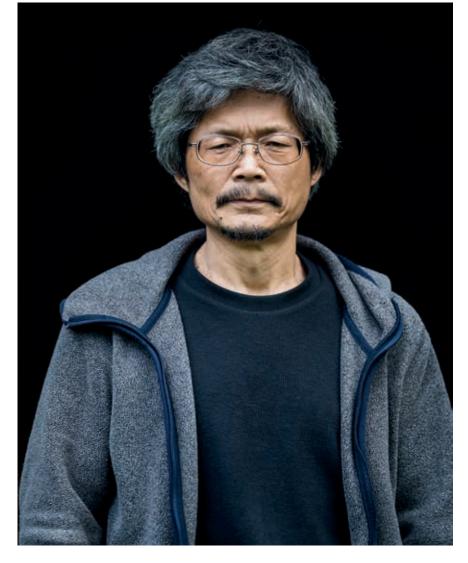
Since then he has been creating works he calls "Yao Su (窯塑)," or "Kiln Sculpture." These are sculptures and vases he says capture the movement of clay on the wheel. Master Lin has practiced martial arts his whole life-first gongfu and now tai chi. He says all his work is meant to capture natural fluidity and beauty. The true purpose of these pieces, however, is of course to research the nature of wood-firing. The basic premise of Yao *Su* is that he starts with a vase and then draws a design for how he would like to warp and "break" it. He then starts firing the piece over and over again, testing to see how well he can control the firing and get the piece into the shape he wants. This allows him to analyze

how the pieces break and why, which he says improves his understanding of the glazes and their reactions, the different shapes of kilns, the nature of fire and much more. This, he feels, will be another piece in the puzzle needed to understand how *yao bian* bowls occurred. Wood-fired kilns are very difficult to control, but Master Lin thinks that by designing and redesigning the kiln, experimenting with air and heat flow, he can get a better understanding of what is happening inside and create conditions that will be much more conducive to producing *yao bian* spots.

#### A Shining Brilliance

Master Lin's amazing mind combined with a creativity that burns as bright as his largest wood-fire kiln are truly inspiring. His situation is unique in all the history of art and is creating results equal to the uniqueness of his lifestyle. He still has not sold a single piece, despite continuous offers. His devotion to art for its own sake is inspiring, indeed. In the end, we of course talked about using his bowls for tea and he shared stories of simpler times in Taiwan, when he was young, and tea was shared freely between family, friends and neighbors. We feel honored to have the time to learn from such a great man and to include his life and work in these pages.

There is great power to know that there are still such unconditional patrons of the arts, and that like in the days of da Vinci, genius is still being supported in a way that fosters unbridled creativity. When you combine that with Master Lin's amazing attention to detail and profound intellect, you can't help but feel that he will indeed advance ceramic arts in Taiwan. His pieces do radiate the aesthetic of what the Chinese call "Li (理)," which is the natural movement of the wind, a flame, the lines in wood or stone, etc. We look at them and feel the movement of the earth and cosmos. If anyone is to make a yao bian piece in the way of the ancient, it is indeed this man. We hope that he reaches his goals and that the world knows how to make yao bian pieces. Let us all raise a bowl of Cloud Temple this month to Master Lin and his lofty aims! May we all use yao bian bowls one day!

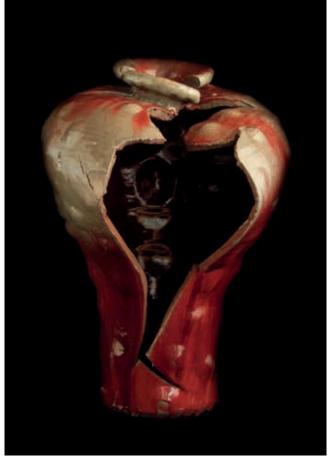


#### Northern Lights (Ji Guang, 極光)



KILN SCULPTURE (YAO Su, 窯塑)





# YAO BIAN TIANMU



Since Master Lin is such a prolific author, we thought we would share with you a section of his "Yao Bian Tianmu (曜變天目)" book. His own words are wiser and more eloquent than ours, offering a different perspective from within the journey, as opposed to a report based on an interview. This also allows us all a glimpse into the genius of his mind, which left us in awe. We chose a section from this book, even though he's written three, as yao bian tianmu is his passion.



本A: Lin Jinzhong (林錦鐘)

o-called "magnificent change" or "transmuted glaze" tianmu-ware tea bowls originated in the Southern Song Dynasty and were produced in the kilns near Jianyang City in Fujian Province, commonly known as the tianmu kilns or Jianyang kilns. They are black-glazed tea bowls whose glaze gives off an iridescent halo, like twinkling fireflies. They undergo a process known as "kiln transmutation," where the glaze takes on different colors during firing. Within this category is what is known as "brilliant transmutation" glaze. The Japanese name, which is often borrowed in English, is "yohen tenmoku"—some of these pieces were acquired by Japanese collectors during the Momoyama and Muromachi periods. In Chinese, "changed glaze" is known as "yao bian tianmu (窯變天目)," and "brilliant transmutation glaze" as "yao bian tianmu (曜變天目)." (The "yao" is different) Two of the three examples that survive today were originally part of the collection of shogun Tokugawa Ieyasu, while the third piece belonged to the collection of Kogetsu Sogan, a prominent monk at Kyoto's Daitoku-ji temple. All three pieces are considered national treasures and are housed in museums in Japan.

#### Black Glaze & "Kiln Sweat"

After burning wood for a long time, the walls of the ancient pottery kilns would develop a blackish-brown

layer of "kiln sweat," formed by the ash and the kiln wall fusing together. From this, the earliest examples of black-colored glaze gradually developed. Black glaze has around 2000 years of history and is known today as slip glaze or *tianmu* glaze.

### The Origins of Tianmu Glaze

Tianmu is a name given to blackglazed pottery by the Japanese. Tianmu tea bowls are the most representative teaware of this genre: the practice of tea-drinking flourished in the Tang and Song Dynasties, and the kiln sites surrounding Mount Tianmu (天目山) in Fujian Province dedicated themselves to producing dark-glazed tea bowls. Later, these came to be known as "jian," "tianmu" tea bowls or "jian zhan (建盞)." Legend has it that a Buddhist monk from Japan once spent some time in religious practice at Mount Tianmu, and when he returned home, he took his tea bowl back as a memento, naming it "tenmoku" (the Japanese pronunciation of tianmu) after the mountain it came from. There are three different types of pattern that can be seen on tianmu ceramic glazes: "oil spot" (you di, 油滴), "rabbit's fur" (tu hao, 兔毫) and "magnificent change" or "brilliant transmutation" (yao bian, 曜變). The beautiful patterns and glowing luster of the "magnificent change" glaze make it the most eve-catching of them all.

Black glazes were developed from the original Han Dynasty (206 BCE-220 CE) glazing techniques, and were a product of dark-colored clay and wood ash. It's speculated that the principle of how to do this was inspired by the dark brown "kiln sweat" that formed on the walls of the wood-burning kilns, produced by years of ash and flame. The oil spot and rabbit's fur glazes in the Song Dynasty (960-1279) were also developed following ancient slip-glaze methods. However, the silicate component in black glaze, traditionally provided by wood ash, has now largely been replaced by quartz or feldspar.

The Song Dynasty was a golden age for ceramic glazing: there was celadon (also called greenware) being produced at imperial kilns in the north and south, more celadon being made at "folk kilns" belonging to ordinary people, northern and southern "black" tianmu glaze, red Jun glaze, and the "green-white" or "shadow-green" glaze known as qingbai (青白) or yingqing (影青). The tea drinking culture of this period made black-glazed ceramics especially popular, and demand was high; all the major ceramic-producing areas across the country began to add black-glazed pottery to their products.

Tianmu pieces from Henan, made with white clay as a base, are the most representative of the northern style of bowls. They are quite special. Since the northern kilns were fueled with coal, which burns relatively quickly, it's easy for oxygen to enter the kiln during firing, forming a neutral-oxidizing atmosphere.



After firing in these conditions, the ceramics come out a yellowish-white color, and the glaze sometimes displays a brownish-black speckled effect known as "oil spot."

The kilns at Jianyang in the southern province of Fujian specialized in producing black-glazed *tianmu* tea bowls. In this region, the clay was stony with a high iron content. The kilns here were fueled with wood, which has a comparatively long burn time. Because the process of stoking the kiln with wood was relatively complicated, this resulted in intermittent periods of oxygen-deficient combustion, creating a reducing atmosphere. Through the process of reduction, the iron oxide in the clay turned brownish-black, producing a deep black color in the glaze.

#### Tianmu Tea Bowls & Tea Contests

The rise and fall of *tianmu*-ware tea bowls was influenced by changing tea-drinking practices; this style of ceramics reached its peak during the Southern Song (1127–1279) and

Yuan (1271-1368) dynasties. In the Song Dynasty, tea leaves were fashioned into semi-fermented "tea paste" cakes. The cakes would be ground into a fine powder that was placed in the tea bowl. When the tea powder was steeped in once-boiled water, a layer of white tea foam would appear on the surface. Tea aficionados would hold "contests" where they compared the fineness and volume of the tea foam, and how long it lasted. The black glaze of tianmu tea bowls was perfect for offsetting the whiteness of the foam and observing the color of the tea, so they became very popular with those who enjoyed tea competitions.

According to historical records, yao bian tianmu-ware tea bowls were a one-in-a-million treasure, coming about quite by chance. Yao bian pieces began as wood-fired black-glazed tianmu-ware that happened to develop "oil spots" surrounded by an iridescent, rainbow-colored halo through the process of kiln transmutation. The reason for this transmutation is still unknown to this day, making these yao bian pieces an unsolved mystery in the 800-year history of Chinese ceramic glazes, from the Southern Song until today. Thirty years ago, a friend of mine spoke these words: "To surpass tradition, we must first understand it." I believe that unraveling the mystery of kiln transmutation is an important task for the field of ceramic arts. Because we don't understand the traditional process, we have not been able to surpass those traditional methods, and the ceramic arts in the modern day can only orient themselves towards new ideas and methods. This study, then, hopes to solve this mystery, with the aim of uniting the new and the ancient-continuing the art of both traditional and modern ceramics, and contributing to a more complete picture of the history of ceramic glazes.

#### **Wood-Firing Tianmu**

Ancient wood-fired black-glazed tea bowls displaying oil spot patterns and containing iron and manganese are extremely rare. Silver-colored streaks are considered an even rarer treasure. Varieties with silver-colored spots surrounded by rainbow-colored iridescent halos are termed "yao bian tianmu." This phenomenon is a type of kiln transmutation; exactly what factors produce this special result is a great mystery. This was a subject that I decided to pursue after the rebuild period following Taiwan's big earthquake in Nantou in September 1999. I set myself a challenge: if I didn't succeed in firing a yao bian tianmu bowl, I would let my beard grow for the rest of my life. Meanwhile, in Japan, other researchers were also busy trying to produce the exact same type of tea bowl. One person had fired 80,000 bowls without a single success; another had produced four truckloads of them, also with no success. I simply hoped that I could untangle this mystery one step at a time, realize my dream, and shave off my beard.

Ceramic art can take on many different forms, and although in a sense we can separate conceptual creation from research on traditional glazing techniques, the two are still intertwined. These days, innovation in the ceramic arts tends to be focused on the creation of new shapes, with little in the way of distinctive glazes. It appears that even fewer people are willing to experiment with wood-fired glazing. Pursuing brilliance in the texture of a glaze and channeling the artistic expression of the flames; these require a meeting of science and art, the ability to combine sense with sensibility. Wood-fired glazes are an endlessly fascinating topic, which I believe will become a mainstream field of research in the future.

Whether because of interest or a sense of calling, some people leave home in their youth to become monks or nuns; others spend their whole lives farming. Some people have nine great wins in their lifetime and one final loss, a much more wretched outcome than simply winning nine times; other people fail nine times before finally succeeding. Our individual personalities determine the way we live our lives, just as the character of the glaze determines the firing method. After thirty-odd years of experimenting with glazes, I sometimes get the sense that I have taken my place among the ranks of ancient potters throughout history; the research of ceramic glazes has become my vocation, my passion and my life's mission.





# Lield Notes

- Analyze the current situation in the field of ceramic arts, including trends and new directions; identify the relative importance of the study of glazes.
- Explore the claim that "To surpass tradition, we must first understand it."
- Clarify the focus of study, to improve the completeness of our historical knowledge of ceramic glazes.
- Explore the meaning of human life and a sense of purpose, and challenge myself to achieve my ultimate goals.
- Interpret the significance of the following:

A national treasure comes alive Life comes alive, work comes alive The environment comes alive, life comes alive The family comes alive... \*

\* (In Chinese, the words for "fire (火)" and "alive (活)" are both pronounced "huo." So, the phrase "to come alive" may also bring to mind the phrase "to catch alight.")

#### **Preparations:**

- 1. Plan the research
- 2. Understand the systematic principles of ceramic glazing
- 3. Understand the principles of kiln firing, learn how to independently assemble and alter the structure of a wood-fired kiln
- 4. Make sure that I like black glaze!
- 5. Be prepared to document my experience of failures over a long period of time
- 6. Maintain physical strength and perseverance
- 7. Gather a large reserve of firewood, and dry it over a long period
- 8. Obtain a loan to cover the costs of the research

#### **Research Process:**

Early research stage (2000–2004): *Tianmu* experiments: systematic collation of black glaze research

Mid-research stage (2005–2007): Investigate theories of wood-firing and the process of stoking the kiln

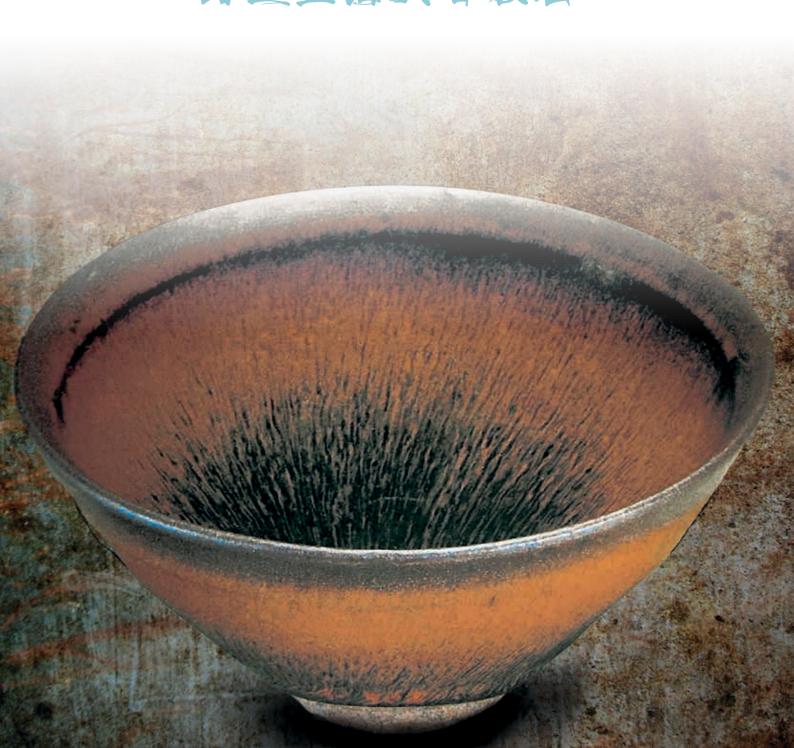
Late research stage (2008–2010): Investigate firing methods, integrating glazing system and kiln structure

Post-research stage (2011–2012): Collate research materials and publish meaningful results \*

\* Throughout these 11 years, I undertook about 400 individual kiln firings in large and small kilns, using 8 different kiln compositions. From 2011 to 2012, I collated a systematic record of all the experimental factors such as kiln structure, glaze and clay, fuel, and firing method.

# SHPWRECKED TANMU

Tianmu Secrets from the Ocean Blue 灣遊蓋海天自秘密



Of all archaeology's various branches, underwater archaeology developed relatively late. The discipline was born when scuba diving was invented by the French in 1943. Thanks to this new diving technology, an abundance of historical artifacts were soon discovered on the seabed of the Mediterranean, drawing the world's attention to this newly-fledged field of study. With more Asian research beginning, we are discovering and learning more about the history of China, including tianmu.



#### 本A: Huang Hanzhang (黄漢彰)

n recent years, with the continued improvement of technology and methods, many Asian countries have launched their own archaeological research projects, uncovering the remains of numerous shipwrecks. Among these were wrecks from the Song and Yuan Dynasties, which were found to contain a number of black-glazed tea bowls produced in Fujian Province, including *Jian* kiln pieces (*jian yao*, 建窯), also known as "tianmu," as well as *Jian*-style pieces from other kilns in Fujian.

Asia's shipwrecks and underwater relics are mainly located in the territories of Korea and Japan, around the coasts of mainland China, near the Paracel Islands in the South China Sea, and in the waters of Southeast Asia. Some notable examples of wrecks containing black-glazed tea bowls are the Kurakizaki site in Japan; the Sinan and Taean Mado shipwrecks in South Korea; the Song Dynasty (960-1279) "Bai Jiao 1" in Dinghai, Fujian; the Song Dynasty "Banyang Jiao 1" shipwreck in Longhai, Zhangzhou, Fujian; the Song Dynasty "Nanhai 1" wreck in Taishan, Guangdong Province; the Paracel Islands' Song Dynasty "Huaguang Jiao 1" wreck; the Yuan Dynasty wreck in Houzhu Harbor, Quanzhou Bay, Fujian; the late Ming Dynasty (1368-1644) Donggu Bay wreck in Fujian's Dongshan County; the underwater relics at Pingzhang, Fujian; those in Sumatra, Indonesia; those in Makung Harbor, Penghu (Pescadores Islands), Taiwan; and an

additional wreck in Penghu. From this list of shipwreck sites, we can see the influence of Song Dynasty tea culture on these regions.

### The Rise & Fall of the Jian Kilns

The Jian kilns were situated in Shuiji Village in Jianyang County, Fujian. During the Han Dynasty (206 BCE-220 CE), this area was called Jian'an County, while during the Tang it became a prefecture called Jianzhou, and today it falls within the jurisdiction of Fujian's Jian'ou County (which neighbors Jianyang). Within this county are Jianxi and Mount Fenghuang, which were famed during the Northern Song Dynasty (960-1126) for their Beiyuan Tribute Tea. In 1935, American James Marshall Plumer conducted an archaeological investigation of the remnants of the Jian kilns, recovering a large number of black-glazed bowls. In 1960, the Xiamen University Museum of Anthropology launched a study of the Luhua Ping kiln site, with their archaeology department subsequently carrying out an excavation of the site.

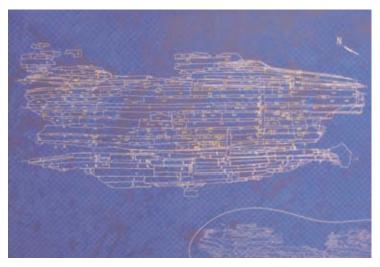
Some of the most well-known kiln sites include Luhua Ping, the Dalu Houmen kiln, Yingzhang Gan, Mount Anwei, Yuantou Keng and Niupi Lun. According to archaeological findings, the *Jian* kilns used to produce green-yellow glazed porcelain during the late Tang and Five Dynasties, and

first began to produce black-glazed pottery in the early Northern Song. The Jian kilns had their heyday from the middle of the Northern Song until the mid to late Southern Song Dynasty. As a result of changes in tea-drinking customs at the end of the Southern Song and the beginning of the Yuan Dynasty, production began to decline, and the kiln sites switched to producing green-white qingbai porcelain. Most of the Jian kilns were built into the natural slope of a mountainside. Because of their long, dragon-like shape, these kilns were nicknamed "dragon kilns (龍窯)." The excavation of the Dalu Houmen kiln site revealed that the entire kiln reached a length of 135.6 meters.

The craftspeople at the Jian kilns used funnel-shaped saggars (containers used to protect ceramics during firing) and placed the pieces facing upwards on a clay firing cushion. The tea bowls were classified into three sizes: large, medium and small. Medium-sized bowls ranged from 11 to 14 centimeters in diameter at the lip. In terms of shape, they were wide at the lip and narrow at the foot, with four main sub-types: shu kou (東口) or "indented-mouth," lian kou (斂口) or "inverted-mouth," pie kou (撇口) or "slanted-mouth" and tang kou (敞口) or "open-mouth." The shu kou style of tea bowl had a small indented ring just below the rim, forming a protruding ridge on the inside that made it particularly suited for observing the tea in tea competitions.

# Stanmy-Mare







Above is a sunken ship from Quanzhou bay. It dates to the Yuan Dynasty (1271–1368); it contained tianmu-ware for trade. Above is a map of the ships found around the islands of the Taiwan Straight. Each yellow dot is a ship that contained a cargo of tianmu-ware. The largest ship found in this area was called "Hua Guang Jiao Yi Hao (華光礁一號)," which roughly translates to: "Light of China, Boat One." To the left is a dragon kiln, dating back to the Song Dynasty (960–1279) in Houmen Mountain (後門山), Fujian. This is one kiln around Jianyang, which is the most famous of all tianmu areas. This kiln is protected by the government and is the longest dragon kiln in the world. It has been rebuilt several times, including recently. Such kilns could fire tens of thousands of tianmu bowls at once, with wood, grass and other plants packed inside to fire it. Kiln masters guarded the techniques, passing them on generationally. To the right is an excavated tianmu bowl from the Song Dynasty.

Jian-ware is mainly made using black glaze, with a small number of white-glaze pieces. Due to factors such as the kiln temperature and the influence of the environment inside the kilns, black glaze has many different manifestations: the basic types include single-fired black glaze, "rabbit's fur (tu hao, 兔毫)" glaze, "partridge feather speckle (or "patridge feather speckle (or "patridge feather spot," zhe gu ban, 鷓鴣斑)" glaze, "magnificent change (yao bian, 曜變)" glaze, varicolored glaze and glaze with colored decorations painted on by hand.

Tianmu-ware is thick and heavy with a high iron content; a cross-section reveals the inner pottery to be blackish-gray in color. The clay is black-colored Zijin clay (紫金上), which differentiates it from the tianmu-style ceramics (in other words, imitation Jian-ware) produced at other kilns throughout Fujian Province. As tea culture trended toward a simpler approach throughout the late Southern Song to the Yuan Dynasty, the Jian kilns began producing a type of hybrid

tea bowl, whose most notable characteristic was the absence of an obvious ring-shaped groove at the bottom of the inside surface of the bowl. Of the tea bowls that have been excavated with the "Gong Yu" (供御) and "Jin Zhan" (進盞) maker's insignia on the bottoms, a few displayed "rust spots," which are likely the result of decorating with spots of glaze for a second firing. These are different from the surviving oil spot and brilliant transmutation Jian-ware bowls housed in Japan, which do not bear any maker's mark. From this we can infer that the black-glazed bowls in the Japanese collections are likely not Gong Yu pieces.

#### Textual Research

Tea drinking flourished during the Song Dynasty, and the practice of holding "tea contests" enjoyed vigorous popularity throughout society, from the imperial household, high-rank-

ing officials and nobles, through to ordinary people, and was especially esteemed among scholar officials. The Song Emperor Huizong was particularly fond of the traditional artistic and cultural pastimes (gugin music, the game of Go, calligraphy, painting, poetry, wine and tea), so the trend for tea contests spread from the imperial court to the general population. In his Treatise on Tea (translated in our April 2016 issue), Emperor Song Huizong offers the following commentary on tianmu-ware ceramics: "The color of the bowls is an exquisite green-black, overlaid with fine jade-like streaks." In these words, we see an expression of the particular fondness for rabbit's fur tianmu tea bowls in the culture surrounding tea contests.

During the Northern Song Dynasty, Cai Xiang, a scholar and calligrapher who oversaw the production of tribute tea cakes, wrote his *Record of Tea* (translated in our April 2017 issue). In the section entitled "Whisking Tea," Cai Xiang recounts how this



tea-drinking method was popular throughout all echelons of society in the Jianzhou prefecture at that time, and how the custom of holding tea contests (dou cha, 門茶) developed as a refinement of the tea whisking method (dian cha, 點茶). This dian cha brewing method involved grinding tea cakes into a fine powder, putting it directly into the tea bowl and adding hot water before whisking the tea into a froth with a bamboo tea whisk. Tea contests involved comparing the elegance of the teaware, as well as the quality, flavor and color of the tea.

In the "Tea Bowls" section of the book, Cai Xiang notes the following: "The tea is light in color, which is best suited to a black bowl. The bowls made in Jian'an are purplish-black in color, with patterns that resemble a rabbit's fur. The body is quite thick and preserves heat for a long time, making them the most highly sought-after. No other bowls are quite as good for the purpose; experts in tea contests do not use pale green ceramics." The *Record of* 

*Tea* also contains the following advice: "If you wish to whisk tea, you must first warm the bowl. If it is cold, the tea will not float. The body of rabbit's fur bowls is thick, so they retain heat for a long time and are very suitable for use. The bowls known as "rabbit's fur" bowls come from Jian'an." The Qingyi Records (清異錄) state that, "The bowls made in Fujian with partridge speckle patterns are highly prized by masters of tea contests." However, there is a possibility these "partridge speckle" bowls actually came from the Jizhou kilns in Jiangxi. Another work, Tea Competitions, provides an important source of material on tea history in Fujian during the Northern Song, a period when Beiyuan Tribute Tea enjoyed great popularity. The book contains the following commentary on tianmu tea bowls: "The purple rabbit's fur bowl is fresh and new; clear water boils with crab-eye bubbles. The snow freezes into flowers; the clouds have not a wisp of mist between them." From this, we can see how the poetry of *Jian*-ware bowls touched the hearts of those who used them for tea competitions.

Moving on to the Qing Dynasty, during the reign of the Qianlong Emperor, we find some pertinent records in On Pottery, written by Zhu Yan, with the fifth volume containing the claim that the term "partridge speckle refers to rabbit's fur bowls." In the late Qing, Ji Yuansou wrote The Elegance of Pottery. In the latter part of the book, the 32<sup>nd</sup> section, on Jian-ware tea bowls, contains the following passage: "The phrase 'partridge speckle' refers to rabbit's fur bowls. The partridge speckle markings are wide, while the rabbit's fur markings are needle-thin; in this way they are slightly different. In recent times, people in Fujian have excavated quite a number of ancient tianmu bowls. They are thick and purple-black in color. The tea bowls are relatively large; the Valley poet uses them for tea competitions. The wine bowls are comparatively small; the Dongpo poet uses them for drinking wine.



This can be confirmed in Cai Xiang's *Record of Tea*. There is no doubt that they are Song Dynasty pieces, produced in the *Jian* kilns at Jian'an. On the bottoms of the bowls, the two characters Gong Yu (供御) are inscribed in regular Kaishu script."

This description provides some insight into the characteristics of *tianmu* ceramics, as well as indicating that a large amount of *Jian*-ware had already been excavated in Fujian by the late Qing, prior to James Marshall Plumer's excavation work at the *Jian* kilns. There remains some controversy, however, about equating partridge speckle and rabbit's fur glazes in this way.

# Distribution & Outward Influence of Tianmu

The distinctive tea drinking culture of the Song Dynasty brought about a craze for black-glazed tea bowls, from the advent of the dian cha "tea whisking" method to the tea contest culture that followed. The tea favored at that time was powdered tea or "mo cha (沫茶)," flavored tea that could be whisked into a foam. From today's perspective, one could say that consuming this type of tea really involves eating the tea rather than drinking it. This meant that using black-glazed ceramics was a necessary part of tea competition culture. The black-glazed tea bowls produced in the Jian kilns became beloved among tea drinkers across all strata of society and led the way for tianmu-style ceramics to be produced everywhere in Fujian. According to archaeological evidence, there were 20 or more areas with kilns producing black-glazed bowls across Fujian Province, spreading across northern Fujian, the Fuzhou region and southern Fujian (Minnan). The northern region of Fujian is situated to the south of the Wuyi mountain range and is home to the three major tributaries that form the upper reaches of the Minjiang River (namely the Jian River, the Futun River and the Sha River). As tea culture continued to flourish, kilns sprang up all over these three main regions, producing black-glazed bowls in the style of the original Jian kilns in Shuiji Village, Jianyang County. Tea was extremely popular at the time.

These black-glazed Jian kiln tea bowls were perfectly suited to the requirements of tea competitions. The classic types of glaze included rabbit's fur, partridge speckle, black glaze with brown colored decoration and "black gold" glaze. The Japanese also deeply admired Jian-ware. In 1335, during the Kamakura period, a Japanese monk who was practicing near Mount Tianmu in Zhejiang Province took a black-glazed Jian-ware bowl back to Japan with him. The style of glaze was subsequently named "tenmoku," which is the Japanese pronunciation of the characters "天 目 ('tianmu' in Chinese, after the mountain)." A number of well-known Jian-ware heirloom pieces remain today in collections throughout Japan. There are differing opinions on the precise meaning of the name tianmu or tenmoku, however. In the field of ancient ceramics, it's believed to refer to Chinese black-glazed porcelain in general, while some believe that it refers specifically to black-glazed tea bowls from the *Jian* kilns of Fujian

Because of differences in culture and aesthetic sensibilities, the Japanese had different names for the colors of Jian-ware's black glazes. For example, in the late 15th and early 16th century, the advisor to the Ashikaga (Muromachi) Shogunate responsible for cultural activities compiled a volume entitled An Account of the Views of the Left and Right of the Palace. In the book, Jian-ware is classified into seven different types according to the color of the glaze: brilliant transmutation, oil spot, tianmu bowls, black bowls (wu zhan, 烏盞), tortoiseshell bowls, nengpi bowls and tenmoku bowls. Of these, tianmu bowls displaying the "brilliant transmutation" glaze were a rare, onein-a-million treasure. Tianmu glaze, on the other hand, referred to that of everyday ceramic-ware which was not considered valuable enough for imperial use. The most highly regarded in this category was partridge feather speckle glaze.

The more well-known heirloom pieces that exist in Japan today include "yohen (yao bian) tenmoku," "oil spot" or "yuteki tenmoku," "partridge speckle tenmoku" and "golden script tenmoku." Yao bian and oil spot glazes are considered special products of the original Jian kilns, while partridge speckle glaze



most often came from the Chayang kilns and "golden script" pieces from the Oulin Ting kilns. A few pieces decorated in the "golden script" style were also produced in the *Jian* kilns. Some examples of black-glazed tea bowls decorated with gold and silver script were found in the workshop area of the Oulin Ting kiln site. Furthermore, the golden script Jian-ware pieces that survive today in Japan bear the characters "壽山福海 (shou shan fu hai)" on the inside of the bowl, loosely meaning: "May you be as long-lived as the mountains and as happy as the sea is wide." Another specimen displaying this gold script style of decoration was also found at the mountainside Jian kiln site at Dalu Houmen.

# Tianmu Found in Shipwrecks

Modern archaeology has led to the discovery of *tianmu* tea bowls from Fujian in shipwrecks and underwater







The bowl on the top left was found on the Hua Guang Jiao Yi Hao ship discussed on the previous page, which is a very famous and large ship brought up off the coast of Fujian. In the close-up above is a Song Dynasty bowl brought up from the ocean, you can see what Master Lin Jinzhong called "kiln sweat" on p. 42, which is caused by wood-firing and ash. To the left is a shard that was also excavated from a sunken ship. It is an example of a "partridge (feather) spot (zhe gu ban, 鷓鴣斑)" bowl, which were more rare. The dots are painted on before firing using a white clay. These bowls would have commanded a much higher price than the normal black bowls or "oil spot" bowls. Even though it is a broken shard, this piece is a rare treasure that would be worth quite a bit to a collector of tianmu-ware nowadays. Partridge spot tianmu provides a stunning backdrop for green tea, bested only by the famed yao bian pieces.

relics throughout the coastal waters of mainland China, as well as in the territories of Japan, Korea, the Paracel Islands, the Penghu (Pescadores) Islands of Taiwan and the waters of South-East Asia. The highest concentration of these discoveries has been in mainland China, Japan and Korea, with relatively few in Southeast Asia. This is likely linked to the spread of tea culture.

The tea bowls that were dubbed "partridge speckle tenmoku" by the Japanese during the Yuan Dynasty have been confirmed to originate from the Chayang kilns in northern Fujian, while the Fujian black-glazed tea bowls excavated from the Sinan wreck in Korea were produced at the original kilns at Jianyang, as well as some from the Chayang and Dongzhang kiln sites. The bowls from the Chayang kilns numbered over 200. The Jian-ware found aboard this wreck dates to the late Southern Song so we can infer that all this Jian-ware found aboard the Sinan wreck was likely bound for Japan, in high demand due to the popularity of tea culture there at that time.

By analyzing the hulls and cargo of these Yuan Dynasty (1271-1368) shipwrecks carrying Song Dynasty tea bowls, we can infer that most of the ships had set out from the port of Ningbo in China and were bound for Japan. The large number of blackglazed tea bowls aboard the vessel that sunk unexpectedly in the Korean waters of Sinan reflects the great appreciation that Japanese tea drinkers held for these black-glazed bowls from Fujian. The historical remains near Taean Mado in South Korea were discovered to contain a large number of blackglazed bowls from the Dongzhang kilns, which were situated in the coastal region of eastern Fujian. Similar pieces have been discovered in Japan, Korea, along the southeast coast of mainland China and in the waters of Java in Indonesia.

The "Fuzhou bowls" referred to in Japanese records were produced at the Dongzhang kilns. In the past, a blackglazed bowl from the Dongzhang kilns was also discovered on the late Ming era wreck at Donggu Bay, Dongshan Island, Fujian. Significantly, this bowl differs in age from the ship itself by several hundred years, leading to speculation that it was perhaps a separate relic from the surrounding seabed. In 1987, the Song Dynasty "Nanhai 1" shipwreck was discovered near the Chuanshan Islands in Taishan County, Guangdong. The black-glazed bowls found among its cargo were widemouthed with slanted sides and flat bottoms, with a short, circular foot ring at the base. Some of these pieces were from the Cizao kilns, their provenance preserved in ink characters on the underside of the foot. Discovered aboard the "Bai Jiao 1" shipwreck in the waters of Lianjiang County, Fujian, were several hundred black-glazed bowls, believed to be Jian-style pieces from the kilns in Fuzhou.

At the site of another shipwreck, the Southern Song "Huaguang Jiao 1," discovered in the Paracel Islands, researchers found more than 10,000 ceramic pieces, as well as tin, copper and stone vessels, and more than 500 wooden fragments from the ship itself.



The ceramics included green, white, green-white (qingbai, 青白) and black glazed pieces. Some of the qingbai pieces were from the kilns of Jingdezhen, while the rest were mainly produced in Fujian. Among their number were a few black-glazed tea bowls; judging by the differences in glaze and shape, they are likely to have originated from the Oulin Ting kilns at the Wuyi Mountains and the Cizao kilns in Jinjiang. In terms of shape, these bowls were wide-mouthed, with a slight indentation around the lip; they have slanted sides and a short circular foot. The black glaze is applied to the inside and outside surfaces of the bowl, stopping above the foot to reveal the natural color of the pottery near the base.

Some of the pieces display thin streaks of brown on the glaze; of these, there are two black-glazed bowls with silver-gray patterns and script decorating the inside surface. One of them is decorated with four circular kaiguang patterns and bears the characters 壽山福海 (shou shan fu hai, "May you be as long-lived as the mountains and as happy as the sea is wide")" in narrow golden script. The other one has the character "褔 (fu, happiness or good fortune)" written on the inside surface in regular Kaishu calligraphic script. In the center of the bowl there are some faint golden spots visible on the glaze, which are probably the remnants of a pattern outlined in gold. This indicates that these bowls belong to the category termed "golden script tenmoku" in Japanese. The quantity

of Fujian black-glazed bowls found in shipwrecks in Southeast Asian waters remains relatively low, which is likely related to the spread of tea culture at the time the ships were active. In 2012, the Guangdong Maritime Silk Road Museum discovered two black-glazed tea bowls in the waters of Sumatra, Indonesia. From the glaze, material composition and shape, one of them was judged to be a piece from the original Jian kilns, while the other was a Jian-style piece produced in the Fuzhou area. From the scarcity of these blackglazed bowls, it's thought that they were probably personal possessions of one of the crew members.

#### Conclusion

There have already been a number of academic articles published on the subject of Song Dynasty Jian kiln and Jian-kiln-style black-glazed tea bowls, including reports on archaeological surveys of the kiln sites. The various shapes, glazes and styles discovered at the kiln sites have provided a foundation for the study of black-glazed tea bowls from all over China. Throughout my own experience working on underwater archaeological excavations over the years, I have personally discovered a good many black-glazed tea bowls from Fujian, most recently at the Penghu and Dongsha Islands. In this article, then, I have endeavored to unify some information from land-bound

excavations of black-glazed tea bowls and to make a preliminary analysis of the underwater archaeological findings of black-glazed tea bowls from across Asia, in the hope of shedding some light on their kilns of origin and area of distribution.

In the past, incomplete knowledge meant that the exact kiln from which a piece originated was often unknown, and ceramics were often classified more broadly by the region they were produced in or their general style. As archaeological endeavors have continued to produce fruitful results, underwater excavations have helped fill in some of those knowledge gaps left by land archaeology. This has allowed for a comparative analysis in this article, in the hope of providing the reader with a clearer understanding of various key topics pertinent to black-glazed tea bowls, including trade, production, distribution, consumption and maritime trade routes.







# TIANMU ARTISANS



# ANG ANG ANI PARISH RUI



Earlier, we took our tianmu journey to the master, interviewing one of Taiwan's most famous tianmu potters, with decades of experience. But we also wanted to introduce the next generation of tianmu artisans, who will help continue the journey onwards, learning from Master Lin Jinzhong. The same passion and devotion that stokes his kiln is burning in the next generation of artists. Wang Xi Rui works just as hard as the old master, and with an equal verve for tianmu, and yao bian in particular. When we visited him, we left inspired by his simple lifestyle devoted to his art, through suffering and success. And his beautiful bowls also were inspiring, as they are already gorgeous at this early stage in his tianmu exploration, which heralds a lot of incredible work to come. We hope that this journey through the history, creation and lore of tianmu is fully fleshed out by the color and scope these two amazing artists bring to this issue. We know that meeting both of them has left an indelible impression on us. We also have a special offer from Wang Xi Rui, which we'll explain after we introduce him!

**本A: Wu De (無的)** 

ang Xi Rui was born to be a potter. He was born in Yingge, the pottery capital of Taiwan. Wang's father had a factory that produced mold-made teapots in the style of Yixingware, which were very popular when Wang Xi Rui was a boy. He was born in 1988, the Year of the Mouse. He told us that his father had a very strong work ethic, which is common amongst Taiwanese of that generation. He passed this on to his son from an early age. Wang Xi Rui always had his hands in clay. When we asked him how young he was when he began taking up pottery, he laughed and said that clay is a part of his whole life, going back beyond memory.

Even as a baby, he was around clay and the production of teaware. He recalls asking his father to go play: "You want to play? Play with this!" his father exclaimed, slapping a large ball of clay on the table. We can imagine the boy being upset for a moment or two as he imagines his friends playing ball without him, and then slowly relaxing his furrowed brow as the ball of clay calls to him. A minute or two more and his hands are covered in clay. And an hour later and the table is full of little snaked up coils, balls and other shapes. Again, Wang Xi Rui was born to be a potter.

Nowadays, there are many more opportunities for young artists to be trained formally, but Wang Xi Rui learned in the traditional way, as an ap-

prentice to his father and other tradesman, artists, clay and glaze makers and even tool producers. He worked with his father almost every day and then was sent around town to learn with his father's acquaintances and friends who had a greater expertise in various aspects of pottery, from blending clay to throwing on a wheel, and from glazing to firing pieces. He was already proficient in much of this by the time he reached adulthood.

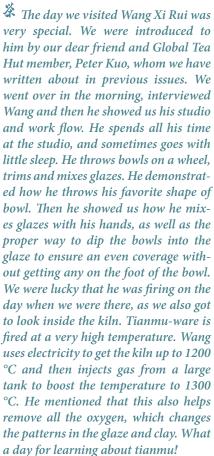
Wang Xi Rui was particularly interested in and skilled at glazing, learning from various masters around Yingge. He was keen to learn everything he could about the creation of glazes, the various ways to apply them and how they change in the firing. It was through his exploration of glazing that he came across tianmu wares. He told us that he first became interested in tianmu pottery because of the challenge. With an excited twinkle in his eye, he said: "The process of making tianmu is very difficult indeed, and that is thrilling! I have been working every day for the last five years, with very few breaks at all, trying to create tianmu pieces." He said that tianmu pottery is challenging because the clay must be blended right and able to withstand the extremely hot firing, which is up to 1300 °C and for a longer duration than most ceramics. Most often, potters refer to ceramics fired at very high temperatures as stoneware. The glazing of *tianmu* can also be challenging, because it is in part made of clay, whereas most glazes are made of various powdered minerals and metal oxides that are then mixed with water to liquefy them. Finally, *tianmu* ceramics are also very sensitive to temperature, so the kiln must be very closely watched for the entire eight hours.

Tianmu clay is very high in iron. In the Song Dynasty (960–1279), the clay used to make the greatest tianmu pieces were all around ten percent iron. Nowadays, most tianmu potters in Taiwan use a combination of Taiwanese and Japanese clay that is around three percent iron. The iron is a colorant and in the reduction firing cycle of tianmu, iron oxide creates crystals and depth in the tianmu glazes.

Glazes were traditionally categorized by the type of "flux" in them, which helps liquefy the glaze and lowers the melting point of the glasslike minerals in the glaze or clay underneath (usually boron trioxide or silica). The oldest fluxes are ash-based, feldspar, salt or lead. There are many kinds of tianmu glazes, but all contain liquid clay, called "slip," along with other glazes. Most of the patterns in traditional tianmu pieces are caused by iron in the clay and glaze reacting to the lack of oxygen in the kiln, which is caused by the extreme temperature and pressure. They are creations of the kiln they are fired in.

# Steamare Artisans











Modern tianmu makers often marvel at the difficulty of achieving this with wood-fired dragon kilns back in the dynastic eras. Dragon kilns are long, winding kilns that went up a mountain, allowing kiln masters to put various types of pieces in different locations within the kiln for firing. Nowadays, most tianmu makers like Wang Xi Rui use electricity to get the kiln to 1200 °C and then start injecting gas, which helps remove all the oxygen inside, stressing the iron to create beautiful patterns. To produce the right amount of reduction for achieving nice results in tianmu work is quite challenging, especially in dragon kilns. It is a marvel that they succeeded.

Another factor in the beauty of tianmu pieces is the way the glaze runs down into the center of the bowl and down the outside. The classic paragon of this is the "rabbit's fur (tu hao, 兔毫)" pieces of the Song Dynasty. "In order to be true rabbit's fur," Wang Xi Rui said with a grin, "the lines must be very tiny, like fur and evenly spaced as if the fur was combed. It is easy to make pieces with large lines running down, but thin, graceful and even lines are extremely difficult." Many times, the glaze runs down onto the kiln shelf and the piece must be destroyed. Other times it runs down onto the foot of the bowl, past the glaze rim. Some people like these drops of glaze that form and

the imperfection of them (*wabi*), but *tianmu* potters usually don't and often sell them for cheaper or destroy them.

When we asked Wang Xi Rui about the infamously low success rate of *tianmu* ceramics, he guffawed and said: "Are you kidding? I went a whole year without a single successful piece. I destroyed them." He had mentioned earlier that he has been working in *tianmu* for the last four or five years, so we assumed he was referring to his first year of trying. When we asked him he laughed even more, grabbing his belly: "I destroyed my first year's work too, but I was talking about a whole other year, which was maybe my third year in. Actually, I guess I destroyed two









years' worth of work." With his hands still on his stomach from laughing he made a gesture that suggested hunger and in a semi-serious way told us that throughout that time he hardly made enough money to eat, and even then, not adequately or regularly. We were introduced to Wan Xi Rui by our dear friend Peter Kuo, whom we introduced in the October 2017 issue of Global Tea Hut. The two have been good friends since childhood. They both reminisced about the hardships of being young, starving artists and Wang looked at his friend with gratitude saying that Peter helped feed him during the hard years when he was learning and all his pieces were destroyed.

Our admiration grew as the two old friends shared war stories concerning the ways they have suffered for their art, and what they learned passing through the kilns that fired them into more finished pieces today. The suffering forced them to return to the wheel again and again solely for the sake of the art and eliminated the marketing from the equation, making them search for a more inner, spiritual inspiration to create pottery aside from recognition or making a living. Obviously, there are easier ways to earn money than art, and even within ceramics there are much more lucrative choices than tianmu—with one of the steepest learning curves there is. But

Wang Xi Rui loves the challenge. In fact, he still aims for the sky, hoping to achieve greatness!.

Wang brought out many test pieces made from various kinds of clay and glazes and talked to us about the quality that makes a tianmu piece great. He called it "jun yun (均匀)," which roughly translates to "uniformity." Wang meant that the patterns in the glaze should be even, without irregularities. This is very challenging, since the patterns are created by the whims of the kiln. Perfection in tianmu, with perfect rabbit fur strokes, small crystalline patterns, spots or stripes is very difficult to achieve and only happens rarely, especially in a single kiln.

# Etennare Artisans

He got a faraway look in his eyes and said his lifelong goal is to create a single treasured masterpiece, which in the tianmu world is called a "yao bian (曜變)." Yao bian (yohen in Japanese) literally means "magnificent change," referring to the way the glazes of tianmu change naturally in the kiln. A yao bian piece is a perfect masterpiece of uniform glory that reminds the viewer of the night sky, reflecting the cosmos just beneath our tea-a difficult goal to attain, indeed! Yao bian is a kind of tianmu as well, and no one alive is able to reproduce it. No one alive has yet figured out how yao bian pieces occur. He said that out of tens of thousands of pieces discovered from the ancient Song days, only three yao bian pieces have been discovered so far. Peter told us that Wang Xi Rui essentially spends all his time in his studio. He is not married yet and has no family. We'd say he is married to tianmu, working every day towards mastery.

For many centuries, the science, craft and art of tianmu were lost to the world, and so, like most tianmu artists, Wang Xi Rui is also devoted to rediscovering the lost techniques and understanding them through modern science. He is constantly testing new clays, glazes and firing methods to try to rediscover lost techniques and refine the ones that are in practice. This and his pursuit of a single masterpiece are the flames that drive him to work so hard, day in and day out-even through hard times where he had to rely on the kindness of a friend to survive!

The fact that so many pieces never see the light of day and that the techniques and skills involved are only just being discovered doesn't deter Wang Xi Rui, but rather drives him. He said that even now around thirty percent of his pieces are destroyed and out of a hundred that do survive only one or two meet the standards he has set for

himself. He said he couldn't show one of those better pieces to us, as he had to sell them to feed himself. Fortunately, we already have some of his pieces to show in the magazine, and whether or not they make his best of the best list, we think they are stunning.

As Peter has grown more interested in tea these last few years, in part through the love and inspiration of this Global Tea Hut community, he has convinced his old friend that the whole industry in Yingge began out of teaware and that understanding tea is a huge part of developing mastery in this craft. "I no longer see my tianmu pieces as mere decorative art," Wang said. "I hope people use these bowls to drink tea. As I learn more about tea, I am learning about the effects tianmu bowls have on tea and that is changing my whole creative process." Like most of us, Tea is teaching Wang Xi Rui how to improve himself and his work in the world. We certainly love the way his bowls look and feel in the hand and the magic they offer a green tea, especially striped green teas like our Tea of the Month, which is amazing in these

Part of our aim with this Global Tea Hut is to promote hardworking, devoted artists like Wang Xi Rui. We could have chosen established artists for this issue, but we knew that we wanted to help a burgeoning artist reach his goal of mastery. To further Wang Xi Rui's journey, we are exposing his gorgeous smile and beautiful bowls to our tea community. We knew when we started this issue that many of you would be interested in owning a tianmu bowl and that they are hard to find in the West. We ordered thirty of Wang Xi Rui's bowls, which we are offering as part of our Light Meets Life fundraiser. You can read more about this special offer on the following page!

It was very inspiring to stand so close to such a bright flame of inspiration. We admire Wang's devotion to his art, his commitment to the craft through hard times and his blossoming love for tea. We are happy to report that his starving days are past, and he is starting to come into his place in the tea world and garner some repute. Devotion, love, passion, a dash of skill and lots of hard work always lead to success in art as in all things, including a tea practice!

















#### OWN A ONE-OF-A-KIND TIANMU BOWL!

hether you are aware of it or not, there is an issue behind the scenes of the Global Tea Hut magazine, community and experience that we are always conscious of, which is closing the gap between our experience living in Taiwan and yours, our beloved tea sisters and brothers around the world. Long ago, when Wu De helped found the Art of Tea Magazine, and then The Leaf, and then traveled to promote them in the West, he encountered this issue even more than a decade ago. "It was amazing how different the Western tea experience was from the Chinese one, though in hindsight that seems obvious," he says. There are, most likely, fewer tea shops and houses where you are and less of a knowledgeable community to discuss tea with and learn from. A huge aspect of our Global Tea Hut is to create that community, both virtually and in real life as we meet for gatherings.

A lot of the early readers of those early magazines complained that when articles were translated, the au-

thors would discuss teas, teaware and concepts that had no bearing on the experiences of Western tea drinkers. It is frustrating to read about teas we cannot ever have, teaware production of things we'll never see and concepts based on a history that doesn't have a bearing on our experiences drinking tea at home. We are always conscious of this, and many of the innovations we've made in the last couple of years have been completely or partially motivated by this: how do we foster closer community and cover issues that you can touch, see, experience and drink?

Of course, the Global Tea Hut app falls into this category, as one of our main goals was to create virtual communication between tea lovers to learn, grow and explore the world of tea together. Also, it has always been our hope that you will use the app to create actual, real-time gatherings to meet other members and drink tea together, and we think that the app has successfully done that. We hope that this aspect of the app continues to grow!

Then, we started the Expansion Packs. These aren't fundraisers to support our current Center, Tea Sage Hut, nor part of the Light Meets Life fundraiser. We realized that the vastness of the tea world dwarfs the twelve teas we send out each year with the magazines as Teas of the Months. Also, due to volume and the need to keep costs low, we cannot always send the highest-quality examples of any tea within the topic we are discussing. The Expansion Packs offer the opportunity for those who are interested to increase the scope of their tea education, drinking their way through more varieties of tea, in both type and quality, furthering the discussion of that issue.

Some of you then asked for us to have some special offers like this month's, offering the chance to get some rarer cakes for drinking/storing, like the Swirling Mist we offered in March of this year. This month was the perfect chance to have another such offer, as we realized that a whole magazine of articles on the history, production and lore of *tianmu* bowls would



maybe reach some in the way we mentioned above, as *tianmu* bowls are rarely seen or used in the West. We wanted to offer some of you the chance to get a *tianmu* bowl if you wanted one, to explore the effects it has on tea liquor, and green tea in particular. Wu De always says that drinking a nice, striped green tea in a gorgeous *tianmu* bowl is on the list of "must-have" experiences for every Chajin. And we wanted to offer some of you the chance to do just that!

Finally, there is another aspect to these special offers, which is that they afford us all, as a community, the chance to make a difference in the lives of artists and tea makers. As you know, we don't want Global Tea Hut to have a positive impact by just discussing environmental philosophy or integrity in tea, but rather to make a real, on-the-ground difference in the lives of people. Some of you know, the only tea we send every year is Elevation because we as a community have committed to buy all the tea that Mr. Su cannot sell each year, changing his life and making

him cry. You have done that! In that way, we also wanted to support the burgeoning career of struggling artist Wang Xi Rui (王希瑞), who we discussed on pp. 53–58.

Wang Xi Rui's bowls are gorgeous and he works very hard. In purchasing one, you will not only get the chance to own a one-of-a-kind *tianmu* bowl, but also to support this young man, in whom we believe. We will have a few dozen of his bowls up on the site for sale should you want a *tianmu* bowl in support of Wang and his art! Any extra funds raised will go to support this Global Tea Hut, should you wish to contribute extra. However, as we mentioned, the real motivation behind this special offer is to offer you an experience and to support Wang Xi Rui!

The bowls will be a minimum of \$100 + shipping. Proceeds support Light Meets Life:

(www.globalteahut.org/tianmu)



# Ceallhylarer

Each month, we introduce one of the Global Tea Hut members to you in order to help you get to know more people in this growing international community. It's also to pay homage to the many manifestations that all this wonderful spirit and Tea are becoming as the Tea is drunk and becomes human. The energy of Tea fuels some great work in this world, and we are so honored to share glimpses of such beautiful people and their Tea. This month, we would like to introduce Erin Farb.

met her on the shortest night of the year. I had never experienced, or even heard of, Cha Dao. With the first sip from my bowl, Cha told me not to worry about what those around me might think. She allowed me to feel into her, into myself. With my eyes closed, I was with only her. I swayed when I felt moved by the music. I felt at home, connected to the earth in the same way I did when alone in the mountains, surrounded by trees.

I joined Global Tea Hut the next day and attended two more tea sessions. Cha Dao entered my life just as I was opening into a new soul-space. At first, I did not introduce her to others. I kept her for myself, learning about her. Learning about myself. I uncovered deeper knowledge of who I was, my connection to Earth, Spirit and Heart.

The first time I served tea was to the women who had been coming to my home each month for collective meditation. From that night I knew Cha was the way I would share my love with them. Once a month, for three years now I have welcomed new and returning sisters to share this gift. The group is never the same. I serve them tea followed by a dinner I prepare in gratitude and love, offerings from my heart to theirs. Following tea meditation, these women then open their hearts to one another. They share stories of compassion, insecurity, fear, pain, and joy such as caring for a dying parent, supporting a grieving partner, the birth of a grandchild, the decision to abandon a career for a passion. They share their souls with women they have only just met. They bring their mothers and daughters, other soul sisters, to share in tea meditation. Tea is my offering of love to them and through this offering I have seen their souls stir and unravel with the steam from their

More recently, Cha has been my own steady earth guide through painful trauma. She has reminded me of my connection to Tierra and Spirit. She has held me when my soul spilled grief into her bowl. With her, I have explored the fear of an unknown path through darkness. I have found poetry in the darkness. In continuing to share her with others, my heart has remained open and I have not lost my generosity of spirit.

Last spring I finally visited Tea Sage Hut. I knew it was time. Surrounded by the steady love of Wu De, Janice, Shen Su and Raneta, my connection to Cha was reinforced, validated, honored, deepened. I found resolution during my stay that would change my life when I returned home. I also realized where I had been creating a blockage. For three years I had honored my soul sisters with the gift of Cha, but I had neglected my soul brothers. Not once had I served a single one of them. Not even my own father. He had been waiting patiently.



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<: Erin Farb

When I at last invited him to sit and receive, he came with an open heart.

In the last few months, Tea has lit a fire in me. I feel myself unfurling like her leaves in hot water, opening in offering. I have been invited to serve tea in the homes of family elders and other soul-workers. Sisters and brothers sit with me each month. When a guest leaves a tea ceremony and says they have not felt such peace in their lives, I am honored to have been able to create a little pocket of loving, healing stillness. I share her wherever, whenever, I can. I take her with me into the mountains, sharing her with the trees and dirt. I share her when I visit friends out of town. I share her on the floor of my tiny office with any colleague who pokes a head in looking for a few minutes. I have shared her with more than a hundred people this year, most of them for the first time.

With my visit to Tea Sage Hut, the community I have built, and the rapidly growing Global Tea Hut community, I celebrate that I am not alone in this beautiful journey. So many of you join me in honoring Cha, the Earth, Spirit and all that lives within our brothers and sisters all over this magnificent earth. We all bring beauty, bursting with love, into the lives of others.



#### COMING SOON TO GLOBAL TEA HUT MAGAZINE

茶主题: Annual Trip

茶道

茶主题: Classics of Tea

茶主题: Chajin Stories/Biographies

茶主题:Dancong Oolong

If you serve tea regularly and would like some extra magazines or tea tins to give out to help spread the word about Global Tea Hut, please let us know. We are also looking to donate magazines to public places.

We are trying to expand by connecting with podcasts, blogs, journalists and other communities. If you have a suggestion, please email our PR point person, Emily Cross, at: emily.global.tea.hut@gmail.com

Remember, there is a section in the app where you can post your questions for our live Instagram and Facebook broadcasts. Wu De will answer these community questions first every time.

We will be publishing the first of our textbooks this year. We are very excited to start what will be a long-term project to create five brewing textbooks and seven tea textbooks—one for each genre of tea.

Take a picture of you and your loved ones opening Global Tea Hut or drinking the Tea of the Month and #tag us on Instagram. We will be selecting five people who post their experience to receive free tea every month from now on! (#globalteahut)

lay Affirmation

#### I am bright

Do I allow the darkness to bring me down? Does the world seem too troubled to heal? I can choose to manifest light. I transcend the hate and answer with love. I share my heart openly with the world, as I share tea. It is our aim to fully launch our video series this year, and our three new interns at the Center are hard at work learning and studying to make this a reality. We want to have a monthly talk on the Tea of the Month and magazine like we used to do, a series on ten-day courses we offer at the Tea Sage Hut, another series on the volunteers who live and work here and maybe even some Chinese lessons covering tea terms, as some of you have requested. Expect to see our YouTube channel get very active soon!

#### Center News

Before you visit, check out the Center's website (www.teasagehut.org) to read about the schedule, food, what you should bring, etc. Make sure you apply early for courses as they fill up fast (this is why we need a bigger, more awesome Center).

We have opened all the ten-day courses to service! This is exciting for those of you who have already taken a ten-day course and want to come serve one. You can apply on the website. This is also another way to visit if a course is full!

Our longer course for older students will be over the course of two weeks in late August. This course is for those who have been initiated into our lineage. Contact us if you are interested in attending. It will be from the 15<sup>th</sup> to the 25<sup>th</sup>. There will also be a trip to Sun Moon Lake beforehand, possibly for five days!

The Center garden is rocking these days, with corn and all kinds of organic greens.

We aim to grow anywhere between one-third to one-half of our food!



#### www.globalteahut.org

The most yao bian Tea magazine in the world! Sharing rare organic teas, a magazine full of tea history, lore, translations, processing techniques and heritage, as well as the spiritual aspects of Cha Dao. And through it all, we make friends with fellow tea lovers from around the world.

