

Hitchhiker's Guide to Tea

Prelude

Dear reader! This is a small compendium contains theoretical and practical knowledge about the vast and wonderful world of tea and aiming to give you a solid foundation to start your own, possibly lifelong tea journey. Remember, that all the information given here is far from complete and can always be researched at greater depth if you have the interest. However some concepts are described in higher detail in order to dismiss myths circulating them. This compendium is not necessarily read from back to back and parts of lesser interest can be freely skipped. I hope that you find this useful and inspiring to explore more of the unending and eternal art of tea.

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Chapter 1 - Introduction

of what will and (mostly) won't be addressed

Tea is a broadly used concept in the West as well as East, so to make sure you're on the same page as me, I'm going to define what I mean by "tea" throughout this compendium. "Tea" refers to processed and dried, loose leafs of one plant and one plant only: *Camellia Sinensis*. So to clarify: teabags, herbs or other artificially flavoured or sweetened brews will not be covered here. Another thing not covered here is the medicinal aspect of tea, as the focus here will be the art of tea for its own sake rather than treating it as a mean to an end. Another reason is lack of substantial, informed research on the topic and general discontinuity about medicinal effects of various teas. History of tea consumption will also be omitted as it is easily researchable and without any major controversies.

The tea tree in all its forms

(A friendly warning: this will be a technical section.)

Camellia Sinensis is the name of the species of a tree (and not a bush, contrary to popular belief). That species has a number of subspecies. By far most commonly used one is *Camellia Sinensis sinensis*, constituting a vast majority of teas out there. The second in order is *Camellia Sinensis assamica*, being a subspecies native to Assam area of northern India. Tea from this subspecies is produced in so small quantities that it actually kept the name of its origin: Assam.

That was the species and subspecies. Zooming in even further into genetic compositions we come to the concept of a **cultivar**, being short for "cultivated variety". There are thousands of different documented cultivars out there, differing in e.g. leaf size, growing rate, biochemical compositions, etc. Cultivars are the point of focus for agricultural tea studies and tea institutes; through careful cross breeding new cultivars are developed, both to meet demands for higher yields as well as specialising plantations for production of specific tea sorts.

End of technicalities.

Chapter 2 - The 6 tea sorts

Tea comes in different sorts, or "colours". When asked, people often mention colours like green, black, red (false) and white. In this chapter I will explain the differences between the 6 officially recognised tea sorts and dispel myths about others.

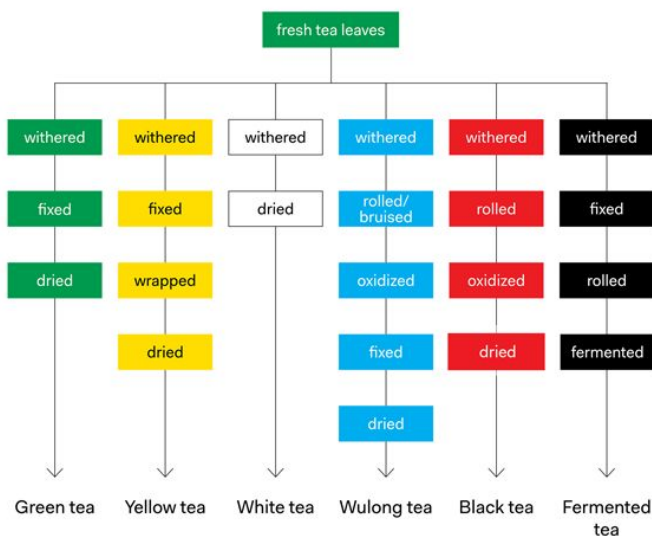
What makes different tea sorts is not different plants, as many believe, but the **processing**, i.e. what happens between **plucking** the fresh leaves and the final product. All plucked tea is

firstly **withered**, in order to soften them so that they don't break during the upcoming steps. The most important difference between the types is level of **oxidation**, also known as **fermentation** of the tea leaves. This is the same process that turns a cut apple brown and is essentially a way for any organic material to decompose from within upon death. This kind of oxidation comes from enzymes in the plant cells themselves and are easily destroyed through applying heat. This process is called **fixing** or **frying**. This is why cut apples on a baked apple pie don't turn brown even after long time: because the enzymes in the apple are destroyed.

The 6 officially recognised tea sorts are:
Green, yellow, white, oolong, black and post-fermented

They will be explained in detail in this order and all correlated myths will be dispelled in respective sections.

Bellow is a chart visually summarising the differences in processing. (From worldoftea.org)



Green tea

绿茶 (lǜ chá)

Just as the fresh tea leaves, green tea has retained its colour and freshness. That is because green tea is **0% oxidised**.

The steps for producing green tea are withering (as all the tea types), fixing (to prevent oxidation and to keep the tea green) and drying (to remove any excess moisture)

Two popular green teas are Long Jing (龙井, Dragon Well) and Bi Luo Chun (碧螺春, green jade spring snail).

Yellow tea

黄茶 (*huáng chá*)

The most uncommon of all the tea types. It is essentially a special variant of green tea but with one added step: so called **sweltering** (or **wrapping** in the chart). In this step the leaves are tightly wrapped when they are still warm from the **fixing** phase (warming leaves up to stop natural oxidation). They are then left in this moist and warm state, which facilitates the special process transforming green tea into yellow tea. Then the tea is dried.

Two, and almost exclusively two yellow teas are produced: 君山银针 (*jūnshān yínzhēn*) and 霍山黄芽 (*huòshān huángyá*).

Observe that actual yellow tea is very rare and when found, it tends to bring really high prices, so don't let yourself be fooled by dishonest tea sellers trying to sell green or even white tea as yellow for just a little extra!

White tea

白茶 (*bái chá*)

This is the **least processed** of teas, as it is only **withered** and **dried**, but not fixed. Because the process of oxidation is never fixed before drying, white teas are called **minimally oxidised** which tend to lie around 5% oxidation.

Two most common white teas are 白毫银 (*báiháo yínzhēn*, Silver Needles) and 白牡丹 (*báimǔdàn*, White Peony).

Oolong tea

乌龙茶 (*wūlóng chá*)

This is the broadest of all types. Oolong is a large scale of oxidation going from light oolongs (starting from **15% oxidation**) to dark oolongs (capping at around **85-90% oxidation**) and anywhere in between. While other tea types stick to a certain oxidation percentage, oolong spans across 75% making various oolong teas very different from each other. Oolongs have a special step in their production called **bruising** or **rolling**. In this step the leaves are rolled either by hand or in large rotating cylinders, in order to break the cells on the edges of the leaf. This way, the broken edges will oxidise faster than the unbroken cells in the middle.

This is one factor for a tea producer to control the level of oxidation.

Most common light oolong is Tiě Guān Yīn (铁观音, Iron Goddess of Mercy) and it is in itself a whole niche world.

Two of the better known darker oolongs are DānCōng (单丛, Single Bush) and DàHóngPáo (大红袍, big red robe).

Black tea

红茶 (*hóng chá*)

Black tea, or **red tea** as it is called in Chinese is what happens if tea leaves are allowed to **fully oxidise**. Therefore it is said that black tea is **100% oxidised**.

As black tea is most prominent in the West, there are many misconceptions about it; it's said that black tea is simple, bitter and cheap. There are cheap and bitter versions, of course, but qualitative black tea is not supposed to be bitter nor simple.

Just as oolongs, black tea is fully **rolled** (and not only bruised) to break as many cells as possible in order to speed up the fermentation process.

Two of many popular Chinese black teas are Keemun or QíMén (祁门, being the name of its origin) and DiānHóng (滇红, originating from Yunnan).

One black tea mostly popular in the West is Lapsang Souchong (拉普山小种, *lāpǔshān xiǎozhǒng*, lit. Small plant from Mt. Lapu), which is black tea **smoked** over pine wood, giving it a thick, smoky taste.

Whilst on the topic of black tea, being called red in Chinese, it is time to debunk the western notion of red tea. What we in the West call red tea is actually not tea at all, as it does not come from *Camellia sinensis*. Red tea in the West is Rooibos or *Aspalathus linearis*, a bush native to South Africa. Rooibos is not even leaves from that bush but instead it's bark. To summarise: what in the West is called black tea, Chinese call red tea. What westerners call red tea isn't tea at all. Myth debunked.

Post-fermented tea

后发酵茶 (*hòu fājiào chá*)

Post-fermented tea, also called **dark tea**, often mistakenly called Puer (which is only one of the subcategories) is a confusing and slightly technical topic. What is special about this tea sort is that it undergoes a time-consuming process of **external post-fermentation**. Normal, internal oxidation was described in the beginning of this chapter. External oxidation is a way for organic material (in this case tea leaves) to keep decomposing even if its own decomposing enzymes are gone. This process takes much longer time if no internal oxidation occurs.

All post-fermented teas **age** in a similar fashion to wine. The older a post-fermented tea is, the darker it is (as fermentation has been going on all this time) and brings much higher prices.

Up until the process **rolling** (here often meaning pressing into tight cakes), production steps of post-fermented tea are exactly the same as for green (and by extension yellow) teas.

Then the process of external post-fermentation is set in motion and the tea is often stored.

As mentioned Pǔ'ěr (普洱) or Pu Erh constitutes almost entirety of post-fermented teas.

Apart from Puer there is a subtype called Hēi chá (黑茶, literally black tea). But since Puer is the most prominent subtype, it must be further explained.

Puer exists in two primary types **Shēng Pǔ'ěr** (生普洱, meaning Raw Puer) and **Shù Pǔ'ěr** (熟普洱, meaning Cooked Puer). Raw Puer is light in both hue and taste. This is the traditional type that is meant to be stored and ripen. Shu Puer is called “cooked” or **ripe** because the process of external fermentation has been artificially hastened, resulting in dark and earthy brew.

Puer is named after the city of Puer in Yunnan province where this tea type originated from. It is most often seen in pressed round cakes or rectangular bricks, but it also exists in loose leaf form.

Chapter 3 - Buying tea in China

When in China one will encounter countless tea shops of varying degrees of quality. This chapter aims to give a number of hints as to finding and purchasing qualitative tea, as well as give some insights into practical Chinese tea shop culture.

A disclaimer: Although this chapter will try to identify the best teas and tea shops, it doesn't mean that these are the only acceptable options and the final choice is ultimately about personal preferences.

Looking into the shops

This section provides general tips and things to have in mind when choosing a tea shop, rather than judge by the cover or the first impression.

When walking past tea shops on the street, one can without walking inside notice quite some factors, eg shop's specialisation, tea storage, level of tourism adaptation, etc. Let's break these down one by one:

Type specialisation can easily be spotted by what teas are visible and in what amounts. If the walls are covered with shelves of stacks of round cakes and bricks with only a few jars or box displays, the shop obviously specialises in Puer and other tea types are merely additions to that main focus.

Storing tea is very important for keeping the quality over time. Tea should be stored in airtight, dark and cool conditions. Therefore the worst way of storing tea is to have open bags or displays. Not only is the tea losing its light aromatic compounds (even faster if it's warm outside) but also the tea is exposed to direct sunlight which damages the heavier taste compounds. Often the tea is stored in closed, but see through plastic or glass containers.

They are rarely airtight and the tea is still exposed to sunlight but at least the aromas are somewhat contained and don't mix. The best way of storing tea is to have it in airtight, clay jars, as they both keep the sun out as well as keeping a slightly cooler temperature inside.

This way however is not very presentable and only shops who care about the quality of their wares more than for display and advertisement would choose this mode of storage.

And finally commercial tourism: some shops don't focus on tea only but sell other unrelated wares like cigarettes or alcohol. These fusions are unfortunately quite common. Also, private shops tend to be a little bit messier than the big chain shops who tend to have a pristine

displays and a sterile environment. The chances are that private shop owners will be in general more knowledgeable, interested, willing to strike good deals and open to bargaining than clerks of chain shops who only work there. It is again just a generalisation. Now that the shop has been looked at from the outside, it's time to take a closer look at what's inside.

In the tea shop

When going to a chinese tea shop one doesn't have to have a particular goal or even an intent to buy anything. One can simply walk in, sit down at the tasting table and sample different teas to one's heart's content for hours without any spoken or unspoken obligation to buy anything, which is an amazing opportunity to talk to locals and practice chinese. Also, as a foreigner you will be extra welcome as an interesting change but also as a advertisement for other Chinese.

More often than not the clerk will already have some tea brewing on an uncounted brew. When you ask about what tea it is they will often give you a very broad answer often only a tea type. Don't be discouraged by that and if you want more information, keep asking. However don't be disappointed if they can't give you the answers you seek as many people working in tea shops don't have extensive knowledge, but rather the information needed to sell.

Another thing worth noting in a tea shop is if the person behind the table looks comfortable (eg eating, smoking, talking loudly with someone else) in which case they are more likely to be proprietors, or if they are more "at work" (silent, still, sitting straight, often alone). These are of course only rough guidelines and you will most definitely encounter exceptions to this generalisation. The reason for noting if the clerk owns the shop or only works there is because owners are often more prone to strike better deals and bargain.

Choosing tea

If you're looking for a particular tea or a broader tea type, just tell them what you're looking for and they will give you different proposals often from different price ranges. Most often one gets broad proposals ranging from cheap to expensive. The lowest quality tea is often left out and actually "shamed" by the clerks. Their criticism is often well placed, but the reason they have this low end product in store is to inspire trust and confidence in the other, higher end teas, as if to show that they are not biased by working there. They will also never propose the best and most expensive of their teas without having some kind of previous relationship with you and knowing that you are likely to appreciate it and buy some. Also, asking for their most expensive teas may be seen as snobby and looking for spending a lot of money to show off rather than appreciate the tea itself.

If you give the clerk free hands in choosing a tea for you to taste they will often start at the higher end of the spectrum and go down. This is a clever marketing technique making one long for the first (presumably best) and most expensive tea while sampling the others. This is only theoretical of course as cheaper teas might better suit individual taste than the expensive ones. I can't stress this enough: expensive doesn't mean better tasting. Often the

most expensive teas available are expensive because of a special story or a particular origin or the age of tea trees harvested, etc. One is then expected to appreciate the taste based on those factors rather than on the taste itself. So don't let yourself be fooled by a blooming description before you get to taste. It happens often that you get the whole story as soon as you start tasting as if to cover it's lacking taste or aroma. It's just one of many ways for the clerk to distract from the actual tasting. Other techniques might be showing off the colour of the brew, smell of dry or wet leaves, smell of the emptied cup, etc. Don't misunderstand, those are all valid parts of the whole tea experience. What I'm saying is to not let that distract you from the actual tasting itself.

Another important tip when buying tea is to **never buy blindly**; Always ask to taste first. Don't go tea shopping if you're in a hurry; take your time.

However, when sampling, remember that chinese often brew tea much stronger than we are used to, and some even say that tea is supposed to be bitter and strong. This is **not the case**. You can always ask them to brew the tea weaker. For more detailed factors of brewing, see Chapter 4.

A little bit about the pricing

Tea is priced per 1 jin (斤) which in Kunming and some other parts of Yunnan is equivalent to 1 kg, but the same word in most of China is **half a kilogram**. If you're insecure, ask how many gram (克, ke) is one Jin. Sometimes one can find tea prices per 100g as well, which is much less confusing.

Cheap teas cost under 200 RMB/1 kg. This is seen as very little in tea terms. Prices considered high lie above 1000 RMB/1 kg. You can every now and then find teas much more expensive than that. There is no real maximum cap for tea prices. However the quality can improve just so much. After a certain point the quality remains constant, but the prices keep on rising. The art is to find the golden spot where the quality is worth the price, but it's not a skill that I can convey in words.

When it comes to Puer teas in cakes or bricks, you will almost exclusively see prices per cake or brick respectively. Standard round tea cake weight lies on a traditional 357g. You can of course find smaller and larger cakes than that, and most often in even, round numbers (500g, 300g, 250g, 200g, 100g).

Chapter 4 - On brewing

Now when you've got your well chosen and well appraised tea, it's time to go home and brew. I will start with a basic overview and then proceed to more detailed description of how to manipulate various factors to get the brew just like you like it.

In general there are two main styles of brewing (not accounting for countless specific ceremonies from different cultures not falling on this spectrum): Western style brewing and Gongfu brewing (功夫茶 - gongfu cha). When brewing western style we use little tea per huge volumes of water, brewed for long time and most often only once. It's the opposite of

Gongfu brewing: much tea per small volumes of water, brewed for short time, but many times. I use Gongfu style as an umbrella term describing the way chinese drink tea, so casual tea shop hang-out as well as the ceremonial Chinese art of tea brewing. The Western brewing doesn't need further explanation as we know it all too well. The reason for advocating Gongfu over Western is that every brew is different from the other brews so one can experience a development of the tea from light tones in the beginning to heavier tastes towards the end. Having all in one long brew tramples the delicate notes and equalises all the brews so only the strongest and most prevalent of tea's characteristics come forth. Having the basic and quite biased overview, I will now objectively describe different factors important to keep in mind to control the brewing process.

Temperature

This is something many people even vaguely interested in tea have surely heard: different teas require different water temperatures. The rule of thumb is **the lighter the tea, the lower the temperature**. For example, green tea, being the lightest, or brightest of the tea types requires lowest brewing temperatures. A good starting point for green teas is around 80°C. If you use 100°C water for green tea, you will **burn** it making it bitter and destroying all the light, high tones, being the signature of green teas. White tea can endure higher temperatures (recommended 85-90°C), followed by oolongs (both light and dark), black and post-fermented where the recommended temperature is 100°C.

However remember that there really isn't any right or wrong and if you prefer burning your green tea in boiling water or brew your black in 80°C, that's perfectly fine too. Some teas show certain aspects of themselves only if you brew it in lower or higher temperature, so feel free to experiment.

The important thing to remember though, is that the higher the temperature the stronger the brew (as heavier compounds are extracted in higher temperatures and light compounds evaporate or break).

Tea to water ratio

Essentially how much tea should brew in how much water. There are all sorts of guidelines in regard to this, but for the traditional Gongfu brewing, one often uses pots or gaiwans of around 100 ml and depending on tea, around 4-6g. There are people who would use 10g of tea per 50 ml of water, but these are on the more extreme side of the spectrum. Speaking from experience it is, as a rule of thumb, better to have little too much tea and control the strength of the brew through temperature and/or length of brewing, rather than having too little tea and try compensating in those ways. There will simply be more compounds to go around, and the flavour and aromas will be enhanced.

Brewing time

The longer you brew, the more compounds will be extracted, aka the stronger the tea. Just like the previous three factors, this can be manipulated to control the strength of your brew. In

Gongfu style, one doesn't brew for long: 10-15 seconds suffice. In casual drinking this is often further reduced to 5-10 seconds, whereas in ceremonial Gongfu brewing one can brew for almost a minute. This is however a delicate and complex art, so trying to imitate the ceremonial Gongfu without knowing in depth the tea brewed and all the important, but invisible steps can be quite disappointing. The casual Gongfu uses similar principles and utensils, but is simplified to the point where simply copying the visible steps will result in a great tea experience.

Gongfu teaware and utensils

In Chinese Gongfu brewing, you will see many sets of teaware and utensils that we wouldn't use in Western style brew. Here I will name them and explain their function.

- *Teapot* - for brewing the tea in, but not for serving. They come in glass, porcelain, but most often in clay. If the clay pot is glazed on the inside (as most are) it can be used for any type of tea (alongside glass and porcelain). If it isn't glazed it is almost always specialised for one type of tea, as the aromas penetrate the porous clay and one can sense all previously brewed teas in all the future brews. The main difference between the different materials is how well it keeps the heat inside. Clay being the best in this aspect, followed by porcelain and glass being least heat conductive. The sizes vary between 50 ml to around 200-250 ml. 100 ml is standard.
- *Gaiwan* - 改完, or literally "lid bowl", consists of a bowl in which to brew, a lid on top and a saucer it stands on (the last being optional, but most common). Most often in glass or porcelain. The size standards are as above.
- *Fairness cup* - In Chinese Gongdao bei (公道杯) is the vessel to which brewed tea is poured from the brewing vessel, and from which tea is distributed to separate cups. So the middle stage between a pot/gaiwan and the cups. It is called a fairness cup because the tea in it is not brewing anymore, so everybody served from it will, fairly, get tea of the same strength. If, instead the tea was poured from the vessel it was brewing in, the first cup will be weak and the last one would be comparatively much stronger, which wouldn't be fair. Gongdao beis are often in glass so that one can view the colour of the liquor, but besides that, the material of fairness cups is not relevant.
- *Presenting bowl* - an open vessel in which dry tea is presented to the audience before brewing.
- *Aroma cups* - almost never seen outside of ceremonial Gongfu brewing. These are tall, thin cups to which the tea is poured first. Then it is transferred from the aroma cup to the normal, drinking (or tasting) cup. Then, one smells the just emptied aroma cup to appreciate the smell left by the tea on the walls of the cup.
- *Tea animals* - or technically any small statue, or symbol one would put on the tea table and pour hot water and/or tea over. This was originally done as a tribute to the forefathers and gods, but now it is purely traditional, without any religious or spiritual context attached to it.
- *Scoop* - is a long and deep "spoon" with which dry tea is transferred from a jar in which the tea is stored to the presenting bowl or directly into the brewing vessel.
- *Cleaner* - is a thin stick with one broad end and one pointy end used to clean the teaware after usage.
- *Tongs* - used in more formal context to move the cups with, so that the brewer doesn't touch the cups with their hands for hygienic purposes. Almost always used in tea shops.

- *Strainer* - placed on the gongdao bei when pouring tea from a brewing vessel to avoid small tea particles in the brew.
- *Funnel* - a small and shallow “bowl” with a big hole in the middle. Used to easier transfer the dry leaves from the presenting bowl to the pot (as these often have small openings). Very rarely used with gaiwans.
- *“Transferring stick”* - a flat stick used to transfer dry tea from the presenting bowl into the brewing vessel. It is a separate utensil because it is supposed to be kept dry, so that the dry tea doesn’t stick to the wet utensil.

Ending words

And with this the short compendium has now come to an end. I hope that the information herein was at least mildly helpful and only mildly confusing. All content comes from my personal experience and research, some of which is confirmed by various sourced and some of which is less known and difficult to find hard facts on.

The world of tea is as vast as the lengths people are willing to go to explore it. Don’t let yourself be persuaded that there are right ways to do something just because someone with an air of authority tells you so. Feel free to explore and experiment to your heart’s content but most importantly, enjoy the process.

As my favourite teahead (Don Mei) says:

Thank you for being a part of revelation of true tea, stay away from those tea bags, keep drinking the good stuff and spread the word.

And remember: DON’T PANIC!