

All About Tea

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What is Tea?

◆ A “beverage produced by steeping in freshly boiled water the young leaves and leaf buds of the tea plant, *Camellia sinensis*”



History of Tea

- ◇ Dates to China since 2700 BCE
 - ◇ Primarily used medicinally by boiling fresh leaves in water
- ◇ Became a daily drink in the third century
 - ◇ Cultivation and processing began
- ◇ First published accounts around the year 350
- ◇ Seeds brought to Japan around 800, and cultivation established in the 13th century
- ◇ The Dutch East India Company carried the first consignment of tea from China to Europe in 1610
 - ◇ In 1669, the English East India Company brought China tea from ports in Java to the London market
- ◇ By the late 19th and early 20th centuries, tea growing had spread across the globe



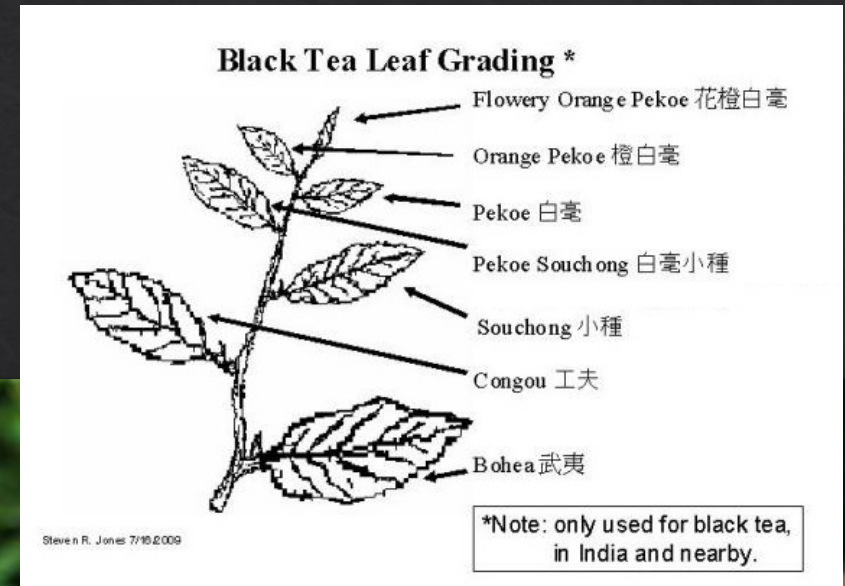
Interesting Tea Facts

- ◆ Tea is the most popular caffeine-containing, non-alcoholic beverage in the world
 - ◆ Second only to water in terms of consumption
- ◆ The United States is the third largest importer of tea in the world after Russia and Pakistan with 3.9 billion gallons consumed in 2021 in the United States



Classifications of Tea

- ◆ Classified based on region of origin
 - ◆ Ex: China, Japan, India, etc.
- ◆ Classified based on size of the processed leaf
 - ◆ Ex: flowery pekoe (FP), orange pekoe (OP), pekoe (P), pekoe souchong (PS), and souchong (S)
- ◆ Classified based on processing and manufacturing of leaves
 - ◆ Ex: black, green, oolong, white



The Tea Plant – *Camellia sinensis*

- ◇ Theaceae family
- ◇ Evergreen shrub to small tree originating from China (6 to 15 feet tall)
- ◇ Alternate, simple, dark green serrated leaves
- ◇ Two major varieties:
 - ◇ *Camellia sinensis* var. *sinensis* – smaller leaves, hardy to zone 6
 - ◇ *Camellia sinensis* var. *assamica* – larger leaves, zones 7 and above
- ◇ White (sometimes pink tinged), fragrant flowers and yellow stamens.
 - ◇ Flowers in fall to early winter
 - ◇ Attractive to bees
- ◇ Produces 3-lobed smooth fruit
 - ◇ Green maturing to dark brown and cracks open to reveal 3 rounded seeds



The Tea Plant – *Camellia sinensis*

- ◇ Slow-growing but easy to manage
 - ◇ Makes great screening and hedge plant
- ◇ Heat and drought tolerant
- ◇ Acidic pH conditions
- ◇ Well-drained soil but moist conditions
- ◇ Full sun to partial shade
- ◇ Mildly deer resistant
- ◇ Susceptible to viruses and some fungal diseases



The Tea Plant – *Camellia sinensis*

- ◇ For optimal tea production, it is best to prune to 4-5' just before spring growth to encourage shoots
- ◇ Processed to create white, green, oolong, or black tea
 - ◇ Smaller young leaves and leaf buds for making green tea
 - ◇ Older, larger leaves for oolong and black tea
 - ◇ Buds for white tea
- ◇ Elevation, rainfall, shading, soil type, and temperature affect tea flavor



Tea Harvesting Terminology

- ◇ Withering-harvest fresh leaves, spread out in thin layers on trays, hot air is blown from the bottom to evaporate moisture
- ◇ Oxidized-leaves are exposed to the air to dry and darken – contributes to flavor, aroma, and strength of tea
- ◇ Fermented- Leaves are subjected to 24-27°C temperature and leaf color changes from green to coppery red – development of pleasant aroma
- ◇ Rolling- Leaves are rolled by hand or using rolling machine to form wrinkled strips (causes tea to wrap around itself, ooze out sap, oils, and juices) – enhances taste of tea



Green Tea

- ◆ Non-fermented
- ◆ Created by withering, steaming, rolling/shaping, and drying leaves
- ◆ Popular in East Asia
- ◆ One cup = 15-50 mg of caffeine
- ◆ Potential health benefits: antioxidants, improve mental alertness, aid in weight loss, relieve digestive issues, vitamins & minerals



Black Tea

- ◇ Extensively oxidized before processing
- ◇ Fully fermented form
- ◇ Withered leaves are rolled, then fermented, dried, then sorted and graded
- ◇ 80% of manufactured tea – most consumed tea
- ◇ 17 mg of caffeine/100 ml



Oolong Tea

- ◆ Harvested leaves are withered, then semi-fermented/partial oxidation
- ◆ Shorter oxidation period than black tea
- ◆ After oxidation, leaves are pan-fried at high temperatures to prevent further oxidation
- ◆ Taste and aroma is cross between green and black tea
- ◆ Popular in Southeastern Asia and Taiwan



White Tea

- ◆ Non-fermented
- ◆ Drying buds with minimal processing - least processed tea
- ◆ Buds are shielded to prevent sun exposure (reduction in formation of green pigment – leads to white appearance)
- ◆ Harvested leaves are withered for 4-5 hours then dried to obtain final product



Brewing Tea



- ◆ A tea infusion is best made by pouring water just brought to the boil over dry tea in a warm teapot and steeping it from three to five minutes
- ◆ The liquor is separated from the spent leaves and may be flavored with milk, sugar, or lemon



Other Types of “Tea” – Herbal Teas

◇ Chamomile – Asteraceae family

- ◇ Promotes relaxation, helps with digestion
- ◇ May help with diabetes, menstrual pain, sleep problems, etc.

◇ Peppermint – Lamiaceae family

- ◇ Helps with digestion, boosting focus, contains vitamins and minerals

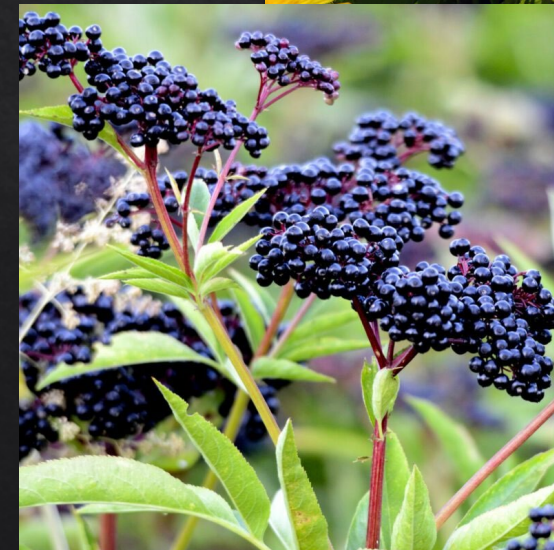
◇ Ginger - Zingiberaceae family

- ◇ May help with motion sickness, nausea, manage blood pressure, heart health, blood sugar, inflammation, etc.



Other Types of “Tea” – Herbal Teas

- ◇ Dandelion – Asteraceae family
 - ◇ Good source of vitamins
 - ◇ May help with immune support, inflammation, blood pressure, liver health
- ◇ Elderberry – Adoxaceae family
 - ◇ Do NOT consume raw, unripe berries
 - ◇ Made from dried, ripe elderberries
 - ◇ Berries are boiled in water, and then the mixture is strained to remove solids
 - ◇ Good source of vitamins and minerals
 - ◇ May help with boosting immune system, flu treatment



References

- ◇ <https://www.britannica.com/topic/tea-beverage>
- ◇ <https://plants.ces.ncsu.edu/plants/camellia-sinensis/>
- ◇ <https://vegetables.wsu.edu/tea/>