COFFEE

Jan Pilzer
2019-03-29
Previous Coffee UDLs

- From Bean to Cup: a history of coffee
  Michael Firmin, 19 Sep 2014

- Coffee Shops Around Vancouver
  Michael Firmin, 13 Sep 2013

- ABCs of Brewing Coffee
  Alexandru Totolici, 5 Oct 2012

- Coffee Vs. Chocolate Battle Royale: War of the Chemical Stimulants
  Mihir Nanavati & Nathan Taylor, 16 Mar 2012

- Coffee
  Tom Hazelton, 19 Mar 2010
COFFEE (AGAIN)

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Coffea Arabica Flowers
Coffee Fruit and Beans
# Most Popular Coffee Species

**Coffea arabica**

- Originated in Ethiopia
- Ideally cultivated at about 1400m altitude
- 60% of the world’s production

**Coffea canephora**

- Commonly known as robusta
- Indigenous to Western Africa
- Mostly grown in Vietnam and Africa
- Easier to grow than Arabica, therefore cheaper
- Stronger flavor, but more bitterness
Coffee Legends

- Abul Hasan ash-Shadhili, an Islamic Scholar (~1200)
  - Observed birds of unusual vitality in Ethiopia
  - Ate the same berries and experienced the same vitality

- Islamic World
  - Coffee as replacement for the forbidden wine
  - Helps fast during the day and stay awake at night

- Kaldi, Ethiopian goat-herder (~800)
  - Noticed the energizing effect of the berries on his goats
  - When presented to the local monastery, the monks disapproved and threw them in the fire
  - The smell led them to rescue the beans and make a drink
CREDIBLE HISTORY

- Yemen's Sufi monasteries (~15th century)
  - Used for concentration
  - Spread north to the large cities of Cairo, Damascus, and Constantinople
- Forbidden in 1511 by conservative imams in Mecca
- Ban overturned in 1524 by order of the Ottoman Sultan
- Introduced to Europe through Malta (~16th century)
  - Prepared by Turkish slaves
- Introduced to Vienna after the Battle of Vienna (1683)
  - Using supplies from the defeated Turks
Coffee in the Americas

- Brought to the Caribbean as seedlings in 1720
  - Starting mass-cultivation in the South-American colonies
- Surge in popularity after the Boston Tea Party 1773
  - More patriotic than drinking tea
- Brazil as largest coffee producer since 1852

- Modern trends
  - Fair Trade: Increased prices to increase farmers’ share
  - Sugary coffee drinks can use cheaper beans
Cherry to Bean

Wet Process (washed)

- Sorted by immersion in water
  - Ripe fruit sinks, unripe floats
- Fruit is stripped from the seed
  - Remaining pulp removed by fermentation
- Sun or machine dried

Dry Process (unwashed)

- Traditional method
- Dirt, soil, leaves removed with a large sieve in a process called winnowing
- Unripe cherries removed by hand
- Sun dried
Milling

- Remove remaining layers of dry skin
- Clean the beans
- Sorting by size and density
- Removing discolored or defective beans
- Separating by color
Invented by German merchant Ludwig Roselius (1903)
- Steaming the coffee beans
- Using benzene as solvent to remove caffeine
- Later other solvents (for example ethyl acetate)

Swiss Water Method (1933 / 19800)
- Create Green Coffee Extract (GCE) out of beans
- Mix CGE with beans to migrate caffeine
- Use carbon absorbers to extract caffeine from CGE

In testing decaf can contain about 10mg of caffeine (compared to ~200mg of regular coffee)
**ROASTING**

- Roasting at around 175 °C
- Weight loss of about 15%
- Double the size
- Home roasting
  - Can be done in a pan or wok
  - Common until the early 20th century
Invented 1881 in France

Invented 1890 in New Zealand

Advanced process by Nescafé 1938

- Brewed with very hot water
- Concentrated by evaporation
- Freeze drying to remove water
  - Frozen and broken into small pieces
  - Warmed in a vacuum chamber
  - Water removed by condensation
- Half the caffeine content
Beans are crushed or “torn”

Multiple size settings

Good for most brewing

Similar to a blender

Cheaper than burr-grinder

Non-uniform results

Finest result

Required for Arabic or Turkish coffee
▪ French Press
  ▪ Also coffee plunger
  ▪ Patented by Italian designer in 1929

▪ Cold Brew for Ice Coffee
  ▪ Cold water
  ▪ Steeping for 12 to 24 hours
  ▪ Diluted with water before serving
- **Paper Coffee Filter**
  - Invented 1908 by German housewife Melitta Bentz
  - Clear, light-bodied coffee

- **Automatic Drip**
  - Wagomat as first electric drip coffee maker
  - Patented 1954 in Germany

- **Vietnamese Filter**
  - Metal filter
  - On condensed milk with ice
- **Espresso Machine**
  - Very hot water
  - High pressure
  - First patented 1884
  - Improved 1905

- **Aeropress**
  - Invented 2005
  - Coffee is steeped for a few seconds, then forced through a filter

- **Moka Pot**
  - Boiling water to create pressure
  - Water forced upwards through coffee
I have brought these for tasting
Thank You

Info Graphic by PopChart
https://popchart.co/products/the-compendious-coffee-chart