Papaver somniferum: The Opium Poppy
Family: Papaveraceae

Origin: Mesopotamia/ Mediterranean

Plant Characteristics:
- Height: 3-4 feet
- Colors: White, purple, pink
- Seeds: About 200 seeds per pod
- Flowers: Hermaphroditic
- Season: March-May

Additional Facts: Lacticifer

Poppy Goddess found on Crete dated back to 3,500 years ago
Uses of *Papaver somniferum*

- Medicinal Purposes
  - Morphine, Codeine, Narcotine, Thebaine

- Illicit Purposes
  - Opium and Heroin

- Food
  - Poppy seeds, oil, cake and flour; salads

- Ornamentals and Decorations
  - Flowers; gilded and painted capsules

- Aphrodisiac, Baby Rattles, Bird Food, Cooper Indicator, Fuel, Currency
Medicinal Purposes

**Morphine**
- Can be between 3-23% of opium content
  - Principle alkaloid compound in opium
- Isolated discovery by F.W. Sertturner in 1805
- Primarily used to relieve pain by acting directly on the central nervous system
- Burst onto the scene with invention of hypodermic needle in 1853 (Franco-Prussian War 1870)
- Used as a cure for opium and heroin addiction, until found to be equally addictive

**Codeine**
- Can be between 0.1-4% of opium content
- Most codeine extracted from morphine through O-demethylation, but can also be obtained from opium itself
- 8-12% the strength of morphine (200 mg of codeine ≈ 30 mg of morphine)
- Most widely used opiate and drug in the world; commonly used with Tylenol and Aspirin
Illicit Purposes

**Heroin**
- Diacetylmorphine (heroin) synthesized from morphine in 1874; used by H. Dresser for the Bayer Company in 1896
  - Originally used to treat tuberculosis
- Acetic anhydride along with about 5 other chemicals are used in transforming morphine into heroin (2x more active)
- Thought to be an effective treatment against morphine addiction, but highly addictive

**Opium**
- Substance that can be used directly from extracted latex product of the unripe seedpod of the opium poppy (lancing)
- Opium is a combination of chemicals, not actually a chemical compound of its own
  - Contains up to 25 alkaloids
  - A dozen are used within drugs on the market (also papaverine, narcotine, and thebaine)
- Administered as an effective treatment for chronic alcoholism
- Still used in rural areas as a source of medicine, currency, food, clothing
  - Hill tribe people in S.E. Asia (Laos and Burma) are leading producers
Illicit Purposes

Heroin

Opium
Opium Poppy Production Today

Areas still producing opium poppies today