

Who is Gregor Mendel?



Figure 1.1: Gregor Mendel (Wikipedia) Source:

http://en.wikipedia.org/wiki/Gregor_Mendel

Gregor Johann Mendel (Figure 1.1), (July 20, 1822 - January 6, 1884), an Augustinian monk is often called "**The Father of Genetics**" for his study of the inheritance of certain traits in pea plants. Mendel grew pea plants in a small monastery garden (Figure 1.2) in St Thomas. Mendel showed that the inheritance of these traits follows particular laws, which were later named after him. He discovered the Laws of inheritance: **Law of Segregation** and **Law of Independent Assortment**. In 1866 Mendel published his work on heredity in the Journal of the Brno Natural History Society but his work at that time was not understood. It was later in 1900 after Mendel died that his work was re-discovered and appreciated.



Figure 1.2: Mendel's garden: © 2002 by Griffiths et al. Source:
http://www.mun.ca/biology/scarr/Mendels_Garden.html

Mendel's Experiment on Peas.

Mendel hypothesized that the determinants of the inherited traits remained discrete during hybridization, rather than being blended.

Why Mendel choose Peas?



Figure 2.1: *Pisum sativum* © 2008 UrbanGardenCasual, Treg, LLC. Source:
<http://urbangardencasual.com/2009/08/27/grow-your-own-peas/>

Mendel chose garden Peas, *Pisum sativum* (Figure 2.1) as his experimental organism because:

Garden peas were easy to cultivate in a large amount, and had a relatively short life cycle.

- They had discontinuous characteristics such as flower color and pea texture.
- They are hermaphrodites therefore it was easy to control pollination by keeping away foreign pollen ensuring cross-fertilization.

Mendel studied seven discrete traits with contrasting form in Peas as summarized in Figure 2.2. The figure summarizes the dominant and recessive traits for each characteristic.

Characteristic	Dominant Trait	Recessive Trait
Flower color	Purple	White
Flower Position	Axial	Terminal
Seed color	Yellow	Green
Seed Shape	Round	Wrinkled
Pod Shape	Inflated (Full)	Constricted (Flat)
Pod color	Green	Yellow
Plant Height	Tall	Dwarf

Shivangini, 2010

Figure 2.2: Seven traits Mendel studied in Peas.

Reference:

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