

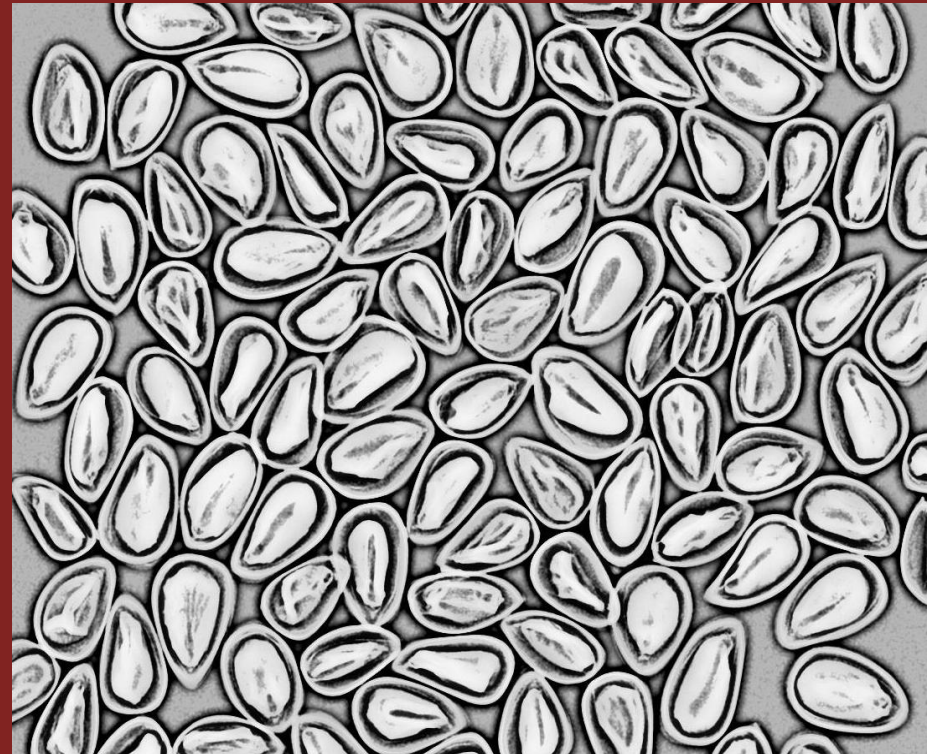
# It's complicated:

How life history traits  
affect plant genetic  
architecture

Jodie Krakowski

MFLNRO

July 2013



# First Things First

- **Genetic architecture**

total diversity



# First Things First

- **Genetic architecture**

total diversity

adaptive



neutral



# First Things First

- **Genetic architecture**

total diversity

within vs. among populations



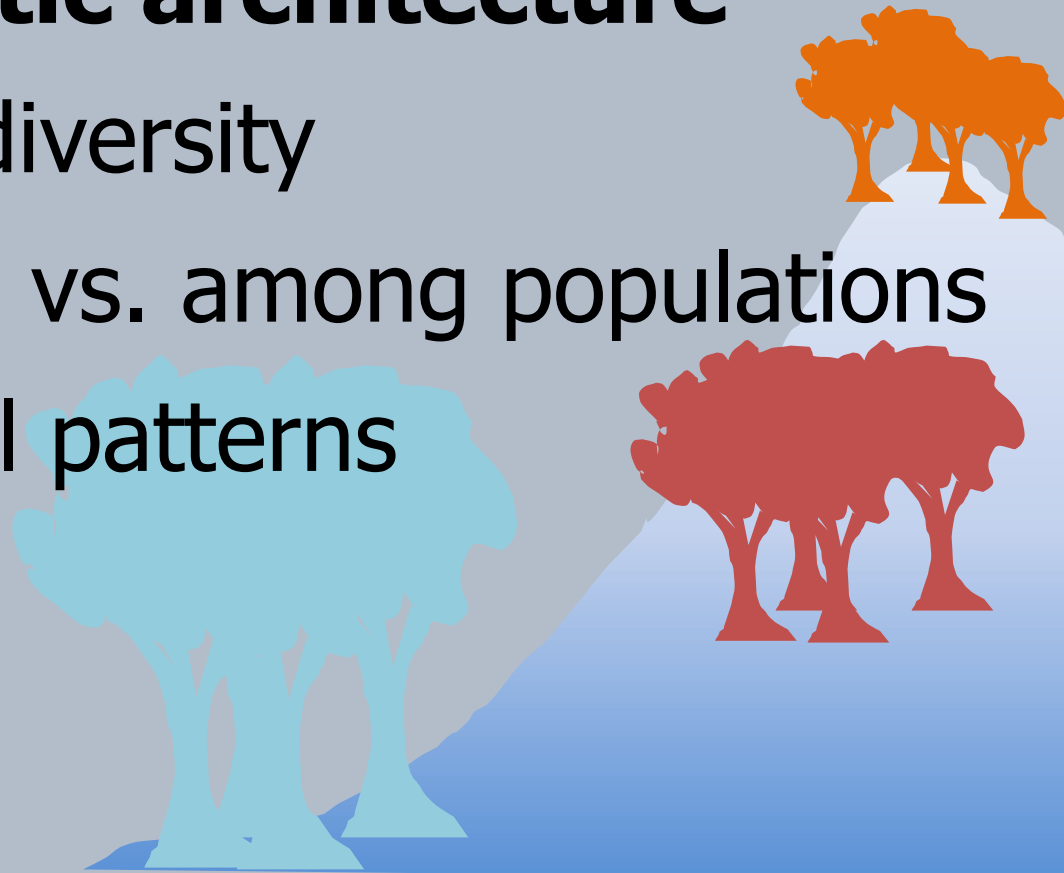
# First Things First

- **Genetic architecture**

total diversity

within vs. among populations

spatial patterns



# First Things First

- **Genetic architecture**

total diversity

within vs. among populations

spatial patterns

- **Mating system**

Hey, go pollinate yourself!

Self-pollinating

mixed mating

outcrossing

# Life history traits

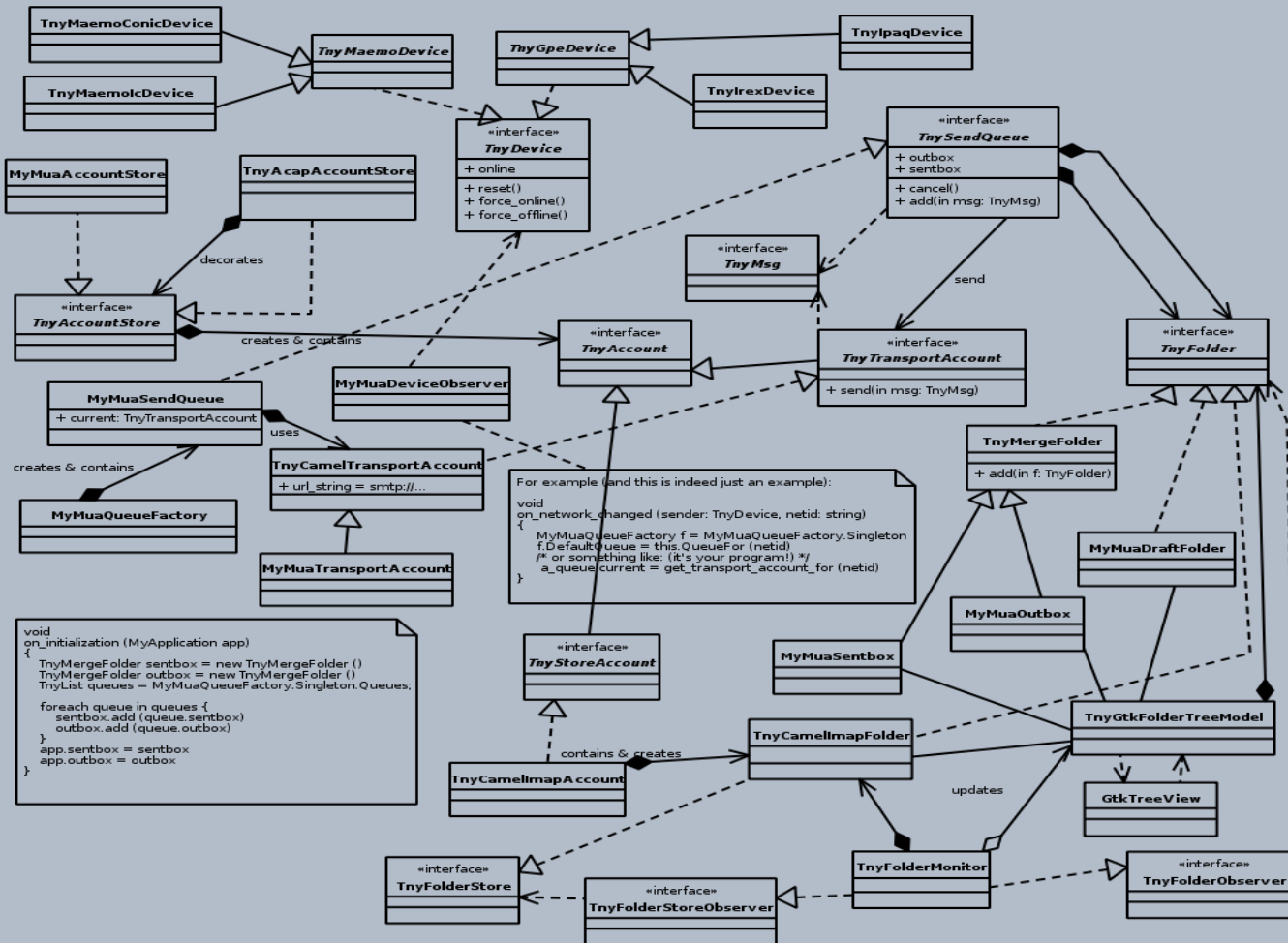
- Mating system
- Taxonomy
- Life span
- Life form
- Successional status
- Geographic range
- Spatial distribution
- Dispersal (seed & pollen)

# Other key influences

- Glaciation
- Disturbance
- Soil & geology
- Hybridization
- Management
- Genetic marker
- Sample breadth & size
- Phenotypic plasticity
- Epigenetics



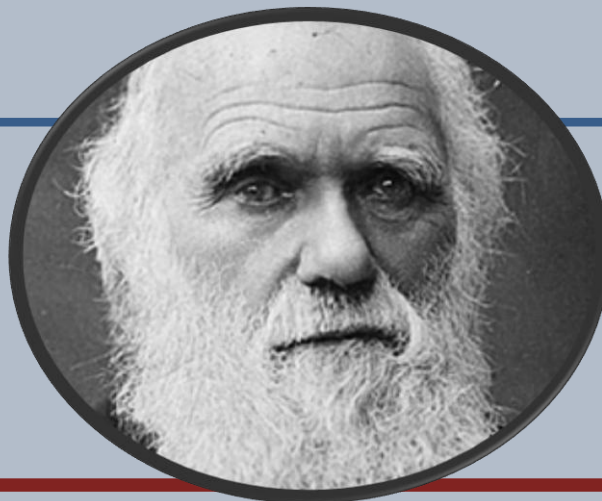
# Like I said...



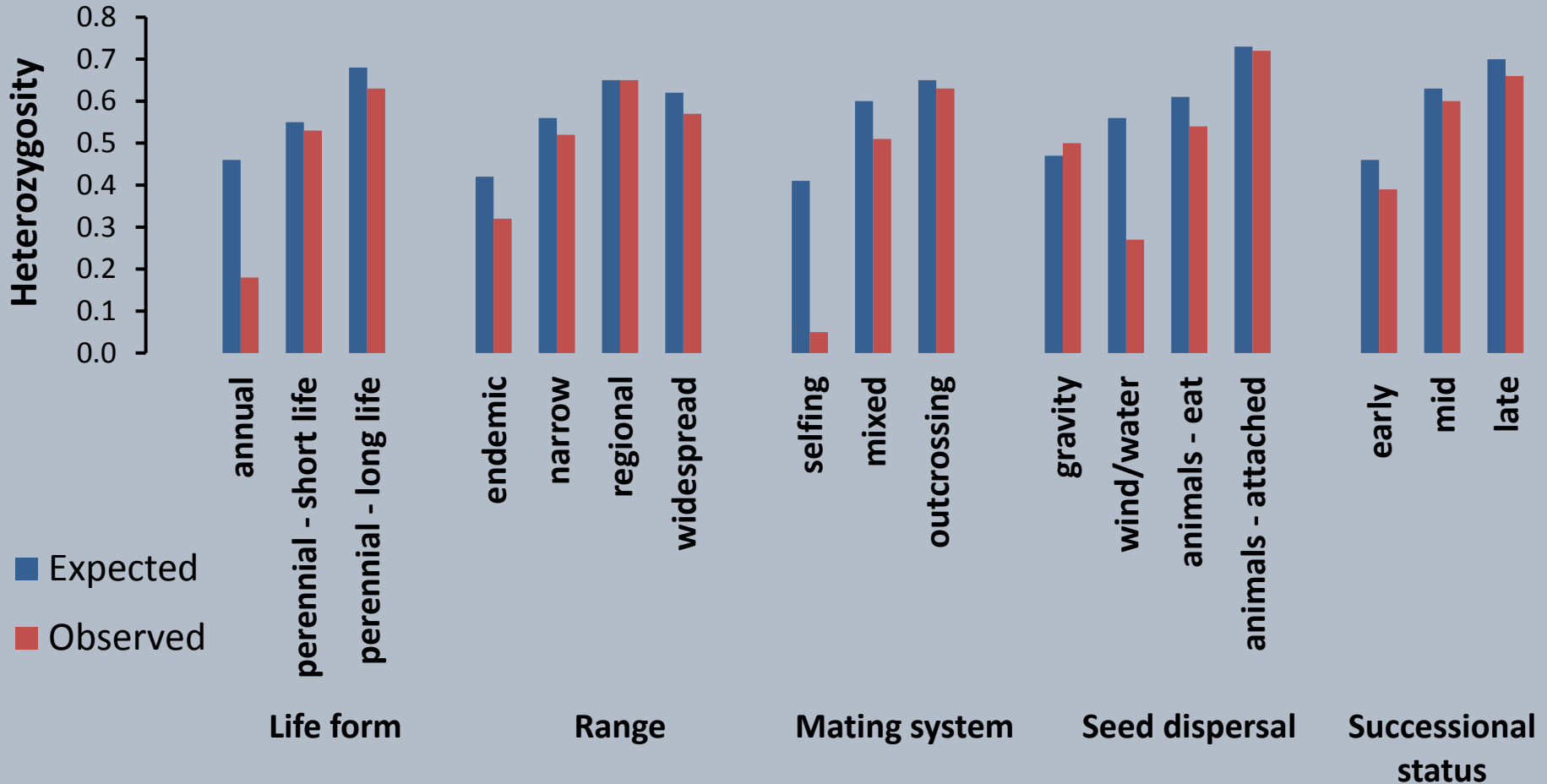
# Some key patterns

***THESE ARE NOT HARD RULES -  
JUST GENERAL TRENDS!***

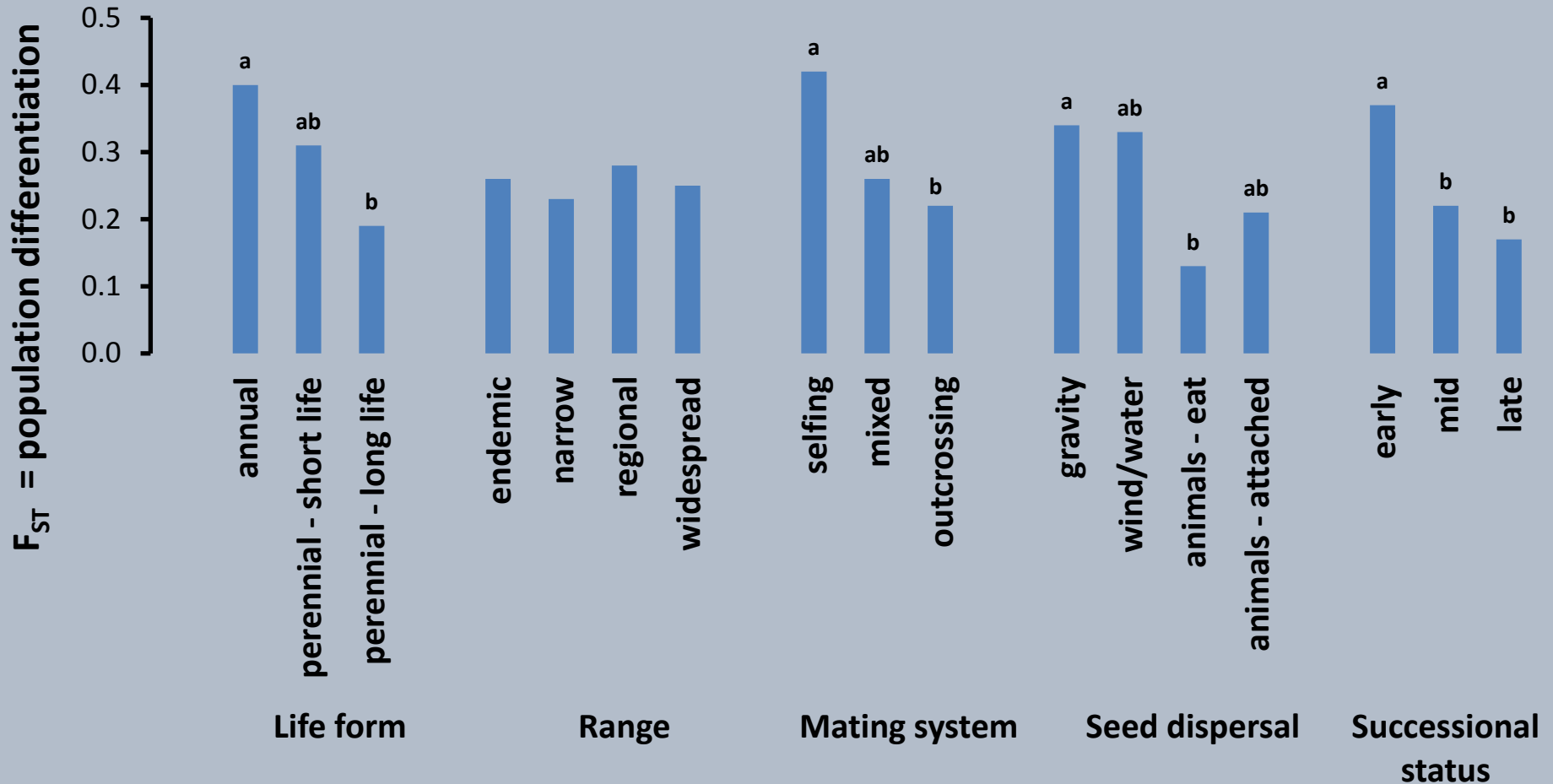
***Darwin says: NATURE'S RULE IS  
VARIABILITY***



# Some key patterns



# Some key patterns



# Applications

---

- **Forest management**  
Regulated in BC
  - **Restoration**
  - **Impacts & resilience**
  - **Conservation**  
Ex situ collections  
In situ gap assessments
-



*That's all Folks!*