Anderson Academy

BIO 140 B · Binomial Nomenclature

Extracurricular: Biology

Lecture 0: Course Overview

Binomial Nomenclature = A simple idea

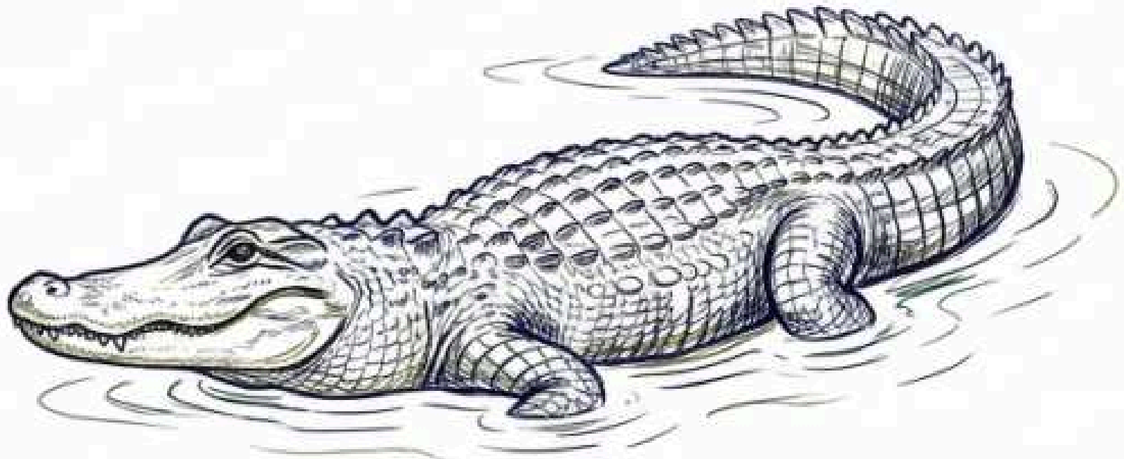
Two words (Latin / Latinized Greek) for every living thing

Seattle marsh:



Ardea herodias

Florida pond:



Alligator mississippiensis

Recognized by scientists everywhere.

Starts from Zero: No biology or Latin needed!

Skills you will unlock:

- ✓ Meaning of *genus* and *species*
- ✓ Why names are *italicized*
- ✓ How to pronounce names without fear
- ✓ Decoding the parts of a name
- ✓ Why names sometimes change

Works on any plant, animal, or fungus globally.

Five Places on One Route:



1. Seattle & Puget Sound
2. The Villages & Central Florida
3. Costa Rica (Rain/Cloud forests)
4. Patagonia (Windswept South)
5. Buenos Aires, Paraná Delta & Pampas

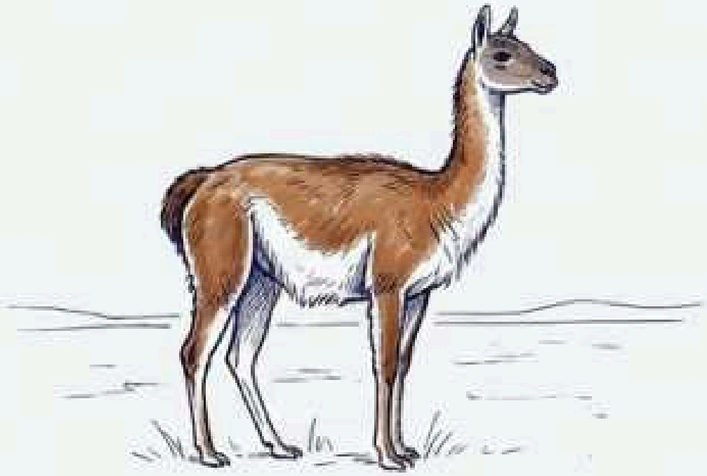
From a Blur to a Memory:



Sandhill crane on a lawn



Sloth in a tree



Guanaco on the steppe



Rufous hornero on a lamppost

Why Latin? Common names are slippery.



Cougar

Mountain Lion

Puma

León

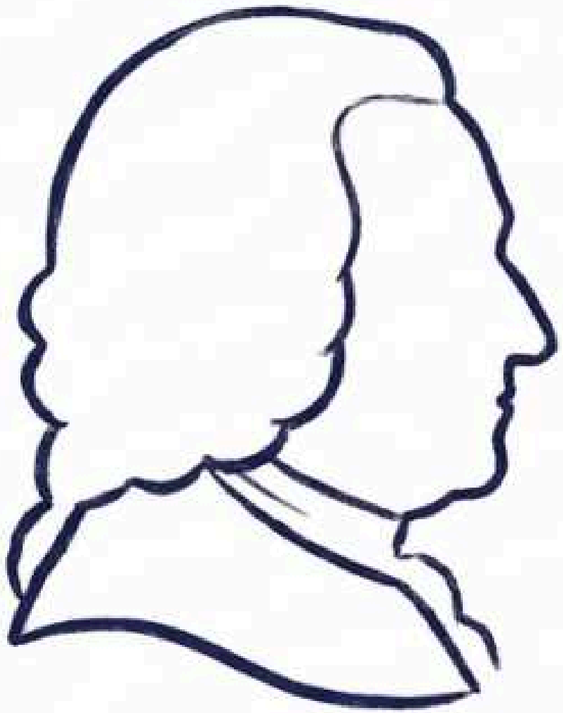
Florida Panther

= All are exactly one label:

Puma concolor

Stays the same from Seattle to Tierra del Fuego.

Lecture 1: The Foundation



Carl Linnaeus
(Swedish naturalist, 1750s)

Writing Rules:

Italics

Capital first word (*Genus*)

Small second word (*species*)

Author's name (sometimes follows)

Dummy name

Lecture 2: Reading a Name



Latin & Greek roots



Ladder of larger groups

Honorifics (e.g., Archibald Menzies)

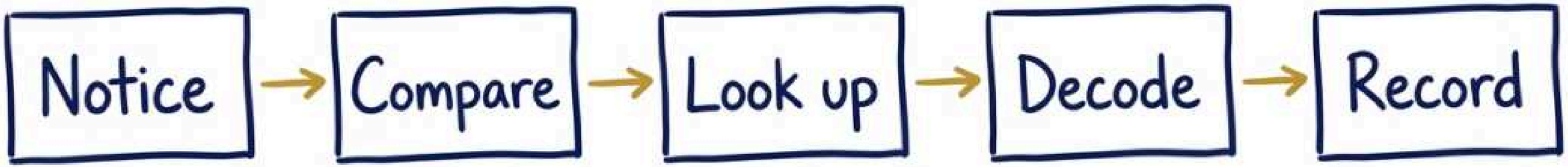


Rule books & overnight name changes

Lectures 3-6: The Journey

Seattle → Florida → Costa Rica → Patagonia → Buenos Aires

The Field Method:

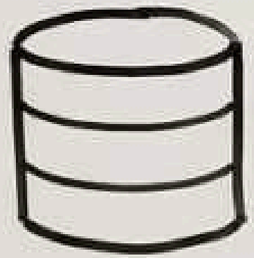


Decode as We Go:

Genus : epithet

- Split into two parts
- Translate the roots
- Perfect description?
  - Honorific? Puzzle?

Checked against standard databases:



ITIS



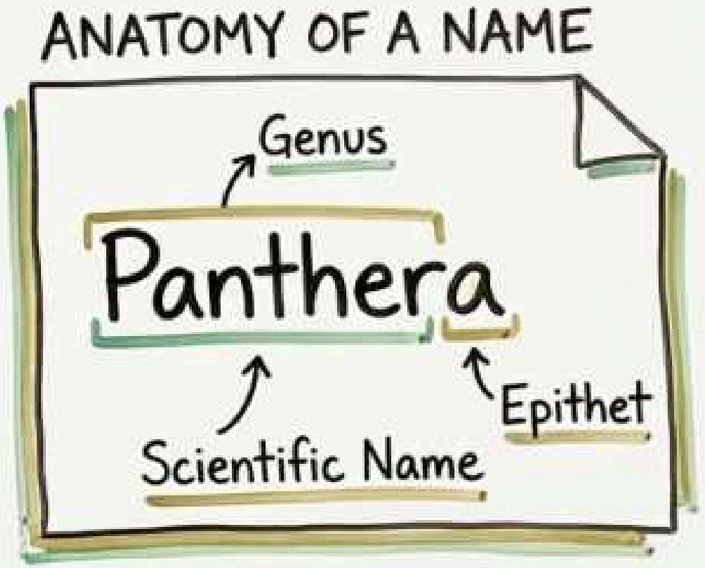
GBIF

Navigating the Course:

Paragraph numbers (e.g., 3.4 = Lecture 3, Paragraph 4)

Reference graphics:

- Anatomy of a name
- Ladder of ranks & Root decoder
- Regional panels & Cheat sheet



Let's begin!