



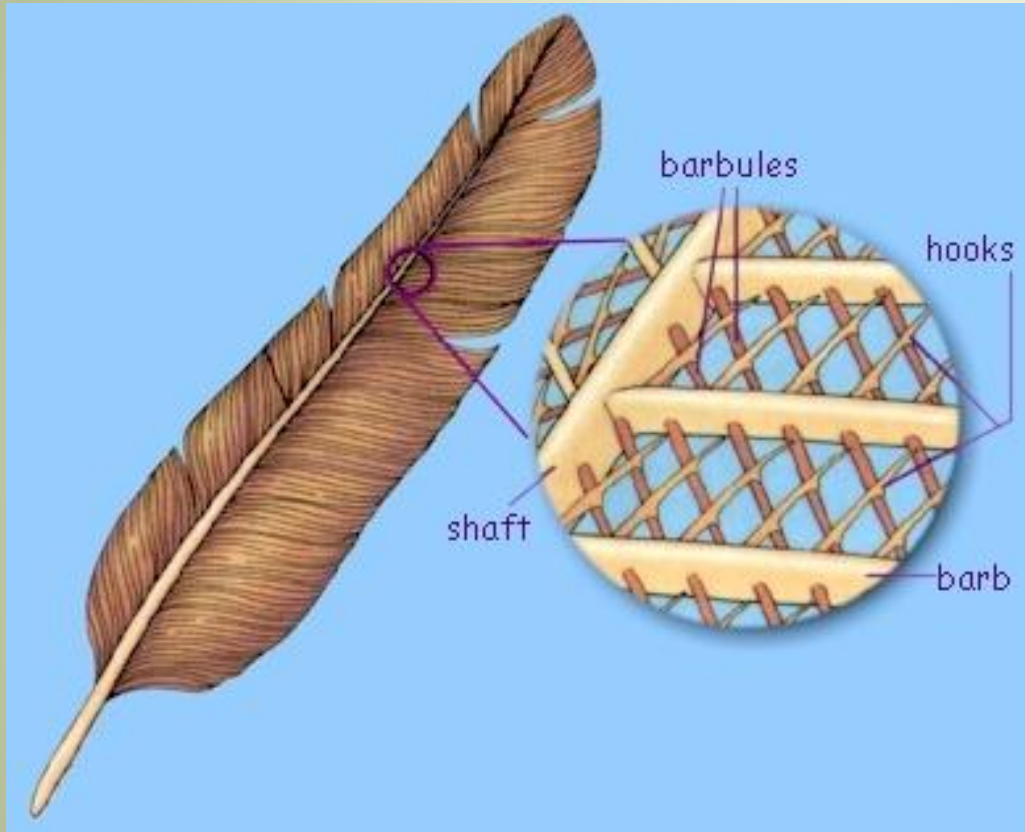
Feathers

Delia Lister

Pittsburg State University

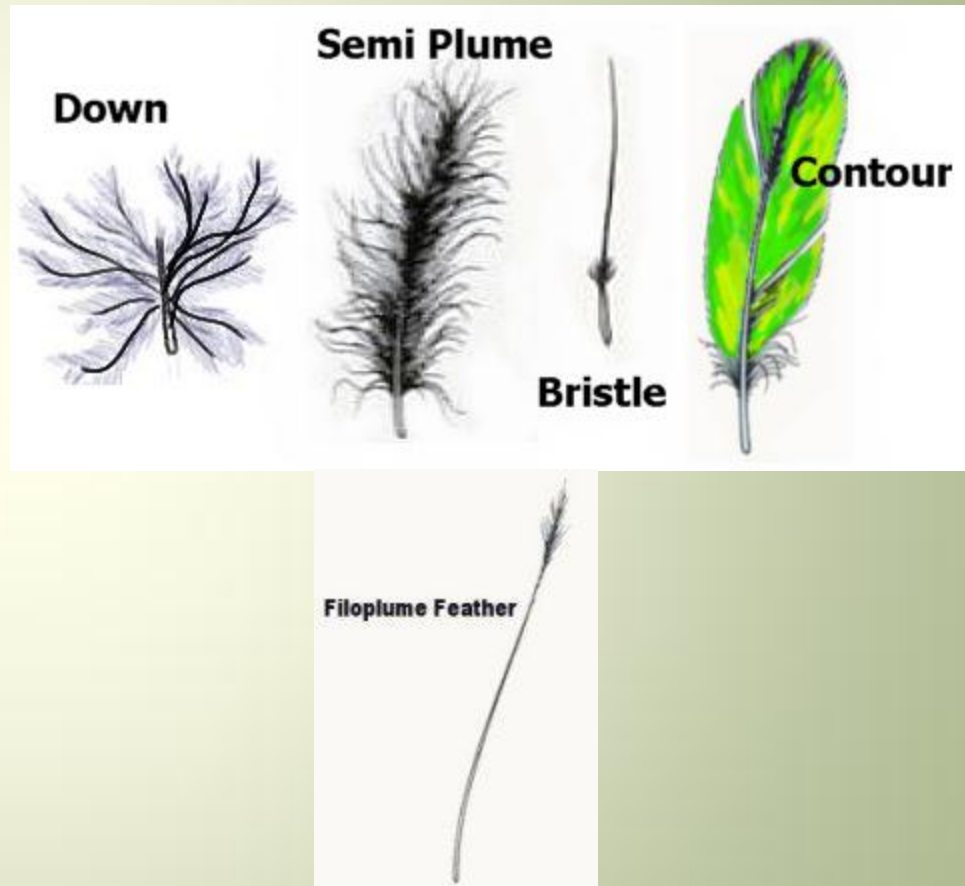
Nature Reach Program

Anatomy of a Feather

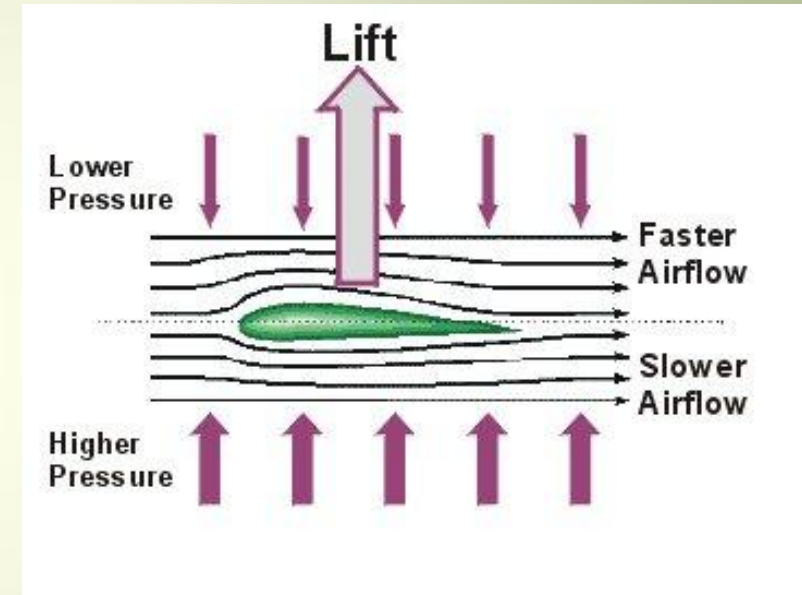
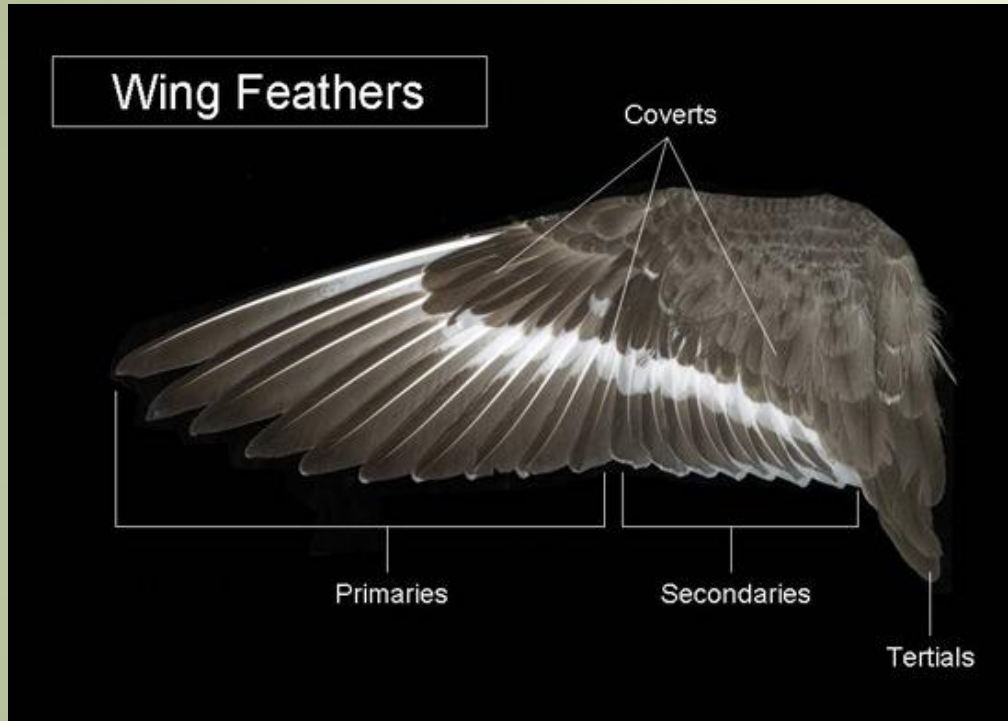


Feather Types

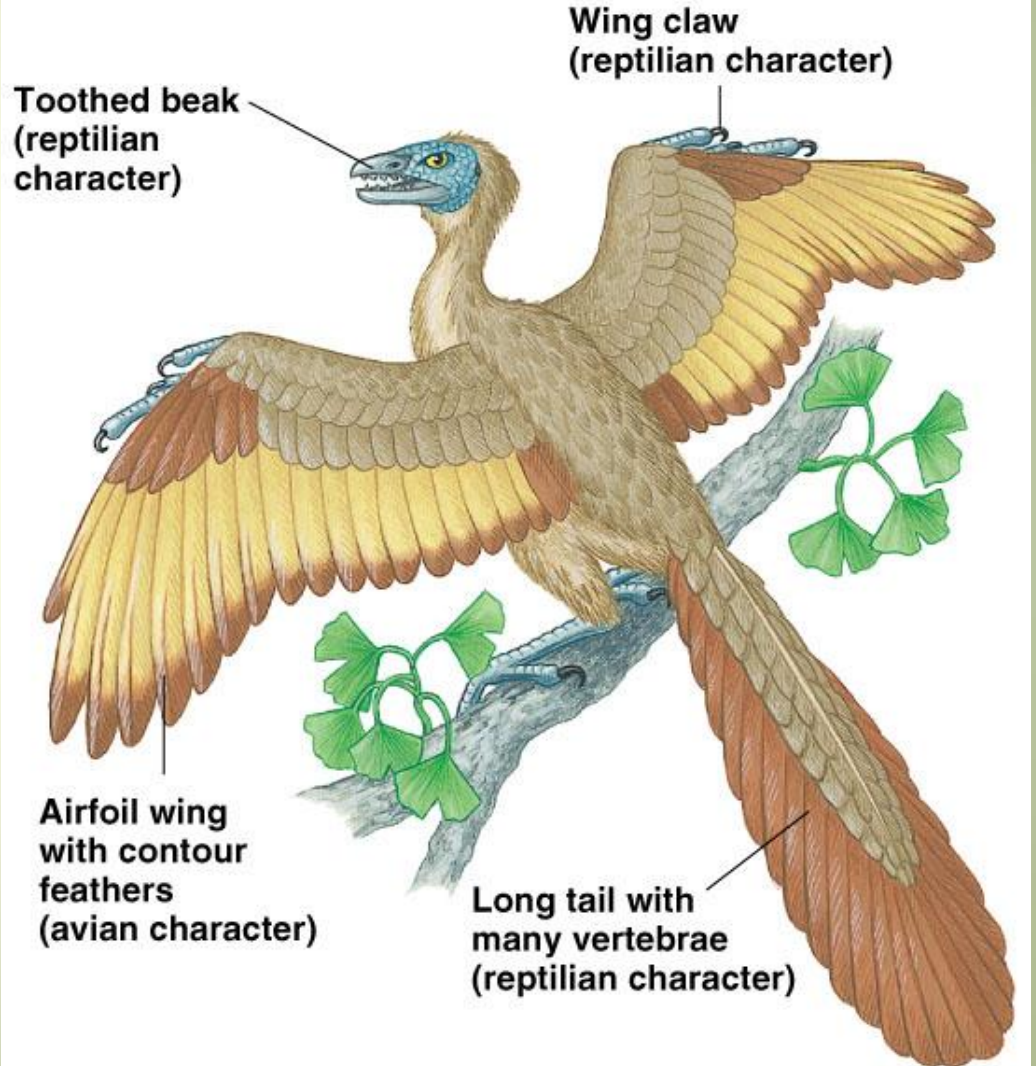
- Contour—covers the body
- Semiplume—insulation
- Down—insulation
- Filoplume—“whiskers”
- Bristle—head/face
- Flight--wing feathers



Feathers and Flight



Archaeopteryx

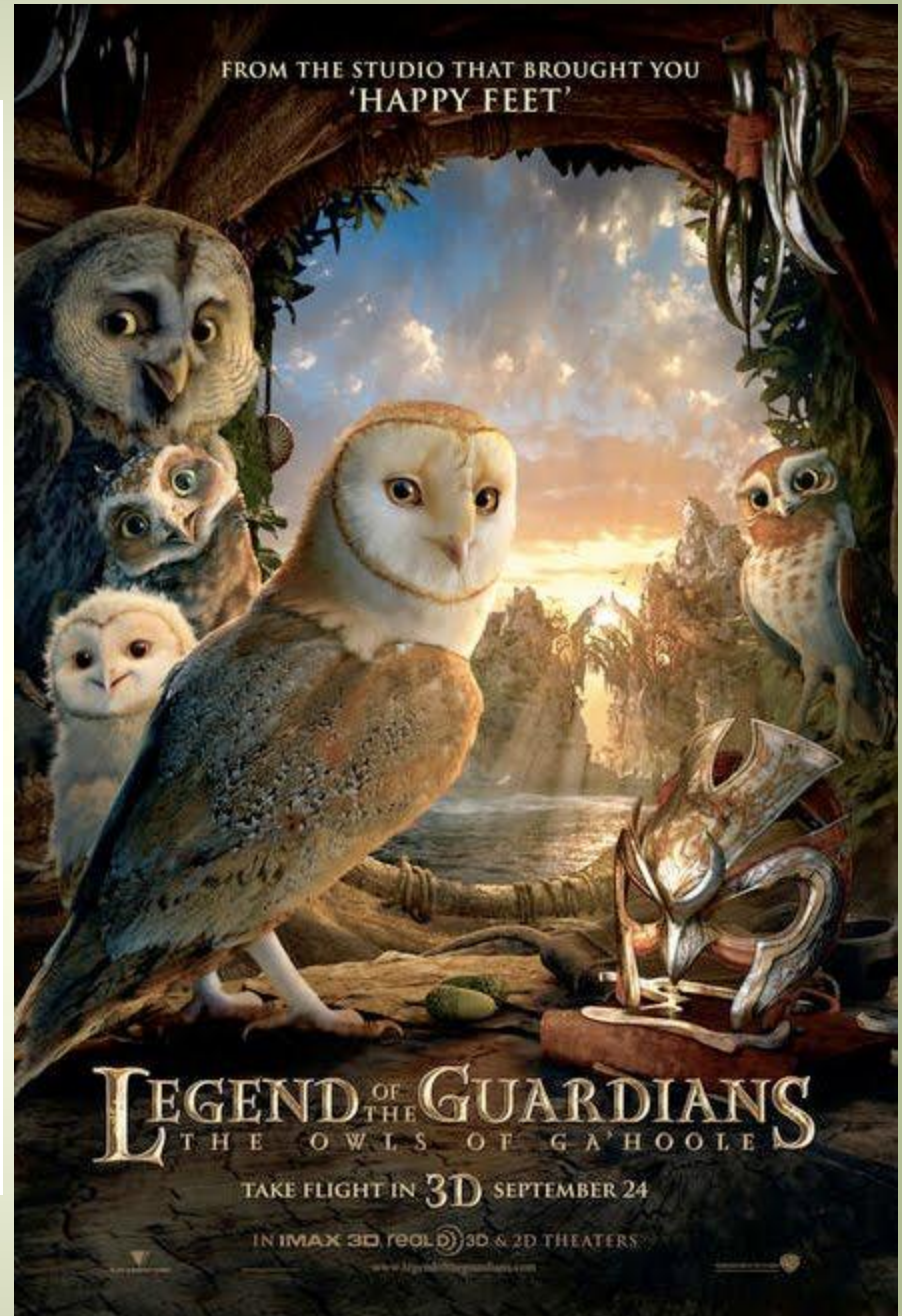


Sinosauropteryx



Birds & Feathers in Our Culture





The Wise Old Owl Says:
 "Be Queen of the block
 and save money too
 ... treat the kids to

Brach's Halloween Candies

When youngsters cry "Trick or Treat", they want the best candy. That's why it's smart to serve Brach's! All the magic, always, exciting, flavors and exciting colors make Brach's the Halloween candy tradition. Brach's them with pure candy and pure fun... or prizes that let you buy plenty. So be a smart shopper and Queen of the block, too... buy Brach's Halloween candies.

FREE Look for Brach's "Candy Owl" marks on many of the Brach's "Trick or Treat" Candies.

Brach's makes **59** kinds of Halloween Candies



the wise bird flies

TWA'S ECONOMY
Sky-Tourist
 SERVICE
 COAST TO COAST

TWA TRANS WORLD AIRLINES



MILLS OWL

New, 5-ball Novelty Table.

NATIONAL
GEOGRAPHIC

Can We Fly?

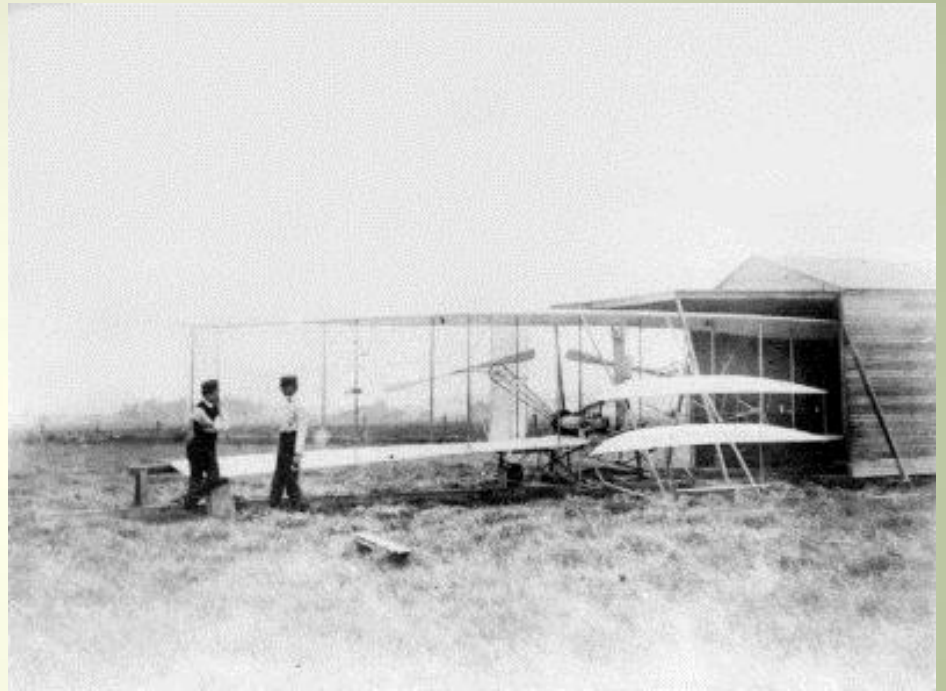


SAVING ORPHAN ELEPHANTS

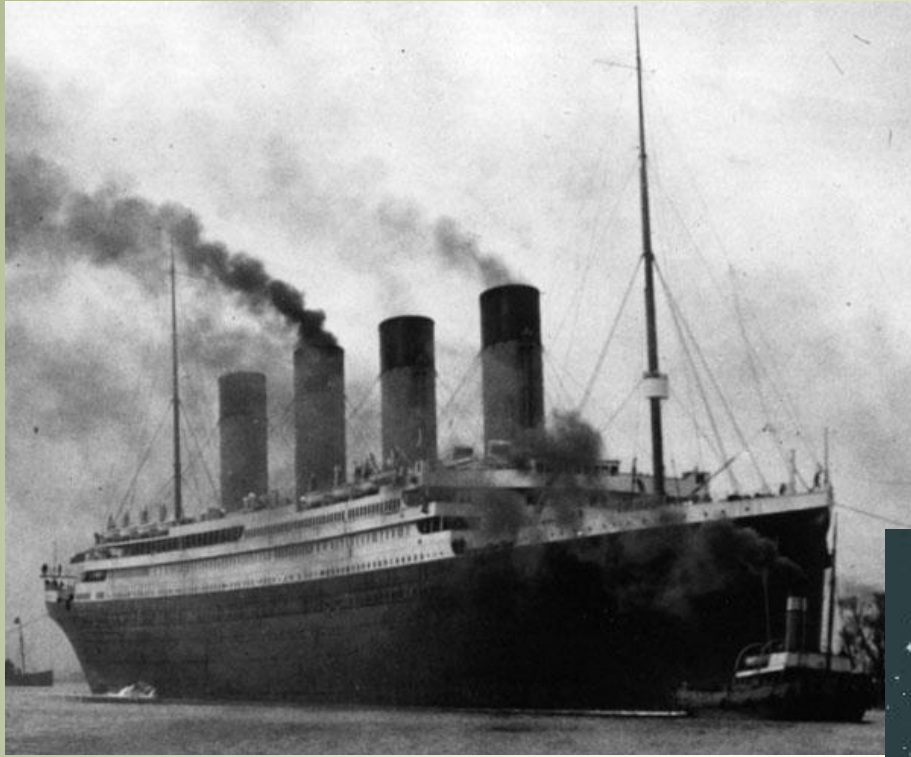
How Ants Can Save Your
Flour from Getting Moldy

HORNBILLS: FOREVER WILD

Biomimetrics!



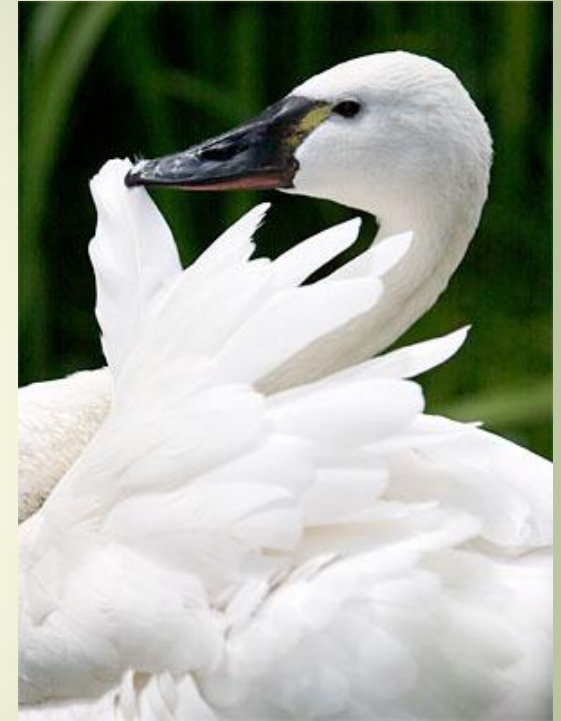
- <http://www.youtube.com/watch?v=hecXupPpEgo>







Feather Fun Facts



- <http://www.youtube.com/watch?v=7FHSQQMnOko>

Feather Colors

- Pigments OR
- Light refraction caused by structure
 - Hummingbirds
 - Most blues

