

Encyclopedia of Life Version 3

New Tools for the Exploration of Biodiversity Knowledge



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Encyclopedia of Life

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Encyclopedia of Life Version 3

New Tools for the Exploration of Biodiversity Knowledge



- 2008** Encyclopedia of Life launched
- 2012** EOL Version 2 released
- 2014** EOL TraitBank launched

Encyclopedia of Life Version 3

New Tools for the Exploration of Biodiversity Knowledge



eol.org

1.3 M taxon pages

10 M trait records

Global access to knowledge about life on Earth



The Paleobiology
Database

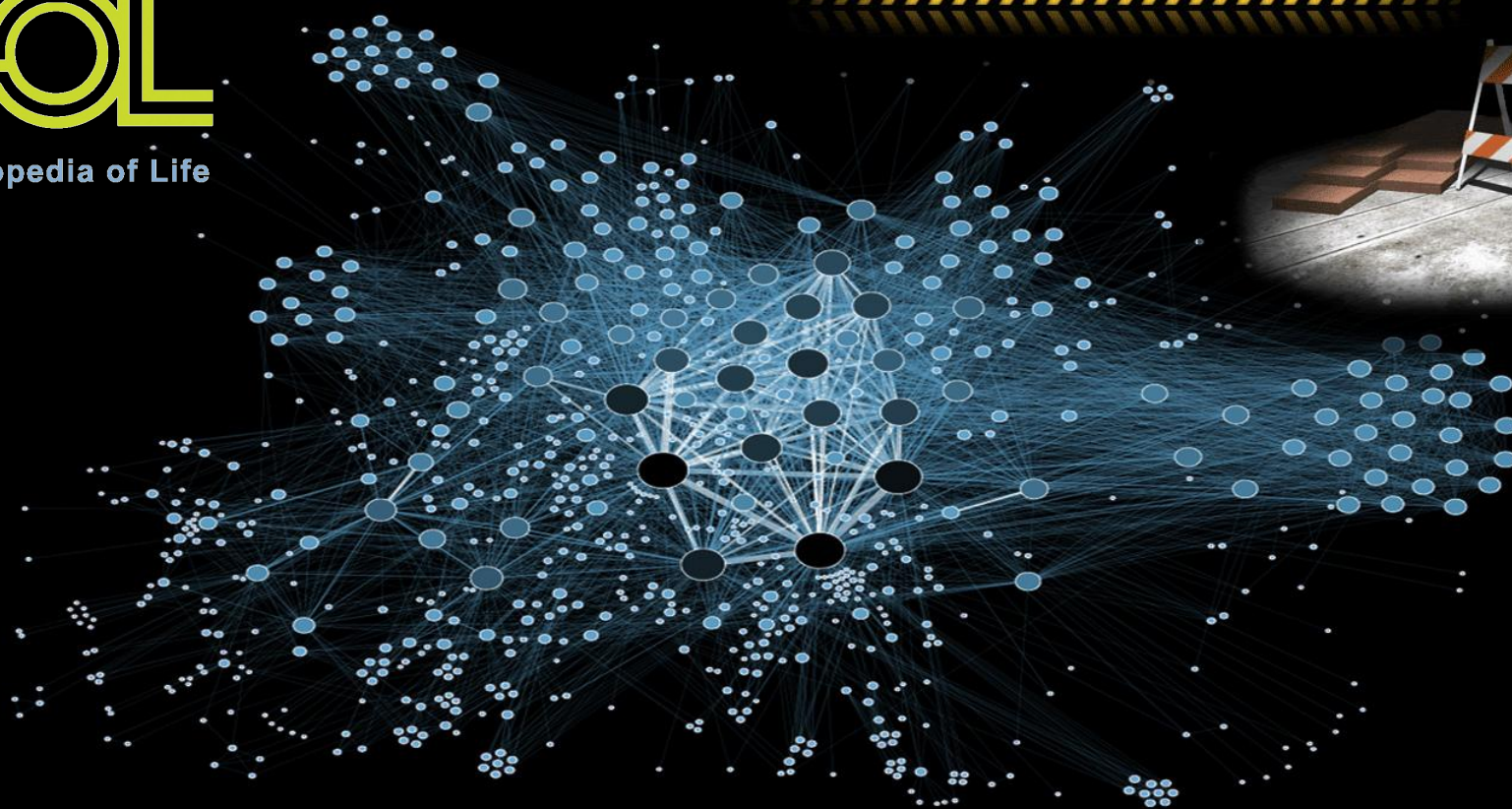


TraitBank





Encyclopedia of Life



EOL Version 2



Orcinus orca

Killer Whale [learn more about names for this taxon](#)

[Overview](#) [Detail](#) [Data](#) [275 Media](#) [10 Maps](#) [Names](#) [Community](#) [Resources](#) [Literature](#) [Updates](#) [Worklist](#)



Orcinus orca **TRUSTED**
 Creator: Christopher Michel
Source: [Wikimedia Commons](#)

[see all media](#)
[see all maps](#)

EOL has data for 39 traits [see all](#)

population trend	Unknown
habitat	aquatic habitat bay beach more
body length (VT)	2.37 m (average, newborn animal) 8.65 m (average, adult)
body mass	158.75 kg (average, newborn animal) 5,628.76 kg (average, adult)
home range	112,249.72 km ² (average) 79,244.72 km ² (average)
clutch/brood/litter size	1 (average)
onset of fertility	10.35 years (female) 13.5 years (male) 13.66 years (average)
age at first birth	14.94 years (average, female)

IUCN threat status: [Data Deficient \(DD\)](#)

Brief Summary

[read full entry](#)

[learn more about this article](#)

Description

Killer whales live in all the oceans between the Arctic and Antarctic ice packs. Given this enormous range and their predatory lifestyle, it is not surprising that they are adaptable, with excellent memory, intelligence, and a capacity for social complexity. They tend to live in pods of fewer than 10 animals, built around a stable core of 2-3 generations of related females - mothers, daughters, sisters, and aunts. This is shown by genetic studies of pods living in the same area. Adult females without calves, and adult males, may help care for and train younger whales to hunt, especially when a reproducing female is rearing more than one offspring. Cooperation extends to hunting, and these animals are known to attack and drown larger whales by swarming them from all sides. Orcas may even beach themselves temporarily to snatch seals, or knock them off ice floes by ramming the ice. Their prey includes larger marine mammals, fish, birds, and cephalopods.

Classification

Classification from [Integrated Taxonomic Information System \(ITIS\)](#) selected by [Renato Agazzi](#) - [see more](#).

[Animalia](#) ±
[Bilateria](#) ±
[Deuterostomia](#) ±
[Chordata](#) ±
[Vertebrata](#) ±
[Gnathostomata](#) ±
[Tetrapoda](#) ±
[Mammalia Linnaeus, 1758](#) ±
[Theria Parker and Haswell, 1897](#) ±
[Eutheria Gill, 1872](#) ±
[Cetacea Brisson, 1762](#) ±
[Odontoceti Flower, 1867](#) ±
[Delphinidae Gray, 1821](#) ±
[Orcinus Fitzinger, 1860](#) ±
Orcinus orca (Linnaeus, 1758)

Cucujus clavipes

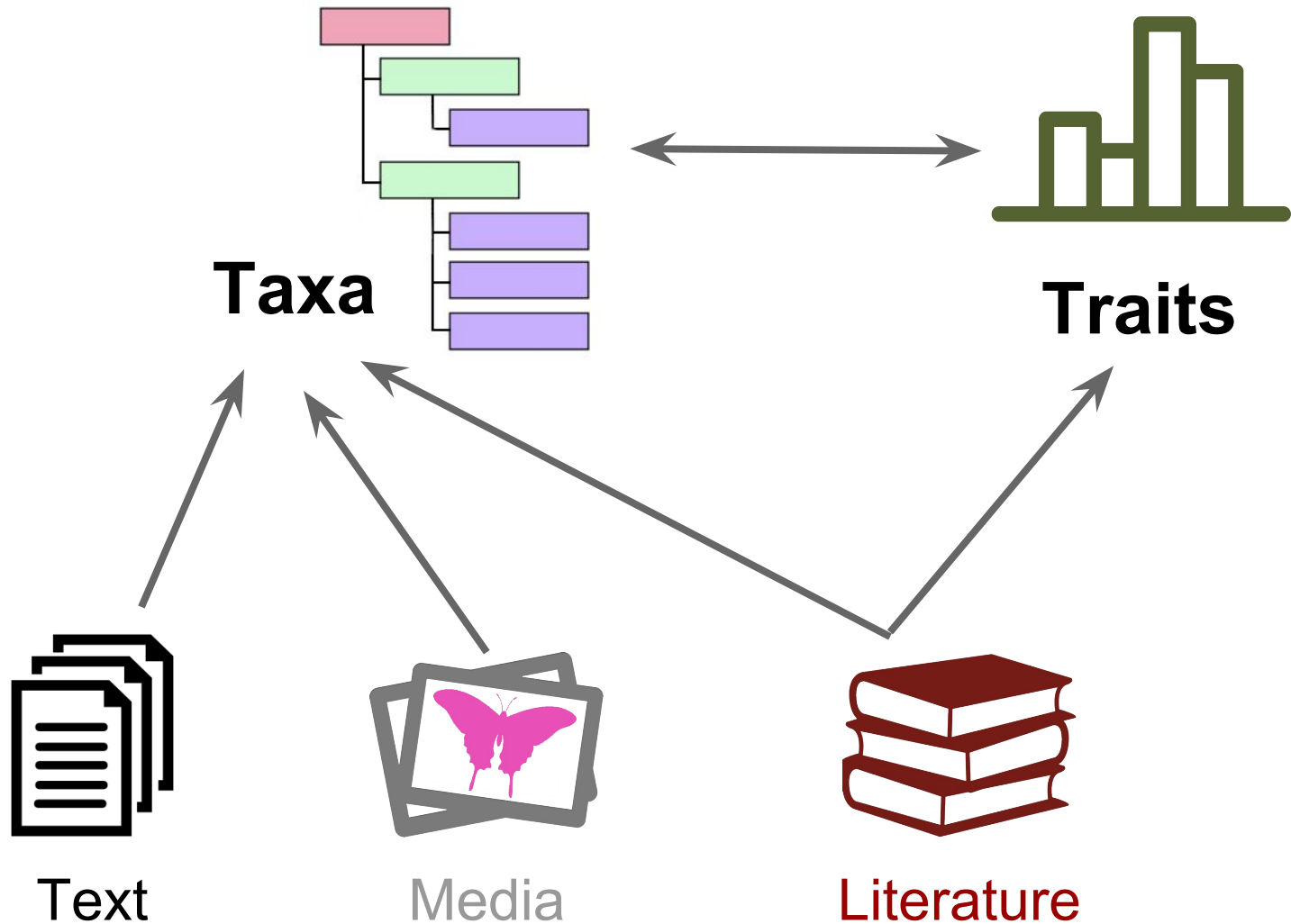
Red Flat Bark Beetle

EXTANT	NEARCTIC	TERRESTRIAL	CARNIVORE
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body length	10-14 mm (adult)
distribution	Canada, United States
biome	temperate broadleaf & mixed forests
environment	deciduous forest, dead wood
trophic strategy	predation (adult, larva)
primary diet	insects

EOL Version 3

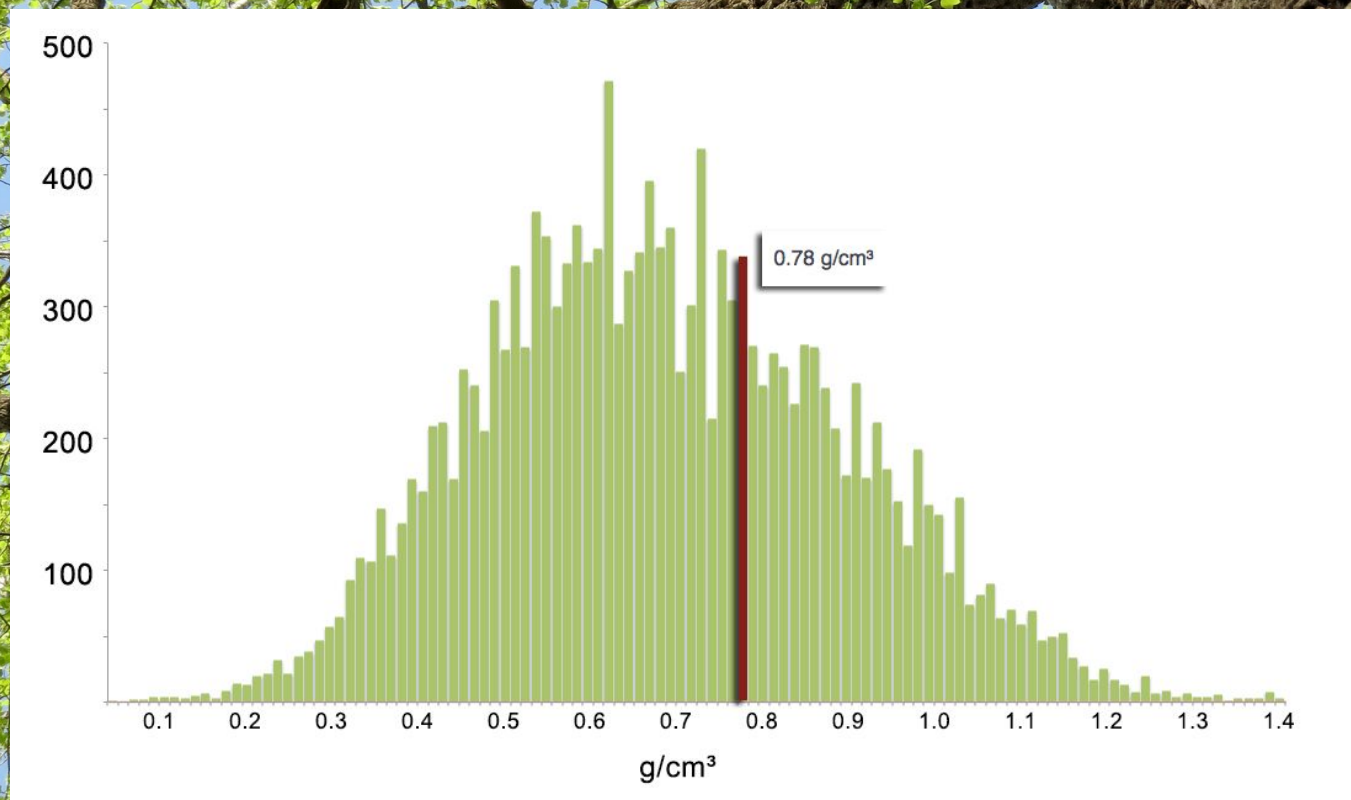









Wood Density

secondary xylem volumetric density

The [volumetric density](#) of a [secondary xylem](#) (wood).

http://purl.obolibrary.org/obo/TO_1000002



-  **Maclura tinctoria**
[Fustic Tree](#)
-  **Lophira alata**
[Azobe](#)
-  **Olea capensis**
[Ijzerhout](#)
-  **Myroxylon balsamum**
[Balsam](#)
-  **Acacia gerrardii**
[Red Thorn](#)
-  **Acacia stenophylla**
[River Cooba](#)
-  **Acacia georginae**
[Georgina Gidyea](#)

EOL Version 3



The OBO Foundry

Open Biological and
Biomedical Ontologies

envo	environments
oba	biological attributes
pato	phenotypic quality
to	plant traits
uberon	multi-species anatomy
vt	vertebrate traits
ro	relations
uo	units of measurements
stato	statistics
chebi	chemical entities
gaz	gazetteer

www.obofoundry.org

EOL Version 3: complex queries

Which plants

are **trees**

have **yellow flowers**

are **>10 m tall**

and have **wood density >0.5 g/cm³?**

EOL Version 2

Animalia +

Chordata +

Mammalia +

Cetartiodactyla +

Physeteridae +

Kogia

Animalia +

Chordata +

Vertebrata +

Gnathostomata +

Tetrapoda +

Mammalia Linnaeus, 1758 +

Theria +

Cetartiodactyla

Cetancodonta

Cetacea Brisson, 1762 +

Odontoceti Flower, 1867 +

Physeteridae +

Kogia Gray, 1846

Animalia +

Chordata +

Vertebrata +

Mammalia +

Eutheria +

Laurasiatheria +

Cetartiodactyla +

Whippomorpha +

Cetacea +

Odontoceti +

Kogiidae +

Kogia Gray, 1846

Animalia +

Chordata +

Mammalia +

Cetacea +

Kogiidae +

Kogia



EOL Version 3

Reference Taxonomy

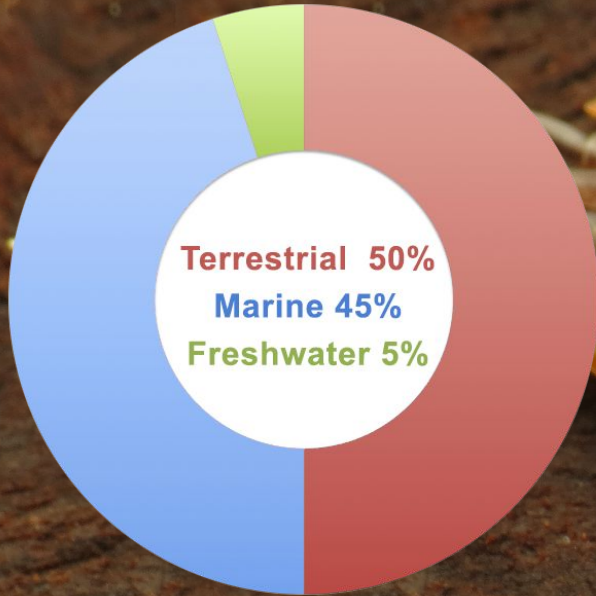


- Life
 - Cellular Organisms
 - Archaea
 - Bacteria
 - Eukaryota
 - Amoebozoa
 - Archaeplastida
 - Chloroplastida
 - Chlorophyta
 - Nematophyceae
 - Progymnospermophyta
 - Pteridospermatophyta
 - Streptophyta
 - Charophyceae
 - Chlorokybophyceae
 - Coleochaetophyceae
 - Embryophytes
 - Klebsormidiophyceae
 - Mesostigmatophyceae
 - Zygnemophyceae
 - Glaucophyta
 - Rhodophyceae
 - Excavata
 - Opisthokonta
 - Aphelidea
 - Choanomonada
 - Corallochytrium
 - Filisterea
 - Ichthyosporea
 - Metazoa
 - Bilateria
 - Deuterostomia
 - Protostomia
 - Chaetognatha
 - Ecdysozoa
 - Nematoda
 - Nematomorpha
 - Panarthropoda
 - Scalidophora
 - Spiralia
 - Xenacoelomorpha
 - Cnidaria
 - Ctenophora
 - Placozoa
 - Porifera
 - unplaced extinct Metazoa
 - Nucletrmycea
 - Fonticulida
 - Fungi
 - Nucleariida
 - Rozellida
 - SAR (Stramenopiles, Alveolates, Rhizaria)
 - unplaced Eukaryota
 - Viruses

Isopoda

Aquatic isopods and woodlice

10,134 living species
46 extinct species
1,587 genera
131 families



body length 0.3 mm - 50 cm
distribution global
max elevation 4,800 m
max depth 7,280 m

- DETRITUS FEEDERS
- BROWSERS
- FILTER FEEDERS
- PREDATORS
- PARASITES

Moneilema gigas

Cactus Longhorn Beetle

EXTANT

NEARCTIC

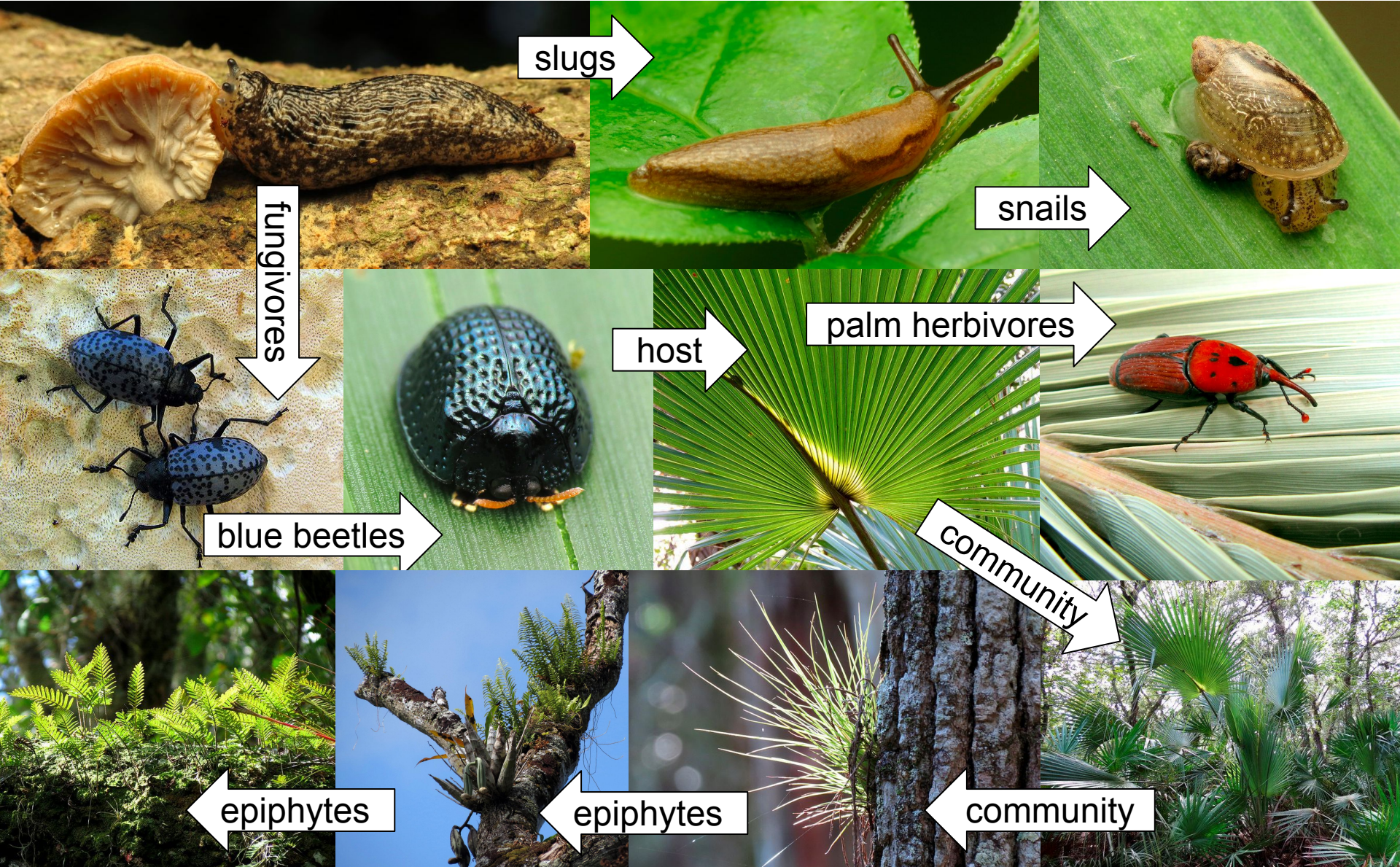
TERRESTRIAL

HERBIVORE



Moneilema gigas is a [beetle](#) in the family [Cerambycidae](#). This species was described by [John Lawrence LeConte](#) in [1873](#). It is found in [deserts](#) in [North America](#). It is an [herbivore](#). Its diet includes [plants](#) in the family [Cactaceae](#), for example [Opuntia](#).

Navigating Biodiversity Knowledge



Improving Data Coverage



Collections Data

Citizen Science

Mining Literature

Data Extrapolation

Sciomyzidae

Marsh Flies



540 species

Life cycles known for almost 50%

Larvae are aquatic, feed on mollusks

open access facilitates synthesis

