



Okaloosa County, FL Adaptations

This card deck contains physical and behavioral adaptations, predators, and prey of 52 species found in natural and urban habitats in Okaloosa County, FL.

This card deck has been developed as part of the Okaloosa SCIENCE project, a collaborative STEM education grant for the Okaloosa County School District in Florida. The goals of this project include enhancing scientific literacy, connecting to place, and building community by engaging in hands-on activities.

Find this card deck and more at:
education.eol.org/species_cards



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Title Image Credit: Daniel Oines CC-BY

Project Description

American Toad *Anaxyrus americanus*



Frogs and Toads



Okaloosa County, Florida
+ Urban Habitats

CARN
Foodweb Role

Snout-vent Length	5-9 cm
Adult Weight	44 g F; 26 g M (avg)
Lifespan	5-10 yr (avg)
Number of Eggs	4000-8000 / yr
Activity	Nocturnal

IUCN Redlist™

LC

Adaptations + Energy Sources

Physical: Excretes toxic fluid from skin for defense
Behavioral: Inflate bodies to prevent being swallowed
Energy: Insects, snails, slugs, earthworms

Image: Kent McFarland CC-BY-NC-SA

Bermudagrass *Cynodon dactylon*



Flowering Plants



Okaloosa County, Florida
+ Urban Habitats

AUTO
Foodweb Role

Height	90 cm (max)
Growth Form	Grass
Life Cycle	Perennial
Seed Color	Brown
Sunlight/Soil	Open; disturbed

IUCN Redlist™

NE

Adaptations + Energy Sources

Growth: Holds water in deep roots to survive droughts
Reproduction: Seeds germinate prolifically after fire
Energy: Sunlight, carbon dioxide, water

Image: 2011 Barry Breckling CC-BY-NC-SA

Common Name

Scientific Name

Taxon Group

Food Web Roles

DECO	Decomposer: Energy from dead material
AUTO	Autotroph: Energy from sun, water, CO ₂
HERB	Herbivore: Energy from plants
OMNI	Omnivore: Energy from plants, animals
CARN	Carnivore: Energy from animals
APEX	Apex Predator: Top predator
DETR	Detritivore: Energy from dead vegetation
SANG	Sanguinivore: Energy from blood
MULT	Multiple: Energy from multiple sources

Habitat (where species is found)
+ (indicates species is also found in other habitats)

Species Conservation Status

IUCN Redlist™

International Union for
Conservation of Nature

LC	Least Concern
DD	Data Deficient
NT	Near Threatened
EN	Endangered

NE Not Evaluated

VU	Vulnerable
CR	Critically Endangered
EW	Extinct in Wild
EX	Extinct

Cinnamon Fern *Osmunda cinnamomea*



Ferns



Okaloosa County, Florida
+ Urban Habitats

AUTO
Foodweb Role

Height	61-91 cm
Growth Form	Fern
Life Cycle	Perennial
Spore Color	Green
Sunlight/Soil	Shade; moist

IUCN Redlist™

NE

Adaptations + Energy Sources

Growth: Fertile red fronds surrounded by infertile ones
Reproduction: Spores grow on mineral soil after fires
Energy: Sunlight, carbon dioxide, water

Image: aarongunnar CC-BY-SA



Common Box Turtle

Terrapene carolina

eol
Turtles



OMNI
Okaloosa County, Florida
Urban Habitats
Foodweb Role

Carapace Length	11-18 cm
Adult Weight	311-523 g
Lifespan	30-40 yrs (avg)
Number of Eggs	4-5 / yr (avg)
Activity	Diurnal, Crepuscular

IUCN Redlist™ VU

Adaptations + Energy Sources
Physical: Shell can regenerate itself if damaged
Behavioral: Retracts body into carapace if threatened
Energy: Arthropods, frogs, reptiles, eggs, fungi, plants

Image: 2011 Todd Pierson CC-BY-NC-SA

Common Dandelion

Taraxacum sylvanicum

eol
Flowering Plants



AUTO
Okaloosa County, Florida
Urban Habitats
Foodweb Role

Height	46 cm (max)
Growth Form	Herb/Forb
Life Cycle	Perennial
Seed Color	Black
Sunlight/Soil	Open; disturbed

IUCN Redlist™ NE

Adaptations + Energy Sources
Growth: Rosettes cover ground, blocking other plants
Reproduction: Seeds light and fly on wind or by force
Energy: Sunlight, carbon dioxide, water

Image: 2008 Keir Morse CC-BY-NC-SA

Common Grackle

Quiscalus quiscula

eol
Birds



OMNI
Okaloosa County, Florida
Urban Habitats
Foodweb Role

Wingspan	36-46 cm
Adult Weight	74-142 g
Lifespan	22 yrs (max)
Clutch / Broods	1-7 eggs; 1-2/yr
Nest Type	Cup high in tree

IUCN Redlist™ LC

Adaptations + Energy Sources
Physical: Hard keel in upper bill for saving acorns
Behavioral: Ants secrete acid to control bird's parasites
Energy: Seeds, amphibians, birds, mice, invertebrates

Image: Mark Rosenstein CC-BY-NC-SA

Coyote

Canis latrans

eol
Mammals



CARN
Okaloosa County, Florida
Urban Habitats
Foodweb Role

Adult Body Length	81-94 cm
Adult Weight	7-21 kg
Lifespan	6-9 yrs (avg)
Offspring/Litter	6 (avg); 1/yr
Female Maturity	9-10 months

IUCN Redlist™ LC

Adaptations + Energy Sources
Physical: Keen sense of smell for locating prey
Behavioral: Change hunting styles seasonally
Energy: Mammals, birds, snakes, invertebrates, carrion

Image: Franco Folini CC-BY-SA

Earthworm

Lumbricus terrestris

eol
Annelids



DETR
Okaloosa County, Florida
Urban Habitats
Foodweb Role

Body Length	35 cm (max)
Development	4 stages; no molt
Lifespan	6 yrs (avg)
Number of Eggs	1-20 / cocoon
Activity	Nocturnal

IUCN Redlist™ NE

Adaptations + Energy Sources
Physical: Bristles on each body segment help grip soil
Behavioral: Move to surface when feel vibrations in soil
Energy: Decaying vegetation, feces, carrion

Image: Malcolm Storey CC-BY-NC-SA

Field Cricket

Gryllus pennsylvanicus

eol
Insects



OMNI
Okaloosa County, Florida
Urban Habitats
Foodweb Role

Adult Body Length	1.5-2.5 cm
Development	Incomplete
Adult Lifespan	1 wk (avg)
Number of Eggs	400 (avg) in lifespan
Wings	Two pairs, shortened

IUCN Redlist™ NE

Adaptations + Energy Sources
Physical: Large hind legs for hopping
Behavioral: Males have fighting and mating songs
Energy: Forbs, grasses

Image: Kevinjudge CC-BY-SA



Field Mushroom

Agaricus campestris

eol
Fungi



+ Okaloosa County, Florida
Urban Habitats

DECO

Foodweb
Role

Cap Size	3-11 cm
Growth Habit	Central stem
Spore Surface	Gills
Cap Color	White
Spore Print	Dark brown

IUCN
Redlist™

Adaptations + Energy Sources

Growth: Hyphae threads absorb nutrients from food
Reproduction: Gill surface increases spore production
Energy: Absorb nutrients from dead organic matter

Image: Drew Henderson CC-BY-NC-SA

Eastern Fox Squirrel

Sciurus niger

eol
Mammals



+ Okaloosa County, Florida
Urban Habitats

OMNI

Foodweb
Role

Adult Body Length	19-43 cm
Adult Weight	800 g (avg)
Lifespan	4-7 yrs (avg)
Offspring/Litters	2-3 (avg); 1-2/yr
Female Maturity	8 months

IUCN
Redlist™

Adaptations + Energy Sources

Physical: Sharp claws, muscular bodies for climbing
Behavioral: Cache acorns and other nuts for winter
Energy: Acorns, nuts, insects, birds, eggs, carrion

Image: Don Loarie CC-BY-NC-SA

Green Anole

Anolis carolinensis

eol
Lizards



+ Okaloosa County, Florida
Urban Habitats

CARN

Foodweb
Role

Snout-vent Length	4-7 cm
Adult Weight	2-6 g
Lifespan	2-8 yrs (avg)
Number of Eggs	6-9 / yr
Activity	Diurnal

IUCN
Redlist™

Adaptations + Energy Sources

Physical: Adhesive pads on toes to climb structures
Behavioral: Males flash dewlaps and do push-ups
Energy: Insects, other arthropods, mollusks

Image: BJ Stacey CC-BY-NC

Green June Beetle

Cotinis nitida

eol
Insects



+ Okaloosa County, Florida
Urban Habitats

HERB

Foodweb
Role

Adult Body Length	1.9-2.5 cm
Development	Complete
Adult Lifespan	< 1 yr
Number of Eggs	75/yr
Wings	Two pairs; modified

IUCN
Redlist™

Adaptations + Energy Sources

Physical: One pair of wings is thickened to act as shield
Behavioral: After pupa, adults emerge + mate after rain
Energy: Organic material in soil (larva); fruits (adults)

Image: Dave Govoni CC-BY-NC-SA

House Mosquito

Culex tarsalis

eol
Insects



+ Okaloosa County, Florida
Urban Habitats

SANG

Foodweb
Role

Adult Body Length	3-6 mm
Development	Complete
Adult Lifespan	6-8 weeks (F)
Number of Eggs	200-300 / night
Wings	One pair

IUCN
Redlist™

Adaptations + Energy Sources

Physical: Aquatic larvae breathe through siphon
Behavioral: Adult female suck blood before laying eggs
Energy:Nectar; females suck bird and mammal blood

Image: Public Health Image Library

Humans

Homo sapiens

eol
Mammals



+ Okaloosa County, Florida
Urban Habitats

APEX

Foodweb
Role

Adult Body Length	147-181 cm (avg)
Adult Weight	Variable
Lifespan	32-84 yrs (avg)
Offspring/Litters	1 or more; variable
Female Maturity	8-17 yrs (avg)

IUCN
Redlist™

Adaptations + Energy Sources

Physical: Opposable thumbs, highly complex brain
Behavioral: Long-term care, cooking food, clothing
Energy: Wide variety of plants, animals, fungi

Image: C.K. Koay CC-BY-NC



Marsh Slug

Deroceras laeve

eol
Gastropods



Okaloosa County, Florida
+ Urban Habitats

HERB

Foodweb Role

Body Length	1-3 cm
Shell/Mantle	Mantle 50% of body
Lifespan	3-5 mo (avg)
Number of Eggs	33 (max), once / life
Environment	Moist, terrestrial

IUCN

Redlist™

NE

Adaptations + Energy Sources

Physical: Self-fertilizes with male and female organs
Behavioral: Can forage underwater + survive for days
Energy: Live and dead vegetation

Image: Paustian, Megan

Northern Mockingbird

Mimus polyglottos

eol
Birds



Okaloosa County, Florida
+ Urban Habitats

OMNI

Foodweb Role

Wingspan	31-35 cm
Adult Weight	45-58 g
Lifespan	8 yrs (avg)
Clutch / Broods	2-6 eggs; 2-3/yr
Nest Type	Cup

LC

IUCN

Redlist™

Adaptations + Energy Sources

Physical: White wing patches make wings look larger
Behavioral: Sing 39+ songs that mimic sounds
Energy: Mainly berries and fruits, insects, some lizards

Image: gaberlunzl CC-BY-NC-SA

Painted Lady Butterfly

Vanessa cardui

eol
Insects



Okaloosa County, Florida
+ Urban Habitats

NECT

Foodweb Role

Wingspan	5.1-7.3 cm
Development	Complete
Adult Lifespan	10-24 days
Number of Eggs	500 in lifetime
Wings	Two pairs

NE

IUCN

Redlist™

Adaptations + Energy Sources

Physical: Straw-like tongue to sip flower nectar (adults)
Behavioral: Migrates to Mexico for winter
Energy: Leaves, foliage (larvae); nectar (adults)

Image: salien CC-BY-NC

Pillbug

Armadillidium vulgare

eol
Malacostraca



Okaloosa County, Florida
+ Urban Habitats

DETR

Foodweb Role

Adult Body Length	1 cm (avg)
Development	Molts; several stadia
Lifespan	1.5 yrs (avg)
Number of Eggs	100/yr (avg)
Activity	Nocturnal

IUCN

Redlist™

NE

Adaptations + Energy Sources

Physical: Back covered in plates that act as armor
Behavioral: Can roll body into ball for protection
Energy: Plant litter, seeds, scavenged dung

Image: Stanislav Krejčík CC-BY

Northern Raccoon

Procyon lotor

eol
Mammals



Okaloosa County, Florida
+ Urban Habitats

OMNI

Foodweb Role

Adult Body Length	60-95 cm
Adult Weight	6.0 kg (avg)
Lifespan	5 yrs (avg)
Offspring/Litters	4 (avg); 1/yr
Female Maturity	8-12 months

LC

IUCN

Redlist™

Adaptations + Energy Sources

Physical: Dexterous, highly sensitive front paws
Behavioral: Often "douse" aquatic food underwater
Energy: Variety of invertebrate and vertebrates, fruits

Image: Arthur Chapman CC-BY-NC-SA

Red Fire Ant

Solenopsis invicta

eol
Insects



Okaloosa County, Florida
+ Urban Habitats

OMNI

Foodweb Role

Adult Body Length	0.2-0.6 cm
Development	Complete
Adult Lifespan	30 days - 6 yrs
Number of Eggs	1,500/day (max)
Wings	Queens, male alates

NE

IUCN

Redlist™

Adaptations + Energy Sources

Physical: Chewing mouthparts bite, slice, and rip food
Behavioral: Swarm, bite, and sting intruders to mound
Energy: Invertebrates, small reptiles, birds, mammals

Image: California Academy of Sciences, 2000-2010 CC-BY-NC-SA



Red-tailed Hawk

Buteo jamaicensis

eol
Birds



APEX

Okaloosa County, Florida
Urban Habitats

Foodweb Role

Wingspan	114-133 cm
Adult Weight	0.90-1.46 kg (F)
Lifespan	10-21 yrs (avg)
Clutch / Broods	1-5 eggs; 1/yr
Nest Type	Pile on tree or cliff

IUCN Redlist™ LC

Adaptations + Energy Sources
Physical: Sharp talons for catching prey
Behavioral: Soar above open areas searching for prey
Energy: Rodents, rabbits, birds, snakes, carrion

Image: Dan Hutcheson CC-BY-NC

Sand Live Oak

Quercus geminata

eol
Flowering Plants



AUTO

Okaloosa County, Florida
Urban Habitats

Foodweb Role

Height	9.1 m (avg)
Growth Form	Tree
Leaf Duration	Evergreen
Seed Color	Brown
Sunlight/Soil	Full sun; sandy

IUCN Redlist™ LC

Adaptations + Energy Sources
Growth: Most of tree is underground, regrows after fire
Reproduction: Acorns favored by wildlife, spread seed
Energy: Sunlight, carbon dioxide, water

Image: Chris M CC-BY

Slash Pine

Pinus elliottii

eol
Conifer



AUTO

Okaloosa County, Florida
Urban Habitats

Foodweb Role

Height	18-30 m
Growth Form	Tree
Leaf Duration	Evergreen
Seed Color	Brown
Sunlight/Shade	Sun/shade; acidic

IUCN Redlist™ LC

Adaptations + Energy Sources
Growth: Grows very quickly (to 40 cm) in first year
Reproduction: Can hybridize with several pine species
Energy: Sunlight, carbon dioxide, water

Image: Chris M CC-BY

Variable Dancer

Argia fumipennis

eol
Insects



CARN

Okaloosa County, Florida
Urban Habitats

Foodweb Role

Adult Body Length	2.9-3.5 cm
Development	Incomplete
Adult Lifespan	2-8 weeks
Number of Eggs	1+ / stem
Wings	Two pairs

IUCN Redlist™ NE

Adaptations + Energy Sources
Physical: Blade-like ovipositor to cut/inject eggs in plant
Behavioral: Hover over vegetation to pick off insects
Energy: Small flying insects like midges + mosquitoes

Image: Jim Johnson CC-BY-NC

Wolf Spider

Hogna carolinensis

eol
Arachnids



CARN

Okaloosa County, Florida
Urban Habitats

Foodweb Role

Adult Body Length	1.8-3.5 cm
Development	Molts
Lifespan	1+ yrs
Number of Eggs	100 (est.)
Activity	Nocturnal

IUCN Redlist™ NE

Adaptations + Energy Sources
Physical: Uses venom to subdue prey
Behavioral: Female carries eggsac/young on abdomen
Energy: Insects, invertebrates, small vertebrates

Image: 2014 William Flaxington CC-BY-NC

Bachman's Sparrow

Aimophila aestivalis

eol
Birds



OMNI

Okaloosa County, Florida
Natural Habitats

Foodweb Role

Wingspan	6-7 cm
Adult Weight	18-22 g
Lifespan	1.9 yr (avg)
Clutch / Broods	2-5 eggs; 2/yr
Nest Type	Ground

IUCN Redlist™ NT

Adaptations + Energy Sources
Physical: Feathers are scrubby brown for camouflage
Behavioral: Hides/feeds in dense brush and grasses
Energy: Seeds, insects, other arthropods on ground

Image: Greg Lasley CC-BY-NC



Cinnamon Fern

Osmundastrum cinnamomea

Ferns



AUTO

 Okaloosa County, Florida
+ Natural Habitats 

Height 61-91 cm **Growth Form** Fern **Life Cycle** Perennial **Spore Color** Green **Sunlight/Soil** Shade; moist **IUCN Redlist™** NE

Adaptations + Energy Sources
Growth: Fertile red fronds surrounded by infertile ones
Reproduction: Spores grow on mineral soil after fires
Energy: Sunlight, carbon dioxide, water

Image: aarongunnar CC-BY-SA

Devil Crawfish

Cambarus diogenes

Crustaceans



OMNI

 Okaloosa County, Florida
+ Natural Habitats 

Adult Body Length 4-6 cm **Development** Molts **Lifespan** 2-3 yrs (avg) **Number of eggs** 200 eggs/yr **Activity** Nocturnal **IUCN Redlist™** LC

Adaptations + Energy Sources
Physical: Claws for tearing food
Behavioral: Females carry eggs/young on abdomen
Energy: Aquatic plants, worms, insects, snails

Image: Smithsonian Institution CC-BY-NC-SA

Earthworm

Lumbricus terrestris

Annelids



DETR

 Okaloosa County, Florida
+ Natural Habitats 

Body Length 35 cm (max) **Development** 4 stages; no molt **Lifespan** 6 yrs (avg) **Number of Eggs** 1-20 / cocoon **Activity** Nocturnal **IUCN Redlist™** NE

Adaptations + Energy Sources
Physical: Bristles on each body segment help grip soil
Behavioral: Move to surface when feel vibrations in soil
Energy: Decaying vegetation, feces, carrion

Image: Malcolm Storey CC-BY-NC-SA

Eastern Pondhawk

Erythemis simplicicollis

Insects



CARN

 Okaloosa County, Florida
+ Natural Habitats 

Adult Body Length 4-5 cm **Development** Incomplete **Adult Lifespan** Few months **Number of Eggs** 900 in lifetime (max) **Wings** Two pairs **IUCN Redlist™** LC

Adaptations + Energy Sources
Physical: Asynchronous wingbeats for acceleration
Behavioral: Males establish territories for breeding
Energy: Grasshoppers, butterflies, bees, dragonflies

Image: Stephen Durrenberger CC-BY-NC-SA

Fiery Searcher

Calosoma scrutator

Insects



CARN

 Okaloosa County, Florida
+ Natural Habitats 

Adult Body Length 2.5-3.5 cm **Development** Complete **Adult Lifespan** 3 yrs (max) **Number of Eggs** Laid singly in soil **Wings** 2 pairs; modified **IUCN Redlist™** NE

Adaptations + Energy Sources
Physical: Sharp, curved jaws to capture prey
Behavioral: Chase caterpillar prey on ground/in trees
Energy: Butterfly and moth larvae (caterpillars)

Image: jameswbeck CC-BY-NC

Florida Harvester Ant

Pogonomyrmex badius

Insects



HERB

 Okaloosa County, Florida
+ Natural Habitats 

Adult Body Length 0.6-1.0 cm **Development** Complete **Adult Lifespan** 2-6 mo **Number of Eggs** N/A **Wings** 2 pairs (reproductive) **IUCN Redlist™** NE

Adaptations + Energy Sources
Physical: Polymorphic workers for specialized jobs
Behavioral: Relocate nest once/ year for sunlight
Energy: Seeds of grasses and forbs

Image: Bob Peterson CC-BY-SA



Gray Rat Snake *Pantherophis spiloides*

eol
Reptiles



+ Okaloosa County, Florida
Hardwood Forested Uplands

CARN

Foodweb
Role

Snout-vent Length 130-190 cm

Adult Weight > 1 kg

Lifespan 25-30 yrs

Clutch/Broods 5-27; 1-2/yr

Activity Nocturnal in summer

NE

IUCN

Redlist™

Adaptations + Energy Flow

Physical: Sensory organ on tongue detects prey

Behavioral: Climb trees skillfully in search of prey

Energy: Small mammals, bats, birds, eggs, frogs, lizards

Image: Justin Guyer CC-BY-NC

Great Horned Owl *Bubo virginianus*

eol
Birds



+ Okaloosa County, Florida
Natural Habitats

APEX

Foodweb
Role

Wingspan 101-145 cm

Adult Weight 0.9-2.5 kg

Lifespan 13 years (avg)

Clutch / Broods 1-4 eggs; 1/yr

Nest Type Treetop or cavity

LC

IUCN

Redlist™

Adaptations + Energy Sources

Physical: Comb-like serrated feathers for silent flight

Behavioral: Nocturnal for hunting

Energy: Mammals, birds, fish, invertebrates, carrion

Image: Cláudio Dias Timm CC-BY-NC-SA

Hispid Cotton Rat *Sigmodon hispidus*

eol
Mammals



+ Okaloosa County, Florida
Natural Habitats

OMNI

Foodweb
Role

Adult Body Length 15 cm (avg)

Adult Weight 160 g (avg)

Lifespan 6 mo (avg)

Offspring/Litters 5-7 (avg); 3-4/yr

Female Maturity 5 months

LC

IUCN

Redlist™

Adaptations + Energy Sources

Physical: Incisors grow continuously for eating plants

Behavioral: Huddle communally in winter for warmth

Energy: Eggs, insects, crustaceans, roots, carrion

Image: Stephen Pollard CC-BY

Humans *Homo sapiens*

eol
Mammals



+ Okaloosa County, Florida
Natural Habitats

APEX

Foodweb
Role

Adult Body Length 147-181 cm (avg)

Adult Weight Variable

Lifespan 32-84 yrs (avg)

Offspring/Litters 1 or more; variable

Female Maturity 8-17 years (avg)

LC

IUCN

Redlist™

Adaptations + Energy Sources

Physical: Opposable thumbs, highly complex brain

Behavioral: Long-term care, cooking food, clothing

Energy: Wide variety of plants, animals, fungi

Image: C.K. Koay CC-BY-NC

Io Moth *Automeris io*

eol
Insects



+ Okaloosa County, Florida
Natural Habitats

HERB

Foodweb
Role

Wingspan 5-9 cm

Development Complete

Adult Lifespan 1-2 wks

Number of Eggs 300 (avg) / season

Wings Two pairs

NE

IUCN

Redlist™

Adaptations + Energy Sources

Physical: Caterpillars have stinging, venomous spines

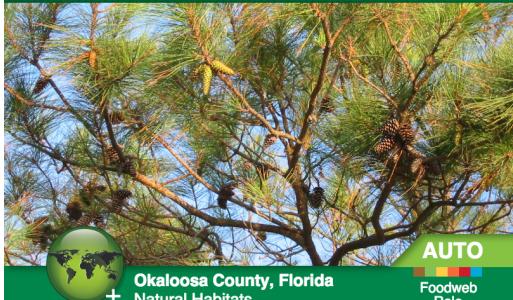
Behavioral: Caterpillars travel single line as they feed

Energy: Foliage from broadleaf trees/shrubs (larvae)

Image: jameswbeck CC-BY-NC

Loblolly Pine *Pinus taeda*

eol
Conifers



+ Okaloosa County, Florida
Natural Habitats

AUTO

Foodweb
Role

Height 25-33 m

Growth Form Tree

Leaf Duration Evergreen

Seed Color Brown

Sunlight/Soil Full sun; acidic soil

LC

IUCN

Redlist™

Adaptations + Energy Sources

Growth: Thick bark to protect tree from ground fires

Reproduction: Winged seeds for wind dispersal

Energy: Sunlight, carbon dioxide, water

Image: Rev. Xanatos Satanicos Bombasticos (ClintJCL) CC-BY-NC-SA



Marsh Slug

Deroceras laeve

eol
Gastropods



HERB
Okaloosa County, Florida
Natural Habitats Foodweb Role

Body Length	1-3 cm
Shell/Mantle	Mantle 50% of body
Lifespan	3-5 mo (avg)
Number of Eggs	33 (max), once / life
Environment	Moist, terrestrial

IUCN Redlist™ NE

Adaptations + Energy Sources
Physical: Self-fertilizes with male and female organs
Behavioral: Can forage underwater + survive for days
Energy: Live and dead vegetation

Image: Paustian, Megan

Non-biting Midges

Chironomidae

eol
Insects



DETR
Okaloosa County, Florida
Natural Habitats Foodweb Role

Adult Body Length	0.1-2.0 cm
Development	Complete
Adult Lifespan	Few days or weeks
Number of eggs	1600 (max)
Wings	One pair

IUCN Redlist™ NE

Adaptations + Energy Sources
Physical: Male has feathery antennae to find females
Behavioral: Larvae tunnels in soil to avoid predators
Energy: Aquatic organic debris, algae, fungi spores

Image: Biopix CC-BY-NC

Narrowleaf Silkgrass

Pityopsis graminifolia

eol
Flowering Plants



AUTO
Okaloosa County, Florida
Natural Habitats Foodweb Role

Height	0.3-0.9 m
Growth Form	Herb/forb
Life Cycle	Perennial
Seed Color	Tan to brown
Sunlight/Soil	Sun; sandy, dry soil

IUCN Redlist™ NE

Adaptations + Energy Sources
Growth: Silvery hair on stems helps reduce water loss
Reproduction: Underground rhizomes sprout stems
Energy: Sunlight, carbon dioxide, water

Image: Mary Keim CC-BY-NC-SA

Oyster Mushroom

Pleurotus ostreatus

eol
Fungi



DECO
Okaloosa County, Florida
Natural Habitats Foodweb Role

Cap Size	4-25 cm
Growth Habit	Shelf
Spore Surface	Gills
Cap Color	White to light brown
Spore Print	White to lilac

IUCN Redlist™ NE

Adaptations + Energy Sources
Growth: Saprotrophic/uses nutrients from host to grow
Reproduction: Animals eat mushroom/spread spores
Energy: Absorb nutrients from trees, decaying material

Image: Richard Sullivan CC-BY-SA

Northern Raccoon

Procyon lotor

eol
Mammals



OMNI
Okaloosa County, Florida
Natural Habitats Foodweb Role

Adult Body Length	60-95 cm
Adult Weight	6.0 kg (avg)
Lifespan	5 yrs (avg)
Offspring/Litters	4 (avg); 1/yr
Female Maturity	8-12 months

IUCN Redlist™ LC

Adaptations + Energy Sources
Physical: Dexterous, highly sensitive front paws
Behavioral: Often "douse" aquatic food underwater
Energy: Variety of invertebrate and vertebrates, fruits

Image: Arthur Chapman CC-BY-NC-SA

Red Fox

Vulpes vulpes

eol
Mammals



OMNI
Okaloosa County, Florida
Natural Habitats Foodweb Role

Adult Body Length	46-90 cm
Adult Weight	3-14 kg
Lifespan	3 yrs (avg)
Offspring/Litters	5 (avg); 1 litter/yr
Female Maturity	10 months

IUCN Redlist™ LC

Adaptations + Energy Sources
Physical: Use tail as warm cover in cold weather
Behavioral: Often cache food for later/mark with urine
Energy: Rodents, rabbits, insects, fruits

Image: Dave C CC-BY-SA



Red-cockaded Woodpecker
Picoides borealis

eol
Birds



OMNI
Foodweb Role
Okaloosa County, Florida
Natural Habitats

Wingspan 35-38 cm
Adult Weight 45-50 g
Lifespan 14 yrs (avg)
Clutch / Broods 3 eggs (avg); 1/yr
Nest Type Tree cavity

VU
IUCN Redlist™

Adaptations + Energy Sources
Physical: Thick, bony skull absorbs force of drilling
Behavioral: Digs in infected trees to produce pitch
Energy: Tree-dwelling insects, larvae, seeds, fruit

Image: BJ Stacey CC-BY-NC

Red-legged Grasshopper
Melanoplus femur-rubrum

eol
Insects



HERB
Foodweb Role
Okaloosa County, Florida
Natural Habitats

Adult Body Length 1.8-2.8 cm
Development Incomplete
Adult Lifespan 45 days (avg)
Number of Eggs 336 (avg) in lifespan
Wings Two pairs

NE
IUCN Redlist™

Adaptations + Energy Sources
Physical: Develop longer wings to disperse
Behavioral: Fly short distances in swarms for forage
Energy: Foliage of forbs and grasses

Image: Armin H. CC-BY-NC

Saw Palmetto
Serenoa repens

eol
Flowering Plants



AUTO
Foodweb Role
Okaloosa County, Florida
Natural Habitats

Height 0.6-2.1 m
Growth Form Shrub
Leaf Duration Evergreen
Seed Color Black
Sunlight/Soil Shade; sandy soil

NE
IUCN Redlist™

Adaptations + Energy Sources
Growth: Long-lived leaves (3.5 yrs) can tolerate shade
Reproduction: Seeds dispersed by fruit eating animals
Energy: Sunlight, carbon dioxide, water

Image: Miguel Vieira from Walnut Creek, CA, USA CC-BY

Six-lined Racerunner
Cnemidophorus sexlineatus

eol
Lizards



CARN
Foodweb Role
Okaloosa County, Florida
Natural Habitats

Snout-vent Length 7.5 cm (avg)
Adult Weight 200 g (max)
Lifespan 4-5 yrs (avg)
Number of Eggs 4-6 / yr
Activity Diurnal

LC
IUCN Redlist™

Adaptations + Energy Sources
Physical: Uses long tail to increase speed/balance
Behavioral: Most active in hot, dry environments
Energy: Insects, spiders, other arthropods, snails

Image: 2011 Todd Pierson CC-BY-NC-SA

Squirrel Treefrog
Hyla squirella

eol
Amphibians



CARN
Foodweb Role
Okaloosa County, Florida
Natural Habitats

Snout-vent Length 2.3-3.7 cm
Adult Weight 0.2-0.5 g (at morph)
Lifespan 8.5 yrs (max)
Number of Eggs 1000 eggs (max)
Activity Nocturnal

LC
IUCN Redlist™

Adaptations + Energy Sources
Physical: Sticky toe pads that aid in tree-climbing
Behavioral: Male attracts female with squirrel-like call
Energy: Small insects

Image: Todd Pierson CC-BY-NC-SA

Old Switch Panic Grass
Panicum virgatum

eol
Flowering Plants



AUTO
Foodweb Role
Okaloosa County, Florida
Natural Habitats

Height 1 m (avg)
Growth Form Grass
Life Cycle Perennial
Seed Color Light brown
Sunlight/Soil Full sun; sandy soil

NE
IUCN Redlist™

Adaptations + Energy Sources
Growth: Root depth can reach about 3 meters deep
Reproduction: Rhizomes allow for growth after fire
Energy: Sunlight, carbon dioxide, water

Image: John Hiltz CC-BY-NC



Wolf Spider
Hogna carolinensis

eol
Arachnids



 Okaloosa County, Florida
+ Natural Habitats  Foodweb Role

Adult Body Length	1.8-3.5 cm
Development	Molts
Lifespan	1+ yrs
Number of Eggs	100 (est.)
Activity	Nocturnal

 IUCN Redlist™

Adaptations + Energy Sources
 Physical: Uses venom to subdue prey
 Behavioral: Female carries eggsac/young on abdomen
 Energy: Insects, invertebrates, small vertebrates

Image: 2014 William Flaxington CC-BY-NC

eol species cards

Adaptation: A physical characteristic or behavior that helps an organism survive in its environment

Brood/Litter: Group of young produced at one time

Carapace: Shell of a turtle or head and thorax of arthropods

Clutch Size: Number of eggs laid in a nest at one time

Complete Metamorphosis: Some insects have a four stage life cycle: egg, larva, pupa, adult

Crepuscular: Active at dawn and dusk

Diurnal: Active during the day

Vocabulary

eol species cards

Habitat: The area an organism lives and can find its resources

Growth Form: Classification of plants as trees, shrubs, herbaceous, and grasses

Incomplete Metamorphosis: Some insects have a three stage life cycle: eggs, nymph, adult

Molt: The act of shedding exoskeleton, skin or feathers as an animal grows

Snout-vent Length: In amphibians and reptiles, the length from tip of nose to tail base (cloaca)

Standard Length: In fishes, length from tip of snout to end of last vertebra

Vocabulary

