

# Aquatic Invertebrates of the Kissimmee River

## Water Scorpion

**Order:** Hemiptera **Family:** Nepidae **Genus:** Ranatra

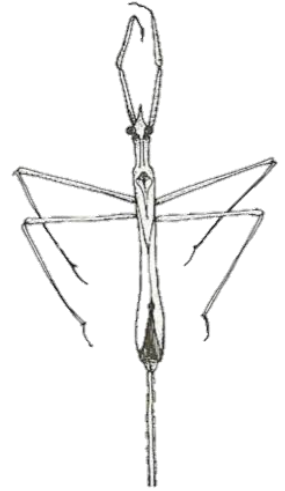
### Identification:

- Sticklike and wiry
- Long, tail-like breathing tube (siphon)
- Poor swimmers, generally crawl and climb in shoreline vegetation

### Habitat/Diet:

- Can be found near the shore among the vegetation
- **Predator** - ambush prey (other insects, or small aquatic organisms) which they capture in mantis-like front legs
- Hang by their tails from the surface of the water awaiting prey

**Fun Fact:** To keep from straying into deeper waters, they have pressure sensors on the underside of their abdomen that inform them of the depth.



## Water Boatman

**Order:** Hemiptera **Family:** Corixidae **Genus:** Trichocorixa

### Identification:

- Back legs are extremely long, flattened and oar-like, with hairy fringes to generate friction with the water as they swim
- When submerged, air is held beneath the wing covers (elytra) and in a film around the body, allowing the organism to remain submerged for long periods of time.



### Habitat/Diet:

- Found in intertidal, brackish, and ponds
- **Herbivore piercer** - grinds or pierces plant cells
- (usually filamentous algae) with their beaks (rostrum) and feed on the juices

**Fun Fact:** Uses the air bubble kept on their body to breathe underwater just like a scuba diver.

## Predaceous Diving Beetle

**Order:** Coleoptera **Family:** Dytiscidae **Genus:** Coptotomus

### Identification:

- Brownish black in color, sometimes marked with yellow or green
- Flattened, oar-like hind legs with swimming hairs
- Can leave the water and fly from pond to pond

### Habitat/Diet:

- Found in clean, slow moving waters with abundant vegetation; indicators of a healthy aquatic ecosystem
- **Predator**

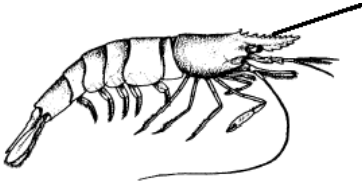
**Fun Fact:** Larval predaceous diving beetles are such voracious predators, they have earned the nickname "water tigers."



# Aquatic Invertebrates of the Kissimmee River



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## Grass Shrimp

**Order:** Decapoda **Family:** Palaemonidae **Genus:** Palaemonetes

### Identification:

- Very tough exoskeleton
- Translucent
- Crawl and climb in waters with heavy vegetation
- When threatened, will dart backward quickly with a strong down stroke of the tail

### Habitat/Diet:

- Found in ponds, lakes, rivers and in grassy areas in shallow water
- **Gathering collector** - eats plant and animal decaying material

**Fun Fact:** Pollution tolerant and found in brackish water too.

## Amphipod (also called Scud)

**Order:** Amphipoda **Family:** Hyalellidae **Genus:** *Hyalella*

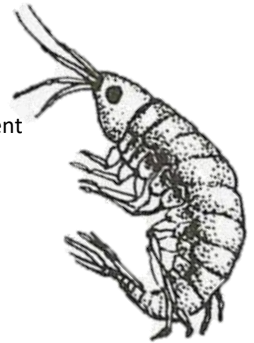
### Identification:

- Laterally compressed body
- Important food for many fish, amphibians, insects and birds
- During mating, males carry females on their backs
- Females carry fertilized eggs in a “marsupium” or compartment in their abdomens
- Remain paired often for more than a week

### Habitat/Diet:

- Live among roots of aquatic plants, feeding on algae and detritus
- **Shredder** - feeds on decaying plants

**Fun Fact:** The word scud means to move or run quickly. Scuds are also called side-swimmers for the way they roll on their side to swim, or amphipods, which means two kinds of feet.



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## Crayfish

**Order:** Decapoda **Family:** Cambaridae **Genus:** *Procambarus*

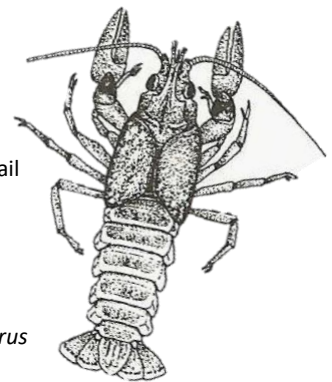
### Identification :

- Brown-black to orangish in color
- Front legs are strong with modified pinching claws used for protection and feeding
- Are usually hidden during daylight hours
- When threatened, will dart away with a strong kick of the tail
- Walk, climb and crawl

### Habitat/Diet:

- Found in freshwater lakes, ponds, ditches, and streams
- **Gathering collector** - feeds on detritus and dead animals

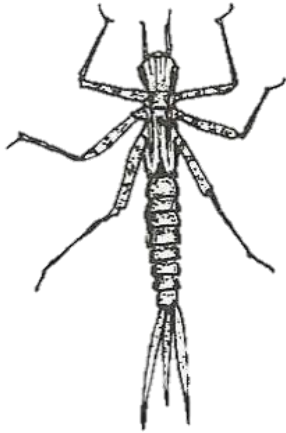
**Fun Fact:** These are often called a “Florida Lobster – *Procambarus alleni*”.



# Aquatic Invertebrates of the Kissimmee River

## Damselfly

**Order:** Odonata **Sub-Order:** Zygoptera **Family:** Lestidae **Genus:** Lestes



Nymph stage

### Identification :

(a) Larvae (Nymph)

- Large caudal gills
- Slender body
- Predators that feed on aquatic bugs such as mosquito larvae.

### Habitat/Diet:

- Found in ponds or streams in vegetation
- **Predator**

**Fun Fact:** Damselflies were flying 300 million years ago!

(b) Adults

- Marked with metallic green, blue, or bronze
- Large size for damselflies
- Unlike other damselflies that sit with their wings closed, this genus perches with its wings partly spread apart.



Image source: Wikipedia

## Dragonfly

**Order:** Odonata (Anisoptera) **Family:** Aeshnidae **Genus:** Anax

### Identification:

(a) Larvae

- Large and elongated
- Green or dark green in color
- Feed on insects, tadpoles and small fish
- Usually found clinging to stalks of emergent vegetation

(b) Adults

- Males: green thorax; wide blue lateral stripes on abdomen
- Females: green thorax; purple-gray abdomen



### Habitat/Diet:

- Found flying and landing around lakes, ponds
- **Predator** - adults feeds on insects captured in flight; nymphs feed on a variety of aquatic invertebrates

**Fun Fact:** The largest living dragonfly lived over 250 million years ago (before the dinosaurs) and had a wingspan of over three feet! A dragonfly needs warmth to fly and you will notice they will often land when the sun goes behind a cloud.



Nymph stage

## Caddisfly

**Order:** Trichoptera **Family:** Brachycentridae **Genus:** Oxyethira

### Identification :

(a) Larvae

- Encapsulate themselves in open-ended cases which they make from silk and very fine foreign material, such as silt, sand, and algae
- Fasten cases to sedentary objects in slow moving water, like rocks and logs
- Legs of the larvae are directed forward, second and third pair are almost three times as long as the first
- Wide, bulky abdomen

(b) Adults

- Adults are small and moth-like

### Habitat/Diet:

- Found in sticks, stone, etc.
- **Filtering collector**

**Fun Fact:** They live only a few weeks to a month after hatching!



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Lives in a stick house



Lives in stone house



# Aquatic Invertebrates of the Kissimmee River

## Small Squaregill Mayfly

**Order:** Ephemeroptera **Family:** Caenidae **Genus:** Caenis

### Identification:

#### (a) Larvae

- Flattened bodies, with two dark square-like gill covers on the abdomen
- Found in submerging grasses and in shoreline detritus
- Mostly climb and crawl or hide in silt, but can swim if disturbed

#### (b) Adults

- Smallest among mayflies
- Have no hind wings
- Yellowish in color with three long tails

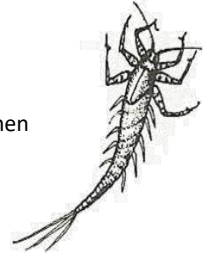
### Habitat/Diet:

- Found in vegetation of ponds, lakes
- **Gathering Collector**

**Fun Fact:** Mayflies have been around since before dinosaurs even existed.



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Nymph stage

## Non-biting Midges

**Order:** Diptera **Family:** Chironomidae **Genus:** (many genera)

### Identification:

#### (a) Larvae

- Many species, most commonly found on rotting vegetation and in the bottom muck
- Larvae generally build tubes
- #### (b) Adults
- Short lived; emerge at dawn or dusk, mate and die
- Males swarm over fixed objects near the shore or in large swarms; females enter swarm to mate
- They don't bite

### Habitat/Diet:

- Found in vegetation of ponds, lakes
- **Gathering collector** - Feed on detritus, algae or other midges



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## Florida Applesnail

**Order:** Ampullariidae **Family:** Pomacea **Genus:** Paludosa

### Identification:

It is much easier to distinguish native and non-native applesnails by the color and size of their eggs. The Florida applesnail has white relatively large eggs, typically deposited on aquatic vegetation; clutch size is <100.

### Habitat/Diet:

- Aquatic plants
- **Grazer/scrapper**
- Their predators in Florida include limpkins, Everglades (snail) kites, raccoons, turtles and alligators. In addition, redear sunfish and certain ducks most likely consume smaller immature snails.

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