



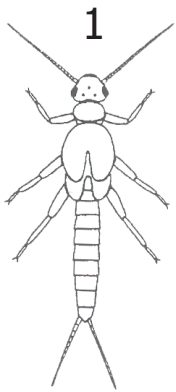
# Guadalupe River Basin

## Macroinvertebrates & Crustaceans

### Identification Chart

#### Group 1

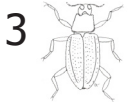
#### Clean Water Animals



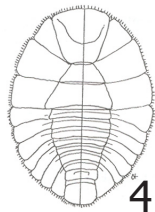
Stonefly Larvae



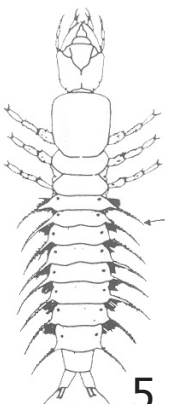
Caddisfly Larvae



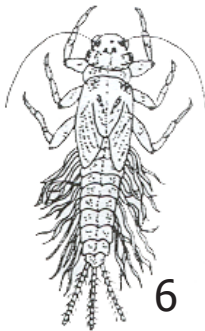
Riffle Beetle



Water Penny Larvae



Dobsonfly Larvae



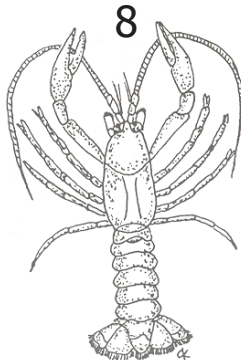
Mayfly Larvae



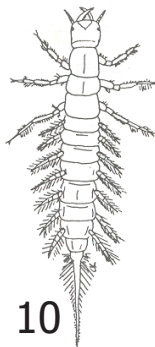
Gilled Snail

#### Group 2

#### Fair Water Animals



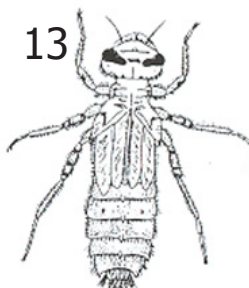
Crayfish



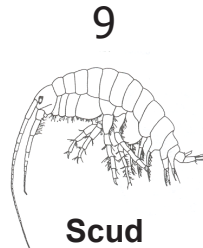
Alderfly Larvae



Crane Fly Larvae



Dragonfly Larvae



Scud



Damselfly Larvae



Clam

#### Group 3

#### Polluted Water Animals



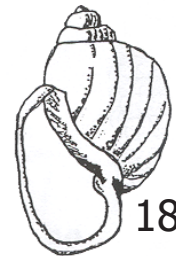
Blackfly Larvae



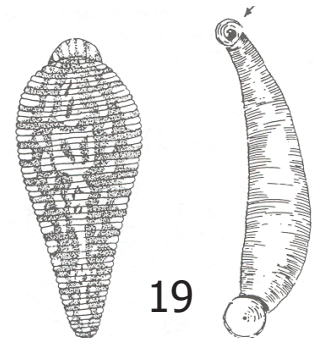
Segmented Worm



Midge Larvae



Pouch Snail



Leech

## GROUP 1 TAXA:

*Pollution sensitive organisms found in good quality water.*

1. **Stonefly (larvae):** Order Plecoptera  
5 - 35 mm long (1/2" - 1 1/2")  
6 legs with hooked tips, long antennae, 2 hair-like tails.
2. **Caddisfly (larvae):** Order Trichoptera  
Up to 5 mm long (1/2")  
Hooked legs on upper third of body, 2 hooks at back end. May be in a stick, rock or leaf case with its head sticking out.
3. **Riffle Beetle (adult):** Order Coleoptera (larvae and adult)  
1 - 6 mm long (1/4")  
Oval body covered with tiny hairs, 6 legs, antennae.
4. **Water Penny:** Order Coleoptera  
4 - 6 mm long (1/4")  
Flat saucer-shaped body with a raised bump on one side and 6 tiny legs on the other side. Immature beetle.
5. **Dobsonfly (larvae):** Order Megaloptera  
25 - 90 mm long (3/4" - 4")  
Dark-colored, 6 legs, many long feelers on lower half of body, short antennae, 4 hooks at back end. Contains fan-shaped gill tufts along sides.
6. **Mayfly (larvae):** Order Ephemeroptera,  
4 - 15 mm long (1/4" - 1")  
Brown, moving, plate-like gills on sides of body, 6 large hooked legs, many long feelers on lower half of body, antennae, 2 or 4 long, hair-like tails.
7. **Gilled Snail:** Phylum mollusca  
10 - 44 mm long (1/2" - 1 3/4")  
Shell opens on right, opening covered by thin-pale called operculum.

## GROUP 2 TAXA:

*Somewhat pollution tolerant organisms can be in fair quality water.*

8. **Crayfish:** Order Crustacea  
1.25 - 15 cm long (1/2" - 6")  
2 Large claws, 8 legs, resembles small lobster.
9. **Scud:** Class Crustacea  
5 - 20 mm long (1/4")  
Fat body higher than it is wide, swims sideways, more than 6 legs, resembles small shrimp.
10. **Alderfly (larvae):** Order Megaloptera  
10 - 25 mm long (1/2 - 3/4")  
Looks like a small hellgrammite but has 1 long, thin, branched tail at back end.
11. **Damselfly (larvae):** Order Odonata  
10 - 30 mm long (1/2" - 1")  
Large eyes, 6 thin hooked legs, 3 broad oar-shaped tails.
12. **Crane Fly (larvae):** Order Diptera  
10 - 50 mm long (1/3" - 2")  
Green or brown, plump caterpillar-like segmented body, finger-like lobes at back end.
13. **Dragonfly (larvae):** Order Odonata  
15 - 45 mm long (1/2" - 2")  
Large eyes, 6 hooked legs.
14. **Clam:** Phylum Mollusca  
4 - 90 mm long (1/4" - 4")  
Hard shells. Ridged triangular shaped shell. Filter feeder.

## GROUP 3 TAXA:

*Pollution tolerant organisms can be in poor quality water.*

15. **Blackfly (larvae):** Order Diptera  
Up to 10 mm long (1/4")  
One end of the body wider. Black head, suction pad on opposite end.
16. **Segmented Worm:** Class Oligochaeta  
1 - 30 mm long (1/16" - 1 1/4")  
Often red; looks like aquatic earthworm. Can be very tiny, thin segmented body.
17. **Midge Fly (larvae):** Order Diptera  
2 - 8 mm long (1/4")  
Narrow wormlike segmented body with distinct head. 2 legs on each side. Characteristic 'wiggler' movement.
18. **Pouch Snail:** Phylum Mollusca  
10 - 25 mm long (1/2" - 3/4")  
Shell opening to the left. No operculum. Breathes air.
19. **Leech:** Order Hirudinea  
5 - 50 mm long (1/4" - 2")  
Brown, slimy body, ends with suction pads.