

Aquatic Macro- invertebrate Survey

Glenbuckie Biodiversity Project

Date: 24/05/13

Survey location GPS: Long 143.9651 Lat -37.8440

EVC: Valley Grassy Forest (code 47) & Stream bank Shrub land (code 851)

Site description: Surrounds are well vegetated with small medium & tall plants. Vegetation includes Woolly Tea Tree, Spiny Rush, Black Wattles & Manna Gums. The stream is in dappled shade and there are healthy aquatic plants in particular " Water Ribbon" growing in the waterway. The stream is slow flowing, narrow, approx. 40-80cm deep and the water is clear. The stream bottom is visible, as are Leaf packs, silt, wood, and small stones/cobbles. The edges are soft, collapsible but not muddy. The stream bottom is soft & silted.

Photo 24



Photo 25



Weather Conditions: fine & no rain in the last 3 days.

Light conditions: part shade

Methology : Using a fine invertebrate net, supplied by Waterwatch (Corangamite CMA), the stream's water, objects, edges & bottom were scaped & filtered so as to sample any invertebrates present. The collection process was over a 10 minute period and sampling was done in 10-15 meters of stream. The material was rinsed using the stream water and the solid material remaining in the net, was examined for Aquatic Macro-invertebrates.

Using resource material supplied by Corangamite Waterwatch , ie flip cards, flow chart & “Agreed Level Taxonomy (ALT) keys v 1.4 “, I comparing the invertebrates found in the net against illustrations, photos, symbols and keys. Identification of the invertebrate specimens was made in groups, family, species and if possible genus. Healthy, identifiable specimens were photographed.

Using the flip cards, I identified invertebrate groups and their sensitivity to stream degradation. A “ALT habitat sheet”, obtained from Corangamite Waterwatch, identified “signal 2” specimens (Order/class/phylum biotic index Chessman 2003). The number of each species found in the net was also documented. See ALT habitat sheet Doc 5.

Conclusion: Visual evidence as seen by photographs 1-23 & 24 & 25, and the collection of a good variety of Aquatic Macro-Invertebrates, suggest the stream is health, Of particularly interest is the collection of pollution sensitive invertebrates,(Stoneflies). The Stoneflies exist only in healthy streams. The water quality test, (physical & chemical analysis) of the stream water confirmed the good status of the stream, bottom is soft & silted.

List of Invertebrates found

	Invertebrate	count	Photo No
1	Crustacean; Order Amphipoda (scud, side swimmers)	11-20	Slide 11 Slide 9b
2	Beetle; (Coleoptera) Dytiscidae, (swimming water tigers)	1-2	Slide 16 Slide 17
3	True Fly Larvae; Family Chironomidae several genera (blood worms)	11-20	Slide 14
4	Mayflies nymphs (Ephemeroptera) family Caenidae (caenids)	1-2	Slide 9a
5	True Bugs (Hemiptera) Families Veliidae/Mesoveliidae/hebridae (water treaders)	6-10	Slide 3 Slide 4 Slide 8
6	True Bugs (Hemiptera) Family Notonectidae, genus Enithares (robust backswimmers)	3-5	Slide 12
7	True Bugs (Hemiptera) Family Notonectidae, genus Anisops (slender backswimmers)	3-5	Slide 18 Slide 2
8	True Bugs (Hemiptera) Family Corixidae ? genus Sigara (striped boatman)	6-10	Slide 23
9	Dragonflies & Damselflies (Odonata) Family Megapodagrionidae	3-5	Slide 6 b
10	Dragonflies & Damselflies(Odonata) Family Synlestidae	1-2	No photo
11	Dragonflies & Damselflies(Odonata) Family lestidae & Coenagrionidae	1-2	Slide 13 Slide 5
12	Dragonflies & Damselflies(Odonata) Family Gomphidae (Gomphids)	3-5	Slide 1a
13	Dragonflies & Damselflies(Odonata) nymph Family Aeshnidae (couta mud eye)	3-5	Slide 20
14	Stoneflies (Plecoptera) Family Notonemouridae (noto nemoor ids)	3-5	Slide 21 Slide 7

15	Caddis fly larvae (Trichoptera) Family Ecnomidae, genus Ecnomus (bandit caddis)	6-10	Slide 15 Slide 1b
16	Caddis fly larvae (Trichoptera) Family Leptoceridae, genus Triplectides (stick caddis)	11-20	Slide 10
17	Not aquatic possibly a millipede	3-5	Slide 22
18	True Bugs (Hemiptera) Family Corixidae ? genus Sigara (boatman)	6-10	Slide 23

Slide 19 shows the specimen tray with Aquatic Macro- invertebrates



Slide numbers





