



[www.whitebaitconnection.co.nz](http://www.whitebaitconnection.co.nz)

**Our field trip...**

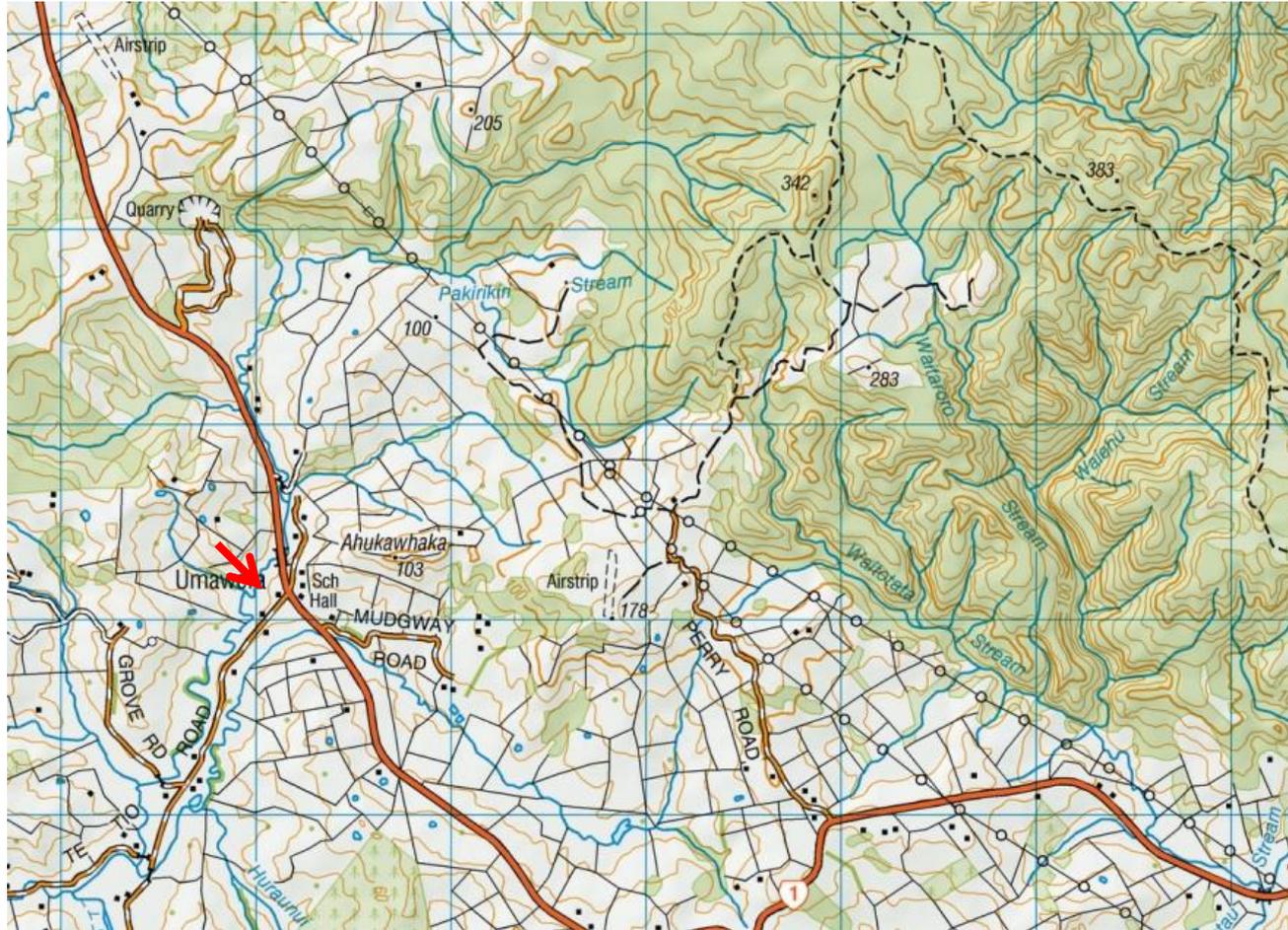
**Umawera School**

**Stream**

**Investigation**

**Finding the treasure!**

Where is the waterway that flows by your school?  
Do you know where the headwaters are?





We looked at an un-named tributary of the Orira River. This is a picture of the catchment. At the top of the catchment you can see Omahuta Forest. What other kinds of land use can you see in this picture?



Not far from where we carried out our stream investigation, the Orira River drains into the Hokianga Harbour via an estuary like this. You can see an area of mangroves where the fresh river water meets the salty sea water. The mixed salty and fresh water of the estuary is called 'brackish' water.



To get to the stream we walked across Mr Oliver's farm.



Soozee had set some fish traps overnight. In the first trap there was only one eel and some backswimmers that were moving about rapidly to keep away from the eel!





...and the eel wasted no time in wriggling out of the basin and heading back towards the water over the grass!

Fortunately it got away unharmed as eels are able to 'breathe' out of water for a while and can easily move over the ground if it is wet.

They have a very good sense of smell and can detect where the water is by smelling it.

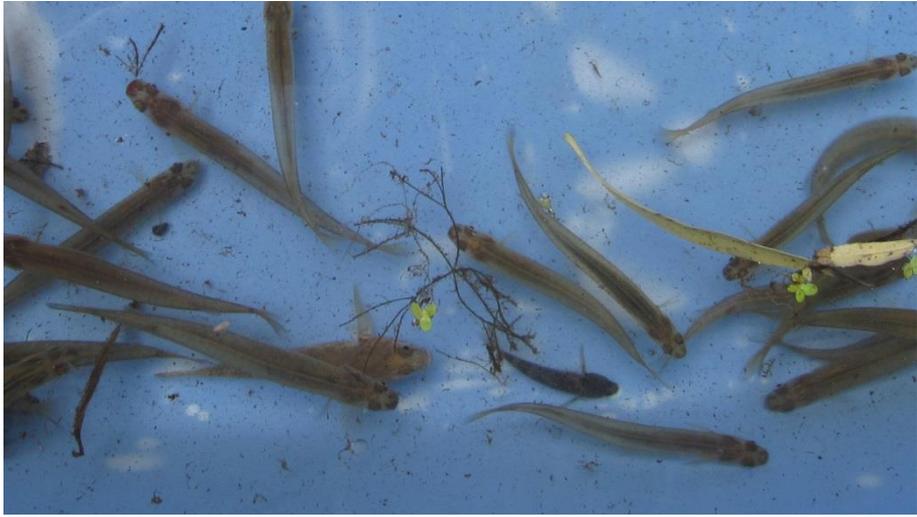




Bye bye eel!



The next traps had lots of fish in them. Most of the fish were juvenile whitebait species, plus Some redfin bullies and common bullies.





The trap in this deep pond contained lots of whitebait species like banded kokopu and inanga



In this shallower reach of the stream, the trap contained mostly bully fish and freshwater shrimps.



After emptying the traps and identifying the critters in them, we measured the temperature of the water. It was 15 degrees Celsius, which is nice and cool and healthy for the fish and invertebrates of the stream.

We also checked the clarity, with the different groups recording measurements mostly between 55 and 75 centimetres. As 70 cm is a good clarity rating our stream is quite good – especially as it had been raining through the night and that would have made the water a bit muddier.

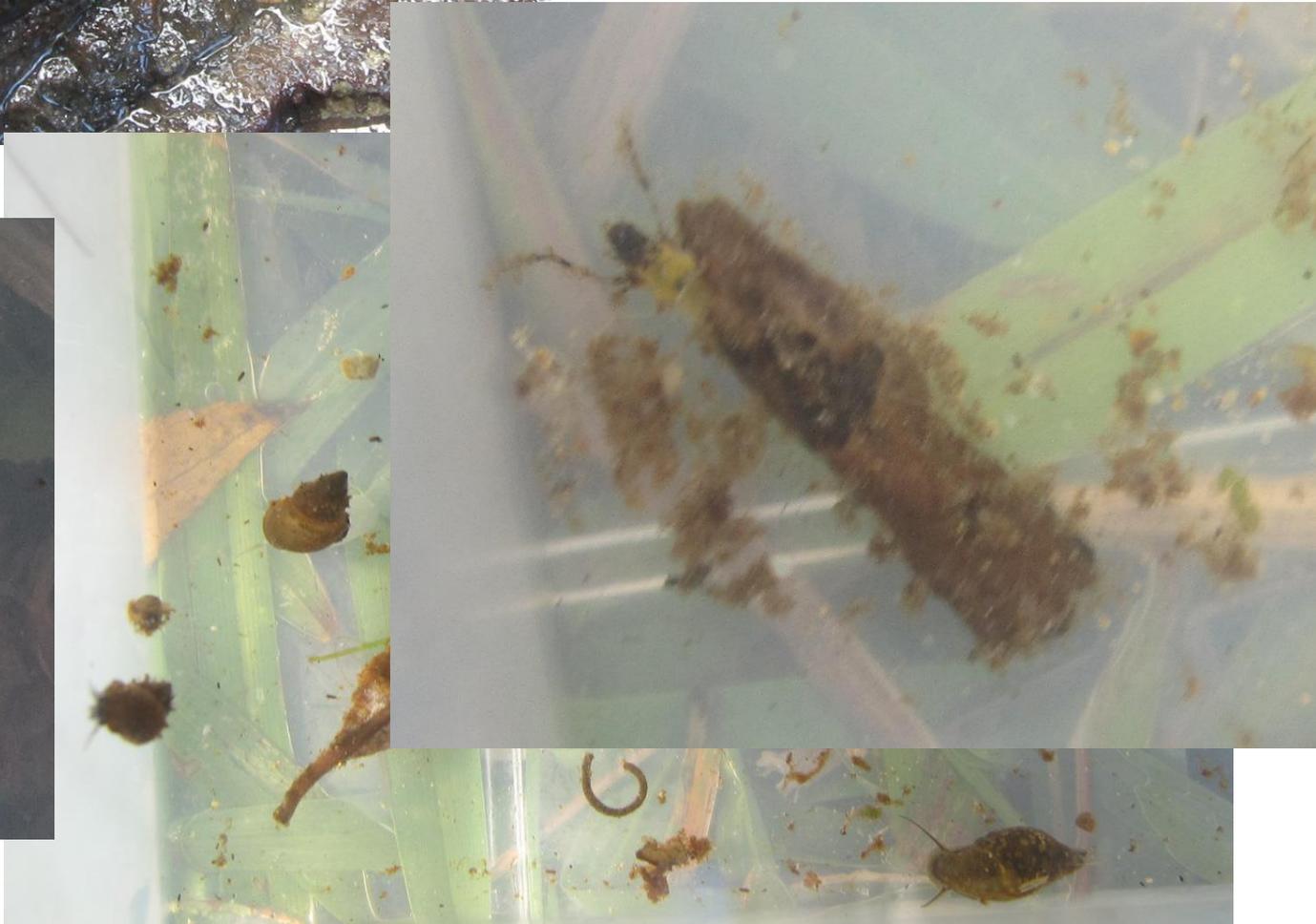
We measured the pH as well and found it was 6.5, which is what you would expect for a stream coming out of the bush, i.e. only slightly acidic and quite healthy for the stream life.



Our next task was to take the scoop nets and see what critters we could find for ourselves.



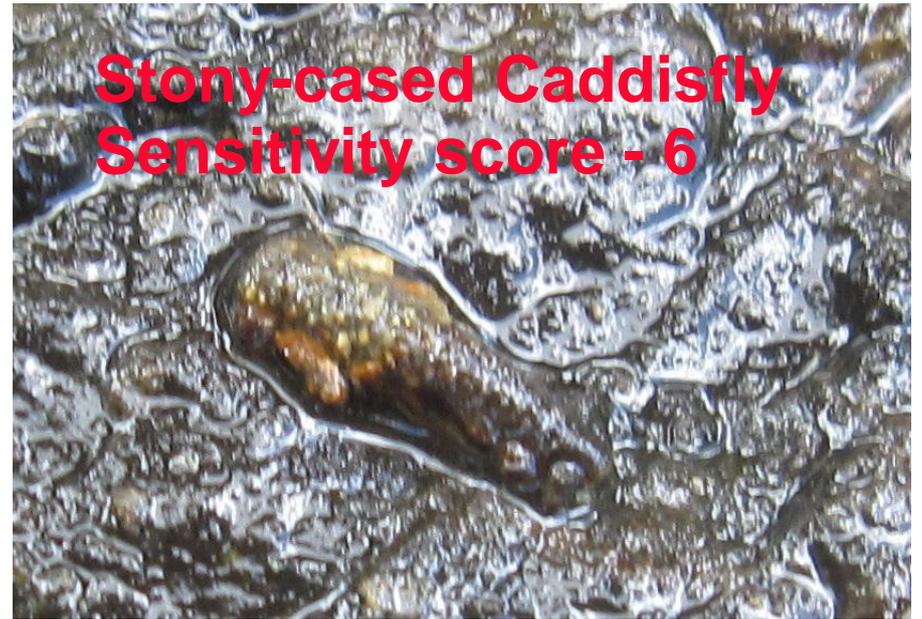
Can you identify these critters and say what their sensitivity score is?







**Eel – Tuna**  
***Anguilla australis* (shortfin)**



**Stony-cased Caddisfly**  
**Sensitivity score - 6**



**Free-living Caddisfly**  
**Sensitivity score - 5**



**Backswimmer - 5**

**Woody-cased Caddisfly - 5**



**Damselfly - 5**

**Stony-cased Caddisflies - 6 –  
stuck to the bottom of a rock**



**Flat Mayfly -8**

**Woody-cased Caddisfly - 5**



**Dolomedes Spider - 5**



**Freshwater snails - 3**





Freshwater Shrimp  
- 5



Beetle - 6

**Stony-cased Caddisflies again (sensitivity score 6)  
– on the rock and off the rock!**



After identifying and recording all the critters we caught we released them carefully back into the stream



