

What we've done and how we did it

Ben Hartley

AZ Rivers is supported by:



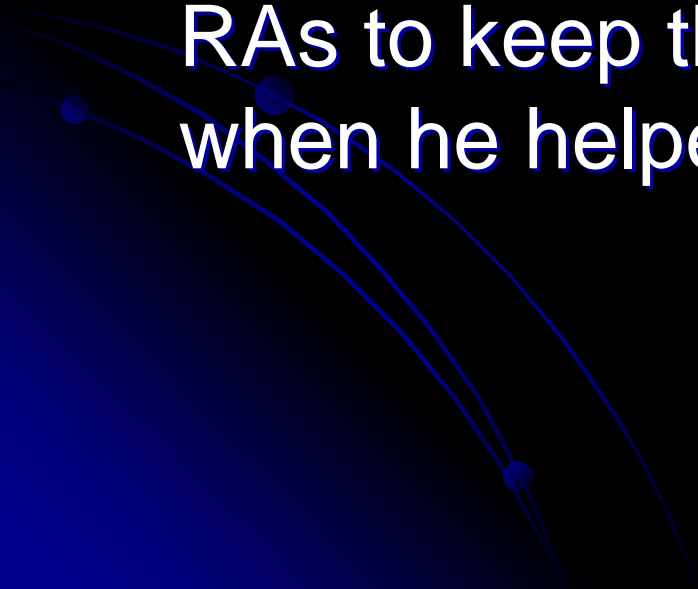
Were we tested on our trip

- Cienaga Creek
- Gray Hawk Ranch
- The San Pedro House
- The Gila Box
- Dankworth pond
- The San Francisco River
- Along Tonto Creek And the Tonto Natural Bridge
- Along the Verde River
- Wet Beaver Creek
- Montezuma's Well

Temperature

- Just stick the thermometer in the water
- Make sure to read it while in the water

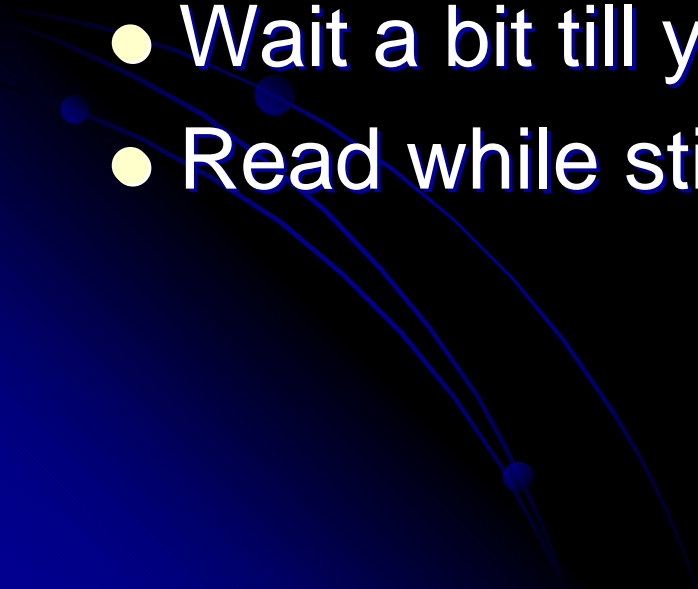
(We had to constantly remind one of the RAs to keep the thermometer in the water when he helped us)



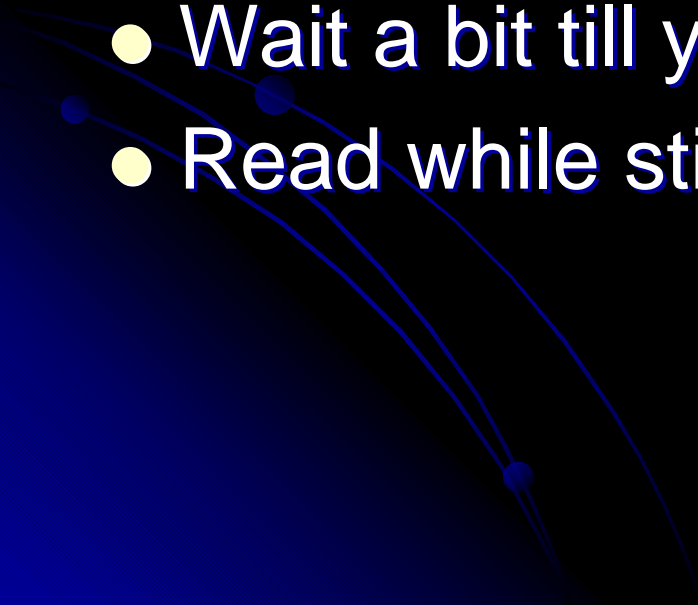
What we tested for

- Temp
- PH
- Conductivity
- Dissolved Oxygen
- Alkalinity
- Nitrates
- Turbidity/Transparency of the water

PH

- We used a Probe that was pre-calibrated while at the Biosphere
 - Turn on Probe
 - Stick probe about an inch into the water
 - Wait a bit till you have a steady reading
 - Read while still in the water
- 

Conductivity

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 - Turn on Probe
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Dissolved Oxygen

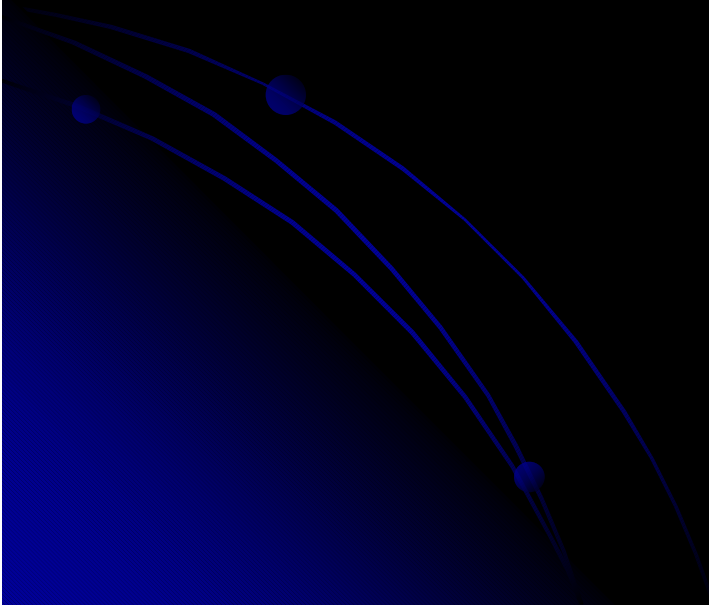
- Used a DO kit
- Procedure: fill sample bottle so there is no air inside it
 - Add 8 drops of Manganous Sulfate Solution
 - Add 8 drops of Alkaline Potassium Iodide Azide
 - Cap and mix
 - Allow precipitate to settle somewhat
 - Add 8 drops of Sulfuric Acid
 - Cap and mix until reagent and precipitate dissolve
 - Fill test tube to the 20 ml line
 - Fill titrator with Sodium Thiosulfate
 - Titrate until sample is pale yellow
 - Add 8 drops of starch indicator
 - Continue the Titration until precipitate is clear.

Alkalinity

- Used alkalinity kit
- procedure: Fill the Titration tube to the 5 ml line with the sale water
 - Add one BCG-MR Indicator Tablet
 - Cap And mix until tablet dissolves. Solution will turn blue-green
 - Fill direct reading Titrator with Alkalinity titration Reagent B
 - Insert the titrator into the center of the test tube cap
 - Gently swirl tube while pressing the plunger of the titrator until the solution turns to a purple color
 - Read result

Nitrates

- Used a Nitrates Kit
- Procedure: Fill the water sampling bottle with sample water
 - Fill one test tube tube



Turbidity

- Use something like a bucket or a cup where you could get water without any of the sediment
- Put the tube completely in your shadow and slowly pour in sample water
- Pour until you could no longer see the pattern at the bottom of the turbidity tube
- Read the results

Location	North	West	Elevation	Temperature	P.H.	Conductivity	DO	Alkalinity	Nitrates	Turbidity
Cienaga	32.0167	110.6431	1007	23.3	8.2	132.4	7.5	269	0	32
Grey Hawk S1	31.60726	110.15517	1208	22	8.2	479	4.1	210	0	32
End of Gila Box	32.88732	109.49708	936	24	8.4	1280	6.5	172	0	77
Beginning of Gila Box	32.96535	109.31004	1012	27	8.2	600	5.9	176	0.3	83
San Fransico River	33.06081	109.30081	1058	29.5	8.1	1130	7	166	0	120+
Tonto Picnic Area	34.33985	111.09579	1661	16	7.9	200	7.5	84	0.1	120+
Tonto Natural bridge	GPS Wouldn't work			17	7.9	560	7.25	219	0.1	120+
Beaver Creek S1	34.67929	111.69571	1186	21	7.4	270	N/A	130	0	120+
Beaver Creek S2	34.67336	111.67346	1181	22	7	260	8.2	152	0.1	120+
Montezuma's Well	GPS Wouldn't work			25	6.4	1020	6.8	476	0.1	120+