

A photograph of a rocky waterfall. The water is cascading over dark, layered rock formations. The water is clear and white with foam at the base. The surrounding rocks are dark and have some green moss or algae. There are some green plants on the right side of the rock face. The overall scene is natural and scenic.

The Relations Between pH and Alkalinity

By Ian Yares

About Me

- My name is Ian Yares.
- I hail from Phoenix, Arizona where I go to Gate Way Early College High School.
- I participated in the 2009 Envirothon with my mentor Theresa Johnson.
- I am an avid researcher when I want to be and the only son of a wonderful mother & father.

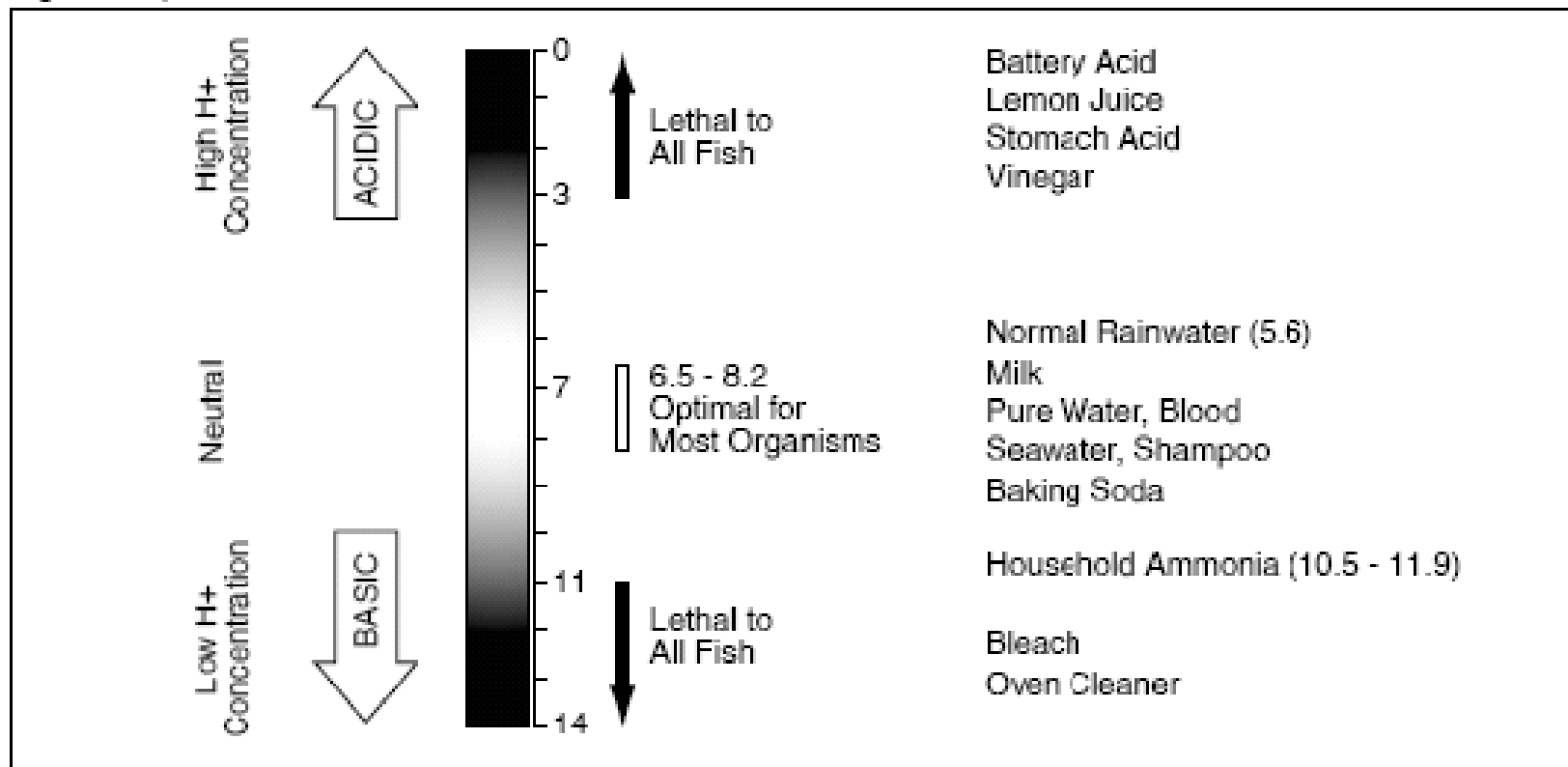
My Topic: pH and Alkalinity

- pH is a measure of acidity in water.
- Alkalinity is what keeps pH from lowering if acid is added.
- If Alkalinity is gone pH will decrease and kill off creatures that cannot adapt.
- Yet with Alkalinity pH is kept stable.
- Without both pH and Alkalinity, diversity will be strangled.
- Animals and plants depend on each other for survival.
- Without a suitable habitat the tower of dependability crumbles.

My Topic: pH and Alkalinity Continued

As seen below ,in figure HY-pH-1, organisms can only live within an acceptable pH.

Figure HY-pH-1



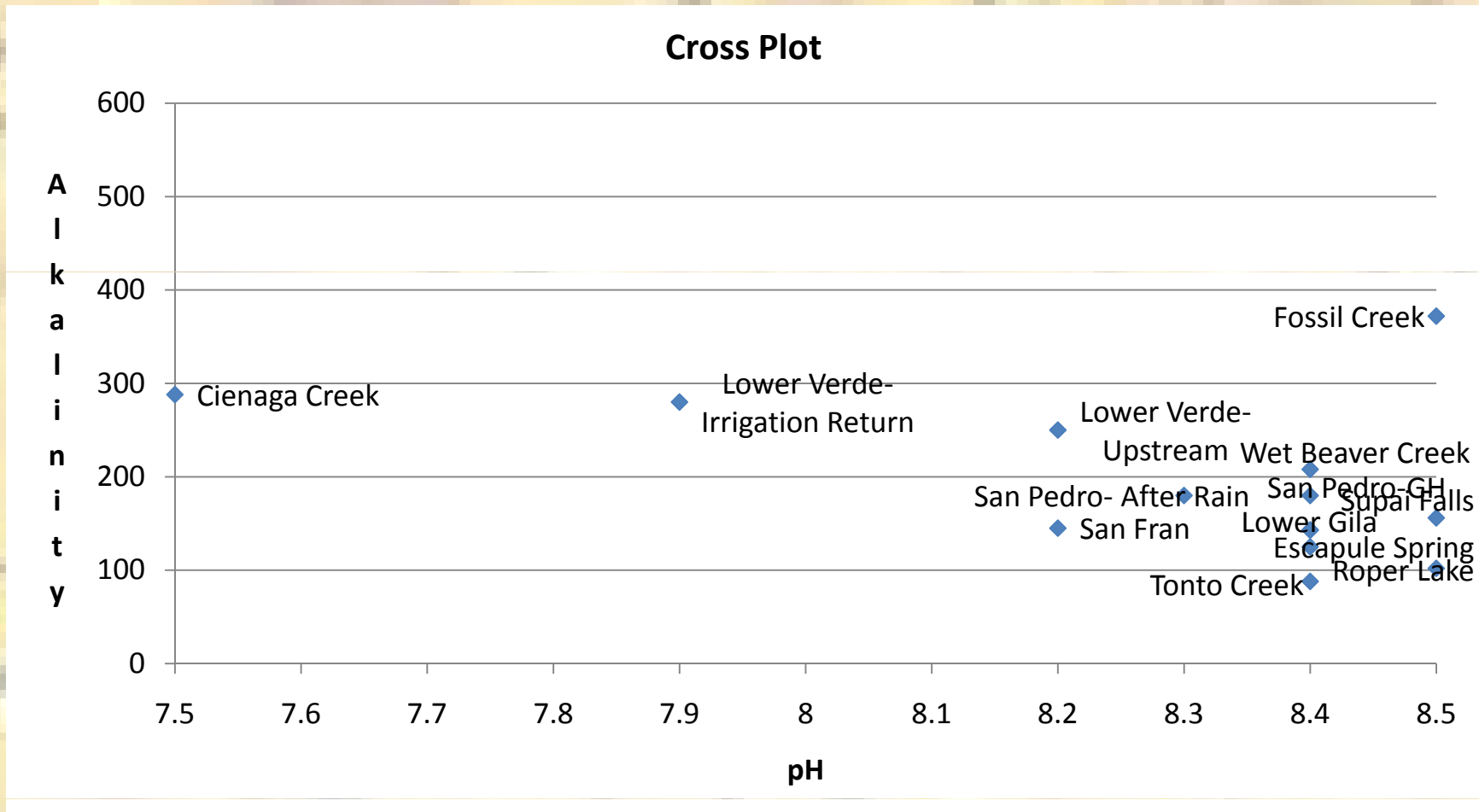
Data Collection

- In the field we used many techniques to measure water.
- For pH a probe kind of like an electronic thermometer was used.
- For Alkalinity a kit of multiple tools, consisting of chemicals, were used along with a sample of water to attain the end result.





Analysis



Alkalinity rule; exception at Cienaga Creek; no correlation data; others show no dif.(Alk)

Limitations

- Like most scientists there are some limitations that got in the way of my work.
- For me I only had so much time to collect data.
- I couldn't gather multiple measurements at the same site.
- The repeatability of the instruments was less than professional grade.
- Lets not forget human error.

Nooo! its
ending!

Conclusion

- So now you know about the balance of pH & Alkalinity and how they relate.
- You learned basic knowledge of the tools used to collect data on pH and Alkalinity.
- I described the limitations of my work.
- One of thirteen sites showed an unusually high Alkalinity for a low pH.

Yaaay!
Sources!

Sources

- <http://www.ycscale.net/pictures/large/PH-Meter-PH-03-1.jpg>



- <http://thefuturebuzz.com/pics/the-matrix.jpg>



- <http://i.pbase.com/g3/42/208742/2/58158128.RodinThinkingMan.jpg>

