Skyglow in American Samoa

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American Samoa has much wildlife, such as bats and a diverse selection of birds. Light pollution can negatively affect these creatures as well as other wildlife. Unfortunately, there is no research on light pollution here on the island, and since we don’t have the necessary tools here to measure light pollution, I decided to use photography. This is a continuation project from last year, and I was able to go to Rose Atoll (a wildlife reserve island and take pictures under the perfect conditions and compare the pictures I took around Tutuila. I used a software called ImageJ to help me find the average pixel value of the picture. Pixel values range from 0, which is black, and 225, which is white. Finding the average pixel value of an image will tell you how bright or dark the picture is. I hypothesized that areas like Utulei, Tafuna, and Leone would have higher pixel values. After I conducted my experiment, I found that locations with the least amount of skyglow were Alega, Agugulu, and Malaeloa. The three locations with the highest levels of skyglow were Utulei, Amanave, and Mesepa. My hypothesis was partially correct.

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