Clouds First Report

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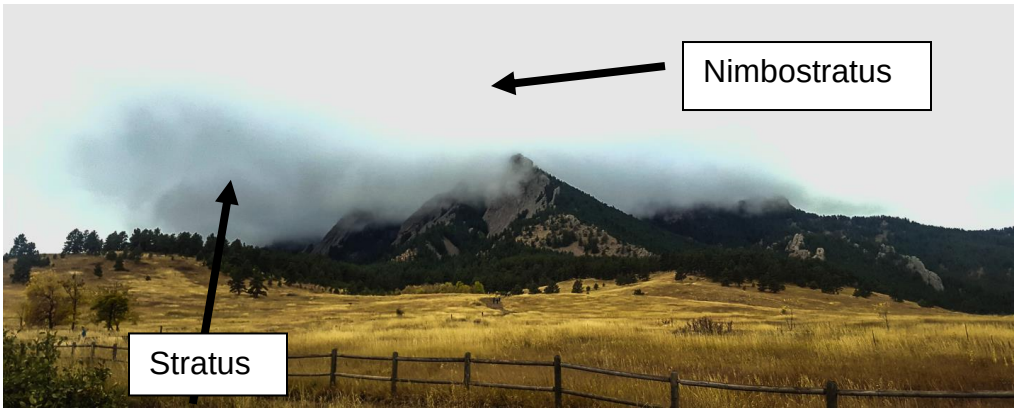
I. Introduction

This photograph captures the beauty of stratus and nimbostratus cloud formations surrounding Chautauqua park. It was taken near noon after light rain showers took place earlier in the morning. I was getting ready to go on a quick hike up the mountain after the rain had ended and looked up to see a stratus cloud slowly engulfing it. I loved how the mountain remained so beautiful on such a not so beautiful day.

II. Cloud Visualization

The clouds in this image seem to be the whiter nimbostratus which had produced a slight drizzle earlier in the day, and darker stratus which is slowly moving around the mountain. Stratus clouds are generally lower to the ground and can be slightly transparent while nimbostratus is the result of altostratus thickening and usually produces rain. Although it was near noon, the nimbostratus clouds were thick enough to block out most of the sunlight which made for a darker photo.



To fully identify these clouds, we must estimate their altitude. The flatiron mountains are approximately 7000' and nimbostratus and stratus clouds generally remain under 6500' so they both make sense. The Skew-T for the day and time of the photograph, October 5th at noon, was slightly above 0 which means that it was a stable atmosphere which also makes sense because it had finished raining by that time and stratus clouds are usually present in a stable atmosphere.

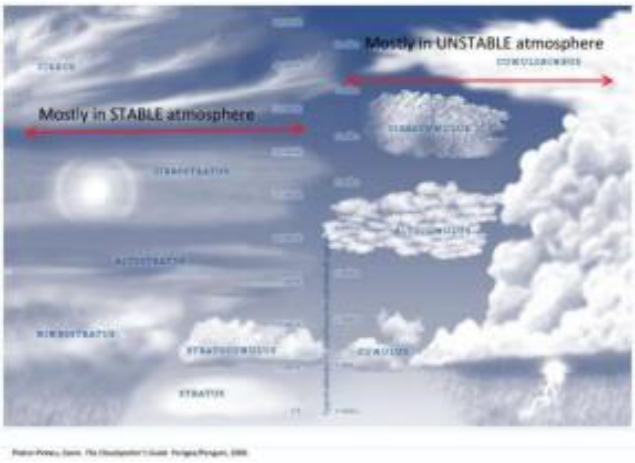


Figure 3: Cloud Regions from Lecture (Pretor-Pinney, 2006)

III. Photographic Technique

For the photo, I used my Samsung Galaxy S6 camera. It is a SM-G920V 16 MP camera model with a 28mm lens. This image was captured using an exposure time of 1/1500 sec and an F-stop of f/1.9 with an ISO of 200. A small focal length of 4.3mm was used in order to get the whole beauty of the mountain and clouds in the picture. The edited version is 5303x2116 pixels while the original was 5312x2988 pixels. The photo was edited using Adobe Photoshop Express through which I was able to mess around with the contrast and clarity to make the image more colorful and crisp. Below is a side by side of the original and edited versions.

Original

Edited

IV. Conclusion

The beauty of this cloud formation in such an iconic Boulder place made for a great chance to get such an incredible shot. Based off of my analysis, these clouds are most likely stratus and nimbostratus clouds. I believe that I fully satisfied my intent of taking a great cloud photo at such a gorgeous place. I love the cool autumn temperature and the contrast between the grass, mountains, and white clouds. The focus seems to be spot on for such a wide angled shot and the added saturation from photoshop really brought out some color. The photo is a bit dark due to the cloud cover that I was trying to capture and the contrast that I edited in. Ultimately, I was quite happy with the shot I was able to capture, and I even got to enjoy a very enjoyable hike afterwards!

References

Pretor-Pinney, G. (2006). *The Cloudspotter's Guide.* Penguin