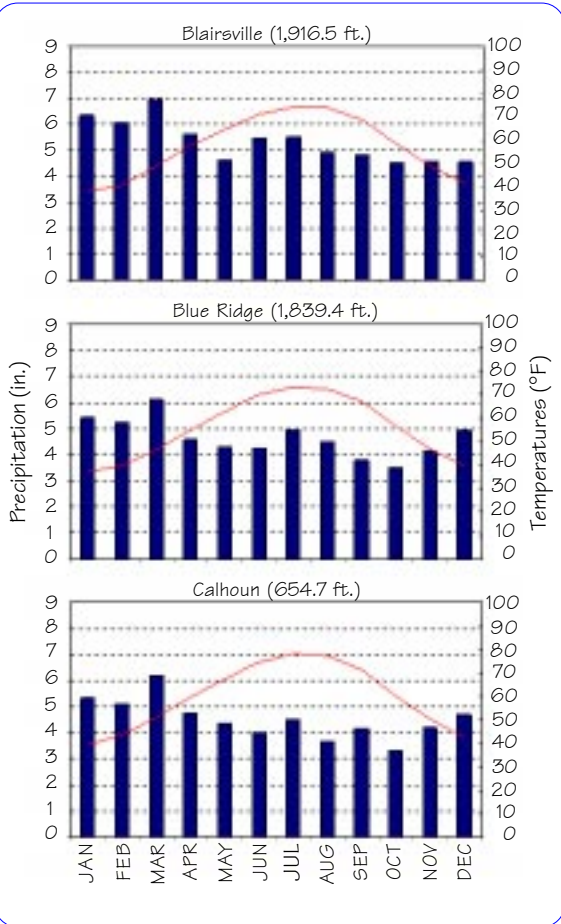


CLIMATOLOGY OF THE GEORGIA MOUNTAINS

Georgia Mountains: An Introduction

Located in the northern quarter of the state, the Georgia mountains and includes the Blue Ridge, Ridge and Valley, and Appalachian Plateau physiographic provinces. Within these provinces are the following geologic divisions: Chickamauga Valley, Armuchee Ridge, Lookout Mountain, The Great Valley, Cohutta Mountains, McCaysville Basin, and the Blue Ridge Mountains. The region is characterized by forest-covered mountains and narrow valleys dominated by farms and pastures. Elevation varies considerably from less than 1,000 ft. up to 4,784 ft.; Brasstown Bald, Georgia's highest point, is located in this region. Major river systems located within the region include the Conasauga, Cossa, Tennessee, Chattooga, Hiwassee, and Chattahoochee Rivers. Ecologically, the Georgia mountains are quite diverse. Along with surrounding mountainous lands, this area harbors more salamander species than anywhere in the world.



Georgia Mountains: Precipitation Profile

In the Georgia mountains, precipitation is relatively consistent month to month, yet it does vary by location. Precipitation (rain and snow) tends to be greatest in the northeast corner of the region and drops off to the southwest. For example, Blue Ridge averages 5 inches more annually than LaFayette; most of this difference arrives in the spring and summer months. Region-wide, the driest months tend to be in the fall (September, October, and November). During this season, precipitation averages between 9 and 15 inches. The historical record suggests that areas in the Georgia Mountains can experience month-long dry spells. For example, October 1938 and October 1963 were extremely dry months in which less than 0.01 inches of rain was reported. In contrast to the dry season, a cool season rainfall maximum predominates in the Georgia Mountains, with January or March being the wettest month of the year. This is caused by cyclonic storms moving across the country on a regular basis during the winter and early spring. Mountain elevations uplift moist air, resulting in considerable precipitation in the region. Extreme rainfall events are not uncommon. For example, on September 9, 1975, Dalton received in excess of 10 inches of rainfall in a 24 hour period. Similarly, just 10 years later, Blue Ridge was hit with 8.27 inches of rainfall in a 24 hour period, causing numerous landslides in the area. This region receives the most snowfall in the state. For example, the Blizzard of 1993 blanketed north Georgia with up to 2 feet of snow.

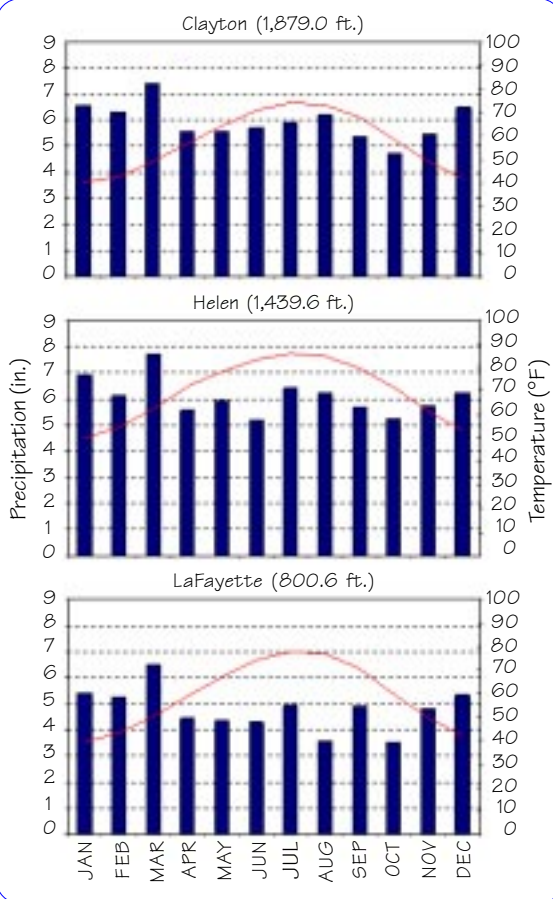
CLIMATOLOGY OF THE GEORGIA MOUNTAINS

Georgia Mountains: A Temperature Profile

Temperatures in Georgia's Mountains are quite variable, due in large part, to the region's topographic relief (i.e., elevation differences). Region-wide annual temperatures average in the high 50s, with summer temperatures in the low 80s. Of course, because of the gradual drop in elevation from the northeast to the southwest, temperatures can vary considerably. Continuous days with temperatures exceeding 90° F are not uncommon, though this also varies from northeast to southwest. For example, Clayton experiences 15 days per year with temperatures exceeding the 90° F mark, whereas that value increases to 53 days at Rome. Low temperatures do not follow the longitudinal trend as described for high temperatures; Clayton and Rome both experience between 70 and 90 days per year in which the mercury drops below 32° F. Elevation greatly influences the number of days of exceptionally cold conditions.

Going to EXTREMES!

Station	Annual Snow (in.)	Date	Hi Temp (°F)	Date	Lo Temp (°F)	Date	Prcp (in.)	Date
Blairsville	18.0"	1993	100°	6/29/36	-16°	1/28/40	5.5"	3/11/52
Blue Ridge	11.0"	1996	98°	6/22/64	-10°	1/9/70	8.27"	10/4/64
Cartersville	9.5"	1968	108°	8/27/54	-9°	1/21/85	6.0"	3/18/90
Clayton	22.0"	1960	102°	7/12/30	-11°	1/21/85	8.02"	10/4/64
Dahlonega	15.5"	1940	103°	7/29/52	-12°	1/21/85	6.28"	3/30/77
Dalton	18.0"	1993	103°	6/27/88	-10°	1/21/85	10.4"	9/24/75
LaFayette	21.0"	1993	106°	7/28/52	-13°	1/20/85	6.99"	2/16/90
Rome	14.0"	1993	107°	6/28/31	-9°	1/21/85	6.67"	10/26/97
Toccoa	15.0"	1970	106°	7/12/30	-5°	1/30/66	8.6"	8/16/84



Georgia Mountains: Climatic Elements

The climate of the Georgia Mountains is influenced by both geographic and meteorologic elements. Temperature and precipitation change daily (diurnally) because of topographic position. Elevation is also an important factor influencing the climate of the mountains because as elevation increases, air temperatures cool. Additionally, as air rises, it's ability to hold water reduces, thus a tendency for higher precipitation at higher elevation. Another important factor includes the great distance to the Atlantic Ocean and Gulf of Mexico. These bodies of water tend to minimize diurnal fluctuations in temperature because of the time it takes for water to heat and cool. Winter climate can be influenced by blasts of arctic air moving southward out of Canada. Spring and summer convective storms, associated with fronts moving through the region, bring great amounts of precipitation, especially if such fronts stall in the mountains.

