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THE SUNSHINE STATE

Visitors driving into Florida pass signs that offer a greeting and mention the weather they may expect: “Welcome to Florida—The Sunshine State.” It is the sunshine that lures so many people to Florida. Florida has been officially known as the Sunshine State since 1970, but other nicknames include the Peninsula State, the Everglades State, the Alligator State, and the Orange State. Florida is the land of sunshine, beaches, theme parks, wildlife, and much more.

Florida’s warm, sunny weather has created a population of tourists, retirees, refugees from the cold North, and visitors from overseas, but Florida’s weather isn’t always warm and sunny. Every Floridian knows to expect rumbling thunderstorms arising from the hot and humid air lifted by sea breezes that sometimes turn violent during summer afternoons. These storms, which are sometimes deadly, throw out bolts of lightning like the Greek god Thor, striking whomever may be in their path. At times the weather is hot and dry for months, as Floridians all over the state saw in 1998 when the parched land ignited into wildfires. Thick smoke from fires at night clings close to the ground and mixes with fog, creating a deadly mix when it drifts over roadways. During the winter, Arctic air masses originating in Siberia migrate across the dark and frozen northlands to Alaska and Canada and plunge southward, bringing a frigid chill to Florida. Snow is not on the mind of most Floridians unless they are headed to the ski slopes or hear news of a blizzard up north. On occasion, though, northern Florida receives a white



Figure 1.1. The roadway greeting sign upon arrival in Florida. Credit: Chris Allen.

proof

coating of measurable snow that sometimes dips even farther south to Tampa and Miami, as happened in January 1977. As nearshore ocean and gulf waters of central and north Florida chill repeatedly during cold outbreaks, warm, moist air moving from over the warm Florida Current and the Gulf Stream create huge sheets of fog and drizzle. Through the years, Florida residents have seen their fair share of violent and destructive weather in the form of major hurricanes, powerful tornadoes, and grapefruit-sized hail. Florida has gained many nicknames related to weather events. After the 2004 hurricane season, when Florida was slammed by four hurricanes, several nicknames were tossed around including the Hurricane State, the Plywood State, and the Blue Tarp State. At other times Florida has been known as the Lightning State, the Sinkhole State (particularly during drought times when sinkholes are more likely to form), the Tornado State, and the Frozen Orange State (during Arctic blasts of icy air).

Florida by the Numbers

Florida, the southeasternmost state, stretches almost 800 road miles from Pensacola in the western Panhandle through Orlando in the middle of the peninsula to Key West at the southernmost part of the Florida Keys. This distance is about the same as the width of Texas, but Florida's land area is narrow. Its total area, over 54,000 square miles ranks 22nd among the states. The peninsula ranges from 100 to 140 miles in width and almost 447 miles from north Florida to the tip of the Florida Keys.

Florida has thousands of freshwater lakes. The 700-square-mile Lake Okeechobee in the middle of the peninsula's southern end is the largest. Freshwater sources within the state encompass 4,300 square miles. By air, one can see that Florida is dotted with lakes; over 7,700 are larger than 10 acres. More than 11,000 miles of rivers, streams, and canals drain the rain that falls in Florida. The longest river in Florida, the St. Johns, is also the longest north-flowing river (at 273 miles) in the United States east of the Rocky Mountains. It runs along the eastern side of Florida from the St. Johns Marsh near Vero Beach in Indian River County to Jacksonville, where it bends to the east and meets the Atlantic Ocean.

Florida has about 4,500 islands larger than 10 acres; only the state of Alaska has more. Bordered by the Atlantic Ocean to the east and the Gulf of Mexico to the west, Florida has 1,200 miles of coastline, more than California's 840 miles. Florida is also known for its flat landscape, much of which is barely above sea level. The highest point in the state, at Britton Hill near the Alabama border, not far from the Panhandle town of Paxton in Walton County, is only 345 feet above sea level. This is the lowest high point among the 50 states.

Most of Florida's population lives near the Atlantic Ocean or the Gulf of Mexico. About 75 percent of the population lives in coastal counties. In 1845, when Florida became the 27th state, it had a population of only 66,500. According to the U.S. Census Bureau (2015), Florida's population estimate for 2014 was over 20 million people, making it the third most populated state; only California (38 million) and Texas (26 million) have higher populations. These residents live in over 9 million housing units in Florida's 67 counties. Twenty-one percent of these residents were under the age of 18 in 2014, and 18 percent were over the age of 64. Florida's



Map 1.1. The geographic grid and Florida time zones.

population density of 351 people per square mile ranks eighth among the states.

North Florida, which shares borders with Georgia and Alabama, is wide enough to be located in two time zones: Eastern and Central (map 1.1). The northernmost “point” of Florida actually extends in a west-east line over 100 miles along Florida’s northern border with Alabama. The northernmost part of Florida is farther south than any part of the southwestern states of New Mexico, Arizona, or California.

From 1938 to 1977, Florida automobile license plates indicated the 1938 population ranking of the county in which the vehicle was registered. For example, Dade County (Miami) which was the most populated county in 1938, was number 1, Duval County (Jacksonville) number 2, Hillsborough County (Tampa) 3, Pinellas County (St. Petersburg) 4, and Polk County (Lakeland-Winter Haven) 5. Currently the top five county populations (with the largest city listed) have over one million residents and the top three reflect the population explosion that occurred along the lower southeast coast: 1) Miami-Dade (2.6 million; Miami), 2) Broward (1.8 million; Fort Lauderdale), 3) Palm Beach (1.4 million; West Palm Beach), 4) Hillsborough (1.3 million; Tampa), and 5) Orange (1.2 million; Orlando). The city with the greatest areal size, 750 square miles, also has the greatest population, Jacksonville (821,000). Next in line by population, according to the 2010 U.S. Census, are Miami (399,000), Tampa (336,000), St. Petersburg (245,000), and Orlando (238,000).

Florida’s warm climate is also a hospitable host to many nonhuman heat-loving creatures. Alligators, one of the more notably dangerous inhabitants, move silently through the state’s lakes and rivers. They can reach 13 feet long and weigh up to 1,000 pounds. Nearly every year three to six people are bitten by alligators without provocation, and every year or two someone is killed by an alligator. Some Florida mammals that are considered dangerous are rarely seen. However, the numbers of these hunters are in decline. Only about 3,000 Florida black bears still exist and the Florida panther, the state animal, is nearly extinct; only about 180 exist today. They feed partly on the many deer, opossum, and armored armadillos that roam the state. The climate is also favorable for six-legged insect annoyances, which include mosquitoes, fire ants, several varieties of cockroaches, and the notorious love bugs that splatter

on automobile windows during the months of May and September. As flood waters rise, many of the insects and spiders that live near and under the ground appear. Entire colonies of fire ants evacuate their tunnels and create a floating raft with their larvae on top when flooding occurs.

The Geographic Grid and Florida

We know that Florida is in the southeastern corner of the continental United States, between the Gulf of Mexico and the Atlantic Ocean, but how can we describe Florida's location more precisely? We often use a geographic grid of latitude (east-west parallels) and longitude (north-south meridians) to describe the location of any place on Earth (map 1.1). For example, the landfall location of Hurricane Charley, which landed in southwest Florida in 2004, was near Port Charlotte, Florida. This location can be stated several ways: in decimal form (i.e., 27.0°N , 82.1°W), in degrees and minutes (i.e., $27^{\circ}00'\text{N}$, $82^{\circ}06'\text{W}$), or with a negative sign that indicates longitudes west of the prime meridian (i.e., $27^{\circ}00'$, $-82^{\circ}06'$).

Map 1.1 shows Florida along with several key lines of latitude and longitude. The easternmost part of Florida is near West Palm Beach, and the westernmost point is the Perdido River in Escambia County. The easternmost Florida longitudes are still west of major Atlantic Coast cities such as Boston, New York, Philadelphia, and Washington, D.C. Most people are surprised to learn that even Pittsburgh, in western Pennsylvania, is located east of the easternmost point of Florida at 80°W . In addition, the westernmost point in Florida is located almost as far west as Chicago. Florida extends farther west in the United States than most people realize.

The Sun and Seasons

The Florida Keys are the southernmost part of the state, and Ballast Key, located at $24^{\circ}31'\text{N}$ latitude, is the southernmost island. Due to the earth's tilt and its revolution around the sun, the sun is directly overhead at noon at the Tropic of Cancer (23.5°N latitude) on June 21 and at the equator (0°) on September 22. It is directly over the Tropic of Capricorn (23.5°S latitude) on December 22, then back over the equator by March

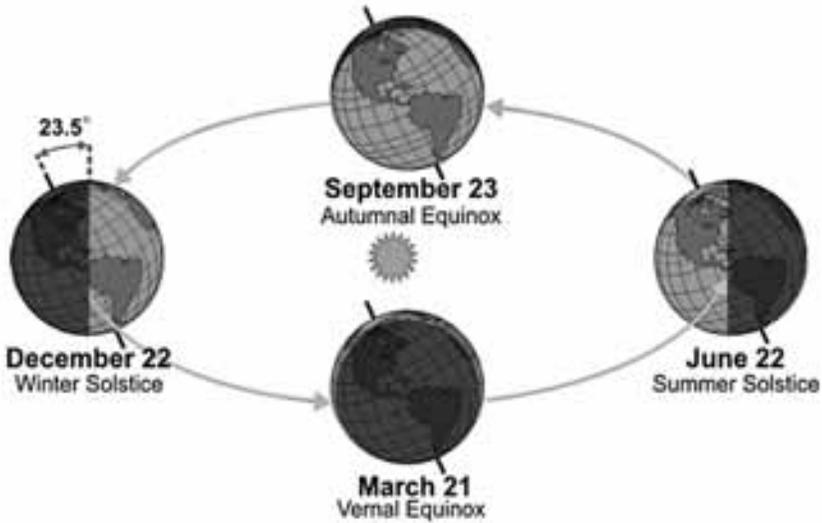


Figure 1.2. The seasons as Earth revolves around the sun. Source: NOAA (n.d.).

21 (figure 1.2). These dates can vary by a day or two in some years. All of Florida is located to the north of the Tropic of Cancer, the northernmost latitude that ever experiences the overhead rays of the sun. Places north of the Tropic of Cancer never experience the sun directly overhead. In the summer, Florida is close to the intense overhead rays of the sun, but in the winter it is much farther from the latitude where the sun shines directly overhead, as is the case for the rest of the continental United States.

Another factor related to latitude that affects the amount of energy from the sun is the length of daylight hours. Because of the geometry of the earth's tilt as it orbits the sun, locations north of the Tropic of Cancer and south of the Tropic of Capricorn have fewer hours of daylight in winter than they do in summer and the least sunlight at the time of the winter solstice. The less direct rays of sunshine (i.e., at angles farther from being directly overhead) and the fewer hours of daylight mean that locations farther from the tropics are colder than places closer to the equator.