# Tourism Climatology in the Southeast United States

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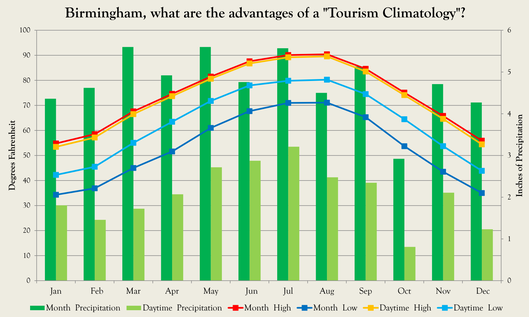
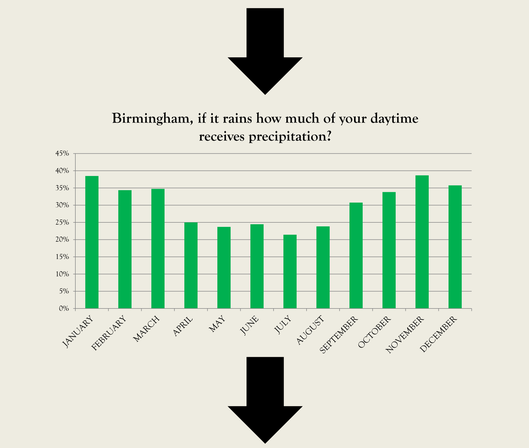
## Development of the "Daytime Tourism Climatology"

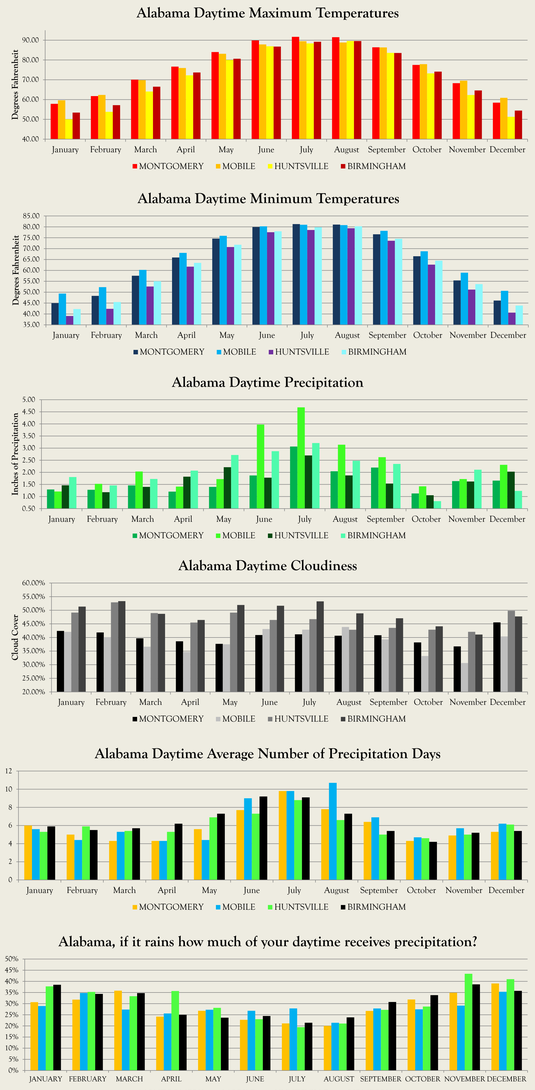
- ✓ The "Daytime Tourism Climatology" project utilizes data from the Automated Surface Observing System (ASOS) network of stations positioned throughout the southeast United States.
- ✓ According to NOAA, ASOS stations are considered part of "a joint effort of the National Weather Service, the Federal Aviation Administration, and the Department of Defense."
- ✓ The observation periods used for the "Daytime Tourism Climatology" are 9:00 – 18:00 LST for the last decade, 2000-2009.
- ✓ The goal of this time frame is to, in general, capture the period of outside, climate-dependent, recreation for a typical tourist—this is the climate they will be exposed to during their activities.
- ✓ The time period takes into consideration a reasonably well-planned outdoor activity which begins in the mid-morning and terminates around a typical dinnertime.
- ✓ The output data is available for any location listed on the map below, but consists of two general output groups, *local specificity flow* and *state daytime comparison*.
- ✓ Tourists now have two additional avenues of decision-making with respect to their individual preferences.

### Tourism Climatology of Birmingham, Alabama
**Local Specificity Flow**



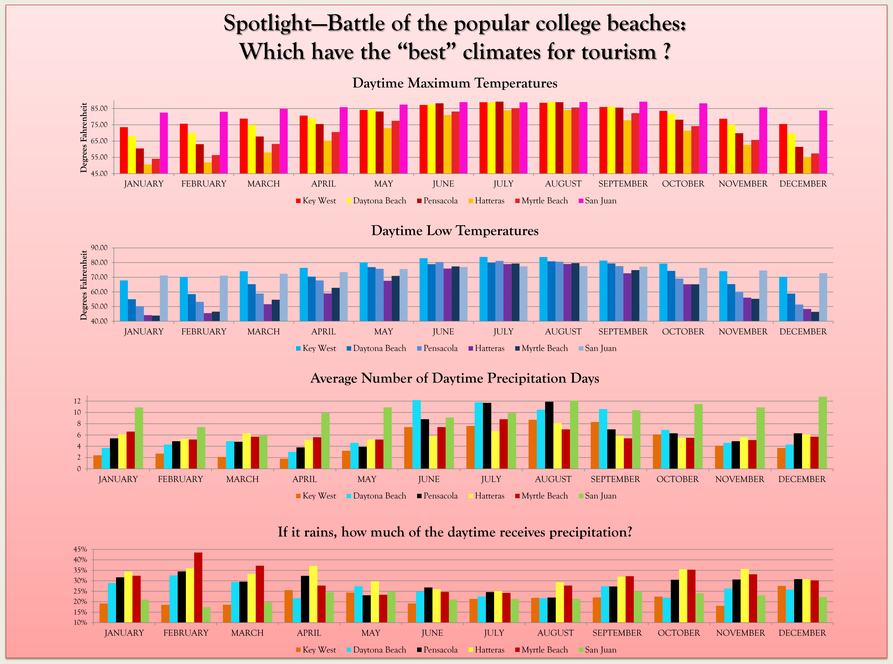

### Tourism Climatology of the state of Alabama
**State Daytime Comparison**





A complete "Tourism Climatology" has been developed for touristic completeness and spatial cohesiveness for locations within the states in the southeast region under the jurisdiction of the Southeast Regional Climate Center (SERCC) including San Juan, Puerto Rico (not pictured).

### Spotlight—Battle of the popular college beaches: Which have the "best" climates for tourism ?




## The Emerging Field of Tourism Climatology

- ❖ Climate & tourism is currently a European phenomenon which is vastly understudied in the United States.
- ❖ The **International Society of Biometeorology** (ISB) is the organizer of the **Commission on Climate, Tourism, and Recreation.**
- ❖ The ISB has had four historical meetings: 2001, 2004, 2007, and 2010. These meetings have had a rich display of bioclimate and biometeorology research; however, **they have all occurred outside of the United States**.

## The Importance of Tourism Climatology

- ❖ The goals of the "Daytime Tourism Climatology Project" are to **provide more user-friendly and higher specified data to tourists** for decision-making and planning.
- ❖ When planning for travel, tourists face many long-term decisions often basing their location choice on general climatology and "local knowledge" of the weather.
- ❖ While weather forecasts are readily available, trips that occur over long spans of time ultimately rely on climatology.
- ❖ With limited luggage resources, tourists pack based upon expected temperature and precipitation. Anomalous departures are to be expected; however, **poor planning based upon non-specific climatological resources can be averted resulting in lower cost, more enjoyable vacations.**
- ❖ According to the World Tourism Organization, U.S. domestic receipts totaled $94.2 billion in 2009. In addition, research from East Carolina University states that in North Carolina, "tourism is a major economic driver accounting for $17.1 billion in travel expenditures, $4.2 billion in payroll, $2.5 billion in tax receipts and employing 198,900 residents."

## Tourism Climatology Q&A

**Q:** I am planning a hike, but will be leaving earlier than 9am. Does this mean that the tourism climatology is useless for me?

**A:** Making personal adjustments is just another way of adapting to your weather. Use the provided information for more specified details of the portion of your day when applicable; and in this case, plan for cooler temperatures in the morning.

**Q:** What universities in the southeast United States are currently known to be working on this important topic?

**A:** THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL; UNCW

**If you are not in this list and want to be, please email perkins4@email.unc.edu to begin collaboration.**

**Q:** Who are the end-users of this product?

**A:** Tourists, private business, tourism development authorities, travel agencies, government agencies, city planners.

**Q:** Is this "Tourism Climatology" available in an automated computer format?

**A:** At this time it is not; however, as interest grows beyond print this would be a logical next step.

**Q:** How does this discipline work with climate change?

**A:** Using predictive models of climate change, indices are applied to determine how at a future date, climate changes can help or hurt local tourism industries or affect the tourist experience.

**Q:** What is the future of this project?

**A:** This project serves as a user engagement tool and may grow into a web application. It seeks to increase interest and provide public exposure to the burgeoning field of tourism climatology.

**Q:** What is the future of tourism climatology in the southeast?

**A:** Possibilities abound, but the current in-process research is developing predictive models with zoos to determine how forecasts and actual weather events affect their attendance.

**Results from the "Tourism Climatology" in general, show more temporally specific, higher utility, information for a particular locale as well as offer a state-wide comparison; a few noteworthy observations were also found throughout the project:**

- ❖ While rain is generally more frequent in summer, it is also of shorter duration, resulting in a lower chance of your daytime being "washed out."
- ❖ **General monthly climatologies** (which include all hours) are accurate with respect to high temperatures but **can underestimate experienced low temperatures by over 10 degrees Fahrenheit.** This can result in poor clothing choices and uncomfortable trips.
- ❖ In the southeastern United States, September usually embodies a temporal precipitation regime of summer much more than autumn as afternoon showers are still typical.
- ❖ Precipitation reaches a maximum in the mid-afternoon of the summer season.
- ❖ In the winter season, precipitation occurrences and amounts generally trend downward as the daytime progresses. This is most prevalent in inland locations.

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SOUTHEAST REGIONAL CLIMATE CENTER

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