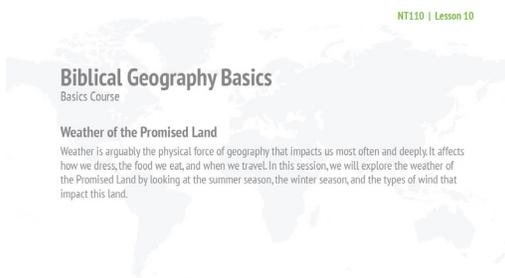


Weather of the Promised Land



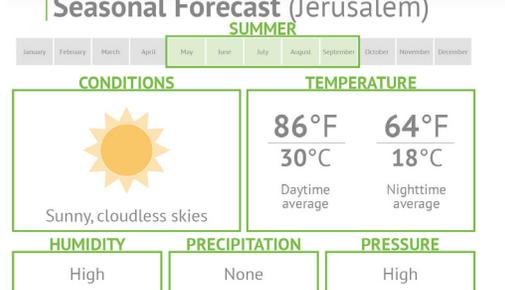
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Introduction

latitude
topography
+ air mass movement
2 seasons:
Summer and Winter

Summer Season



Introduction

There's geography in my Bible. Remember, we have defined physical geography as not just the features on the surface of the earth, but the forces that impact them. And high on that list has to be weather. So in this session we're going to talk about weather of the Promised Land.

Now, like weather elsewhere, it's influenced by a number of variables, including latitude, topography, and the movement of air masses. Well, without taking you too deeply into the meteorology, let's say that Israel of the past, as well as the present, generally has two seasons—a summer season and a winter season. Fortunately, all of the evidence suggests that since 2000 BC to the present, weather patterns have pretty much remained the same in this region, and that allows us to use some of the modern data to understand what weather was like in Bible times as well. In this session we'll take a look first of all at the summer season and the sort of culture that develops from it. And then we'll move to the winter season and also look at some of the culture that developed for it. And we'll conclude at a look at the wind, which is evident in all seasons, but which is very unique in its composition and its connotation.

Summer Season

Let's start with the summer season. One day is very much like the next during the summer season in Israel, which extends from about May through September. Here we have an atmosphere defined by high pressures, and those yield the following conditions—sunny skies. Israel is to this day one of the sunniest countries in the world, largely due to the summer season when we have sunny skies. Because of the proximity of the Promised Land to the Mediterranean Sea, it continues to have high humidity during the

Summer Season

Seasonal Culture

- Fruit crops maturing



Summer Season

Seasonal Culture

- Fruit crops maturing
- Traveling
- Shade-seeking



Summer Season

Seasonal Culture

- Fruit crops maturing
- Traveling
- Shade-seeking
- Going to war



summer. Days are warmer. For example, Jerusalem will achieve an average high of 86 degrees Fahrenheit, cooling in the evening to about 64 degrees. But the big news of this summer season is that there is no cloud cover and virtually no precipitation. That affects the culture of people living in Bible times, and here you see some of the things that occupied people during the summer season.

Even though it doesn't rain, we still have fruit crops maturing over the summer season. Fruit crops like olives and dates and grapes and figs. Where do they get their water? Dewfall. Take a look once more at this chart, and you'll see the relationship between dewfall and agriculture. I called your attention earlier to the word *drought*, but notice that next to the word *drought* on the chart, I have *dewfall*. Even though it doesn't rain, the proximity of the Promised Land to the Mediterranean Sea means that about 250 nights a year there is plentiful dewfall. And there are some plants in the Promised Land maturing during the summer that acquire 25 percent of their moisture from the dewfall itself.

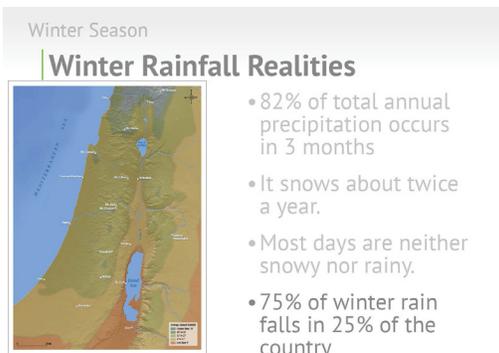
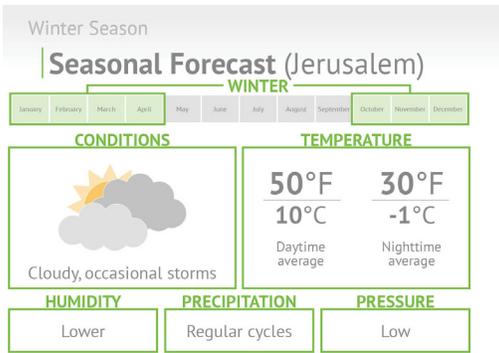
This is the season of the year when the roads are in the best condition and when people were relieved from responsibility in the agricultural field, so it was the season people traveled. It's also a season when people look for any shade that they could dive into, and when you're traveling during the warmer seasons of the year, you're always looking for shade. Anywhere you can find it, whether it's within a tent or the shadow of a great rock. And to this day as I hike in the summer months in Israel, my groups are always looking for the shadier side rather than the sunny side of the canyon to walk.

And because most armies were composed of citizens—militias, if you will—you had soldiers who were farmers, and when the farmers were relieved from their field work, they were able to go to war, making summer season not just the season of travel but a season for going to war as well.

This is the time of year when the Mediterranean Sea had its quietest cover, meaning it's an ideal time for shipping to occur.

Winter Season

Let's contrast that with the winter season. The winter season in the Promised Land runs from October through April, and a dramatic change occurs in the atmosphere. The high pressure that had given



the sunny, rainless weather gives way to a series of low pressure areas that migrate off the Mediterranean Sea. About 25 storms or so per year, and those result in very different conditions. The skies can be cloudy. The days are cooler. Now Jerusalem’s average high is only about 50 degrees Fahrenheit during the day, and at night drops to 30 degrees Fahrenheit. Rainfall occurs in a regular cycle. We’ll talk about that in a moment, and occasionally this is the time of year when very, very strong storms occur.

Here are some of the rainfall realities that I want you to be sure to think of during the winter season. Eighty-two percent of the country’s rain falls during the months of December through February. But I wouldn’t want you to think that it’s raining here all the time. Sometimes it snows, as you can see from this photograph. About twice a year we get snow in Jerusalem, but most days are not snowy; most days in the winter season are not rainy. You have moderate temperatures, partly cloudy skies, which occasionally give way to an advancing low pressure area. And when one of those low-pressure areas arrives, they usually impact the weather for about five days in a pattern that looks something like this: You have about three days of rain or snow followed by a cold day, followed by a warm day, and a return back into the conditions that we had known, which are the partly cloudy skies and moderate temperatures of the winter months.

The rainfall, of course, as we mentioned in our previous session, is very unevenly distributed in the Promised Land, with about 75 percent of those winter rains falling in just 25 percent of the country. There is more moisture received in the northern half of the Promised Land. Look at these two pictures—one to the north where approximately 60 inches of precipitation is feeding this whitewater rapids, and just 150 miles to the south, we have a mere 2 inches of annual precipitation, the very dry conditions you see there. There’s more moisture on the west side of the rising terrain, on the west side of the Central Mountain zone. That’s because when the air masses move off the Mediterranean Sea, saturated with moisture, they’re forced up the slopes of those mountains. And as they move up in elevation, those air masses cool, and that cooling air is able to contain less water. Clouds form, rain begins, and the west side of the mountain receives the primary rainfall. As you go over the summit of that Central Mountain zone or over the watershed, the air again descends and warms and conditions dry out, and the east side is where we find the Judean wilderness that actually exists in a rainfall shadow.

This can result in very different realities, depending if you're west or east of that central watershed line. For example, Jerusalem receives approximately 22 inches of annual precipitation. Just 15 miles to the east, Jericho receives a mere 5 inches of precipitation. That's the story told in these two photographs. They are only taken 15 miles apart on the same day, but one is on the west side of the mountains and one is on the east side of the mountains—Judean shephelah versus the Judean wilderness.

Now, just as summer impacted the lives of people and shaped their culture, winter does the same. So from October to April things begin to change culturally in the Promised Land. As the storms develop on the Mediterranean Sea, Mediterranean shipping comes to a close. Overland travel slows because of the wet roads and the demands of the agricultural fields. Because many of your soldiers are also farmers, military operations are typically suspended during the winter season. This is the time when water collection begins, and it's the beginning of the grain agricultural cycle, as we'll see in just a moment.

This is what the winter storms look like as they come in across the Mediterranean Sea, creating very dangerous conditions. In fact, occasionally one of these low-pressure areas intensifies to the point of becoming what is called a medicane—a Mediterranean hurricane. It's very likely that this is the kind of storm that doomed the ship the apostle Paul was on. In Acts 27 we have the most detailed description of a shipwreck on the Mediterranean Sea in any of the ancient literature we have.

The winter season is the time of the year when the ground water recharges. The Jordan River fills again, the springs are recharged, the wells are recharged, and the cisterns are filled. It's a time of year when travel is suspended and people give their attention to growing grain. Look carefully again at this chart. Not down at the bottom, but at the top, and you can see that during those months from October through March is when we find the rainfall in the land. And if you look at the perimeter ring, you'll see that this is the time of the year that the grain fields are plowed and planted and the grain itself matures in the field. Without the winter rains—the early rains, the middle rains, and the late rains—there would be no grain harvest like we see here. That is the story of the winter season, one of the more difficult seasons to live through and yet vital to the well-being of people living in the land.

Winter Season

Winter Rainfall Realities



Winter Season

Seasonal Culture

- Mediterranean shipping ends
- Travel slows
- Military operations suspended
- Water collection begins
- Grain agricultural cycle begins

Winter Season

Seasonal Culture

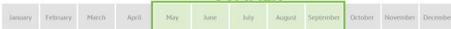
- Mediterranean shipping ends
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Wind

Mediterranean Sea Breeze

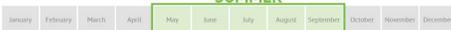
SUMMER



Wind

Mediterranean Sea Breeze

SUMMER



- Natural air conditioning: cooler, moist air drawn off the sea

Wind

Now, in each of these two seasons, the summer and the winter seasons, we have wind blowing. But the wind is not always of the same type, nor did people perceive it in the same way. It's important for us to know because on more than one occasion wind is mentioned by the biblical authors. So let me give you a quick introduction to the three most common winds.

During the winter season we're more likely to see the frontal winds develop. Now, these winds are created as a consequence of the relative pressure difference between high-pressure areas and low-pressure areas that you might see on the weather map at home. These winter winds are very, very strong winds. They are the winds that close down shipping on the Mediterranean Sea, and in some cases cause property damage in places like Jerusalem. These frontal winds, which are violent and intense, are contrasted sharply with the summer wind, the most common of which is the Mediterranean Sea breeze.

Because the Promised Land lies adjacent to the Mediterranean Sea, it benefits from what I call "natural air conditioning" during the summer months. As the sun rises, the land warms and the air over the land begins to rise. As that warm air rises, it draws in the cooler moist air off the Mediterranean Sea, and that wind, that sea breeze, increases in air speed from about 22 to 34 miles per hour during the day. It starts at the coast, perhaps by eight o'clock in the morning. And by eleven o'clock in the morning to noon, Jerusalem is receiving this natural air conditioning. It's the predictable wind that causes threshing floors to be located where they are. Remember, threshing floors are designed to help people separate the grain kernel from the chaff. It's done by the different weights of those two products—the grain being heavier, the chaff being lighter. If you throw both up into the wind, the wind will blow the chaff downwind and away from the grain you want to collect. And the location of the threshing floor is going to take advantage of those sea breezes that occur during the summer months, and the threshing floor will be uniquely positioned to take advantage of them.

The third type of wind is the one that no one likes. The frontal winds, people put up with; the sea breeze, wind that people enjoy and used. But then the khamsin winds, the east wind, the southeast desert wind that comes pouring in. Its name, by the way, comes from the Hebrew word for fifty, and it's related to the season of

Wind

| Khamsin Winds

Passover. The khamsin winds typically occur in the transition season between summer and winter and winter and summer, but these are nasty winds. The wind speeds can be up to 60 miles per hour. The desert winds lift temperatures by 25 degrees Fahrenheit in just a matter of a few moments, reduce relative humidity to 2 percent, and fill the air with a dust and fine haze that makes everyone irritable even to this day.

Winds are of different types in Bible lands, and so when we encounter the idea of wind in our Bible, we can ask ourselves which type of wind and which connotations are most likely being associated with it.

Conclusion

Our lives are powerfully influenced by the weather, and in the same way people who were living in Bible times had lives that were powerfully influenced by the weather as well. Not surprising, then, that it's mentioned in Scripture. So in this session we hope to have given you a little better idea of what the weather looks like in the Promised Land during Bible times—during the summer season, during the winter season, both of which produce their own unique type of winds.

You've seen during these sessions that the Bible that is so full of people and events we know is also a book filled with geography we don't know. And it's not just a book about people, but it's a book about place. And in His wisdom, the Lord has with some frequency on the pages of our Bible used place to help communicate His thoughts to us. I hope these sessions will set you off on a journey—a journey that will set you seeking a better understanding of the geography of the Promised Land. Because when we understand that geography as well as we can, we will understand the things that God is sharing with us in His Word.

May God bless you in your Bible reading and in your efforts to learn the land of the Bible so that you might better understand the Lord communicates with us through it.