What's Happening IN THE WORLD?

BY LAWRENCE GABLE *VOL 12, NO 7 MARCH 2012*

The Sahara's Dust Hits West Africa

The Sahara Desert is Earth's largest hot desert. Every year a powerful dry wind blows dust and sand across West Africa. That forms a cloud that settles over several countries and causes problems for the people who live there. It is called the Harmattan, and this year it is as bad as people have seen for quite some time.

The Sahara Desert covers most of Northern Africa. It spans 3,000 miles from the Red Sea in the east to the Atlantic Ocean in the west. It also stretches south for 1,200 miles. Except for the Arctic and Antarctica, the Sahara is the largest barren place on Earth. The desert forms much, or most, of the landscapes of ten countries.

The weather reaches extremes in a few different ways. Above all, the Sahara is dry. About half of the desert receives less than one inch of rainfall per year. The other half gets no more than four inches. In some places it might rain for a few days in a row, then not rain again for several years.

The Sahara experiences a wide range of temperatures. The average daytime summer temperature is 90° F, but in some parts of the desert it regularly hits 120° F. In fact, the hottest temperature ever recorded was 136° F in the Sahara in Libya. The intense heat can act like a chimney, pulling sand and dust particles three miles into the sky. Winds in the high atmosphere can blow the sand and dust to faraway places like Central Europe, South America and Florida. Temperatures cool in the winter, when the average daytime temperature is only about 55° F.

Finally, the Sahara is windy. A large part of Earth's air circulation is called the trade winds. In the northern hemisphere they blow down from the northeast across Northern Africa toward West Africa. They remain low in the atmosphere. Between November and March a particularly strong, dry trade wind blows across the desert and collides with wet storms from the Atlantic. Their collision results in the Harmattan.

The Harmattan blows like a storm. The dry winds began in November 2011, and by February they were carrying tremendous amounts of dust and sand from the Sahara to West Africa. That created a dark cloud that stretches a thousand miles from Mali west to the Atlantic coast and south to the Gulf of Guinea and the equator. In satellite images it obscures parts of West Africa and the Atlantic completely. For days at a time it blocks the sun, so temperatures fall below freezing.

People in West Africa suffer from a variety of health problems during the Harmattan. Their skin gets unusually dry, so they suffer painful cracking of the lips, hands and soles of their feet. Others get windburn or spontaneous nosebleeds. Because the air quality is bad, people with allergies and asthma have difficulty breathing. The drop in temperatures is dangerous to babies, the elderly and the homeless, who can develop hypothermia easily.

Crops in West Africa suffer too. The wind itself damages crops, and its drying effect causes plants to wither and die. In Ivory Coast, for example, winds and dry weather already have hurt the cocoa crop. The cocoa trees lack the moisture and sunshine they need in order to form flowers and pods. Cocoa is an important part of the economy there, so the poor harvest will hurt communities.

The fine red or yellow dust also becomes a nuisance in people's daily lives. It falls like rain and covers everything. It causes machinery to quit running, and airlines have to cancel flights. If the sun is visible, it glows but does not shine. Drivers have to use headlights to see through the haze, and people turn lights on in their houses during the day. Despite keeping doors and windows closed, the wind blows the dust into buildings. People cover everything indoors and clean their homes several times a day.

The dryness could last until May. The dust cloud will go away before that though, so the problems that it brings will improve. Of course West Africans anticipate the Harmattan's arrival every year, but it is never easy. It is just part of life downwind from the Sahara.

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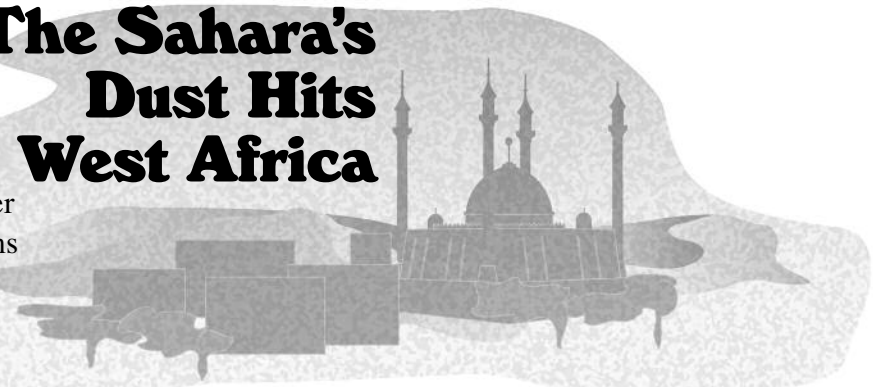

The Sahara Desert is Earth's largest hot desert. Every year a powerful dry wind blows dust and sand across West Africa. That forms a cloud over several countries and causes problems for the people there. It is called the Harmattan, and this year it is worse than usual.

The Sahara Desert covers most of Northern Africa. It goes 3,000 miles from the Red Sea in the east to the Atlantic Ocean in the west. It also stretches south for 1,200 miles. The desert covers much of ten countries.

The weather reaches extremes in a few ways. Above all, the Sahara is dry. About half of the desert receives less than one inch of rainfall per year. The other half gets no more than four inches. In some places it might rain for a couple of days, then not again for several years.

The Sahara experiences a wide range of temperatures. The average summer temperature is 90° F, but in some places it regularly hits 120° F. In fact, the hottest temperature ever recorded was 136° F in Libya. The intense heat can act like a chimney. It pulls sand and dust high into the sky. Winds in the high atmosphere can blow it to places like South America and Florida. Temperatures cool in the winter, when the days are only about 55° F.

Finally, the Sahara is windy. A large part of Earth's air movement is called the trade winds. Above the equator they blow from the northeast across Northern Africa toward West Africa. Between November and March a particularly strong, dry trade wind blows across the desert and meets wet storms from the Atlantic. That results in the Harmattan.

The Harmattan's dry winds began in November 2011. By February they were carrying dust and sand from the Sahara to West Africa. That created a dark cloud that stretches a thousand miles from Mali west to the Atlantic coast and south to the Gulf of Guinea. In satellite photos it covers parts of West Africa and the Atlantic completely. For days at a time it blocks the sun, so temperatures fall below freezing.

People in West Africa suffer health problems during the Harmattan. Their skin gets dry, so they suffer painful cracking of the lips, hands and feet. Others get windburn or nosebleeds. The bad air quality causes people with asthma to have difficulty breathing. The drop in temperatures is dangerous to babies, the elderly and the homeless.

Crops in West Africa suffer too. The wind itself damages crops, and the dryness kills plants. In Ivory Coast, for example, winds and dry weather already have hurt the cocoa crop. The cocoa trees do not get the moisture and sunshine they need to form flowers and pods. A bad cocoa crop will hurt many communities.

The fine dust also affects people's daily lives. It falls like rain. Machinery quits running, and airlines have to cancel flights. The sun may glow, but does not shine. During the day drivers use headlights and people turn lights on in their houses. People keep doors and windows closed, but the wind blows the dust in anyway.

The dryness will last until about May. The dust cloud will go away before that though, so the problems that it brings will improve. Of course West Africans expect the Harmattan every year, but it is never easy. It is just part of life downwind from the Sahara.

Background Information

The Sahara covers all, or significant parts, of Algeria, Chad, Egypt, Libya, Mali, Mauritania, Morocco, Niger, Sudan and Tunisia.

The Sahara's population is around 4 million. The majority of the people live in Algeria, Egypt, Libya, Mauritania and Western Sahara, an area that is claimed by Morocco.

The Sahara Desert is spreading southward at a rate of about one kilometer per year. This devastates farming communities.

The Harmattan is also sometimes called the Northeast Trade Winds, and the effect of the dust and sand is known as the Harmattan Haze.

The name Harmattan may have originated from the Arabic word *haram*, which means "the evil thing."

Sand dunes form one-fourth of the Sahara. They can reach a height of 500 feet.

Nighttime temperatures often fall below freezing, even in the middle of summer.

Meningitis also sweeps across Saharan countries with the Harmattan. New cases appear with the dry November winds, and subside only when humidity rises in late spring. Records show that the winters with especially strong Harmattan winds coincide with the years of highest number of meningitis cases.

The Harmattan does actually bring a couple of advantages to the people of West Africa. The low temperatures make it hard for mosquitoes to breed, so it reduces the spread of malaria. The dryness also helps farmers dry crops such as maize, nuts and grains.

Fires are a problem during Harmattan. Things made of wood get so dry that they ignite easily. Also, farmers burn brush in their fields, and the wind turns those fires into wildfires. Finally, people must take extra care when heating their houses with unsafe electrical or gas units, or with fire.

The cocoa crop's main season runs from October to March.

Topics for Discussion and Writing

Pre-reading:

- Use a map to identify the Saharan countries as well as those in West Africa.

Comprehension:

- Describe how the Harmattan affects people in West Africa.

Beyond the Text:

- Name some ways that you think people can protect their health during the Harmattan.
- How do you think people who live in the Sahara Desert adapt to the climate and landscape there?
- How do people who live and grow crops in deserts get water for themselves and their crops?

Vocabulary (*advanced article only)

Article-specific: barren*; landscape*; intense; equator; allergy; asthma; hypothermia*; to wither*; pod; haze*

High-use: to span*; extreme; range; regularly; atmosphere; circulation*; hemisphere*; to collide*; satellite; image*; to obscure*; spontaneous*; moisture; economy*; community; despite*; to anticipate*

Sources

The Chronicle **www.ghanaian-chronicle.com** February 10, 2012

Public Radio International "The World" February 8, 2012

Reuters February 8, January 30, 16, 2012

AllAfrica September 19, 2011

CA Curricular Standards (4–12)

English-Language Arts

Reading 1.0 Vocabulary Development
2.0 Comprehension (Informational Materials)

Writing 1.0 Writing Strategies
2.0 Writing Applications

ELD—*Intermediate and Advanced*
Reading Vocabulary Development/Comprehension
Writing Strategies and Applications
Listening and Speaking

History-Social Science
6.1; 7.2; 7.4; 10.10