

8404064

7

H

BRITANNICA
JUNIOR
ENCYCLOPÆDIA

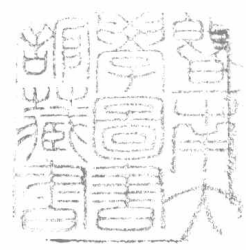
Z256.1
E901
7

8404064
外文书库

BRITANNICA JUNIOR ENCYCLOPÆDIA

For Boys and Girls

7
H



Prepared under the supervision of the editors of

ENCYCLOPÆDIA BRITANNICA

ENCYCLOPÆDIA BRITANNICA, INC.

- Chicago • Geneva • London • Manila • Paris •
- Rome • Seoul • Sydney • Tokyo • Toronto •

©

1934, 1937, 1938, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949,
1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962,
1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1975, 1976,
1977, 1978, 1979, 1980, 1981

1982

By Encyclopædia Britannica, Inc.

Copyright under International Copyright Union

All Rights Reserved under Pan American and Universal Copyright Conventions

By Encyclopædia Britannica, Inc.

No part of this work may be reproduced or utilized in any form or by any means,
electronic or mechanical, including photocopying, recording, or by any information storage
and retrieval system, without permission in writing from the publisher.

Library of Congress Catalog Card Number: 80-67751

International Standard Book Number: 0-85229-388-7

KEY TO PRONUNCIATION

It is of especial importance that an encyclopaedia for children give the pronunciation where the boy or girl might go astray. In all such instances the pronunciation in BRITANNICA JUNIOR ENCYCLOPÆDIA is clearly marked. The accent is shown by the mark ('). The sounds for the different letters, when not self-evident, are as follows:

ā as in *pale*
ā as in *care*
ă as in *bat*
ā as in *farm*
ā as in *task*
a as in *ball*
ē as in *be*
ē as in *met*

ē as in *her*
ī as in *mice*
ī as in *tin*
ō as in *cold*
ō as in *not*
ō as in *for*
oi as in *oil*
ōō as in *boat*

ou as in *out*
ū as in *use*
ū as in *run*
u as in *pull*
ū as in French *début*, German *über*
g (always hard) as in *gay*
j for g as in *gentle*
K for ch as in German *Bach* or Scottish *loch*

ñ (nasal) as in French *bon*
th as in *think*
th as in *thee*
t as in *picture* (Sound varies
from t to ch)
z as in *pleasure* (Sound varies
from z to zh)

THE UNIVERSITY
OF CHICAGO



BRITANNICA JUNIOR ENCYCLOPÆDIA IS PUB-
LISHED WITH THE EDITORIAL ADVICE OF THE
FACULTIES OF THE UNIVERSITY OF CHICAGO
AND THE UNIVERSITY LABORATORY SCHOOLS
●
Let knowledge grow from more to more and thus be human life enriched



Marc Riboud—Magnum

Monkeys of India roam the land stealing food crops to eat, although some stay near the temples for handouts from religious pilgrims. These monkeys live at a Hindu temple in the hills near Jaipur. See **HINDUISM**.

HAAKON (*hō'kōn*) **VII** (1872–1957), king of Norway, was born Prince Charles, the second son of Frederick VIII, king of Denmark. In 1905, when Sweden agreed to permit Norway to become an independent nation, the Norwegians invited Prince Charles to take the throne of the new kingdom. The Danish prince accepted, and a year later he was crowned. The young king took the old Norse name of Haakon, calling himself Haakon the Seventh.

When the Germans invaded Norway in 1940, Haakon called on his countrymen to resist the enemy. His people, however, did not have the arms or manpower to halt the powerful Nazi armies; and on June 7 (1940) he fled to England.

His long exile was ended with the collapse of the German armies in Europe in May 1945. Haakon returned to his homeland shortly after the war ended. The king was given a warm welcome on his arrival in Oslo, and his subjects approved his return to the throne.

HABEAS (*hā'bē ās*) **CORPUS** (*kōr'pūs*) is Latin and means "you have the body." If a person is seized by the police, put in jail, and held there only on suspicion, his lawyer may go before a judge and ask for a *writ of habeas corpus*. The police must obey the writ. They must bring the person before the court so that the judge may find out if the person has been held without being charged with any crime. If he has not been charged, the court will give him his freedom.

This writ prevents anyone from taking away a person's liberty without due process. It became a part of English law when it was written into Magna Carta (1215). It has been in United States' law since 1787 when it was written into the Constitution: "The Privilege of the Writ of Habeas Corpus shall not be suspended, unless when in Cases of Rebellion or Invasion the public Safety may require it."

In ordinary times the right to ask for such a writ is unquestioned. During wartime or in great emergency, the right may be denied. In the United States this can be done only by an act of Congress or by an act of a state legislature.

HABIT (*hāb'it*) is anything that we learn to do, and then do over and over again without having to think about it. Some habits are good because they are helpful to a person. Brushing one's teeth every morning and night is an example. Others are bad for they may be harmful, such as smoking or biting one's fingernails.

When a habit is repeated often, it becomes more deep-seated, and less and less conscious thought is needed to carry it out. After one has repeated a habit regularly and for a long time, he may find it very difficult to stop even when he wishes to do so.

Skills are sometimes thought to be habits. You may be very skilled at playing the piano or in drawing but you may not have a habit of playing or drawing very much.

Habits are different from instincts. If a person's action is instinctive, he did not have to learn it; it was there from birth. By definition habits are actions which must be learned.

Customs are closely related to habits. They are also learned ways of behaving, but they are shared by a family, tribe, or other group. (See **CUSTOM**, **SOCIAL**.)

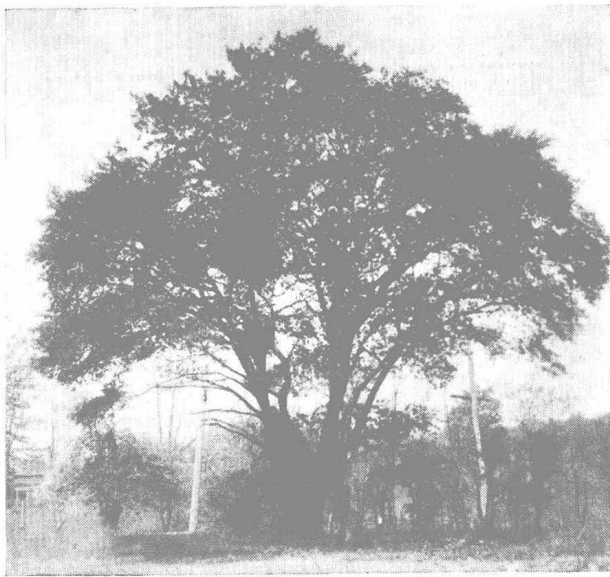
Memory is not the same as habit, yet habits depend on a certain sort of memory—unconscious memory. Like memory, habits need repeating to be established. Memories, skills, and habits are alike in that the more often they are repeated, the easier they are to do.

Habits can be formed not only in the way we move our muscles, but also in the way we feel (our emotions), and in the way we think. (See **EMOTION**.) We may learn to be so afraid of many things that we are habitually (by habit) afraid even when there is nothing to fear.

Poor habits of behaving, feeling, and thinking often may be corrected by regularly practicing the better ways. The poor habits may still be present for a while, but in time they may be replaced by the good ones.

HACKBERRY (*hāk'bēr ē*). Also called sugarberry or nettle trees, hackberry trees are close relatives of the elms. About 75 species grow





L. W. Brownell

The hackberry tree is found wherever the climate is temperate. The roots are used for dye and the wood for boxes, baskets, and furniture.

mostly in the Northern Hemisphere. Six species are native in the United States.

American hackberries range from low, shrub-like forms to tall trees (100 feet or more) with rounded wide-spreading crowns. Their leaves are like the elms but they are longer and thinner. Their bark often is roughened by ridges.

Small clusters of greenish flowers appear soon after the leaves unfold in the spring. Some have pistils, the flower part needed to produce fruits and seeds. Others have only the pollen-bearing stamens.

The ripe fruits (berries) are mostly deep purple, sometimes orange-brown or red, and about the size of garden peas. They have thick skins, pulp that is thin and sweet, and a hard bony pit that contains the seed. Birds eat the fruits and spread the seeds.

Hackberries are popular shade trees in the Middle West, the South, and parts of the West. Some hackberry lumber is used for cheap furniture, fence posts, boxes, and crates.

HADDOCK (*hăd'ŭk*) are members of the cod family. They are the most important commercial fish of New England. More than one hundred million pounds are caught each year. Haddock live in the Atlantic Ocean from Martha's

Vineyard, Massachusetts, to Nova Scotia, Canada. They are also found off the coast of Europe where they are an important commercial fish.

Females lay as many as 2,000,000 eggs a year between January and June. The eggs float on the surface for 13 days. When the young hatch, they too float on the surface for three months. Many are eaten by other fish, the rest go to the bottom. If they have found good haddock grounds, they grow into adult haddock in three years.

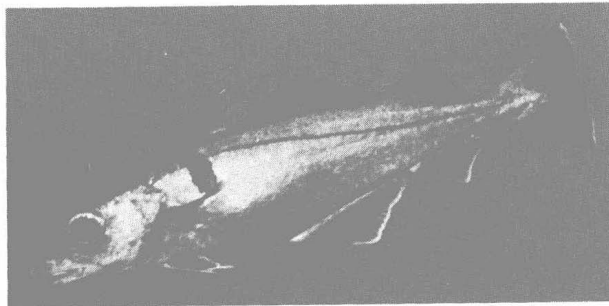
Haddock travel in schools. Their main food is mollusks and other animals without backbones such as crabs and worms which they find at the ocean bottom.

In general body shape, haddock look like cod with three dorsal fins and two anal fins. But the first dorsal of the haddock is high and triangular. The haddock also has a dark line down its side and a dark mark above the pectoral fin. They are smaller than cod. The record haddock, caught off the coast of Iceland, was 44 inches long and weighed 37 pounds. The average size of New England haddock is 20 inches and $2\frac{1}{2}$ to 3 pounds.

The flesh of the haddock is white and firm and has a mild flavor. It freezes very well. Haddock was not an important commercial fish until 1925 when quick freezing became an important industry. Besides frozen fillets, haddock is made into fish cakes and fish chowder. When it is lightly smoked, it is called *finnan haddie*, because smoking the fish started in the town of Findon in Scotland. The smoked fish was originally called "Findon haddocks."

The haddock is an important food fish. It is distinguished by a dark lateral line and a dark spot behind the head.

HMSO, Crown Copyright



HADES (*hā'dēz*), in Greek mythology, was the name of one of the gods and also of the kingdom he ruled. This was the dark underground region where the ghosts of the dead were thought to go. The river Styx flowed around the underworld seven times. The god Hades was a brother of Zeus, and also of Poseidon. The three of them had divided the world and all its power into three parts. Zeus ruled the surface of the earth; Poseidon, the sea; and Hades (also called Pluto), the underworld. (See PLUTO OR HADES.)

The kingdom of Hades was believed to be in the center of the earth. It could be entered through certain dark pools or caves. In Hades the dead lived as shadows. The Greeks believed that there were two parts to Hades: Erebus, where all the dead came right away, and Tartarus, which was much deeper. Hermes, the messenger of the gods, led the dead to the lower world. To reach Erebus, the dead first had to cross the Acheron, the river of sadness. There Charon waited to take them across in a boat. He would only take those who had been properly buried. The others had to wander on the shore for 100 years. An ugly, three-headed dog, Cerberus, guarded the gate of Hades. He was kind to the dead who arrived, but he would never let any of them get out again.

The Romans believed that Hades had three parts: Erebus, Tartarus, and the Elysian fields. Three judges decided whether the dead had been wicked or good. The souls of the wicked ones went to Tartarus, where they were punished forever. The souls of the good went to the Elysian fields, where they feasted, sang, and played games. Most of the good were born again, but first they had to drink from the river Lethe to forget their lives in Hades.

HADRIAN (*hā'drī ān*) (PUBLIUS [*pūb'li ūs*] AELIUS [*ē'li ūs*] HADRIANUS [*hā drī ā'nūs*]) (A.D. 76-138). When Hadrian became ruler (117), the Roman empire was at its greatest in both size and power. History ranks him as one of the most able of the Roman rulers. He had been well trained for the task by Emperor Trajan, the great soldier-emperor.

Born in Spain but orphaned at 10, he went to

Rome to live with his relative, Trajan. Under his guidance Hadrian learned to command armies and to rule people justly.

When he became Emperor the needs of the people seemed most important to Hadrian. So he did not try to add more land to the empire, but set the Euphrates River as the eastern boundary. He organized good government throughout the Roman world.

Hadrian set up laws that were the same for all, and began to gather them into the great Roman Codes of law from which modern law in European countries developed. He improved roads for travel, and spent years visiting different parts of the empire.

Everywhere Hadrian went he built fine public buildings, and some of them are still standing. Large sections of the great Wall of Hadrian which protected the borders of Britain from the northern barbarians stand today. Most famous of all Hadrian's buildings is the Pantheon in Rome, Italy. This domed temple became the model for Michelangelo's Church of St. Peter in the Vatican, and later for the dome of the Capitol in Washington, D.C. Hadrian's tomb (Rome, Italy), now called the Castel Sant' Angelo, was the pattern for modern memorial buildings such as Grant's tomb in New York City and the Jefferson Memorial in Washington, D.C.

HAGENBECK (*hā'gēn bēk*), **CARL** (1844-1913), is often called the "father of the modern zoo." When Carl was 14, his father, an amateur animal trainer, gave him some seals and a polar bear. Carl's collection of animals grew until he needed large buildings to keep them.

Hagenbeck left his home in Hamburg, Germany, to go with hunters and explorers to jungles and snow-clad mountains. He captured animals in nearly every land in the world.

In 1875 Hagenbeck began to exhibit his animals in all the large cities of Europe. He also trained animals to sell to circuses. At the World's Columbian Exposition in Chicago, Illinois, in 1893, Hagenbeck's Circus was one of the most popular attractions. His collection included large animals and reptiles. Many of the animals were trained to do tricks.

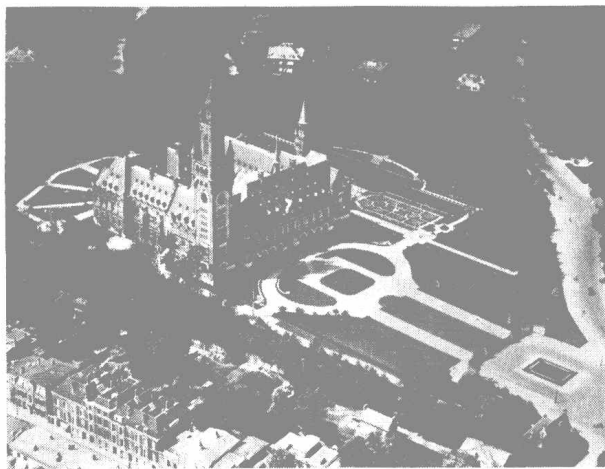
However, Hagenbeck dreamed of a permanent exhibit where animals could live in surroundings much like their natural homes. This dream came true in 1907 when he opened his great zoo at Stellingen, near Hamburg, Germany. Today his idea is followed by most large zoos. (See Zoo.)

In 1905 Hagenbeck used his outstanding skill as an animal collector to capture 1,000 camels for the German government to use in Africa. He described his adventures and his methods of capturing and training animals in a book, *Beasts and Men*, published in 1908.

HAGUE (*hāg*), **THE, NETHERLANDS.** The Hague is the political capital, the seat of the government, and the home of the royal family of the Netherlands. It is the seat of the International Court of Justice of the United Nations. The city is called 's Gravenhage, or Den Haag, by the Dutch. The name means "the count's hedge." It lies 15 miles northwest of Rotterdam and its center is 3 miles from the North Sea. On the seashore is the famous resort, Scheveningen, now a suburb.

Most of the Netherlands' cities have grown up as great trading centers linked to the sea by waterways. The Hague, however, grew from a hunting lodge in the middle of a forest. In the 13th century the counts of Holland made it their permanent residence. When the Netherlands won its independence from Spain in the 16th century, The Hague became the meeting place of the States-General, or Congress. In the center of the city are the government buildings in the Binnenhof or "inner court." These medieval buildings were once surrounded by several moats crossed with drawbridges. Near the Binnenhof are the remains of the forest, now turned into a public park.

The Hague has little industry and commerce. It is chiefly a residential city with broad avenues of linden trees, quiet canals, stately houses, and public buildings. The Mauritshuis, built in the 17th century, contains a collection of the work of outstanding Dutch and Flemish painters. Among those represented are Rembrandt, Rubens, Van Dyck, and Vermeer. It has many of Rembrandt's paintings, the most



OROC

The Peace Palace at The Hague.

celebrated being the "Presentation in the Temple," and the "Anatomy Lesson." The Town Hall, dating from 1565, also contains a gallery of historic paintings.

Many peace treaties and alliances have been made in The Hague. In 1899 it was chosen for the meeting of an International Peace Conference proposed by Czar Nicholas II of Russia. The Netherlands' government invited nations to the meeting. Delegates from 26 countries met in the royal palace known as the Huis ten Bosch, or House in the Wood, on May 18, 1899. After ten weeks of discussion no agreement was reached on limitation of armaments. However, from the meeting came a plan for a Permanent Court of Arbitration. From this court, panels of judges could be chosen by two or more of the member nations for the arbitration (settling) of disputes. Such panels have been used frequently for the settlement of arguments among nations. (See ARBITRATION.)

Since the Permanent Court of Arbitration was started, The Hague has been the home of international courts. Andrew Carnegie, the United States industrialist and philanthropist who was always interested in peace, had great interest in this court. He gave \$1,500,000 to build a Peace Palace at The Hague.

A second conference on peace and international law met at The Hague on June 15, 1907. Agreements were made with the hope that nations would discuss and settle their disputes rather than go to war.

The Permanent Court of International Justice of the League of Nations, usually called the World Court, also held its meetings in the Peace Palace. The new International Court of Justice of the United Nations has replaced the World Court. (See UNITED NATIONS, section on *International Court of Justice*.) The population of The Hague is 494,696 (1974 estimate).

HAIG (*hāg*), **DOUGLAS** (1ST EARL HAIG) (1861–1928), was a British army officer. Born in Edinburgh, Scotland, he was educated at Oxford University, and in 1885 joined the British Army. Haig became an expert on cavalry, or horse soldiers, and published a book *Cavalry Studies* in 1907. From 1906 to 1909 he directed the British War Office. Shortly after World War I began, he was made a full general.

In 1914 Haig was in charge of an army corps and later commanded one of Britain's two armies in France. He was a good leader in the battles of Mons, Marne, Aisne, and the first battle of Ypres. In 1916 he became commander of both the British armies. He was able to get along very well with the generals of Britain's allies, such as General Joseph Joffre of France, General John Pershing of the United States, and Marshal Ferdinand Foch of France, the commander of all the Allied armies. Haig suggested the plan that led to the final battles which defeated the German Army and brought victory to the Allies in 1918.

After the war Haig was made an earl and given many honors. But until his death he spent all his time helping war veterans. He

started the custom of selling poppies on "Poppy Day" to raise money for disabled veterans.

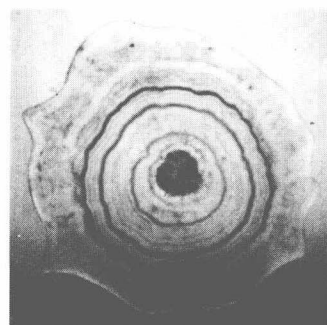
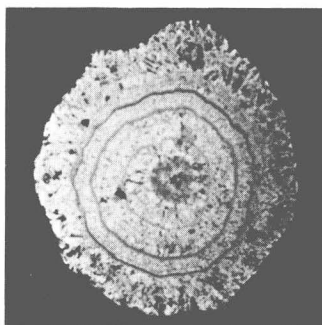
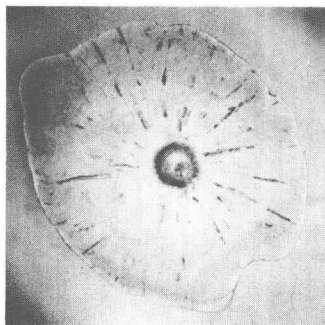
HAIL (*hāl*) is falling lumps of frozen water that may have any one of a number of shapes. A hailstone may be, for example, a flat disk, a cone, or a sphere with points. A hailstone most often is made up of alternating layers of opaque and clear ice. Hailstorms usually occur during warm weather in spring and early summer. A hailstorm is generally a violent storm, with thunder and strong vertical winds. Such storms usually occur in the interior of continents. They are most common in the middle latitudes, or the latitudes that are midway between the poles and the Equator. (See STORM.)

Hail can form only when the atmosphere contains a large amount of moisture. Hail is formed when a frozen raindrop passes through a layer of cloud where the temperature is below freezing, which is 32 degrees Fahrenheit. The cloud droplets usually do not freeze at temperatures about 0 degrees Fahrenheit. The hail-



The insides of these hailstones show that each is slightly different, although each usually builds up around a nucleus. The rings, below right and center, show layers of growth much as the skins of an onion. The dark lines, below left, show that air was trapped during the formation of the stone. These three stones are each about 1 1/2 or 2 inches in diameter. The outside surface of a hailstone, above, usually is rough and uneven.

Courtesy (below) Colorado State University, Hail Project, (above) U.S. Department of Commerce, Environmental Science Services Administration



stones grow as they bump into supercooled raindrops or the cloud droplets, either or both of which then freeze onto the hailstone. Hailstones four or five inches in diameter, weighing almost a pound, are occasionally built up. The largest hailstone ever recorded weighed more than one and one half pounds and was five and one half inches in diameter. Some large hailstones may reach speeds of one hundred miles an hour. (See CLOUD; RAIN.)

Sometimes small hailstones are carried upward into supercooled clouds by strong wind currents. They may then fall, only to be carried upward again by another current. This rising and falling may take place several times. Eventually enough layers are built up on the hailstones so that they fall to the ground.

Hail does enormous damage every year. It beats down many different crops. In severe hailstorms, trees may be stripped of their leaves, windows broken, and automobile tops and metal roofs punctured. Exceptional hailstorms have killed animals and injured people.

Attempts have been made to control the formation of hailstones. Certain salts have been "sown" into cumulo-nimbus clouds, in which hail is formed. The "seed" is intended to cause rain, or even small hailstones, to form rather than large hailstones.

The formation and other characteristics of hail are not completely understood. New theories must be evaluated. Some scientists, for example, believe that the electricity in thunderstorms may be caused by electrified hail.

HAILE SELASSIE I (*hī' lē sūlās' ē*) (1892–1975), former emperor of Ethiopia, ruled for more than 40 years—from 1930 until his overthrow by a military coup in 1974.

Named Tafari at birth, he was the son of a noble family of Harar, Ethiopia. His great-grandfather was a king; his father served as chief advisor to Emperor Menelik II. Tafari began his career as a provincial governor. When Menelik's daughter, Zauditu, became empress in 1917, Tafari was named regent and heir to the throne. During Zauditu's reign he steadily gained power, taking the title of king in 1928.

At the death of the empress, in 1930, he as-



Wide World

Haile Selassie.

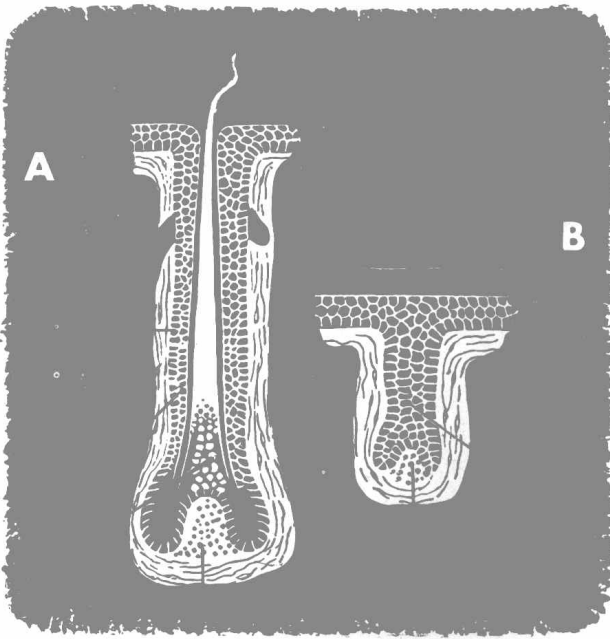
sumed the powers of emperor and took the name Haile Selassie I ("Might of the Trinity"). He gave Ethiopia its first parliament and first free elections, but kept a strong hold on the government. He was exiled from 1936 to 1941, during the Italian occupation of Ethiopia, but returned to power with the help of British forces.

During his long reign, Selassie brought about administrative and educational reforms. He worked for modernization that was consistent with Ethiopian culture and traditions. In foreign affairs he reversed the kingdom's centuries-long pattern of isolationism. In 1923, while regent, Selassie became the first Ethiopian ruler to visit Europe. Earlier he had assured Ethiopian membership in the League of Nations. Under his leadership Ethiopia also assumed a dominant role in African affairs. (See also ETHIOPIA.)

HAIR (*hār*) is the threadlike outgrowths of the skin of mammals. It is formed by the outermost layer of skin, called the epidermis. It forms the scales, nails, and claws of various animals. Cells from the epidermis grow down to form a sort of tiny pocket, the second skin layer. The outer part of this pocket becomes the sheath, or *follicle*, of the hair. The cells inside the pocket become the *shaft* of the hair itself. The *root* of the hair is made up of growing cells.

Blood brings food for hair growth to the *papilla*. Each follicle has glands that supply oil for the hair and skin. At the base of the follicles are tiny muscles. It is the contraction of these muscles which makes a cat's hair stand on end and which gives people gooseflesh. The hair itself is three-layered. The outside layer is made of thin, overlapping scales. Underneath them are long cells joined into fibers. The center consists of rounded cells.

The chief value of hair is that it conserves the heat of the body. A covering of hair also



A, at left, shows the main parts of a hair that have grown through the skin's surface. B, at right, shows an early stage in the growth of a human hair.

protects tropical animals from direct sunlight. Very long hair on certain parts of the body usually serves some special purpose. A mane may protect an animal's neck from the teeth of its enemies. Tails may act as fly swatters. Crests may attract the opposite sex. In the case of the hog, there are stiff bristles composed of the fusion of several hairs. In the case of the porcupine, the hairs are very large, strong spines capable of inflicting serious injuries. Hairs also may serve as organs of touch. The whiskers of cats have special nerves that are quick to respond to touch.

The number of hairs on mammals differs from the few hairs found on the lips of some whales to the great number of hairs that make up the coats of large mammals in cold climates. Among humans, some of the Asiatic races have very little hair and almost no beards at all. The Ainu of Japan have almost the entire body covered with hair. Circus sides often show freaks notable for their hairiness.

An infant at birth is covered with a fine down which is later replaced by the usual growth of hair. In man, one does not notice most of this hairy coat because it is commonly of very fine texture and light in color. However, almost

the only parts of the body where the human skin is actually hairless are the palms of the hands, the soles of the feet, the undersides of the fingers and toes, and the lips.

Shape and Color of Hair

The shape of single hairs varies with different kinds of animals and even, among mankind, with different races. The rounder a hair is, the straighter it will be. The flatter it is, the more it will curl. Thus, the hair of a Mongolian, which is very straight, is quite round. The hair of a Negro, which is woolly, is quite flat.

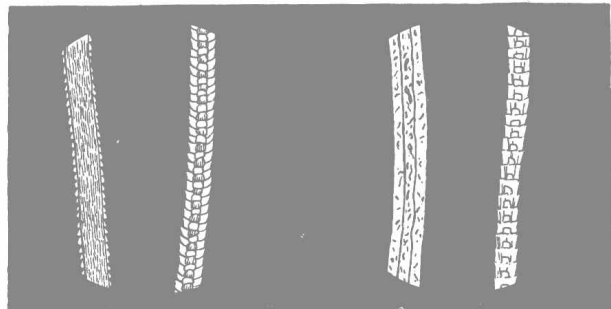
The pigment which gives the color to black, brown, or yellow hair is found beneath the outermost layer of the hair. White hair is usually caused by a total absence of pigment and by the presence of many air cells which reflect all the light. It may be the result of age, heredity, poor circulation of the blood, sickness, grief, or fear.

Hair is shed regularly, as the ordinary life of a hair is from two to four years. In many mammals the shedding is a continual process which is not noticeable. In others there is a marked molting season.

Care of the Hair

To care for one's hair properly, one should massage the scalp for at least a few minutes every day. Brush the hair thoroughly with a clean brush. Wash it often enough to keep it free of dust and soot. Except in certain cases in which the scalp is very dry, it should be shampooed at least once in every two weeks in the country and more frequently in the city. Any pure soap may be used, but it should

Four hair structures, left to right: human hair, cat hair, horse hair, rabbit hair—all greatly magnified.



be carefully rinsed out of the hair after shampooing. Where the scalp is very dry, it is best to rub it with olive oil before shampooing. A good hair tonic may stimulate the growth of hair. Dyes may be generally harmful.

Hair has many commercial uses. Sheep's wool and camel's hair are woven into cloth valued for warmth. Pig's bristles are made into brushes, and the furry skins of many kinds of animals are widely used. (See WOOL.)

HAITI (*hāt' ē*), **WEST INDIES**, is one of the smallest Latin-American republics and the first to achieve independence (1804). It occupies the western third of the island of Hispaniola.



Odette Mennesson-Rigaud-Photo Researchers, Inc.

Haitian women balance baskets of items for trade on their heads as they follow a mountain path to market.

The Atlantic Ocean lies to the north, and the Caribbean Sea lies to the south. Haiti is bordered on the east by the Dominican Republic, which occupies the remainder of the island and is separated from Cuba by the Windward Passage. The country, a former French colony, has a largely French-speaking, Negro population. The name Haiti, adopted after independence, is from the Indian word *Ahiti*, meaning high, or moun-

tainous, land. The official name of the country is the Republic of Haiti.

Landscape and Climate

The landscape of Haiti is dominated by mountains. The Massif du Nord and Montagnes Noires are the chief ranges in the northern and central areas. Another mountain range in the southwestern peninsula is composed of two groups, the Massif de la Selle and the Massif de la Hotte.

Areas of level land are limited in size and hemmed in by mountains or the sea. The Plaine du Nord (Plain of the North) is between the Massif du Nord and the Atlantic Ocean. The Plaine Centrale (Central Plain) and Plaine de l'Artibonite (Plain of the Artibonite) are both between highlands. The former is dry and unsuited for irrigation. The latter is irrigated with water from the Artibonite River and produces large quantities of food. The Cul-de-Sac, a geological depression, includes Etang Saumatre, the largest lake in Haiti. Haiti has many rivers, most of which are short and rapid. The exception is the Artibonite, Haiti's longest and most useful river.

The climate of Haiti is varied. Temperature and rainfall are affected by the complex topography. In general, the climate is moderately tropical. Temperatures, however, decrease with increased elevation. Temperatures average about 81 degrees Fahrenheit in the lowlands and about 76 degrees in the higher areas. There is little variation on the coast, but freezing temperatures may occur in the highlands. The average yearly rainfall is 55 inches.

The country's vegetation reflects the island's climatic pattern. The wetter portions were originally densely forested, while the drier areas were covered by scrub brush. Valuable species of timber, such as mahogany and tropical oak, remain in the more remote mountains. Much of the original vegetation has been removed, and the more accessible forests have been heavily exploited.

Animal life is less abundant and varied than are the forms of vegetation. The reptiles are represented by snakes, lizards, and some crocodiles near the mouths of rivers. Fish are



plentiful in the coastal waters, and there are numerous tropical birds and insects.

The utilization of natural resources other than soil, water, and forest is not well developed. Haiti possesses some mineral wealth. Copper was mined between 1961 and 1972. Deposits of bauxite, manganese, and petroleum are now being mined. Haiti's most important natural resource is its arable land.

The People

The island of Hispaniola was occupied by Arawak Indians when Columbus discovered it in 1492. Under Spanish control these people rapidly declined and were replaced by Negro slaves.

Most Haitians live in rural areas and make their living from farming. Only about 20 percent of the people live in urban centers. Haiti

is one of the most crowded of the Latin-American republics, with more than 400 persons for each square mile. It is also one of the poorest republics; Haitians earn an average of only about \$90 per year. Most farm families live in small wood-framed huts with thatched roofs and few furnishings. Port-au-Prince is the capital and largest city.

Roman Catholicism is the official religion of Haiti. The religion of the country people, how-

FACTS ABOUT HAITI

CAPITAL: Port-au-Prince. **NATIONAL ANTHEM:** Le Dessalinienne.

AREA: 10,714 square miles (27,750 square kilometers); slightly larger than Maryland; 75 percent highlands, 25 percent lowlands.

POPULATION: 4,668,000 (1976 estimate); 436 persons per square mile (168 persons per square kilometer); 20 percent urban, 80 percent rural.

CHIEF LANGUAGES: French, Creole (dialect).

CHIEF RELIGION: Roman Catholic.

LITERACY: About 32 percent of the people over 15 years old can read and write.

MOUNTAIN RANGES: Massif de la Hotte, Massif de la Selle, Massif du Nord, Montagnes Noires.

HIGHEST POINT: Chaîne de la Selle, 8,773 feet (2,675 meters).

LARGEST LAKE: Etang Saumatre.

MOST IMPORTANT RIVER: Artibonite.

FORM OF GOVERNMENT: Republic.

HEAD OF GOVERNMENT AND CHIEF OF STATE: President.

LEGISLATURE: National Assembly (single house).

POLITICAL DIVISIONS: 5 departments.

CHIEF CITIES: Port-au-Prince (625,000, 1975 estimate); Cap-Haitien (46,217, 1971); Petionville (35,257, 1971); Gonaïves (29,261, 1971).

CHIEF MANUFACTURED AND MINED PRODUCTS: Bauxite, cement, cotton fabric.

CHIEF AGRICULTURAL PRODUCTS: Crops, cacao, coffee, corn, cotton, sisal, sugarcane; Livestock, cattle, goats, horses, hogs.

FLAG: Red, black, and green. (See FLAG.)

CURRENCY: Gourde; 5 gourdes equal one U.S. dollar.

ever, is Voodoo, or *voudou*, a folk religion of African origin that has adopted some of the symbols, ceremonies, and outward forms of Catholicism. Voodoo has frequently been suppressed, but it is still widely practiced. Voodoo priests, priestesses, and sorcerers are quite influential. There are also some Protestant missions in the country.

Haiti's culture is a blend of French and African customs and traditions. A class distinction

ing are taken from the everyday life of the peasants.

Haiti has a rich and varied folklore. Voodoo influence is quite noticeable in the peasants' music, dance, and art. Most of the folk songs are chants and include voodoo ceremonial and ritual songs as well as work and party songs. Instruments include a four-note bamboo flute, tambourine, marimba, lambi (a conch shell), and a variety of drums. Painting and sculpturing have developed rapidly since the establishment of the Centre d'Art in Port-au-Prince in 1944.

Economy

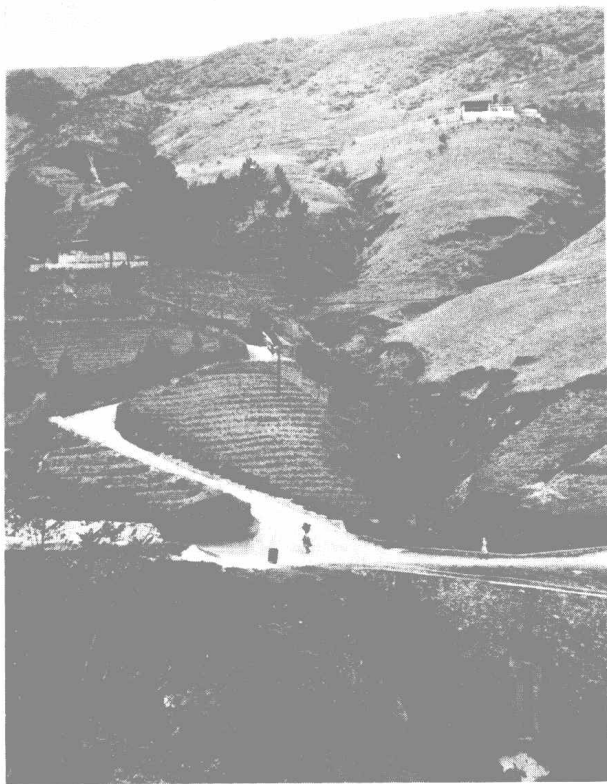
Haiti is largely an agricultural country. Most farms are small, averaging less than three acres, and are owned by their operators. Most of them produce some surplus, which is sold in the colorful native markets. The economy reached its peak during the colonial period. During the Haitian independence revolt, however, most of the sugarcane plantations were broken up and the irrigation systems largely destroyed.

The basic food crops include rice, corn, sweet potatoes, beans, and cassava. In addition, a variety of tropical fruits are grown. Farmers also raise some livestock. Fishing is limited to inland and coastal waters, and most of the catch is consumed locally.

The principal commercial crops include coffee, sisal, sugarcane, bananas, cotton, and cacao. Most of the coffee is grown on small farms located on the mountain slopes. Sisal is grown along the northern and western coasts. Banana exports have declined because of plant disease and increased domestic consumption. Sugarcane is grown in limited quantities where irrigation water is available.

Industrial activity is limited primarily to the processing of forest and agricultural products. Sugar and sisal processing are most important. The cotton textile industry is located at Port-au-Prince. Coffee is the leading export and accounts for about one-half of the total export earnings. Major imports include food products, machinery, fuels, textile yarns, and fabrics.

The domestic transportation system is poorly



Herbert Lanks—Black Star

Most Haitians work in agriculture even though there is little level land in the country. Farmers even cultivate steep hillsides to increase crop production.

exists between the elite and the peasant. The elite speak French, are mostly mulattoes, and live in the urban areas. The peasants speak Creole, are mostly Negroes, and live in the rural areas.

Haiti's national literature is composed of both French and African elements. The early writers were members of the elite and wrote in French. In this century, however, many writers have used Creole. The themes for much of the writ-

developed. Most of the roads were constructed in the 1920's during the U.S. occupation of Haiti. In the 1960's the government embarked upon a limited road building program. Rail lines are limited and inadequately maintained. A small national airline provides service between the capital and other cities. Haiti is well served by international air and steamship lines. Port-au-Prince is the major seaport and air station.



Stan Wayman-Rapho Guillumette

Voodoo rites are still widely practiced by rural Haitians even though the country is officially Roman Catholic. African slaves originated Voodoo in Haiti.

Education

The constitution states that primary and secondary schooling is free to everyone. There are more than 800 elementary schools, but many have only one or two classrooms. More than one-half of the elementary schools are private, and most of these are operated by religious groups. Secondary schools are mostly private and in urban areas. There are also several professional and technical schools. In theory primary education is compulsory, but in the mid-1970's it appeared that less than one-fifth of all Haitian children attended school.

Higher education is concentrated at the University of Haiti, established at Port-au-Prince in 1944. About 68 percent of the population over the age of 15 was illiterate in the late 1970's. A campaign against illiteracy has had only limited success.

Government

In 1957 Francois Duvalier became president of Haiti. A new constitution was adopted that year, which, unlike the old one, did not forbid successive presidential reelection. During Duvalier's terms of office the guarantees of the constitution came to have little meaning. In 1961, after serving only four years of his six-year term, Duvalier was elected for another

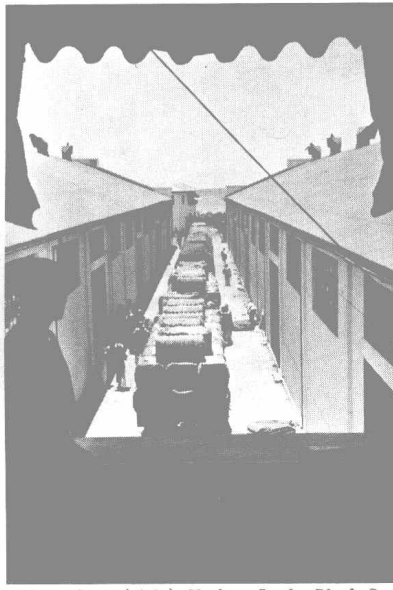
six-year term. He abolished the two-house legislature and replaced it with a single house. He further secured his leadership in 1964 when the legislature, which he controlled, abolished the 1957 constitution. A new constitution made Duvalier president for life and gave him the power, when necessary, to dismiss the cabinet and rule by decree.

Under the constitution the government is composed of executive, legislative, and legal

A magnificent mural by Haitian artists adorns the Episcopalian Cathedral of the Holy Trinity in Port-au-Prince.

Nick de Morgoli-Camera Press—Pix from Publix





(Left) Odette Mennesson-Rigaud-Photo Researchers, Inc., (right) Herbert Lanks-Black Star
Haitian farmers, left, pound millet, which is an important local food. Sugarcane rises
in the background. Bales of cotton, right, await shipment at Port-au-Prince.

branches. The president is the head of the government and of the state and is commander in chief of the army. He is assisted by a cabinet, and he appoints the prefects who head the nine departments of Haiti. The members of the one-house legislature, the National Assembly, are elected for six-year terms. Citizens 21 years of age and over have the right to vote. Haiti's high court is called the Court of Cassation.

History

Columbus discovered Hispaniola on December 6, 1492, on his first voyage to the New World. He established a colony, Fort Nativity, in what is now Haiti, but it did not survive. In the 1600's French adventurers from the nearby island of Tortuga settled in Haiti. They were called *boucaniers* because they cured meat over open fires on grills called *boucans*. The word *buccaneer* comes from this source.

In 1697 the Treaty of Ryswick, between France and Spain, recognized France's claim to the western third of Hispaniola. The new colony was named Saint Domingue and rapidly became France's most prosperous overseas possession. Sugarcane plantations with extensive irrigation systems were the main source of income. African slaves were imported and soon outnumbered their white owners. When the

Revolution broke out in France in 1789 the Negro slaves of Haiti also rebelled.

Toussaint L'Ouverture, a Negro slave, became the dominant leader during the civil war. He conquered all the island but did not sever colonial ties with France. He named himself governor-general for life in 1801. Later he was captured through treachery at a peace conference and sent to France for imprisonment. (See TOUSSAINT L'OUVERTURE.)

Jean Jacques Dessalines became the leader after Toussaint was captured. He was successful in defeating the French forces, which were weakened by epidemics of yellow fever. In January 1804 Haiti became the first Latin-American colony to achieve independence. That same year Dessalines proclaimed himself Emperor Jacques I. (See DESSALINES, JEAN JACQUES.)

The country was divided after Dessalines' death in 1806, with Henry Christophe ruling the north as a monarchy and Alexandre Petion governing the south as a republic. The country remained divided until Petion died in 1818 and King Henry I (Henry Christophe) committed suicide in 1820. Their successor was Jean Pierre Boyer who controlled all of Haiti. In 1844 the annexed Spanish portions of the island successfully revolted and became the Dominican Republic.

From 1849 to 1859 Faustin Soulouque, a former slave, ruled Haiti. He proclaimed himself Emperor Faustin I. General Fabre Geffard overthrew Soulouque in 1859 and became president. He instituted many reforms and permitted foreign religious orders to establish Haiti's first schools. From Geffard's overthrow in 1867 until 1915 a succession of 20 presidents held office. During the period there were many revolts.

In 1915 the U.S. Marines were sent to Haiti to restore order following a revolution in which