

NATURE MAGAZINE

PUBLISHED BY THE AMERICAN NATURE ASSOCIATION
To Stimulate Public Interest in Every Phase of Nature and the Out-Of-Doors, and
Devoted to the Practical Conservation of the Great Natural Resources of America

IN THIS ISSUE

June-July, 1950

Vol. 43, No. 6

Marsh Hawk.....	Jacob Bates Abbott	Cover
Nature in Print.....	Howard Zahniser	282
Contents Noted.....	R. W. W.	287
The Amazing Golden Plovers.....	John W. White	289
Portrait by Audubon (Poem).....	Eleanor Thayer	292
Peep in the Patio.....	Gest Very	293
Java's One-Horned Rhino.....	Anton de Vos and A. Hoogerwerf	297
Sea-Goin' Borers.....	E. John Long	299
Interloper (Poem).....	Katharyn Wolcott	302
Gold-Faced Digger Wasp.....	A. C. Parsons	303
The Curious Black Lily.....	Norman Laird	305
Adult for A Day.....	William J. Jahoda	307
Mushrooms — Edible and Otherwise.....	L. W. Brownell	309
Wyoming Jackson Hole National Monument (Editorial).....		313
Rabbits, Rabbits and Rabbits.....	Robert Strother	314
Wildlife in the Mails.....	E. R. Kalmbach	317
Reminder (Poem).....	Ruth Seymour Vesely	320
Animals Help the F.B.I.....	Frank A. Woodfield	321
Caught in the Act.....	Joseph R. Swain	322
Cumulus Mammatus.....	Ernest Robson	323
Nature's Television (Poem) Maurine M. Wagner		323
The Heavens in June and July.....	Isabel M. Lewis	324
Wood Pewee (Poem).....	Sue Wyatt-Semple	325
Camera Trails.....	Edna H. Evans	326
The School Page.....	E. Laurence Palmer	328
N.A.B.T.....		332
Under the Microscope.....	Julian D. Corrington	334

A. B. McClanahan, Advertising Manager

ADVERTISING OFFICES

New York 17-295 Madison Ave. Los Angeles 5-2978 Wilshire Blvd.
Washington 6-1214 16th St., N.W. San Francisco 4-Mills Building
Chicago 1-35 E. Wacker Dr. Minneapolis 2-1019 Northwestern
Bank Bldg.

NATURE MAGAZINE is published monthly, October to May,
inclusive, bimonthly, June to September, inclusive, by the American
Nature Association. Entered as second-class matter May 31, 1927,
at the post office at Washington, D. C., U. S. A., and accepted for
mailing purposes at the special flat rate of postage provided for in
the United States Postal Act of October 3, 1917, and February 28,
1925. \$4 a year; foreign \$5.00. Additional entry Easton, Pa.

Publication and Editorial Office, 1214 16th Street, N. W., Washington
6, D. C. Additional office of publication, Easton, Pa.

Copyright, 1950 by American Nature Association, Title Registered
U. S. Patent Office. Printed in the United States.

THE ASSOCIATION

RICHARD W. WESTWOOD.....	President
<i>Washington, D. C.</i>	
HARRY E. RADCLIFFE.....	Vice-President
<i>Washington, D. C.</i>	
JAMES A. O'HEARN.....	Secretary-Treasurer
<i>South Orange, N. J.</i>	
DR. E. LAURENCE PALMER.....	Director, Nature Education
<i>Cornell University, New York</i>	
ARTHUR NEWTON PACK.....	President Emeritus
<i>Abiquiu, N. M.</i>	

THE MAGAZINE

RICHARD W. WESTWOOD.....	Editor
EDWARD A. PREBLE.....	Associate Editor
JULIAN D. CORRINGTON.....	Microscopy Editor
ISABEL M. LEWIS.....	Astronomy Editor
E. LAURENCE PALMER.....	School Editor
HOWARD ZAHNISER.....	Book Editor
EDNA HOFFMAN EVANS.....	Photography Editor
HARRY E. RADCLIFFE.....	Business Manager

SCIENTIFIC CONSULTING BOARD

DR. WALDO L. SCHMITT	Head Curator, Zoology, U. S. National Museum
DR. HARRY C. OBERHOLSER	Retired Ornithologist, U. S. Fish and Wildlife Service
W. L. McATEE	Retired Biologist, U. S. Fish and Wildlife Service
DR. PAUL BARTSCH	Retired Curator of Mollusks, U. S. National Museum
DR. EDGAR T. WHERRY	Wild Flower Preservation Society
DR. WILLIAM M. MANN	Director, National Zoological Park
DR. EDWARD A. CHAPIN	Curator of Insects, U. S. National Museum

NATURE MAGAZINE
PAST AND PRESENT,
IS INDEXED IN THE
READER'S GUIDE IN
YOUR PUBLIC LIBRARY

U. S. AND CANADA
ONE YEAR.....\$4
FOREIGN...\$1 EXTRA
TWO YEARS.....\$7
LIFE.....\$100



Two male Javanese, one-horned rhinoceroses disport in a typical wallow in the Reserve in the western part of the island.

Java's One-Horned Rhino

By ANTON DE VOS & A. HOOGERWERF

Photographs by A. Hoogerwerf

ONE of the most imposing looking animals of the world is now on its way to extinction. Except for a few ardent Nature enthusiasts, nobody seems to care. If measures are not taken in the very near future, a few mounted specimens of the queer Javanese rhinoceros will share space with other animals in some museums with the label "Recently Extinct." What will not be mentioned — but should be — is: "Through Human Carelessness."

It is unfortunately the bitter truth that the extirpation of this rhinoceros will be the result of the greediness of few and the indifference of others. To the misfortune of this pachyderm, a belief — dating back for a great many centuries — exists among some Oriental people that their horns, skin, certain other parts of their body, and their blood have magical medicinal qualities. Pulverized horn or skin are believed to cure almost any kind of disease, and to be able to restore lost strength, youth, and vitality. Cups made of the horn are believed to render poison innocuous. This creates a large demand for the rhinoceros and it has been, therefore, ardently hunted. That the animal is worth the hunters' while is shown by the fact that the horn alone is worth

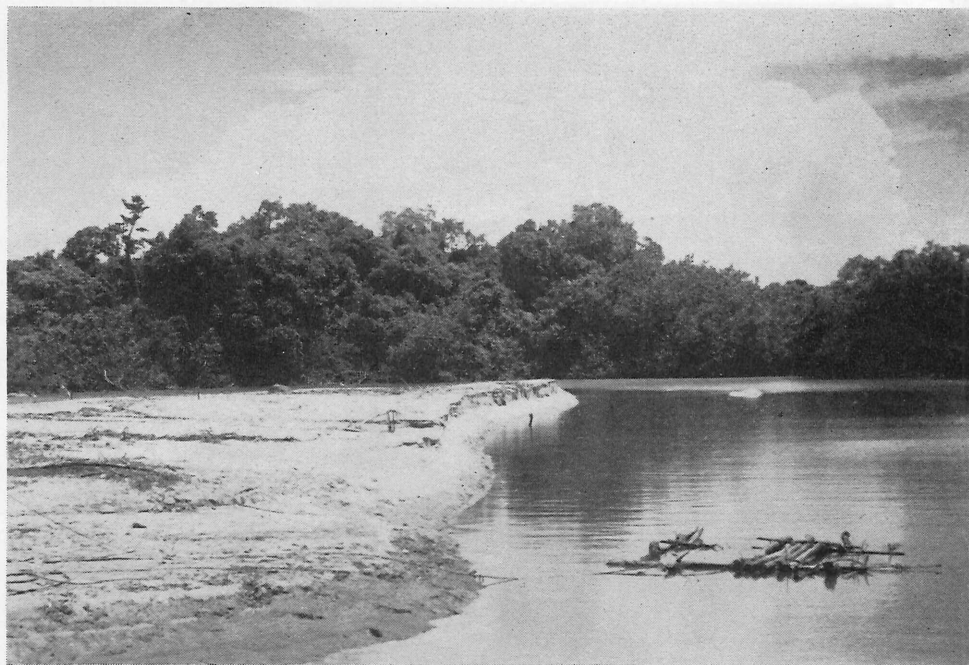
its weight in silver. One horn means one dead animal.

During the Dutch rule in Java, the rhinoceroses were adequately protected in a refuge on the extreme western point of this island. Now, on account of the chaotic-political situation in Java, not much attention is paid to the survival of the animals, which may result in an untimely extinction of the species.

Formerly the range of the one-horned rhinoceros included Bengal, Assam, Burma, Siam, Indo-China, Malaya, Sumatra, and west and central Java. It is now very likely that it has become restricted to western Java only, although it might still survive on Sumatra. This rhino disappeared from the mainland, and the greater part of Java, during the last few decades as a result of persecution by native hunters. However, some white hunters are also guilty. On Sumatra, thirty years ago, possibly a dozen of these colossuses still survived, yet a single big-game hunter since shot seven specimens within a few years' time.

On Java the species had reached a low ebb around 1930, when only twenty individuals were believed to have survived. As a result of strict police protection in the Oedjong Koelon Reserve in western Java the rhi-

A view of a river in the Oedjong Koelon Reserve in Java, where the rhino and other wildlife were protected during Dutch rule. The jungle background is mostly second growth.



nocerosses increased remarkably well and probably numbered around thirty just before World War II. Apparently during the hostilities with Japan very few were poached, as natives were not allowed to carry firearms and there was fear of the few tigers that inhabit the reserve. Actually, the tiger may prove to be the best guardian of the rhino in the near future. Nevertheless

a few rhinos may have been poached since the end of the war, as many Indonesians and Chinese are in the possession of firearms. Illegal killing, combined with the lack of interest shown by the authorities under the present chaotic circumstances, makes the future look far from bright for the Javanese rhino.

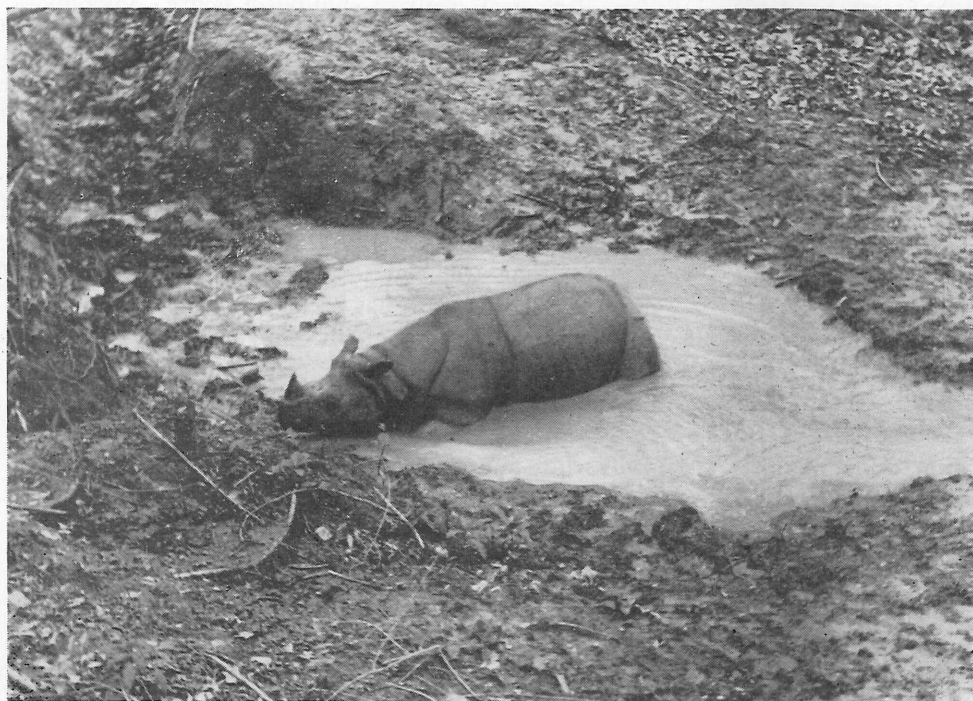
Rather little is known about this vanishing creature. It is secretive in habits and therefore difficult to observe. It is nearly always roaming around alone.

The Javan one-horned rhino differs from the Indian species by virtue of its smaller size, smaller horn, and a different pattern of the deep skin-folds. The thick skin is subdivided into small, scale-like discs, which make this pachyderm look like a prehistoric monster. It in-

frequently attacks human beings. As the rhino's vision is poor, attacks do not take place on sight, but on scent. As soon as a rhino has had a good smell of human odor, it either flees or charges. The speed such a heavy colossus can develop during a charge is really remarkable, and a person has to be a good runner and an agile tree-climber to escape. In the interests of survival, most of the observer's time while studying the rhinos was spent in trees. Nevertheless, he was attacked several times, and once his luggage was badly banged up during such an attack.

The vegetation of Oedjong Koelon, the game reserve where studies of the rhino were made and which covers an area of about 65,000 acres, consists mainly of second-growth jungle. The area is partially covered by a savannah landscape dotted with palm trees and, partially, by bamboo thickets.

The rhinos move through the reserve more or less in a criss-cross fashion, although tunnels are made in the vegetation in places that are often frequented. During their travels, the animals browse on the leaves and twigs of different trees and shrubs, and greases also are eaten. The
(Continued on page 332)



Side view of a male rhino in its wallow. Here the typical lone horn and skin folds of the pachyderm are visible.

PEEP IN THE PATIO

(Continued from page 296)

grasshopper, whose head and inner possessions I removed, so that there was left only an empty and headless husk. This I carefully stuffed with mashed leaf, wet with milk and water. My purpose was to see if life could be prolonged through the absorption of nutriment at scattered centers by a sort of osmosis. As a study in viability it was not a failure, for certainly the rough edges of death were smoothed away. Possibly what happened was not due to nutrition, but rather to the fact that the inner lining of the husk was not permitted to wither as fast as it might have, had there been no leafy protection against evaporation. Whatever the explanation, this leg-happy fellow continued to jump, when prodded, for sixty-three triumphant hours. His vigor dwindled so slowly that one wonders *when, if ever*, death took over and the ghoulish ghost expired.

Equally startling can be a sudden manifestation of life when its imminence is not suspected. Prying from the wall a delicately formed chunk of amberish something, about the size of a large olive, I brought it indoors as an example of the dependence of beauty upon symmetry. Some weeks later our house began to hop with minuscule objects, pale jade-green in color. Their source was traced to the amber, an unrecognized egg-capsule of a praying mantis. Dozens of little mantids were tumbling over themselves as they squirmed out of their prison. In the warmth of the house, they had hatched prematurely. All that we could catch were restored to the patio, but a frost disputed their right to be there, and few of them survived.

Afterward, an adult, (from who knows what mantid's capsule, for we now find them adhering to almost every tree,) flew into our dining room one evening when we were at dinner. It landed like a helicopter on a side table and cheerfully began, with scratchy sounds from its bewildered claws, to climb the steep sides of a pitcher. Once on top, it gazed around the room, turning its head this way and that, and fixed upon us a long friendly stare. Then in disgust it gave its eyes a thorough rubbing with its wrists, like a cat washing its face, and flew off to a screened porch. There it made itself at home for some weeks, depending on imported food. Three flies made an excellent meal, but flies were scarce and an occasional caterpillar had to be substituted. This it grabbed with its short arms, and gnawed from one end to the other.

One moonlit night, there jumped, not a cow over the moon, but a cat-sized animal over our wall. When I saw him scooting under the house through an aperture whose screen had been left open, I put out a hand to grab the fluffy tail. White stripes stopped me short. Should I then sit by the opening with a can of salmon, and if

he came out, try to slide the screen behind him? An alarm clock was the answer. Perhaps by the wee small hours Mr. Polecat would have gone a-hunting. Most fortunately he had!

Let us draw a final curtain on this pageant of life and death in the patio. It is a late afternoon in summer. A sheet of rain is sweeping down from the mountain tops, flashes of lightning rip the clouds, and thunder smashes and rolls across the valley. Suddenly the storm vanishes, and in the peaceful crepuscule a new music arises on the soaking desert — an orchestra of "frogs." Their concert is so loud that we wonder how such small animals can produce it. Thousands of spade-foot toads, seen or heard only after a hard summer storm, have come up from underground to sing and rejoice and love.

JAVA'S ONE-HORNED RHINO

(Continued from page 298)

colossuses sometimes break or uproot entire trees when feeding.

The Javanese rhino is more nocturnal than diurnal in habits. During the day the animal seeks cover in the dense jungle vegetation, while at night it feeds and washes itself in some of the numerous mud-wallows present in the area. Bathing, however, takes place in the daytime, and is apparently a favorite pastime. While in the wallows, the animal rolls over and over. Sometimes it stays in such pools for hours at a stretch. After a bath, mud is rubbed off on the trees that surround a pool. Enormous dung heaps are produced, indicating the huge quantities of food digested. Only one young is born to a cow every four or five years after having been carried for about eighteen months. The calf is suckled for at least two years. As the reproductive rate is extremely slow, this means an extra danger to the survival of the species. It was one of the animals listed as requiring immediate protection by the International Conference on Nature Protection at Lake Success, New York, in 1949. It is to be hoped that conservationists throughout the world will aid the handful of enthusiasts in Indonesia in trying to save this vanishing species.

WILDLIFE IN THE MAILS

(Continued from page 320)

the world. Gradually the concept gained in popularity.

A cursory review shows that in the decade, 1891-1900, fifteen postage stamps were issued in which wildlife was used as the central theme of the design. In the following decade, 1901-1910, eighteen more appeared, and between 1911 and 1920, nineteen were issued throughout the world. At least 40 new wildlife stamps were released during the next decade and the

peak was reached during the period, 1931-1940, when no less than 145 were issued. From 1941 to the present 69 more have been added and when it is realized that many of the stamps appearing in the previous decade are still in use, the concept of wildlife on postal issues throughout the world is a dominant one today.

THE HEAVENS IN JUNE AND JULY

(Continued from page 325)

telescopically to be in the gibbous phase. Mars is now decreasing noticeably in brightness. It is as bright as Vega on June 1, but by the end of July is not much brighter than Spica, which it passes on July 28. It remains in Virgo during these two months. It is on the meridian at sunset the end of June and sets about midnight. It is low in the west by the end of July at sunset, setting between two and three hours after the sun. Jupiter is in the constellation of Aquarius. It rises about midnight in the southeast the middle of June, and in the late evening in July, and is visible for the remainder of the night. Saturn remains visible in the western evening sky in the constellation of Leo. On June 3 it is due south at sunset. The middle of June it is about midway between Regulus and Mars. By the end of July it is low in the west at sunset. At that time it is exactly equal to Regulus in brightness and not much inferior to Mars which is now rapidly decreasing in brightness. It will be interesting to compare the change in brightness of these two planets with that of Spica and Regulus which remain unchanged.

Summer will commence in the northern hemisphere and winter in the southern hemisphere when the sun is farthest north of the equator on June 21 at 6:37 P.M., Eastern Standard Time.

"David's Folly"

We were intrigued by a folder that comes to hand from "David's Folly" Earthworm Farm, West Brooksville, Maine, principally at the choice of the name. The folder does not reveal who David was or what kind of folly he indulged in. It does, however, tell the story of the value of earthworms, where to put them and how to enlist their cooperation. If you are short on earthworms and would like to remedy that situation drop them a line and ask for a folder.

Demonstration Forest

Research and practical demonstration of woodland management will be carried on by Iowa State College on a 296-acre forest near Delhi, Iowa. This tract came to the College under the will of the late Emma L. Brayton, who had indicated much concern over the destruction of native Iowa timber. The forest will stand as a memorial to Miss Brayton's father and mother.