

'DARKEST AFRICA' TRULY IS GLARINGLY BRIGHT

By ROBERT F. INGER

CURATOR OF AMPHIBIANS AND REPTILES

AFTER three and one-half months in Africa, it is difficult to say what is the most impressive aspect of that great continent. Perhaps the first thing to say is that Africa is the bright continent rather than the dark one, for in its vast tropical belt the sun has a glaring brilliancy that seems to press a man's eyeballs into his skull. Even wearing a broad-brimmed hat and sun-glasses does not protect against the intense light of the mid-day sun.

The great density of the human population is, if anything, more astounding than the force of the sun. We thought that Africa would be full of wide open spaces, but our impression is that it is full of people. Our plane from Europe to Leopoldville in the Belgian Congo touched down in Kano, northern Nigeria, to refuel. From 5,000 feet above that semi-arid region, we could see at least as many evidences of human habitation as one might see from a similar altitude above northern Illinois.

In the Belgian Congo people were swarming everywhere. Riding in a jeep along one of the many dirt roads, we would often say to ourselves, "Ah, now we are really out in the wild bush." And then we would round a turn to see a cluster of grass huts and half a dozen shouting, laughing children jumping up and down in front of a few banana trees and waving at us with great delight. Or if no huts were visible, we would see a man on a bicycle, or a woman wrapped in brilliantly colored calico walking gracefully along the road.

FIELD WORK BEGINS

However, we went to Africa on a zoological mission—"we" being my wife and myself. The Institut des Parcs Nationaux du Congo Belge had asked me to study a large collection of frogs and toads from the Parc National de la Garamba, which is in the extreme northeastern part of the Belgian Congo. It was in connection with that study that we undertook the field work.

The Parc National de la Garamba is one of four national parks in the Belgian Congo. Its 1,250,000 acres (roughly twice the size of Rhode Island) lie in savanna, a tropical grassland in which the spacing of trees varies from widely scattered to almost contiguous. The landscape is not as spectacular as, say, the Colorado Rockies or the Swiss Alps. But the gently undulating hills that seem to go on forever create a powerful impression. With the change of season from dry to wet, the grasses and, therefore, the entire countryside change from straw color to rich, deep green. To sit on a rise and look across the rolling landscape, to see the contrast between patches of young and dead grass, and to watch a group of dark cape buffalo or a

herd of red hartebeest grazing gives a quiet satisfaction that is not easily forgotten.

The park was given its particular location in order to protect the last Congo populations of giraffe and white rhino. Although the increase in the number of white rhinos progresses slowly, the giraffes have been a great success. We did not make a census, but we estimate that we saw giraffes three to five hundred times in our three months. For some reason it is difficult to watch giraffes moving without laughing. At least it was impossible for our native assistants to watch them without laughter, in which I admit we participated. Despite the fact that we saw giraffes every day, we could not get over the feeling that this must surely be the most improbable animal in the world.

ABUNDANCE OF ELEPHANTS

We saw elephants every day too. Elephants are extremely abundant in the Garamba, perhaps too numerous, for there are signs that they are destroying the range in places. On one occasion while riding in a jeep, we spotted a herd numbering 150 to 300. I cannot distinguish between 150 and 200 or 300 elephants. But from the size of the mass, the clouds of dust, and the length of time they took to pass, there must have been many more than 100. Futoyo, my principal native assistant, who has worked in the Garamba for more than ten years and who knows the mammals and their habits very well, estimated the herd at 500. That was an over-estimate, but herds that size have been seen before in the Garamba.

There is something satisfyingly solid about an elephant. It is not just its size—its shape and the quiet, dignified manner in which it moves across the savanna also have a lot to do with that impression. Sometimes, however, its dignity evaporates. One morning the men and I were caught by a sudden, heavy rainstorm and took shelter under a clump of trees growing along a creek. We had seen three elephants about 250 yards away on the other side of the stream before the rain began, but had paid as little attention to them as they had to us. Then we discovered that they, too, wanted to take shelter under "our" trees. Slowly flapping their ears and swinging their trunks, they came closer and closer as though oblivious of us. When they were about fifty feet away, Futoyo shouted, "Hey! Where you going?" (In Lingala, not English.) The elephants wheeled and shot off in the opposite direction, trunks up and tails streaming, followed by gales of laughter.

The black rhinoceros, the second African species, also lives in the Garamba, making the park one of the few places where both it and the white rhino occur. Rhinos are not as numerous in the Garamba as are the other large mammals, but we saw them often. To round a sharp curve in the track and suddenly to see a rhino scarcely thirty

feet away is a marvelous experience. Shaped like huge bricks and set close to the ground, the rhinos left us with an impression of massiveness that we never got from elephants.

LIONS AVOID PEOPLE

Unlike some other famous African parks, the Garamba has never been open to tourists. As a result, in the Garamba the lions are not accustomed to people and definitely do not lie around in the open unconcernedly as cars drive by. Quite the contrary. They are not often seen—we saw them only twice—but they can be heard every night. When they are surprised in the open, they snarl and head for other places in a hurry. Cape buffalo, water buck, hartebeest, roan antelope, and several small kinds of antelope are common in the Garamba and each species adds to the interest of the park.

In fact there were so many interesting creatures—birds, ants, termites, grasshoppers, and dung beetles, to name just a few—that we often had to remind ourselves that our three months in the Garamba were to be devoted to amphibians. The frogs of any tropical region are varied and numerous; we collected roughly thirty species and probably overlooked five to ten others. These species occupy a variety of habitats. Many live only in the large permanent marshes. Others live only in narrow, densely-wooded ravines that mark the courses of certain small streams. Still others are found throughout the savanna. Some spend all of their lives in water, whereas others climb up the papyrus and reeds of the marshes, and some hop across the ground. There are tiny species, literally no larger than your small fingernail, and large species, the size of our bullfrog. The coloration of certain species was quite handsome. One tree-frog had a dark brown back that was spotted with red, a white abdomen, a lemon-yellow throat, and red legs. Several species were bright grassy-green and one had a gold stripe on each side.

Unfortunately these beautiful colors fade when the frogs are preserved. And many had to be preserved. One hundred years ago man's ignorance was so colossal that the main purpose of most zoological field work was simply to collect so that we might learn what animals lived in the various regions. Now we have a rough answer to that problem, and field zoology is directed increasingly to the study of the ways in which the animals live and how their lives are interwoven. One of the primary goals of our field work was to obtain detailed habitat information on each species of frog in order to determine ultimately the spatial relationships of the entire fauna. In effect we asked ourselves a series of questions about each species. Does it live in papyrus marsh or open ponds? If in the marsh does it perch on vegetation or does it remain in the water? If it climbs on the papyrus stems, how high above the surface of the

water does it sit? One foot? Two feet? Six feet?

METHODICAL RECORDS

To answer questions of this sort it is necessary to collect specimens, number them, and record the numbers opposite notes on the exact situations in which they are found. Back in the Museum laboratory, the notes on several thousand frogs can be analyzed and perhaps answers to the questions will emerge. This process of analysis is not easily done in the field because many species cannot be named with certainty away from a laboratory and a library. And it is no good having a collection of notes attached to species called who's-it or what's-it. We must have the notes associated with, say, *Rana grandisonae* so that information collected in the Parc National de la Garamba can be compared with similar information gathered in other parts of Africa. Science is not a mere collection of facts; it is a series of relationships based on facts. And in our branch of natural science, as well as in all others, these relationships cannot be derived without proper identification of the animals (or plants or molecules) involved.

At this stage of the game, when the study of our specimens and notes has just begun, it is impossible to say how many questions we succeeded in answering. But this much is certain: if our field work was successful, we have probably raised more questions than we have answered. For it is in the nature of science that solutions to one set of problems reveal other problems that we could not even conceive before.

MINERALOGY IN VERSE AT DARWIN HOME

The unusual poem, reprinted here with a paraphrase of its original introductory material and footnotes, was published in *The American Journal of Science, and Arts*, Volume 5, in 1822, as part of a series occupying ten pages, put forth with a sufficient supply of footnotes, abstracts, subtitles, and morals to equip a definitive edition of *Paradise Lost*. The name of the author does not appear. The material was uncovered for reprinting in the BULLETIN by Eugene S. Richardson, Jr., Curator of Fossil Invertebrates. The 1822 spellings are retained.

The *Granitogony*, a bit of 19th century natural history in metrical form, was written in 1811, when the author was on a visit at Derby, the former residence of Dr. Erasmus Darwin, grandfather of Charles Darwin. In the company of a few scientific friends it was suggested, that, if Erasmus Darwin, who wrote an outline of evolution in verse, had lived to see the progress of geology, he would have favored the world with another poem, *The Loves of the Mountains*.

Impressed with this idea, the author, on the following day, to amuse himself on a long and solitary walk in December, composed the following verses. They were written and shown on his return, and the Moral quatrain was afterwards added.

At the period when this poem was composed, the author was more disposed to adopt the theory of those philosophers who assert that the world has been baked, than that of the German Geognosists, who assert that it has only been boiled. He later inclined to a midway faith, and was disposed to believe that the crust of our planet has been stewed, fire and water being equally operative in its formation.

GRANITOGONY

OR

THE BIRTH OF GRANITE

In ancient time, ere Granite¹ first had birth,
And formed the solid pavement of the earth,
Stern Silex² reign'd, and felt the strong
desire

To have a son, the semblance of the sire.
To soft Alumina³ his court he paid,
But tried in vain to win the gentle maid;
Till to caloric and the spirits of flame
He sued for aid—nor sued for aid in vain:
They warm'd her heart, the bridal couch
they spread,
And Felspar⁴ was the offspring of their bed:
He on his sparkling front and polished face
Mix'd with his father's strength his mother's
grace.

Young Felspar flourish'd, and in early life
With pale Magnesia lived like man and wife.
From this soft union sprang a sprightly
dame,
Sparkling with life—and Mica⁵ was her
name.

Then Silex, Felspar, Mica, dwelt alone,
The triple deities on Terra's throne.
For he, stern Silex, all access denied
To other gods, or other powers beside.⁶
Oft when gay Flora and Pomona strove
To land their stores, their bark he rudely
drove
Far from his coast; and in his wrath he
swore
They ne'er should land them on his flinty
shore.

Fired at this harsh refusal, angry Jove,
In terrors clad, descended from above;
His glory and his vengeance he enshrouds,
Involved in tempests and a night of clouds:
O'er Mica's head the livid lightning play'd,
And peals of thunder scared the astonished
maid.

To seek her much-loved parents quick she
flew;
Her arms elastic round their necks she threw,
"Thus may I perish, never more to part,
Press'd to my much lov'd sire's and grand-
sire's heart!"

So spoke the maid. The thunder-bolt had
fled,
And all were numbered with the silent dead.

But, interfused and changed to stone, they
rise

A mass of Granite⁷ towering to the skies.
O'er the whole globe this ponderous mass
extends,

Round either pole its mighty arms it bends;
And thus was doom'd to bear in after time
All other rocks of every class and clime.
So sings the bard that Granite first had birth,
And formed the solid pavement of the earth:
And minor bards may sing, whene'er they
list,
Of Argillaceous or Micaceous Schist.

MORAL

(The friend to whom this poem was shown in 1811, suggested the propriety of annexing a Moral. In compliance with general custom, the author followed the advice. It would, however have been more consonant to his own modesty, to have left the moral application to the reader's sagacity than to have thus obtruded it on his notice.)

Learn hence, ye flinty hearted rocks,
Your burthens all to bear,
Lest Jove should fix you in the stocks,
Or toss you in the air.

THE AUTHOR'S COPIOUS FOOTNOTES

Appended to his poem, the author offered the following extensive explanations of various points:

¹Granite.—This rock is essentially composed of three minerals, Quartz, Felspar, and Mica united, without any cement, or without interstices between them; frequently the three minerals appear to penetrate each other. Hence it has been supposed that these minerals were crystallized and united when the mass was in a state of fusion.

²Silex.—This earth is one of the principal constituent elements of the three minerals that form Granite. Quartz is nearly pure Silex; it is more imperishable than Felspar or Mica.

³Alumina.—This earth is soft and unctuous when moist. It is a constituent part of Felspar, in which it is combined with a large portion of Silex, and with other ingredients. As Silex and Alumina cannot be made to combine chemically by water, the Muse has properly sought aid from caloric to promote their union.

⁴Felspar, when crystalline, is distinguished by its laminar structure and smooth shining face.

⁵Mica.—The descent of Mica may be rather dubious: the quantity of Magnesia which enters into the composition of this mineral, as given in some analyses, is very small.

⁶Siliceous earth alone is extremely unfavorable to vegetation, and granitic rocks, in which this earth abounds, remain for ages denuded and barren.

⁷Granite forms the summits and peaks of
(Continued on page 12, column 3)



Inger, Robert F. 1959. "Darkest Africa' Truly is Glaringly Bright." *Bulletin* 30(11), 8–9.

View This Item Online: <https://www.biodiversitylibrary.org/item/25677>

Permalink: <https://www.biodiversitylibrary.org/partpdf/371367>

Holding Institution

University Library, University of Illinois Urbana Champaign

Sponsored by

University of Illinois Urbana-Champaign

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the Chicago Field Museum.
For information contact dcc@library.uiuc.edu.

Rights Holder: Field Museum of Natural History

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.