BIOPHILATELY

OFFICIAL JOURNAL OF THE BIOLOGY UNIT OF ATA

SEPTEMBER 2015 VOLUME 64, NUMBER 3

Save the Trees!

(We need them to print this journal.)

Michael Kogan

Milestones in Paleo-Philately

More Inside >>

IN THIS ISSUE

BIOPHILATELY

Editor

Jack R. Congrove
P.O. Box 33092, Fort Lewis, WA 98433, USA
jackcongrove@comcast.net

Publisher

Richard Roman
Dick.Roman@SbcGlobal.Net

Associate Editors

Christopher E. Dahle ***Botany***
1401 Linmar Dr. NE, Cedar Rapids, IA 52402
chris-dahle@fastermac.net

Dr. Paul A. Mistretta ***Fungi***
4148 Commodore Dr., Atlanta, GA 30341
paulmistretta70@gmail.com

Michael J. Prince ***Mammalia***
"Dorset," Grove Road, Ash Vale, Aldershot, Hants. U.K.
Michael.Prince@bushinternet.com

Glenn G. Mertz ***Ornithology***
625 N. Lafayette St., Allentown, PA 18104
ggmertz@juno.com

Charles E. Braun ***New Birds***
7 Winthrop Drive, Aiken, SC 29803
charlesebraun@gmail.com

Kris P. Lindstrom ***Ichthyology***
P.O. Box 51008, Pacific Grove, CA 93950
kplenviro2@sti.net

Ian Hunter ***Invertebrate Zoology***
6 Tiller Pl SE, Airdrie, AB
T4A 1S6, Canada
ighunter@shaw.ca

Donald P. Wright, Jr. ***Entomology***
84 Woosamonsa Rd., Pennington, NJ 08534
don.aa2f@verizon.net

Michael Kogan ***Paleontology***
Munich, Germany
admin@paleophilatelie.eu

BIOLOGY UNIT OF ATA

Alan J. Hanks **President**
34 Seaton Drive, Aurora, ON Canada L4G 2K1

Laurence E. Davidson **Vice-President**
30 Front St., Apt. 307, Stratford, ON Canada N5A 7S3

Christopher E. Dahle **Secretary/Treasurer**
1401 Linmar Dr. NE, Cedar Rapids, IA 52402

Directors

Jack R. Congrove (Washington)
John Pereira (Massachusetts)
Dr. Frederick C. Skvara (New Jersey)
Donald P. Wright, Jr. (New Jersey)

Publicity Director

William Cochrane
9/30 William Street, Castlemaine, Victoria
3450 Australia
enquiries@philatelicdatabase.com

Librarian

Mark Reineke
925 Boychuk Drive, Saskatoon, SK
S7H 4L6 Canada
mikadoate@sasktel.net

Website
www.biophilately.org

The Biology Unit, founded in 1951, is a study unit of the American Topical Association dedicated to the international cooperative study of biological postage stamps and related material.

Back copies of *Biophilately* are available from the Librarian. Copies of separate articles are available at a charge six cents per page. Please contact the individual associate editors if you have queries about the content of their columns.

Send membership enquiries and change of address notices to the Secretary, Chris Dahle, (319) 364-4999. See the following page for dues rates.

The purpose of this journal is to provide members with informative articles dealing with biological topics and to publish listings covering the new **zoological** and **botanical** issues of the world, identified and classified to the best of our ability.

Please send letters, comments on the journal, articles, or new material to the Editor (data above). The Publisher will handle requests for issues from the current year. Contact the Librarian (address above) for copies of all other issues.

NOTE: Please provide a self-addressed envelope with the necessary return postage (or International Reply Coupons, if available) for all enquiries requiring an answer.

PLEASE NOTE: Material for the next issue should be in the hands of the Editor before 15 November 2015.

MILESTONES OF PALEO-PHILATELY

Michael Kogan, BU1863

[*Ed. Note: This article is the first of a three-part commentary on the history of stamp issues depicting Paleontology subjects by Michael Kogan, our Associate Editor for Paleontology and the creator of the* Paleophilatelist *website.*]

> *"Paleontology, also spelled palaeontology, scientific study of life of the geologic past that involves the analysis of plant and animal fossils, including those of microscopic size, preserved in rocks. It is concerned with all aspects of the biology of ancient life forms: their shape and structure, evolutionary patterns, taxonomic relationships with each other and with modern living species, geographic distribution, and interrelationships with the environment. Paleontology is mutually interdependent with stratigraphy and historical geology because fossils constitute a major means by which sedimentary strata are identified and correlated with one another. Its methods of investigation include that of biometry (statistical analysis applied to biology), which is designed to provide a description of the forms of organisms statistically and the expression of taxonomic relationships quantitatively."* —Encyclopedia Britannica

The first stamps issued in the mid-19th century have boring designs. They were rectangular or square in shape, depicted the leader of the country: king, queen, president, or had just a face value. Even though people around the world began collecting stamps almost immediately. The first philatelists tried to find production differences between stamps of the same design—color or paper variations, difference in perforation, some errors on images, etc.

It took over 30 years until the first commemorative stamp was issued. In 1871, Peru issued a stamp showing a locomotive. Shortly after, many other postal authorities began issuing stamps dedicated to important events, local and worldwide famous places, landscapes, famous persons of the county, etc. Nowadays postage stamps are not only evidence of postal payment, but also ambassadors of the country. They tell us a story of the issuing country, shows us famous persons, landscapes and scenic sights, cultural and sporting events, and local flora and fauna.

The fossilized remains of prehistoric animals, especially large ones, such as dinosaurs or giant mammals, have always stirred the imagination of people, creating all sorts of myths and legends about Dragons, Cyclops, and ancient Giants. The well-preserved remains of the ancient inhabitants of the earth have very great scientific and material value. Some of them even have the status of national treasure.

Philatelic Firsts

This article is about milestones of Paleo-Philately, the thematic collection of Paleontology-related philatelic materials.

The Sinclair Oil Company used this meter franking, as well as their regular advertisements, to promote their motor oil. They chose a dinosaur for company logo as a symbol of the great length of time their oil spent in the ground.

In 1935 and 1938, Sinclair Refining Company ran ad campaigns. As part of them, they issued set of stamp-like labels depicting various dinosaurs. These were intended for children. In each program when you went to a Sinclair station on week one you would be given a stamp album. Then on each of the eight following weeks you would be given a new sheetlet of stamps.

The first appearance of a dinosaur on a postal item
United States, ca.1935

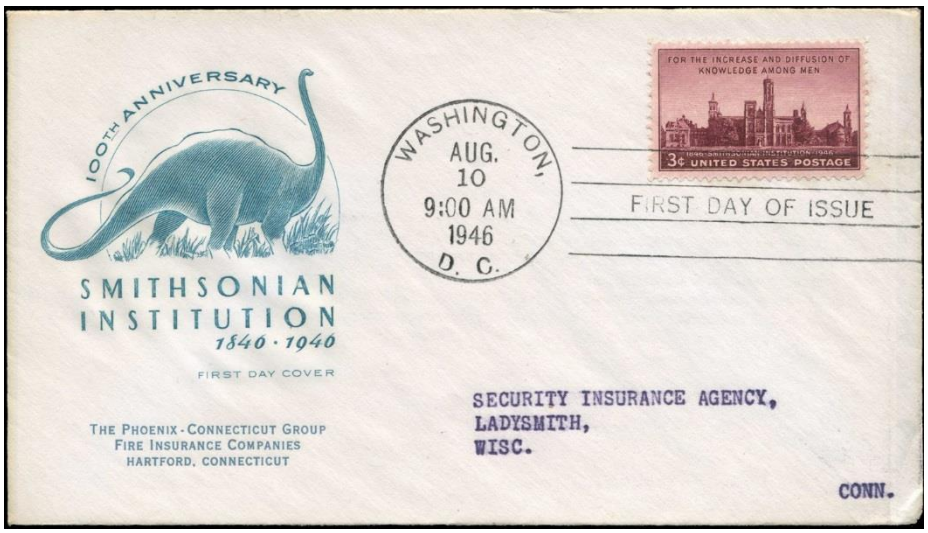
The books had some advertising material, but mostly contained scientific and historical information to explain the dinosaurs and petroleum to children.

On 10 August 1946, the U.S. Post Office Department issued a stamp to celebrate the centenary of the Smithsonian Institution. The stamp itself shows the Smithsonian's buildings in Washington, D.C. (Actually this stamp itself can be considered as a paleontological thematic because the Institution has very large Paleobiologic Department.) An illustration on the left side of the First Day Cover shows a sauropod, most likely a Diplodocus.

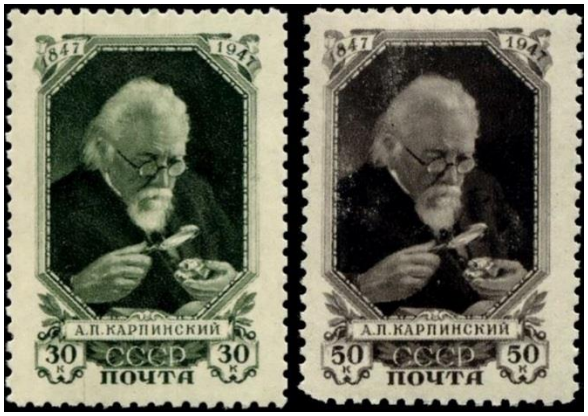
The following year on 17 January 1947, Russia issued the first stamp showing a paleontologist.

Actually it is a set of two stamps, 30 kopejka (100k = 1 ruble) dark green and 50k sepia. These stamps show a portrait of A.P. Karpinsky (1847–1936).

He is most known as the first elected president of Russian Science Academy. However, he was also great geologist and paleontologist, who made some important discoveries in Ural Mountains area of Russia.



Dinosaur appearance on an FDC cachet
United States, 1946, Sc#943



First stamps depicting a paleontologist
Russia, 1947, Sc#943

On 3 March 1952, Russia issued a 40k stamp titled, "Greatest Russian scientist biologist-paleontologist: V. O. Kovalevskij" This stamp honors V.O. Kovalevsky (1843–1883) and is actually the first stamp dedicated to paleontologist.

First stamp dedicated to a paleontologist
Russia, 1952, Sc#1616

First stamp depicting a fossil
Romania, 1967, Sc#1941

The first stamp of scientists with a prehistoric animal fossil on a background has been issued in Romania on 29 July 1967, as part of set of famous Romanian people. The 40-bani shows Grigore Antipa (1867–1944), a Romanian biologist and director of the Bucharest Natural History Museum.

Some websites and even philatelic books and catalogs mention this stamp as the first stamp to depict paleontologist on. However, Antipa was not a paleontologist at all. He was a zoologist, ichthyologist, economist, ecologist, oceanologist, and museologist. He founded the Romanian school of Hydrobiology, Ichthyology, and Oceanology; was a pioneer in the field of museology; and was the author of modern concepts in ecology, bio-sociology, and biosphere.

As director of the Bucharest Natural History Museum, he made an important contribution to the organization of phylogenetic and ecological collections. As a token of gratitude for his work in the museum since 1933, the museum now bears his name. The confusion is caused by the fossil of *Deinotherium giganteum* depicted on the background of the stamp. It is there only because it is the most impressive exhibit of the museum.

Contributors to Paleontology

Another group of persons to mention is contributors to Paleontological science.

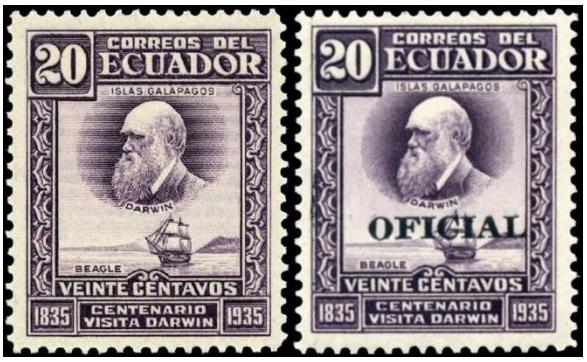
People have found fossils since ancient times, but Paleontology as a science was established in the middle of the 19th century. The establishment was impossible without the help of scientists from many other sciences such as biology, botany, and geology. Many politicians and wealthy persons supported the young science.

Carl von Linné (Linnaeus)
Sweden, 1939, Sc#294 & 298

Modern biology, botany, and of course paleontology classifies all animals and plants according a taxonomic system proposed by Swedish botanist Carl Linnaeus in the mid-18th century. The first stamp honoring Linnaeus was issued by Sweden on 2 June 1939.

The foundation of Paleontology is the evolutionary theory of Charles Darwin, who published his famous work, *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*, in 1859.

The first stamps to depict Darwin were issued by Ecuador in 1936, to commemorate the 100th anniversary of his visit to the Galapagos Islands. Later the same year the stamps were overprinted for official use.



Charles Darwin first commemoration
Ecuador, 1936, Sc#343 & O193

Thomas Jefferson
U.S., 1856, Sc#12

One of most notable contributors to establishment of Paleontology science in United States was the third US President Thomas Jefferson.

Jefferson is rightfully renowned as the principal author of the Declaration of Independence, the Third President of the United States, and a champion of liberty. But he was also a central player in the beginnings of American paleontology. In addition, his participation occurred at a time when people were struggling with the ideas of fossils as evidence of past life, of extinction, and of an Earth far older than the Biblical account.

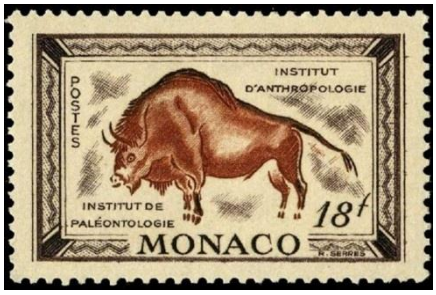
Some of the objects of Jefferson's paleontology became part of the collections at the American Philosophical Society in Philadelphia. Beginning in 1849, these holdings were transferred to the Academy of Natural Sciences of Philadelphia, where they are currently housed. This is the Thomas Jefferson Fossil Collection.

- The American Mastodon is the most important species in this collection. The identity and nature of this mysterious creature captured the interest and imagination of people in both Europe and North America.
- The Giant Claw, or *Megalonyx*, was the subject of the first scientific papers in American paleontology.
- Six other fossil animals are also part of this collection: Ancient Bison (*Bison antiquus*), Ancient Horse (*Equus cf. E. complicatus*), Harlan's Musk Ox (*Bootherium bombifrons*), Megalodon Shark (*Carcharocles megalodon*), Stag Moose (*Cervalces scotti*), and Woolly Mammoth (*Mammuthus primigenius*).

Next to the American Mastodon, Jefferson's Ground Sloth is the most important fossil animal represented in this collection. This unusual animal was the subject of the first and second scientific articles on fossils ever published in the United States. —from *http://www.ansp.org/*

On 5 March 1949, the Monaco Post issued a set of three stamps showing various areas of interest of Prince Albert I, who had a keen interest in the origins of man and who founded the Institute for Human Paleontology in Paris that was responsible for a number of archeological digs.

One stamp depicts an aurochs drawing from the famous Lascaux cave, and the other two show the buildings of the Institute for Human Paleontology in Paris and the *Musée d'Anthropologie Préhistorique* in Monaco. All three are the first stamps in their category.



First prehistoric drawing
Monaco, 1949, Sc#244

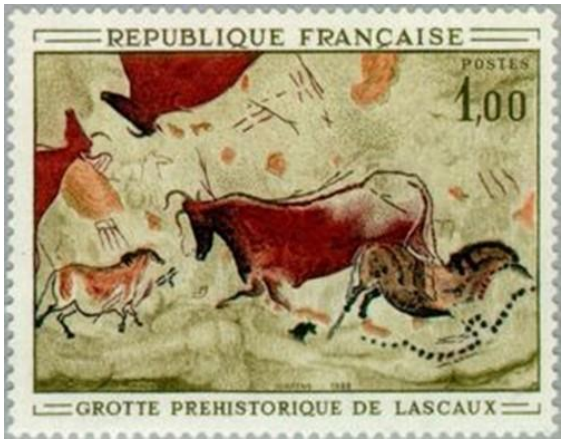
First Paleontology museum
Monaco, 1949, Sc#C22

Prehistoric Anthropology
Monaco, 1949, Sc#C23

[*Ed. Note: See the next edition of* Biophilately *for the continuation of this article that will deal with depictions of prehistoric animals on stamps.*]

PREHISTORIC ART

On 13 April 1968, France issued a stamp in its Tourism series (Sc#1204) part of a set of four depicting a small portion of the stunning Paleolithic artwork discovered in the Lascaux Cave in 1940. The paints are estimated to be 17,300 years old.



This cave contains nearly 2,000 figures, mostly images of large animals that, based on fossil evidence, are known to have lived in the area at the time.

The central figure on this stamp depicts an aurochs (*Bos primigenius*) a type of wild ox.

This multicolor commemorative stamp measures 48×27 mm and is perforated 13×12. A total of 7.747 million stamps were printed using the intaglio process.

As is often the case when humans get involved with things, opening the cave to tourists quickly resulted in detrimental consequences to the cave paintings. Heat, humidity, carbon dioxide, and contaminants produced by visitors has caused damage and introduced lichens and black mold.

Currently, the cave is closed except for a few scientific experts working to preserve these priceless and irreplaceable artifacts of early humanity.

Having hopefully learned a lesson from these events, officials in charge of the Chauvet Cave, which contains spectacular artwork from 32,000 to 30,000 years ago, have sealed it off from access to the public. They have built a full scale replica of the interesting portions of the cave based on laser scans and locate some distance away.

The Chauvet Cave played a prominent role in Jean M. Auel's 2011 novel, *The Land of Painted Caves*.

BIOPHILATELY

OFFICIAL JOURNAL OF THE BIOLOGY UNIT OF ATA

DECEMBER 2015 VOLUME 64, NUMBER 4

Why did you yell "Fire!" when you fell into the chocolate?

(Because no one would save me if I yelled "Chocolate!")

Michael Kogan

Milestones in Paleo-Philately

More Inside >>

IN THIS ISSUE

The Biology Unit, founded in 1951, is a study unit of the American Topical Association dedicated to the international cooperative study of biological postage stamps and related material.

Back copies of *Biophilately* are available from the Librarian. Copies of separate articles are available at a charge six cents per page. Please contact the individual associate editors if you have queries about the content of their columns.

Send membership enquiries and change of address notices to the Secretary, Chris Dahle, (319) 364-4999. See the following page for dues rates.

The purpose of this journal is to provide members with informative articles dealing with biological topics and to publish listings covering the new **zoological** and **botanical** issues of the world, identified and classified to the best of our ability.

Please send letters, comments on the journal, articles, or new material to the Editor (data above). The Publisher will handle requests for issues from the current year. Contact the Librarian (address above) for copies of all other issues. **NOTE:** Please provide a self-addressed envelope with the necessary return postage (or International Reply Coupons, if available) for all enquiries requiring an answer.

PLEASE NOTE: Material for the next issue should be in the hands of the Editor before 15 February 2016.

MILESTONES OF PALEO-PHILATELY

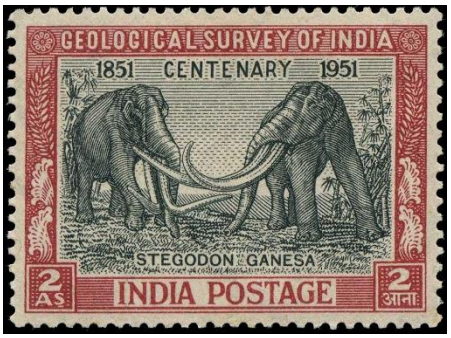
Michael Kogan, BU1863

[*Ed. Note: This article is the second of a three-part commentary on the history of stamp issues depicting Paleontology subjects by Michael Kogan, our Associate Editor for Paleontology and the creator of the* Paleophilatelie *website (*www.paleophilatelie.eu*). See Vol. 64 (3) for the first chapter.*]

[*Ed. Note: Corrections to the first installment: On page 155, "Later the same year the stamps were overprinted for official use." The first stamp, without overprint, was also for official use. On page 156: "On 5 March 1949, the Monaco Post issued a set of three stamps showing various areas of interest of Prince Albert I…." This was actually a set of 12 stamps.*]

First Stamp Commemorations

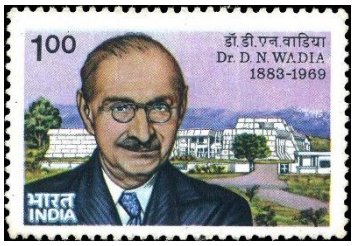
In 1951, **prehistoric animals** appear on postage stamps for the first time. To commemorate the Indian Geological Survey centenary on 13 January 1951, India Post released a stamp showing two prehistoric "elephants" (*Stegodon ganesa*), the first ever reconstruction of a prehistoric animal on a stamp.



Stegodon ganesa
India, 1951, Sc#232

Stegodons were primarily an Asiatic group of Mammutidae. This family is believed to have evolved sometime by the middle Miocene, nearly 15 million years ago, and became extinct by the late Pleistocene about 30,000–40,000 years ago. Stegodons appear to be transitional between true mastodons on the one hand and true elephants on the other.

Why are Stegodons depicted on stamps for the anniversary of the Indian Geological Survey?



Dr. D. N. Wadia
India, 1984, Sc#1068B

In 1928, a three-meter long fossil tusk of an elephantine mammal (*S. ganesa*) was discovered by Dr. Darashaw Nosherwan Wadia (1883–1969) who pursued his personal research on stratigraphy, structure, and paleontology of the Kashmir Himalayan region with single-minded devotion.

Being a very keen observer, he worked towards identification of broad structural elements of the northwest Himalayas. The discovery of this skull, which was found in association with fossil ganoid fish and pteridospermous plants, led to the fixing of the age of an important geological rock formation in the Kashmir Himalayas to the Permo-Carboniferous period (355–250 million years ago). The fossil tusk is now kept at the museum of the Geology Department of the Jammu University.

In 1952, Algeria issued the first stamp showing a **fossil**.

In that year, the XIX International Geological Congress was held in Algeria. The host country issued two special stamps on 11 August to promote this event. The ammonite fossil depicted on the 15-franc stamp is *Berbericeras sikikensis*. The second stamp, denominated 30fr, shows one of the most famous geological sites in the country—the Hoggar Mountains.

B. sikikensis
Algeria, 1952, Sc#247

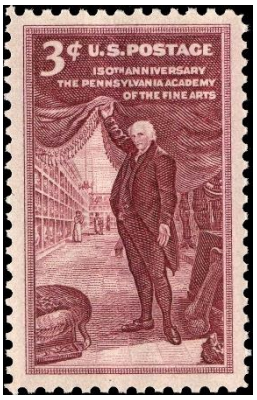
Ammonites are excellent index fossils, and it is often possible to link the rock layer in which they are found to specific geological time periods. Therefore, they appear on several philatelic items related to some geological events.

The **skeleton** of a prehistoric animal appears for the first time on a stamp from the United States on 15 January 1955.

The stamp was issued in conjunction with the sesquicentennial celebration of the Pennsylvania Academy of Fine Arts. The stamp pictures Charles Wilson Peale's self-portrait, "The Artist in His Museum." Many of the museum's exhibits were collected by Peale, and he includes some of them in his painting. The stamp features several, like a wild turkey ready to be preserved as

Mastodon bone & reconstruction

well as a great mastodon bone, in honor of one of Peale's greatest achievements—the reconstruction of a mastodon's skeleton. The mastodon and three other prehistoric mammals can be seen on American stamps issued on 8 June 1996



C. W. Peale
USA, 1955, Sc#1064

Mastodon (LL)
USA, 1996, Sc#3079

It took another three years until the first stamp of **dinosaur** was issued. On 15 April 1958, the People's Republic of China issued a set of three stamps titled, "Chinese Paleontology."

The 4-fen stamp depicts a trilobite (*Kaolishania pustulosa*) of Haoli Mountain (Paleozoic).

A dinosaur found near Lufeng (*Lufengosaurus huenei*) is on the 8-fen stamp (Mesozoic).

The Chinese giant deer (*Megaloceros* [=*Sinomegaceros*] *pachyosteus*) appears on the 16-fen stamp (Cenozoic)

Lufengosaurus, meaning Lufeng lizard, is a genus of sauropod dinosaur from the early and middle Jurassic period of what is now southwestern China. It was named by C. C. Young in 1941.

This is one of the few prosauropod dinosaurs to survive from the early Jurassic era. Prosauropods, meaning "before the sauropods," were small, herbivorous dinosaurs closely related to the giant sauropods of the late Jurassic period. This dinosaur became the first complete dinosaur skeleton to be mounted in China and displayed in Beijing.

The FDC of this set is very rare, as it was issued in a quantity of 1,000 pieces only.

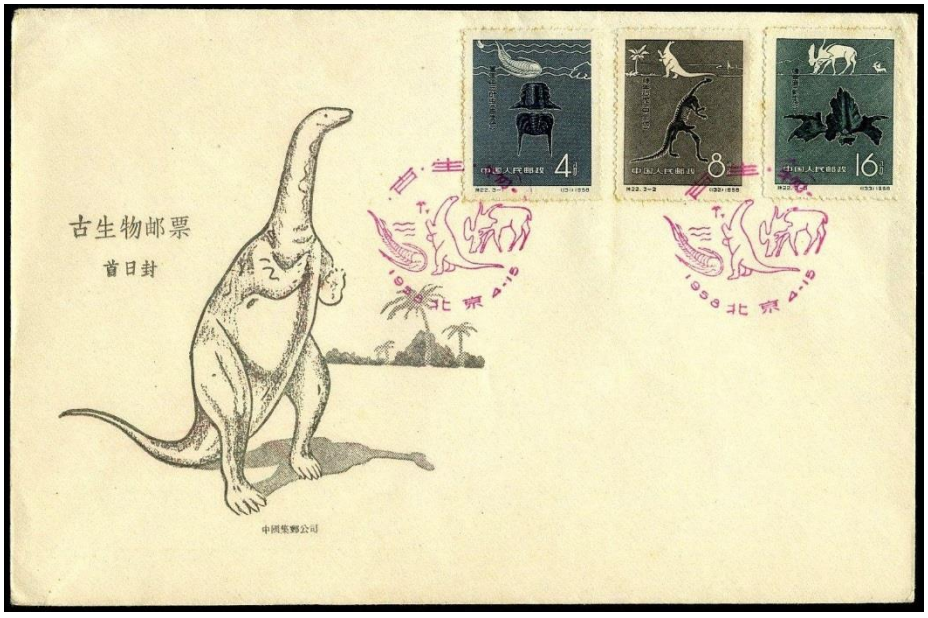
Dinosaurs appeared on US stamps for the first time on 6 May 1970. The USPS issued a set of four stamps to commemorate the 100th anniversary of the opening of the American Museum of Natural History (AMNH) in New York City.

One of these stamps reproduces the Jurassic period portion of a mural titled, "The Age of Reptiles," painted by the famous paleo artist Rudolph F. Zallinger.

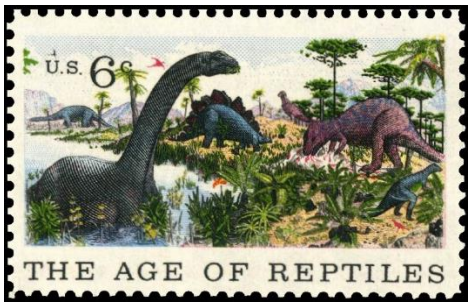
Lufengosaurus huenei
China P.R., 1958, Sc#342

This mural covers the entire east wall of the Yale Peabody Museum's Great Hall. It is one of the largest in the world, measuring 110 feet (33.5 meters) by 16 feet (4.9 meters). It required more than 4.5 years (1943–47) to complete.

Painted using the Renaissance *fresco secco* technique, the mural showcases a panorama of the evolutionary history of the earth—from the Devonian Period 362 million years ago (MYA) to the Cretaceous Period 65 MYA—based on the best scientific knowledge available at the time.



Chinese Paleontology FDC
China P.R., 1958, Sc#341–43



"The Age of Reptiles"
USA, 1970, Sc#1390

The chronology of the mural reads from right to left and spans more than 300 million years, with large foreground trees marking the boundaries between the geologic periods.

Between 1958 and 1961 Swiss Post, in cooperation with Pro Patria organization, issued four semi-postal stamp sets showing some fossils and minerals from the collections of local museums.

Pro Patria is a Swiss patriotic and charitable organization. Its purpose is to give meaning to the Swiss national holiday, 1 August, by collecting donations to benefit social and cultural works of national public interest.

One of the methods the organization uses to collect donations is the issue of semi-postal stamps. The first stamp set was issued in 1938.

All the mineral sets contain five stamps: one stamp with a logo of the Pro Patria campaign and four stamps showing minerals and fossils. The additional amount paid for each sold stamp transferred to the organization. Actually, these are the first semi-postal stamps with a paleontological context ever issued.

The set from 1961, distinguished from others, contains two fossil stamps: a **fish** and a **plant**. Both are the first stamps in their category.

The fish is very likely *Scorpaena porcus* and the fern plant is probably *Asterotheca meriani*.

Asterotheca is a genus dating from the Permian period 299–252 MYA. It grew in humid and swampy locales and was one of the first plants on the earth.

Plant fossils are the subject of Paleobotany study.

Paleobotany is the branch of paleontology dealing with the recovery and identification of plant remains from geological contexts, and their use for the biological

Scorpaena porcus
Switzerland, 1961, Sc#B305

Asterotheca meriani
Switzerland, 1961, Sc#B307

reconstruction of past environments. It includes the evolutionary history of plants, with a bearing upon the evolution of life in general. Paleobotany is important in the reconstruction of ancient ecological systems and climate, known as paleoecology and paleoclimatology, respectively. It is also fundamental to the study of green plant development and evolution.

Edaphosaurus
Poland, 1965, Sc#1307

Brontosaurus
Poland, 1965, Sc#1309

The first colorful, pictorial stamps depicting prehistoric animals were issued on 5 March 1965 by Polish Post who liked to popularize discoveries of paleontologists. The set of ten stamps show representations of prehistoric animals, mostly dinosaurs.

The designs are based on pictures by Zdenek Burian, a Czech painter and book illustrator, whose work during a remarkable career spanning five decades, played a central role in the development of paleontological reconstructions.

Stegosaurus
Poland, 1965, Sc#1311

Styracosaurus
Poland, 1965, Sc#1313

Tyrannosaurus
Poland, 1965, Sc#1316

Originally recognized only in his native Czechoslovakia, Burian's fame later spread to an international audience, and a number of artists later attempted to emulate his style.

Cryptocleidus
Poland, Sc#1308

Mesosaurus
Poland, Sc#1310

Brachiosaurus
Poland, Sc#1312

Corythosaurus
Poland, Sc#1314

Rhamphorhynchus
Poland, Sc#1315

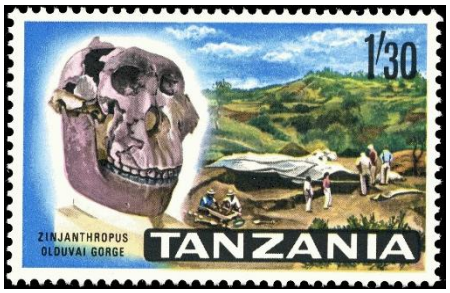
Burian is regarded by many as the most influential paleo-artist of the modern era. Many stamps issued around the world are based on his illustrations.

Also in 1965, the first stamp with an early human fossil came from Tanzania, the "cradle of humankind."

On 9 December 1965, Tanzania issued a set of 14 definitive stamps with some typical animals, landscapes, and some historical episodes to show development of the country.

The 1.30sh stamp shows a skull of *Zinjanthropus* and its excavation site at Olduvai Gorge valley.

Zinjanthropus, later categorized as *Paranthropus boisei*, is an extinct hominin postulated from a skull discovered in Olduvai Gorge, Tanzania, by British paleoanthropologist, Mary Leakey on 17 July 1959.



Zinjanthropus
Tanzania, 1965, Sc#14

For much of her career, Mary Leakey (1913–1996) worked together with her husband, Louis Leakey (1903–1972), in Olduvai Gorge, uncovering the tools and fossils of ancient hominins. She developed a system for classifying the stone tools found at Olduvai.

She also discovered the Laetoli footprints. It was there, at the Laetoli site, that she discovered hominin fossils that were more than 3.75 million-years-old. In addition, she discovered 15 new species of other animals, and one new genus.

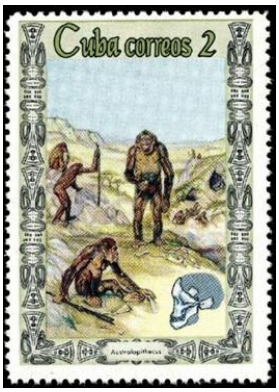
In 1960, she became director of excavation at Olduvai and subsequently took it over, building her own staff. After the death of her husband, she became a leading paleoanthropologist, helping to establish the Leakey tradition in the field.

Mary Leakey
GB, 2013, Sc#3164

Mary Leakey died on 9 December 1996, at the age of 83, a renowned paleoanthropologist, who had not only conducted significant research of her own, but had been invaluable to the research careers of her husband and their sons, Richard, Philip, and Jonathan.

On 31 March 1967, Post Authority of Cuba issued a set of seven stamps that were the first to show **human evolution**.

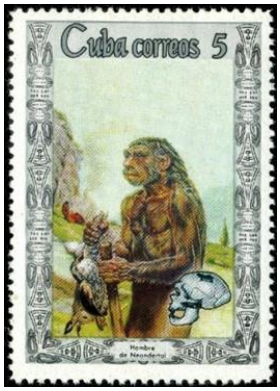
Homo habilis
Cuba, 1967, Sc#1210



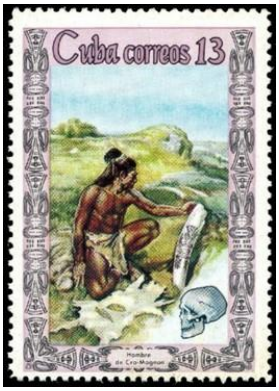
Australopithecus
Cuba, 1967, Sc#1211

Pithecanthropus erectus
Cuba, 1967, Sc#1212

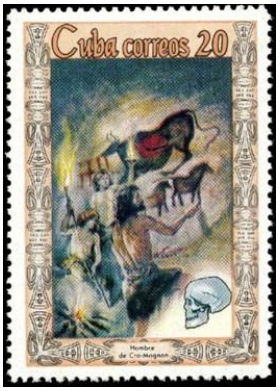
Sinanthropus pekinensis
Cuba, 1967, Sc#1213



Neanderthal man
Cuba, 1967, Sc#1214



Cro-magnon carving
Cuba, 1967, Sc#1215



Cro-magnon painting
Cuba, 1967, Sc#1216

Each stamp shows a skull fragment for the relevant stage of human (*Homo*) species and depicts some major stage of human development, known from the worldwide fossil record.

The first two stamps show very early species: *Homo habilis*, who lived between roughly 2.8 to 1.5 MYA, and *Australopithecus*.

From paleontological and archaeological evidence, the *Australopithecus* genus apparently evolved in eastern Africa around 4 MYA before spreading throughout the continent and eventually becoming extinct sometime after 2 MYA.

Pithecanthropus erectus and *Sinanthropus pekinensis* both belong to the *Homo erectus* group that lived between 1.9 MYA and 700,000 years ago. *Pithecanthropus erectus* is known from fossils found at the bank of the Solo River at Trinil, in East Java. Fossils of *Sinanthropus pekinensis*, also known as Peking Man, are found in China.

The Neanderthals, or Neandertals, are closely related to modern humans, differing in DNA by just 0.12 percent. Remains left by Neanderthals include bone and stone tools, which are found in Eurasia, from Western Europe to Central and Northern Asia as well as in North Africa.

Neanderthals are generally classified by biologists as the species *Homo neanderthalensis*, but some considers them to be a subspecies of *Homo sapiens* (*Homo sapiens neanderthalensis*).

Several cultural assemblages have been linked to the Neanderthals in Europe. The earliest, the Mousterian stone tool culture, dates to about 300,000 years ago. Late Mousterian artifacts were found in Gorham's Cave on the south-facing coast of Gibraltar

Neanderthal discovery
Gibraltar, 1973, Sc#297

With an average cranial capacity of 1,600 cubic centimeters, the cranial capacity of Neanderthals is notably larger than the 1,400 cubic centimeters average for modern humans, indicating that their brain size was larger. This difference in brain size can be attributed to the cold climate adaptations.

Genetic evidence published in 2010 and 2014, suggests that Neanderthals contributed to the DNA of anatomically modern humans, including most non-Africans as well as a few African populations, through interbreeding, likely between 50,000 to 60,000 years ago.

The final *Homo* species shown on these stamps is the modern *Homo sapiens*. The 13c and 20c stamps show Cro-Magnon men. These are the first early modern humans that lived in Europe in the Upper Paleolithic period from 500,000 to 10,000 years ago. Current scientific literature prefers the term European early modern humans (EEMH). Fossils of this species are found in Italy, Britain, and even in Arctic regions.

All stamps of this set use illustrations by the famous Czech painter and book illustrator, Zdenek Burian, from a book titled *Prehistoric Man*, published in 1960.

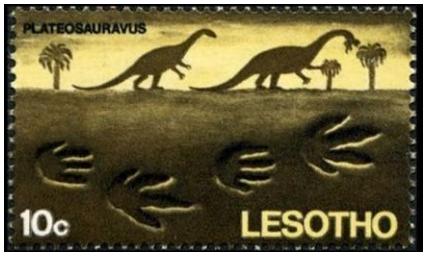
On 5 January 1970, Lesotho issued a set of five stamps showing some **footprints** of dinosaurs and other prehistoric animals.

Paleoichnology is the study of fossilized footprints. Scientists can learn many things from studying such tracks. They can give an idea about size of the animal and if it walked on two or four legs.

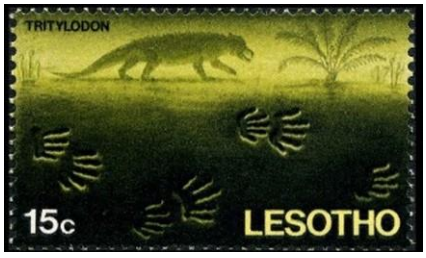
Dinosaur footprints at Moyeni
Lesotho, 1970, Sc#75

Gryponyx tracks
Lesotho, 1970, Sc#76

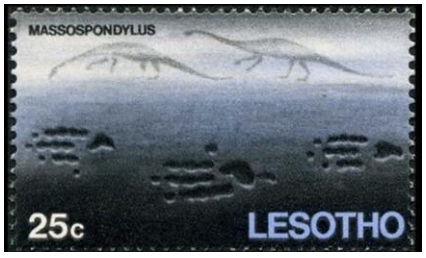
The distance between the footprints can indicate the speed and behavioral of the animal. Many sites have been found with numerous tracks giving information on the social behavior of the animals, whether they traveled in herds, pairs, or alone. In addition to all of this, scientists can learn the animal's foot anatomy and foot padding.



Plateosauravus tracks
Lesotho, 1970, Sc#77



Tritylodon tracks
Lesotho, 1970, Sc#78



Massospondylus tracks
Lesotho, 1970, Sc#79

Also in 1970, fossils appeared for the first time on **postal stationery**.

On 19 June 1970, the Polish Postal Service issued a post card to commemorate the 50th anniversary of the Polish Geological Institute. The building of the institute is depicted on the left side of the card.

The imprinted stamp shows an ammonite of genus *Perisphinctes* from the collection of the institute. The ammonite is about 30 centimeters in diameter and can be founded in various locations in Poland.

A trilobite (*Marrolithus ornatus*) is featured on a special postmark issued in Kielce. This blind trilobite is only 2 centimeters in size, probably burrowed in the mud of the Ordovician sea floor (485–443 MYA).

On 31 October 1970, the first **diamond-shaped** stamps of fossils were issued by Angola.

Most stamps issued around the world have been rectangular or square shaped. However, from time to time some postal authorities produce stamps with other shapes.

The fossil stamps are part of a set of 12 definitive stamps including minerals titled, "Geology, Mineralogy, Paleontology," and show an *Angolasaurus* skull (50c, Sc#551), petrified wood (2e, Sc#554), the tooth of a Megalodon (3.5e, Sc#557, and more, found in the country.

Perisphinctes ammonite
Poland, 1970

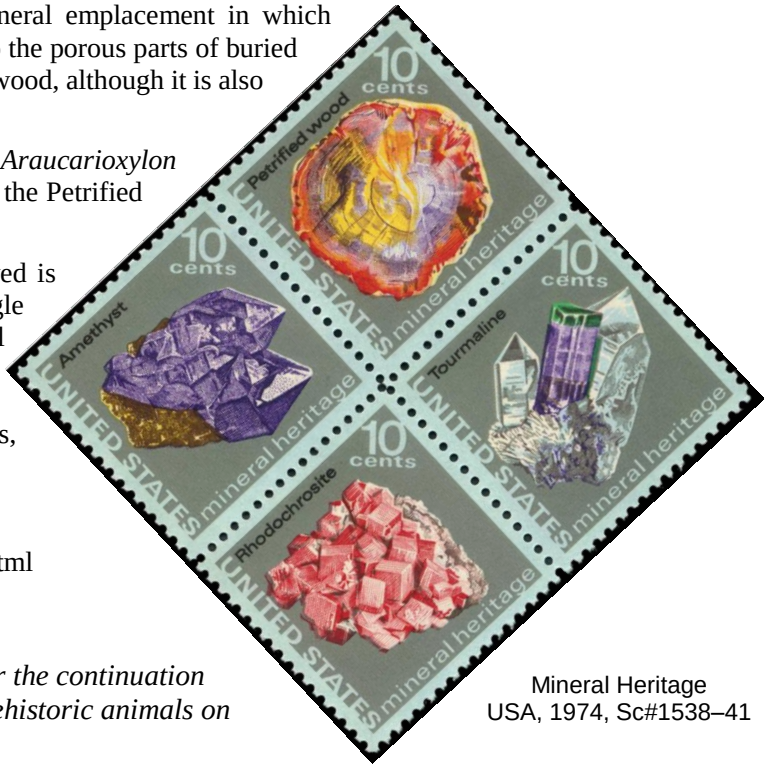
Fossils and Minerals
Angola, 1970, Sc#551–62

On 13 June 1974, the USPS issued a set of four 10 cent diamond-shaped stamps titled, "Mineral Heritage."

One of these stamps depicts petrified wood. Mineral emplacement in which dissolved minerals are carried by ground water into the porous parts of buried wood, results in petrifaction. We see it in petrified wood, although it is also known in shells and bones.

Petrified wood is composed principally from *Araucarioxylon arizonicum*, an extinct conifer, and may be seen in the Petrified Forest National Park in Arizona.

Another site where petrified wood may be observed is Yellowstone National Park. This area is not a single forest, but a vertical succession of 27 individual forests preserved in more than 2,000 feet (600m) of volcanic deposits. Not only have the tree trunks been preserved, but the impressions include leaves, twigs, needles, and cones.



Mineral Heritage
USA, 1974, Sc#1538–41

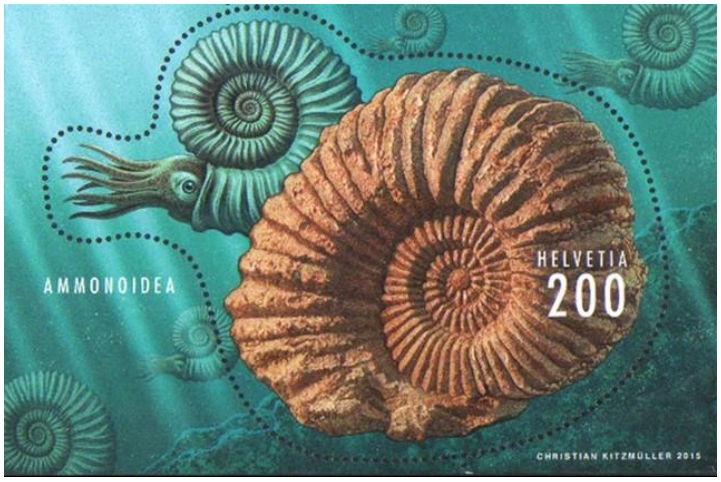
References:

http://www.paleophilatelie.eu/stamps_milestones.html
http://www.stampedout.nl/code/histframe.html
https://en.wikipedia.org

[*Ed. Note: See the next edition of* Biophilately *for the continuation of this article that will deal with depictions of prehistoric animals on souvenir sheets.*]

SWISS AMMONITE

On 5 March 2015, Switzerland issued a 2-swiss franc souvenir sheet containing one irregularly shaped stamp depicting a *Colombiceras* ammonite fossil along with an image showing a reconstruction of how the creature may have appeared when it was living.



The designer was Christian Kitzmüller of Bülach, Switzerland. The sheet was offset printed on white paper with optical brightener in four colors by Gutenberg AG of Schaan, Liechtenstein.

The stamp is perforated 14, which might be hard to measure because nowhere do the perforations form a straight line.

These fossils are found in the Swiss Jura Mountains and are the remains of creatures related to octopus and squid that first appeared around 400 million years ago, spread throughout the world's oceans, then died out at the same time as the dinosaurs approximately 65 million years ago.

Ammonites had an outer shell like a snail, but the inner part of the shell had chambers of the kind we can still see today in the living pearly nautilus. Scientists believe that ammonites fed on small prey and probably lived close to the sea floor. However, there are many unanswered questions including how many tentacles and what kind of eyes they had.

Scientists estimate that almost 20,000 different species existed spread over a period of 335 million years. As a result, ammonite make excellent index fossils used to date geological strata.

BIOPHILATELY

OFFICIAL JOURNAL OF THE BIOLOGY UNIT OF ATA

MARCH 2016 VOLUME 65, NUMBER 1

Butterfly Bars

(The New Protein Diet)

Vic Eichler

Frog Early Development

More Inside >>

IN THIS ISSUE

BIOPHILATELY

Editor

Jack R. Congrove
P.O. Box 33092, Fort Lewis, WA 98433, USA
jackcongrove@comcast.net

Publisher

Richard Roman
Dick.Roman@SbcGlobal.Net

Associate Editors

Christopher E. Dahle ***Botany***
1401 Linmar Dr. NE, Cedar Rapids, IA 52402
chris-dahle@biophilately.org

Dr. Paul A. Mistretta ***Fungi***
4148 Commodore Dr., Atlanta, GA 30341
paulmistretta70@gmail.com

Michael J. Prince ***Mammalia***
"Dorset," Grove Road, Ash Vale, Aldershot, Hants. U.K.
Michael.Prince@bushinternet.com

Glenn G. Mertz ***Ornithology***
625 N. Lafayette St., Allentown, PA 18104
ggmertz@juno.com

Charles E. Braun ***New Birds***
7 Winthrop Drive, Aiken, SC 29803
charlesebraun@gmail.com

(vacant) ***Herpetology***

Kris P. Lindstrom ***Ichthyology***
P.O. Box 51008, Pacific Grove, CA 93950
kplenviro2@sti.net

Ian Hunter ***Invertebrate Zoology***
6 Tiller Pl SE, Airdrie, AB
T4A 1S6, Canada
ighunter@shaw.ca

Donald P. Wright, Jr. ***Entomology***
84 Woosamonsa Rd., Pennington, NJ 08534
don.aa2f@verizon.net

Michael Kogan ***Paleontology***
Munich, Germany
admin@paleophilatelie.eu

BIOLOGY UNIT OF ATA

Alan J. Hanks **President**
34 Seaton Drive, Aurora, ON Canada L4G 2K1

Larry E. Davidson **Vice-President**
30 Front St., Apt. 307, Stratford, ON Canada N5A 7S3

Christopher E. Dahle **Secretary/Treasurer**
1401 Linmar Dr. NE, Cedar Rapids, IA 52402

Directors

Jack R. Congrove (Washington)
John Pereira (Massachusetts)
Dr. Frederick C. Skvara (New Jersey)
Donald P. Wright, Jr. (New Jersey)

Publicity Director

William Cochrane
9/30 William Street, Castlemaine, Victoria
3450 Australia
enquiries@philatelicdatabase.com

Librarian

Mark Reineke
925 Boychuk Drive, Saskatoon, SK
S7H 4L6 Canada
mikadoate@sasktel.net

Website
www.biophilately.org

The Biology Unit, founded in 1951, is a study unit of the American Topical Association dedicated to the international cooperative study of biological postage stamps and related material.

Back copies of *Biophilately* are available from the Librarian. Copies of separate articles are available at a charge six cents per page. Please contact the individual associate editors if you have queries about the content of their columns.

Send membership enquiries and change of address notices to the Secretary, Chris Dahle, (319) 364-4999. See the following page for dues rates.

The purpose of this journal is to provide members with informative articles dealing with biological topics and to publish listings covering the new **zoological** and **botanical** issues of the world, identified and classified to the best of our ability.

Please send letters, comments on the journal, articles, or new material to the Editor (data above). The Publisher will handle requests for issues from the current year. Contact the Librarian (address above) for copies of all other issues.

NOTE: Please provide a self-addressed envelope with the necessary return postage (or International Reply Coupons, if available) for all enquiries requiring an answer.

PLEASE NOTE: Material for the next issue should be in the hands of the Editor before 15 May 2016.

MILESTONES OF PALEO-PHILATELY

Michael Kogan, BU1863

[*Ed. Note: This article is the final section of a three-part commentary on the history of stamp issues depicting Paleontology subjects by Michael Kogan, our Associate Editor for Paleontology and the creator of the* Paleophilatelie *website (*www.paleophilatelie.eu*).*]

Souvenir Sheets

The first miniature sheets (or souvenir sheets) were issued before World War II, usually with a surtax to raise funds for a charity rather than for sale to collectors. They became more of a collector's item with pictorial issues around 1970.

In 1971, Manama issued the first stamp set including a miniature sheet with a prehistoric animal.

Miniature Sheet showing a Wooly Mammoth (*Elephas primigenius*)
Manama, 1971, TS#746

The set contains eight stamps showing various prehistoric animals, mostly dinosaurs, and a miniature sheet with a mammoth on a 10-riyal stamp along with some other prehistoric animals on the margin.

The animal depicted on the stamp is a wooly mammoth (*Elephas primigenius*), a species that lived during the Pleistocene epoch from 2.588 million years ago (MYA) to 11,700 years ago, and was one of the last in the line of mammoth species.

From the 1960s until the end of the 1980s, some small Middle Eastern countries (called "Sand Dunes" by philatelists) produced stamps in huge quantities for every popular topic: space, sports, famous people, etc. These stamps were aimed at stamp collectors rather than postal use and usually were never available in the country of origin to actually use on letters as postage. One such set is from Fujeira (1968).

Prehistoric animals were not really popular stamp subjects in those days. Most stamps depicting prehistoric animals were issued after 1993, when the famous *Jurassic Park* film led to huge public interest in dinosaurs. There are not many paleontology related stamps in this category.

State of Oman, 1980, unl

On 10 September 1980, the first unofficial/illegal stamps with prehistoric animals appeared on the market.

These stamps, issued under the names "State of Oman" and "Dhufar," are considered illegal because they were issued by some rebel groups and used to raise funds.

Since then many companies and individuals have printed stamps depicting various prehistoric animals, mostly dinosaurs, using the names of non-existent countries to make money from inexperienced collectors.

One of the first sets of illegal stamps issued by the "State of Oman" shows a mixture of prehistoric animals:

Traditionally stamps were printed in sheets of several identical pieces. To increase sales, some postal authorities started to produce stamp sets on sheets. Such sheets were usually designed as a big picture composed of many different stamps.

The first sheet like this with a prehistoric theme was issued on 6 November 1990 by the South American country of Guyana. It contained twenty different stamps depicting South American prehistoric animals.

On one hand, it is nice to have a whole picture, but on the other hand, these occupy a large space in an album and are not useful for non-philatelist customers.

One of the most beautiful souvenir sheets depicting prehistoric animals, issued by the United States on 1 May 1997, shows a painting by the famous American paleo-artist, James Gurney, author of *Dinotopia*.

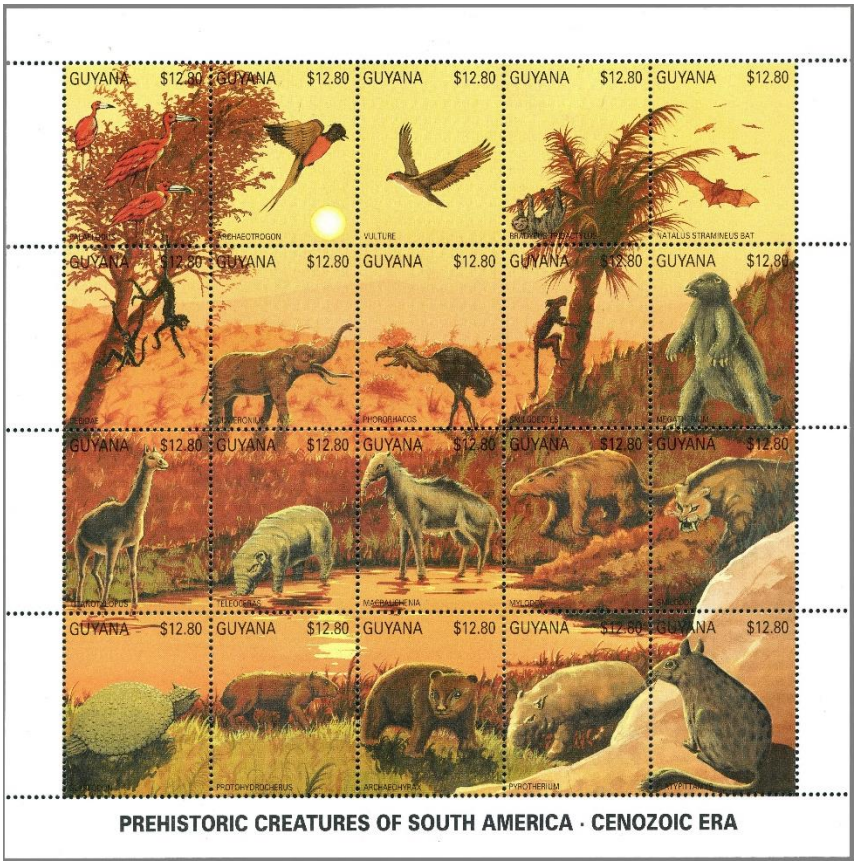
Distinguished from many artists who create very rough images of prehistoric creatures, Mr. Gurney worked very closely with leading paleontologists in order to create accurate reconstructions.

One of the scientific advisers with whom Gurney consulted was prominent American paleontologist Jack Horner.

Horner's discoveries have significantly advanced the world's knowledge of dinosaurs. The scientist also served as a consultant for the Steven Spielberg films *Jurassic Park* and *The Lost World*.

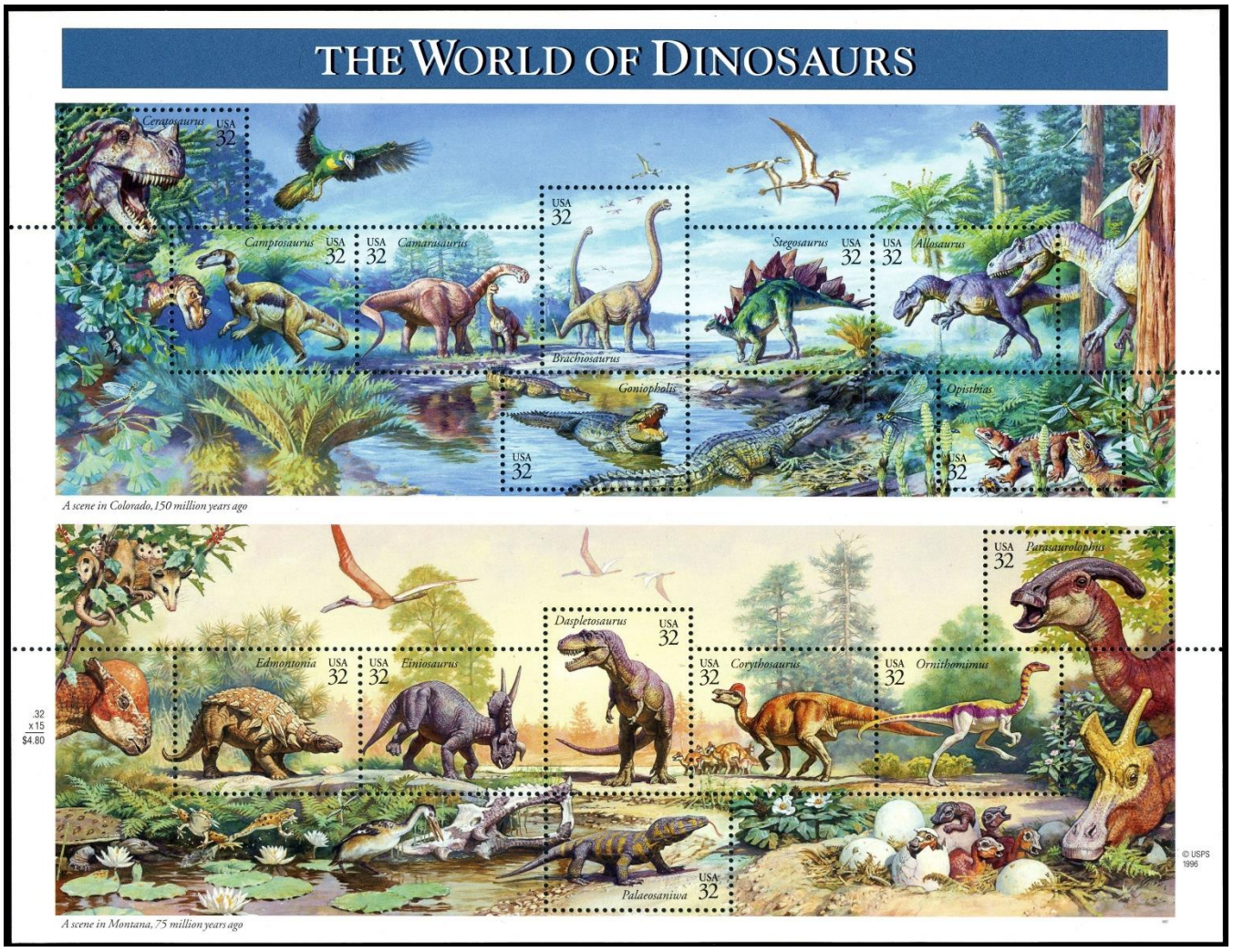
The World of Dinosaurs stamps were rushed for issue on 1 May, to coincide with the release of the Steven Spielberg sequel to *Jurassic Park*, *The Lost World*.

This blockbuster movie thrilled audiences with its lifelike depiction of dinosaurs.



Guyana, 1990, Sc#2378

The First Day of Issue ceremony for the stamps was held at the Dinosaur Valley Museum in Grand Junction, Colorado, located in the heart of the world-famous "Dinosaur Triangle." This area, which extends from western Colorado to northeastern Utah, has produced a wealth of dinosaur excavation sites.



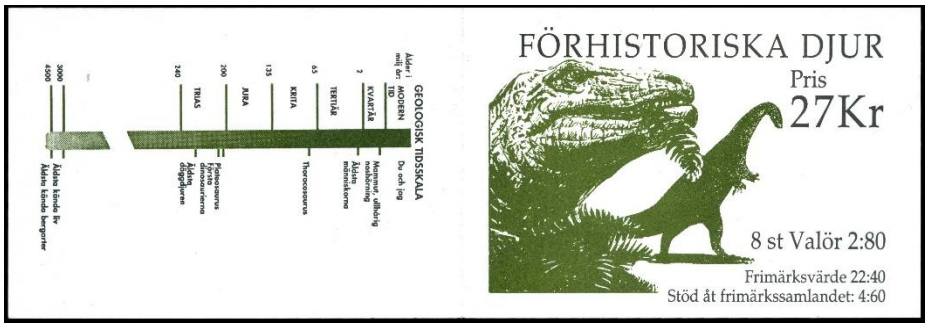
The World of Dinosaurs, United States, 1997, Sc#3136

The upper part of the sheet shows some scenes of Colorado 150 MYA. The lower part shows life in Montana 75 MYA.

Booklets

Another way to sell many stamps at once is in stamp booklets, widely accepted in many countries of the world. The first booklet with fossils was issued in Thailand on 1 January 1992. The booklet contains five mint stamps showing a dinosaur excavation and dinosaur skeletons. These stamps are part of set of four stamps dedicated to centenary of the Thai Department of Mineral Resources.

Locating Fossils
Thailand, 1992, Sc#1430

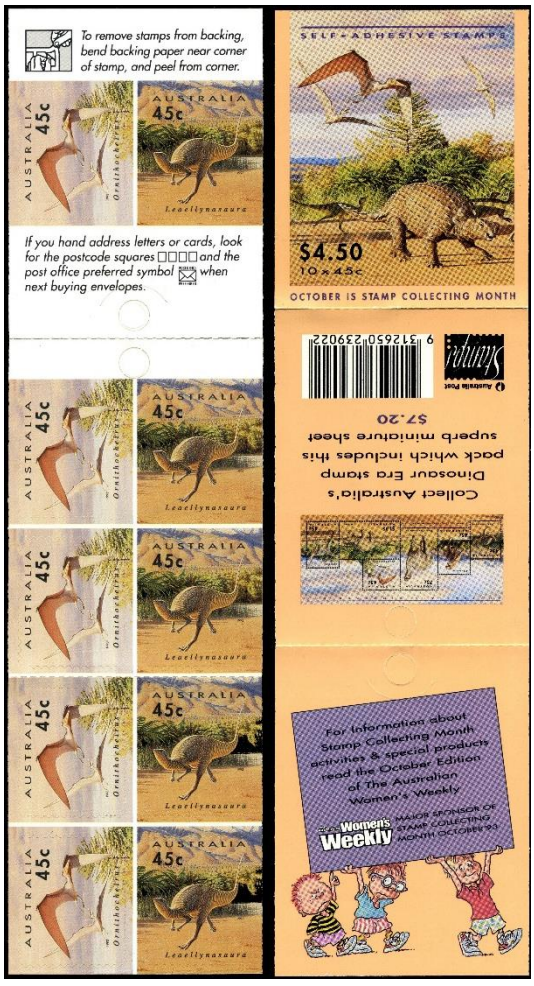


The same year, on 9 September, the Swedish postal service issued a booklet with stamps of prehistoric animals consisting of two blocks of four stamps each. The booklet also contained some information about the animals.

Prehistoric Animals
Sweden, 1992, Sc#1972a

On 1 October 1993, three British Commonwealth countries (Australia, Canada, and New Zealand) simultaneously issued some sets of stamps showing dinosaurs and other prehistoric reptiles. All three sets were sold with a thematic stamp book, *The Stamp of the Dinosaur*, which also told the story of dinosaurs.

Two stamps from the Australian set were issued as self-adhesive and sold as a booklet of ten and in rolls. These stamps are the first self-adhesive stamps of prehistoric animals.



Prehistoric Animals
Australia, 1993, Sc#1349a

ATM Stamps

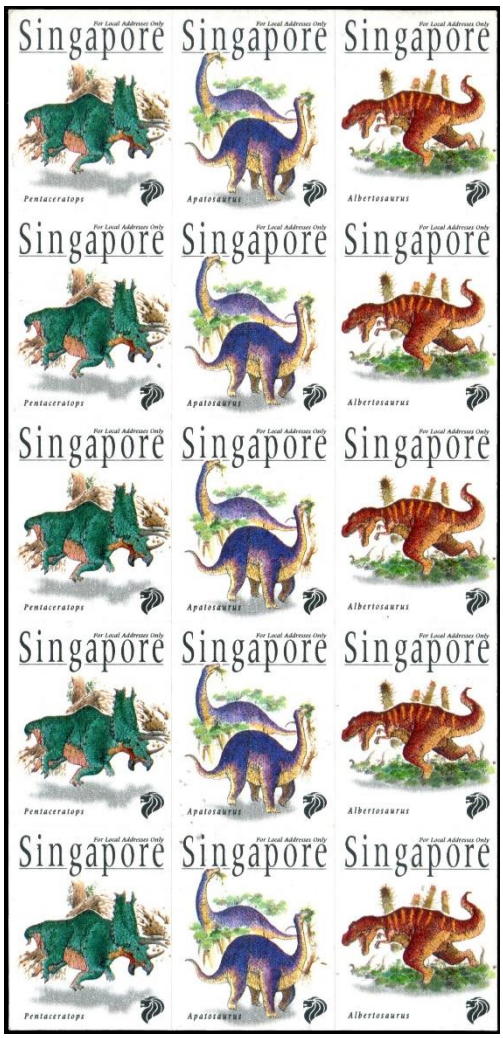
On 22 April 1998, the Singapore Post introduced the first automatic teller machine (ATM) stamps depicting dinosaurs.

The sheet of 15 stamps was sold exclusively via OCBC (Oversea Chinese Banking Corporation) bank terminals for a limited period of time. The sheets were designed with exactly the same dimensions (156×74 mm) as the SGD 50 currency note and very thin (less than 0.13 mm) so that they could be issued through the same aperture. These stamps are also the thinnest stamps related to Paleontology.

In November 1999, the Postal Services of Portugal introduced a new set of Frama machine labels titled "Dinosaurs of Portugal."

[*Ed. note: Frama labels are variable value stamps issued by a machine similar to an ATM. The user chooses the value at the time the stamp is dispensed. They are very similar to meter stamps.*]

The four different labels showed some dinosaurs and some of their footprints. Fossilized remains of all the dinosaurs depicted on the stamps as well as their footprints are found in Portugal. These stamps had seven predefined values from PTE 50 to PTE 350.



Dinosaur ATM Stamps
Singapore, 1998, Sc#831–33

The first postage stamps had no perforations at all. Postal clerks had to cut them with scissors from the stamp sheets. Nowadays, stamps used for postage are perforated to enable easy and quick separation from a sheet or booklet.

Usually perforations are uniform, but in recent years some postal authorities have created perforations in odd forms to prevent imitation of their stamps.

On 5 August 2010, Korean Post issued a stamp set titled "The Age of Dinosaurs Series Stamps (1st)" with perforations in the shape of a dinosaur.

Dinosaur Frama Labels
Portugal, 1999, unlisted

Special Effects

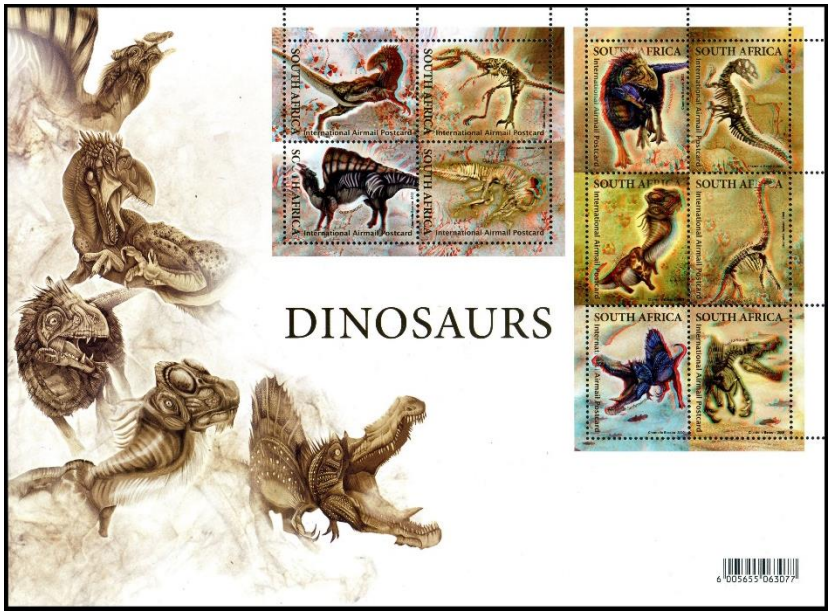
The first three-dimensional (3D) stamps showing dinosaurs and their fossils were issued in a souvenir sheet of ten by South Africa on 2 November 2009.

The South African Post Office combined pre-history with modern technology by using the anaglyph method to create a 3D effect.

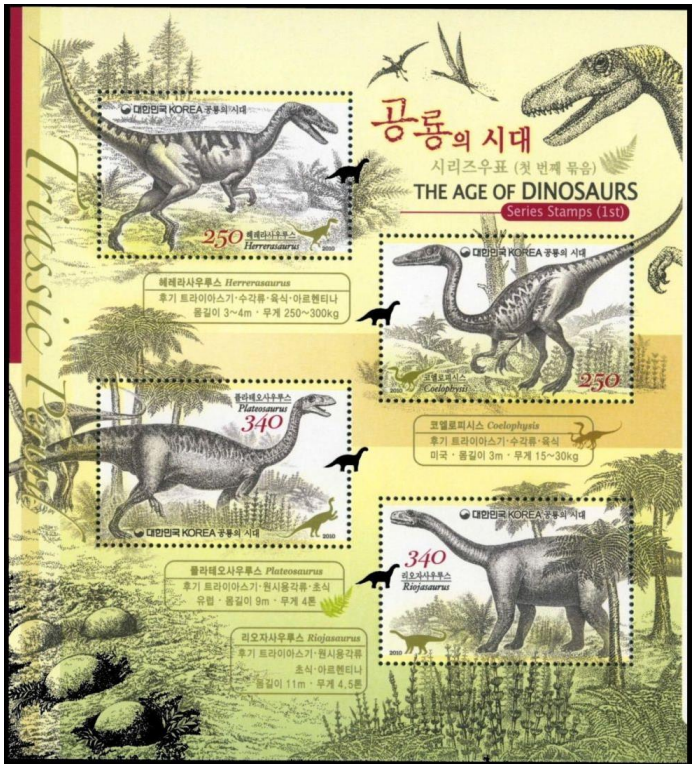
This set of stamps is the first ever with a 3D effect to be issued by the South African Post Office and are the first dinosaur stamps with 3D effect.

An anaglyph is a stereo image that requires special glasses with red and green (or blue) lenses for 3D viewing. To achieve the effect, two views of a picture are printed in two colors, usually red for the left eye and blue or green for the right eye.

Five of the stamps depict skeletons of different types of dinosaurs, while the other five stamps show images of what scientists believe these creatures most probably looked like. All the dinosaurs depicted on the stamps have an African connection.



Dinosaur 3D Stamps
with viewing glasses
S. Africa, 2009, unlisted



Dinosaur-shaped Perforations
South Korea, 2010, Sc#2340

Odd-shaped Perforations
Switzerland, 2015, Sc#1559

On 5 March 2015, post of Switzerland issues the first stamp of prehistoric animal (Ammonite) with odd shaped perforations along the image:

On 5 June 2012, the Post Authority of Turkey issued a mini-sheet of four stamps titled "World Environment Day (Dinosaurs)." Additionally, there is a souvenir book with one more plastic lenticular (3D hologram) stamp and several post cards.

The lenticular stamp shows a running T-Rex and is the first lenticular stamp to depict a dinosaur. Even though it sold with the booklet only, it is a valid stamp and can be used for postage.

Lenticular Stamp
Turkey, 2012, Note

On 20 February 2014, Post of Hong Kong issued a set of six special stamps of "Chinese Dinosaurs" printed with a luminous effect that makes the unique features of the Chinese dinosaurs glow in the dark.

Luminous Stamps
Hong Kong, 2014, Sc#1630a

References:

http://www.paleophilatelie.eu/stamps_milestones.html
http://www.stampedout.nl/code/histframe.html
https://en.wikipedia.org

ANOTHER BONE

[*Ed. note: I received a response from Director Fred Skvara regarding the previous part of Michael Kogan's article*.]

Hi Jack,
I thoroughly enjoy the issues of *Biophilately*. Your inclusion of articles in addition to the checklists is really welcome and I think that many of our members will enjoy them no matter what their biology subtopic. They read well.

In "Milestones of Paleo-Philately," by Michael Kogan in the December 2015 issue, he mentions the mastodon bone and a turkey to be stuffed in the 1955 United States commemorative showing Charles Wilson Peale in his museum. There is another bone depicted in the stamp and I have included a blowup of the case in the lower left of the stamp showing a turkey furcula.

Regards,
Fred Skvara

Among the items in the case is a furcula from a turkey, the fused clavicles which form the V-shaped bone (wishbone) that lies between the neck and breast in birds.