

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

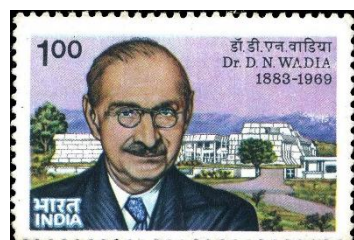
In 1951, **prehistoric animals** appear on postage stamps for the first time. To commemorate the Indian Geological Survey centenary on 13 January 1951, India Post released a stamp showing two prehistoric “elephants” (*Stegodon ganesa*), the first ever reconstruction of a prehistoric animal on a stamp.

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?



Stegodon ganesa
India, 1951, Sc#232



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 Noshewan 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.

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

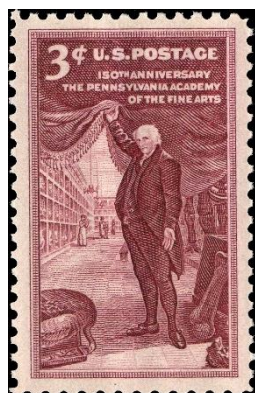


B. sikikensis
Algeria, 1952, Sc#247



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.

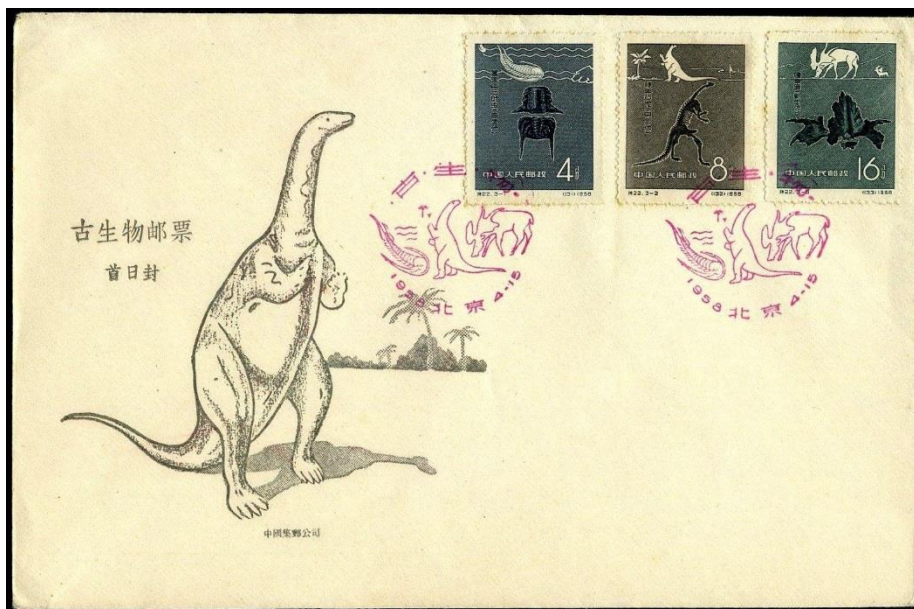
One of these stamps reproduces the Jurassic period portion of a mural titled, "The Age of Reptiles," painted by the famous paleo artist Rudolph F. Zallinger.



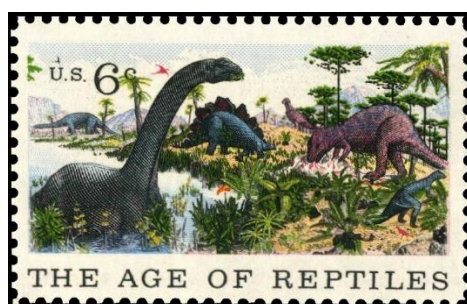
Lufengosaurus huenei
China P.R., 1958, Sc#342

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

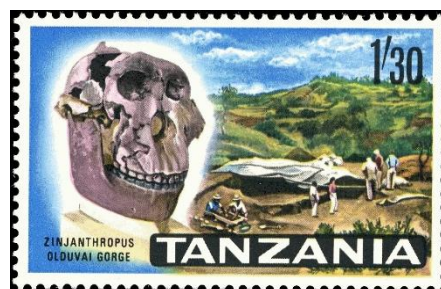
Burian is regarded by many as the most influential paleo-artist of the modern era. Many stamps issued around the world are based on his illustrations.

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 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.

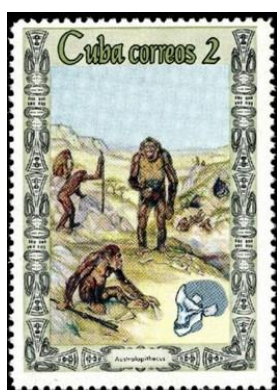
On 31 March 1967, Post Authority of Cuba issued a set of seven stamps that were the first to show **human evolution**.



Mary Leakey
GB, 2013, Sc#3164



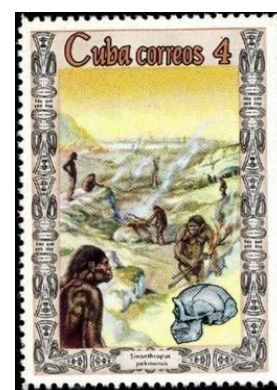
Homo habilis
Cuba, 1967, Sc#1210



Australopithecus
Cuba, 1967, Sc#1211



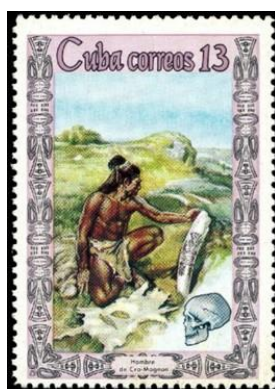
Pithecanthropus erectus
Cuba, 1967, Sc#1212



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

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.



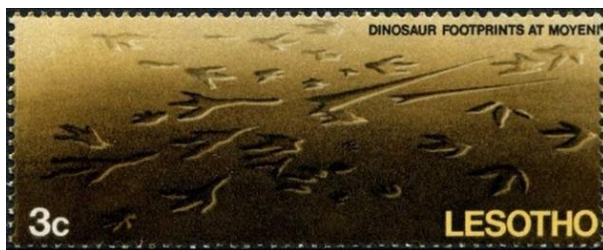
Neanderthal discovery
Gibraltar, 1973, Sc#297

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.

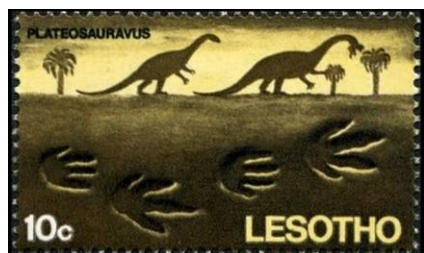


Dinosaur footprints at Moyeni
Lesotho, 1970, Sc#75



Gryponyx tracks
Lesotho, 1970, Sc#76

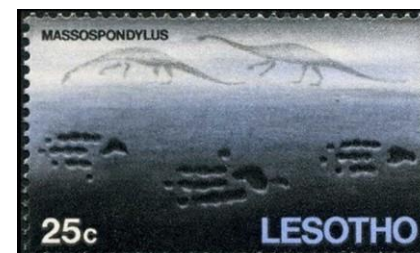
The distance between the footprints can indicate the speed and behavioral of the animal. Many sites have been found with numerous tracks giving information on the social behavior of the animals, whether they traveled in herds, pairs, or alone. In addition to all of this, scientists can learn the animal's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



Plateosaurus 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 (*Marroliothus 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 petrification. 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.

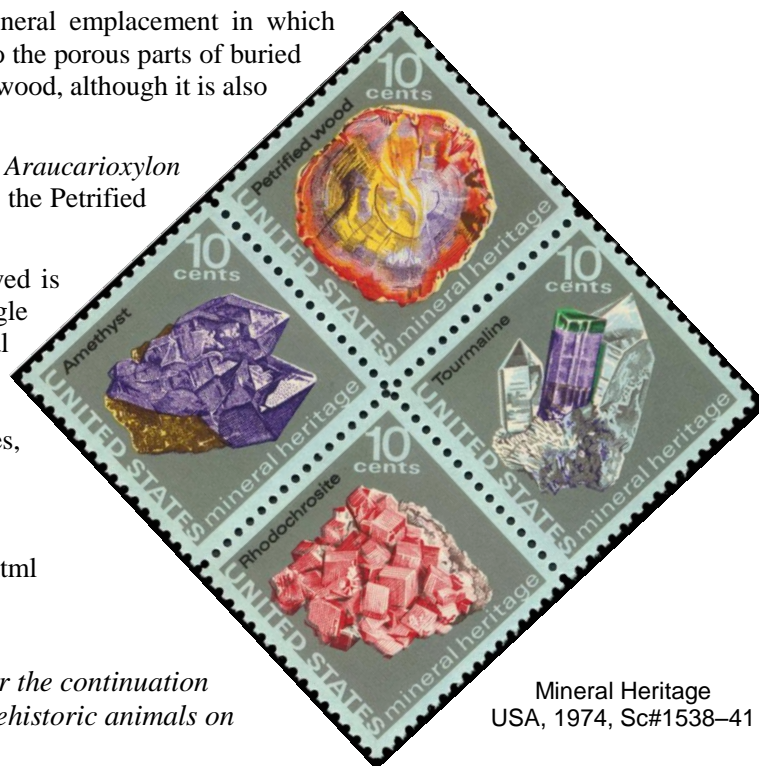
References:

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<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.]



Mineral Heritage
USA, 1974, Sc#1538–41

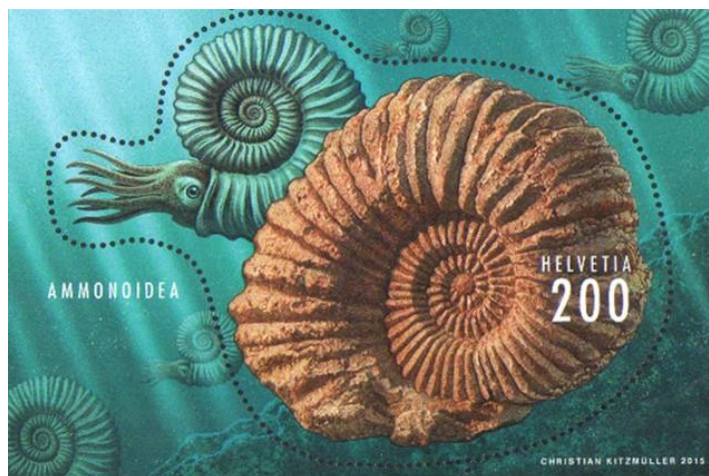
SWISS AMMONITE

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.