



HISTORICAL PERSPECTIVE

Snakes as Food for Man

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In many parts of the world snakes are eaten by certain people. Those that are most sought after are the larger species such as the pythons and their relations. According to receipts given to airmen stranded in Far Eastern jungles, all snakes are edible.

Charles M. Bogert, Curator of Reptiles at the American Museum of Natural History, New York, also states that the meat of any snake is edible, though it is very doubtful whether many people have ever bothered to prepare any but the larger species, and doubts whether any world survey of this subject has been made. He states that North American Indians occasionally



Although now listed in CITES Appendix I, Indian Pythons (*Python molurus*) once were regularly exported to China for use as food. Photograph © L. Lee Grismer.



A night market in Toulieu, southwestern Taiwan, at which Stejneger's Pitvipers (*Viridovipera stejnegeri stejnegeri*) are shown to spectators and then killed. The carcasses are placed in strong alcohol, and the "tonic" is bottled and sold (insert: Stejneger's Pitviper). Photographs © Gerrut Norval.

included snakes in their diet, and he has sometimes seen dried snake meat in the market in China Town, New York, though this may be for its supposed medicinal qualities.

ASIA. The Chinese are probably the greatest snake-eaters though others put Mexican Indians and certain Africans as close seconds. A missionary, Mr. Thompson, with a long experience in China has said that he has eaten snake meat in China and found its flavour good. The Indian Python, *Python molurus*, is actually sent from India to China for food purposes, and is eaten in Hong Kong where it is to be seen in the shops. Python meat there is said to be good and its price higher than that of beef. The huge Reticulated Python, *Python reticulatus*, of the Ular Sawa Rendam or Ular Danau of the Malays which occasionally reaches a length of over thirty feet, is eaten in various parts of Malaya and elsewhere, e.g., by Chinese and other peoples of S.E. Asia. J. Waters describes how the Reticulated Python often finds its way into Chinese meat markets in Malaya. The Blood Python, *Python curtus*, is also eaten in parts of S.E. Asia though it is not so popular as food as the much larger Reticulated Python. The Blood Python, known to the Malays as Ular Sawa Tikus reaches a length of only nine feet.

¹ Reprinted from the *British Journal of Herpetology* 1:183–189 (1954). Spelling, punctuation, italics, and citations as in the original article.



A vendor in Cà Mau Province, Vietnam (Mekong Delta) selling Burmese Python (*Python bivittatus*) steaks. Note the live snake in the cage. Photograph © L. Lee Grismer.



Heavily exploited for skins and food, the international trade in Reticulated Pythons (*Python reticulatus*) is regulated under CITES Appendix II. Photograph © Bjorn Lardner.



Although smaller than pythons, Oriental Ratsnakes (*Ptyas mucosa*) are eaten in many parts of southeastern Asia. This snake was photographed at the Guangdong Market in southern China. Photograph © Hou Mian.

It is kept in captivity by animal dealers in Singapore for sale to Zoological Gardens, and whether this species is also used as food is not stated, though it is implied, by Burkill (4). Waters however describes this snake as a fat little fellow which will

also be found on the (food) market. Dr. Malcolm Smith states that although it is commonly said that the python (probably the Indian python *Python molurus*) and the Rat Snake *Ptyas mucosus*²—(*Zamenis*), are eaten in Thailand, where he lived for twenty years, he never saw them eaten in the town, though it is possible that they are eaten by the country people there in times of scarcity. Logan (7), writing over 100 years ago, describes several snakes as being eaten by an aboriginal tribe in Malaya and he mentions the use of their fat by a sea gypsy clan, Oran Sabimba, who killed, and ate any jungle animal they found. Dr. Malcolm Smith describes having once seen a large sea-snake being prepared as food by the Chinese in Hainan, and he believes that a good many snakes are eaten by the Chinese poor. In W. China the people are very careful to “bone” snakes before eating them (Sewell).

J. D. Romer has lived several years in Hong Kong and describes the use of various species of snakes from S.E. Asia as food in the Colony, where he observed three shops which

² Now *Ptyas mucosa* (the change in the ending of the specific epithet is a consequence of reevaluating the gender of the generic name with which the specific name must agree).



Brongersma's Short-tailed Python (*Python brongersmai*) was until recently considered a subspecies of the Blood Python (*P. curtus*). Like other pythons, international trade in skins and live animals is regulated under CITES Appendix II. Photograph © L. Lee Grismer.



Moellendorff's or Red-headed Ratsnakes (*Elaphe moellendorffi*) are among many species imported in large numbers from southern China to Hong Kong, where they are served as food or used in preparing "snake wine" and other medicines. Photograph © Rex Knight (www.ratsnakes.com).

specialised in the sale of snakes for food. Recently, he noticed in one of these shops, three specimens of *Elaphe moellendorffi*³ which had been sent from South China as food. Mr. Romer purchased these three snakes and presented them to the London Zoo, where they were new to the collection. Many other species of live snakes are imported in large numbers into the Colony from Southern China when the cold weather starts (October-November); these large importations do not occur in the hot season. Many snakes from these shops go to the Chinese restaurants as food or are used in preparing "snake wine" and other medicines. The following species are commonly encountered in the shops:—The Indian Cobra, *Naja naja*, (a "spitting" variety of which occurs in Malaya), the King Cobra, *Naja hannah*⁴, occasionally, the Banded

³ Moellendorff's Ratsnake.

⁴ Now placed in the genus *Ophiophagus*.

Krait, *Bungarus fasciatus*, common, the Rayed or Copperhead Racer, *Elaphe radiata*, common, the Greater Indian Rat Snake, *Ptyas mucosus*, and the Lesser Indian Rat Snake, *Ptyas*



King Ratsnakes (*Elaphe carinata carinata*; top) are not protected in Taiwan. Nevertheless, the owner of a snake-meat store in Chiayi City, southwestern Taiwan was unwilling to allow photographs of snakes collected from the wild for food (the lower photograph was taken surreptitiously). Local Taiwanese also consume the bile, which is mixed with strong alcohol. Photographs © Gerrut Norval.

korros, common, and occasionally the Indian Python, *Python molurus*. The Red-tailed Racer, *Elaphe oxycephala*, is eaten

occasionally in parts of Malaya, as is the Elephant-trunk Snake or File Snake, *Acrocordus javanicus*.



King Cobras (*Ophiophagus hannah*) were found occasionally in Chinese meat markets. Generally, fangs were removed or mouths sewn shut. Photograph © P. Gowri Shankar.



Despite their lethal venom, Banded Kraits (*Bungarus fasciatus*) once were common in Chinese markets, where they were handled routinely by workers. Photograph © L. Lee Grismer.



The bizarre and entirely aquatic Elephant Trunk or File Snake (*Acrochordus javanicus*) was known to be eaten in parts of the Malay Peninsula. Photograph © L. Lee Grismer.

Mr. E. Esmond of Hong Kong states that the gall-bladder of snakes is greatly valued for its medicinal qualities. It is taken for a general tonic, and is swallowed raw. Many snakes have the gall-bladder removed and this is then sold separately, the snakes themselves being then sold as food. Snakes complete with gall-bladder fetch a far higher price than those that have had them removed. He also states that in Hong Kong the cold season lasts from October to January and during this time snakes are eaten as they are fat and easy to handle. In certain restaurants during this time snake meat is always on the menu, but may be of any species. On occasions special feasts, or Snake Banquets, are held where only snake meat is served. The main dish at these banquets consists of three to five different species of snakes, and in this instance the species are named. Another expensive banquet is called the Dragon and Tiger Banquet. This consists of Civet Cat⁵ and Snake Meat. When Civet Cats are unobtainable ordinary domestic cats have been known to disappear!

The Kraits (*Bungarus*) are handled fairly freely by the assistants without the fangs being removed, but the fangs of the cobras are often removed by scraping them out with a flat piece of wood. Lester reports that the mouth is sometimes even sewn up.

Angel (1) records that the “Acrochorde de Java” (*Acrochordus javanicus*) said to be common in the Far East, is eaten there. He mentions several other species used as food in various parts of Asia. These include the following:—*Hypsirhina polylepis*⁶ from New Guinea; *Hypsirhina chinensis*⁷, an opisthoglyph well known in Tonkin (French Indo-China) and hunted near Hanoi and used there and in Tonkin as food; Blomhoff’s Viper, *Agkistrodon blomhoffii*⁸ was eaten in Japan in the 18th

⁵ A small, lithe-bodied, mostly nocturnal mammal in the family Viverridae native to tropical Asia and Africa.

⁶ Macleay’s Mud Snake, now placed in the genus *Enhydryis*.

⁷ Chinese Mud Snake, now placed in the genus *Enhydryis*.

⁸ Better known as the Short-tailed Mamushi, now placed in the genus *Gloydius*.



The Chinese Water Snake (*Enhydryis chinensis*) was hunted actively for food in what is now Vietnam. Photograph © Li Zhen-Chang.



The Mamushi or Blomhoff’s Viper (*Gloydius blomhoffii*) was eaten in 18th-century Japan. Photograph © Louis Porras.



In Australia, Scrub Pythons (*Morelia kinghorni*) were stiffened over a fire, wound into coils, and cooked in hot ashes. Photograph © Alastair Freeman.



Australian Olive Pythons (*Liasis olivaceus*) were especially relished for their fat and their eggs. Photograph © Sean P. Graham.

century, and Siebold (1838) states that its flesh was highly nutritious and high prices were paid for it in Japan; Sea-snakes are beheaded in Hainan and their flesh made into sausages.

In the Arab world al-Damiris in his “Hayat al-Hayawan (A Zoological Dictionary)”, London, 1906 (2 vols.) in Vol. II, p. 64, gives a good account of Bedouin eating vipers (Hariya). This creature is said to be the horned viper (*Cerastes*).

AUSTRALIA. In Australia, according to Stirling (13), all kinds of snakes, except the poisonous ones, are eaten by the Australian Aborigines. The Carpet Snake or “Yuppi” (11) and the Diamond Python, both varieties of the same species, *Python spilotes*⁹, and the Scrub or Amethystine Python, *Python amethystinus*¹⁰ are also eaten by them, the latter in Arnhemland¹¹. Ten-foot pythons, after being stiffened over the fire are wound into coils 18in. in diam. and cooked in the hot ashes (2). Such large snakes as these pythons and the Rock Pythons *Liasis fuscus*¹² and *L. olivaceus*¹³, are taken in numbers and are specially relished for their fat. Their eggs are also much prized.

⁹ Now placed in the genus *Morelia*, as *M. spilota*.

¹⁰ Now placed in the genus *Morelia*; also, the spelling of the specific epithet has reverted to its original spelling, with the species now known as *M. amethystina*; Australian populations formerly recognized as a subspecies now are considered a full species, *M. kinghorni*.

¹¹ One of five regions in the Northern Territory of Australia.

¹² Brown Water Python.

¹³ Olive Python.

According to Daisy Bates (3), a well-known authority on the Aborigines, the long and fat Carpet Snake, “Goonia” *Python spilotes*, is rolled into lengths and roasted, while the Wombat Snake called Moolai-ongoo, probably *Aspidites*¹⁴, when cooked in hot ashes for four hours becomes very tender. Clay-baking is another method, the unskinned and headless snake being wrapped in clay and baked in hot ashes for 6 to 8 hours.

A recent writer, Donald Thompson (12), states that the Javan File Snake, *Acrochordus javanicus* (a water snake),

so-called because of its rough, rasplike skin and sometimes also called Elephant Trunk Snake in Arnhemland, and Macleay’s Water Snake, *Hypsirhina polylepis*, see also above, of E. Queensland streams, and probably another species of *Hypsirhina* are all eaten by aborigines in N. Australia.

¹⁴ Two species of pythons are assigned to the genus *Aspidites*, the Blackheaded Python, *A. melanocephalus* and the Woma, *A. ramsayi*.



Before World War II in what is now Ghana, the author observed men hunting for snakes. The Striped Sand Snake (*Psammodphis sibilans*) was one of the species captured for food. Photograph © Cesare Colli.



The author once saw a tribesman in what is now Ghana capture a Puff Adder (*Bitis arietans*) for food, but only after the head had been removed for making “snake medicine” to cure or prevent harm from snakebites. Photograph © Ed Cassano.



African Rock Pythons (*Python sebae*) are eaten throughout much of West Africa, where they are hunted during the rainy season when they take refuge in old termite mounds.

AFRICA. During my time of residence on the Gold Coast¹⁵, before the second world war, I once noticed Northern Territory men hunting for snakes isolated on hillocks during a flood, and saw that African Sand Snakes, *Psammophis sibilans*¹⁶ was one of the species of snake then captured for use



The meat of rattlesnakes, such as the Eastern Diamondback (*Crotalus adamanteus*), often is sold as a novelty to tourists in the United States. Photograph © Suzanne L. Collins (CNAH).

as food. On another occasion one of my labourers, also of Northern Territory origin (a Gurunshi¹⁷), took the body of a Puff Adder, *Bitis arietans*, for food, after the poisonous head had been removed for making “Snake medicine” to cure or prevent harm from snake-bite. The snake is of course first skinned, cut into pieces and then cooked and eaten. Lester confirms my observations that Puff Adders, *Bitis spp.*, are eaten on the Gold Coast. Dr. B. M. Nicol (8), a nutrition expert writing recently from Nigeria, gives 3 grams of snake meat as an average (daily or weekly?) consumption of peasant farmers, based on a survey of 3 districts of Nigeria.

The large African Python, *Python sebae*¹⁸, which reaches a length of twenty feet is also eaten in parts of West Africa, e.g., by the Dagombas and Gurunshis of the Northern Territories of the Gold Coast, and also in parts of Nigeria, according to Nuno. Livingstone described Bakalahari and Bushmen taking sections of a 15-20 ft. snake over the shoulders, like logs of

¹⁵ The former British colony became the independent nation of Ghana in 1957.

¹⁶ Hissing Sand Snake.

¹⁷ An African tribe, as are a number of ethnic entities mentioned in the following paragraphs.

¹⁸ African Rock Python.



Green Anacondas (*Eunectes murinus*), arguably the world’s largest (at least heaviest) snakes, are eaten in South America. Photograph © César L. Barrio Amorós.



The meat of the Boa Constrictor (*Boa constrictor*) is considered a delicacy in parts of South America. Photograph © Kevin Enge.

wood. Their flesh was much appreciated by these people (6). Schmidt (12) describes the hunting of pythons in the rainy season in the Belgian Congo when they take refuge to sleep in large holes, e.g., in former termite hills. The tracks of these large snakes are followed to their retreat and nooses are set at the entrance to their holes, a similar practice being reported from French West Africa by Angel. As the python emerges it usually gets caught behind the head, while at other times they are killed with spears. These snakes are extensively eaten by Africans in that part of the Belgian Congo¹⁹. The African Python, *Python sebae*, is commonly eaten (sometimes roasted) in the less sophisticated parts of A.E. Sudan, e.g., in Darfur and the Nuba area of Southern Kordofan²⁰, and further south some of the Nubas eat even certain poisonous snakes after discarding head and tail as equally poisonous (Corkill). Torday (15) gives a good deal of information on the use or non-use of snakes and other animals as food by African peoples, many of his authorities being early traveller-explorers, some of whom wrote of conditions before the comparatively settled state of modern Colonial Africa, and when famine resulting from slave raiding, from droughts and from locust attacks, probably brought much greater distress than today. Of these the Fan (A. L. Bennett) of French Equatorial Africa²¹; the Warega (Delhaise), the Basonga (Schmitz), the Ababua (Calonne-Beaufaict), all of the Belgian Congo; the Azande (Anderson) of the Congo-Sudan border and the Batawala (“rarely”—Colle) of the N. Rhodesia²²-Congo border; the Kych and the Bongo (“whose children hunt for them specially”—Petherwick) of the southern part of the A.E. Sudan; and the Suk (Dundas) of Kenya are all reported by the authorities quoted as having eaten snakes, while in recent times Pitman (9) reports that the Bwamba of Uganda eat snakes.

On the other hand these early travellers noted that the following African tribes were not snake-eating, the Chuka (Orde-Brown) and Manbetu (Emin) from the Belgian

Congo, and the Turkana (Emley) and the Nandi (Johnston, Hollis) of Kenya.

The French naturalist Lacépède quotes Shaw as saying that very many people in Cairo and its surroundings used to eat lizards and snakes, a practice which gave them the special privilege of walking in honoured parts of a certain yearly Moslem procession in Cairo.

AMERICA. (a) *North America*. In the United States snake meat is only eaten as a novelty. According to John E. Werler, fried rattle-snake meat was given until recently on Sundays to visitors to the San Antonio Reptile Gardens, Texas, for those who cared to try it. Ross Allen, Florida Reptile Institute, Silver Springs, Florida, can the meat of the large Eastern Diamondback Rattlesnake, *Crotalus adamanteus*, at about \$1.50 for a small can. Its flavour is said to resemble that of

¹⁹ Name of the Democratic Republic of the Congo prior to Congolese independence in 1960.

²⁰ A former province of central Sudan that was divided into three federal states in 1994.

²¹ A former federation (1910–1958) of French territories in west-central Africa comprising the present-day countries of Chad, Gabon, Congo, and Central African Republic.

²² A state formerly comprising the region now known as Zimbabwe.



Montpellier (*Malpolon monspessulanus*; top) and Aesculapian (*Zamenis longissimus*; bottom) Snakes once were eaten in France. Photographs © Sascha Schmidt (www.herpsshots.de).



Large Whipsnakes (*Dolichophis jugularis*) were sometimes eaten in times of need. To avoid any discomfiture associated with eating snakes, the meat was sold under the name of “Hedge Eel” or “Bush Eel.” Photograph © Matt Wilson (The European Amphibian & Reptile Blog).

chicken, while Calvin L. Wilson thinks that it resembles turkey, but is moist like chicken and the meat breaks like fish, rather than being fibrous. Others again think that it resembles frogs’ legs in flavour. Lester recently tried a can of rattlesnake and found it rather like soft tasteless fish, any flavour there was appeared to be from the sauce in which the snake was tinned. The flesh is sometimes eaten fried. Angel (1) describes the use of other Rattlesnakes, *Crotalus spp.*, in Canada as food, and in early settlement days, when trees were being felled, they were abundant, and R. Vaughan Melton (1951) quotes Ross Cox (c. 1632) as saying that the Canadians of that time often ate them, first skinning them and cooking them on a stick over an open fire, turning the stick until the snake was well roasted. H. J. Coke (1852) assures us that the flavour of rattlesnake meat is better than that of the eel, with which view Thomas Aubury agrees, telling us that it also produces a very rich soup. The traveller Bartrain, travelling in Eastern Florida in 1821, attended a local Governor’s feast at which a rattlesnake was served. In other parts of the New World rattlesnakes have been prepared as preserves.

(b) South America. Anacondas, *Eunectes murinus*²³, are eaten in South America (Angel (1)), where the flesh of the *Boa constrictor* is regarded as a most dainty dish in Eastern South America (Ditmars (5)). Charles M. Bogert writes to say that

Boa constrictors are reputedly eaten in some parts of Mexico, though he cannot yet substantiate this statement from first-hand experience. The Ross Allen Reptile Institute, Florida, also report that the *Boa constrictor* can be used as food. Angel (1) describes the use as food of *Urotheca bicincta*²⁴ from the Guianas and Brazil.

EUROPE. Angel (1) describes the use of snakes as food in former times in France, e.g., the banded (collared) grass snakes *Natrix spp.*, the Montpellier Snake, *Malpolon monspessulana*²⁵ and the Aesculapian Snake, *Elaphe longissima*²⁶. These snakes known as the Green and Yellow (la Verte et Jaune) *Coluber jugularis*²⁷ were sometimes eaten in times of need under the name of “Hedge Eels” or “Bush Eels”. Moyse Charas, an early writer, speaks in high praise of vipers as food (and of course as medicine, giving very good remedies).

²³ Green Anaconda.

²⁴ This name might apply to one of several species in the genus *Urotheca* (Neotropical Ground Snakes) or, more likely, to Herrmann’s Water Snake (*Hydrodynastes bicinctus*).

²⁵ More properly *Malpolon monspessulanus* (see previous comments on the gender of generic names).

²⁶ Now usually assigned to the genus *Zamenis*, which requires a change in gender for the specific epithet to *Z. longissimus*.

²⁷ The Large Whipsnake is now assigned to the genus *Dolichophis* and was previously considered conspecific with *D. caspius* and *D. schmidtii*.



Venom of the South American Bushmaster (*Lachesis mutus*), the world's largest pitviper, must be heated to 120 °C before it is denatured. Photograph © Brian R. Eisele.

During the German occupation of Paris (1941-44) Madame (Dr.) Marie Phisalix, a research worker on reptiles at the Museum of Natural History made use of eggs of vipers as food, and recommended the fat in them (and in the body of the vipers in general) to supplement the meagre fat ration of that period.

EFFECTS OF HEAT ON SNAKE VENOM. Angel (1) has some interesting observations on the question of the destruction of the lethal effect of the venom of poisonous snakes, used as food. Some feel that care should be taken when killing the snake to prevent it biting its own body in its agony, so injecting the venom into the flesh intended to serve as human food. Others insist that cooking destroys the power of any such poison injected in this way. Experiments have proved that the temperature required to destroy the power of venom differs with different species. That of *Bothrops alternatus*²⁸



Pentastomid parasites are not restricted to the Eastern Hemisphere. These “tongue-worms” were taken from a young Jararacuçu (*Bothrops jararacussu*), a South American pitviper, in Brazil. Photograph © Guilherme Gallassi.

(S. America) is destroyed at 65 degrees C. after heating for quarter of an hour, while that of the Cascavel or Cascarelle Rattlesnake, *Crotalus terrificus*²⁹, of South and Central America needs 110 degrees C.; that of the Bushmaster, the “Surocuco”, *Lachesis mutus*³⁰, which comes from the same regions, required 120 degrees C.

PARASITES IN HUMANS RESULTING FROM THE EATING OF SNAKES. During my visit to the Gold Coast in 1948 I was shown a parasite taken from a patient in the Gold Coast Hospital in Accra, the parasite having passed to the African via a snake he had eaten. This would be the arthropod, *Porocephalus*³¹. Dr. M. H. Hughes of the Medical Research Institute, Accra, Gold Coast, reports that these cork-screw shaped, worm-like *Porocephalus armillatus*, which grow up to three inches in length, are harboured by the following snakes:—*Python sebae*, *Python regius*³², *Bitis nasicornis*³³, *Bitis gabonica*³⁴ (cf. An old edition of Brumpt's “Précis de Parasitologie”). These four snakes occur in the Gold Coast, and Dr. Hughes reports that both nymphs and larvae of *Porocephalus* have not infrequently been found in the mesentery of humans at Accra and elsewhere, though their presence rarely gives rise to any symptoms, and he could give no observations whether the above four snakes, or any other species have been observed to harbor porocephalids on the Gold Coast. The nymphs are also found in monkeys e.g. on the Gold Coast. Mr. Lester confirms that various West African snakes at the London Zoo, e.g., *Bitis gabonica*, *Bitis arietans*, *Naja nigricollis*³⁵ and other West African species have been found to harbour *Porocephalus*. The hosts of another Porocephalid, *Armillifer armillatus* are reported from a South African paper by Dr. Annie Porter (10) as being the species already quoted, plus *Python reticulatus*, the night Adder, *Causus rhombeatus* and *Cerastes cerastes*³⁶.

Though the origin of the infection is unknown, Porocephalids are said to be commonest amongst snake-eating peoples, who may thus ingest eggs containing the larvae of Porocephalids, e.g., when raw snake flesh is occasionally eaten as food and for ritual purposes, e.g., by certain Shangaans of Portuguese East Africa³⁷. The African reports of such infections date back to 1830 and are almost entirely from West and Central Africa so far, and are not confined absolutely to Africans, as one case from Bathurst (1854) was a

²⁸ The Urutu (*Bothrops alternatus*).

²⁹ Now considered a subspecies of the South American Rattlesnake (*C. durissus*).

³⁰ Now *Lachesis muta* (see previous comments on the gender of generic names).

³¹ Internal parasites in the class Pentastomida, also known as tongue worms.

³² Ball Python.

³³ Rhinoceros Viper.

³⁴ Gaboon Viper.

³⁵ Black-necked Spitting Cobra.

³⁶ Desert Horned Viper.

³⁷ Colonial name for Mozambique, which gained independence in 1975.

European. Broden and Radham (1907) found Porocephalids in 30 out of 133 postmortems in the Congo, and Mouchet found the parasites in 22% of postmortems he conducted in Leopoldville³⁸. Cases from Jamaica (1865), from Antwerp (1897) and two cases from Constantinople³⁹ (1920) were all Africans. It is the nymphs which occur as parasites in man, and have been known to have mortal effects.

³⁸ Colonial name for Kinshasa, the capital of the Democratic Republic of the Congo.

³⁹ Capital of the Eastern Roman or Byzantine Empire, the Latin, and the Ottoman Empires, now known as Istanbul (largest city in Turkey).

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