

Jochen Althoff, Sabine Föllinger, Georg Wöhrle (Hg.)

Antike Naturwissenschaft und ihre Rezeption

Band XXII

 **Wissenschaftlicher Verlag Trier**

Antike Naturwissenschaft und ihre Rezeption. -

Trier : WVT Wissenschaftlicher Verlag Trier, 2012

ISSN 0942-0398; ISBN 978-3-86821-389-8

Band 22 (2012)

*Gedruckt mit Unterstützung der
Karl und Gertrud Abel-Stiftung*

Titelvignette: Sich in den Schwanz beißende Schlange aus dem
Codex Marcianus Graecus 299 (= 584), fol. 188v;
Bibliotheca Marciana, Venedig

© WVT Wissenschaftlicher Verlag Trier, 2012

ISBN 978-3-86821-389-8

ISSN 0942-0398

Umschlaggestaltung: Brigitta Disseldorf

Alle Rechte vorbehalten

Nachdruck oder Vervielfältigung nur mit
ausdrücklicher Genehmigung des Verlags

WVT Wissenschaftlicher Verlag Trier

Bergstraße 27, 54295 Trier

Postfach 4005, 54230 Trier

Tel.: (0651) 41503 / 9943344, Fax: 41504

Internet: <http://www.wvttrier.de>

E-Mail: wvt@wvttrier.de

Ragnar K. Kinzelbach (Rostock)

**An Indian Rhino, *Rhinoceros unicornis*,
(V34) on the Artemidorus Papyrus.
Its position in the antique cultural tradition**

1 Introduction

1.1 Introduction to the Artemidorus papyrus

The verso of the Artemidorus papyrus, which at the latest was written in the very early first century A.D. in Alexandria, is covered by 42 drawings by the same hand, 40 of them animal pictures (sometimes comprising two animals, and therefore 45 animals in total), most of them provided with a name label in Greek. According to the general title on the verso of the papyrus it contains “terrestrial quadrupeds, birds, fish, and whales”, an Aristotelian description of biodiversity (LEYRA 2011). There is no particular principle of order, except that only large and rare animals are depicted, from a variety of taxa: a jellyfish, a mantis shrimp, five fish *s. l.*, six reptiles *s. l.*, 11 birds, and 17 mammals. They are of Southern Mediterranean, African and South Asian provenience. No common domestic animals are included. The illustrations belong to the Hellenistic tradition of labelled animal pictures, starting with Aristotle, continued by the original of the Nile mosaic of Praeneste (Palestrina) and by the sepulchral painting of Marisa (Israel), followed in Hellenistic-Roman art by decorative mosaics and wall paintings, and on the other hand by “scientific” illustrations in Byzantine codices (KÁDÁR 1984). The Artemidorus papyrus was obviously made and used as a model sheet.

The particular value of the Papyrus lies in the large number of drawings in a consistent style with identical characteristics, and the fact that they are labelled. Three scenes show mythological animal fights in a plesiomorphic manner, making it much easier to draw conclusions about the original zoological background than is the case for later, more standardized pictures. A distinct group of Indian *s. l.* animals can be identified. Of 45 animals, at least eleven are certainly of Indian provenience or stem from more eastern trade connections related to India. For others, no decision can be made since they occur in Africa as well as in South Asia.

In 20 B.C., a delegation from India arrived in Daphne near Antioch (Antakya, Turkey), where it was granted its first audience with the princes, the later

Emperor Augustus. This was undoubtedly a most singular event, and it left literary traces in the works of various authors. Strabo (Geography XV, 1, 73) was in Alexandria at the time and described the envoy on the basis of a letter he received from Nikolaos of Damaskos (historian, lived until 4 B.C. at the court of Herod the Great, later biographer of Augustus).

The delegation was made up of various *chargés d'affaires* of whom only three arrived in Daphne. Others had died of exhaustion on the way, one having expired on the island of Crete. With the delegation in Antioch, on Samos and on Augustus' return trip to Rome *via* Athens and Eleusis was a spiritual adviser from Bargosa (Barygaza, Bharuch, Broach) who went by the name of Zarmanochegas (S'ramanacharya, a Hindu sadhu and teacher of the shramana). He was not the leader of the delegation and thus did not need to return to report to his employer and, after being initiated by Augustus into the Eleusinian Mysteries in 19 B.C., set fire to himself in Eleusis and died. His gravestone, which remained visible for a long time afterwards, bore the inscription "Here lies Zarmanochegas, the Indian from Bargosa, after making himself immortal as is the Indian custom." (Cassius Dio XV, 1, 72). This allows us to identify both the holy man's city of origin and, indirectly, the seat of his ruler Poros (see below). The delegation also brought as an offering the unfortunate young man Hermas whom Strabo later encountered personally in Rome and who, as a result of missing both arms, was said to resemble one of the pillars of the god Hermes. At least eight Indians in national costume were on hand to help with the parading and exhibition of the animals.

The envoys identified themselves upon arrival in Daphne by presenting a letter from their king, Poros, also named Pandion (Strabo, Geography XV, 1, 686), to the princeps of the Roman Empire. The name of the king is an anachronism as Poros, the famed opponent of Alexander the Great, actually died in 317 B.C. No contemporary ruler by this name has yet been identified. It is likely that the name was simply assumed by a rich Gujarati ruler, either Vikramaditya, whose victory over the Saka in 57 B.C. heralded the beginning of the Vikram Era or his successor. This ruler, praising himself as king of 600 kings, was looking to enter into political agreements and to establish trade relations with the Roman Empire, which in the light of its recent conquest of Egypt was moving ever closer. The animals were transported on a forerunner of the Silk Road in a journey which lasted, according to Florus (Epitomae II, 34), four years from Gujarat to Antioch/Antakya (fig. 1). Transport by ship was rejected because of the difficulty of carrying fodder for so many pachyderms.

The list of animals which the delegation brought to Daphne includes large elapids, *i.e.* cobras (“echidnas megalas”), including a king cobra; a tiger python (“ophin pechon deka”) which was a realistic ten cubits (approx 4.4 m) long; a “partridge” that was larger than a vulture (“perdika de meizo gypós”), a Himalayan monal, and a one-and-a-half metre long river turtle (“chelonen potamian tripechyn”). The latter was probably the Ganges Soft-shelled Turtle *Trionyx (Aspideretes) gangetica* which lives in the Indus and Ganges and, with a shell length of at least 0.7 m, does tie in with the recorded dimensions. Other animals, which were almost certainly present but not listed, include at least six Indian elephants and probably a rhinoceros. Coins minted to commemorate the encounter show the Emperor riding in a carriage pulled by elephants (fig. 2), and Horatius (Epistulae II 1, 194) records seeing a white elephant in Rome around this time. Furthermore, it is recorded that after his return to Rome from Samos, Augustus put both the tiger python and a rhinoceros on public display. So, the fate of individual animals can be traced. They became part of political events.

The Indian embassy of 20/19 B.C. was successful. It marks both the reconstruction and expansion of the harbour of Myos Hormos (al-Qseir) on the Red Sea, and the beginning of the Roman trade with India for the next four centuries. The trade agreement entered into on Samos was of immediate and lasting efficacy. Indeed, even in the time capsule that Pompeii became in 69 A.D. numerous objects of Indian provenience were discovered.

In the winter of 20/19 B.C. the delegation met with the princeps for a second time at his winter residence on Samos. The only members of the menagerie to accompany the envoys were a tiger or two. On Samos the treaties were entered into and the leader of the delegation returned to India to make his report. The tiger(s) and the remaining members of the delegation travelled with Augustus *via* Eleusis and Athens to Rome. Probably for logistical reasons, the retinue travelling with the menagerie chose to go *via* Alexandria, where the animals were put on display for a short while. This is when the illustrations on the back of the Artemidorus papyrus came about. It is not known whether the artist, for convenience named Zographos Anonymos, drew them from life or whether he was working from drawings made by other artists (for details KINZELBACH 2009).

The drawings which correspond to Strabo’s account depict the species mentioned above: the tiger, the Himalaya monal, the cobras, the river turtle. Others feature an elephant with a Burmese python and additional representatives of southern Asian fauna which the literary accounts do not mention but which almost certainly belonged to the same troop, such as a cassowary, an advocat

stork, an exotic domestic cock, and a four-horned antelope. It is not unthinkable that it also accommodated a leopard, a cheetah and a bearded vulture, all of which appear in Zographos Anonymos' drawings. The menagerie also contained a rhinoceros, as according to Suetonius a rhinoceros was one of the highlights displayed later by Augustus at the Saepta (Suetonius, Augustus 43, 4).

The uniqueness of the drawings and animals names in the Artemidorus papyrus, together with the written testimony of several antique authors, would rule out the notion that the papyrus is a 19th century fake.

1.2 New identifications from the Artemidorus papyrus

The artist responsible for the animal drawings on the Artemidorus papyrus, Zographos Anonymos, follows the Hellenistic tradition of naturalistic animal pictures with labels. Despite his volatileness he knew how to depict characters of diagnostic value, e.g. the three claws of the Ganges soft-shelled turtle, the strong quills in the rudimentary wing of the cassowary, the cleanly cut sting of a stingray, the neck bladder of the adjutant stork. This strengthens the assumption that he was educated in Aristotelian zoology.

For the identification of Indian elephants among the presents from the Indian embassy the coin of 18 B.C. by moneyer Publius Petronius Turpilianus has already been mentioned (KINZELBACH 2009: 48); this shows Augustus on a birga drawn by Indian elephants. Evidence indicating a higher number of elephants is provided by a medallion displaying Augustus on a quadriga (fig. 2) (KELLER 1909). This motif was continued in 34-36 A.D. on Roman sesterces during the reign of Tiberius and even later. Nikolaos of Damaskos (Strabo, Geography XV, 1, 73), the eye-witness of the arrival of the Indian embassy, did not mention the elephants or the rhino. Probably, the embassy was split into groups and the pachyderms arrived later or were located on another site. Florus (Epitomae II, 34) also testified independently two elephants as a gift. The mosaic of the "big hunt" in Piazza Armerina (Sicily) shows an elephant entering a ship, which may be another motif based on the Indian embassy (see 3.5).

Also, a white elephant living in Rome at the same time was mentioned by Horace (Epistulae II, 1, 194), as was a giraffe from Alexandria on stage in Rome (KINZELBACH 2009: 116). WEEBER (1994: 29) claims that this elephant was originally from Siam. TOYNBEE (1983: 399, footnote 12, 6) had already mentioned the possibility of its Siamese provenience and attributed it to the Indian embassy of 20 B.C. This distant origin is remarkable since it leads to Southeast Asia as part of the region where other animals of the menagerie of Poros were

captured to be traded by intermediaries in Taprobane (Sri Lanka), e.g. the cassowary and the advocate stork on the Artemidorus papyrus.

The cassowary named “stymphalis”, originating from Sumatra, Aru-Island or even Australia was quite an unexpected member of the menagerie from India (KINZELBACH, 2012). Meanwhile a further testimony of a cassowary in the Roman Empire was discovered, most probably referring to the same specimen. Albertus Magnus (after KITCHELL & RESNIK vol. I, 1999, p. 1567) writes about a bird named “cornica”: “The cornica, according to Pliny, is a very large bird in regions of the East. It has a lung almost the size of a calf’s lung, and it is soft and full of blood. It therefore drinks a great deal, more than other birds. It has few and small feathers and its wings are small as well.” KITCHELL & RESNIK l. c. commented in footnote no. 111: “An unidentified bird that does not seem to appear in modern versions of Pliny. The same information and source are given in Thomas Cantimprensis (ThC 5.33, see KITCHELL & RESNIK, l.c.).”

Almost the same information is repeated by Conrad GESSNER (H. N. Aves 1555 p. 307: 61-62 and p. 308: 1-2) who writes:

Corinta or Cornica is a very big bird in the Orient, which has a soft lung almost the size of a cow’s, which is very much filled with blood, therefore it drinks much more than other birds, it has few and small feathers & wings, Albertus citing Pliny, where nothing such can be found.

Described by three medieval authors, all referring to an apocryph Plinian text, is a black bird, which is erroneously classified as a particular species of the Corvidae. It is not the crow, “cornix”, which is treated separately. It is of very considerable size, living in the East, with a lung nearly of the size of a cow’s, which is very much filled with blood. This is said to be the reason for drinking much more than other birds. It has few feathers (the head and neck being naked), small feathers (the hair-like downs) and small wings (a flightless bird). The report refers to a recently deceased bird, otherwise no information on its lung would have been available. Its heavy drinking is due to a comparison with much smaller birds, also the specimen referred to may have been dried off by inadequate nourishment. The combination of characters agrees only with those of a cassowary.

This is an independent report for a cassowary in the West, a relatively short some time before Pliny (23-79 a. C.). It goes back supposedly to a Latin speaker, who created with “cornica” a new, Latin name for this bird which was unknown to him. It is derived from “cornu”, “horn” and was inspired by the “helmet” of the cassowary. This confirms the determination.

The cassowary was depicted alive and named “stymphalis” in Greek by the Zographos Anonymos of the Artemidorus papyrus. The specimen he refers to

was brought by the Indian Embassy of 20/19 B.C. to the princeps. It was exposed for a while in Alexandria, destined for a transport to Rome, but died before or briefly after and was dissected. A Roman eyewitness, probably someone of the army, reported it verbally some decades later to Pliny or he took a note which found its way to Pliny, who, after all, had the rank of a Roman general resp. admiral.

A very weak report on a bird which possibly was the cassowary is found in Herodotos (3,111), who refers to plantations of cinnamon beyond the sources of the Nile in a forest which was guarded by terrifying gigantic birds. Southern Africa and Southeast Asia thence were thought to form a continuous land mass.

There are only a few new findings concerning the list of animal species on the Artemidorus papyrus. The African marabou (*Leptotilos crumeniferus*) (V41) on the papyrus (KINZELBACH 2010) might better be identified as a related species of similar shape and size, the advocate stork (*Leptotilos dubius*) from South Asia (fig. 3). It might either have had a similar far provenience as the cassowary, or this species then might have occurred much farther west on the Indian subcontinent. This possibility is confirmed by the rather reliable identification of Aelian's "kélas" as an advocate (THOMPSON 1936):

Γίνεται ἐν Ἰνδοῖς ἀκούω ὄρνιν, καὶ τὸ μέγεθος τριπλάσιον ὠτίδος ἐστίν, καὶ [τὸ] στόμα ἔχει γενναῖον δεινῶς, καὶ μακρὰ τὰ σκέλη φέρει δὲ καὶ προηγορεῶνα, καὶ ἐκεῖνον μέγιστον προσεμφερῆ κωρύκῳ, φθέγμα δὲ ἔχει καὶ μάλα ἀπηχές, καὶ τὴν μὲν ἄλλην πύλωσιν ἐστί τεφρός, τὰς δὲ πτέρυγας ἄκρας ὠχρὸς ἐστίν. (Aelian 16, 4).

Most recently a huge Mediterranean jellyfish was identified, *Rhizostoma pulmo* (Macri, 1778) (Cnidophora, Scyphozoa, Rhizostomatidae). Its new number is (V 42, new number). It is shown stranded on a Mediterranean beach (fig. 4). The pulsating exumbrella is defined by an undulated rim, giving way to a heap of mouth tentacles grown together to form a filtering network. This gives the animal the name of cabbage-head jellyfish, one of two species frequently found in the Mediterranean Sea, either *Cotylorhiza tuberculata* (up to 30 cm in diameter, yellowish, with blue knots full of nettle cells) or the gigantic jellyfish *Rhizostoma pulmo* (up to 80 cm in diameter with a length of up to 2 m, very heavy, translucent). The curiosity of Zographos Anonymos was most probably aroused by the latter one (fig. 5). Cod. N. Y. Morg. M. 652, fol. 211v (KADAR 1978: tab. 74) also depicts a jellyfish. The contrast between its umbrella and a voluminous bunch of mouth tentacles, together with the denomination "peri pleumonon thalassiou", "about the sea lung", suggests the species *Rhizostoma pulmo* here too (fig. 6).

KINZELBACH (2009, 2010) indicated that fig. (V34) could be the tail tassel of an Indian rhino, being situated behind a big gap of the papyrus (see below 3.3). This species enlarges the group of animals from India.

2 Early antique information on the Indian rhino

The approximately 50 rhinos, Rhinocerotidae, which are repeatedly attested to as participants in Roman displays between 55 B.C. and 248 A.D., belonged almost entirely to the two-horned African species:

- The wide-mouthed Rhinoceros, *Ceratotherium simum* Burchell, 1817, also erroneously named the White Rhinoceros because of the misinterpretation of the Afrikaans “wilde” meaning “wide, broad”. Following the very competent study by GOWERS (1950, 1951), this is now known to be the species which was most frequently imported to Rome from Nubia and the regions upstream west of the Nile. Its first horn grows up to 158 cm.
- The Black Rhinoceros, *Diceros bicornis* Linnaeus, 1758. Only few records from antiquity may be attributed with certainty to this species. Its first horn grows up to 138 cm.

With as much certainty as was possible from the limited sources, GOWERS (1950, 1951) clarified that nearly all the rhinos that reached the circuses of Rome were African rhinos. In the early days perhaps it was the hinterland of Northwest Africa – there is some slight evidence for Tibesti – that provided rhinos. Later, in the course of the growing influence of Rome on Egypt, in the roughly 300 years that rhinos were present in Rome, the technically much more convenient method of transport on the Nile, following the model of the Ptolemies, prevailed. At this time the northern subspecies of the Wide-mouthed rhino (*Ceratotherium simum cottoni* Lydekker, 1908) lived west of the Nile and was taken by ship to the capital, Alexandria, the harbour of embarkation for Rome. The oldest report on Wide-mouthed rhinos living in the wild stems from Agatharchides (WOELK 1966). It was written ca. 130 B.C. and is based on older authorities. The Wide-mouthed rhino can be identified by the reference to its habit of polishing the anterior base of the first horn on the soil by browsing. Agatharchides also refers to the subsequently embellished legend, later reported by Diodorus, Pliny, Cassius Dio (LV, 27), and Aelian (XVII, 44), of the fight between an elephant and a rhino which was re-enacted in 8 A.D. in Rome using an Indian rhino (see below 3.4).

The Nile mosaic of Praeneste (Palestrina) is a decorative rendering of the geographical results of the first major expedition to prospect for and capture animals, especially elephants for the army. It was initiated by Ptolemy II Philadelphos (reigned 285-246) (STEINMEYER-SCHAREIKA 1978). Among the wild fauna of the savannah, what is unmistakably a Wide-mouthed rhinoceros is displayed (SALARI 2008: 46). The use of the African wild animals which were acquired on this occasion is documented by Athenaios (end of 2nd to beginning of 3rd century A.D.) in *Deipnosophistai* (V, 32, 201), which contains a fragment of Kallixeinos (Fr Gr Hist. 627) describing a festive procession in Alexandria of Ptolemy II Philadelphos which included, among many other exotic animals, an African rhino:

A hundred and thirty Ethiopian sheep, three hundred Arabian and twenty Euboean sheep, six-and-twenty Indian cows, Ethiopian elephants eight, and giraffes, one immense white bear, fourteen leopards, sixteen panthers, four lynxes, three bear-cubs, one camelopard, and one rhinoceros from Ethiopia. (YONGE 1854)

This procession was the prototype for similar parades up to the Middle Ages, beginning with the triumphal processions of Gnaeus Pompeius (55 B.C.), Gaius Julius Caesar (46 B.C.), and Octavianus Augustus (29 B.C.).

From reading the antique literature we also know of a third, single-horned species from South Asia. However, as shall be shown below, only one living specimen ever came into the area of Hellenistic or Roman culture. This was the

- Indian rhino *Rhinoceros unicornis* Linnaeus, 1758 (fig. 7), which is characterised by only one horn, up to 0.5 m. long, by a skin clearly consisting of plates of strong horn separated by a vertical joint-like structure and covered by humps and warts. Once widely distributed on the sub-continent, it is now restricted to only a few nature reserves.

A few prehistoric line drawings from Nubia or Meroe show unicorn rhinos (discussion by STÖRCK 1977: 196 ff., 221 ff.). The drawings are flawed by deficient technique and perceptual mistakes: the second horn of both the African rhinos frequently is very small and insignificant, sometimes only forming a little knob. The picture of a single-horned rhino in Punt, in the temple of Hatshepsut in Deir el-Bahari (New Kingdom, 18th Dynasty, ca. 1479-1458 B.C.), is an artefact.

For zoogeographic reasons it is impossible that a representative of the genus *Rhinoceros* existed in the Holocene, living in the wild in North Africa. We can exclude likewise the possibility that Indian rhinos were transported to Africa in the praedynastic period. The Indian rhino only became known in the Mediter-

ranean area with the increasing cultural exchange between the Persians and the Greeks, at first in the form of unsubstantial reports, and then when the raw material of the horn started appearing as merchandise; but there were no living specimens as living evidence (GOWERS 1950, 1951, STÖRCK 1977).

The Indian rhino generally only has one horn; in particular cases there may be more than one. So Dürer's "hornlet" (see below 3.5) was probably lifelike, despite frequent dogmatic comments to the contrary. In both the African two-horned species the second horn may be inconspicuous, and occasionally three, or even five additional horns on the body may be found (GRZIMEK 13: 48).

The aim of this study is to collect and examine the scarce information and few depictions available of the Indian Rhino from the Mediterranean area, and to describe the only traceable living individual there and to reconstruct its fate and reception.

2.1 The Indian rhino in old Mesopotamia

The oldest pictures of Indian rhinos we currently have are found on the characteristic clay seals from Harappa and Mohenjo Daro on the Indus, dating from 2600-1800 B.C. (fig. 8). It is assumed from this evidence that some herds of the species were living in the wild in the region. Obviously the animals depicted on the seals were kept in captivity since on some pictures they are shown behind a heap of fodder (fig. 8a, b, c). The Indian cultural area has a long tradition of veneration of the rhino (BRIGGS 1931, STÖRCK 1977), leading to a familiarity and ease in the handling of this impressive, but quite amenable animal. Indeed, the young female which was donated to Augustus proved to be very gentle, as, much later, did Clara, the friendly Indian rhino which toured Europe in the 17th century (RIDLEY 2008).

There are pictures of Indian rhinos in old South Mesopotamia, an area which was close to India in distance, and sometimes also culturally and politically. They are either imported or imitations of originals from India, so their occurrence is not surprising. As far as is known, live Indian rhinos were not transported that far westward at the time. The only exception may have been the zoo of Salmanassar II. – Examples:

1. Indian rhino, stylised, on the obelisk of Salmanassar II. The obelisk also displays realistic images of Indian elephants and monkeys in captivity (KELLER 1909, 386-387, f. 133) (fig. 9a).

2. Indian rhino, accompanied by a gavial and by an elephant. Seal from El-Asmar, Iraq. Imported from India, or suggesting Indian influence (FRANKFORT 1939b after ZEUNER (1967) (fig. 9b).
3. Indian rhino, accompanied by a flying lammergeyer, among other animals on an old Babylonian seal cylinder in the collection Clerq (KELLER 1909 f. 134) (fig. 9c).

2.2 Early Greek knowledge

Ktesias of Knidos (405-398/7 B.C.), personal physician to the Persian king Artaxerxes II, described in his books “Persika” and “Indika” – which survived only as fragments, *e.g.* in Aelian – white wild asses of the size of horses or larger, with a big horn on the forehead, which was used to make drinking vessels with antivenin properties. This kind of horn, therefore, became merchandise, and remains so now. The denomination of the animal itself as “Indian Ass” continued to be used for a long time, *e.g.* up to THEVET (1558).

Ktesias, FGrHist. 688, 45, 45: “ὅτι εἰσὶν ὄνοι ἄγριοι ἐν τοῖς Ἰνδοῖς, ἴσοι ἵπποις καὶ μεῖζους. λευκοὶ δὲ εἰσὶ τὸ σῶμα, τὴν κεφαλὴν πορφυροῖ, καὶ ὀφθαλμοὺς ἔχουσι κυανέους. κέρας δὲ ἔχει ἐντῷ μετώπῳ, ἐνὸς πῆχεος <καὶ ἡμίσεος> τὸ μέγεθος. καὶ ἐστὶ τὸ μὲν κάτω τοῦ κέρατος ὅσον ἐπὶ δύο παλαιστάς πρὸς τὸ μέτωπον πᾶν λευκόν· τὸ δὲ ἐπάνω ὄξυ ἐστὶ τοῦ κέρατος· τοῦτο δὲ φοινικοῦν ἐστὶ, ἐρυθρὸν πᾶν· τὸ δὲ ἄλλο τὸ ἐν τῷ μέσῳ μέλαν. ἐκ τούτων οἱ πίνοντες – κατασκευάζουσι γὰρ ἐκπώματα – σπασμῶι (φασίν) οὐ λαμβάνονται οὔτε τῆι ἱερᾷ νόσῳ· ἀλλ’ οὐδὲ φαρμάκοις ἀλίσκονται, οὔτ’ ἂν προπίωσιν οὔτ’ ἂν τῷ φαρμάκῳ ἐπιπίωσιν ἢ οἶνον ἢ ὕδωρ ἢ ἄλλο τι ἐκ τῶν ἐκπωμάτων [...].”

The war historians of the Indian campaign of Alexander the Great (356-323), Curtius, Pseudo-Kallisthenes, and Kleitarchos (Historia Alexandri Magni III 17, 18) reported that the Macedonians in India became acquainted with rhinos; the soldiers claiming that the animals were native to the bamboo forests (KELLER 1909). In the medieval Alexander book (KIRSCH 1991: 132), going back to much older sources, this rhino is named “odontetirannus” (“odontotyranos”), and is depicted as a grey horse-like animal with three horns in the mid-line of its forehead. Aristotle (384-322 B.C.) itemised the one-horned Indian ass without details, probably using Ktesias (Aristotle Hist. anim. II, 1 499b, 18; De partibus animalium IV, 6 663a, 23).

Megasthenes (ca. 350-290 B.C.), as asserted by Arrian, stayed with Silyrius, the satrap of Arachosia, and frequently mentioned his visit to the king of the Indians (BOSWORTH 1996: 113-127). He spent some time as ambassador of the Diadoch king Seleukos I Nikator at the court of the Indian king Sandrakottos (Chandragupta Maurya) in Pataliputra after a peace agreement in 303 B.C.,

which means he was one of the very few Greeks of his time who got to know the eastern parts of India. His “Indika” provide information about what he had seen himself or had been told by local informants. Written records are available only in fragments cited by Aelian (see below), Arrian, Diodor, and Strabo. With regard to the Indian rhino, Megasthenes only reports commonplaces and gives the indigenous name “kartázōnos”.

Aelian, *De natura animalium* XVI 20: “έν δὴ τοῖς καὶ τοὺς Βραχμῶνας ἀριθμεῖν ἄξιον, καὶ γάρ τοι καὶ ἐκεῖνοι ὑπὲρ τῶνδε ὁμολογοῦσι τὰ αὐτά. λέγεται δὲ καὶ ζῷον ἐν τοῦτοις εἶναι μονόκερων, καὶ ὑπ’ αὐτῶν ὀνομάζεσθαι **καρτάζωνον**. καὶ μέγεθος μὲν ἔχειν ἵππου τοῦ τελείου, καὶ λόφον, καὶ ἀχλὺν ἔχειν ξανθὴν, ποδῶν δὲ ἄριστα εἰληχναὶ καὶ εἶναι ὄλιστον καὶ τοὺς μὲν πόδας ἀδιάρθρωτους τε καὶ ἐμπερεῖς ἐλέφαντι συμπεφυκέναι, τὴν δὲ οὐρὰν ἔχειν συός· μέσον δὲ τῶν ὀφρῶν ἔχειν ἐκπεφυκὸς κέρασ οὐ λεῖον, ἀλλὰ ἐλιγμοὺς ἔχον τινὰς καὶ μάλᾳ αὐτοφυεῖς, καὶ εἶναι μέλαν τὴν χροάν· λέγεται δὲ καὶ ὄζυτατον εἶναι τὸ κέρασ ἐκεῖνο· φωνὴν δὲ ἔχειν τὸ θηρίον ἀκούω τοῦτο πάντων ἀπηχεσάτην τε καὶ γεγωνοτάτην· καὶ τῶν μὲν ἄλλων αὐτῷ ζῷων προσιόντων φέρειν καὶ πρῶον εἶναι, λέγουσι δὲ ἄρα πρὸς τὸ ὁμόφυλον δύσεριν εἶναι πως, καὶ οὐ μόνον φασὶ τοῖς ἄρρεσιν εἶναι τινα συμφυῆ κύριζίν τε πρὸς ἀλλήλους καὶ μάχην, ἀλλὰ καὶ πρὸς τὰς θηλείας ἔχουσι θυμὸν τὸν αὐτόν, καὶ προάγειν τε τὴν φιλονεικίαν καὶ μέχρι θανάτου τοῦ ἠττηθέντος ἐξάγουσαν. ἔστι μὲν οὖν καὶ διὰ παντός τοῦ σώματος ῥωμαλέον, ἀλκὴ δὲ οἱ τοῦ κέρατος ἄμαχός ἐστι. νομῆσ δὲ ἐρήμους ἀσπάζεται, καὶ πλανᾶται μόνον· ὥρα δὲ ἀφροδίτης τῆς σφετέρας συνδυασθεῖς πρὸς τὴν θήλειαν πεπράννται, καὶ μέντοι καὶ συννόμω ἐστόν· εἴτα ταύτης παραδραμούσης καὶ τῆς θηλείας κούσης, ἐκθηριοῦται αὐθις, καὶ μονίας ἐστίν· ὅδε ὁ Ἰνδὸς καρτάζωνος, τούτων οὖν πῶλους πάνυ νεαροὺς κομίζεσθαι φασὶ τῷ τῶν Πραισίων βασιλεῖ, καὶ τὴν ἀλκὴν ἐν ἀλλήλοις ἐπιδεικνύσθαι κατὰ τὰς θέας τὰς πανηγυρικὰς· τέλειον δὲ ἀλώναί ποτε οὐδεὶς μὲνηται.”

Diodor of Agyrion in Sicily (1st century B.C.) was the author, at the beginning of the reign of Augustus, of a “Historical Library” in 40 volumes. It was he who published for the first time, except for some writing on a wall in Marisa (see below 2.3), the Greek name “rhinókerōn”, an animal that has a horn which is compared with boxwood, and is said to fight elephants. His sources were Ktesias or Kleitarchos.

Diodorus Siculus *Hist.* 3, 35: “Ἐπεὶ δὲ τῶν ἐθνῶν καὶ βίων τὰ κεφάλαια τῶν δοκούντων εἶναι παραδόξων διεληλύθαμεν, περὶ τῶν [ὄντων] θηρίων τῶν κατὰ τὰς ὑποκειμένας χώρας ἐν μέρει διέξιμεν. ἔστι γάρ ζῷον ὃ καλεῖται μὲν ἀπὸ τοῦ συμβεβηκότος **ρίνόκερος**, ἀλκὴ δὲ καὶ βία παραπλήσιον ὄν ἐλέφαντι, τῷ δὲ ὕψει ταπεινότερον, τὴν μὲν δορὰν ἰσχυροτάτην ἔχει, τὴν δὲ χροάν πυξοειδῆ. ἐπὶ δ’ ἄκρων τῶν μυκτῆρων φέρει κέρασ τῷ τύπῳ σιμόν, τῇ δὲ στερεότητι σιδήρῳ παρεμφερές. τοῦτο περὶ τῆς νομῆς ἀεὶ διαφερόμενον ἐλέφαντι τὸ μὲν κέρασ πρὸς τινα τῶν πετρῶν θήγει, συμπεσὸν δ’ εἰς μάχην τῷ προεξημένῳ θηρίῳ καὶ ὑποδύνον ὑπὸ τὴν κοιλίαν ἀναρρῆττει τῷ κέρατι καθάπερ ξίφει τὴν σάρκα. τῷ δὲ τοιοῦτῳ τρόπῳ τῆς μάχης χρώμενον ἔξιαιμα ποιεῖ τὰ θηρία καὶ πολλὰ διαφθείρει. ὅταν δὲ ὁ ἐλέφας φθάσας τὴν ὑπὸ τὴν κοιλίαν ὑπόδυσιν τῇ προβοσκίδι προκαταλάβῃται τὸν **ρίνόκερον**, περιγίνεται ῥαδίως τύπτων τοῖς ὁδοῦσι καὶ τῇ βίᾳ πλέον ἰσχύων.”

2.3 An Indian rhino in the tomb at Marisa

The picture frieze of Marisa (Moresbeth, home of Micah) at the tomb of the family of Apollophanes, head of the Sidonian colony settled there, dates from the last quarter of the 2nd century B.C. (PETERS & THIERSCH 1905, MEYBOOM 1995, JACOBSON 2007). It displays in Hellenistic style, labelled with animal names, a predominantly African fauna with a few direct references to the Nile mosaic of Praeneste (probably to its forerunner in Alexandria). Here, only the two wall drawings of rhinoceroses are of special interest (PETERS & THIERSCH 1905, IV, 14-17, 21-22). The first is without doubt a Wide-mouthed rhino, regardless of the criticism of the crudity of the work by a few scholars of cultural science. It is characterised by its huge head, the wide, barrel-shaped trunk, the big left ear, and a pendent tail with a tassel. On the trunk is a series of light, vertical stripes or wrinkles. On its forehead is a robust first horn and a second very small horn. The name given is “rinokerôs” (fig. 10).

The second is an Indian rhino (fig. 11). It is smaller and more slender. Its head is flat, and both ears are visible; the series of vertical stripes or wrinkles is less dense, drawn in black. The characteristic “armour plates” of an Indian rhino are lacking. But on the rear of the back a very striking feature is shown, namely a number of rounded whitish spots, which correspond to the typical hunches or warts of the Indian rhino on the same part of body. A hairless tail is present. The first horn is thin and quite long; there is no second one.

Surprisingly, earlier authors seemed to find it difficult to identify the species. HAMMERSTEIN (1980: 96) suspected a Black rhino. PETERS & THIERSCH (1905: 27-28) likened it to a tapir, which is nonsense from a zoogeographical point of view. The label provided next to this animal contains at most eight characters, which were read as “ΛΟΦ...” J. Peters added on p. 28 a footnote: “Perhaps something like *hylophágos*, wood-eating?” JACOBSON (2007: 34) also gave the reading “ΛΟΦ...” and cited the extension by MACALISTER (1906a: 2) as “(AI)ΛΟΥ(ΠΟΣ)” which leads, not very convincingly, to a cat. As a result, he himself came up with the proposal “ΕΛΛΦΟΣ”, a deer. Since there is no similarity with this species he constructed a supposed confusion by Aristotle of “Indian ass” and “Oryx”. *Auctor huius* reads in table XIV in PETERS & THIERSCH (1905): “ΟΝΟΣ...” by identifying an inversion of the N, as is frequently found in inscriptions. This is the name which was used by Herodotus (IV, 191) for African rhinos: “όνιοι κέρατα εχόντες”, which later transferred was as “όνος ίνδικος” to the Indian rhino. So, the faunule of the Marisa tomb comprises except the African species only two of Asiatic provenience, the Indian rhino and the tiger (“mantichoras”).

2.4 No Indian rhino for Pompeius, 55 B.C.

Gaius Plinius Secundus Maior (ca. 23-79 B.C.) mentioned one-horned rhinos in India: "*boves silidis unguulis, unicornes*" (n. h. VIII, 76). Of an animal hitherto interpreted as an Indian rhino, Pliny (n. h. VIII, 71, 72) wrote: "*Indicos boves unicornes tricornesque*" On the occasion of the triumphal procession of Cnaeus Pompeius Magnus in the year (55 B.C.) of his consulate in Rome: "*Isdem ludis et rhinoceros unius in nare cornus, qualis saepe visus.*" ("... with one horn on the nose as was seen frequently.") Or might "*saepe visus*" ("frequently seen") mean that the same individual, but not other examples of the same species, was seen frequently? Gaius Julius Solinus (middle of the 4th century), whose book "*De mirabilibus mundi*" depends considerably on Pliny, made clear that the Rhino of Pompeius was of Ethiopian origin.

Besides this Pliny (n. h. VI, 173) only cited details on African rhinos, mainly following Agatharchides (see below).

The triumphal procession of Pompeius coincided with the second enthronement of Ptolemy XXI Auletes (115/107-51 B.C.), which was achieved with Pompeius' support. It is thus self-evident that the king would reciprocate with an Ethiopian rhino, the only kind which was within his reach. Its second horn was either small and ignored or it was cut. GOWERS (1950: 67) also explicitly contradicted JENNISON (1937: 34), who suggested an imported Indian rhino.

2.5 No Indian rhino for Octavian 29 B.C.

In 29 B.C., Octavian celebrated in Rome his triumph over Antony and Cleopatra and the conquest of Egypt. Cassius Dio (ca. 163- 229 A.D.) enumerated among the sacrificial animals a rhinoceros and a hippopotamus, both of which were allegedly presented in Rome for the first time (Rom. Hist. LI, 22, 5). He failed to mention the rhino of Pompeius (see above) and a hippo which had been presented by Scaurus in 58 B.C. The comparable occasion also suggests here a Sudanese provenience for the beast.

2.6 (Almost certainly) no Indian rhino in the circuses of Rome

Rhinos are occasionally stamped on Roman coins, e. g. those of the Emperor Titus Flavius Domitianus (reigned 81-96 A.D.), whose quadrans shows an easily recognizable two-horned rhino alternating from the left and right side. The same applies to coins issued under Hadrian (reigned 117-138 A.D.). Further pictures on mosaics and tesserae show apparently one-horned rhinos; GOWERS (1950) provided evidence that these were in actual fact carelessly rendered two-horned

ones, an opinion which is frequently supported by additional information of an Ethiopian origin of the animals. This is especially true for the unmistakable Wide-mouthed rhino on the Nile mosaic of Praeneste / Palestrina (SALARI 2008).

An African rhino was also the model for a poem for the state occasion of the opening of the colosseum in Rome by the Emperor Titus in 80 A.D., dedicated by Marcus Valerius Martialis (40-102 A.D.) (De Spectaculis 22, 1-6):

*Sollicitant pauidi dum rhinocerotā magistri
seque diu magnae colligit ira ferae,
desperabantur promissi proelia Martis;
sed tandem rediit cognitus ante furor.
Namque grauem cornu gemino sic extulit ursum,
iactat ut inpositas taurus in astra pilas.*

As adversaries of a two-horned rhino he mentioned a bull and a bear. The bear (and later the bull) was fatally gored and thrown up like a ball. This fight is also testified to on a clay lamp from a place called Labium (KELLER 1887: 118). The same “rhinoceros” is probably cited with no further details in Martial’s *Aphrodisiaca* (14, 52 and 53).

The rhinos presented in animal fights by several later emperors also originated from Africa. They are mentioned for the last time in the *Historia Augusta* (Gordiani Tres, 33) in 248 A.D. Due to an invasion of the Blemmyans in Egypt in 250 A.D. Rome finally lost control of the source of supply for African rhinos.

3 The Indian rhino of Augustus of 20 B.C. on the Artemidorus papyrus

3.1 The origin and reception of the Indian rhino of Augustus

There is only one exception, in the time of Augustus. Suetonius’ report: Gaius Suetonius Tranquillus (ca. 70-140 A.C.) wrote around 120 A.D., in “De vita Caesarum” (Div. Aug. 43, 4) that Augustus himself exhibited rare animals in public:

*Solebat etiam citra spectaculorum dies, si quando quid inuisitatum dignumque cognitu
advectum esset, id extra ordinem quolibet loco publicare, ut rhinocerotem apud Saepta,
tigrim in scaena, anguem quinquaginta cubitorum pro comitio.*

This happened in the year 11 B.C. TOYNBEE (1983: 392, footnote 12) suggested, though with some reservations, that Suetonius’ (“*rhinocerotem apud Saepta*”) information referred to the year 29 B.C. In this year Augustus celebrated a triumph and he led another, African rhino, in his parade (*cf.* 3.5). Furthermore the

construction of the Saepta, which had been planned and initiated by Caesar, was only completed in 26 B.C. by Marcus Vipsanius Agrippa.

The grouping of a rhino, a tiger and a giant snake allows these animals to be identified as part of the presents of the Indian embassy and with the drawings of the Artemidorus papyrus.

Gaius Plinius Secundus Maior (ca. 23-79 A.C.) reported (n. h. VIII, XXIV, 65) that in the year 11 B.C., Augustus presented a tame tiger (the first one in Rome) and thus confirms the time of the presentation of other Asian animals.

Rhino, tiger and python can be identified as the personal belongings of Augustus, who allowed the public to share in the enjoyment of these gifts from the Indian embassy. This is true also of the White elephant (from Siam) mentioned by Horace (Epistulae II 1, 194), of a giraffe from Alexandria (V21 in the Artemidorus papyrus), and of at least four more elephants which were already publicly known of because of images on coins (see above). The specific assemblage of South Asian animals allows us to take the rhino for an Indian rhino.

Why did so much time elapse between the acquisition of the Indian menagerie in 20 B.C. and the personal presentation of the rhino by Augustus around 11 B.C.? First of all, in 20 B.C. Augustus was involved in a delicate domestic policy situation which even led him to fear for his life. Then he spent a long time (16-13 B.C.) in Gaul after the considerable defeat (with the anxiously hidden loss of a whole legion) of Marcus Lollius against the Germans. This was followed by intermittent absence from Rome in Aquileia and again in Gaul. The presentation of his exotic animals in between may have served his recreation as well as to court the favour of the masses.

Strabo's report: Strabo obviously mentioned the same rhino as Suetonius. Strabo saw it, as also he met the servant Hermas, in Rome, where he lived after 20 B.C. up to 10 B.C. (Strabo, Geogr., XV, 1, 73). Strabo probably participated in the public animal show in the Saepta, where he acquired by autopsy his knowledge about a rhino for his critical correction of the book of Agatharchides *vide* the geographer Artemidorus (see below).

Strabo of Amaseia (63 B.C.-19 A.C.) described (Geogr. XVI, 15, 1774-5) the African coast of the southern Red Sea.

Strabo, Geographica 16, 4: "πληθῆει δ' ἐλέφασιν ἡ χώρα καὶ λέουσι τοῖς καλουμένοις μύρμηξιν· (compare Artemidorus papyrus, Kinzelbach 1910) ἀπεστραμμένα δ' ἔχουσι τὰ αἰδοῖα, καὶ χρυσοειδεῖς τὴν χροάν, ψιλότεροι δὲ τῶν κατὰ τὴν Ἀραβίαν· φέρεται δὲ καὶ παρδάλεις ἀλκίμους καὶ ῥινοκέρωτας· οὗτοι δὲ μικρὸν ἀπολείπονται τῶν ἐλεφάντων οἱ ῥινοκέρωτες, [οὐχ], ὥσπερ Ἀρτεμίδωρος φησιν, ἐπὶ σειρὰν τῷ μήκει, καίπερ ἑωρακέναι φήσας ἐν Ἀλεξανδρείᾳ, ἀλλὰ σχεδὸν τι ὅσον *** τῷ ὕψει, ἀπὸ γε τοῦ ὑφ' ἡμῶν ὁραθέντος· οὔτε πύξω τὸ χρῶμα ἐμπερές, ἀλλ' ἐλέφαντι μᾶλλον· μέγεθος δ' ἐστὶ

ταύρου· μορφή δ' ἔγγυτάτω συάγρου καὶ μάλιστα κατὰ τὴν προτομή, πλὴν τῆς ῥίνος, ὅτι ἔστι κέρασ συμὸν στερεώτερον ὀστέου παντός χρῆται δ' ὄπλω, καθάπερ καὶ τοῖς ὀδοῦσιν ὁ σύαγρος· ἔχει δὲ καὶ τύλους δύο, ὡς ἂν σπείρας δρακόντων ἀπὸ τῆς ῥάχεως μέχρι τῆς γαστρὸς περικειμένας, τὴν μὲν πρὸς τῷ λόφῳ, τὴν δὲ πρὸς τῇ ὀσφύϊ. ἐκ μὲν δὴ τοῦ ὑφ' ἡμῶν ὀραθέντος ταυτὰ φαμεν ἡμεῖς, ἐκεῖνος δὲ προσδιασαφεῖ διότι καὶ ἔλεφαντομάχον ἰδίως ἔστι τὸ ζῶον περὶ τῆς νομῆς, ὑποδύνον τῇ προτομῇ καὶ ἀνακεῖρον τὴν γαστέρα, εἰάν μὴ προληφθῆ τῇ προβοσκίδι καὶ τοῖς ὀδοῦσι."

The information referred to goes back to Agatharchides, mediated by the geographer Artemidoros. Agatharchides of Knidos (2nd half of 2nd century B.C.) composed a report on the Red Sea from sources which had been in the archives in Alexandria since Ptolemy I Soter (367/6-283/2 B.C.) (Agatharchides, *De Mari Erythraeo* I, 71: Woelk 1966).

Strabo compared the details of his source, Agatharchides, with his own experience. He was not satisfied with Agatharchides' data on the length and height of the rhino (since he had seen not an adult Wide-mouthed rhino but a young Indian rhino), nor with what Artemidoros says about the colour of the rhino, which he found grey as in an elephant, not boxwood-coloured. According to Strabo, the animal was the size of an ox and its shape might be compared to that of a boar, apart from the horn, which was stronger than a bone. Two elevated folds like the bodies of snakes extended from the back to the belly, each in the region of the shoulders and loins. Unlike Agatharchides, Strabo had the image of a small Indian rhino in his mind, not of an adult White-mouthed rhino, which explains the difference in size. He mentioned only one horn, of a grey colour, and the conspicuous skin folds, which very characteristically – they are missing entirely in the African rhino species – border the back and side plates of the Indian rhino.

Strabo had probably not seen the Indian rhino earlier in Alexandria. He was not an eye-witness to the animals being transported there, since when the menagerie arrived he was already in Rome. But there he had seen an Indian rhino, probably taking the opportunity to visit Augustus' public presentation in 11 B.C. There too he also almost certainly met personally the servant Hermas whom he had mentioned earlier citing the letter of Nikolaos of Damaskos.

In Alexandria, the point of embarkation, many of the species of the menagerie were drawn by the unknown artist Zographos Anonymos, including the Indian rhino, which up to this point had been known only by report (KINZELBACH 2009, 1010).

The work of Zographos Anonymos: the artist, approximately contemporaneous with Augustus, depicts on the Artemidorus papyrus (GALLAZZI, KRAMER & SETTIS 2008; KINZELBACH 2009) a brush of hair which has not yet

been identified (V34, discussion in GALLAZZI, KRAMER & SETTIS 2008: 435-436). At first glance it could be taken for the tail of an ass, a giraffe, an elephant or a rhino; however, in all these animals it should appear pendent instead of being drawn horizontally (fig. 12). The Indian rhino has a tail of sparse strong hair. In its youth it is much more abundant, thins out with age, and finally only a little hair remains. In middle age the hair sometimes grow in two rows, as can be seen, for example, on the figure of the Portuguese Indian rhino by Albrecht Dürer (fig. 19). The tassel on the Artemidorus papyrus shows thick hair, corresponding to a young specimen, but it should be shown pendent. However, there is a pictorial tradition which permits the horizontal depiction of the tassel. There is sufficient space in the corresponding gap of the Artemidorus papyrus (fig. 16) for the body that should go with it, but the drawing itself is missing. It seems likely that someone must have deliberately removed it for other uses.

The Artemidorus papyrus itself, or a comparable mosaic or wall painting, must have been available to later authors, because its subject-matter, as well as particular details, were rendered much later in the codices of Oppian's *Cynegetica*. Both copies of the *Cynegetica* in Venice and Paris contain two coloured drawings which show African and Asian animals, including an Indian rhino. The two copies are very similar; the one in Paris, being much rougher, is not discussed here.

Codex Venice

(A) A man (right) and a woman (left) framing eight wild animals which are arranged in two lines. COD. VEN. MARC. GR. Z. 479 fol. 2v. = Kádár 1978: 138/1. (fig. 14).

(B) Twelve wild animals are arranged in two lines. COD. VEN. MARC. GR. Z. 479 fol. 3r. = Kádár 1978: 139/2 (fig. 15).

The text of the codex provides only scanty general information. It emphasizes that the rhino is not bigger than an oryx, *i.e.* disappointingly small (see above, Strabo). It is assumed to be stronger than an elephant. All rhinos are believed to be males of unknown origin; the speculation is that they are generated out of rock or soil "without love, without marriage, without birth". How much knowledge has been lost since Aelian!

There is concordance between Oppian (Codex Venice B) (fig. 15) and the Artemidorus papyrus on several levels.

- The general method of presenting exotic animals with labels was identified by KÁDÁR (1978). Coincidence in detail is evident in the serval labelled

“lynx”, as in the images in Praeneste and Marisa, and the eland labelled “nabous”, as in the Nile mosaic in Praeneste.

- The inventory of species partly parallels the Artemidorus papyrus, e.g. a poisonous elapid snake, a sea monster (*thynnoprictis*, *pistrix*), an elephant, a wild sheep (*Ammotragus*), a moray as a substitute for the python.
- Some of the animals coincide in detail with the drawings of the Artemidorus papyrus, e. g. the unnatural tail tassel of the leopard. The coincidence is most striking in the unnatural ceremonial beards of several animals (a synapomorphic character). The Indian rhino has a chin beard which is additionally emphasised in fig. 14 by a red coloration. In both figures the lips are red.
- The rhino frolics happily, behaviour very similar to that witnessed in the Indian Rhino named “Clara” which was exhibited all over Europe in the 18th century (CLARKE 1986, picture by E. RIDINGER; fig. 17). Its tail tassel, too, is shown in exactly the same horizontal position as in the Artemidorus papyrus. This fragment of an animal tail (GALLAZZI, KRAMER, SETTIS 2008, V34) is reminiscent in form, though not in terms of species it can be allocated to the “fir twig shape” of a lion’s tail on papyrus 55001, fide A. Moortgat (after OMLIN 1971: 55) seen frequently in old Mesopotamia (fig. 12, 13, 15). It resembles even more the tail of the hyena or fox on the satirical papyrus (London 55001) showing scenes from an inverted world (LAMBOURNE 1990: 12).
- Zographos Anonymos loved to show animals in action, e.g. the tiger (V31). Oppian’s Indian rhino is grey like an elephant, as described by Strabo. It has spots, a feature characteristic of an Indian rhino, which is covered by huge warts; cf. fig. 7 and also Marisa (fig. 11).

Comment on (A) (fig. 14): the eight animal species are smaller than the accompanying human figures. They stand on a wavy green lawn, surmounted by single grasses and flowers, as on the Artemidorus papyrus.

- Substitute for “*astrokýôn*” (V29) on the Artemidorus papyrus. An animal in the same position but different coloration in KÁDÁR (1978: S. 166 COD. VEN. MARC. GR. Z. 479 fol. 38v).
- Bear to the left.
- Boar to the right. Noticeable tail, big tusk, red tongue.

- A large antelope without horns (female of Greater kudu, *Tragelaphus strepsiceros*), with large ears, spots on the back, and with a small hump. See too the “*nabous*” of the Nile mosaic of Praeneste (*Taurotragus derbianus* = *T. onix* in SALARI 2008: fig. 49, 50).
- Lion to the left. A crisp and dark mane. Back darker than the lower side, slightly spotted (as in a juvenile), tail erect with a black tassel.
- Indian elephant to the left with a decorated head collar. Tail with an outstandingly dense tassel.
- Indian rhino to the left. Back darker than the lower side, tail pendent, trunk with warts, mouth slightly red and red streaks in the ceremonial beard.
- Serval to the left. A long-eared cat with ear-tufts like a lynx. Only back and tail are spotted, tongue red, ceremonial beard present. See the “*lynx*” in Marisa and – badly damaged – on the Nile mosaic of Praeneste.

Most animals come from North Africa (lion, serval, aardwolf, antelope), some from both North Africa and western Asia (lion, bear), some only from western Asia (Indian elephant, Indian rhino, boar).

Comment on (B) (fig. 15): the animals are placed on a straight green lawn, surmounted by single bunches of grass and flowers, as on the Artemidorus papyrus.

- Lion with mane to the right. Tail elevated and S-shaped. Label “*léôn*”.
- Eagle to the left. Vague head coloration, wings small, spread as on a Roman sign.
- Leopard to the right. Thick-headed, with small dots. Tail elevated and S-shaped, erroneously with a tassel. Label “*párdos*”, in the Paris manuscript “*pardys*”.
- Moray to the left. Upper jaw bent up. Label “*mýraina*”. Similar in KÁDÁR (1978: 149, Cod. Ven. Marc. Gr. Z. 479 fol. 14v, where a moray meets a snake).
- Serval to the right. Unnaturally long-eared cat, dense spot pattern, tail hanging, with long hair. With beard (not in the Paris manuscript). Compare to the “*lynx*” in Marisa (JACOBSON; PETERS & THIERSCH 2007: pl. 24, pl. XV) and – badly damaged – on the Nile mosaic of Praeneste (SALARI 2008: fig. 29, 30). See KÁDÁR (1978: 166, Cod. Ven. Marc. Gr. Z. 479 fol. 38v; KÁDÁR 1978: 213, Cod. Par. Gr. 2736 fol. 32r).

- Falcon to the left sitting straight upright on a stone on the bottom.
- Indian rhino, jumping, to the right. Spotted, tail elevated and S-shaped, with tassel (see *Artemidorus papyrus*).
- Elapid snake to the left. Anterior part of the body raised up as in a big cobra, beak-like snout. Label “*échenêis*” (see *Ophiophagus hannah* on the *Artemidorus papyrus*).
- Scimitar-horned Oryx (*Oryx dammah*) to the right. Long horns, brown coloration.
- Goose to the left. It is either a domestic goose (unlikely, as this would not be a rarity) or a snow goose. See “*haimachênós*” in Cod. N. Y. Morg. M. 652 fol. 200r (KÁDÁR 1978: 64).
- Indian elephant to the right. With sagging back, resembling the African species.
- Sea monster (“whale”) to the right. Dog-like, eared head. Body spotted, contorted. Red hair or spines on neck and back. With ceremonial beard. Anterior legs paw-like. Tail like a stereotypical trilobate dolphin’s tail. Compare (V09) on the *Artemidorus papyrus*.

The species in fig. 15 come from the Mediterranean Sea (moray, sea monster), from North Africa (lion, serval, oryx), from North Africa and western Asia (lion, leopard, falcon, eagle) or only from western Asia (Indian elephant, Indian rhino, elapid snake). Several animals in both drawings are found in the same grouping as on the *Artemidorus papyrus*: the sea monster, Indian elephant, Indian rhino, leopard, elapid snake, aardwolf. The boar wrongly replaces the hyena, the moray appears in place of the python.

All the drawings are in the Hellenistic tradition, which started in the third century B.C., as ties in with the theory put forward by KÁDÁR (1978). The similarities may be symplesiomorphic (randomly similar by old age and the early distribution of similar artwork, e.g. the sea monster), or synapomorphic (“genetically” leading back to one unique “ancestor” or master illustration).

A unique indicator or marker is the occurrence of a long, unnatural chin-beard (“ceremonial beard”) in many species, probably originating from an old Egyptian influence. The beard has been found up to now (except in sea monsters) only on the *Artemidorus papyrus*, with one exception – a Coptic peacock (KINZELBACH 2009: fig. 113). Thus, Oppian’s picture is synapomorphic with the

Artemidorus papyrus itself or possibly with closely related artwork which is still to be discovered.

This pictorial tradition allows the reconstruction of the Indian rhino of Augustus on the Artemidorus papyrus by substituting the drawing passed down by Oppian (fig. 16).

3.2 The death of the Indian rhino of Augustus in a fight with an elephant

Parallels and the report of Aelian (XVI, 20) allow the assumption that the Indian rhino which was presented to Augustus was a young female. When it started its long journey it was 1-2 years old; when it arrived in Antiochia in 20 B.C. it was 5-6 years old. According to Zographos Anonymos and Oppian it jumped around like a child; Strabo affirmed it was still small in size in the year 11 B.C. Furthermore, in the mosaic of Piazza Armerina (see below) it is not yet adult.

As well as at the public exhibition hosted by Augustus in 11 B.C., the Indian rhino was probably put on display on many other occasions: see Pliny (see 2.4). Its relaxed position, its flimsy harness and equipage in the mosaic of Piazza Armerina suggest a quiet life in captivity. This came to an end at the age of about 30 years in 8 A.D. during the event which is depicted below.

Since Agatharchides (WOELK 1966), one question that fired the imagination was who would be the winner in a fight between an elephant and a rhino. In the year 8 A.D. Cassius Dio (LV 33, 4) reported that an elephant defeated a rhino in the arena. No details were given about their provenience. Both, considering their individual ages, could have been survivors of the Indian menagerie of 20 B.C. If so, the date of the death of the Indian rhino of Augustus can be determined. STÖRK (1977) thought the rhino in question was an African rhino, but at the time of the fight and for a long time afterwards, up to Nero's expedition to the Sudan, there is no evidence of a supply of African rhinos to Rome.

3.3 No Indian rhino in Pompeii

A marble relief, supposedly from Pompeii, drawn by KELLER (1909: 387), shows an Indian rhino. It resembles Dürer's rhino in every detail (fig. 18, 19). TOYNBEE (1983: 111) took this image in the Museo Archeologico Nazionale, Naples, to be Roman. She tried to interpret "Dürer's hornlet" as the crippled second horn of an African rhino, as did also JASHEMSKI & MEYER (2002). EISLER (1996: 287) identified this piece with certainty as a fake, made after an

Italian copy of Dürer's woodcut of 1515, adding (almost correctly) that ancient Rome knew only African rhinos.

3.4 The Indian rhino in Piazza Armerina

The Indian rhino which decorated the hunting mosaic in Piazza Armerina is included in scenes depicting the hunting of other animals, but is not itself hunted, as it is already in human care. It stands quietly in a pool, where it was guided regularly for drinking and bathing. This shows the professional skill of its keepers in knowing its needs. It wears an artful shoulder collar which covers its breast, attached to which are two ropes which hang loose on both sides and are held by relaxed keepers, accompanied by a happy dog. Within the limits which are to be expected, the picture is naturalistic. The typical horn rises to the back. The characteristic plate-like parts of the skin are separated by two strong folds. There are no conspicuous warts on the body, which means the animal is still young. The rich tail tassel resembles figure V34 of the Artemidorus papyrus. Obviously this was a young, tame animal (CAPIZZI & GALATI w. y.: 50, fig. 20).

The mosaic was created around 210 A.D. (CAPIZZI & GALATI w. y., STEINMEYER-SCHAREIKA 1978). By this time the importing of rhinos had already become rare, especially from India; none at all were imported into Sicily. Obviously, therefore, an old master illustration from Alexandria or Rome was used.

GOWERS (1950, 1951) stated rightly that Indian rhinos in Rome were extremely rare. They were not readily available as models. Therefore it is fairly certain that this mosaic depicts the Indian rhino of Augustus, which until the time of its death during the combat with the elephant in 8 A.D. was frequently to be seen in the circus (compare Pliny 2.4) and may have inspired artists.

3.5 The impact of the Indian embassy

A temporary political weakness in the Parthian Empire created a window of opportunity in the 2nd half of the 1st century B.C. during which east-west contacts were favoured. In this window the first contacts took place between Indian dynasts and the Imperium Romanum, which had just started to expand eastwards. A first embassy from India met the princeps in the year 26/25 B.C. in Tarraco (Zaragoza) in Spain. Details are unknown. The second Indian embassy, which arrived in 20/19 B.C. bringing rich presents, left a much more visible trace in the Roman history of trade and culture. According to Publius Annaeus Florus (ca. 120 A.D.) the trade attained a tremendous amount. It has not yet been completely explored.

“Now that the races of the west and south were subjugated, and also the races of the north, those at least between the Rhine and Danube, and of the east between the Cyrus (Kura) and Euphrates, the other nations too, who were not under the rule of the empire, yet felt the greatness of Rome and revered its people and the conqueror of the world (main verb missing in this sentence). For the Scythians and the Sarmatians sent ambassadors seeking friendship; the Seres too and the Indians, who live immediately beneath the sun, though they brought elephants amongst their gifts as well as precious stones and pearls, regarded their long journey, in the accomplishment of which they had spent four years, as the greatest tribute which they rendered; and indeed their complexion proved that they came from beneath another sky.” (Florus, *Epitomae* II, 34).

Furthermore, a song of praise by Horace to celebrate the Jubilee of 17 B.C. mentioned, among other encomiums for Augustus, the Indian embassy: “*Skyths, sullen briefly before, and Indians, expect his decisions*”. In Pompeii a very typical Indian ivory figure of the goddess Lakschmi was excavated in domus I 8,5, from the period before 79 A.D. (NAPPO 1998: 45), indicating large-scale trading (KINZELBACH 2009, 2010). The Indian embassy of 20 B.C. may thus be considered the starting point for long-lasting trade relations between the Empire and southern Asia which made use of the harbours of Myos Hormos (Qsseir, Egypt) and Basra (Iraq) and which led to archaeological and historical traces as far afield as the Chinese Empire.

4 Summary and discussion

The sources allow the reconstruction of the individual biography of an Indian rhino in classical times. The Indian embassy of 20/19 B.C. presented a young female Indian rhino about five years old. This age corresponds exactly to what Aelian (XVI, 20) writes when he reports that in India freshly caught foals were brought to the king. The rhino underwent a journey with the Indian embassy that lasted four years. The transporting overland of such large herbivores (half a dozen elephants and a rhino), not to mention tigers and other animals, could not have been accomplished in a shorter time. The assumption of transport by ship between Gujarat and, for example, Basra thus becomes invalid. Only frequent stops on fertile coasts would have provided the necessary amount of fresh pasture. The same logistical impediment is true for the sea route to the harbour of Myos Hormos (Qsseir), which was newly activated during the early reign of Augustus. Only Taprobane (Ceylon/Sri Lanka) might have been the junction for the passage by ship to Bargosa of some of the animals of the embassy, such as the cassowary, the adjutant stork, and the White elephant. However, it cannot for

logistical reasons have been the starting point for the embassy as has sometimes been proposed; in addition, Indian rhinos are not found there.

According to Suetonius' account the rhino was exhibited to the public by Augustus himself in 11 B.C., which is the same year as it was seen in Rome by Strabo. Probably the same animal died in 8 A.D. in a fight with an elephant. It was then 30 years old, a not unusual age for an Indian rhino.

This rhino was depicted on the Artemidorus papyrus together with other animals of "Indian" provenance. However, all that remains is a tail tassel, in a horizontal position (V34) at the end of/ followed by a big gap. Characteristic species of the Artemidorus papyrus are rendered in the codex of Oppian's *Cynegetica*; among them is a young Indian rhino. Its jumping position fits very well into the gap of the Artemidorus papyrus. Zographos Anonymos liked to show animals in action, so the frolicking rhino originates from his personal style. This rhino is still youthful as befits its situation in 20/19 B.C. (see above), and this also explains the still adolescent appearance of the Indian rhino on the mosaic of Piazza Armerina (see above). Johann Elias RIDINGER ca. 1750 portrayed the Indian rhino "Clara", the "Dutch" rhinoceros (CLARKE 1986: 47 ff.; cf. RIDLEY 2005) which was caught in Assam as a foal in 1739 and toured around Europe between 1741 and 1758 in a similar attitude of *joie de vivre* (fig. 17).

Rhinos were mentioned in Rome for the last time in *Historia Augusta* (Gordiani Tres. 33) in the year 248 A.D. (GOWERS 1950). The next Indian rhino did not come to Europe until 1513 via Lisbon. Albrecht DÜRER (1471-1528) made a sketch (original in B. M. London) which was cut in wood and widely distributed in a number of prints (fig. 19). Dürer's woodcut and its numerous imitations epitomised the image of the Indian rhino for a long time (CLARKE 1986, RIDLEY 2008). Its characteristic armoured appearance led to the German name "Panzer-nashorn", which is still in use. On the other hand, the image caused misinterpretations and irrelevant critiques. For example, the animal was supposedly clothed in a metal harness, or the equally famous "Dürer hornlet" on its neck was seen as a product of the imagination only or as a callus caused by a local lesion. Since then additional formations of the skin of *Rhinocerotidae* have become known, including small second and third horns, small paired horns on the shoulder and callosities all over the body.

Another famous drawing of the Lisbon rhino was created by Hans BURCKMAIR the elder (1473-1515) (fig. 21). His model was a drawing from Portugal which was conserved at Rome (EISLER 1996: 285; 10.43) (fig. 22).

It is to be hoped that this study makes it clear that the Indian rhino was known in the earliest period of the classical Mediterranean area only as an un-

substantiated rumour from distant parts. A single living specimen, which came to serve as a subject for writers and a model for artists, survived the long journey from Gujarat to Rome, as part of the menagerie of the Indian embassy of 20/19 B.C. Pictures of it survived on the Artemidorus papyrus, in Piazza Armerina and in Oppian's *Cynegetica*. It thus occupies a key position, similar to the Indian rhino of Lisbon of 1515 which was popularised by Albrecht Dürer. Dürer's image dominated the iconography of the one-horned and armoured "Indian rhino" in Europe for nearly 300 years. Similarly, in the 18th century, the Indian rhino "Clara" dominated the perception of this species in Europe (RIDLEY 2008). The most famous picture of the latter, the panel by J.-B. Oudry, is on display at the Country Museum of Schwerin (Mecklenburg-Vorpommern).

My thanks to Prof. Dr. Barbara Kramer, Trier, for Greek texts and for advice; and Mrs. Lucy Cathrow, Rostock, for linguistic revision.

5 References

Sources

- AELIANOS:** Aeliani de natura animalium, recognovit, adnotatione critica et indicibus instruxit Rudolphus Hercher, Paris 1858 (Firmin Didot). – Aeliani de natura animalium libri septemdecim. Kritisch bearbeiteter griechischer und lateinischer Text, herausgegeben von Fridericus Jacobs, Jena 1832.
- AGATHARCHIDES:** Agatharchides von Knidos, Über das Rote Meer. Übersetzung und Kommentar, herausgegeben von Dieter Woelk. Diss. Freiburg i. B., Bamberg 1966. – Agatharchides, De Mari Erythraeo. In: C. F. Mueller, *Geographi Graeci Minores* (1856) vol. I, S. 71.
- ALBERTUS MAGNUS:** On Animals. A Medieval Summa Zoologica. Translated and annotated by Kenneth F. Kitchell Jr. & Irvan Michael Resnick. Baltimore and London 1999.
- ARISTOTELES:** Aristotelis opera omnia, ex recensione Immanuelis Bekkeri edidit Academia Regia Borussica. Vol. I, Berlin 1831. – AUBERT, H. & F. WIMMER (1868): Aristoteles, Thierkunde. Kritisch berichtiger Text mit deutscher Übersetzung, sachlicher und sprachlicher Erklärung und vollständigem Index, her-

- ausgegeben von Hermann Aubert und Friedrich Wimmer. 2 Bde., Leipzig 1868.
- ATHENAIOS: The Deipnosophistes, Banquet of the learned of Athenaeus. Literally translated by C. D. Yonge, London 1854.
- CASSIUS DIO: Cassius Dio, Römische Geschichte, Bd. IV, Bücher 51-60, übersetzt von Otto Veh. Zürich und München 1986.
- FGRHIST: Die Fragmente der griechischen Historiker, herausgegeben von Felix Jacoby. Berlin 1923, ab Teil III Leiden, New York, Köln 1964.
- FLORUS: Florus Publius Annaeus. Florus, Epitome of Roman History with an English translation by Edward Seymour Forster. London 1984.
- KALLIXEINOS: Siehe FGRHist.
- KTESIAS: Siehe FGRHist.
- HERODOTOS: Herodot, Historien. Griechisch-deutsch, herausgegeben von Josef Feix. München 1963.
- HORATIUS: Quintus Horatius Flaccus, Opera, lateinisch-deutsch. Mit einem Nachwort herausgegeben von Bernhard Kytzler. Stuttgart 1992.
- MARTIALIS: M. Valerii Martialis Epigrammaton libri edd. Heraeus / Borovskij, Leipzig 1982.
- OPPIANUS: Oppiani Poemata de venatione et piscatione cum interpretatione Latina et scholiis. Acc. Eutechnii paraphrasis Ixeutikōn et Marcelli Sidetae fragmentum de piscibus. Teil 1: Cynegetica / ad quatuor mss. codd. fidem recensuit et suis auxit animadversionibus Jac. Nic. BELIN DE BALLU. Argentorati 1786 - Cynegetica. Cod. Ven. Marc. Gr. Z. 479 (=881); Biblioteca Nazionale, Venezia. Facsimile and commentary (spanish). Valencia 1999.
- PLINIUS: C. Plinius Secundus. Naturalis Historiae libri XXXVII, herausgegeben und übersetzt von Roderich König in Zusammenarbeit mit Gerhard Winkler. Naturkunde, lateinisch-deutsch. Darmstadt 1986.
- SOLINUS: De mirabilibus mundi. C. Ivlii Solini collectanea rerum memorabilium ed. Theodor Mommsen. 4. Aufl., unveränd. Nachdr. der 1. Aufl., Berlin 1895. Zürich u. Hildesheim 1999.

- ausgegeben von Hermann Aubert und Friedrich Wimmer. 2 Bde., Leipzig 1868.
- ATHENAIOS: The Deipnosophistes, Banquet of the learned of Athenaeus. Literally translated by C. D. Yonge, London 1854.
- CASSIUS DIO: Cassius Dio, Römische Geschichte, Bd. IV, Bücher 51-60, übersetzt von Otto Veh. Zürich und München 1986.
- FGRHIST: Die Fragmente der griechischen Historiker, herausgegeben von Felix Jacoby. Berlin 1923, ab Teil III Leiden, New York, Köln 1964.
- FLORUS: Florus Publius Annaeus. Florus, Epitome of Roman History with an English translation by Edward Seymour Forster. London 1984.
- KALLIXEINOS: Siehe FGRHist.
- KTESIAS: Siehe FGRHist.
- HERODOTOS: Herodot, Historien. Griechisch-deutsch, herausgegeben von Josef Feix. München 1963.
- HORATIUS: Quintus Horatius Flaccus, Opera, lateinisch-deutsch. Mit einem Nachwort herausgegeben von Bernhard Kytzler. Stuttgart 1992.
- MARTIALIS: M. Valerii Martialis Epigrammaton libri edd. Heraeus / Borovskij, Leipzig 1982.
- OPPIANUS: Oppiani Poemata de venatione et piscatione cum interpretatione Latina et scholiis. Acc. Eutechnii paraphrasis Ixeutikōn et Marcelli Sidetae fragmentum de piscibus. Teil 1: Cynegetica / ad quatuor mss. codd. fidem recensuit et suis auxit animadversionibus Jac. Nic. BELIN DE BALLU. Argentorati 1786 - Cynegetica. Cod. Ven. Marc. Gr. Z. 479 (=881); Biblioteca Nazionale, Venezia. Facsimile and commentary (spanish). Valencia 1999.
- PLINIUS: C. Plinius Secundus. Naturalis Historiae libri XXXVII, herausgegeben und übersetzt von Roderich König in Zusammenarbeit mit Gerhard Winkler. Naturkunde, lateinisch-deutsch. Darmstadt 1986.
- SOLINUS: De mirabilibus mundi. C. Ivlii Solini collectanea rerum memorabilium ed. Theodor Mommsen. 4. Aufl., unveränd. Nachdr. der 1. Aufl., Berlin 1895. Zürich u. Hildesheim 1999.

- STRABON: Strabos Geographika. Mit Übersetzung und Kommentar herausgegeben von Stefan Radt. Bd. 4, Buch XIV-XVII, Text und Übersetzung, Göttingen 2005.
- SUETONIUS: Maximilian Ihm (Hrsg.): *C. Suetonii Tranquilli opera*. Vol. 1. *De vita Caesarum libri VIII*. Editio minor. 1908; Nachdruck Stuttgart 1978, 1993. – Das Leben der römischen Kaiser. Herausgegeben und übersetzt von Hans Martinet. Düsseldorf 2001.

Secondary literature

- BOSWORTH, Albert Brian:
The historical setting of Megasthenes' Indica. In: *Classical Philology* 91 (1996), 113-127.
- BRIGGS, George W.:
The Indian Rhinoceros as a Sacred Animal. *Journal of the American Oriental Society* 51,3 (1931), 276-282.
- CAPIZZI, Carmelo & Francesco GALATI:
Piazza Armerina. Seine Mosaiken und Morgantina. Bologna (o.J.).
- CLARKE, T. H.: *The Rhinoceros from Dürer to Stubbs 1515-1799*. London, New York 1986.
- EISLER, Colin: *Dürers Arche Noah: Tiere und Fabelwesen im Werk von Albrecht Dürer*. München 1996.
- FRIEDENTHAL, H.: *Tierhaaratlas*. Jena 1911.
- GALLAZZI, Claudio & Bärbel KRAMER:
Artemidor im Zeichensaal. Eine Papyrusrolle mit Text, Landkarte und Skizzenbüchern aus späthellenistischer Zeit. *Archiv für Papyrusforschung* 44 (1998), 189-208.
- GALLAZZI, Claudio & Salvatore SETTIS (ed.):
Le tre vite del Papiro di Artemidoro. Voci e sguardi dall'Egitto greco-romano. Milano 2006.
- GALLAZZI, Claudio, Bärbel KRAMER, Salvatore SETTIS:
Il Papiro di Artemidoro. Milano 2008.
- GOWERS, Sir William:
The classical rhinoceros. *Antiquity* 24 (1950), 61-67.
- GOWERS, Sir William:
The classical rhinoceros again. *Antiquity* 25 (1951), 155.

- HOFSTÄTTER, H. H.:
Die Kunst im Bild der Jahrtausende. Baden-Baden 1966.
- JACOBSON, David M.:
The Hellenistic paintings of Marisa. Leeds 2007.
- JASHEMSKI W. F. & F. G. MEYER (edd.):
The natural history of Pompeii. Cambridge 2002.
- JENNISON, G.:
Animals for Show and Pleasure in Ancient Rome. Manchester 1937.
- KÁDÁR, Zóltan:
Survivals of Greek zoological illuminations in Byzantine manuscripts. Budapest 1978.
- KELLER, O.:
Thiere des classischen Alterthums. Innsbruck 1887.
- KELLER, O.:
Die antike Tierwelt. 2 Bde. Leipzig. Repr. d. Ausg. 1909, Hildesheim 1963.
- KINZELBACH, R.:
Tierbilder aus dem ersten Jahrhundert. Ein zoologischer Kommentar zum Artemidor-Papyrus. Archiv für Papyrusforschung Beiheft 28 (2009).
- KINZELBACH, R.:
Eine bunte Gesellschaft. Die Tiere des Artemidor-Papyrus. Antike Welt 3 (2010), 8-13.
- KINZELBACH, R.:
A cassowary *Casuarius casuarius* (Linnaeus, 1758) record from Alexandria, Egypt, in 20 B.C. (Aves, Ratitae, Casuariidae). The open Ornithology Journal 2012.
- KIRSCH, W. (ed.):
Das Buch von Alexander, dem edlen und weisen König von Makedonien mit den Miniaturen der Leipziger Handschrift (Text der Orosius-Edition). Leipzig 1991.
- LAMBOURNE, Maureen:
The art of bird illustration. New Jersey 1990.
- LEYRA, I. Pajón:
Paradossografia visuale sul Papiro di Artemidoro. 4 febbraio 2011, Firenze (in print).
- MEYBOOM, P. G. P.:
The Nile mosaic of Palestrina. Leiden 1995.
- NAPPO, Salvatore
Ciro:
Pompeii. Die versunkene Stadt. Köln 1998.
- OMLIN, Jos. A.:
Der Papyrus 55001 und seine Satirisch-erotischen Zeichnungen und Inschriften. Catalogo del Museo Egizio di Torino, Serie Prima – Monumenti e Testi, Volume III (1973).

- PETERS, JOHN P. & HERMANN THIERSCH (1905):
Painted tombs in the Necropolis of Marissa (Marêshah). Pfister
1905. Reprint in: Jacobson 2007.
- RIDLEY, Glynis: Claras Grand Tour. Die spektakuläre Reise mit einem Rhino-
zeros durch das Europa des 18. Jahrhunderts. Hamburg 2008.
- SALARI, Leonardo:
Mosaico nilotico di Palestrina: Animali reali o fantastici? Studi
e fonti per la Storia della Regione Prenestina. Palestrina 2008.
- STEINMEYER-SCHAREIKA, Angela:
Das Nilmosaik von Palestrina und eine ptolemäische Expediti-
on nach Äthiopien. Bonn 1978.
- STÖRCK, Lothar:
Die Nashörner. Verbreitungs- und kulturgeschichtliche Mate-
rialien unter besonderer Berücksichtigung der afrikanischen
Arten und des ägyptischen Kulturbereiches. Dissertation
Tübingen, Hamburg 1977.
- TOYNBEE, Jocelyn M. C.:
Tierwelt der Antike. Mainz 1983.
- THEVET, A.: Les singularités de la France antarctique autrement nommée
Amérique et de plusieurs terres et îles découvertes de notre
temps par frère André Thevet natif d'Angoulême, à Paris
1558.
- THOMPSON, D'Arcy W.:
A glossary of Greek birds. London 1936 (repr. Hildesheim
1966).
- ZEUNER, F.: Geschichte der Haustiere. München 1967.

6 Figures

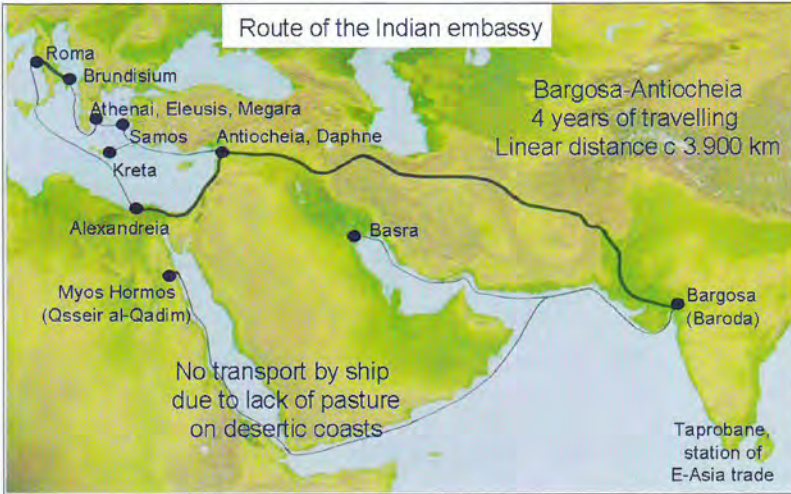


Fig. 1. Only three of several ambassadors arrived alive in Antioch and on Samos; several died on the way of exhaustion, one of them on Crete while searching for the actual residence of Augustus. One committed suicide in Eleusis after having finished his mission successfully. Augustus took female tigers from Samos directly to Rome; the heavier elephants, the rhino, a male tiger etc. travelled on cereal transporters *via* Alexandria to Rome.
 (Source: Der 3D-Weltatlas, P.M. CD-ROM ISBN 3.8032-1782-2)



Fig. 2. Augustus with a quadriga of elephants.
 (KELLER 1909 after M. u. G. IV 5).



Fig. 3. Revised identification of “pelekanos ichthyobolos” as a Lesser adjutant stork *Leptoptilus javanicus* (Horsfield 1821) from India.



Fig. 4. Identification on the Artemidorus papyrus of a Cabbage-head jellyfish *Rhizostoma pulmo* (L., 1758).

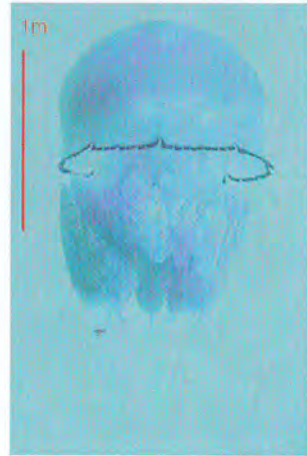


Fig. 5. Cabbage-head jellyfish *Rhizostoma pulmo* (L., 1758). Mediterranean Sea. Riedl.

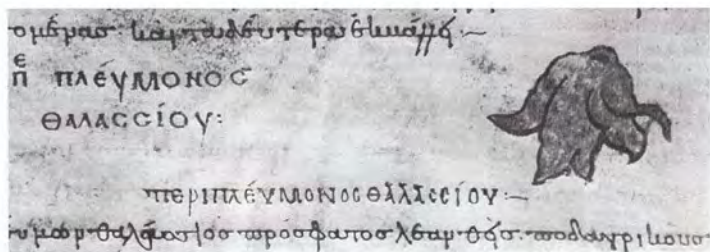


Fig. 6. Cabbage-head jellyfish, called the sea-lung, “peri pleumonos thalassiou”, from Cod. N. Y. Morg. M. 652, fol. 211v (Kádár 1978, tab. 74).

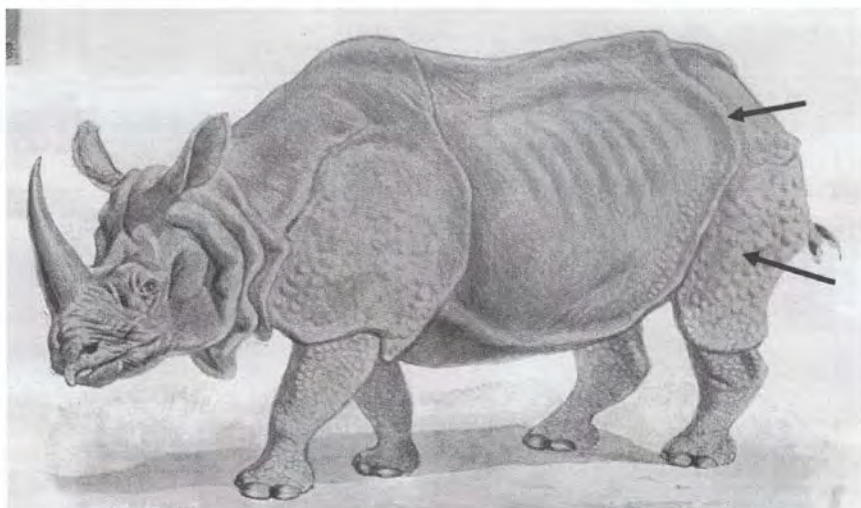


Fig. 7. Indian rhino, *Rhinoceros unicornis* Linnaeus, 1758 (FRIEDENTHAL 1911: pl. X).

Fig. 8. Indian rhinos from Mohenjo Daro (India).



8a. After HOFSTÄTTER (1966).



8b. From http://realhistorywww.com/worldhistory/ancient/Indus_Valley_India_1.htm.



8c. After J. Marshall in BRENTJES (1962).

Fig. 9. Indian rhinos from Mesopotamia.



9a. Stylised "unicorn", old Mesopotamia,
obelisk of Salmanassar II. (KELLER 1909, f. 133).



9b. Seal, El-Asmar Iraq,
Indian influence (Frankfurt
1939b in ZEUNER 1967).



9c. With Bearded vulture,
Babylonian cylinder (Coll.
Clerq, KELLER 1909, f. 134).



Fig. 10. Wide-mouthed rhino, Marisa. Caption: "rhinokerôs"
(PETERS & THIERSCH 1905).



Fig. 11. Indian rhino, Marisa. Caption: "onos..."
(PETERS & THIERSCH 1905).



Fig. 12. Artemidorus papyrus (V34). Tail tuft
(GALLAZZI, KRAMER, SETTIS 2008).

Fig. 13. Satirical papyrus, London 55001.



13a. Detail with tails of Striped hyena (left), and fox (right)
(LAMBOURNE 1990: 12).



13b. Tail of hyena in horizontal position.



Fig. 14. Oppian of Apamea, Cod. Ven. Marc. GR. Z. 479 fol. 3r. Facsimile (1999), Ministero per i Beni Culturali e Ambientali d'Italia. Cf. KÁDÁR (1978).



Fig 15. Oppian of Apamea, Cod. Ven. Marc. GR. Z. 479 fol. 3r. Facsimile (1999), Ministero per i Beni Culturali e Ambientali d'Italia. Cf. KÁDÁR (1978).



Fig. 16. Artemidorus Papyrus. Gap in front of the tail tuft (V34), filled with Oppian's frolicking young Indian rhino, mirror-inverted, cf. fig. 15.



Fig. 17. Frolicking young Indian rhino “Clara” by Johann Elias RIDINGER, Augsburg ca. 1750-5. Private collection, Madrid (CLARKE 1986 p. 57).

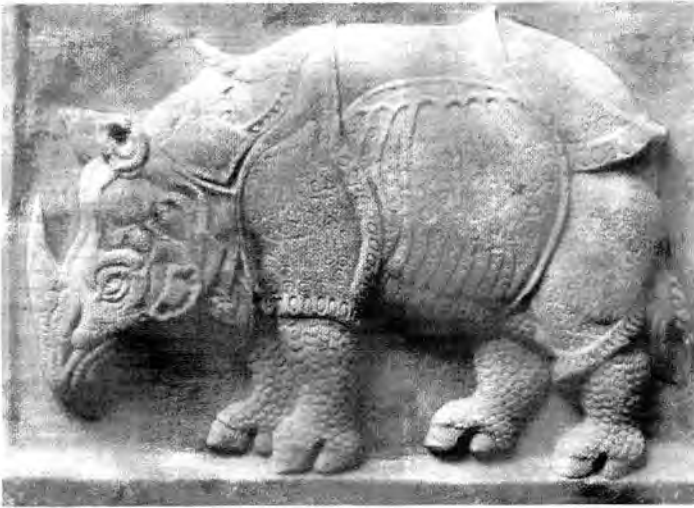


Fig. 18. Indian rhino after DÜRER. A marble stone relief allegedly found at Pompeii. Museo Nazionale Napoli, EISLER (1996: 287).

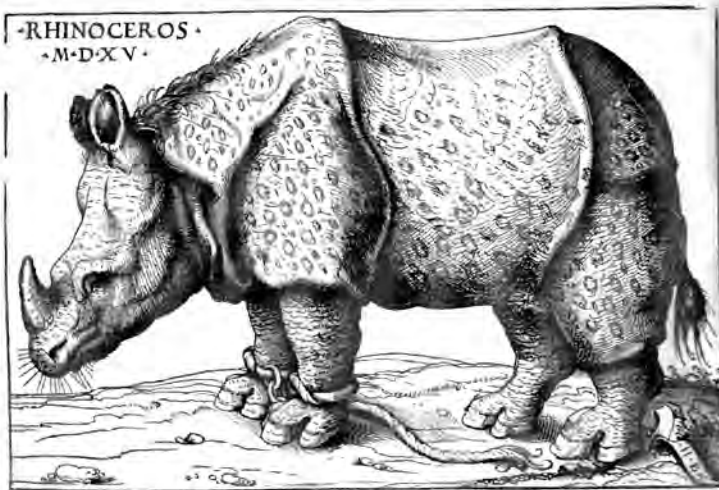


Fig. 21. Indian rhino. Woodcut by Hans BURGMAIR 1515, after a sketch from Portugal. (EISLER 1996: 285).

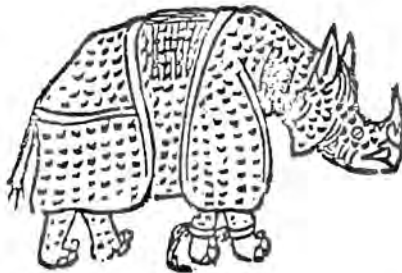


Fig. 22. The Rhino of 1515 on a chain, stuffed in Lisbon. Woodcut. Biblioteca Colombina, Sevilla.



Fig. 19. Indian rhino. Drawing and woodcut by Albrecht DÜRER 1515, after a sketch from Lisbon. With “Dürer hornlet”. Arrived under King Emanuel Afonso de Albuquerque on May 1st 1513 (EISLER 1996: 285).



Fig. 20. Indian rhino, guided by attendants to a wallow, with breast collar, standing in the water. Mosaic of the Great Hunt, Villa Erculia, Piazza Armerina, c. 250 A.D. (CAPIZZI & GALATI: 50).