

## MARINE EQUIVALENTS OF LAND-ANIMALS: TRACING THE IDEA FROM ANTIQUITY TO THE MODERN PERIOD

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### ABSTRACT

The idea that the various species of land-animals have marine equivalents (with some exception: the marten, the fox) is found in the early rabbinic literature, and medieval Jewish texts that depend on it, but Greek, Latin, and Talmudic Aramaic names for fishes patterned after the name for some land-animal clearly show that such an idea was shared in the Graeco-Roman world. We are able to show that this idea was current among Scottish and Icelandic fishermen, as well as in early modern scholarly texts (thus representing elite belief), up to *Telliamed*, a book first published posthumously in 1748, authored by Benoît de Maillet (1656–1738); an American edition appeared in Baltimore in 1797, apparently upon the initiative of D. Porter, who was affiliated with an observatory. *Telliamed* proposed a theory, an *Origin of Species* of sorts that had land-animal develop from supposedly similar aquatic animals, and what is more, *Telliamed* also was an *Origin of Man* of sorts, claiming as it did that among humans, different peoples developed polygenetically, separately, from aquatic men, and that more primitive peoples were relatively closer to such origins. (As a precaution, the author had the fictitious Indian philosopher Telliamed expound the theory to a missionary. Being still unconverted, Telliamed could depart from human monogenesis as claimed by the Book of Genesis.) We also show how the idea of parallel land- and marine animals affected medieval art. Strikingly, an image shows Alexander the Great inside a glass barrel, watching underwater a fox and a ruminant, as well as humans, living on the seafloor among trees, while fish swim around. We show how prolific the idea was in Indian art depicting mythical composite animals. Composite animals have even appeared in TV commercials, and a current idea claims that *chimaerae* originated from finds of mixed fossil bones.

**KEY WORDS:** Marine animals, Aquatic equivalents of land animals..

## ANIMALES MARINOS EQUIVALENTES A LOS DE TIERRA: SEGUIMIENTO DE LA IDEA DESDE LA ANTIGÜEDAD HASTA LOS TIEMPOS MODERNOS

### RESUMEN

La idea de que las distintas especies de animales de tierra tienen equivalentes marinos (con alguna excepción: la marta, el zorro) se encuentra en la literatura rabínica antigua y en textos judíos medievales que dependen de ella; pero nombres de peces en griego, latín y arameo talmúdico que siguen la norma de los nombres de animales de tierra muestran claramente que tal idea existió también en el mundo grecorromano. Podemos mostrar que esta idea fue habitual entre los pescadores de Escocia e Islandia, así como en antiguos textos eruditos modernos (que representan así una creencia elitista), hasta el *Telliamed*, un libro publicado por primera vez con carácter póstumo en 1748, escrito por Benoît de Maillet (1656-1738); una edición americana apareció en Baltimore en 1797, aparentemente por iniciativa de D. Porter, que tuvo que estar vinculado a un observatorio. *Telliamed* propuso una teoría, un *Origen de las*

*especies*, de especies que tuvieron su desarrollo como animales de tierra a partir de animales de agua similares, y todavía más, *Telliamed* también fue un *Origen del hombre* de diferentes especies, afirmando, como hizo, que entre los humanos diferentes pueblos se desarrollaron multigenéticamente, de forma separada, a partir de hombres acuáticos, y que los pueblos más primitivos estaban relativamente más próximos a ese origen. (Por precaución, el autor hizo que el filósofo indio ficticio Telliamed expusiera la teoría a un misionero. Como todavía no se había convertido, Telliamed pudo partir de monogénesis humana, como afirmaba el Libro del Génesis). También mostramos de qué modo la idea de animales de tierra y mar paralelos afectaron al arte medieval. Sorprendentemente, una imagen muestra a Alejandro Magno dentro de un barril de cristal, observando bajo el agua un zorro y un rumiante, así como humanos, que viven en el fondo marino entre árboles, mientras los peces nadan alrededor. Mostramos la productividad que tuvo la idea en el arte indio que pinta animales compuestos. Animales mixtos han aparecido algunas veces en anuncios de televisión y una idea actual afirma que las *chimaerae* surgieron a partir de hallazgos de huesos fósiles mixtos.

**PALABRAS CLAVE:** Animales marinos, Equivalentes acuáticos de los animales de tierra.

### 1. *Marine Animals Equivalent to Land-Animals, According to Early Rabbinic Literature*

The Hebrew-language *Mishnah* is a Jewish authoritative legal code from around 200 or 210 C.E. There also exists a very similar legal code, the *Tosefta*, which never acquired the authority that the *Mishnah* achieved in Jewish law. The *Jerusalem Talmud* and the *Babylonian Talmud* elaborate (with digressions) on articles of law from the *Mishnah*, but on occasion the article of law is a *lectio extra vagans*, but if such is the case, it is typically found in the *Tosefta* instead.

In the *Tosefta*, tractate *Kil'áyim*, ed. Lieberman, 5:10, one finds this statement:

כל שיש ביבשה יש בים הרבה בים שאין ביבשה אין מין חולדה בים

Any that exists on dry land, exists in the sea. Many are in the sea that do not exist on dry land. There is no kind of *ḥulda* [mustelid or viverrid] in the sea.

Liebermann identified parallels *ad loc.*<sup>1</sup> The parallels are as follows; the *Babylonian Talmud*, tractate *Hullin* 127a, states: “Our Sages taught: Everything that exists on dry land exists in the sea, except the *ḥulda*”, and this is quoted in a medieval gloss by Rashi to the *Babylonian Talmud*, tractate *Avodah Zarah* 39a.

Let us consider the rabbinic parallels one by one<sup>2</sup>. The *Babylonian Talmud*, in tractate *Hullin* (which is about norms concerning meat for lay consumption), 127a, states:

<sup>1</sup> SAUL LIEBERMAN, *Tosefta Ki-Feshutah* (8 vols.), New York: Jewish Theological Seminary, 1955–1973.

<sup>2</sup> Thanks are due to Meir Bar-Ilan of Bar-Ilan University, for his kind help in identifying these occurrences.

תנו רבנן: כל שיש ביבשה יש בים, חוץ מן החולדה.

Our Sages have taught: “Any that exists on dry land, exists in the sea, except the *hulda* [mustelid or viverrid]”.

The Soncino English translation of the *Babylonian Talmud* was made in the 1930s.<sup>3</sup> The translation of the fuller passage<sup>4</sup> is as follows (their brackets): “Our Rabbis taught: Every creature that is on the dry land is also to be found in the sea, excepting the weasel. R. Zera said: Where is there proof for this from Scripture? Give ear, all ye inhabitants of the world. [(*Psalms* 49:2)] R. Huna the son of R. Joshua said. The beavers around Naresh are not land [creatures]”.

Naresh is a town on the canal of the same name, on the east bank of the river Euphrates. Concerning the Scriptural evidence alleged from *Psalms* 49:2 — evidence based on homographs: חֵלֶד *héled*, with vowel diacritic marks חֵלֶדְ (a Biblical Hebrew poetic word for ‘world’) as opposed to the zoonym חֹלֶד *hóled* (with vowel diacritic marks חֹלֶדְ (i.e., a mustelid or viverrid: say, the marten) — a note to the Soncino English translation states:

‘The world’ is expressed by the rare word חֵלֶד (*heled*) which is similar to the word for the weasel (*holed*). The world (*heled*) is the specific habitation of the weasel (*holed*), for the latter is not to be found in the sea.

As for what the Soncino translation rendered as “The beavers around Naresh are not land [creatures]” (their brackets)”, a note of theirs remarks (again, their brackets; ‘Er. = tractate *Erubin*; Sot. = tractate *Sotah*; Tosaf. = the *Tosafot*, medieval glosses from Franco-Germany other than Rashi’s)<sup>5</sup>:

So according to Rashi. Tosaf., however, gives an entirely different render-

<sup>3</sup> ISIDORE EPSTEIN (ed.), *The Babylonian Talmud*, translated into English with Notes, Glossary and Indices. London: The Soncino Press, 1935–1948. 35 volume edition: *Seder Nezikin* (8 vols., 1st edn, 1935, repr. 1952, 1956); *Seder Nashim* (8 vols., 1st edn. 1937, repr. 1956); *Seder Mo’ed* (8 vols., 1st edn., 1938; repr. 1956); *Seder Tohoroth* (2 vols., 1st edn. 1948, repr. 1960); *Seder Zera’im* (2 vols., 1st edn., 1948, repr. 1959); *Seder Kodashim* (6 vols., 1st edn. 1948, repr. 1960); *Index Volume* (1952). 18 volume edition: *Seder Nezikin* (4 vols., 1961); *Seder Nashim* (4 vols., 1961); *Seder Mo’ed* (4 vols., 1961); *Seder Tohoroth* (1 vol., 1961); *Seder Zera’im* (1 vol., 1961); *Seder Kodashim* (3 vols., 1961); *Index Volume* (1961). The Reformatted Soncino Talmud (RST) was made freely available online by Reuven Brauner at <http://halakhah.com/indexrst.html>

<sup>4</sup> Available e.g. at <http://www.halakhah.com/pdf/kodoshim/Chullin.pdf>

<sup>5</sup> The most popular Hebrew commentary to the Pentateuch, actually the *glossa ordinaria*, is the one by Rashi, i.e., Rabbi Solomon ben Isaac (Troyes, Champagne, 1040 – Worms, 1105); in non-Jewish Latin contexts, he was called *Rabi Salomon*. He is as well the main commentator of the Babylonian Talmud. *Rashi* is an acronym of *Rabbi Shlomo Yīshāqī*.

ing: ‘The inhabitants of Bibri and of Naresh are not fit for human society’ (i.e., they are in every way wicked, see following statement of R. Papa). Accordingly Bibri (Be-Bari) is taken as the town close to Naresh; cf. ‘Er. 56a and Sot. 10a. V. Tosaf. a.l., and Lewysohn, *op. cit.* p. 98. [Obermeyer p. 308 renders: Be-Bari and Naresh are not accounted as (inhabited) settlements. They are, that is, sparsely inhabited and infested consequently with wild animals]<sup>6</sup>.

That interpretation is afforded by the fact that the text continues by casting aspersions on the behaviour of inhabitants of some towns such as Naresh. Such derogatory remarks have of course even present-day parallels in popular culture; for example, the inhabitants of Heeley in Sheffield, South Yorkshire, are apparently nicknamed “Duffans/Duffers (*duff* = ‘cheat’)”, according to an entry in a list of “Selected British Blazon Populaire Terms”<sup>7</sup>.

## 2. *A Medieval Gloss to the Babylonian Talmud*

One more occurrence of the notion that terrestrial animal kinds (with one exception) have marine equivalents, is found in the main medieval commentary to the *Babylonian Talmud*, the one by Rashi, to tractate *Avodah Zarah*, 39a (in a passage that discusses kosher fish species). The wider context, given here according to the Soncino English translation, is as follows (their brackets, our braces):

Our Rabbis taught: [Those species of fish] which have no [fins and scales] at the time but grow them later, as, e.g., the *sultanith* and ‘*aphiz*, are permitted; those which have them at the time but shed them when drawn out of the water, as, e.g., the *colias*, scomber, sword-fish, anthias and tunny are permitted. R. Abbahu announced in Caesarea that fish-entrails and fish-roe may be purchased from anybody since the presumption is that they only come from Pelusium and Aspamia. This is like what Abaye said: The *zahanta* {a footnote to the Soncino translation states: “A small fish preserved in brine”} from the riv-

<sup>6</sup> The two modern books cited are: LUDWIG LEWYSOHN, *Die Zoologie des Talmuds: Eine umfassende Darstellung der rabbinischen Zoologie, unter steter Vergleichung der forchungen älterer und neuerer Schriftsteller*, Frankfurt am Main, 1858; and: JACOB OBERMEYER, *Die Landschaft Babylonien im Zeitalter des Talmuds und des Gaonats: Geographie und Geschichte nach talmudischen, arabischen und andern Quellen* (Schriften herausgegeben von der Gesellschaft zur Förderung der Wissenschaft des Judentums), Frankfurt am Main: I. Kauffmann, 1929. Also see: ADOLPHE NEUBAUER, *La Géographie du Talmud; mémoire couronné par l’Académie des inscriptions et belles-lettres* (Études Talmudiques, première partie), Paris: Michel Lévy frères, 1868; reprinted, *La Géographie du Talmud*, Amsterdam: Meridian Publishing Co., 1965; Hildesheim: G. Olms, 1967.

<sup>7</sup> On p. 52 in: PHILIP SHAW, “Tone and Analogy in British Citizen Names”, *Orbis: Bulletin international de documentation linguistique* (Leuven/Louvain, Belgium), 35, 1988–1990 [1992], pp. 33–54.

er Bab-Nahara<sup>8</sup> is permitted. On what ground? If I answer because of the rapid flow of the stream and an unclean species of fish cannot exist in fast-flowing water since the backbone is lacking in them, we do see them existing there! If it be suggested that the reason is because the water is salty and an unclean species of fish cannot exist in salty water since scales are lacking in them, we do see them existing there! — Rather must the explanation be that the river-bed is such that it does not permit the breeding of the unclean species of fish. Rabina said: Since nowadays the rivers Goza and Gamda flow into [Bab-Nahara, its *zahanta*] is prohibited<sup>9</sup>. Abbaye said: The sea-ass [i.e., hake] is permitted, the sea-ox prohibited; and an aid to the memory is the unclean [on land, viz., the ass] is clean [in the water] and vice versa.

Pelusium, the Egyptian city at the mouth of the easternmost, now dry branch of the delta of the Nile, used to export textiles as well as fish. Aspamia instead is Spain. In the Mediterranean trade in Roman times, both the coastal towns of Egypt and Spain used to export fish, and such imported fish was found in the Land of Israel. Because of the Sages' knowledge of that produce, they assumed that only kosher fish was traded, if fish-entrails or fish-roe came from Pelusium or Spain.

The *tora de-yamma* (literally, 'sea-ox') is the ray, a cartilaginous sea fish<sup>10</sup>. The *ḥamra de-yamma* (literally, 'sea-ass') is the cod (the genus *Gadus*): the same semantic motivation was also found among the Greeks and the Romans, in the Greek fish name *onos* 'donkey' and Latin fish name *asellus* 'little donkey'. The *soltanit* or *sultanit* (סולתנית *swltnyt*) is identified with the sardinelle (the genus *Sardinella*) by Dor<sup>11</sup>. The fish named right after the *swltnyt* in the *Babylonian Talmud*, tractate *Avodah Zarah* 39a has its name spelled <'pys> (עפיץ), clearly a miscopying of <'py'n> (עפיאן), 'afyan (cf. Greek *aphye*, Latin *apua*): in fact, the of <'py'n> (עפיאן) 'afyan fish is named right after the *soltanit* or *sultanit* (סולתנית *swltnyt*) fish in the *Babylonian Talmud*, tractate *Hullin* 66a. Dor<sup>12</sup> identified the 'afyan fish with the sardine (the genus *Sardina*). The Greek name *aphye* was related to the belief that this fish kind does

<sup>8</sup> Footnote to the Soncino translation: "A tributary of the Euphrates".

<sup>9</sup> Footnote to the Soncino translation: "Because these streams carry unclean fish into it. [These three tributaries of the Euphrates flowed above Pumbeditha, OBERMEYER, *op. cit.* p. 228]".

<sup>10</sup> As already proposed by LEWYSOHN, *Die Zoologie des Talmuds*, p. 270.

<sup>11</sup> MENACHEM DOR, *Ha-ḥay bi-yemei ha-Miqra ha-Mishnah ve-ha-Talmud* [Hebrew: *The Fauna at the Times of the Bible, the Mishnah and the Talmud*], Tel-Aviv: Grafor-Daftal Books, 1997, p. 174.

<sup>12</sup> DOR, *Ha-ḥay*, p. 174.

not reproduce sexually like other fishes, but is generated by the foam of seawater<sup>13</sup>

Rashi's relevant glosses are as follows:

דלא מרבה טינא דג טמא - קרקעית של אותו הנהר אין מגדל דגים טמאים.  
 חמרא דימא ותורא דימא - דקי"ל במסכת חולין [דף קכז] כל שיש בים  
 יש ביבשה חוץ מן החולדה.  
 טמא - ביבשה טהור בים.

Of these glosses, the first one is to “that the river-bed is such that it does not permit the breeding of the unclean species of fish”, literally “as the mud of the river does not raise unclean fish”, with “unclean fish” being expressed as *dag tame*, a singular used collectively. Rashi states: “The floor of that river does not raise unclean fish/fishes (plural: *dagim tēme'im*)”.

The second gloss quoted is to *hamra de-yamma ve-tora de-yamma* (“the sea-ass and the sea-ox”). It cites tractate *Hullin* (folio 127 is intended), where it is stated: “Any that exists on dry land, exists in the sea, except the *hulda* [mustelid or viverrid]”.

The third gloss quoted is to “unclean”, which it completes with: “on dry land, is clean in the sea”. The sage Abbaye expressed the notion that given a pair of animal kinds, X being a terrestrial animal, and Y being a marine animal equivalent to X (i.e., the “sea-X”), then if X is kosher, one can infer that Y is not kosher.

### 3. More about Abbaye's Paradoxical Pattern

Abbaye's paradox of X being kosher and X-fish being non kosher, and vice versa<sup>14</sup>, also occurs in modern English fish-names, in relation to the kosher status of the signifieds. The pig is non kosher, and so is the hawk (a bird, a day raptor) and the parrot. In present-day American English terminology, *pigfish* denotes a kosher fish, *Orthopristis chrysoptera*, whereas *porkfish* denotes another kosher fish, *Anisotremus virginicus*. Both species belong to the grunts, i.e., family *Pomadasyidae*. The hogfish or capitaine (*Lachnolaimus maximus*, from the family *Labridae*) is a kosher fish. *Hawkfishes* denotes the family *Cirrhitidae*, including the hawkfish (*Cirrhitus* species). These are kosher, unlike the hawk (the bird). Parrotfishes are the fishes of the family *Scaridae*, and of the genus *Scarus* in particular. Unlike parrots, parrotfishes are kosher. From the family *Charangidae* (comprising jacks and pompanos), the horse mackerel (*Trachurus symmetricus*) is a kosher fish, whereas horse meat not

<sup>13</sup> As pointed out by LEWYSOHN, *Die Zoologie des Talmuds*, p. 261.

<sup>14</sup> “An aid to the memory is the unclean [on land, viz., the ass] is clean [in the water] and vice versa”.

kosher. (A non kosher fish belonging to *Charangidae* is the leatherjacket, i.e. the species *Oligoplites saurus*). Butterflies (the insects) are non kosher, but butterfly fishes (family *Chaetodontidae*) comprise kosher fishes<sup>15</sup>.

The dolphin (a mammal) is non kosher, but the dolphin fish (*Coryphaena*) is a kosher fish. Scorpions are non kosher, but scorpionfishes (family *Scorpaenidae*) comprise kosher fishes. Squirrels are non kosher, but squirrelfishes (the genus *Holocentrus*, and more in general family *Holocentridae*, which also comprises the menpachii, i.e., the genus *Myripristis*) are kosher fishes. Dogs are non kosher, but the dog salmon is kosher. The tilefish (*Logholatilus chamaleonticeps*, from *Branchiostegidae*) is a kosher fish, even though its scientific name states that it has the head of a chameleon, which is a non kosher animal. The goose is kosher fowl, but the goosefishes (*Lophius* species) are non kosher. Cows are kosher; cowfishes (*Lactophrys*) are non kosher. Moreover, note that whereas lizards are non-kosher, lizardfishes (*Synodidae*) are sardine-like marine fish with large scales, and are therefore kosher. They are common in the Israeli market, and are found on both the Mediterranean and Red Sea coasts of Israel.

By contrast, consistence instead of the paradox can be detected in the following. Cats are non kosher; all catfishes (order *Siluriformes*) are non kosher. The spoonbill, being related to the stork, is a non kosher bird. The spoonbill cat (also known as paddlefish, *Polyodon spathula*) is non kosher, like all other sturgeons. Dogs are non kosher, and dogfishes (like all other sharks) are non kosher. The wolf is non-kosher; wolffishes (also known as ocean catfishes, of the genus *Anarhichas*) is a non kosher fish. Rats are non-kosher; ratfishes (also known as chimaeras: order *Chimaeriformes*) are non kosher cartilaginous fishes. Snakes are non-kosher; snake mackerels (*Gempylus* species) are non kosher fishes. Toads are non-kosher; toadfishes (*Opsanus* species, and all other *Batrachoididae*) are non kosher. Snails are non kosher, and so are snailfishes, i.e., *Liparis* species (like all the lomosuckers, i.e., family *Cyclopteridae*, to which *Liparis* belongs).

By “Goatfishes or surmulletts”, Atz refers<sup>16</sup> to the family *Mullidae* of kosher fishes, such as the red mullet (*Mullus surmuletus*). Both the goatfishes and goats are kosher. Mulletts are the species of the genus *Mugil* (also kosher), or of the family *Mugilidae* in

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<sup>15</sup> See the list of kosher and unkosher fish by JAMES W. ATZ (2003). See: J.W. ATZ, “Kosher and Non-Kosher Fish”, Adapted by ARLENE J. MATHES-SCHARF for *Kashrut.com: The Premier Kosher Information Source on the Internet* (Sharon, Massachusetts), <http://www.kashrut.com/articles/fish> List updated on March 11, 2003; accessed in July 2004. Previously published by the Orthodox Union in *Kosher Guide* (1991) and in the *Orthodox Union Kosher Consumer Directory* (1991–1993).

<sup>16</sup> ATZ, *supra*.

general. The buffalo is considered to be kosher, and buffalo fishes (*Ictiobus* species, from the suckers, i.e., the family *Catostomidae*) are kosher fishes. The kosher status of the unicorn is problematic: considered to be related to the deer, it was considered kosher, but eventually some Jewish authority identified the rhino with the unicorn. Unicornfishes or kalas (*Naso* species), which belong to the surgeonfishes (family *Acanthuridae*) are kosher fishes. In Italian, *pesce porco* (literally, ‘pig fish’) is the name of *Oxynotus centrina*, which looks like a very fat shark<sup>17</sup>, and like all sharks, is non-kosher.

Sometimes the dubious kosher status of some fish (i.e., whether the scales are big and easily detached enough) was given dramatic expression, as in this recollection of the medieval German Rabbi Yehudah Ḥasid (the Pious) of having heard that once Rabbi Ephraim of Regensburg had permitted ‘*blbwṭ*’ fish to be eaten, but on that night he had a dream of being served a dish full of little unclean animals (*šrašim*) for him to eat; he was angry, but the one serving him told him: “Why are you angry? It is you who permit this”. He waked up, and remembered that on that day he had permitted the ‘*blbwṭ*’ fish. He immediately stood up, and broke all the pots and dishes that had contained that fish that they had eaten<sup>18</sup>.

#### 4. *A Different Exception to the Rule of There Being a Marine Equivalent for Every Terrestrial Animal Species, in The Life of Ben Sira*

In Version A of the *Life of Ben Sira*, a medieval Hebrew humorous work, the twenty-first question King Nebuchadnezzar asks the child prodigy Ben Sira is precisely about the absence of a marine equivalent of the *ḥóled*, as opposed to there being marine equivalents of all other terrestrial animals. Actually Ben Sira’s reply consists of a tale whose protagonist is the fox and the vixen, whereas the *ḥóled* engages in copycat action. In Version B, Nebuchadnezzar’s question is: “Why in the sea there is [a marine equivalent] of any creatures of your Creator, even of humans [i.e., sirens and tritons], except the fox?” The *ḥóled* is absent from the answer as well.

Yassif’s critical edition of the medieval *Ben Sira* proposes<sup>19</sup> that in the motif that the Sages had associated with the *ḥulda* was transferred there to the fox (*shu‘al*).

<sup>17</sup> E. TORTONESE and B. LANZA, *Pesci, anfibi e rettili*, in the series *Piccola Fauna Italiana*, Milan: Aldo Martello Editore 1968, pp. 20 and 23, Fig. 8A.

<sup>18</sup> This tale appears in *Or Zarua*, rules of *Avodah Zarah*, §200 (cf. *Tashbets*, §352), and was quoted in EPHRAIM ELIMELECH URBACH, *The Tosaphists: Their History, Writings and Methods*, 1st edition [Hebrew]. Jerusalem: The Bialik Institute, 1955, pp. 174–175.

<sup>19</sup> On p. 99 in ELI YASSIF (ed.), *The Tales of Ben Sira in the Middle Ages: A Critical Text and Literary Studies* [in Hebrew], Jerusalem: The Magnes Press, 1984. Yassif provided a critical edition, on the same page, of Version A and Version B of the *Life of Ben Sira*.



Perhaps this is so, because in the Middle Ages the fox was culturally more prominent<sup>20</sup>. Both animals are small-to-medium sized carnivores. Ben Sira's reply to the twenty-first question is as follows, in Version A:

Moreover, he [Nebuchadnezzar] asked him [Ben Sira]: "Why in the sea is there [a marine equivalent] of any creature that is in the world, but of the fox and of the *hóled* [i.e., mustelidae and viverridae] there are none?" He [Ben Sira] told him [Nebuchadnezzar]: "The fox, because he is astute. And there is in him [something] of any creature that there is in the world<sup>21</sup>. When the Angel of Death was created, he raised his eyes and saw that the world was full of all kinds of creatures. He told the Holy One, Blessed Be He: 'O Master of the universe! Let me kill all these!' He [the Holy One] told him [the Angel of Death]: 'I consigned to you everyone, except the kind [*doró*, literally: 'generation'] of the bird *Melham* [the Phoenix, but the name *Melham* is unique to *Pseudo-Sirach*] because all of My creatures tasted the taste of sin, but he [that bird] did not want to taste. Hence he was called *Melham*, as it took pity of himself and fled from sin. [Perhaps that name as being a co-derivative of *nilhám* 'fought' against sin is intended? Cf. *milhamá* 'war'.] He [the Angel of Death] said: 'O Master of the universe! If such is your wish, let me separate him [the bird *Melham*] from all sins'. He [the Holy One] told him [the Angel of Death]: 'Do so!'. Then he [the Angel of Death] built a great city, and introduced there *Melham*, and he inscribed on its gates: 'The Holy One, Blessed Be He, has already decreed that on you neither the sword of the Angel of Death, nor the power of any human being shall have dominion'. Again, he [the Angel of Death] said: 'O Master of the universe! What shall I do to the other creatures?' He [the Holy One] told him [the Angel of Death]: 'Take a couple of every kind of creature, and throw [them] into the sea. And let them be there as they were in the Ark, and the rest shall die by your means'. Immediately, he [the Angel of Death] took a couple of each and every kind and threw [them] into the sea, until he reached the fox and his female.

<sup>20</sup> In the words of HANS-JÖRG UThER (*infra*, p.133), "the fox in international folktales, both written and oral [...] is taken to be the incarnation of cunning, slyness, perfidy, and even wickedness. However, more positive qualities and faculties, such as an ingenious mind, a readiness to care for and help others, quickness, and circumspection are also recognized. This is a sign of the ambivalence considered to be characteristic for all animals". Moreover, Uther states (*infra*, p.143, his brackets): "Although the fox induces various animals to self-deception when they look at their reflection in the water (ATU 34, 92, and others), the fox itself is said to have met with a similar fate (for example in Mongolia [LÖRINCZ 1979, nos. 34, 34A\*]). HANS-JÖRG UThER, "The Fox in World Literature: Reflections on a 'Fictional Animal'", *Asian Folklore Studies* (Nanzan University), 65(2), 2006, pp. 133–160 (<http://www.jstor.org/stable/30030396>); LÁSZLÓ LÖRINCZ, *Mongolische Märchentypen* (Asiatische Forschungen, 61), Wiesbaden: Harrassowitz, 1979.

<sup>21</sup> Version B instead states: "Because he [the fox] is more astute than any creature".

What did they do? Intelligently, they went and lied flat on the beach, and told the Angel of Death: ‘Your Majesty! Why are you looking for us?’ He [the Angel of Death] replied to them: ‘I have come in order to throw you into the sea’. They told him: ‘Will you take [and throw into the sea] two couples of us?’ He told them: ‘No’. They told him: ‘But a couple [of foxes] was submerged into the sea’. The Angel of Death raised his eyes and saw the image of a fox and of his female in the sea. He reckoned that a couple of their species was submerged in the sea. They told them [the fox and vixen on the beach]: ‘You can go’. They went away, and fled. The *hóled* [i.e., a mustelid or viverrid: say, the marten] and his female encountered him [the fox]. The *hóled* [marten] told them: ‘Why are you fleeing?’ He [the fox] told them: ‘Such and such things happened to us because of the Angel of Death’. Upon hearing what the fox had related, the marten told his female: ‘Just as the fox, who has many enemies<sup>22</sup>, has escaped by his cunningness, I, who am mentioned among neither the dead nor the quick [literally: the living ones and the dead ones]<sup>23</sup>, all the more so: I shall go and do as the fox did’. He went and did likewise, and escaped from him [from the Angel of Death]. Therefore there are in the sea [marine equivalents] of every kind of creature, except those species [the fox and the marten]. Some time afterwards, the Leviathan carried out a census in the sea, and did not find there those two kinds<sup>24</sup>. He told the fishes of the sea: ‘Why do you lack the fox and the marten?’ They told him [the Leviathan]: ‘The fox escaped by his cunningness’. Straightaway, he [the Leviathan] gave order to the fishes: ‘Go and bring to me the fox, the most astute of all creatures, so I shall eat the heart of stone that is inside him!’ Upon hearing that, the fishes gathered, all of them, near the beach and saw a fox standing there on the beach. They rejoiced very much, and danced in front of him. The fox told them: ‘Happy the one who will eat his fill of your flesh!’ They said: ‘If you want to eat your fill of our flesh, enter the sea and you shall eat your fill whenever you want!’ And they rejoiced and danced in front of him. The fox shook his head toward them and said: ‘Who could eat his fill of your flesh?!’ They said: ‘If you want to eat your fill of our flesh, enter the sea, and there is a royal

<sup>22</sup> MS Vatican 271 of Version A of the *Life of Ben Sira* adds to “Just as the fox, who has many enemies” the words “who inform about him”.

<sup>23</sup> Apparently, being indifferent, such that neither the living, nor the dead would bother about him.

<sup>24</sup> According to Version B (which skips the episode of the copycat action of the marten), “one year afterwards [i.e., after the fox escaped], the Leviathan saw those who entered the sea, he made a calculation [or rather: reckoned], and found that the fox was missing. The Leviathan said: ‘Where is the fox?’ They told him: ‘She escaped by her cunningness’”. Use of the feminine, along with knowledge of the fact that dialectal Italian fruit names were incorporated in Version B in the list of the thirty fruit trees, strongly suggests that agreement with the feminine here is because in Italian, *volpe* (or dialectally: *golpe*) for ‘fox’ is feminine (unlike *goupil* in dialectal French). The unmarked gender for the lexical concept ‘fox’ is feminine, in Italian. Concerning the Italian dialectal names for fruit trees, see: EPHRAIM NISSAN and DARIO BURGARETTA, “On the Italian Botanical Glosses in Version B of the *Life of Ben Sira*”, in press in *Quaderni di Semantica*.

throne ready for you there. And you shall reign over us, as the Leviathan, our king, is already dead. This is why we came, all of us, in order to look for a king'. He [the fox] told them: 'I don't want to reign over you in the sea. But if it is true that you want to make me king, I shall reign over you here'. They told him: 'You, they say you are the most intelligent animal, but you are only an idiot! Don't you know that the humans make networks and webs in order to catch us inside the sea? Should we climb up to dry land, all the more so [i.e., we shall be all the more vulnerable]<sup>25</sup>. Now, if you want to rule over us, come with us to that stone, sit on it, and you shall reign over us, who are children [i.e., creatures] of the seas'. There and then, he [the fox] wanted to jump into the sea, but he was afraid<sup>26</sup>. The fishes told him: 'Don't you know that proverb which humans use? [Aramaic:] «He who wants to eat, he submerges his legs among the reeds/bulrush». If you want to reign over us, enter and you shall reign over the creatures of the seas'. Straightaway, the fox jumped into the sea. And he went with them. When they passed by the place where they had say they would make him king, he<sup>27</sup> told them: 'Where are you taking me to?' They told him: 'To the Leviathan, because he wants to eat your heart'. He told them: 'Why didn't you tell me that when I was on dry land? Then I would have entered [the sea] along with my heart. Because I don't have it with me now, as I forgot it on dry land!' They told him: 'Are you sure?' He told them: 'Indeed. Take me to dry land, I shall take it and will come with you'. They immediately returned him to dry land, and he began to dance and to deride them. They told him: 'Why are you deriding us?' He told them: 'You idiots! I escaped from the hand of the Angel of Death, and I outsmarted/derided him; shall I not outsmart/deride you?!' They told him: 'Did thou not tell us: «Take me out, [...] with you?»'<sup>28</sup> He told them: 'You idiots! Had my heart<sup>29</sup> been with me [i.e., had I been in my right mind], would I

<sup>25</sup> Either a source, or a parallel for the motif of the fish providing the fox with that answer is in the talmudic anecdote about Rabbi Aqiba, who during the Hadrianic persecutions, when Jews in the Land of Israel were forbidden to engage in the study of the Law, was nevertheless teaching. Another sage remarked to him about the risk of being caught. Rabbi Aqiba reportedly retorted with a fable about the fox who wanted to catch fish: the fox invited them to come on dry land, so they could be friends. The fish replied that he, who is believed to be intelligent, is instead an idiot, as their lives are in danger even inside the water, all the more so on dry land. Rabbi Aqiba's point was that the Jews would cease to exist, if they were to abide by the evil decree and abstain from learning their Law.

<sup>26</sup> In Version B, the fox jumps without much ado.

<sup>27</sup> The fox became suspicious as they were going further than that place.

<sup>28</sup> That sentence is garbled in Version A. Its parallel in Version B is: "Why then did you say: 'Let me get out, because my heart is not with me'?"

<sup>29</sup> The fox at this point in the tale is playing with a double sense: the heart in the anatomical sense, and the heart in the metaphorical sense 'understanding' or 'intelligence' (cf. "And his heart understands (*ul'ēvavó yavin*)" in *Isaiah* 6:10). In the *Babylonian Talmud*, in the last line of tractate *Berakhot*, 61a, claims: "The Sages stated: 'The kidneys give counsel (*kēlayót yo 'ašót*), the heart understands

have entered the sea [to be] with you?!’ When they heard that much, they returned to the Leviathan weeping. They related to him all that matter. He [the Leviathan] told them: ‘He behaved properly: he did not come to me, because he is wicked and cunning’<sup>30</sup>. They told him [the Leviathan]: ‘This is why we were unsuccessful, and did not bring him’<sup>31</sup>. Therefore, those ones [the fox and the marten] are not in sea’. He [Nebuchadnezzar] told him [Ben Sira]: “Well done!”<sup>32</sup>

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(*lev mevin*)”’. Rashi has two glosses for this: “‘The kidneys give counsel (*kēlayót yo ‘ašót*)’ to the heart: ‘Do so’”; and “‘And the heart understands (*vehallév mevin*)’: what it has to do, whether to obey the advice of the kidneys or otherwise. And whence {do we learn, i.e., what is the evidence} that the kidneys give counsel? As it is said {(*Psalms* 16:7)}: ‘I shall bless the L-rd who advised me; also by night, my kidneys admonished me’. And whence {do we learn} that the heart understands (*šehallév mevin*)? As it is said {(*Isaiah* 6:10)}: ‘And his heart understands (*ulěvavó yavin*)’”’.

30 In Version B, the Leviathan says instead: “You behaved properly, not bringing him here, because of his exceeding wickedness”. That apparently implies that had the fox been in the Leviathan’s presence, presumably the fox would have been a troublemaker, would have outsmarted everybody and would have wrecked havoc.

31 Interestingly, neither Version A nor Version B has the Leviathan punish the unsuccessful fish by devouring them. That is something that in tales (or then in *Star Wars* films), one would expect of a terrible master whose subordinates report having been unsuccessful, if they can be easily replaced (e.g., Darth Vader disintegrates them). In both Version A and Version B of the *Life of Ben Sira*, the Leviathan, once told about their failure by the fish, merely makes a verbal comment about the fox.

A huge monster fish is not invariably one that devours the other fish. According to Tibetan lore, in a previous life Buddha transformed himself into a huge fish, for the precise purpose of containing a huge quantity of flesh with which to feed his people. See: WILLIAM WOODVILLE ROCKHILL, “Tibetan Buddhist Birth-Stories: Extracts and Translations from the *Kandjur*”, *Journal of the American Oriental Society*, 18 (1897), pp. 1–14. In Rockwell’s Section 3, “*Jātakas* in the *Djang lun*”, one of the items listed is as follows (p. 5): “Ch. 35. Two birth stories: in the first, the Buddha was King “Eye-opener”; in the second, he was King Shuto-lag-gar-ni, who killed himself to become a monster fish on which his people fed in a time of famine”. Note that according to a rabbinic eschatological tradition, the flesh of the Leviathan is reserved for the righteous to eat at a banquet in the world to come. The other facet of the medal of Buddha the helper is than in some reincarnations, Buddha is not only helpful, but sacrifices himself for others’ good.

32 According to the early medieval Hebrew homiletic work *Pirke de-Rabbi Eliezer*, the fish that swallows Jonah tells him that on that very day, he, the fish, is scheduled to be devoured by the Leviathan. Jonah is confident he can have them avoid that fate, and tells the fish to take him to the Leviathan. Jonah scares the Leviathan, by proving — by exhibiting the visible evidence of this — that he partakes of the Covenant of Abraham. Jonah does that much by uncovering himself indecently, which by itself, in context, “would suggest the bare possibility rather than the probability of a sense of humour”: we are recycling this wording from a different context, on p. 33 in LONSDALE RAGG, “Wit and Humour in Dante”, *The Modern Language Review*, 8(1), 1913, pp. 27–46).

The Leviathan, upon seeing that Jonah is circumcised, flees. Jonah points out to the fish that he, Jonah, saved the fish from being devoured by the Leviathan. As a reward, the fish takes him on a sightseeing tour (thus, Jonah sightseeing underwater is an occurrence of a motif also found in



Fig. 1. The *Steipereidur*, “the tamest of the whales”, according to the Latin text accompanying a map by the Flemish cartographer Abraham Ortelius, from his map of Iceland the way it appear in the 1603 edition of *Theatrum Orbis Terrarum*, first published in 1570. This kind of *cetus* supposedly fought other whales on behalf of fishermen<sup>33</sup>.

*Pseudo-Callisthenes*, about Alexander the Great sightseeing underwater). The fish shows Jonah the foundations of the earth: the earth is on water. Therefore, the fish is able to take Jonah under Jerusalem. Jonah becomes aware that he is under the Temple of Jerusalem, because on top of Hell he sees the sons of Korah praying, and they warn him that he should seize his opportunity.

The Latin noun *fascinum* denotes ‘evil eye’, ‘bewitching, spell’ in Pliny the Elder, but ‘*membrum virile* as a protection against witchcraft or the evil eye’ as occurring in Horace and others. In contrast, Jonah exposing himself to the Leviathan is not exercising magic; rather, he informs the Leviathan that Jonah himself is a member of Abraham’s Covenant, and therefore the Leviathan can expect divine punishment in case it devours this man. The Leviathan and the underwater environment are wondrous. Arguably the point of the passage is that the wondrous realm is mindful of the Covenant (even though the Gentiles whom the text’s readers met with are often not). The Leviathan does understand that Jonah, because of his faith allegiance, is well-connected High Above, and this must matter very much in the wondrous realm.

<sup>33</sup> JOHN K. PAPADOPOULOS and DEBORAH RUSCILLO, “A Ketos in Early Athens: An Archaeology of Whales and Sea Monsters in the Greek World”, *American Journal of Archaeology*, 106(2), 2002, pp. 187–227, at p. 222. A thematically related paper is: ARTHUR WAUGH, “The Folklore of the Whale”, *Folklore*, 72(2), 1961, pp. 361–371.



Fig. 2. Hero fighting a *ketos*: detail from a Caeretan hydria, ca. 520–510 B.C.E.<sup>34</sup>



Fig. 3. Hero fighting a *ketos*: detail from an Etruscan red-figure crater, now in Perugia, Italy<sup>35</sup>.

<sup>34</sup> The full image is Fig. 28 on p. 218 in Papadopoulos and Ruscillo, “A Ketos in Early Athens”.

<sup>35</sup> The full image is Fig. 27 on p. 218 in Papadopoulos and Ruscillo, “A Ketos in Early Athens”.

5. *Considerations about the Tale of the Fox and the Fish*

In his critical edition, Yassif<sup>36</sup> presents another association, from Version A of the *Life of Ben Sira*, of the *shu'al* with the *hulda*, namely, in a passage in which the male fox and his vixen, having escaped from the Angel of Death, meet the male marten and his female:

Immediately, he [the Angel of Death] took a couple of each and every kind and threw [them] into the sea, until he reached the fox and his female. What did they do? Intelligently, they went and lied flat on the beach, and told the Angel of Death: “Your Majesty! Why are you looking for us?” He [the Angel of Death] replied to them: “I have come in order to throw you into the sea”. They told him: “Will you take [and throw into the sea] two couples of us?” He told them: “No”. They told him: “But a couple [of foxes] was submerged into the sea”. The Angel of Death raised his eyes and saw the image of a fox and of his female in the sea. He reckoned that a couple of their species was submerged in the sea. They told them [the fox and vixen on the beach]: “You can go”. They went away, and fled. The *hóled* [i.e., a mustelid or viverrid: say, the marten] and his female encountered him [the fox]. The *hóled* [marten] told them: “Why are you fleeing?” He [the fox] told them: “Such and such things happened to us because of the Angel of Death”. Upon hearing what the fox had related, the marten told his female: “Just as the fox, who has many enemies, has escaped by his cunningness, I, who am mentioned among neither the dead nor the quick [literally: the living ones and the dead ones], all the more so: I shall go and do as the fox did”. He went and did likewise, and escaped from him [from the Angel of Death].

Yassif reasons as follows<sup>37</sup>: whereas the *Life of Ben Sira* apparently originated in Mesopotamia<sup>38</sup>, Version A appears to have been shaped in Western Europe during the 11th century (its presence in Provence in the first half of the 11th century is proven)<sup>39</sup>; in Western Christendom, the literary formation of the cycle of *Reynard the Fox* (*Roman de Renard*, *Fuchs Reinhart*) began in the tenth and 11th centuries, becoming widespread by the 13th and 14th. The cunning fox has many enemies, who are his victims who complain about the fox to the King of the Animals. According

<sup>36</sup> On p. 99, fn. 34, in ELI YASSIF (ed.), *The Tales of Ben Sira in the Middle Ages: A Critical Text and Literary Studies* [in Hebrew], Jerusalem: The Magnes Press, 1984.

<sup>37</sup> YASSIF, p. 99, fn. 34.

<sup>38</sup> On p. 27, YASSIF dates this from the late ninth century or the early tenth century. He locates this in Iraq on p. 29.

<sup>39</sup> YASSIF, p. 21.

to Yassif<sup>40</sup>, it is only by reference to this, that one can make proper sense of “Upon hearing what the fox had related, the marten told his female: ‘Just as the fox, who has many enemies, has escaped by his cunningness, [...]’”.

Importantly, Yassif<sup>41</sup> suggests that the given episode — in the narrowest sense, this would be what the male marten tells his female concerning the fox — is an addition from Germany or France, by somebody who wanted to insert in the tale about the fox a reference to lore that was current concerning the fox at his time and place.

Yassif however ascribes to that addition also the aim to reconcile what the rabbinic sages of old had claimed about the *hóled*, with the same story being told in the *Life of Ben Sira* about the fox instead. This is why in Version A, it is not only the fox, but also (in agreement with rabbinic tradition) the marten that has no marine equivalents, whereas the earlier text of the *Life of Ben Sira* apparently ascribed that feature to the fox alone (thus transferring that feature from the marten to the fox, and implicitly excluding the marten).

In the *Life of Ben Sira*, the aetiological tale<sup>42</sup> that relates how the Angel of Death was ordered to kill all animals except a couple of each kind to be thrown into the sea, and these survive there like the couples in the Ark<sup>43</sup>. The fox and vixen tricked him into taking their reflection in the water for a couple already in the sea. Once saved, they were emulated by the *hóled* (mustelidae and viverridae). Therefore of all land animals, one finds their likes in the sea, except those two kinds<sup>44</sup>.

The demon tricked by a mirror is Aarne and Thompson’s (1928) tale type 1168A<sup>45</sup>; it apparently spread from India through the tales in the Arabic *Kalila wa-Dimna*.

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<sup>40</sup> YASSIF, p. 99, fn. 34.

<sup>41</sup> YASSIF, p. 100, fn. 34.

<sup>42</sup> Its original text according to Versions A and B is given by ELI YASSIF in his critical edition, on pp. 250–251.

<sup>43</sup> The making in the present days of fables concerning particular animal species in Noah’s Ark was discussed by EPHRAIM NISSAN, “In the Garden and in the Ark: The *belles lettres*, Aetiological Tales, and Narrative Explanatory Trajectories. The Concept of an Architecture Combining Phono-Semantic Matching, and NLP Story-Generation”, *DSH: Digital Scholarship in the Humanities*, in press.

<sup>44</sup> See a discussion in YASSIF’s book on *Pseudo-Sirach*, pp. 97–104.

<sup>45</sup> ANTTI AARNE and STITH THOMPSON, *The Types of the Folktale: A Classification and Bibliography*, by A. Aarne, translated and enlarged by S. Thompson (Folklore Fellows Communications, 74), Helsinki: Suomalainen Tiedekatemia = Academia Scientiarum Fennica, 1928; 2nd revision: (Folklore Fellows Communications, vol. 75, no. 184), 1961; reprints: 1973, 1964, 1981. Another reprint: B. Franklin, New York, 1971. Aarne’s German original was *Verzeichnis der Märchentypen*.



Douglas Galbi has pointed out<sup>46</sup> a parallel with a tale from the Sanskrit *Panchatantra*, Ch. 4 (“Loss of Gains”)<sup>47</sup>, and signalled that a variant of the tale exists in *Shuka Saptati*, tale 67<sup>48</sup>. Galbi wrote:

Within its answer to one such question, the *Alphabet of Ben Sira* significantly revises a story from the Sanskrit work *Panchatantra*. In the *Panchatantra*, a monkey climbs on the back of a crocodile to be taken to the crocodile’s home. The crocodile plans to kill the monkey in order to get the monkey’s heart that his wife wants to eat. In the middle of the ocean, with the monkey riding on the crocodile’s back, the crocodile reveals his plans to the monkey. The monkey tricks the crocodile into returning him to his home on the shore by claiming that he would retrieve a second heart much sweeter to eat than the one he had with him. In a similar story in the *Alphabet of Ben Sira*, a fox rides into the middle of the ocean on the back of a fish. In this version of the story, the fox dupes the fish into returning him to shore with the claim that he does not have his heart with him: “For our custom is to leave our heart in our residence when we travel. If we need it, then we fetch it. If not, it remains at home.”

Already Israel Abrahams<sup>49</sup> mentioned the parallel from the *Panchatantra*. Abrahams cited Vol. 2 of Benfey’s translation of the *Panchatantra*. I would like to signal parallels from the Far East. The following is tale 323, “The Silly Jelly Fish”, from a collection of Far Eastern tales edited by Elswit<sup>50</sup>:

The wife of the Sea Dragon king says only Monkey’s liver will cure her illness. The Dragon King asks his Jelly-Fish servant to bring Monkey into the sea. The Jelly-Fish coaxes Monkey onto his back, but when they are half-way across the water Monkey discovers why Jelly-Fish has come for him. He feigns dismay, saying that he left his liver in a tree back on the land. Jelly-Fish floats Monkey back to get his liver, but the minute Monkey touches land, he zips up high in the tree and says he cannot find it. Jelly-Fish reports to the

<sup>46</sup> DOUGLAS GALBI, “Alphabet of Ben Sira: Mocking Learning with Justice”, in his blog *Purple Motes*, 7 July 2013 (<http://purplemotes.net/2013/07/07/alphabet-of-ben-sira-mocking-learning-justice/>), which he has kindly brought to Nissan’s attention.

<sup>47</sup> Translated from Sanskrit by ARTHUR W. RYDER, *The Panchatantra*, Chicago, Illinois: University of Chicago Press, 1925, pp. 381–388.

<sup>48</sup> Translated from Sanskrit by A.N.D. HAKSAR, *Shuka Saptati: Seventy Tales of the Parrot*, New Delhi: Rupa Co., 2009, pp. 196–199.

<sup>49</sup> ISRAEL ABRAHAMS, “The Fox’s Heart”, *Jewish Quartely Review*, 1 (1889), pp. 216–222.

<sup>50</sup> On p. 177 in SHARON BARCAN ELSWIT, *The East Asian Story Finder: A Guide to 468 Tales from China, Japan and Korea, Listing Subjects and Sources*, Jefferson, North Carolina: McFarland, 2014 (paperback; on a different page in the McFarland 2009 illustrated casebound edition).

Dragon King, who has his officers beat the Jelly-Fish until there are no bones in his body.

This is a version from Japan. It a tale about clever escape, but when the tale features the jelly fish, it is also an aetiological tale about how it came upon to pass that the jelly fish has no bones or shell. In fact, among her sources, there are two Japanese versions published in different books under the title “Why the Jelly Fish Has No Bones” or “Why the Jelly Fish Has No Shell”. Elswit enumerates Japanese, Chinese, and Korean variants. In Korean variants, the cunning animal is a hare or rabbit, saving itself from the turtle that was sent to lure it for its liver or heart or eyes.

#### 6. *Talmudic Aramaic Fish Names Based Upon the Name for Some Terrestrial Animal, and Greek or Latin Examples*

Paul Barbier, fils (Jr.) was a major authority on Romance fish names<sup>51</sup>. Barbier’s analysis of Latin *asinus* or *asellus* (a fish so called after the donkey)<sup>52</sup> is a superb example of the extent to which language contact is only part of the story: cultural contact plays a huge part, and the idea of land animals having aquatic equivalent underwent remarkable Judaisation in more than one way once it found its way into Jewish sources; lexical reflexes by semantic calque are only part of a broader picture.

By semantic calque from the Greek equivalent (the fish name *onos*), one also finds the “sea donkey” (the genus *Gadus*?) in the Aramaic of the *Babylonian Talmud*: *ḥamra de-yamma* ⟨ḥmr’ dym’⟩ stated to be kosher (*Babylonian Talmud*, tractate *Avodah Zarah* 39a<sup>53</sup>). As a mnemonic device, the talmudic text pointed out a

<sup>51</sup> He is the author of the papers “Le mot *bar* comme nom de poisson en français et en anglais », *Revue des Langues Romanes*, 5th series, 48 (1905), pp. 193–199; “Étymologie et dérivés romans du lat. *acernia, acerna*”, *The Modern Language Review*, 8(2), 1913, pp. 185–188; “Deux noms de poissons”, *The Modern Language Review*, 9(2), 1914, pp. 190–196.

PAUL BARBIER, fils, also authored a series of papers published in 1908–1936, namely, “Noms de poissons. Notes étymologiques et lexicographiques”, *Revue des Langues Romanes*, 51, pp. 385–406 (1908); 52, pp. 97–129 (1909); 53, pp. 26–57 (1910); 54, pp. 149–190 (1911); 56, pp. 172–247 (1913); 57, pp. 295–342 (1914); 58, pp. 270–329 (1915); 63, pp. 1–68 (1925–1926); 65, pp. 1–52 (1927–1928); 67, pp. 275–372 (1933–1936).

<sup>52</sup> In BARBIER (1910, *supra*), Sec. 89 is about Latin *asellus, asinus* (which are primarily names for ‘donkey’).

<sup>53</sup> Cf. MENACHEM DOR, *Ha-ḥay bi-yemei ha-Miqra ha-Mishnah ve-ha-Talmud* [Hebrew: *The Fauna at the Times of the Bible, the Mishnah and the Talmud*], Tel-Aviv: Grafor-Daftal Books, 1997, p. 174), whereas contiguously the *tora de-yamma* ⟨twr’ dym’⟩ (Aramaic for “sea bull”) is stated to be non kosher (*Babylonian Talmud*, tractate *Avodah Zarah* 39a; DOR, *supra*, p. 180).

paradox: “Abbaye said: the ‘sea donkey’ is kosher, the ‘sea bull’ is non kosher. The signs for you [to remember] are: the one unclean [i.e., the kind of beast living on earth] is clean [i.e., the fish so named in the sea], and the one clean [the kind of beast on earth] in unclean [i.e., the fish]”. See above on p. 58.

Chapter 4 in Michael Fontaine’s book *Funny Words in Plautine Comedy*<sup>54</sup> is concerned with “the role of the audience in a Plautine performance”<sup>55</sup>. It is entitled “Innuendo and the Audience”<sup>56</sup>. “A striking feature of Plautine drama is the extent to which the characters try to draw us into the play, competing with each other for our sympathies”. “Who was in Plautus’ audience, and how can we tell?” “I hope to break some fresh ground here by reorienting discussion around what Plautus does *not* say; that is, I propose to enlarge the data set by examining the style, the quality, and the content of his innuendo”.

For example, the greedy character of Lycus (Wolf) in the comedy *Poenulus* (*The Little Carthaginian*) is from a town in Acarnania, thus suggesting ἀκαρνάν, one of the names of “the predacious *wolf*-fish (probably the bass)”<sup>57</sup>, called *lupus* ‘wolf’ in Latin, and reputed in Rome to be a fish feeding on sewage — aptly for the given character, because of his dishonourable occupation<sup>58</sup>. The plot is about his being entrapped by a bailiff and witnesses. Reference is made to the money involved in the entrapment: “aurum [...] comicum”, i.e., ‘stage-money’<sup>59</sup>. Fontaine explains<sup>60</sup>:

Since we are supposed to be able to see what they are holding, the witnesses do not bother to tell us what it is. Nevertheless, from other sources we are able to piece together the conclusion that their stage money consists of the golden yellow beans of the lupine, a plant that in Latin is called *lupinus* or *lupinum*. This is the missing connection that we need.

There is a pun, and it is conveyed visually, because the plant is not mentioned verbally, but can be assumed to have been shown by the witnesses to the audience of Plautus’ play. As an adjective, *lupinus* means ‘wolfish’. We can see then that a terrestrial

<sup>54</sup> M. FONTAINE, *Funny Words in Plautine Comedy*, New York & Oxford: Oxford University Press, 2010.

<sup>55</sup> FONTAINE, p. 147.

<sup>56</sup> FONTAINE, p. 149. The next three quotations are from that same page.

<sup>57</sup> FONTAINE, p. 151.

<sup>58</sup> FONTAINE, pp. 151–152.

<sup>59</sup> FONTAINE, pp. 152–153.

<sup>60</sup> FONTAINE, p. 153.

animal (the wolf)<sup>61</sup> lent its name to a fish at the lexical level, that it is also a corradical of a plant name, and that all three were combined in wordplay in Plautus' comedy.

Ludwig Lewysohn<sup>62</sup>, followed by Dor<sup>63</sup>, identifies the *tora de-yamma* with the ray, a cartilaginous fish. Dor also has an entry for the *hamra de-yamma*, which he identifies with the genus *Gadus*, i.e., the cod, a sea-fish called *šibbūt* in Israeli Hebrew, in contradiction with the talmudic tradition and the Iraqi Jewish tradition up to the present, for which that name denotes a particular, much appreciated kind of riverine fish. Dor<sup>64</sup>, s.v. <šybwṭ>, proposed that perhaps the talmudic fish called <šybwṭ> was *Gadus*, referring to the statement (*Babylonian Talmud*, tractate *Hullin*, 109b) that “the pig [tastes like] the brain of <šibbūtā>”.

Dor remarked that Lewysohn's identification of the rabbis' “sea donkey” <ḥmr' dym'> with the cod was based on names in Aristotle and Pliny, and proposed that the analogy is correct: “One is right to assume that a fish called *Onos* in Greek and *aseillus* in Latin — the ass of the sea — was called likewise in Aramaic. In the *Talmud*, usually the Greek names for fish appear in loan-translation.” Such semantic calques are also found in Syriac: <'rnb' dyma> (literally “sea hare”) is found in Syriac, with a cognate in Arabic, and is a calque after the Greek *λαγῶς θαλάσσιος*<sup>65</sup>.

<sup>61</sup> Actually, the onomasiological motivator ‘fox’ occurs in various languages in names for fish (not the same that are motivated by ‘wolf’), e.g., the scientific name *Albula vulpes* (and Italian name for which is *volpe biancastra*); the scientific name for a shark species, *Alopias vulpinus*, called in Italian *pesce volpe*; or then *pesce volpe*, regionally in Italy *volpe di mare* or *volpe marina* for the fish *Onos mediterraneus* = *Motella fusca* (E. TORTONESE and B. LANZA, *Pesci, anfibi e rettili*, in the series *Piccola Fauna Italiana*, Milan: Aldo Martello Editore 1968, p. 57; G. DEVOTO and G.C. OLI, *Vocabolario illustrato della lingua italiana*, Milan: Selezione dal Reader's Digest, 1st edition, 1967, s.v. 2 *volpe*, acceptance 4); and *volpina*, an Italian regional name for the grey mullet, i.e., the fish *Mugil cephalus*, in standard Italian *mùggine comune* (DEVOTO and OLI, *supra*, s.vv. *volpina*, 2 *mùggine*), known in French as *mulet* [lit. ‘mule’] or *muge*, and now called by Israeli zoologists *qifón*, but in the Israeli marketplace by the Arabic name *būrī* — an Arabic name in use in countries on the Mediterranean, but also in use in Iraqi Arabic and in Baghdadi Judaeo-Arabic for the same species. Nissan understands from his mother, a native of Baghdad, that also in Baghdad *būrī* is a fish name: the name for ‘grey mullet’, a marine fish.

<sup>62</sup> LUDWIG LEWYSOHN, *Die Zoologie des Talmuds: Eine umfassende Darstellung der rabbinischen Zoologie, unter steter Vergleichung der forchungen älterer und neuerer Schriftsteller*, Frankfurt am Main: Selbstverlag des Verfassers, in Commission bei J. Baer, 1858.

<sup>63</sup> DOR, *supra*, p. 180.

<sup>64</sup> DOR, p. 174.

<sup>65</sup> On p. 21, §84, in IMMANUEL LÖW, “Aramäische Fischnamen”, in his *Fauna und Mineralien der Juden*, edited by ALEXANDER SCHEIBER, pp. 3–24, Hildesheim, Germany: Georg Olms. Originally, pp. 549–570 in *Orientalische Studien Theodor Nöldeke zum siebzigsten Geburtstag*, 1 (Giessen, 1906).

The ‘*izza de-yamma* <‘yz’ dym’>, literally “sea-goat”, mentioned as a fish with horns in the *Babylonian Talmud*, tractate *Bava Batra*, 74a, was taken to be some fabulous animal by Jastrow,<sup>66</sup> and if so, this would correspond to the Graeco-Roman imaginary about a sea-creature half-fish, half-capricorn. Also consider a paper by Green, entitled “A note on the Assyrian ‘goat-fish’, ‘fish-man’ and ‘fish-woman’”.<sup>67</sup> In that paper, Green provides a discussion of part fish, part human or part goat characters in Assyrian iconography. Dor however, a zoologist rather than a philologist or an archaeologist, tentatively identified<sup>68</sup> the ‘*izza de-yamma* with the fish *Naso brevirostris*, whose English name is *spotted unicorn*. It has a horn on its forefront. (Its Israeli Hebrew name is *qarnappón érekh-qéren*, literally “long-horned little rhinoceros [little horn-nosed]”).

The “sea-goat” (*aigkereus*, Αἰγοκερέυς), the Capricorn, already known from Mesopotamian texts by the Sumeran name MUL.SU.ḪUR.MÁŠ (or even MÁŠ for short), is the subject of an article by Albrile<sup>69</sup>. A Capricorn appears in a stucco medallion preserved in one of the palaces adjacent to the palace of Khosrow I (itself from the middle decades of the sixth century C.E.). Sasanian textiles (imported to Byzantium) sometimes share visual motifs with stucco representations. Well into the Islamic period, Oriental silks used to arrive into southern Italy into the port cities of Amalfi, Salerno, and Naples. According to Albrile, this may be how the visual motif of the Capricorn (along with other motifs from Iranian art) reached Western Europe and the visual traditions of its own religions<sup>70</sup>. Albrile’s article is summarised as follows in an English-language editorial<sup>71</sup>:

He inquires into the symbolism of the Capricorn — the “Goat-fish” (or: “Sea-Goat”) known already in Assyro-Babylonian antiquity — for the purpose of tracing the evolution that led this astral sign from its more ancient origins to its Christian “transcription” through the mosaics of Romanesque churches.

<sup>66</sup> MARCUS JASTROW, *Dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Midrashic Literature* (2 vols.), London: Luzac & Co.; New York: G.P. Putnam’s Sons; Leipzig: Trübner & Co., 1903 (often reprinted by various publishers). Downloadable:

Vol. 1: <http://www.hebrewbooks.org/pdfpager.aspx?req=38236>.

Vol. 2: <http://www.hebrewbooks.org/pdfpager.aspx?req=38237>.

<sup>67</sup> A. GREEN, “A note on the Assyrian ‘goat-fish’, ‘fish-man’ and ‘fish-woman’”, *Iraq*, 48 (1986), pp. 25–30, pl. V–X.

<sup>68</sup> DOR, *supra*, p. 177.

<sup>69</sup> EZIO ALBRILE, “Il mosaico fatale”, *Antonianum*, 89(2/3), 2014, pp. 301–318.

<sup>70</sup> ALBRILE, “Il mosaico fatale”, pp. 308–309.

<sup>71</sup> On p. 242 in GIUSEPPE BUFFON OFM, “Ad lectores”, *Antonianum*, 89 (2/3), 2014, pp. 239–246.

The discipline of astrology, the Author observes, was seen as the science of becoming, and represented the imperceptible yet unstoppable changing of the cosmos. The Goat-fish, connected with the liquid god of the abyss, Ea-Enki, is a personage that appears often in the kudurru, an Akkadian term for boundary-stones. The delimitation of space, as in the marking of boundaries, is evidently the earthly reflection of astral reality. It is important to emphasise that the transferring of this symbol from the East to the Christian West happened thanks to the circulation of relics. These were wrapped up in precious cloths bearing motifs of Iranian art. The sign itself, Capricorn, stands for a constellation of the Zodiac between Aquarius and Sagittarius. When Eudoxos of Cnido [an Italianism; recte in an English-language context: Cnidos], using the signs of the Zodiac instead of months, fixed the equinoxes in the middle of Aries and of Libra, the summer solstice in the middle of Cancer, and the winter solstice in the middle of Capricorn, the Zodiac sign of Capricorn came to coincide with the Capricorn constellation; now, because of the phenomenon of the “precession” of the equinoxes, at the winter solstice the sun is actually found in the neighbouring constellation of Sagittarius. The importance of the Grazzano mosaic, analysed by Albrile, arises from the fact that it is actually a fragment of a larger work, within which there could be seen this oscillation between Capricorn and Sagittarius.

In fact, Albrile’s paper was concerned in particular with a mosaic from a place in northwestern Italy, Grazzano Badoglio, a hamlet from the Monferrato area of Piedmont, in its province of Asti<sup>72</sup>.

Language contact was proposed by Saul Levin, as the cause for Latin *asinus* ‘donkeys’ (the masculine plural in the accusative case) < *asonos* < Northwest Semitic *aθonoθ* ‘she-asses’ (so in Hebrew). According to Levin<sup>73</sup>, the transition to *asonos* and then to *asinus* took place in Italy from a prehistoric but late loan, as had it been older, the first *s* would have become *r*.

<sup>72</sup> Because of the context of the journal *Antonianum: Periodicum Trimestre Pontificiae Universitatis Antonianum de Urbe*, which is the journal of a Franciscan university, its editor remarked on p. 243: “Albrile’s reasoning on astral and topographic spaces is of the greatest interest for the Franciscan Order”.

<sup>73</sup> SAUL LEVIN, *Semitic and Indo-European: The Principal Etymologies* (Current Issues in Linguistic Theories, 129), Amsterdam: John Benjamins, 1995, pp. 119–124. For Levin’s sense of lexical “cognacy”, cf. SAUL LEVIN, “What Does ‘Cognate’ Mean? In reply to Alan Kaye and other reviewers of *Semitic and Indo-European: The principal etymologies*”, *General Linguistics*, 36 (1999 [1996]), pp. 257–269.

Concerning the semantic shift from mammal-name to fish-name, cf. MICHÈLE FRUYT, “Métaphore, métonymie et synecdoque dans le lexique latin”, *Glotta* [Vandenhoeck & Ruprecht GmbH], 67 (1/2), 1989, pp. 106–122 (<http://www.jstor.org/stable/40288076>). On p. 108, she states: “Ainsi, designer un poisson (lat. *apriculus*) par le nom du ‘sanglier’ (lat. *aper*), c’est pratiquer une métaphore d’après le trait ‘couleur sombre’”.

Just as Greek names for fish named after some terrestrial animals are found in Talmudic Aramaic, likewise it is quite possible that Jewish sources borrowed the notion of aquatic kinds equivalent to land beasts. The late antique *Tosefta Kil'ayim* (ed. Lieberman, 10, 10) claims: "Everything that is [found] on land is [found] in the sea, many in the sea that are not on land. There is no kind of *ḥulda* in the sea", where by *ḥulda*, mustelidae and viverridae (not rats which is the sense in Israeli Hebrew) were meant<sup>74</sup>.

7. "Fox of the Sea" in Text by the Medieval Hebrew Fabulist Berechiah haNakdan

The 13th-century Hebrew fabulist Rabbi Berechiah haNakdan (from England or from Rouen), who for example dealt with the elephant<sup>75</sup> for polemical purposes but adapting a Christian motif<sup>76</sup>, treated the fox in relation to philological homiletics, ending up with an alliterative and ambiguous statement:  $\langle \text{ḥšw'lym hllw 'lw lšw'lw šl ym} \rangle$  *Haššu'alim hallalu 'alu lešu'alo šel yam*, "Those 'foxes' [in the *scriptio defectiva* in the second word in  $\langle \text{šw'lym š'lym} \rangle$  from *Song of Songs* 2:15] rose to [i.e., were made up, compensated for, by] the *šu'alo šel yam* ['fox of the sea', as though]".

This was discussed by Zipor<sup>77</sup>. Zipor was concerned with such homiletic *loci* that apply  $\langle \text{šw'lym} \rangle$  'foxes' to Pharaoh's exhortation to the Egyptians against the Hebrews: "Let us act cunningly against him" (*Exodus* 1:10), which resulted in his decree of drowning. Supernal retribution for this came about as Pharaoh's pursuing army was drowned at the crossing of the Red Sea. The hermeneutic point was that resorting to water in the decree of Ch. 1 of *Exodus* was intended to be cunning, as no retaliation in kind (by water) was expected, by virtue of the promise to Noah that

<sup>74</sup> cf. MENACHEM DOR and DAVID TALSHIR, "The *ḥoled* and the *ḥulda*" [Hebrew], *Lěšonenu: A Journal for the Study of the Hebrew Language and Cognate Subjects*, 57(1) (1992), pp. 39–49; as well as: ZOHAR AMAR, "The Weasel [Israeli Hebrew *ḥamos*] — the Identification of the Mishnaic *ḥulda* by Maimonides" [Hebrew], *Lěšonenu*, 73 (2011), pp. 327–333; and G. BAR-OZ and T. DAYAN, "Weasels from the Hellenistic Period of Israel" [English], *Israel Journal of Zoology*, 47 (2001), pp. 271–273.

<sup>75</sup> In EPHRAIM NISSAN, "Imagined Elephants in the History of European Ideas: Varejka's Pataphysical Way to the Subject", *International Studies in Humour*, 2(1), 2013, pp. 100–177, much material is relevant for Jewish studies, for example.

<sup>76</sup> According to MARC MICHAEL EPSTEIN, "'The Ways of Truth Are Curtailed and Hidden': A Medieval Hebrew Fable as a Vehicle for Covert Polemic", *Prooftexts*, 14(3), 1994, pp. 205–231, and ID., "The Elephant and the Law: The Medieval Jewish Minority Adapts a Christian Motif", *The Art Bulletin*, 76(3), 1994, pp. 465–478.

<sup>77</sup> On p. 359 in: M.A. ZIPOR, ("Al Tikre — Exegesis or Text?" [Hebrew], in: M. BAR-ASHER, M. GARSIEL, D. DIMANT and Y. MAORI (eds.), *Studies in Bible and Exegesis, Vol. III. Moshe Goshen-Gottstein — In Memoriam*, Ramat-Gan, Israel: Bar-Ilan University Press, 1993, pp. 362–349.

there would never be another Deluge. In connection with this, the “foxes” drowning in the sea was the homiletic interpretation of “The fate of the foxes will be theirs” (*Psalms* 63:11), whose plain sense is “Their bodies will be food for scavenging animals” (cf. the Arabic cognate *θá‘lab* ‘jackal’).

Zipor remarks that the medieval fabulist Berechiah haNakdan (who was active in either northern France, or England) is ascribed the statement that  $\langle\check{s}w'lym \check{s}'lym\rangle$  (“foxes, foxes”) occurring in *Song of Songs* 2:15, the word being repeated without the mute  $\langle w\rangle$  (i.e., with a *scriptio defectiva*), was “compensated” as though in another scriptural *locus*: *Isaiah* 40:12, where the Masoretic text has  $\langle my mdd b\check{s}'lw mym\rangle$  *Mi madad beša‘alo mayim* (“Who measured water in His footprint?”, as though), whereas a vulgate version of which the *Isaiah Scroll* is witness, instead of  $\langle b\check{s}'lw mym\rangle$  has  $\langle b\check{s}w'lw my ym\rangle$ , i.e., “in His  $\langle\check{s}w'lw\rangle$  the water of the sea”,  $\langle\check{s}w'lw\rangle$  here presumably meaning ‘footstep’ or ‘step’ (like the usual noun *šá‘al*), yet a homograph lending itself to be interpreted as *šu‘ál* — thus being a homophone of the name for ‘fox’. Out of that intricate homiletic trajectory based on the *scriptio defectiva*, a “fox of the sea” emerged.

#### 8. *Terrestrial Animals and Humans on the Seafloor, in Visual Representations of Alexander the Great’s Immersion and Sightseeing Underwater*

This section signals Western iconographical materials conveying visual proof of the belief that terrestrial animals and even humans live on the seafloor; namely, an image from the *Roman d’Alexandre en prose*, on hold in Berlin at the Kupferstichkabinett, manuscript 78.C.1, c.67 (figs. 5, 6 and 7)). In that image, a naked man and woman stand on the seafloor and eat raw fish, while observed by a dog, also standing on the seafloor and facing them. Another canine carnivore, as well as sheep and fruit trees, were also drawn, while a huge fish is swimming above them. The scene is observed by Alexander the Great, from his glass barrel, his submersible. A detail (bottom, right) of the same image. Alexander watches trees, a marine fox, and a marine ruminant on the seafloor, while fish swim around.

Concerning Alexander the Great exploring the sea in a glass submersible, it is claimed in a Jewish source<sup>78</sup> that his goal was to listen to the waters singing Divine glory. That claim was made in *Midrash Tehillim* (*Schocher Tob*), as edited by Salomon Buber — the context being in relation to *Psalms* 93:4 (which in the *Vulgate* is 92:4)<sup>79</sup>.

<sup>78</sup> There even exists a version of the Alexander Romance in Mongolian. See: F.W. CLEAVES, “An Early Mongolian Version of the Alexander Romance”, *Journal of Asiatic Studies* 22 (1959), pp. 1–99.

<sup>79</sup> *Midrash Tehillim* (*Schocher Tob*), as edited by SALOMON BUBER, Vilna: Romm, 1891, third part, from





Fig. 4. Alexander the Great in a submersible. From one of the two Doria tapestries now in Genoa.



Fig. 5. An image of Alexander the Great in a glass barrel watching life underwater, from the *Roman d'Alexandre en prose*, from the Kupferstichkabinett in Berlin, manuscript 78.C.1, c.67.



Fig. 6. A detail (bottom, right) of the same image. Alexander watches trees, a marine fox, and a marine ruminant on the seafloor, while fish swim around.



Fig. 7. Another detail (bottom, left) from the same image: a man and a woman eat raw fish; they are not a merman and a mermaid, though. They stand on their feet, on the sea floor, and they are each about to eat a fish. A dog stands on the seabed, facing them. In his glass barrel, Alexander's glance is directed elsewhere.

Besides, in Section 8 of his Introduction, entitled “Alexander’s Descent into the Sea”, of his book about a Medieval Hebrew version of the Alexander Romance, Israel Kazis wrote<sup>80</sup> concerning rabbinic parallels to the story the way it appears in

p. 415, line 23 to p. 416, line 3. See p. 98, fn. 19, in: JEAN-PIERRE ROTHSCHILD, “*L’Iter ad Paradisum* entre homélie rabbinique, traité d’apologétique et *exemplum*”. In : CATHERINE GAULLIER-BOUGASSAS and MARGARET BRIDGES (eds.), *Les Voyages d’Alexandre au paradis: Orient et Occident, regards croisés*. (Alexander Redivivus, 3.) Turnhout, Belgium: Brepols, 2013, pp. 93–125.

<sup>80</sup> ISRAEL J. KAZIS (ed., trans.), *The Book of the Gestes of Alexander of Macedon, Sefer Toledot Alexandros ha-Makdoni: A Mediaeval Hebrew Version of the Alexander Romance by Immanuel ben Jacob Bonfils* (The Mediaeval Academy of America, Publication No. 75), Cambridge,

*Pseudo-Callisthenes:*

This legend is found in two sources in Talmudic literature: *Midrash Tehillim*, Ps. 93, 5, and *Yalqut Shim'oni*, Ps. 93, sec. 848. Except for a minor difference in detail both sources contain the same account. We shall quote the account in *Midrash Tehillim* after which some comments will be made on a doubtful reading in the text.

“‘Out of the voices of many waters, the mighty breakers of the sea’ (Ps. 93:4). It happened that when Hadrian Caesar sought to fathom the depth of the Adriatic Sea,[74] he took ropes and kept lowering them for three and half years, until he heard a heavenly voice which said: ‘Hadrian will end (ere his rope does)! Again, Hadrian Caesar sought to know how the waters praise the Holy One, blessed be He, and so he made chests of glass into which he put men, and then lowered the chests into the Great Sea.[75] When the men came up, they said: ‘We have heard the waters of the Great Sea praise the Holy One, blessed be He, thuswise: The Lord on high is mighty.’”

Despite the fact that the name Hadrian Caesar occurs here as well as in *Yalqut Shim'oni*, it is suggested that this represents a scribal error and that the emperor referred to in this episode is Alexander. This suggestion is supported by the following considerations: First, as indicated in our discussion of the preceding episode, Alexander’s desire to fathom the depth of the sea is mentioned along with his desire to ascend into the heavens in two other sources in Talmudic literature, namely *Pirke [recte: Pirke or Pirqe] Rabbi Eli’ezer*, XI, and *Yalqut Shim'oni*, 1 Kg. 18, sec. 211. Secondly, this legend is associated with Alexander in *Ps.-Call.*, Book II, ch. 38.

Kazis further remarked<sup>81</sup>:

The legend as related in Talmudic literature appears to be an abbreviated account of the story of this episode as found in *Ps.-Call.* and reveals the presence of a rabbinic motif. In the Greek account, Alexander descends into the sea in order to seek pearls. In the Jewish account, Alexander’s concern is not with pearls but rather with discovering how the waters praise God.

In two endnotes, Kazis claimed<sup>82</sup>:

74 The text reads *Adrias*, the Adriatic. However, the text in *Yalqut Shim'oni* reads *Oķionos*, “Great Sea”, and according to [Salomon] Buber other manuscripts also read *Oķionos*; see his edition of *Midrash Tehillim*, p. 415,

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Massachusetts: The Mediaeval Academy of America, 1962, pp. 19–20.

<sup>81</sup> KAZIS, p. 20.

<sup>82</sup> KAZIS, notes 74 and 75 on p. 185.

note 32. See also Braude, *op. cit.*, [i.e., W.G. Braude, *The Midrash on Psalms* (New Haven, 1959), II,] p. 499, note 9, who feels that the alternate reading, *Oḳionos*, is preferable.

75 *Oḳionos* here is further reason for preferring it to the Adriatic Sea in the beginning of this episode.

### 9. *Marine Versions of Terrestrial Animals in Heraldry*

This is a complex theme. Let us begin with something more familiar to modern Westerners. At a heraldry Web site, the following introductory text (Ch. 9 in a series) is signed by an Australian-based “Alarice, Baronial Herald” (credits for the iconography accompanying the original were given to contributors styled “Master Sven the Stormdriven”, “Mistress Rhianwen ni Dhiarmada”, “Count Sir John of Skye”, “Master Sir Richard de la Croix”, and “Viscountess Lucrezia Lorenz”):

In this continuing introductory heraldry series, today we look at mythical creatures, which are extremely popular in both medieval and modern heraldry. Virtually all mythical creatures may be traced back to some real animal, and reflect a combination of ignorance, legend and imagination. In some cases it was believed that these mythical creatures (often termed in heraldry under the blanket term *monsters*) were real. Most are hybrids of other creatures. [...] A *sea-horse* is a heraldic horse with the two forelegs changed to webbed feet, and the back forelegs changed into a single fin. This is a common treatment for animals – a *sea-dog* is the same but has the body and head of a dog (although the *sea-dog* often has a tail and the hind legs of a beaver), and a *sea-wolf* would have the body and head of a wolf, and so on. A *mermaid* has the head and body of a naked woman with a finned tail (often holding a mirror and comb); a *merman* is the same thing with a man’s body. Virtually any animal can be altered to a sea animal by the addition of fish tails and fins. Again, if sitting on the tail fin, the position is termed “erect”.

### 10. *Relevant Lore of Scottish and Icelandic Fishermen*

In his critical edition of the *Life of Ben Sira*, Yassif<sup>83</sup> cited *The Folklore of the Jews* by Angelo Solomon Rappoport<sup>84</sup>, concerning a belief among Scottish fishermen, according to which of all dry land animals there exists an equivalent in the sea.

<sup>83</sup> On p. 99 in ELI YASSIF (ed.), *The Tales of Ben Sira in the Middle Ages: A Critical Text and Literary Studies* [in Hebrew], Jerusalem: The Magnes Press, 1984.

<sup>84</sup> A[NGELO] S[OLOMON] Rappoport, *The Folklore of the Jews* (Soncino Jewish Publication Society, 3), London: The Soncino Press, 1937, p. 153. Rappoport’s book has been meanwhile published again: (Kegan Paul Library of Jewish Studies), London: Kegan Paul, 2007.

Our present treatment much expands upon the parallels from international folklore or the history of ideas, not only Scottish folklore.

Jeb McLeish, an anthropologist based in Scotland, is well positioned to clarify the matter, especially as far as Scottish lore is concerned. Our collaboration in the present study began with a query Nissan sent McLeish: “have you any information about a belief among Scottish fishermen, according to which of all dry land animals there exists an equivalent in the sea? (e.g., horse vs sea-horse).” McLeish replied on 13 March 2014 and signalled that “Walter Gregor noted the belief from an informant in Portessie in the 1880’s (North east Scotland). He is rather terse and reports no more than this.” Namely:

It is believed that there is a “beest i’ the sea for ilky beest o’ the laan (land)”, said a Portessie man to me<sup>85</sup>.

The following was stated in a study about Icelandic folklore, by Gísli Pálsson<sup>86</sup>:

Several species of whales, so-called ‘wicked whales’ (*illhveli*) are said to do damage to ships and men. [...] The ‘horse-whale’ (*hrosshveli*) was one of the wicked whales. It was said to resemble a horse, to neigh like a horse, and to have a horse’s tail that sent tremendous waves across the ocean and destroyed boats and men (Davidsson 1900, p. 320).

The folklore contains numerous accounts of strange water beings that attempt to drag humans into the ocean or destroy their boats: ‘sea-men’ (*hafmenn*), ‘water-horses’ (*vatnanykrar*), ‘sea-dogs’ (*sæhundar*), and ‘flying fish’ (*flugfiskar*), to name only a few [...]. All these stories establish series of pairs of oppositions that relate to the contrast between the land and the ocean. The strange beings mediate between the polar opposites; their peculiar properties draw the relevant contrasts.

### 11. *The Marine Monkey According to Vallisneri*

The natural scientist (especially entomologist) and physician Antonio Vallisneri or Vallisneri (Trassilico, in Garfagnana, 1661 – Padua, 1730) was the main exponent

<sup>85</sup> This is quoted from p. 17 in: WALTER GREGOR, “Some Folk-Lore of the Sea”, *The Folk-Lore Journal*, 4(1), 1886, pp. 7–17.

<sup>86</sup> On pp. 125–126 in: GÍSLI PÁLSSON, “The Idea of Fish: Land and Sea in the Icelandic World-view”, Chapter 9 in: ROY WILLIS (ed.), *Signifying Animals: Human Meaning in the Natural World* (One World Archaeology, 16), London: Unwin Hyman, 1990, pp. 119–133. A paperback edition was published in London by Routledge in 1994. The 1990 edition was based on precirculated papers presented at the World Archaeological Congress in Southampton within the theme “Signifying animals”. Pálsson cites Ó. DAVIDSSON, “Folklore of Icelandic Fishes”, *Scottish Review*, 36(72), 1900, pp. 312–332.

of Galileo's tradition in his times. Vallisneri was born in northern Tuscany, now in the province of Lucca, but in Garfagnana, an area bordering on Emilia (he was the heir of a paternal uncle with lands in Scandiano in Emilia)<sup>87</sup>.

Vallisneri's early studies were in Scandiano, Spilamberto, Modena, and Reggio Emilia (all four places in the Emilia region, which itself borders on Tuscany), under the rule of the House of Este. His medical studies were in Bologna as a pupil of Marcello Malpighi (1628–1694), but to comply with Este legislation, he graduated in Reggio (within the Este domains). Vallisneri later was in Venice, Padua, and Parma. As a scholar, Vallisneri was a follower of Francesco Redi (1626–1698). Vallisneri also sought to promote a technical lexicography in medicine and the natural sciences, and while open-minded (his linguistic views were an antecedent of views from the Enlightenment), he sought to promote the use of Tuscan as being the Italian language (see <http://www.vallisneri.it>).

We are going to concern ourselves with an entry in Vallisneri's *Saggio d'istoria medica, e naturale*<sup>88</sup>. The headword "SIMIA *marima*" is a typo for "SIMIA *marina*", i.e., "marine monkey":

SIMIA *marima*. Ho detto, che in mare v'è la *Sirena*, emulatrice in qualche parte delle fattezze degli uomini, ma vi è ancora il Vitello, il Porco, il Cane, e cento altri animali consimili molto a' terrestri, [p. 456:] di maniera che viene ad essere il Mare, come un Mondo da se dentro quest'altro Mondo. Eliano vi descrisse infino la Simia, ch'è un pesce lungo, cartilaginoso, rassomigliante nel colore, e nella faccia alla Simia terrestre. E ricoperto di una scaglia dura, come quella delle Galane, e si trova nel Mar Rosso, in cui dicono, che nuota con tanta celerità, che par, che voli.

<sup>87</sup> DARIO GENERALI is a leading expert about Vallisneri. See his entry "Vallisneri, Antonio" in *Il Contributo italiano alla storia del Pensiero – Scienze*, Rome: Treccani, accessible online at [http://www.treccani.it/enciclopedia/antonio-vallisneri\\_\(Il\\_Contributo\\_italiano\\_alla\\_storia\\_del\\_Pensiero:\\_Scienze\)/](http://www.treccani.it/enciclopedia/antonio-vallisneri_(Il_Contributo_italiano_alla_storia_del_Pensiero:_Scienze)/)

<sup>88</sup> =n pp. 455–456 in Vallisneri's *Saggio d'istoria medica, e naturale*, within the 1733 *Opere fisico-mediche*; <https://goo.gl/OGR9Bk> opens p. 455. The edition is: ANTONIO VALLISNERI, *Opere fisico-mediche stampate e mansocritte del Kavalier [sic] Antonio Vallisneri raccolte da Antonio suo figliuolo, Corredate d'una Prefazione in genere sopra tutte, e d'una in particolare sopra il Vocabolario della Storia Naturale, Tomo terzo, ed ultimo*, Venice: Sebastiano Coleti, 1733. (Nissan thanks Dario Burgaretta for bringing this work to his attention in the context of a different project). The conditions in the will of Giuseppe Vallisneri, Antonio Vallisneri Sr.'s uncle, required the nephew to have a son to succeed him in turn; the nephew's wife had eighteen pregnancies, resulting in several children, of which only three daughters and one son, Antonio Jr., survived. It was this son who edited the *Opere fisico-mediche* as published in 1733.



[SEA MONKEY. I have said, that in the sea there is the *Siren*, mimicking in some part the appearances of men, but there also exist the Calf, the Pig, the Dog, and a hundred other animals that much resemble those on land, [p. 456:] so that the Sea comes to be like a World on its own, inside this other World. Helian described there even the Monkey, which is a long fish, cartilaginous, resembling in colour, as well as in the face, the Monkey of land. It is covered by hard scales, like those of the Turtles, and it is found in the Red Sea, inside which, they say, it swims so quickly, that it appears as though it was flying.]

## 12. *The Sirens in Vallisneri's Book*

Further to the entry “SIMIA *marima*” (for “SIMIA *marina*”) we have considered, the next two entries in Vallisneri's book are devoted to the mythical Sirens, and then to Sirens in entomology. The former is reproduced and translated hereby:

SIRENA; o *Serena*. *Siren*. E una sorta di pesce, o di mostro marino, che (come dicono alcuni) verso la parte superiore alla donna, o all'uomo si rassomiglia, e verso l'inferiore al pesce. I libri, e monumenti antichi, parlando della *Sirena*, sono mescolati di cose vere, e di false, se ci fidiamo particolarmente de' Greci, i quali hanno avuto per costume, o per natura del loro fervido ingegno, infrasca[?] sempre le loro Storie con le menzogne. E verissimo, che vi è il *Pesce Donna*, detto *Sirena*, siccome v'è il maschio, *uomo marino* chiamato, ma è poi falsissimo, che cantino, o che con voce umana parlino. Veggiamo in terra le Scimie, ed i *Macachi*, o *Gattimammoni*, che hanno non poca similitudine coll'uomo, e veggiamo pure in Mare i Vitelli, le Volpi, i Lupi, i Cani, le Galane, e tanti altri animali maggiori, minori, e minimi, a' que' della terra in molte parti simigliantissimi, onde non è tanto da maravigliarsi, come fanno alcuni, che ci sia nel mare anche una spezie di pesce, in qualche parte all'umana simigliantissima, di cui, poco fa, m'è venuto una Relazione di Londra, fatta da un Capitano di Nave a quella Regia Società, che nel venire dalle Indie nuove, avea veduto (e ne mostrava il disegno) un uomo marino, che attorno la Nave si fece più volte vedere, il quale uccidere non vollero, sperando di pigliarlo vivo, ma accortosi della trama, si sommerse, nè più lo scoprirono. Conservo nel mio Museo due mani, e sei costole di *Sirena*, che mentire non lasciano, essendo già adesso cosa nota, e da molti viaggiatori alle Indie descritta. [...]

[SIREN. *Siren*. It is a kind of fish, or marine monster, which (as some say) in its upper part resembles a woman o a man, and in its lower part, a fish. Ancient books and monuments, treating of the *Siren*, are a mix of truths and untruths, if we are to believe in particular the Greeks, who used to have the habit, or then because of the nature of their fervid genius, of always stuffing their Stories with lies. It is quite true, that there is the *Woman Fish*, called a *Siren*, just as

there exists the male, called a *marine man*, but then it is quite false that they sing, or that they speak with a human voice. We see on land the Apes, and the *macaques*, also called *mammon cats*, which have considerable resemblance with man, and we also see in the Sea the Calves, the Foxes, the Wolves, the Dogs, the Turtles, and many other animals large, small, and minimal, quite similar to those on land, and therefore one must not overly wonder, as some do, that in the sea there also exists a species of fish, which in some parts is quite similar to the human species, and concerning which, I recently received a Report from London, made by a Ship Captain to that Royal Society. When coming from the new Indies, he saw (and was showing a drawing of this) a marine man, who around the ship made himself seen several times. They did not want to kill him, hoping to capture him alive, but once he took notice of their intentions, he submerged himself, and they did not uncover him again. I conserve in my Museum two hands and six ribs of a Siren, and these allow no lying, this already being a well known thing, and one described by many travellers from the Indies. ...]

Vallisneri concluded his entry for the Siren by warning that representations of sirens as found in books must be modified, because they draw sirens with a beautiful face of a woman, and body parts of a perfect woman.

13. *The Double Nature of the Otter, Church's Days of Abstinence from Meat, and the Broken Vow of a Domestic Cat in a Fable by Clasio*

The otter lives in water, yet resembles earthbound small carnivores. When it was hunted for meat, in some Christian lands the parts in front used to be eaten on days when eating meat is permitted, whereas the rear parts were eaten on the Church's days of abstinence, as though they were fish. This double nature, and the subterfuge involved in consuming this animal's meat, reminds of one of the fables in verse of the *Favole e sonetti pastorali* by Luigi Clasio (1754–1825). His fables (*Favole*) first appeared in 1795, and in their final version in 1807. His real name was Luigi Fiacchi. He was born in Scarperia, in the Mugello rural region near Florence, Tuscany.

In the 1886 edition, published by Casa Editrice Guigoni in Milan, of the *Favole e sonetti pastorali* by Luigi Clasio (fig. 8) which begins with his *Lezione sopra l'apologo* he gave to the Società Colombaria in 1803, Fable XLVI, *Il Gatto e il Pistrello* (The Cat and the Bat), appears on pp. 87–88 (fig. 9 and 10).

A domestic cat devours his owner's nightingale. The owner is so furious, he would kill the culprit, if only he could find it. The cat feigns innocence, but in its



Fig. 8. Engraving facing the frontispiece of the 1886 edition, published by Casa Editrice Guigoni in Milan, of the *Favole e sonetti pastorali* by Luigi Clasio which begins with his *Lezione sopra l'apologo* he gave to the Società Colombaria in 1803. By his real name he was Luigi Fiacchi. He was born in Scarperia, in the Mugello rural region near Florence, Tuscany, in 1754; he died in 1825. His fables (*Favole*) first appeared in 1795, and in their final version in 1807. His *Sonetti pastorali* were published in 1789.

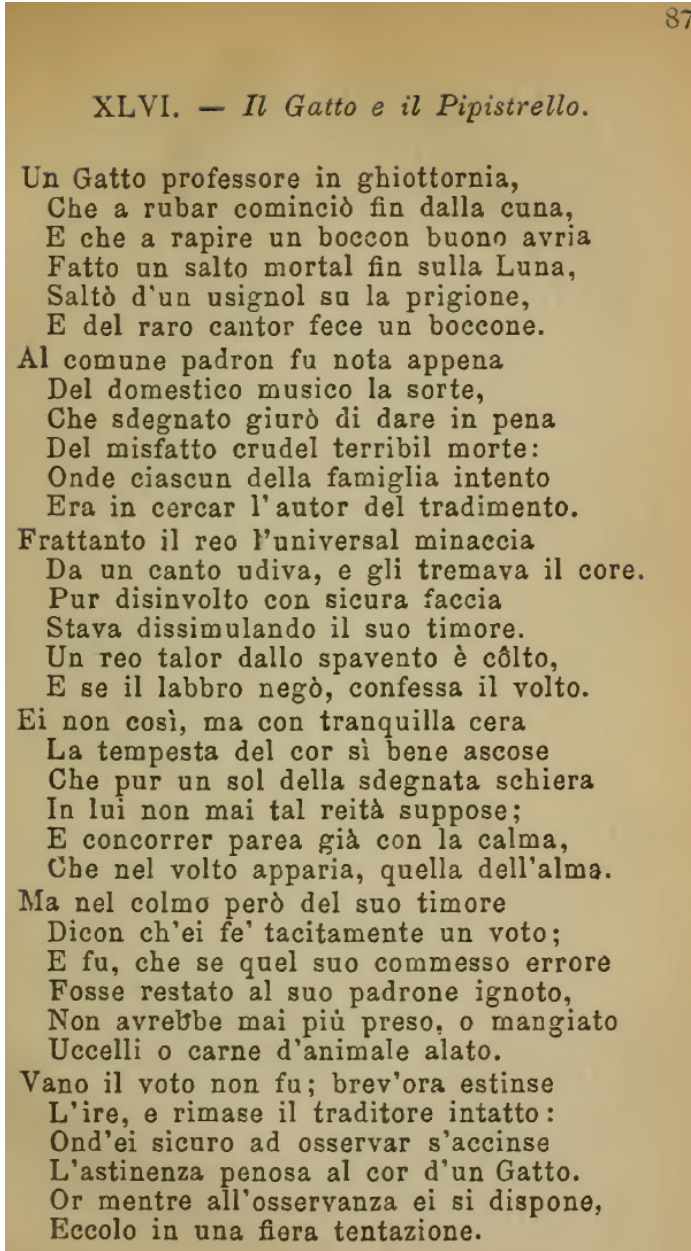


Fig. 9. Clasio's poem "The Cat and the Bat"

38

Venne sotto l'artiglio un Pipistrello  
 De' più bei che la notte unqua vedesse:  
 Ma perchè ha l'ali e passa per uccello,  
 Ei rammenta al pensier le sue promesse.  
 Mosso dall'appetito al cibo aspira,  
 Lo scrupolo l'avverte e lo ritira.  
 Pur l'animal passò, passò con lui  
 L'occasion precipitosa e lieve;  
 Ed il Gatto mantenne i voti sui,  
 Forse perchè la tentazion fu breve:  
 Ma il folle Pipistrel, dando di volta,  
 Tornò sotto l'artiglio un'altra volta.  
 Messer lo Gatto allor gli salta addosso,  
 E gli scrupoli serba a miglior uopo.  
 — Io, decide fra sè, mangiar lo posso  
 Come uccello non già, ma come topo. —  
 Così con dottorai temperamento  
 Soddisfè l'appetito e il giuramento.  
 Nel mondo, oh come spesso e facilmente  
 Si delude il dover! chè in più d'un caso  
 L'utile parla, e l'utile sovente  
 « I più schivi allettando ha persuaso: »  
 E v'è più d'un che in suo vantaggio ha fatto  
 Abili decisioni al par del Gatto.

XLVII. — *Le due Zucche ed il Ranocchio.*

Ricco di pioggia un orgoglioso fiume  
 Ruppe le anguste sponde,  
 E secondo il suo barbaro costume  
 Sommerse il campo, ed il depredò con l'onde;  
 Tra le prede ch'ei fece eran due belle  
 Zucche tra lor sorelle,  
 Che, non potendo far forse altramente,  
 Docili secondavan la corrente.  
 Una di lor su l'acque  
 Galleggiava assai più; l'altra, più grave,  
 Or si perdea tra i flutti  
 Della torbida piena,  
 Ora a fior d'acqua si mostrava appena,

Fig. 10. End of Clasio's poem "The Cat and the Bat".

heart it vows that if he is saved from punishment, he would abstain forever from eating any bird or winged animal (“Non avrebbe mai più preso, o mangiato / Uccelli o carne d’animale alato”). The cat keeps his vow — for a while.

Eventually, a bat, one the yummiest the cat had ever seen, comes within the cat’s range, but the cat remembers his vow, and abstains from devouring that bat (“Venne sotto l’artiglio un Pipistrello / De’ più bei che la notte unqua vedesse: / Ma perchè ha Tali e passa per uccello, / Ei rammenta al pensier le sue promesse. / Mosso dall’appetito al cibo aspira, / Lo scrupolo l’avverte e lo ritira.” Note the erroneous spelling “perchè” instead of “perché”, an error a Tuscan like Clasio would not have made. But the publisher was in Milan. It is a typical Lombard or otherwise northerner error, as in the North, any *e* is a long *e*.) The cat kept his vow, perhaps because temptation was brief (“Ed il Gatto mantenne i voti sui, / Forse perchè la tentazion fu breve”).

Foolishly, the bat makes a U-turn and comes back within the range of the cat (“Ma il folle Pipistrel, dando di volta, / Tornò sotto l’artiglio un’altra volta.”). Mr. Cat jumps upon it, banishing his scruples (“Messer lo Gatto allor gli salta addosso, / E gli scrupoli serba a miglior uopo.”). The cat tells himself: “I can eat it not as a bird, but as a mouse” (“Io, decide fra sé, mangiar lo posso / Come uccello non già, ma come topo”). “That way, with doctoral temperament, it satisfied both his appetite and his vow” (“Così con dottorale temperamento / Soddisfè l’appetito e il giuramento.”). The last stanza remarks about how easily, in the world, duty is circumvented because of the lure of perceived interest.

#### 14. *Elite Belief from Early Modern Scholarly Texts*

In an email of 10 March 2014, McLeish informed Nissan: “[...] The belief certainly existed. I looked at this subject many years ago in a wider context than Scotland but concentrated on late 19th century: these types of story became popular again in response (at least partly) to developments in science I suspect. City or village beneath the sea is a popular one. One other subject I looked at that yielded a few European variants was the sea bean or drift nut. Forests beneath the sea. Although in the tradition of the Western Islands, sea beans usually represent the vital organs of a saint etc.” He continued by pointing out: “I am also aware of a nice example of related discussion on this from late 17th century natural science. Wider interest in supernatural forms of reproduction. So the subject is related to a number of others. Kidney stones is one. Examples cited of kidney stones shaped like a pistol or a horse, fish shaped like monks etc. Written by a good friend of John Ray. Reproduction was a significant topic right at the start of modern biology here and biological reproduc-

tion is significant in regard to how the subject first defined itself. Scandinavia is also worth a look in terms of fishing traditions in regard to this subject.”

Jeb McLeish identified various relevant data. In an email of 21 March 2014, under the header “18th century Elite Belief”, he quoted this passage:

In a word, nothing can be seen in the true Marine Bodies at Sea, but may be paired and sampled in the like on Land, except a living Inhabitant<sup>89</sup>.

The sentence quoted from the anonymously published essay of 1705 was its author’s comment after a quotation from Woodward (the rest of this section is a quotation which in turn contains quotations)<sup>90</sup>:

Fossils, such appearing Symptoms and Indications of their having once been the Parts and Appurtenances of Animal Marine-bodies, that without manifest violence to their Faculties, they could not choose, on such appearing Probabilities, but assert them such: There frequently appearing, immured in the densest Concretions of Marble, Lime-stone and Chalk, vast numbers of Cockles, Oyster-shells, Escallops, Periwinkles and other variety of Shells, belonging to Seas and Rivers, some of them broken, some entire, being (as Dr. Woodward affirms)

precisely of the same Size and Figure, with those now found on the Sea-shores, of the same Substance and Texture, consisting of the same peculiar Matter; and this constituted and disposed in the same manner as is that of their respective Fellow-kinds at Sea. Nay more▪ the tendency of the Fibres and Striae the same and alike in both; the Composition of the *Lamellae* constituted by these Fibres the same in both: the same *Vestigia* of Tendons▪ by means whereof the Animal is fastened and joynted to the Shell, in each of them.

[p. 9:] Besides (saith he) these Fossil Shells, are attended with the ordinary Accidents of the Marine ones: They sometimes grow to one another, the lesser Shells on the larger; they have *Balanus*, *Tubuli vermiculares*, Pearls, Coral and the like, still actually growing on them; and, which is very considerable, they are most exactly of the same spe-

<sup>89</sup> From p. 9 in an early 18th century text, *An account of the origin and formation of fossil-shells, &c: Wherein is proposed a way to reconcile the two different opinions, of those who affirm them to be the exuviae of real animals, and those who fancy them to be *lusus naturae**, which is now accessible online at <http://quod.lib.umich.edu/e/eccodemo/K056026.0001.001/1:3?rgn=div1;view=fulltext>

That essay originally appeared in “LONDON, Printed by *W. Botham*, for *James Knapton*, at the *Crown* in *St. Pauls Church-Yard*. MDCCV.” It is now posted at Eighteenth Century Collections Online: Text Creation Partnership (ECCO TCP) hosted at the University of Michigan.

<sup>90</sup> We quote from pp. 8–11.

cifick Gravity. Nay farther, they answer all Chymical Tryals in the same manner as the Sea-shells do; their parts, when dissolved, have the same appearance to view, the same smell and taste, they have the same *Vires* and Effects in Medicine, when in|wardly administred to animal Bodies: *Aqua fortis*, Oyl of Vitriol and other like *Menstrua*, have the very same effects upon both.

In a word, nothing can be seen in the true Marine Bodies at Sea, but may be paired and sampled in the like on Land, except a living Inha|bitant.

He farther adds

[p. 10:] That so exactly conformable to the Marine ones, are those Shells, Teeth, Bones, which are digg'd out of the Earth, that tho' several hundreds of them (which I now (says he) keep by me) have been nicely and critically examin'd by very many learned Men, who are skill'd in all parts of History, and who have been particularly curious in, and conversant with Shells, and other Ma|rine Productions; yet never any Man of them went away dissatisfied or doubting, whether these are really the very *Exuviae* of Sea-Fishes or not. Nay, which is more to my purpose, (adds he) some of the most eminent of those very Gentlemen who were formerly very doubtful in this mat|ter, and rather inclined to believe that these were natural Minerals, and who had wrote in defence of that Opinion; do notwithstanding upon strict and repeated inspection of these Bodies in my Collection, and upon farther inquiry and procurati|on of plain and unalter'd Shells from several parts of this Island, fully as|sent to me herein, and are now con|vinc'd that these are the Spoils and Remains of Sea Animals.

These great and pregnant Testimo|nies of Similitude between these Marine and Terrestrial Products, have induced several Persons of this and other Nati|ons, as well as Dr. *Woodward*, to be|lieve [p. 11:] them all to have one and the same Original: and that those Shells, Teeth, Bones, that are thus found in Stones and Earth, the pieces also and fragments of them, have been the *Exuviae* or spoils of Marine Animals: But to demonstrate how and by what means they came to be so dispersed and lod|ged in Earth, Rocks and Stones, so far from their natural Element, *Hoc opus hic labor est*, this has extremely [sic] per|plexed their thoughts and has set some of them on strange attempts to endea|vour to loose and solve the Difficulty.

It was plain that nothing but the universal bulk of Water in which these Shells (they say) were generated, could perform this Work; but to convey these Shells into great depths in the firm and compacted Body of the Earth, and there too into the most dense and so|lid *Strata* of Rocks and Stones, by the only means of this Fluid, into which it naturally has no access, is a dif|ficulty they could not surmount.



15. *An Early Modern European Sailor Contrasting Native Americans in a Canoe at Sea, with Marine Life Beneath It*

In a second email of 21 March 2014 to Nissan, McLeish remarked: “I also came across an interesting source from Richard Hakluyt years ago. 16th century example of sailors applying this belief of the relationship of species on land to those of the sea to Native American Indians. It reminded me strongly of fairy beliefs of the period (although that statement requires further research).” In an email of 24 March 2014, McLeish explained: “See if I can find the source. It’s the statement of one sailor who contrasts Native Americans spotted in a canoe at sea, with marine life beneath it<sup>91</sup>. If memory serves me correct he makes a statement not dissimilar to that of the Scottish fisherman I cited (need to find the source and confirm that). But it reminded me most strongly of the type of statements made by Robert Kirk in his secret commonwealth of elves fauns and faeries.”

In a book review<sup>92</sup>, Julian Goodare of the University of Edinburgh began as follows:

In 1691, the Scottish minister Robert Kirk completed his manuscript treatise *The Secret Common-Wealth*. He was a Gaelic scholar who had helped the scientist Robert Boyle investigate the Highland phenomenon of second sight. *The Secret Common-Wealth* attempted with remarkable erudition to place Scottish fairies on a scientific basis, arguing that they were a genuine part of God’s creation whose lifestyle brought them only rarely into contact with human beings. Kirk’s attempt was perhaps doomed, but has provided much of the material for this new, historical account of Scottish fairy belief. Henderson and Cowan seek to show that early modern Scots believed in fairies, and to explain why this mattered. Fairies mattered to Kirk as part of a spirit world that could be invoked against ‘Sadduceeism’ (denial of spirits), which churchmen saw as a step towards atheism. Fairies mattered to the common folk for different reasons. Through ballads and folk-tales they structured world-views, enforced taboos, and provided escapist fantasy from lives of drudgery; hence ballads and folk-tales provide the book’s second form of evidence. Stories about other worlds or states tell us about ourselves and our own world by telling us about what we are not. Fairy stories can also serve as warnings — the hills, the water,

<sup>91</sup> Native American dress was supposedly reflected in mermen and mermaids.

<sup>92</sup> Reviewing LIZANNE HENDERSON and EDWARD J. COWAN, *Scottish Fairy Belief: A History*, East Linton, East Lothian, Scotland [east of Edinburgh]: Tuckwell Press, 2001. Julian Goodare’s review appeared in *Albion: A Quarterly Journal Concerned with British Studies*, 35(1), 2003, pp. 180–182, <http://www.jstor.org/stable/4054576> That journal is published by The North American Conference on British Studies.

the forest, all potential fairy haunts, all contain practical dangers. But danger is power. The most striking way in which Scottish fairies' power was recognized was when the elite after the Reformation began to treat them as demonic.

Like Isaac Newton and John Locke, the experimental scientist Robert Boyle (1627–1791) invested time and energy also in alchemy<sup>93</sup> (but until about the end of the 17th century, the terms chemistry and alchemy were used interchangeably). Boyle however also sought to research “second sight” as reported in Scotland<sup>94</sup>.

<sup>93</sup> See LAWRENCE M. PRINCIPE, *The Aspiring Adept: Robert Boyle and his Alchemical Quest*, Princeton, NJ: Princeton University Press, 1998. “Boyle is a preeminent figure of the 17th century. He is best known as a natural philosopher, particularly in the fields of chemistry and physics, but his scientific work covers many areas including hydrostatics, medicine, earth sciences, natural history, and traditional alchemy. His avid service to the Christian faith produced devotional and ethical essays, and theological tracts on the limits of reason and the role of the natural philosopher as a Christian”; “Boyle also showed a keen interest in occult phenomena” (pp. 199 and 200 in L.M. PRINCIPE, “Boyle, Robert”, in: WOUTER J. HANEGRAAFF with ANTOINE FAIVRE, ROELOF VAN DEN BROEK, and JEAN PIERRE BRACH (eds.), *Dictionary of Gnosis & Western Esotericism*, Leiden: Brill, 2006, pp. 199–200).

<sup>94</sup> It should not come as a surprise that scientists in the 17th century were also interested in the occult. After all, what is beyond the pale for present-day science need not have been so in earlier historical periods. Even in the 20th century, “[d]uring the Weimar years, Germany’s police experimented with a wide range of new technologies and forensic techniques. Among the more unusual of these was so-called criminal telepathy (Kriminaltelepathie): the practice of using a telepath or clairvoyant to shed light on unsolved crimes. Placing the emergence of the criminal telepath in the context of interwar crime and occultism, and the police interest in these occult practitioners in the context of professionalization, [Heather Wolfram’s] article maintains that the Weimar police’s brief flirtation with the occult was consistent with, rather than antagonistic to, their efforts to professionalize through science”. Of course, such practice was criticised: “the bitter polemics against criminal telepathy by men such as Albert Hellwig and Albert Moll resulted from their belief that the activities of clairvoyants endangered the claims of criminalists, jurists and psychiatrists to expertise in the nascent fields of criminology and criminalistics”. The two quotations are from p. 581 in HEATHER WOLFFRAM, “Crime, Clairvoyance and the Weimar Police”, *Journal of Contemporary History*, 44(4), 2009, pp. 581–601. “Criminal telepathy appears to have been a largely German phenomenon. In England, for example, as the Society for Psychical Research told the German jurist Albert Hellwig, there were no well-attested cases of criminal telepathy. [...] In England, the problem appears to have been the retention of old witchcraft laws, which prevented occultists from setting up in business in the manner they did in Germany. Alexandra Lambert’s work, however, has demonstrated that clairvoyant detectives did feature quite prominently in English detective fiction”. WOLFFRAM, *ibid.*, p. 582, fn. 4, citing ALEXANDRA LAMBERT, “‘Thoughts are Things’: Magical Objects, Objective Magic and Sax Rohmer’s *The Dream Detective* (1920)”, in ELMAR SCHENKEL and STEFAN WELZ (eds.), *Magical Objects: Things and Beyond* (Leipzig Explorations in Literature and Culture, Berlin: Galda & Wilch Verlag 2007), pp. 127–144. The legal situation was not the same all over Germany: “In some German states, most notably Bavaria, Baden and Hesse, occultists faced prosecution under so-called *Gaukelei* (charlatanry) laws, which stated that anyone who accepted money or gifts for occult services could be fined or imprisoned. In other states, including Prussia, occultists tended to be charged with fraud, a conviction for which depended on

But often, Boyle seems specifically to have sought out a particular informant because he wanted to learn more about a topic on which he understood the man in question to be an expert. The way in which such contacts occurred is perhaps illustrated by a slightly later episode that has been investigated in detail, Boyle's interview with Lord Tarbat about 'second sight' in Scotland on 3 October 1678, which led to an explosion of interest in the topic over the next two decades, for which Boyle is largely responsible. For it appears that Tarbat had divulged similar information to the Earl of Lauderdale, Secretary of State for Scotland, and his entourage earlier that year, and it must have been through his contact with the royal court that Boyle learned of this and summoned Lord Tarbat to visit him when he was in London some months later<sup>95</sup>.

Cf. Michael Hunter (ed.), *The Occult Laboratory: Magic, Science, and Second Sight in Late Seventeenth-Century Scotland*<sup>96</sup>. George Molland, reviewing<sup>97</sup> the latter book, states (our added brackets):

The centerpiece is a work entitled *The Secret Commonwealth*, by Robert Kirk, minister of Aberfoyle (in the Highlands) and renowned as a Gaelic scholar, who produced a version of the psalms in that language. By contrast, *The Secret Commonwealth* treats, in quasi-Tolkienesque fashion, of the subterranean inhabitants of the Earth — elves, fauns, fairies — who “are said to be of a midle [sic] nature betwixt man and Angell” [sic] (p. 79) and who dwell in underground cavities. They interact with humankind but are only properly perceived by those endowed with second sight, and it is second sight that runs

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proving the defendant's bad faith” (WOLFFRAM, *ibid.*, p. 583, fn. 7).

<sup>95</sup> Quoted from p. 379 in MICHAEL HUNTER and CHARLES LITTLETON, “The Work-Diaries of Robert Boyle: A Newly Discovered Source and Its Internet Publication”, *Notes and Records of the Royal Society of London*, 55(3), 2001, pp. 373–390, <http://www.jstor.org/stable/531947>

<sup>96</sup> Woodbridge, Suffolk, England: Boydell Press, 2001. The publisher's blurb states: “The uncanny ability of certain individuals to foresee future events had long been regarded as a characteristic of the Scottish Highlands, but in the late seventeenth century interest in the phenomenon came to a head, stimulated by English scientific and philosophical curiosity about magic, particularly second sight. The natural philosopher Robert Boyle and other English savants investigated these Highland beliefs; they found the region a kind of laboratory, strange yet accessible, where data about unusual beliefs could be collected and theories tested. Scottish authors were also stimulated to write accounts of second sight, notably John Fraser, Dean of the Isles, and the Highland minister, Robert Kirk (1644–92), in his famous work, *The Secret Commonwealth*. These and other texts are included in this book, making available crucial information about belief systems which might otherwise never have been recorded, and illuminating changing contemporary attitudes towards the relationship between the natural and the supernatural”.

<sup>97</sup> In *Isis*, 94(1), 2003, pp. 150–151, <http://www.jstor.org/stable/10.1086/376139>

as a leitmotif throughout the whole volume.

As for second sight, “After Boyle, other writers from the South<sup>98</sup> took an interest in the question, notably John Aubrey, Samuel Pepys, and Edward Lhuysd” (Molland, *ibid.*). In another review of Hunter’s *The Occult Laboratory*, Mark Goldie wrote<sup>99</sup>:

Within a world-view which took for granted that the preternatural existed alongside the natural — in which the divine economy included a spirit world of angels and devils as well as a material world of humans and animals — there was ample reason to accept that some people were endowed with mystic insight. A compelling motive for giving credence to such phenomena was the need to shore up this world-view in the face of the onslaught of philosophical materialism, freethinking, and unbelief. The coffee houses were rife with

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<sup>98</sup> I.e., in England, as opposed to Scotland. PETER ELMER’s own review of Hunter’s *The Occult Laboratory* appeared in *The British Journal for the History of Science*, 35(2), 2002, pp. 225–226, <http://www.jstor.org/stable/4028190> Elmer stated: “Most significantly, perhaps, he [Hunter] has shown how an understanding of early modern science in England should be more fully grounded within a British context — a historiographical development in line with the work of mainstream religious and political historians of the period, who have increasingly called for an end to Anglocentricity in their discipline. Boyle’s foray into Scotland and second sight has numerous interesting parallels (Molyneux on the preternatural in Ireland, Richard Baxter on the phenomenon of corpse candles in Wales), all of which suggest that the emergence of a British consciousness in the late seventeenth and early eighteenth centuries was not confined to events in the religious and political spheres. The notion of Britain — especially its Celtic fringes — as a laboratory for exploring problematic scientific phenomena is profoundly insightful”.

Cf. on p. 21 in MICHAEL HUNTER, “Robert Boyle and the Early Royal Society: A Reciprocal Exchange in the Making of Baconian Science”, *The British Journal for the History of Science*, 40(1), 2007, pp. 1–23 (<http://www.jstor.org/stable/4500680>): “Once launched, the genre of ‘inquiries’ popularized as a result of these activities by Boyle and the Royal Society in the 1660s became more widespread. From the 1670s onwards we encounter a whole series of specially printed ‘inquiries’ issued as separate broadsheets which, as various scholars have noted, played a significant role in the natural philosophical (and antiquarian) enterprise of the period. Thus the publisher JOHN OGILBY issued *Queries in Order to the Description of Britannia* in 1673, and ROBERT PLOT, first curator of the Ashmolean and author of *The Natural History of Oxfordshire and of Staffordshire*, brought out two such sets of printed inquiries in 1674 and 1679. Plot was followed by his successor at the Ashmolean, EDWARD LHUYD, whose *Parochial Queries for Wales* appeared in 1696, by which time the practice had spread to Ireland in the hands of William Molyneux and to Scotland in the hands first of Sir Robert Sibbald and then of Robert Wodrow. Meanwhile, in England, we find such publications of a similar type as JOHN WOODWARD’S *Brief Instructions for Making Observations in All Parts of the World*, issued under the imprimatur of the Royal Society in 1696. In some cases, we have sets of the responses which such queries elicited, and as a whole the genre cries out for a full study in its own right”.

<sup>99</sup> *The English Historical Review*, 117(472), 2002, pp. 647–649, <http://www.jstor.org/stable/3490484>

‘atheists’ and ‘Hobbists’<sup>100</sup>, and the ‘earnest virtuosi’ took up the existence of Second Sight as a weapon against the ‘scoffing wits’.

In Kirk’s *The Second Common-Wealth* (which is included in Hunter’s *The Occult Laboratory*)<sup>101</sup>, Kirk suggested that the people of the air or dwelling below ground reflect the habit and customs of those in the middle: “Their apparell and speech is like that of the people and countrey under which they live”<sup>102</sup>. The wider historical note is that in the late 17th century the belief was in Scotland that the fairy realm reflected local customs and habits, if a seer moved for example to America he lost his ability with second sight as he had no local understanding and access to the fairy realm. It contrasts with later beliefs in spiritualism (where everyone has an Indian spirit guide).

#### 16. *Telliamed about Marine Equivalents of Land-Animals*

In an email of 29 May 2014, McLeish was able to signal the (American, Early Republic edition of the) book *Telliamed*, to whose theory about the derivation of terrestrial creatures from marine ones, sections 16 to 17 are devoted. *Telliamed, or, The World Explain’d* (this is the English title according to an early American edition), or as per the original French title, *Telliamed, ou, Entretiens d’un philosophe indien avec un missionnaire françois sur la diminution de la mer*<sup>103</sup>, is a book in the natural sciences, first published in French in 1748, having been authored by Benoît de Mail-

<sup>100</sup> After the philosopher Thomas Hobbes. MARK A. WADDELL, in his review of Hunter’s *The Occult Laboratory* (in *Albion: A Quarterly Journal Concerned with British Studies*, 34(3), 2002, pp. 551–552, <http://www.jstor.org/stable/4054805>), put it this way: “In order to explain the interest of these English virtuosi in the Scottish phenomenon of second sight, Hunter sets up a dichotomy between the committed theism promulgated by Boyle and his coterie, and the denial of the supernatural that Hunter claims was a fashionable counterpart to the atheism that was flourishing in the coffeehouses of the time”.

<sup>101</sup> SAMANTHA A. MEIGS, reviewing HUNTER’S *The Occult Laboratory* in *The Journal of American Folklore*, 118(470), 2005, pp. 496–497 (<http://www.jstor.org/stable/4137675>), declared: “Hunter also errs badly when he comments that the ‘fairy theory of second sight’ is ‘unique to Kirk’ (p. 20). It is not; the idea figures prominently in more than one witch trial dating to as early as 1597. More specific instances could be quoted, but the point has been made”.

<sup>102</sup> HUNTER, *The Occult Laboratory*, p. 82.

<sup>103</sup> The book in French appeared in Amsterdam in 1748, then at Basel, Switzerland, in 1749, and next at The Hague, Netherlands, in 1755: *Telliamed, ou, Entretiens d’un philosophe indien avec un missionnaire françois sur la diminution de la mer, la formation de la terre, l’origine de l’homme, &c.* mis en ordre sur les mémoires de feu M. de Maillet, par J. A. G\*\*\* [Jean Antoine Guer or Guers]. Amsterdam: L’Honoré & fils, 1748 (2 vols.). Basle: Chez les libraires associés, 1749. Nouvelle édition, revue, corrigée & augmentée sur les originaux de l’auteur [by J.B. Le Mascrier], À la Haye: Chez Pierre Gosse, Junior, 1755; also, À la Haye: Chez Duchesne, 1755. Mascrier, mindful of religious orthodoxy, in a sense “bowdlerised” de Maillet’s text while preparing it for publication.

let (1656–1738), a diplomat as well as an amateur natural scientist. In 1920, Fritz Neubert published a study about *Telliamed*<sup>104</sup>. Claudine Cohen has reconstructed the context in which the book came into being<sup>105</sup>.

An English translation of *Telliamed* already appeared in London in 1750<sup>106</sup>. An English edition newly made by Albert Carozzi was published in Urbana in 1968<sup>107</sup>.

<sup>104</sup> FRITZ NEUBERT, *Einleitung in eine kritische Ausgabe von B. de Maillets Telliamed, ou Entretiens d'un philosophe indien avec un missionnaire français: ein Beitrag zur Geschichte der französischen Aufklärungsliteratur* [i.e., *Introduction to a critical edition of B. de Maillet's Telliamed ou Entretiens d'un philosophe indien avec un missionnaire français: A contribution to the history of French literary literature*], Berlin: E. Ebering, 1920 (reprint Nendeln, Lichtenstein: Kraus Reprint, 1967). The context of publication was that Fritz Karl Hermann Neubert (Bautzen, 2 July 1886 – Berlin, 2 July 1970) had become an assistant at the University of Leipzig in 1918, and that book was his Habilitation dissertation under the supervision of Philipp August Becker. In 1923, Neubert became full professor of Romance philology at the University of Breslau. He moved to a chair in Berlin in 1943. When Berlin and its university were divided, he joined the Freie Universität Berlin, from which he retired in 1958. Viktor Klemperer (*Diaries 1942–45*), in an entry of 27 January had this to say: “Neubert, this most perfect mediocrity among the Romanists of my generation, a schoolmaster without his own thought, has been called to the Berlin Ordinariat for Romance literature”, and proceeded to claim that Neubert’s having been deemed worthy of the chair in Berlin depended upon the strength of Nazi sentiment [“Wie gut muß seine nazistische Gesinnung sein wieviel besser und wieviel öfter erwiesen als seine literarhistorische Leistung?”.] ([https://de.wikipedia.org/wiki/Fritz\\_Neubert](https://de.wikipedia.org/wiki/Fritz_Neubert)).

<sup>105</sup> Claudine Cohen, *Science, libertinage et clandestinité à l'aube des Lumières: le transformisme de Telliamed*. Paris: Presses universitaires de France, 2011. Claudine Cohen is a historian of geology and palaeontology. The book *Telliamed* itself was published on that same year in Paris; *Telliamed*, mis en œuvre par Francine Markovits (Corpus: Review de Philosophie, 59, 2010), Paris: Université de Paris Ouest – Nanterre – La Défense, on behalf of the Association pour le Corpus des oeuvres de philosophie en langue française, 2011. An edition by Markovits previously appeared. Benoît de Maillet, *Telliamed: ou, entretiens d'un philosophe indien avec un missionnaire français sur la diminution de la mer*, texte revu par Francine Markovits. Paris: Fayard, 1984.

<sup>106</sup> *Telliamed, or discourses between an Indian Philosopher and a French Missionary, on the diminution of the sea, the formation of the earth, the origin of men and animals, and other curious subjects, relating to natural history and philosophy. Being a translation from the French original of Mr. Maillet*. London: printed for T. Osborne, in Gray's-Inn, MDCCCL (1750). Also, *Telliamed: or, discourses Between an Indian philosopher, and a French missionary, on the Diminution of the sea, the Formation of the Earth, the Origin of Men and Animals, And other Curious Subjects relating to Natural History and Philosophy. Being a Translation from the French Original of Mr. Maillet, Author of the Description of Egypt*, London: printed for Jacob Loyseau, at the Bible, in St. Clement's, Churchyard, 1750.

<sup>107</sup> Benoît de Maillet, *Telliamed: or, Conversations between an Indian Philosopher and a French Missionary on the Diminution of the Sea*. Translated and edited by ALBERT V. CAROZZI. Urbana: University of Illinois Press, 1968. Cf. A.V. CAROZZI, “Robert Hooke, Rudolf Erich Raspe, and the Concept of ‘Earthquakes’”, *Isis*, 61(1), 1970, pp. 85–91, <http://www.jstor.org/stable/229150>

An American edition was published in Baltimore in 1797 book in the natural sciences, published anonymously but probably upon the initiative of D. Porter (who was affiliated with the Observatory in Federal-Hill), and adopting the posture of supposedly containing “discourses between an Indian philosopher and a missionary”<sup>108</sup>. *Telliamed* is a fictitious Indian philosopher who is quite well acquainted with Western sources, both ancient and modern. Note that *Telliamed* is the name “de Maillet” in reverse<sup>109</sup>.

<sup>108</sup> *Telliamed, or, The World Explain'd: containing discourses between an Indian philosopher and a missionary, on the diminution of the sea, the formation of the earth — the origin of men & animals: and other singular subjects, relating to natural history & philosophy; a very curious work*, printed in Baltimore by W. Pechin, no. 15, Market-Street, for D. Porter from the Observatory in Federal-Hill, 1797.

<sup>109</sup> STÉPHANE SCHMITT began as follows a review of the books of Claudine Cohen and Francine Markovits, *Isis*, 103(1), 2012, pp. 174–175 (<http://www.jstor.org/stable/10.1086/666414>): “The French diplomat and amateur natural historian Benoît de Maillet (1656–1738) occupies a paradoxical position in the history of the sciences in the eighteenth century. His main contribution in this field is a book entitled *Telliamed* [i.e., the author’s name in reverse]; *ou, Entretiens d’un philosophe indien avec un missionnaire françois sur la diminution de la mer*, published anonymously ten years after his death, in 1748, but based on manuscripts written many decades before. In this work, Maillet proposed a Neptunian theory of the Earth and formulated ideas on the transformation of species and the marine origin of life. On the one hand, the different versions of this text — manuscript and printed — seem to have been widespread throughout the century; they were well known to famous scientists and writers like Buffon, Voltaire, and Diderot and seem to have had a significant influence on the development of the earth and life sciences. But, on the other hand, Maillet’s unconventional hypotheses were generally objects of ridicule during the eighteenth century and the first part of the nineteenth century. His views were considered seriously only after 1860, when the rise of evolutionary theories made him a ‘forerunner’ of Darwin in the eyes of many scientists and historians of science” (Schmitt’s brackets). Cohen’s book is a departure from the latter myth, Schmitt remarked: “Cohen’s serious and well-documented volume is notable for at least two strong points, as compared with the existing literature on Maillet. First, it contributes to breaking with the old historiographical tradition that anachronistically considered Maillet a ‘forgotten hero’ of evolutionary theory: here he appears as a man closely connected to his own social, literary, and scientific context, not as a visionary genius foreshadowing Lamarck and Darwin. Second, the notion that the study of writing practices and of the circulation of manuscripts and books is an important part of the history of science is particularly interesting when applied to a text with such a complex history as the *Telliamed*”. Cf. Claudine Cohen, “La communication manuscrite et la genèse du *Telliamed*”, in François Moureau (ed.), *De Bonne Main: La communication manuscrite au XVIII<sup>e</sup> siècle* (Bibliographica, 1; Paris: Universitas; Oxford: Voltaire Foundation, 1993), pp. 9–69. Schmitt concluded his review by pointing out that a critical edition that would examine the textual variants systematically is a *desideratum*.

The social context of clandestine circulation of manuscripts was discussed by ADAM SUTCLIFFE, “Judaism in the Anti-Religious Thought of the Clandestine French Early Enlightenment”, *Journal of the History of Ideas*, 64(1), 2003, pp. 97–117 (<http://www.jstor.org/stable/3654298>): “Many writers of radical texts lived tranquil lives remote from the metropolis. Jean Meslier (1664–1729) spent his entire adult life working as a curate in remote rural Champagne, where he wrote perhaps the most trenchantly anti-Christian text of the entire Early Enlightenment, which circulated only after his death

In the 1797 American edition, the long preface is unsigned. The scanned version available online of the Baltimore 1797 edition<sup>110</sup> is from the copy on hold at the Armed Forces Medical Library in Washington, D.C. (In Britain, according to the COPAC database<sup>111</sup> there is a printed copy of that edition at Oxford University and Manchester University.)

*Telliamed* is a tantalising book, concerning the belief that terrestrial animals have marine equivalents, and it actually claims that the terrestrial species derive from their equivalent marine species, even humans. One comes across a scholarly article by Edward Wright, “An Account of the Orthoceratites: In a Letter from Edward Wright, M.D. to Mr. Peter Collinson, F.R.S.”,<sup>112</sup> which was published in London in the 1755–1756 volume of the Royal Society’s journal *Philosophical Transactions*,<sup>113</sup> and in which on p. 673, Wright set to refute Buffon and *Telliamed*,<sup>114</sup> yet the latter

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as *Le Testament de Jean Meslier*. [Cf. e.g. MIRIAM YARDENI, “L’antisémitisme du curé Meslier”, *Revue des études juives*, 137 (1978), 47–60.] Benoit de Maillet (1656–1738), for a long period French consul in Egypt, devised the proto-evolutionist theory of the ancient retreat of the sea and the derivation of all life from sea-forms, put forward in his *Telliamed*. The ways in which these writers understood the relationship between open and clandestine texts and between their public lives and their clandestine philosophizing is clearly a subject of extreme complexity, and it suggests a striking fluidity in intellectual identities” (*ibid.*, pp. 103–104, our brackets). “Clandestine texts were regarded as ownerless and were freely embellished and modified. Of the various extant copies of *Telliamed*, each one is slightly different, having been freely adapted by each copier” (*ibid.*, p. 105).

<sup>110</sup> It can be accessed online at <https://archive.org/details/2562019R.nlm.nih.gov>

<sup>111</sup> <http://www.copac.ac.uk>

<sup>112</sup> Edward Wright signed his letter in Brussels on 11 June 1756.

<sup>113</sup> *Philosophical Transactions*, Vol. 49 (1755–1756), pp. 672–682. <http://www.jstor.org/stable/104998>

<sup>114</sup> RHODA RAPPAPORT, “Lavoisier’s Theory of the Earth”, *The British Journal of the History of Science*, 6(3), 1973, pp. 247–260 (<http://www.jstor.org/stable/4025444>), wrote on pp. 249–250: “Lavoisier’s teachers all discussed the dynamics of sedimentation and distinguished between what their pupil later called pelagic and littoral beds. But they did not explain clearly the relationship of this subject to their general theory of the earth, and so they left wholly or partially unanswered the question: if the *terre nouvelle* was laid down on the ocean floor, why then do some of its strata appear to be *littoral* in origin? The question did not arise in connexion with present shorelines, and Buffon was able to describe at length their gradual elevation or [p. 250:] degradation as the sea engages in a perpetual shift from East to West around the globe. But littoral deposits far from modern seas posed a problem of interpretation that even the ingenious Buffon found difficult of solution. In fact, he offered two mutually exclusive explanations. On one occasion Buffon suggested that alternating littoral and pelagic formations could be attributed to the fact that the seas ‘ont ... couvert et peuvent encore couvrir successivement toutes les parties des continents terrestres’. More often, however, his analysis resembles the theory put forward earlier by Benoit de Maillet in *Telliamed* (1748). Believing that the ocean floor can be agitated by strong currents, Buffon concluded that most of the earth’s mountains



is mentioned once, then Wright's text (pp. 673–674) continues by taking issue with "Mons. De Buffon" alone:

Pelagian or ocean shells are frequently found fossil very near the surface, as every naturalist knows, which proves, that such places have formerly been the sea-shore. Hence it is clear, that the cause, which transported them thither, acted suddenly; which agrees perfectly with the account of the deluge given by Moses in the holy scripture; and, at the same time, overturns the system of Mons. De Buffon, and the author of *Telliamed*, who pretend, that the earth was for many ages covered with water, and that in that long course of time it was, that the shells, which we now find fossil, were gradually produced; hence that they are to be considered as the remains of innumerable successive generations of marine bodies, formerly the only inhabitants of the globe. The greatest depth of the sea, as yet founded [sic], have been found to be about 3000 fathoms, and the ordinary depths are about 150; which makes it evident, that were the theories of these gentlemen true, such fossil [p. 674:] shells ought never to be found at less depths in the earth than from 150 to 3000 fathoms.

— until on p. 678 we come across a second mention of *Telliamed*:

I believe Mons. De Buffon must admit a universal deluge, such as is related in the Holy Scripture: and if a deluge of this kind is once admitted, why should we assign other causes for the transportation of marine and terrestrial bodies into climates foreign to those, where they were produced? Why, say Mons. De Buffon and the author of *Telliamed*, because many thousands of years seem to have been requisite for the production of so immense a quantity of sea-shells as those we [p. 679:] find every-where fossil; and besides, says the author of *Telliamed*, their disposition is so regular, that it is plain the confusion of a deluge could never have placed them in such a manner. But as to the immense quantity of fossil shells, upon which these gentlemen insist so much, they have been misled by imagining, that many parts of the surface of the earth contain marine bodies, which evidently do not; and these parts are, as I observed above, the mountains properly so called, in the constituent strata of which no sea-shells nor marine bodies of any kind, no bones of land animals nor impressions of plants, are to be found. [...]

Charles Edwards, in a 1900 article in folklore studies about myths concerning

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had been built up by the combined action of sedimentation and erosion taking place on the ocean floor; hence, the present land masses consist of sedimentary formations which are all deep-water in origin".

Cf. RHODA RAPPAPORT, "Geology and Orthodoxy: The Case of Noah's Flood in Eighteenth-Century Thought", *The British Journal of the History of Science*, 11(1) ["French Science" thematic issue], 1978, pp. 1–18, <http://www.jstor.org/stable/4025604>

animals<sup>115</sup>, included the following paragraph on pp. 36–37:

In 1678 Father Kircher [in *Mundus Subterraneus*, Amsterdam] demonstrated the transformation of orchids into birds, apes, and men, and in 1749 De Maillet published his belief that all the animals on land and the birds of the air are born of creatures who live in the sea. In the mind of this philosopher there must be a likeness between parent and offspring, so the birds arise from flying-fishes, lions from sea-lions, and man himself from the husband of the mermaid. There is a myth in Japan, founded upon history, that a princess went into the mountains to care for the silk-worms, and finally her body itself became metamorphosed into such larvae. In Japan it is supposed that the snake and the tortoise are converted into one another<sup>116</sup>.

In an article about the English architect and perspectivist Joseph Gandy (1771–1843), Brian Lukacher<sup>117</sup> stated in its abstract:

Bringing architectural theory into conjunction with the mythographic study of ancient art and religion in French and English scholarship of the late eighteenth and early nineteenth centuries, Gandy's writings and pictures postulated that all architectural forms originally possessed "emblematical" significance relating to the formation of language and mythology. His treatise and architectural imagery delved not only into the origins and recovery of architecture as a religious semiotic system, but also into the status of architecture as a subject of natural history.

"Gandy's method of collecting, and decontextualizing, the geologic wonders of the world for *Architecture; its natural model* has its most immediate source in popularizing science books" (Lukacher, p. 294). "Gandy's postdiluvian landscape illustrated what natural historians had for centuries referred to as 'the plastick virtue of the earth'". In his treatise, Gandy entertained intriguing, though scientifically retrograde, no-

<sup>115</sup> CHARLES L. EDWARDS, "Animal Myths and Their Origin", *Journal of American Folk-Lore*, 13(48), 1900, pp. 33–43, <http://www.jstor.org/stable/533731>

<sup>116</sup> On p. 35, EDWARDS stated: "At the present time as reflected in Mrs. Bergen's very complete collections of animal and plant lore [*Memoirs of the American Folk-Lore Society*, vol. 7, 1899], there are eleven items concerning the transformation of hairs into either worms or snakes. So this fancy, which has come to us from ancient days, is still held in all parts of the United States as well as in other countries. Even within the last two or three years, people have asked the editor of the 'Scientific American' if the horsehair makes an eel, and the editor has solemnly assured them that it does not. It is an easy step from the conception of the origin of organisms by abiogenesis to their origin from one another by heterogenesis"

<sup>117</sup> BRIAN LUKACHER, "Joseph Gandy and the Mythography of Architecture", *Journal of the Society of Architectural Historians*, 53(3), 1994, pp. 280–199 (<http://www.jstor.org/stable/990938>).

tions about the creativity of nature: figured stones and *lusus naturae* seemed to be evidence of the earth's mimetic tendencies" (Lukacher, p. 295). The earth itself was but an eclectic assemblage of historic traces and geologic styles. Fascinated by the legend of Atlantis and influenced by such fanciful cosmological theories as those proposed in Benoit de Maillet's *Telliamed* [...] Gandy could even spin his own cosmic fables that would further dissolve the boundaries between nature and architecture" (*ibid.*).

Humphry Davy, writing as a geologist, passed harsh judgement on *Telliamed*, which he considered to have been written in "the form of a romance, for the fables are more numerous than the facts and it affords much entertainment, but little or no instruction"<sup>118</sup>.

The preface of *Telliamed* is followed by a *Plan of Telliamed's System*, which is a substitute for a table of contents.

In his review of Carozzi's translation of *Telliamed*<sup>119</sup>, Alexander Ospovat remarked<sup>120</sup>:

<sup>118</sup> Statement quoted on p. 221 by ROBERT SIEGFRIED and R.H. DOTT, JR. "Humphry Davy as Geologist, 1805–29", *The British Journal for the History of Science*, 9(2), 1975, pp. 219–227 (<http://www.jstor.org/stable/4025808>), citing Lecture 4, of Davy's ten unpublished lectures he gave in 1805. "These lectures have never been published and exist in manuscript in the archives of the Royal Institution in London, each in an unpaginated, bound notebook. Lectures 1 to 5 are in the Davy MSS., box 16, and lectures 6 to 10 are in box 17" (Siegfried and Dott, p. 227, note 7). "In spite of the fact that Davy today is almost solely known for his chemical discoveries and his invention of the miner's safety lamp, he was in his own time also well known as an active participant in geological circles. As early as 1805 he gave a series of ten lectures on geology at the Royal Institution; in 1807 he was instrumental, with George Greenough, in the founding of the Geological Society of London; and in 1813 he was given special permission by the French Emperor, Napoleon I, to visit the extinct and active volcanoes in France and Italy with a view to testing his own hypothesis concerning the source of volcanic heat" (*ibid.*, p. 219).

<sup>119</sup> Another review claimed: "Never ignored but never given the attention it deserves, *Telliamed* remains an enigma which would repay study; and Carozzi's edition adds to the subject dimensions which no future historian will be able to neglect". R. [i.e., Rhoda] RAPPAPORT, review of Benoit de Maillet, *Telliamed*, translated and edited by ALBERT V. CAROZZI (Urbana: University of Illinois Press, 1968), in *The British Journal for the History of Science*, 5(3), 1971, pp. 312–313 (<http://www.jstor.org/stable/4025342>). Rappaport also remarked about too modern terminology in Carozzi's translation: "Sometimes the chosen English word has too modern or too precise a connotation or involves a question of interpretation (thus, *dispositions* becomes 'structure' and *congélation* 'indurated deposits'); in such cases, Carozzi provides the French in a footnote".

<sup>120</sup> On pp. 139–140 in ALEXANDER M. OSPOVAT, review of Benoit de Maillet, *Telliamed*, translated and edited by ALBERT V. CAROZZI (Urbana: University of Illinois Press, 1968), in *Isis*, 61(1), 1970, pp. 139–141, <http://www.jstor.org/stable/229178>

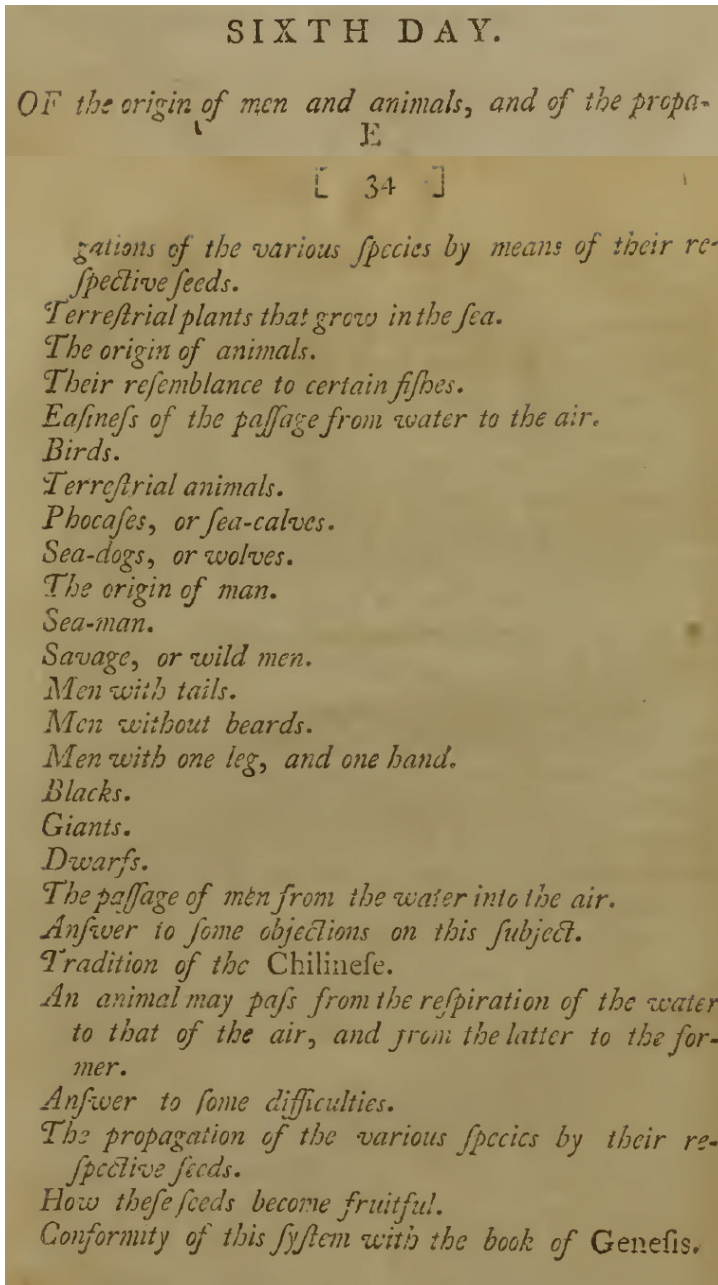


Fig. 11. From the last two pages of the *Plan of Telliamed's System* from *Telliamed* (Baltimore, 1797).

In the *Telliamed* de Maillet presented a cosmogony in which he focused his attention on the history of the earth and the origin of plants, animals, and man, using the sea and its activities as the principal agent in bringing about the physiographic, lithological, and structural changes in the earth's crust. His geological proofs of the diminution of the sea were to a large degree a search for an answer to the problem of the nature and origin of fossils, and his work not only helped to solve that problem but also provided future theorists of organic evolution with one of the essential ingredients for their theories — sufficient time. While Buffon spoke in terms of over a hundred thousand years, de Maillet spoke in terms of billions. The present edition is much more than a translation of *Telliamed*. It presents the original manuscript plus the additions and modifications that de Maillet made during his lifetime. And the result is quite different from any of the printed versions. The editions of 1748 and 1749 were, in Albert V. Carozzi's words, replete with mistakes; and unfortunately Abbé J.B. le Mascrier, to whom de Maillet had entrusted the original manuscript along with his additions and corrections, tried to make the 1755 edition "safe", that is, in keeping with the teachings of the Church. Of the seven known manuscript copies of *Telliamed*, two are considered to be more reliable than the others. Professor Carozzi has translated one of the two, a copy made in 1728 and now in the Library of the University of Illinois. He also includes de Maillet's additions and modifications, thus providing a new, more complete, and more authentic version of de Maillet's system than has ever been available before. [...] Professor Carozzi, who has already distinguished himself for several edited translations in the history of geology, has surpassed his previous efforts. [...]<sup>121</sup>

<sup>121</sup> Already in "American Doctoral Degrees Granted in the Field of Modern Languages in 1958–59", compiled by Wm. MARION MILLER, *The Modern Language Journal*, 44(3), 1960, pp. 130–135 (<http://www.jstor.org/stable/319795>), one comes across a dissertation from Columbia University (New York) by HARRIET D. ROTHSCHILD, *Benoît de Maillet: Eighteenth Century Naturalist (A Study of Telliamed)*. This was listed under the rubric "Romance Languages and Literatures / French".

It must be said that the border between scientific literature and the *belles lettres* was crossed by the prolific, notoriously licentious French author Nicolas-Edme Rétif de la Bretonne (Sacy, 1734 – Paris, 1806), in a rather curious work among whose sources he listed *Telliamed*. MARK R. RUBIN, "Aurora Australis, or Some Further Light on the Sources of *La Découverte australe* of Rétif de la Bretonne", *The French Review*, 51(5), 1978, pp. 692–696 (<http://www.jstor.org/stable/389101>), began that article by remarking: "Among Rétif's more curious productions is a four-volume work published in 1781, *La Découverte australe*. That opus, subtitled *Le Dédale français*, is a curious mixture of science fiction, metaphysical speculation, and social satire, which has been the subject of relatively little critical consideration and has never been re-edited in its entirety in French. Even more curious is Rétif's uncharacteristic silence about the circumstances of its composition: there is something anomalous about such reticence on the part of a man who felt compelled, after having filled sixteen volumes with his autobiography [*Monsieur Nicolas* (16 vols., 1794–1797)], to publish essentially identical material again, this time in dramatic, rather than narrative, form". The book (that has been considered a work of proto-science-fiction) was *La Découverte australe, Par un Homme-*

Apart from its theory of the earth and of living beings, *Telliamed* was also concerned with stellar astronomy: William “Herschel drew important lessons from Buffon’s identification of temporal epochs as taxonomic categories, and from the claims of writers like De Maillet for the uniformity of the agency of natural law acting through time. The cyclical cosmology of *Telliamed* in which suns became planets which then caught fire to resume their place as suns was divided into such epochal and natural types”<sup>122</sup>.

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*volant, ou le Dédale français; Nouvelle très-philosophique: Suivie de la lettre d’un Singe, &c.* 4 vols. (Leipsick [?] and Paris: n.p., 1781). Leipsick is Leipzig. (In the early years of the 20th century, one would still come across the spelling “Leipsic” in English texts.) In fn. 1 in his paper, Rubin explained: “The work, which was composed for the most part in 1779, may be divided into two sections: novelistic and expository. The first, the story of the ‘French Daedalus’, Victorin, and of his discoveries in the southern (austral) hemisphere, is, of course, the ‘nouvelle très-philosophique’ announced by the title. The second section is subdivided into four parts: a systematic review of theories on the creation of the universe, entitled ‘Cosmogénies, ou Systèmes de la Formation de l’Univers, suivant les Anciens et les Modernes’; a curiously contradictory tract rather in the general spirit of Rousseau’s *Discours sur les sciences et les arts*, entitled ‘Lettre d’un Singe aux Etres de son espèce’, complete with abundant explanatory notes; a long documentation of the book’s general theories of evolution, entitled ‘Dissertation sur les Hommes-brutes’; and a series of satirical ‘diatribes’ about aspects of contemporary French society, collectively entitled ‘La Séance chés [sic] une Amatrice’” (our added brackets).

HAROLD BROOKS, “A Song from Mr Cypress”, *The Review of English Studies*, New Series, 38(151), 1987, pp. 368–374 (<http://www.jstor.org/stable/515570>), was concerned with sources of the minor poet Thomas Love Peacock. Those sources include, e.g., Byron — the paper begins by stating: “Mr Cypress’s song in *Nightmare Abbey* is spirits of early Byron thrice distilled” — but also *Telliamed*. Referring to Mr. Asterias the ichthyologist in Ch. 7 of Peacock’s *Nightmare Abbey*, Brooks on p. 372 quotes a passage stating that Asterias “had been becalmed in tropical seas, and had [vainly] watched to see the colossal polypus rise from the water, and entwine its enormous arms round the masts and the rigging. He maintained the origin of all things from water, and insisted that the polypodes were the first of animated things, and that from their round bodies and many-shooting arms, the Hindoos had taken their gods, the most ancient of deities. But ... the end and aim of his researches, was to discover a triton and a mermaid, the existence of which he ... was prepared to demonstrate a priori, a posteriori, ... syllogistically ... by arguments deduced both from acknowledged facts and plausible hypotheses”. Then Brooks proceeds to remark: “By these shafts natural historians, natural philosophers, ichthyologists, credulous travellers, and Lake poets are all transfixed. Allusion is made to eighteenth-century controversies: one of ‘Neptunists’ against ‘Plutonists’ or ‘Vulcanists’, familiar to Peacock in Benoît de Maillet, *Telliamed: Or, Discourses between an Indian Philosopher and a French Missionary, On ... the Origin of Men and Animals*; a second one, claims for the priority of Hindu over Christian theological tradition, endorsed by Voltaire and others, confuted by Joseph Priestley, Thomas Maurice, and Sir William Jones”. At the very end of his paper, Brooks explained in fn. 27 on p. 374 that his own research from the 1940s was used in the London doctoral thesis of a supervisee of his, A. Nikitas, “Peacock’s *Nightmare Abbey* ed. with a critical introduction and commentary”, 1967. “Particularly on Peacock’s chapters VII and XI, of course with due acknowledgement, he drew freely upon it. In turn it was he who introduced me to Salgues and to *Telliamed*”.

<sup>122</sup> Quoted from p. 231 in: SIMON SCHAFFER, “Herschel in Bedlam: Natural History and Stellar Astronomy”, *The British Journal for the History of Science*, 13(3), 1980, pp. 211–239, <http://www.jstor.org/stable/4026197>

In *Telliamed*, any fish animals are referred to as *fish*. This is in line with what a New York jury would have eventually decided (against the testimony of a naturalist), in *Maurice v. Judd* in 1818<sup>123</sup>. In *Telliamed*, terrestrial animals are claimed to have equivalents in the sea; this is put in the mouth of the Indian philosopher, through which the author conveys his own opinions<sup>124</sup>:

The transformation of a silk-worm or a caterpillar into a butterfly, would be a thousand times more hard to be believed than that of fish into birds, if this metamorphosis was not daily made before our eyes. Are there not ants which become winged at a certain time? What would be more incredible to us than these natural prodigies, if experience did not render them familiar to us? How easy is it to conceive the change of a winged fish flying in the water, sometimes even in the air, into a bird living always in the air, in the manner I have explained? [...]

As for quadrupeds, we not only find in the sea, species of the same figure and inclinations, and in the waves living on the same aliments by which they are nourished on land, but we have also examples of these species living equally in the air and in the water. Have not the sea-apes precisely the same figure with those of the land? There are also several species of them. — Those of the southern are different from those of northern seas; and among these last our authors distinguish the *Danish* ape from the other species. Do we not find in the sea a fish with two teeth like those of the elephant, [p. 237:] and on its head a trunk with which it draws in the water, and with it the prey necessary for its subsistence? One of these was shewn [sic] at *London* very lately. Would it be absurd to believe that this sea-elephant has laid a foundation for the species of land-elephants?

The lion, the horse, the ox, the hog, the wolf, the camel, the cat, the goat, the sheep, have also fish in the sea similar to them. In the preceding age, there were some sea-bears shewn at *Copenhagen*, which had been sent to the king of *Denmark*. After having chained them they were permitted to go into the sea, where they were seen to sport together for several hours. Examine the figures of the fish which are known to us, and you will find in them nearly the form of most of our land-animals.

There are twenty kinds of phocas's, or sea-calves, large and small. Your histories, and the journals of your literati, speak enough of the occasions, on which they have been taken, and even tamed. The city of *Phoecea*, as is said, drew its name from the great number of these animals always seen in the sea contiguous [sic, for contiguous] to it. [...]

<sup>123</sup> D. GRAHAM BURNETT, *Trying Leviathan: The Nineteenth-Century New York Court Case That Put the Whale on Trial and Challenged the Order of Nature*, Princeton, New Jersey: Princeton University Press, 2007; E. NISSAN, "Ontologies on Trial: The Lesson of *Maurice v. Judd* (New York, 1818)", *International Journal of Law and Information Technology*, 22(2), pp. 191–211 (2013).

<sup>124</sup> *Telliamed*, Baltimore edition, pp. 236–237.

## 17. Telliamed and Other on Sea-Bears or Sea-Dogs and on Tritons or Seamen

The Indian philosopher Telliamed supposedly tells his interlocutors about such animals as sea-bears or sea-dogs, and the author corroborates this with first-person reports as well as upon the authority of documentary sources, before turning to sea-men<sup>125</sup>:

Do they not in the lower *Germany*, feed in ponds of freshwater, sea-bears, which may be also called sea-dogs, and which are very common in the seas of cold countries? Have not these the colour and the hair of *Danish* dogs? When I went to *Dantzick*, I saw one of them in a pond. At the smallest noise he heard on the brink of the pond, he lifted up his head, to see what was the occasion of it. Is it to be doubted that our dogs have come from these sea-dogs, since they resemble them so perfectly in figure, colour, and other circumstances?

As for man, who ought to be the principal object of our attention, you have, no doubt, read, continued our philosopher, what your ancient histories relate concerning the tritons or seamen; but I shall not mention what (the ancients have wrote on this subject, I shall pass over in silence, what *Pliny*, who is perhaps unjustly branded as a liar, [*sic*] has said concerning a tritons [*sic*] who was seen in the sea playing on the flute. [...] In a word, I shall reject every thing which may be supposed to be the effect of fancy and imagination, in the works of the ancient poets, and only adhere to well-attested facts, which have happened in or near our own time, and which every one has an opportunity of enquiring into.

Sometimes, European and Native American lore about tritons coalesced. An important account of the fauna of Dutch Brazil was Gulielmus (Willem) Piso's<sup>126</sup> *Historia Naturalis Brasiliae*<sup>127</sup>. Another early modern account of fauna in Dutch Brazil is embedded in a historiographical account by Caspar van Baerle (Barlaeus), in whose natural history descriptions there is constant contrast between land and sea<sup>128</sup>. The

<sup>125</sup> *Telliamed*, Baltimore edition, p. 239.

<sup>126</sup> Gulielmus Piso (Willem Pies) was born in 1611, and died in 1678. He was a physician in Amsterdam.

<sup>127</sup> It was a voluminous book, and whereas it included contributions by Willem Pies, it was based on notes taken by the scientist Georg Marcgraf or Marcgrave (1610–1643). Both men belonged to the retinue of Johan Maurits of Nassau Siegen at the time he was Dutch governor of Brazil (1637–1644). Gulielmi Pisonis, *Historia natvralis Brasiliae, auspicio et beneficio illustriss. I. Mauritii [...]: In qua non tantum plantae et animalia, sed et indigenarum morbi, ingenia et mores describuntur et iconibus supra quingentas illustrantur*. Lygd. Batavorum: apud Franciscum Hackium; et Amstelodami: apud Ludovicum Elzevirium 1648. Reprinted, St. Louis: Missouri Botanical Garden Library, 2004. Cf. Heinrich Lichtenstein [1780–1857], *Estudo crítico dos trabalhos de Marcgrave e Piso sobre a história natural do Brasil à luz dos desenhos originais*, São Paulo, 1961.

<sup>128</sup> For example, one fish has “oxen eyes” and was accordingly called *olho de boy* in Portuguese indeed (but “Boope, marinus piscis” in the original Latin text); the oil of tunnies resembles butter; there is mention of the water bat and the sea spider (“*Guacucua* is a water-bat. *Nhanduguacu* a



following description of tritons is taken from Barlaeus' account:

Most surprising are the Tritons, by the Natives called Ypupiapra, since they show an almost human face and the female creatures show long hanging hair with a more attractive appearance. They are also observed at 7 or 8 miles from Baia de Todos los Santos and also near the province of Porto Seguro. One believes that they kill people in a slow embrace, not by malignancy but by extreme love. Because corpses washing ashore are damaged at the eyes, nostrils and fingertips, it is most probable that this is caused by sucking or biting by such marvels of the sea.

Concerning the "love" of marine humanoids for humans, consider lore from Scotland about a male marine monster cohabiting in women in their houses:

Stronsay or Sdronsay, so called as if 'Streams Isle.' This island is six miles in length and four in breadth: peats are abundant here, and half part is uncultivated. Some here worship God, others not. They also greatly believe in fairies, and say men dying suddenly afterwards live with them, although I do not believe it. Troici, under the name of a marine monster, very often cohabit with women living here, which, when I lived there, a beautiful woman was there married to a sturdy farmer; she was tormented with a great spirit, and was seen against the husband's will lying in one bed, and he cohabiting naturally with the women. The woman at length became emaciated from sorrow: I advised that she might get free by prayer, alms-giving, and fasting, and which she did; she was thus troubled during a year. The description of this monster is this. He was covered with marine plants over the whole body, he was similar to a young horse covered with hair, he had a member similar to a horse and large testicles.

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large sea-spider"); another fish is likened to a pig in its Portuguese name, *peixe porco* (with the indigenous vernacular name *guaperua*); turtles lay eggs as big as a chicken. See especially p. 116 in MARINUS BOESEMANN, "A Hidden Early Source of Information on North-Eastern Brazilian Zoology", *Zoologische mededelingen*, Leiden, 68 (1994), pp. 113–125. That article is concerned with early modern accounts of Brazilian fauna, but especially with the one by Barlaeus, published in 1647. Boeseman suggested in note 21 that "The Portuguese name *Olho de Boy* ('Boope, marinus piscis' in original Latin text) was not found in the available literature, but most likely stands for *peixe-boi*, the manatee (*Trichechus manatus* (Linnaeus)), with the indigenous vernacular name of (*i*)*guaraguã*". (The manatee is a mammalian). As for the *peixe porco*, Boeseman in note 29 proposes: "Considering also the prominent spines to which Barlaeus draws attention, it should be interpreted as a trigger-fish, probably *Balistes vetula* (Linnaeus)". Boeseman's note 30 explains: "The *Guacucua* or waterbat is described and figured" in the *Historia Naturalis Brasiliae*, "and may be identified as *Ogcocephalus vespertilio* (Linnaeus) (or *O. longirostris* (Valenciennes)". Boeseman's note 31 explains: "The *Nhanduguacu*, called sea-spider by Naber, but only spider in the Latin text, is misplaced among the fishes. It has been described, with the same indigenous vernacular name and figured" in the *Historia Naturalis Brasiliae*, "and belongs to the terrestrial bird spiders (*Avicularia* species), but a further identification of Marcgrave's species remains uncertain".

This appears in *A Description of the Orkney Islands* by Jo. Ben, 1529. In that account of the “Stream Isle”, the writer was probably trying to slot the local description into wider elite cultural concepts he had familiarity with and was influenced by. As for the private parts of the humanoid monster being likened to those of a horse, consider for comparison that the prophet Ezekiel, in his anger at Pharaonic Egypt for failing to support the Kingdom of Judah after pushing that buffer state to rebel against Babylon, referred to Egyptian sexual mores perceived as being loose by likening the flesh to that of the donkey, but the ejaculation to that of a horse (*Ezekiel* 23:20).

The following passage is of 17th-century ethnology from the north of Scotland. It is from a book by John Brand (1668?–1738, he was minister of Borrowstounness)<sup>129</sup>, *A Brief Description of Orkney, Zetland, Pightland-Firth & Caithness*, 1701:

That there are sea creatures having the likeness of men and women seems to be generally acknowledged by all who have inquired thereunto, they having found it confirmed by the testimony of many in several countries as their histories do bear. Hence are accounts given of these sea-monsters, the mermen and mermaids, which have not only been seen but apprehended and kept for some time. And hence probably the fiction of the syrens hath had its rise; these enchanting songsters, translated by mermaids by our lexicographers, whose snare Ulysses so happily escaped.

They tell us that several such creatures do appear to fishers at sea, particularly such as they call sea-trowes, great rolling creatures tumbling in the waters [...] the fishers in Orkney and Zetland are afraid when they see them, which panic fear of theirs makes them think, and sometimes say, that it is the devil in the shape of such creatures; whether it be so or not as they apprehend, I cannot determine. However, it seems to be more probable that evil spirits frequent both sea and land.

Creatures locally called a *Trow* were often classed as a fairy. *Zetland* is an old name for Shetland.

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<sup>129</sup> *A New Description of Orkney, Zetland, Pightland-Firth and Caithness: wherein, after a short journal of the author's voyage thither, these northern places are first more generally described; then a particular view is given of the several isles thereto belonging; together with an account of what is most rare and remarkable therein: as also the author's observations thereupon. Dedicated to his Grace the Duke of Hamilton*, by John Brand. Edinburgh: Printed by G.M. and sold in London by J. Taylor at the Ship in St. Paul's Church-Yard, 1703. An earlier edition was Edinburgh: Printed by George Mosman, 1701. The edition Edinburgh: W. Brown, 1883, was reprinted verbatim from the original edition of 1701.

18. *Reports in Telliamed about Monstrous Marine Humans*

In the final part of his book, the author of *Telliamed* indulges in reports about monstrous humans; some of these were about supposed humans living in the sea<sup>130</sup>:

Father *Henriquez*, a *Jesuit*, relates, in one of his letters printed at Venice in 1548, and 1552, that being in the *East-Indies*, near the *Indian* point, he was one day invited to see sixteen tritons, seven male and nine female, which they had taken at one haul of the net. I was assured, that in the *Texel*, about thirty years ago, there was a sea-man taken, who lived three days, and was seen by all the people of *Amsterdam*. — They who sail in the *Greenland* seas affirm, that on the coast of that country they often meet with those figures male and female, but of a larger size than those in the other seas. A thousand similar examples found in your books, especially in your voyages, evince that these monsters, are frequently seen by ship's crews, during the course of their navigation, even so near, that it is often easy to view them and their shapes perfectly.

The following is a proof of what I have advanced, so recent, so circumstantiate, and so authentic, that we must renounce our reason, and bid adieu to all evidence, if we do not yield to it. In 1720, on Thursday the 8th of August, the wind variable, being east south-east, in twenty-eight or thirty fathoms of water, seven ships in view on the banks of *Newfoundland*, about ten o'clock in the morning, there appeared near a French vessel called the *Mary de Grace*, commanded by *Oliver Morin*, a sea-man, who first shewed [sic] himself under the roundlet of the owner, whose name was *William L'Aumone*. The owner forthwith took a gaff in order to draw him on board. But the captain hindered him, for fear the monster should drag him along. For this reason he only gave him a blow on the back with it, without piercing him.

When the monster felt the blow he turned his face to the owner like a man in wrath, who wanted to make reprisals. He swam round the ship, and when he was behind her laid hold of the rudder with both hands, which obliged the crew to fix its handle to both sides of the ship, lest he should endanger her. — Then he repassed by the starboard, swimming always as if he had been an ordinary man, and when he was before the vessel, he stopped to look at the figure on the bow, which was that of a beautiful woman. After having long considered it he laid hold of the lowest rope of the bowsprit, and raised himself out of the water with a seeming intention to seize the figure. They tied a cask to a rope, and allowing it to hang at the side of the ship, he took it and handled it without breaking it.

He afterwards swam to the windward of the ship, about a cable's length, and passing behind her, again laid hold of the rudder. The captain having or-

<sup>130</sup> *Telliamed*, Baltimore edition, pp. 245–246.

dered a harpoon to be prepared, tried to harpoon him, but mist [i.e., missed] his blow. The handle only struck [p. 246:] his back, upon which he for a long time turned his face to the captain, as he had to the owner, and with the same gestures. — After this he passed before the ship, and again stopped to consider the figure, upon which the owner ordered the harpoon to be brought to him: But being afraid lest this sea-man had been the ghost of a sailor called Commune, who the year before had made away with himself on board the ship, the 8th of the same month, which was August, his trembling hand ill directed the blow, so that for a third time the monster was only struck with the baton, to which the harpoon was fixed. Then he presented his countenance with a menacing air, as he had done the two former times. This, however, did not hinder him to come nearer, and to lay hold of a line with which one John Marie was fishing. After this he again swam to the windward of the ship, to the distance of a gun shot.

He afterwards returned, came very near, and raised himself out of the water as far as his navel, so that all the company distinctly observed, that he had a breast as full as that of a woman. Then he turned himself on his back, and with his hands laid hold of his private parts, which were as large as those of a horse. After this he swam round the ship, and again laid hold of the rudder. Swimming from thence slowly, he raised himself out of the water, and turning his back towards the ship, he voided his excrements against her side. After this he moved off till we could see him no longer.

This entertainment lasted from ten o'clock in the morning till noon, the monster having all that time been near the vessel, and often not above two or three feet distant, so that the crew, composed of thirty-two men, had both the pleasure and convenience of remarking the following particulars; that his skin was brown and tanned, but without scales; that all the motions of his body, from head to foot, were like those of a real man; that his eyes were well proportioned; that his mouth was of a moderate size, considering the length of his body, which by the crew was computed to be about eight feet; that his nose was large and very flat, his tongue thick, his teeth large and white, his hair black and straight, his chin furnished with a downy beard, and moustaches of the same kind under his nose, his ears like those of an ordinary man, his feet and hands the same, except that his fingers were joined with a pellicule, such as that found in the feet of geese and ducks. In a word, his body was as well shaped as that of an ordinary man.

#### 19. *Telliamed about the Origin of Land-Animals and Humans from the Sea*

The author of *Telliamed* puts in the mouth of the Indian philosopher Telliamed talking to the first-person narrator, a missionary, the claim that just as terrestrial animals departed from the sea, so humans did, and that the “barbarity [which] still reigns among the human races” of the Arctic is related to their having been sea-men

(i.e., aquatic humans living in water instead of breathing air) until relatively recently, as opposed to advanced peoples<sup>131</sup>:

[p. 256: ...] As all the species of sea-men are not known, it is impossible to determine those from which the various human races particularised by figure, dispositions and qualities proper to each, may have descended. It is at least certain, that some of them who have been taken, respired in the common air, as well as in the sea. However, though the respiration in the air is as natural to them as that in the sea, we ought not to doubt, but the former being sudden and forced, especially when such a transition happens in warm climates, the diversity of the air and water which they quit, is very prejudicial to the species. It is not therefore surprising, that sea-men taken in temperate or warm climates, have either lived so short a time, or by their melancholy air testified the change of their health. [...]

[p. 257:] Besides, it is not to be doubted, but nature chuses [*sic*, for chooses] proper times and places for the transmigration of the sea-races to the respiration of the air. Now, it is certainly towards the poles, and in cold countries, that the dispositions to these passages are most favorable, because in these climates the air being always moist, and full of thick fogs the greatest part of the year, is not very different [*sic*] in cold and moisture from the water of the sea — Thus, it is probably in these countries that the sea-race have passed and still passes most frequently from one element to another. These sea-races may however become terrestrial in all parts of the globe, by the advantage of certain dispositions, as in deep vallies, [*sic*, for “valleys”] where the elevation and proximity of the mountains maintain a perpetual coldness and moisture, and where thick and gloomy forests, or large caverns, sheltered these races at their departure from the water from the warm air, which might at that time have been incommodious to their breast and lungs.

But it is more probable, that the transmigrations of the sea-species, always have, and always will be more frequent towards the poles, and in cold climates. It is for this reason that the immense multitudes of men with which the southern parts of Asia and Europe are peopled, have come from these northern countries. It is also for this reason, that waters in these cold regions, are more fertile in monstrous fish, and sea-calves, than those of warm climates; and that these lands are better flocked with birds and animals of unknown species, than temperate countries. The moist and cold air, as I have said, of these northern places, is more favourable for the passage of sea-animals from that element to another.

[.... p. 260: ...] There is in all men an indelible mark, that they draw their origin from the sea. In a word, consider their skin with one of our lately inven-

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<sup>131</sup> *Telliamed*, Baltimore edition, pp. 256–264.

ted microscopes, which magnify a grain of sand to the bulk of an ostrich's egg, and you will find it all covered with small scales like those of a carp. Besides, we have several men covered with scales visible to the naked eye, which still confirms this origin. If therefore the men who now inhabit the earth, are descended from other men, who live originally in the sea, is it not probable, as the former observations attest, that some of them, especially in their youth, might recover the habit of living in the sea, as their forefathers did?

Is it, after this, surprising, that many of the Greek philosophers should assert, that water was the first principle of all things? Thales, Anaxagoras, and many others, have been of this opinion. Anaximenes gave this prerogative to the air, which amounts to the same doctrine; since, according to Sorel, water is only a condensed air, and air a rarified water, since there is air in water, and water in air, and in both a terrestrial matter, which becomes visible in the sediment. All those who have said, that the earth and the air were the principles of all things, have looked upon water as the cause of the generation of every thing which has either a sensitive or a vegetative life. Has not Homer advanced, that the Ocean was the father of the Gods, and Thetis their mother? Truth has its distinguishing marks even in fable. These factions at least indicate to us, that the memorable men of antiquity, who were by the barbarity of the ages made Gods, owed their origin to the sea, which includes air and earth, and even fire, when her waters are warmed by the rays of the sun. Thus she re-unites in herself every thing that [p. 261:] can concur to the generation of all species capable of life, animals, trees, and plants. [...]

But, Sir, said I, if the races of terrestrial animals proceeded from those of the sea, should we not still observe this passage, and see animals coming from the sea, very different from those [p. 262:] which came from it long ago? Yes, replied TELLIAMED, you would no doubt observe this difference, if you lived in the countries where this transmigration happens; that is, in the coldest countries, and those nearest the poles, where I have told you that this passage from one element to another must occur more frequently. The primitive races of men, after their first appearance on dry land, must have lived much in the sea, because you know that animals which come from the sea, are at first so savage, that every thing extraordinary which they either see or hear, frightens them, and makes them fly to the sea again.

But granting that this doctrine should not on the first view appear probable, yet the fierce and savage humour of so many of the inhabitants of the cold nations, and of the animals found in them, is a just image of the recent transmigration of these races from the water to the air. This alone is a proof of their late change of state and condition. You may observe recent traces of this both with respect to men and animals, in almost all the parts of the habitable world. These creatures taken by

the Dutch on the coast of Terra del Feugo [*sic; recte*: Fuego] in 1708, who only differed from ordinary men by the want of speech; these of a human form met with in Madagascar, who walk as we do, and who are deprived of the use of voice, though both species comprehend what we say; these very men, who hardly appear to be men, are perhaps people who have lately come out of the sea, and who have no voice, just as some dogs of Canada are deprived of it. But both will certainly acquire the use of it in some generations to come. [... p. 263: ...]

It is not therefore surprising, that on account of the situation of our countries, we should not observe this first departure of aquatic [*sic*: a spelling Italianism] animals from the sea. Let us be content to be witnesses of the rusticity and stupidity of those who are perhaps lately come from it, and whom we have an opportunity of seeing. — What barbarity still reigns among the human races found in Greenland, Spitzberg<sup>132</sup>, the country adjacent, to the streights [*sic*, for “straits”] of St. David, and Hudson’s bay? I shall not spend time in pointing out to you the extreme difference between these barbarians, probably lately come from the sea, and certain races of men, who have come from it long ago. You well enough know the extent of this difference; perhaps a good many generations were necessary, and even a change of climate, to bring them to the point of perfection at which ours has already arrived. I am persuaded that certain races, such as the blacks of some of the cantons of Africa, will not arrive at such perfection in fifty ages, except by their mixture with other people of more favourable dispositions. [... p. 264: ...] There is reason to believe, that there was a time after the deluge, in which all nations of the earth have been a new race.

I conceive, Sir, said I to Telliamed, that every thing living on the earth may draw its origin from the sea; but in order to establish this opinion, you have a great difficulty to resolve, for when in this globe there were no species perhaps, because they had been totally destroyed by fire, as you suppose that may have happened, how was it peopled without the assistance of a new creation, or at least without a transportation of animals to it, from a new globe where they subsisted before? How could this transmigration have been made? What to you seems so difficult, replied the Indian, is by no means so. I am now to convince you, that without the help of this new creation, all the species which now live in the globe might have been there naturally produced, though they had been extinguished.

#### 20. *A Sea-Monster with a Horned Muzzle on a Byzantine Silver Ewer*

We reproduce (fig. 12) the image of a Byzantine silver ewer with a rectangular foot, now at the State Hermitage in St Petersburg. It shows in relief a woman sitting on the back of a sea-monster. The latter has a scaly body and the tail of a fish, as well as a

<sup>132</sup> Spitsbergen, i.e., the Svalbard archipelago.

horned muzzle. Was it inspired by a narval? The horn of a narval is straight and twisted (somewhat like a Baroque column), whereas neither feature matches the horn of the sea-monster on the Byzantine ewer. Moreover (though not necessarily in the same period as the early medieval date at which the Byzantine ewer considered was manufactured), narval horns used to be marketed as, and mistaken by buyers for, unicorn horns, thus, horns coming from a particular kind of quadruped, rather than from a fish.

The piece now in the State Hermitage was found in 1924 in some unidentified region alongside the river Kamá in Siberia. It is made of silver and stands 25.2 cm. high (Fig. 5). Its body is formed of two convex sides attached to a ring-like central section. It has a rectangular foot and profiled flaring neck with double mouth. A single handle, now missing, was fastened to fixtures, still preserved, attached to the upper part of the neck and to the middle of the body. The ewer has been assigned to the early seventh century by L. Matzulewitsch<sup>133</sup>, who already likened its shape to that of the “pilgrim’s flasks”. [...] The enameled disks and plaques were executed separately and then applied to the body of the ewer. This technical method was universally employed in the Byzantine art of enamelling<sup>134</sup>.

Generally speaking, “The body of the ‘pilgrim’s flask’ was utilized to produce bottles with a long neck and with or without a foot”<sup>135</sup>. Concerning so-called pilgrim’s flasks, Aga-Oglu stated<sup>136</sup>:

The history of the type reaches back into great antiquity, and the questions of its origin and diffusion are beyond the immediate interest of this paper, but a brief observation is necessary for our thesis. Widely known all over the old continents, they fall into three principal groups: (1) flasks formed of two convex sides joining each other directly and surmounted by a short neck flanked by two loop-like handles; (2) flasks formed of two flat sides attached to a ring-like central section with the same neck and handles; and (3) flasks with a similar ring-like central section, neck, and handles, but with convex sides. Flasks of the first group were manufactured in Egypt as early as the eighteenth dynasty (1447–1375 B.C.). Their presence has been recorded also all over the Near East. To this group belong most of the so-called Saint Menas flasks. Of remote historical origin also are the flasks of the second group. The addition of a central ring-like section was, of course, in-

<sup>133</sup> LEONID ANTONOVITSCH MATZULEWITSCH [MATZULEVIČ], *Byzantinische Antike. Studien auf Grund der Silbergefäße der Ermitage* (Archäologische Mitteilungen aus russischen Sammlungen, 2), Berlin & Leipzig: Verlag von Walter de Gruyter & Co., 1929.

<sup>134</sup> Quoted from p. 164 in Mehmet Aga-Oglu, “Is the Ewer of Saint Maurice d’Agaune a Work of Sasanian Iran?”, *The Art Bulletin*, 28(3), 1946, pp. 160–170.

<sup>135</sup> Aga-Oglu, “Is the Ewer”, p. 164, fn. 38.

<sup>136</sup> Aga-Oglu, “Is the Ewer”, pp. 162–163.





Fig. 12. A Byzantine silver ewer, with a sea-monster with a horned muzzle (State Hermitage, St Petersburg)<sup>137</sup>.

<sup>137</sup> Fig. 5 in Mehmet Aga-Oglu, "Is the Ewer of Saint Maurice d'Agaune a Work of Sasanian Iran?". Aga-Oglu ended his article by answering his question in the negative: "the ewer of Saint Maurice d'Agaune, in my opinion, is beyond any doubt not a work of Sasanian Iran or of the Islamic Near East, but a product of Byzantine industrial art and was made during the late Macedonian period". <http://www.jstor.org/stable/3046817>

troduced to enlarge the capacity of the vessel. These flasks occur in Mesopotamia during the Parthian period, and continued to be produced in Syria and elsewhere well into the fourteenth century and possibly later. Equally, if not more, popular were the flasks of the third group, [...] The type of “pilgrim’s flask” did not remain unknown to the West, either, and all three groups are represented, with minor modifications of form, in various countries [as early as the Etruscan period].

### 21. *Orientalising Animal Sculpture of Medieval Campania*

Volbach<sup>138</sup> discussed some medieval sculpted animals showing Oriental influence, from the Campania region of southern Italy.

[Earlier] studies mentioned above have demonstrated the part played by eastern silks in the transmission of oriental motives to the West. These silks were brought by native and Levantine merchants to the ports of Amalfi, Salerno, and Naples, whence they found their way over the surrounding region. Other products of the minor arts — ivory carvings, metalwork, and rock crystal vessels — were also imported from the East to Campania and South Italy. Ivory caskets and horns (oliphants) were brought from Syria and Egypt to Palermo in particular, and eagerly copied at the courts of the Norman and Hohenstaufen rulers. Recently it has even been possible to prove that a drawing after a Byzantine model, taken perhaps from a pattern book, must have been brought to South Italy at an early period. These eastern objects exercised a strong influence on the sculpture of Campania, which, however, shows no exclusive attachment to the style of any particular part of the East, although certain artists and patrons had their preferences: [...] <sup>139</sup>

Among the other things, Volbach dealt with the hippocamp:

The third fantastic creature which recurs in variously modified forms in Campanian art is the hippocamp. It appears as early as about 600 on Sasanian fabrics, and is frequently copied on Byzantine silks of the tenth and eleventh centuries. The Campanian sculptors, however, combined antique with eastern features, adding a long fish-tail and thus creating a new species of winged sea-dragon. This hybrid is sometimes represented alone, surrounded only by fish, sometimes with Jonah as in the relief in the Museum of Capua in a form that recalls Early Christian art in Rome. One of the earliest examples is on the Cimitile relief which, from its inscription mentioning Bishop Lupinus, can be dated in the tenth century. Here the hippocamp has the linear form characteristic of tenth-century Cimitile sculpture. In spite of the greater

<sup>138</sup> W.F. VOLBACH, “Oriental Influences in the Animal Sculpture of Campania”, *The Art Bulletin*, 24(2), 1942, pp. 172–180.

<sup>139</sup> VOLBACH, “Oriental Influences in the Animal Sculpture of Campania”, p. 172.

movement in the figure, this example can be assigned to an earlier period than the peculiar Jonah relief in Capua, which shows a greater dependence on the Sasanian model. Recently another Jonah relief has appeared in a private collection (Fig. 20); it reveals a striking similarity to the Sorrento monster, and was therefore probably executed in the vicinity of that city (possibly for the ambo of the old Cathedral). It has the long fish-tail characteristic of most of these sea-monsters, as in the examples at Positano, Gaeta, Minturno, and the slab from the neighborhood of Sessa, now in the Kaiser-Friedrich Museum, Berlin. The linear treatment of the head, eyes, and wings incline us to place this relief at the very beginning of our group, even earlier than the Capua Jonah; here also imitation of an eastern prototype is obvious. In comparison with eastern reliefs such as the Sasanian peacock-dragon in the Museum of Constantinople, it appears more linear and two-dimensional, a characteristic of nearly all central Campanian sculptures influenced by the Orient<sup>140</sup>.

Volbach continued<sup>141</sup>:

The Jonah relief on the ambo of Minturno is more plastic in technique. Later twelfth-century reliefs, such as the slabs from the Cathedral of Gaeta, and others of the first half of the thirteenth century, gradually abandon the eastern prototype, and adopt classical features to an increasing extent. The wings dwindle, and in their place appears a ring of foliage around the middle of the body — an antique motive found on Hellenistic tritons and sea-monsters. Among the latest examples of these creatures are two thirteenth-century reliefs which were formerly in a Neapolitan palace, but have unfortunately disappeared (Fig. 24). The two monsters, each with the head of a wild boar in its claws, resemble sea-lions or dolphins, illustrating the final stage of the western adaptation of the eastern hippocamp. The addition of the boar's head suggests that the artist has here invested the animals with the symbolic meaning of the Physiologus, whereas previous sea-monsters were endowed only with the demonic character of the medieval Bestiary.

Volbach's article concluded by stating in its very last paragraph: "After the end of the thirteenth century, the East no longer contributed to the development of western art. Animal sculptures influenced by the Orient, which abound in all the churches of Campania from the ninth century on, now disappear. Gothic art, with its new aims, sought new sources of inspiration".

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<sup>140</sup> VOLBACH, "Oriental Influences in the Animal Sculpture of Campania", p. 178.

<sup>141</sup> VOLBACH, "Oriental Influences in the Animal Sculpture of Campania", p. 179.



Fig. 13. Jonah relief from the tenth century, “Possibly from Ambo of Old Cathedral of Sorrento”<sup>142</sup>. Note how the sea-monster has the head and ears of a quadruped carnivore.



Fig. 14. A 13th-century relief showing a sea-monster (formerly at a palace in Naples). It has a leonine head: thus, we may say, this sea-monster is a marine equivalent of a terrestrial lion. This sea-monster has the head of a boar in its claws<sup>143</sup>.

<sup>142</sup> VOLBACH, “Oriental Influences in the Animal Sculpture of Campania”, Fig. 20.

<sup>143</sup> This image is Fig. 24 in VOLBACH, “Oriental Influences in the Animal Sculpture of Campania”.



Fig. 15. A winged hippocamp in an Art Deco fountain (1937), with dolphins at the City Hall in Kansas City, Missouri<sup>144</sup>.

## 22. *Marine Equivalentents of Land-Animals in Indian Art*

In 1985, a book by K. Krishna Murthy, *Mythical Animals in Indian Art*, was published in New Delhi<sup>145</sup>. Its Part II, “Aerial or Atmospheric Mythical Animals (*Vyomacārin*)” (pp. 8–25), comprises Sections 1 to 14: “Winged lion (*Sapaksha Simhah*)”, “Winged and horned lion”, “Griffins”, “Winged deer or stag or antelope”, “Winged horse”, “Winged elephant”, “*Kinnara* and *Kinnari*”, “Winged bull with el-

<sup>144</sup> [http://en.wikipedia.org/wiki/File:Hippocamp\\_and\\_Dolphins\\_Kansas\\_City-City\\_Hall.jpg](http://en.wikipedia.org/wiki/File:Hippocamp_and_Dolphins_Kansas_City-City_Hall.jpg)

<sup>145</sup> K. KRISHNA MURTHY, *Mythical Animals in Indian Art*, New Delhi: Abhinav Publications, 1985.

ephant face”, “Winged otter”, “Winged goat”, “Lion faced cock”, “Male and female with lion’s body and wings”, “Eagle with five-hooded nāga”, and “Female with body of a bird and with wings”.

Part III, “Terrestrial Mythical Animals (*Bhucārin*)” (pp. 26–40), comprises its own Sections 1 to 12: “Human faced lion”, “Horned lion”, “Beaked lion”, “Elephant faced bull with antlers”, “Half-man and half-horse”, “Elephant faced man”, “Goat faced man”, “Bear faced man”, “Beaked otter”, “Chimaera”, “Half-maiden and half-snake (Mermaid)”, and “Half-man and half-snake (Merman)”.

Part IV, “Aquatic Mythical Animals (*Jalacārin*)” (pp. 41–62), comprises its own Sections 1 to 27: “Triton”, “Ichthyocentaur”, “Hippocamp and ichthyo-centaur” (*sic*), “*Makara* with crocodile forequarters and fishtail behind”, “*Makara* with elephant forequarters and fishtail behind”, “Horse with fishtail”, “Winged dragon”, “Stag with fishtail”, “Water bull or marine bull”, “Goat with human face and fishtail”, “Goat with fishtail and lion’s paws”, “Wolf with fishtail”, “Deer with fishtail”, “Cat with fishtail”, “Beaked horse with fishtail”, “Boar with fishtail”, “Buffalo with fishtail”, “Lion with fishtail”, “Beaked lion with fishtail”, “Winged lion with fishtail”, “Monkey with fishtail”, “Duck with fishtail and lion’s paw”, “Swan with fishtail and lion’s paw”, “Ram with fishtail and lion’s paw”, “Dog with fishtail”, “Crocodile with scorpion tail”, and “Lion and *makara*”.

The preface is followed by a list of illustrations, and sandwiched between the latter and the introduction to *Mythical Animals in Indian Art*, there are 24 plates, or rather pages of drawings, which are pointed to from inside the sections. The following is excerpted from the section entitled “*Makara* with crocodile forequarters and fishtail behind”:

[...] It is clear that the crocodile and the fish go into the make-up of the Indian *makara*. In early Indian art such as at Barhūt and Amarāvati, the *makara* has the head of a crocodile and the body of a fish with its scales, tail and fins. Sometimes, a pair of legs is added to this and horns are stuck above the eyes. Such a *makara* gradually acquires a snout resembling the curled trunk of the elephant and the crocodile lower lip slowly disappears.

In early Amarāvati sculpture the *makara* is partly a crocodile and partly a fish with the scales and fins emphasised, the horns absent and the ear fin-shaped. In the later Amarāvati sculptures the horns are those of a ram. The tips of the horns are sometimes shaped like a fishtail suggesting that the inspiration was from *jasha* which is a horned fish. Sometimes a pair of legs like those of a crocodile are added. Slowly, the crocodile jaws lose their length but the animal still approximates to the crocodile after whom his ancestor was made.

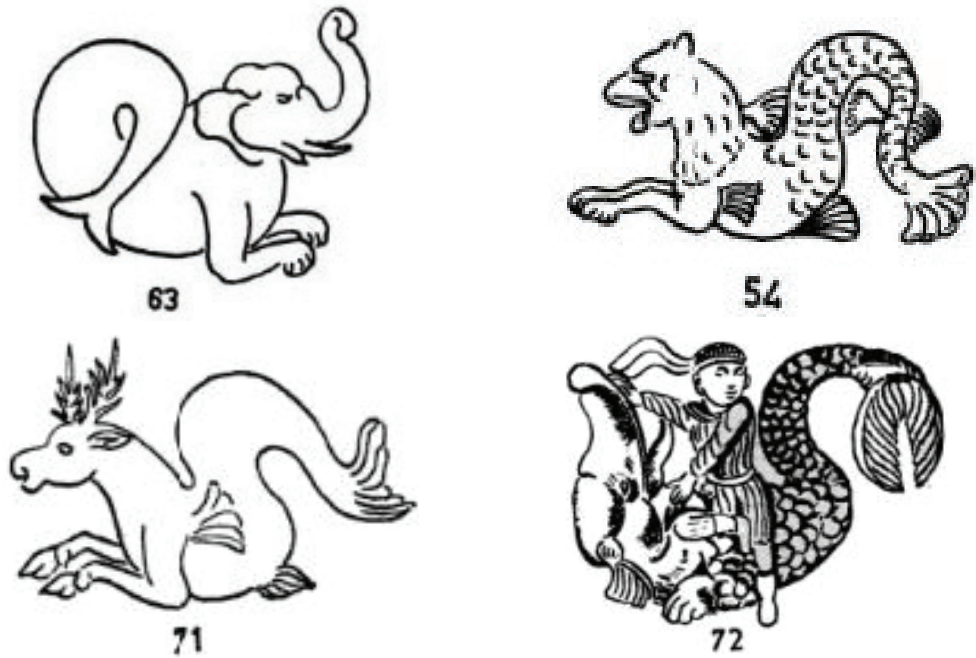


Fig. 16. Two Sanchi mythical animals (from Tables III and IV in Krishna Murthy 1985).

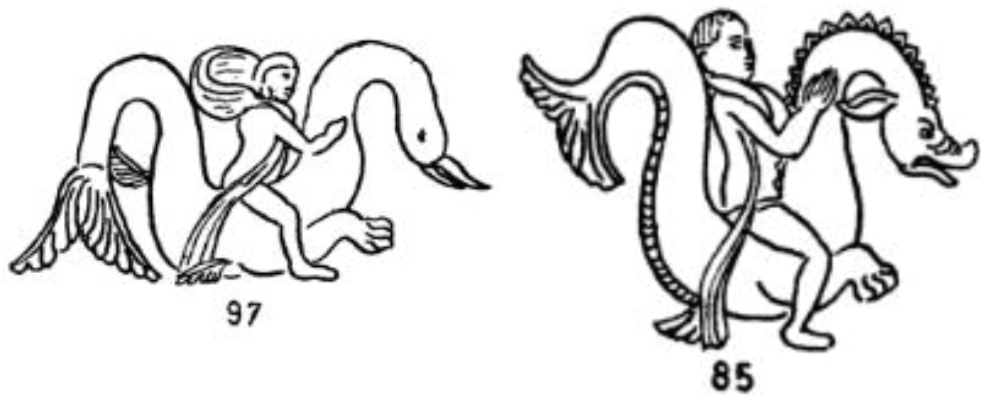


Fig. 17 Left, a fishtailed swan; right, another fishtailed animal; both of them from Mathura Art (Krishna Murthy's Table XIII).

The teeth are prominent.

In medieval times the teeth curve up beside the mouth like the side-tusks of a bear [shouldn't this be "boar"?] while the body shows it is that of a land animal with short legs like that of a rhinoceros and a tail spread like foliage into a descriptive appendage. It is in this strange animal in Chālukyan and contemporaneous temples that we meet the descendant of the original *makara* although completely transformed beyond recognition. The curling snout of the crocodile that resembles the elephant's trunk is a later development. [...] <sup>146</sup>

Krishna Murthy disagrees with an earlier scholar, Cousins, who opined that the snout resembles that of a tapir. According to Krishna Murthy instead, "it is clearly the elephant whose influence we can see on the *makara* as both the *makara* and the elephant are animals of India. Thus, the following animals have lent their contribution in the composition of the *makara* — the elephant, bear, rhinoceros, ram, fish and



Fig. 18. A Gandhara ichthyo-centaur now at the Victoria and Albert Museum in London <sup>147</sup>.

<sup>146</sup> KRISHNA MURTHY, *Mythical Animals in Indian Art*, p. 45.

<sup>147</sup> <https://commons.wikimedia.org/wiki/File:Ichthyo-Centaur.jpg>



crocodile”<sup>148</sup>. Next, Krishna Murthy pointed out the Indian earliest textual references to the *makara*, “but the exact type of animal is not referred to”; an earlier scholar suggested that “the general type of *makara* is crocodilian”<sup>149</sup>. The *makara* is also a symbol of love; some scholars theorised about this in relation to the proteiform shape of this animal, and Krishna Murthy proceeded to identify such instances in art that support considering the *makara* “a symbol of continuous cohabitation”<sup>150</sup>.

### 23. *The Origin of the Idea of a Composite Animal?*

Composite animals are a very old idea. On an ancient Indian seal, the image is shown of a composite animal, being a head of cattle which has the trunk of an elephant. Matt Kaplan suggests<sup>151</sup> that such mythical composite animals as Chimaera<sup>152</sup> (lion + goat + snake), Pegasus (horse + vulture), the Sphinx (lion + eagle + human) and Scylla (feline + canine with many heads and legs) may have originated as ancient people could not make sense of mixed fossilised bones — “fossils of multiple animal skeletons jumbled together”<sup>153</sup> — found in what in a bygone era had been a water-covered tar pit. Tar pits were absent from Greece or Europe except Russia, but they are found in Russia and the Middle East (and California, where they are a trove of fossils). Kaplan builds upon Adrienne Mayor’s<sup>154</sup> hypothesis that fossil findings in antiquity inspired the myth of the Griffin. Of course, this does not take into account symbolic function as a motivation for conceiving of a composite animal, such as a flying horse<sup>155</sup>.

<sup>148</sup> KRISHNA MURTHY, *Mythical Animals in Indian Art*, p. 46.

<sup>149</sup> KRISHNA MURTHY, *Mythical Animals in Indian Art*, p. 46.

<sup>150</sup> KRISHNA MURTHY, *Mythical Animals in Indian Art*, p. 47.

<sup>151</sup> M. KAPLAN, *The Science of Monsters: Why Monsters Came to Be and What Made Them So Terrifying*, London: Constable & New York: Scribner, 2013. See pp. 39–45 in Ch. 2, “Beastly Blends”.

<sup>152</sup> “Chimera”, in Kaplan’s spelling.

<sup>153</sup> KAPLAN, *The Science of Monsters*, p. 43.

<sup>154</sup> A. MAYOR, *The First Fossil Hunters*, Princeton, New Jersey: Princeton University Press, 2000.

<sup>155</sup> It must be said that symbolic function should not be easily dismissed. While discussing a book by PHILIPPE SWENNEN, *D’Indra à Tištrya: Portrait et évolution du cheval sacré dans les mythes indo-iraniens anciens* (Publications de l’Institut de civilisation indienne. Série in-8°, fascicule 71), Paris: Collège de France, 2004, in his own review article, PRODS OKTOR SKJAERVØ, “The Horse in Indo-Iranian Mythology”, *Journal of the American Oriental Society*, 128(2), 2008, pp. 295–302, remarks (p. 297): “Chapter 4 is devoted to descriptions of winged or flying horses. Swennen notes that, while they are compared to birds in the *Rigveda*, in the *Avesta* they have epithets otherwise only applied to stars; the flying horse is identified with the sun in the *Rigveda*, but with the star Tištriia,

#### 24. *Palaephatus' Rationalisation of the Sphinx*

The Sphinx is famous for the riddles that a passer-by must answer, not to lose his life, until Oedipus defeats her: see a discussion in Lowell Edmund's *The Sphinx in the Oedipus Legend*<sup>156</sup>. Palaephatus — an English translation by Jacob Stern exists<sup>157</sup> — tried to rationalise the Greek myth of the Sphinx. The following is quoted from James Romm's review<sup>158</sup> of Stern's book:

[...] Palaephatus is an odd bird. His peculiar method of rationalizing exotic myths does not fit easily into any of the generic categories established by the Loeb Classical Library [...]. Palaephatus was apparently a contemporary of Aristotle, and thus lived at a time when the body of myths inherited from high antiquity had long been under scrutiny by scientists and skeptics. Plato in the *Phaedrus* shows Socrates playfully attempting to rationalize the myth of Boreas [...]. But Socrates quickly draws back from this sort of approach, anticipating that it would take vast amounts of time and ingenuity to similarly decode all the fabulous elements in the mythic tradition: centaurs, chimeras, gorgons, Pegasuses, and the like. As if taking this *Phaedo* passage as his challenge, Palaephatus set out to [rationalise] all of Greek mythology [...], even when this required performing bizarre, almost ludicrous linguistic or logical contortions. [...] Palaephatus seems to be in dead earnest, since for him the credibility of the whole mythic tradition is at stake. [...] Stern, for the most

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Sirius, in the *Avesta* (§93)". Moreover (*ibid.*): "The discussions and conclusions in chapters 1–7 are summed up in chapter 8: the Indo-Iranian horse was a dominant stallion (§145). The bright and dark colors of the horses suggest the alternation of the day and night skies (§146). The white horse was associated with a star and was described as winged and/or flying (§§147–49). It is possible that the Indo-Iranian horse was called \**arūant*, derived from the root *AR*, which referred to both the rising of the sun and to setting in motion (§151)".

One comes across a winged horse on a cylinder seal from Bahrain, cut in the Neo-Babylonian style, and one also finds a row of winged and horned caprids on a cylinder seal from a site in Saudi Arabia (not far from Bahrain), cut in Neo-Babylonian style. See D.T. POTTS, "Cylinder seals and their use in the Arabian Peninsula", *Arabian Archaeology and Epigraphy*, 21 (2010), pp. 20–40, and see the bibliography it cites about those items.

<sup>156</sup> L. EDMUNDS, *The Sphinx in the Oedipus Legend* (Beiträge zur klassischen Philologie, Vol. 127), Königstein/Ts: Hain, 1981 (ca. 70 pp.).

<sup>157</sup> J. STERN, (ed., trans.), *Palaephatus: On Unbelievable Tales*, Wauconda, Illinois: Bolchazy-Carducci Publishers, 1996.

<sup>158</sup> J. ROMM, Review of *Palaephatus: On Unbelievable Tales*, trans. Jacob Stern (Wauconda, Illinois: Bolchazy-Carducci Publishers, 1996). *Bryn Mawr Classical Review*, 96.11.4 (1996). That journal, which only publishes reviews, is accessible online at [bmcr.brynmawr.edu](http://bmcr.brynmawr.edu). The book review can be accessed at <http://bmcr.brynmawr.edu/1996/96.11.04.html>



Fig. 19. The visual motif of Pegasus appears in this etching, “Heliodorus punished in the Temple”, from Gustave Doré’s Bible, thus combining a Greek motif with the Jewish narrative (*2 Maccabees* 3: 23–29)<sup>159</sup>.

<sup>159</sup> “But Heliodorus executed that which he had resolved on, himself being present in the same place with his guard about the treasury. But the spirit of the Almighty God gave a great evidence of his presence, so that all that had presumed to obey him, falling down by the power of God, were struck with fainting and dread. For there appeared to them a horse with a terrible rider upon him, adorned with a very rich covering: and he ran fiercely and struck Heliodorus with his fore-feet, and he that sat upon him seemed to have armour of gold. Moreover, there appeared two other young men, beautiful and strong, bright and glorious, and in comely apparel: who stood by him, on either side, and scourged him without ceasing with many stripes. And Heliodorus suddenly fell to the ground, and they took him up covered with great darkness, and having put him into a litter they carried him out. So he that came with many servants, and all his guard into the aforesaid treasury, was carried out, no one being able to help him, the manifest power of God being known. And he indeed by the power of God lay speechless, and without all hope of recovery”.



Fig. 20. A clay image of Medusa with the much smaller Pegasus, found in Syracuse, Sicily, and now at the Museo Archeologico Regionale in Syracuse, Sicily<sup>160</sup>.

<sup>160</sup> This is Fig. 271 in the *Lexicon Iconographicum Mythologiae Classicae*, Vol. IV-2, Zürich & München: Artemis Verlag, 1988. It also appears as Fig. 1 in FRANCESCO TANGANELLI, “Gorgoni e cavalli nel mito e nelle arti figurative di età orientalizzante e arcaica”, *Rivista di Studi Indo-Mediterranei*, 5 (2015), accessible at <http://kharabat.altervista.org/index.html> (2015).

part, meets this challenge ably. However there are places in which his footnotes could do more to clarify the ways in which linguistic misprisions give rise to Palaephatus' mythic tales. For example, when the victims of a female bandit named Sphinx, who happens to be accompanied by a pet dog, describe the speed with which their attacker moved [...] one can easily see how the image of a winged monster, part dog and part woman, took form. But that image is much harder to derive from Stern's English version, "She doesn't run, she flies — she and her dog!" It might not have been possible to capture in translation the ambiguity as to whether the Greek *KAI/... KAI/* denotes two different creatures or two combined into one, as singular verb suggests; but a footnote would have helped the Greekless reader understand just how natural an error led to the creation of the Sphinx legend. [...]

### 25. Composite Animals in TV Commercials

In the early 2010s, a TV commercial in Italy advertised Webank by means of a beast called a *muccapardo*, a fanciful hybrid of a cow (*mucca*) and a leopard (*leopardo*). Even though, historically, *pardo* existed in Italian and denoted a cheetah (now called *ghepardo*), the neologism *muccapardo* cannot be properly considered to be a compound. Rather, it is a portmanteau (< *mucca* + [*leo*] *pardo*). The idea of using a composite animal named by a neologised portmanteau word in a TV commercial was not novel, in Italy. There was the famous precedent of how Biscolussi biscuits were promoted. This subsection elaborates on the latter.

*Carosello* commercials (fig. 21) were broadcasted on Italian television on the First Channel, at prime time before the evening news, from 3 February 1957 until 1 January 1977. These commercials were longer than usual afterwards, and there was an understanding that they should entertain with a funny narrative, before turning to overt promotion. In the 2000s and 2010s, Italian-language webpages exist in which people reminisce nostalgically about *Carosello* commercials, or about promotional slogans in general. In the 1970s, Colussi, a biscuits manufacturer in the town of Perugia, Italy, used to promote their Biscolussi biscuits<sup>161</sup> by associating this product with an array of composite animal characters, individuals with a personal narrative who gradually became composite by adopting body parts from two animal kinds other than their own. The names of those characters used to be composite as well, made up of three zoonyms: neither regular Italian compounds, nor (other than peripherally) proper portmanteaux. The main conduit for the promotional campaign was the now long discontinued, and for nostalgic fans almost mythical, *Carosello* commercials.

Memorabilia were also offered by Colussi, and are now collector items<sup>162</sup>. We re-

<sup>161</sup> The name *Biscolussi* of the product was formed as a portmanteau from *biscotti* and *Colussi*.

<sup>162</sup> Joel's Friends album and memorabilia can be bought at the Italian e-commerce site for collectors. See <http://www.icollezionisti.com/catalog/album-figurine-amici-gioele-colussi-p-35.html>



Fig. 21. A still of Carosello commercials from Italian television in the 1960s.

produce card no. 7 (fig. 22) from the Colussi promotional cards displaying, one in turn, the composite animals who are collectively referred to as Gioele's (i.e., Joel's) friends (*gli amici di Gioele*). The head of Gioele is shown top left. It has a beak, as well as the ears of a hare. (The body is that of a small mammal, arguably a carnivore, and there are small wings on the shoulders, and the feet of the hind legs are very long.)

The composite animal shown at the centre is part Siamese cat (*un [gatto] siamese*), part zebra (Italian *zebra*), and part jaguar (*giaguaro*). In the original in colour, the segment *zebr* inside the composite name is shown in a different colour, *vis-à-vis* the two adjacent segments on both sides.



Fig. 22. A composite animal (Siamese cat, zebra, and jaguar), called *Siameszebriaguaro*, shown on card no. 7 from the Colussi promotional cards displaying Gioele's friends (*gli amici di Gioele*).

This colour differentiation was intended in order to make segmentation easier. This however was mainly a memory aid, because the young people that the promotional campaign was targeting were assumed to have been watching the commercials on television, or to have seen the full-page advertisements in *Topolino* (Italy's Mickey Mouse weekly, whose poor relation, catering to the poor, were the likewise weekly, but



Fig. 23. Gioele (the winged, crowned character) surrounded by his friends, singing the praises of Biscolussi biscuits.

slim and cheaper *Albi della Rosa*): such television commercials, as well as the ads in print, each told a story in which one of the composite animals related its own transformation, from animal kind *A*, through taking some body part from animal kind *B*, to eventually taking some other body part from animal kind *C*.

At the end of the animated story, the commercial would show a group of those composite animals (fig. 23), singing the praise of the Biscolussi biscuits, produced in Perugia<sup>163</sup> by Colussi:

Di Gioele amici siam  
ed insieme noi cantiam  
viva e viva gli indiscussi  
di Perugia Biscolussi<sup>164</sup>.

Later on, Colussi diluted the exact sense of *amici di Gioele*, and these were made to include *i Puffi*, i.e., the *Schtroumpfs*, the blue-skinned elves.

So famous was the refrain from that TV commercial, that when in the summer of 1996 the firm Colussi took over the brand Misura from the multinational Heinz Plas-

<sup>163</sup> More precisely, products of the brands Colussi, Gran Turchese, PanColussi, and Biscolussi are produced at the factory of the Gruppo Colussi (which comprises the firm Colussi SpA) at Petignano di Assisi, in the province of Perugia (<http://www.colussigroup.it/col01a.asp>).

<sup>164</sup> Cf. <http://www.il-fantamondo.com/biscolussi.htm> and <http://www.facebook.com/group.php?gid=64748287369>

mon, a report by Daniele Manca in *Corriere della Sera* of 30 August 1996 reminded its readership of the commercials, by referring to the firm as being the one of Joel's Friends, then quoting the refrain in full<sup>165</sup>.

The rhymed lyrics of the little song that the composite animal characters sing as a chorus at the end of the advertisement spot, “Di Gioele amici siamo / ed insieme noi cantiam: / Viva e viva gli indiscussi / di Perugia Biscolussi” (i.e., “Joel's friends we are, / and together we sing: / Long live the uncontrovertibly good / (from Perugia) Biscolussi”), display, in the last verse, a Latinate syntax in the word order of the genitive.

This is quite unnatural for Italian, in which the genitive can only be prepositional (the preposition is *di*, ‘of’), and unlike Latin, not by declension. Nevertheless, this syntax was enabled by a poetic tradition that in the late 19th century found extreme expression in Carducci's verse. Giosuè Carducci is a long overrated poet to some of whose work, children in the 20th century have been getting exposure as early as primary school.

#### 26. Another Example of a Recently Drawn Composite Animal

At the end of the “Feedback” column (p. 64) of *New Scientist*, Vol. 218, No. 2915, dated 4 May 2013 (London edition), Perry Bebbington, a reader, was credited with information about a shop window “promoting ‘Animal Designer Accessories’ in the UK town of Kimberley, Nottinghamshire. Perry assumes from this that: ‘genetic engineering has become so easy and commonplace — at least in the Midlands — that there are now shops where you can have an animal designed to your own specifications.’”

A drawing in colour illustrated that item. It showed, in the ground on the left side, a pet food bowl inscribed with “TIDDLES”, a cat's name. Facing it on the right side was a composite animal. It had a light reddish brown cat's head and collar, blue-eyed and staring at the reader. It also had a light greenish brown body, legs, and forelimbs of a kangaroo, small dark wings on its shoulders, and a striped tail, ending with a rattle (as in the tip of the tail of a rattle snake), with tiny motion lines suggesting it was being rattled by the composite animal.

<sup>165</sup> “A compiere lo sgarbo alle multinazionali e a testimoniare ulteriormente l'aggressività delle medie imprese italiane è stata l'azienda degli ‘amici di Gioele’. Di Gioele amici siamo ed insieme noi cantiam viva viva gli indiscussi di Perugia Biscolussi cantavano negli anni Settanta, in un celebre filmato pubblicitario, i biscotti a forma di animali prodotti dalla Colussi.” This quotation is from D. Manca, “Colussi, un colpo su ‘Misura’. L'azienda di biscotti strappa la società alla multinazionale Heinz Plasmon. [Pre-headline:] Alimentare e rivincite. Il marchio di Perugia si diversifica entrando nel settore dei prodotti salutistici”, *Corriere della Sera*, Milan, 30 August 1996, p. 20.

[http://archiviostorico.corriere.it/1996/agosto/30/colussi\\_colpo\\_misura\\_co\\_0\\_96083010686.shtml](http://archiviostorico.corriere.it/1996/agosto/30/colussi_colpo_misura_co_0_96083010686.shtml)



27. *The Figures of Men or Animals in “Petrifying Waters”*

In the 18th century, scholars took interest in stalactites and what were considered “petrifying waters”. Charles Leigh (who elsewhere claimed he had found a toad alive in a block of stone) wrote as follows to Richard Richardson in Yorkshire:

Honoured Sir

Since my return home, I have been so hurryd from one place to another in making my observations since the publishing of my proposals that I have scarce had one leisure houre; but have now nothing to doe but to print; and in order to do that, in a fortnights time will be for London, and employ five presses, and so put a speedy period to that matter. I have not observed stones to be transmuted to a different substance, but have seen petrifying waters from the Stalactities present us with the figures of plants, men, shells, and animals. In what I can be serviceable, you may be assured that I shall be proud of communicating my thoughts to you, and shall ever remain

Your most humble servant

Charles Leigh

This is found in *Extracts from the Literary and Scientific Correspondence of Richard Richardson, M.D., F.R.S., of Bierley Yorkshire; Illustrative of the State and Progress of Botany and Interspersed with Information Respecting the Study of Antiquities and General Literature During the First Half of the Eighteenth Century*, 1863.

More in general, there used to be competing theories about the nature of fossils. For example, Edward Llwyd and John Ray were in disagreement as to the nature of fossils. The following is quoted from a letter from Llwyd to Ray<sup>166</sup>:

Some of these Marine Fossils are no other than as it were Shadows or superficial Representations of Sea Bodies [...] And that such Marine Substances are sometimes generated in Humane Bodies: For me it appears a far less Wonder, that Shells and other Marine Bodies should be produc'd in the Bowels of the Earth, than their Production in the Bodies of Men or Animals at Land. And that they have been so found, is sufficiently attested, both by Ancient and Modern Authors, of a Credit and Character beyond all Exception.

Edward Llwyd had an awareness of stratigraphy. One of his rivals was pushing the thesis that formed stones (i.e., fossils) were formed by the great flood. Llwyd's own theory in part is against a deluge origin for formed stones (fossils). Llwyd believes that they grew in rocks, they were reproductions of nature. He referred to fish like monks, kidney stones, and so forth.

<sup>166</sup> <http://www.archive.org/stream/threephysicotheo00rayj#page/184/mode/1up>

## 28. *Concluding Remarks*

We have examined, throughout the history of ideas, the idea that land-animals have marine equivalents. A table of contents of this article would be of some help in recapitulating. We have begun by discussing occurrences in Roman-age rabbinic texts, their medieval glosses, and a notable occurrence in a fable from the medieval *Life of Ben Sira*. We also examined some fish-names in Talmudic Aramaic, Greek, and Latin (while also discussing a *locus* in Plautus). Strikingly, an image shows Alexander the Great inside a glass barrel, watching underwater a fox and a ruminant, as well as humans, living on the seafloor among trees, while fish swim around. We considered European medieval art, as well as Indian art, where composite animals proliferate, and among these, fishtailed composite animals are numerous. (We mentioned composite animals from TV commercials, and a recent idea that claims that *chimaerae* originated from finds of mixed fossil bones.) We considered fishermen's lore from Scotland and Iceland, about the parallel between land-animal and marine animals. We also considered early modern scholarly texts in Italian and English. We quoted extensively from an early American edition (Baltimore, 1797) of the French book *Telliamed* (Amsterdam, 1748), which proposed a remarkable theory about land-animal kinds as well as human peoples each separately deriving from aquatic forms.

### Structure of the present article

#### Abstract

1. *Marine Animals Equivalent to Land-Animals, According to Early Rabbinic Literature*
2. *A Medieval Gloss to the Babylonian Talmud*
3. *More about Abbaye's Paradoxical Pattern*
4. *A Different Exception to the Rule of There Being a Marine Equivalent for Every Terrestrial Animal Species, in The Life of Ben Sira*
5. *Considerations about the Tale of the Fox and the Fish*
6. *Talmudic Aramaic Fish Names Based Upon the Name for Some Terrestrial Animal, and Greek or Latin Examples*
7. *"Fox of the Sea" in Text by the Medieval Hebrew Fabulist Berechiah haNakdan*
8. *Terrestrial Animals and Humans on the Seafloor; in Visual Representations of Alexander the Great's Immersion and Sightseeing Underwater*
9. *Marine Versions of Terrestrial Animals in Heraldry*
10. *Relevant Lore of Scottish and Icelandic Fishermen*
11. *The Marine Monkey According to Vallisneri*
12. *The Sirens in Vallisneri's Book*
13. *The Double Nature of the Otter, Church's Days of Abstinence from Meat, and the Broken Vow of a Domestic Cat in a Fable by Clasio*

14. *Elite Belief from Early Modern Scholarly Texts*
15. *An Early Modern European Sailor Contrasting Native American in a Canoe at Sea, with Marine Life Beneath It*
16. *Telliamed about Marine Equivalents of Land-Animals*
17. *Telliamed and Other on Sea-Bears or Sea-Dogs and on Tritons or Seamen*
18. *Reports in Telliamed about Monstrous Marine Humans*
19. *Telliamed about the Origin of Land-Animals and Humans from the Sea*
20. *A Sea-Monster with a Horned Muzzle on a Byzantine Silver Ewer*
21. *Orientalising Animal Sculpture of Medieval Campania*
22. *Marine Equivalents of Land-Animals in Indian Art*
23. *The Origin of the Idea of a Composite Animal?*
24. *Palaephatus' Rationalisation of the Sphinx*
25. *Composite Animals in TV Commercials*
26. *Another Example of a Recently Drawn Composite Animal*
27. *The Figures of Men or Animals in "Petrifying Waters"*
28. *Concluding Remarks*

Note to p. 72 and to fn. 53 on p. 70, concerning the "marine ox/bul" (*tora de-yamma*): different culture may apply such a similitude to different marine animals. In Sardinian, *sa boe marinu* ("the marine ox") denotes the seal. Nearly 15 seals live in a coastal cave, called in Italian "Grotta del Bue Marino" (the name is a calque from Sardinian), on the eastern littoral of Sardinia, between the towns of Arbatax and Orosei. Cf. on p. 107: "There are twenty kinds of phocas's, or sea-calves, large and small".

Note to p. 97, concerning the belief that if a Scottish seer moved for example to America he lost his ability with second sight: cf. in a short story by the Neapolitan folklorist, literary writer, and far rightist Vittorio Imbriani (1840–1886), entitled *L'impieatrice*, "The Woman Who Turns Men to Stone" (reprinted in 1983 in Milan by Serra e Riva, edited by G. Pacchiano). According to the plot, after his defeat in Renaissance Italy, Cesare Borgia does not die in Spain, but meets in Mexico the Aztec princess Ciaciunena, a beautiful young woman who turns to stone any man who would stare into her eyes. He convinces her to fight on his behalf for Italy's unification. She agrees. He falls in love with her, and she inadvertently turns him to stone. She wants to nevertheless carry on with his struggle, and seeks Pope Julius II, in order to turn to stone him and his courtiers. Alas, in the Old World her magic powers do not work. Imbriani concludes by remarking that at any rate Julius II already had a heart of stone, well before Ciaciunena's visit.