

About geese growing on trees, the Medieval interpretation of the Barnacle and Brent goose origin

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SUMMARY

There was a long-standing belief (from the twelfth century to the early nineteenth century) that Barnacle Geese (*Branta "Anas" leucopsis*) and Brent Geese (*B. bernicla*) developed attached to seaside trees by their beaks and clad in shells before dropping into the sea, where they became mature geese. The food-gathering appendages of the sessile goose-necked barnacles (*Cirripedia*) were supposedly protofeathers. Barnacle Geese nest in remote areas well above the Arctic Circle, so Europeans, who only saw these birds during the migratory and winter periods, filled in the unknown part of the life history of the species with the folktale about this bizarre metamorphosis. This myth may have persisted as long as it did, because the meat of these – but not other – geese could continue to be eaten during Lent.

Introduction

Medieval attempts to explain the nature of things did not always coincide with modern beliefs, but they were logical and could be beneficial in one way or one another. Waterfowl specialists, in particular, would be interested in an unusual interpretation of the Barnacle and Brent Goose origin that can be found in Western European medieval literature in slightly different versions.

It is known that the geographical range of the Barnacle Goose has significantly widened and now these birds' nest not only in high Arctic latitudes but also on coastal marshes. But this change happened recently, over the last 25 years, and in the Middle Ages Barnacle and Brent Geese (who probably weren't distinguished as species at that time) were seen in Europe – at sea or at the shore – only in winter or during migratory periods. Nobody had seen nestlings or nests of these geese in Europe and it produced several myths about their “miraculous” origin.

Spontaneous generation and *Scala Naturae* (Chain of Being)

For centuries Man believed that living organisms could come into being by spontaneous generation from non-living materials. This belief is found in all ancient cultures including the ancient Chinese, Egyptian, Greek cultures as well as the native cultures in the Americas. Based on this common belief Plato and Aristotle developed the concept of the “*Scala Naturae*” or Great Chain of Being, in which all non-living and living objects can be included in a hierarchic queue. In his *Historia animalium* Aristotle compiled and expanded the work of earlier natural philosophers and various ancient explanations for the appearance of organisms and synthesized the doctrine of spontaneous generation, in which life can arise from non-living material, if the material contains *pneuma* (“vital heat”) (ARISTOTLE 1910). Aristotle's concept was taken as a scientific fact for two millennia. Until the 17th century the *Scala Naturae* was one of the most popular concepts to explain the way things are on earth.

Based on this theory, in which organisms can be spontaneously generated from completely different ones, unrelated to them, or even from various inanimate materials, it is not so astonishing that medieval scientists accepted theories about the origin of species that were completely fantastic from the point of view of modern science.

For example, it was believed that muddy soil gave rise to oysters, worms, eel, frogs, snails and crocodiles, that fly maggots “self-generated” in rotting meat and mice would spontaneously generate from wheat and a dirty sweaty shirt in an open vessel (e.g. BONDESON 1999, GOEDAERDT 1662, HELMONT 1683, (Saint) ISIDORE OF SEVILLA (Isidorus Hispalensis, c. 556–636) in BARNEY et al. 2006 & MÖLLER 2008).

The myth of the transformation or spontaneous generation of *Branta* Geese

Like today, in medieval times *Branta* species wintered along the coast of Ireland, Great Britain and coastal parts of the West-European lowlands, but nobody knew where they stayed in summer and where they bred.

In consideration of the common belief in the transformation and spontaneous generation of species, it is no wonder that the quest for answers led to the birth of a myth. According to one version, Barnacle and Brent Geese developed from fruit that fell in water from trees growing on the seashore. Another version says that they developed in the shells of Goose Barnacles – crustaceans of infraclass *Cirripedia* -, which form colonies on different substrates, including pieces of driftwood immersed in salt water. The black and white colour of these shells is similar to the colour of Barnacle Geese, the “leg” connected to the trunk resembles a goose neck, the shell itself – a goose head, and six pairs of limbs – goose feathers (i.a. see GERALD OF WALES 1951, GIRALDUS CAMBRENSIS 1188 in FORESTER 2000, LYDIUS 1750). It means that with some imagination Goose Barnacles could be taken for proto geese (Fig. 1). It is interesting that according to some versions goose barnacles developed from pieces of resin on trees in the water.



Fig.1. The development of a Barnacle Goose from a Barnacle (woodcut from “Ornithologiae” by ULISSE ALDROVANDI (1603), <http://wellcomeimages.org/indexplus/image/M0005646.html>).

We had to plunge deep into literature to find out who was the first to come up with these hypotheses (often corroborated by the accounts of “eyewitnesses”) and how these beliefs spread across Europe, existing for almost seven hundred years until the beginning of the 19th century. We attempt to reconstruct this captivating story in chronological order.

Evolution of the myth

According to BERNINGER (2002), the barnacle-myth was first mentioned by Archbishop Eustachios of Antiochia in the fourth century AD and anew by the Cardinal-Bishop of Ostia, PETRUS DAMIANI (Petrus de Honestis, c. 1007–1072), who reported in c. 1040 that in certain parts of the coast of Great Britain trees were growing, whose fruits transubstantiated in geese, which people consumed during Lent, because they had emerged from plants (BERNINGER 2002).

Some authors trace the myth of the tree-growing Barnacle Geese as far back as the 7th century, when ISIDORE OF SEVILLA (c. 556–636) is supposed to quote it in his *Etymologiae* (RADER 2010, SPRINGER & KINZELBACH 2009). We failed to find this quotation, but found an interesting one in the *Exeter Book* or *Codex Exoniensis* from the 10th century. Among other texts there are ninety riddles, one of which reads:

“My beak was in a narrow place, and I beneath water, flowed under by flood, very much sunk in mountain-streams, and in the sea I grew, covered above by waves, clutching with my body to a single wandering piece of wood. I had a living spirit when I came from the embrace of surf and beam, in a black garment; some of my trappings were white, when the air lifted me, living, aloft, wind from wave, and afterwards widely bore me, over the seal’s bath. Say what I am called.”

According to a number of authors, the answer must be “Barnacle Goose”, because at that time it was a popular belief that the Barnacle Goose was born from a barnacle growing on wood or on a tree (BAUM 1963, SOPER 2017).

As far as we were able to find, it was bishop GIRALDUS CAMBRENSIS (Gerald de Barri or Gerald of Wales, c. 1146–1223), who in 1188 was the first to write down in Latin the folk tales about spontaneous generation or transformation of young Barnacle Geese from rotten wood via Goose Barnacles. In 1177 the future English King John Lackland (the younger brother of Richard the Lionheart) was appointed the Lord of Ireland and the English rule was set in these territories. As a royal clerk and chaplain to King Henry II of England bishop Giraldus Cambrensis accompanied Prince John between 1183 and 1186 on an expedition to Ireland. After his return he published a manuscript with the description of the new lands called *Topographia Hiberniae* in 1187 or 1188. This description of Ireland also contains the myth of the Barnacle Geese.

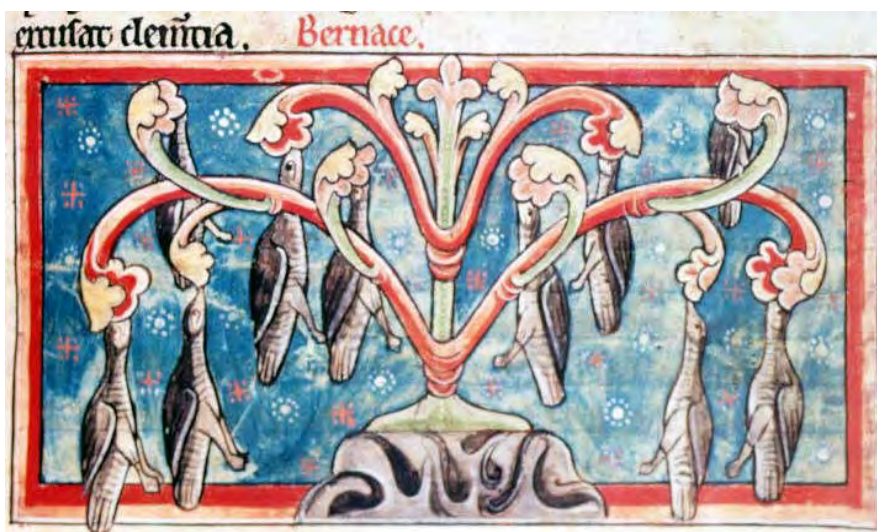


Fig. 2. “Barnace hang from trees enclosed in shells until they can grow feathers and fly” (drawing inspired by the description by Giraldus Cambrensis (1186), from *The Medieval Bestiary*, <http://bestiary.ca/beasts/beast1195.html>).

He wrote that “*in some parts of Ireland, bishops and men of religion make no scruple of eating these birds on fasting days, as not being flesh, because they are not born of flesh*”. But Giraldus did not agree with them, because the first man Adam was composed of flesh, although he was born from clay. About the birth of the Barnacle Geese he wrote: “*Being at first, gummy excrescences from pine-beams floating on the waters, and then enclosed in shells to secure their free growth, they hang by their beaks, like seaweeds attached to the timber. Being in progress of time well covered with feathers, they either fall into the water or take their flight in the free air, their nourishment and growth being supplied ... from the juices of the wood in the sea-water*” (Fig. 2.). Then the author described that he had “*seen with his own eyes*” colonies of these little geese, with “*more than a thousand minute embryos*” – half-birds, almost formed real geese hanging from one piece of timber on the seashore in Ireland. Gerald of Wales used the Barnacle Goose story to argue with the Jews stating that it shows that nature “*continually produces and gives birth to new animals, without union of male and female*”, that the first man “*was begotten of clay*” and the Barnacle Goose “*is engendered of wood*”, which proofs that the birth of Jesus, “*namely, birth from a woman, without union with a man*” has to be accepted as a natural thing (GERALD OF WALES 1951, GIRALDUS CAMBRENSIS 1188 in FORESTER 2000, JACOBS 1893). These quotations show that the Barnacle Goose myth was not only the description of nature, but also had a high theological content. It seems that this mixture made the myth so attractive and supported its later spread across the whole of Europe.

About 50 years later in his *Otia Imperialia* of 1211, GERVASIUS OF TILBURY (c. 1150–1220) wrote about geese growing on young willow trees along the coast near the Abbey of Faversham in Kent, which were eaten as “fish” during Lent (GERVAIS OF TILBURY 1211, BONDESON 1999)

Some years later FREDERICK II OF HOHENSTAUFEN (1194–1250), King of Sicily (from 1198) and Germany (from 1212), King of Italy and Holy Roman Emperor (from 1220), as well as King of Jerusalem (from 1225), who was a very versatile person, also touched upon this topic. That is what he wrote about Barnacle Goose in his *De Arte Venandi cum Avibus* (c. 1240): “*it is said that in the far north old ships are to be found in whose rotting hulls a worm is born that develops into the barnacle goose. This goose hangs from the dead wood by its beak until it is old and strong enough to fly. We have made prolonged research into the origin and truth of this legend and even sent special envoys to the North with orders to bring back specimens of those mythical timbers for our inspection. When we examined them we did observe shell-like formations clinging to the rotten wood, but these bore no resemblance to any avian body. We therefore doubt the truth of this legend in the absence of corroborating evidence. In our opinion this superstition arose from the fact that barnacle geese breed in such remote latitudes that men, in ignorance of their real nesting place, invented this explanation.*” (after WILKINS 2006). It is likely that Frederick II received one of the crustaceans living on the tree trunks – maybe even goose barnacles. But because barnacles are more numerous in waters near Britain and Ireland the myth was likely created there and then spread to other European countries. And Frederick II was completely right in his guess that Barnacle Geese nest in remote northern areas.

The opinion of Frederick II was supported by the Dominican monk, bishop, philosopher, theologian and scientist (Saint) ALBERTUS MAGNUS or ALBERT VON LAUINGEN (c. 1200–1280), who described in his *De Animalibus*, written between 1258 and 1263, that the story that Barnacle Geese are generated from rotten wood cannot be true, because he and his fellows have more often seen that these birds copulate, lay eggs, breed and rear young like other geese (ALBERTUS MAGNUS 1920, GESNER 1669).

In the next century, the Barnacle Goose story re-appeared in the popular at the time book *The Travels of Sir John Mandeville* published circa 1356. The author writes: “... *I told them of as great a marvel to them, that is amongst us, and that was of the Bernakes. For I told them that in our country were trees that bear a fruit that become birds flying, and those that fell in the water live, and they that fall on the earth die anon*” (MANDEVILLE 1900, Fig. 3).



Fig. 3. „...those that fell in the water live, and they that fall on the earth die.....” (SIR JOHN MANDEVILLE, c. 1356, woodcut from “*Cosmographiae universalis*” by S. MÜNSTER, after LACROIX 2004).

The wonderful “metamorphosis” that avoids the stage of a crustacean was mentioned a few centuries later: small balls appear at the ends of branches of trees growing above water and looking like willows, when matured they fall into the water and fully developed geese come out of them (POLYOLB 1622, Song 27, p. 1190, cit. by: THISELTON DYER 1883). According to RICHARD HAKLUYT, who gathered historical and geographical information that he put on paper in 1598–1600 in an originally three-volume book (later versions of the book had 16 volumes) *The Principal Navigations, Voyages, Traffiques, and Discoveries of the English Nation* the fruit of these trees looked like pumpkins (Fig. 4). He wrote: “...as I my selfe have heard reported, that there stand certaine trees upon the shore of the Irish Sea, bearing fruit like unto a gourd, which, at a certaine time of the yeere doe fall into the water, and become birds called *Bernacles*, and this is most true.” Later in his book he tells a different story: “At their comming home the keeles of their shippes where marvielously overgrowne with certaine shelles of two inches length and more, as thicke as they could stand, and of such bignesse that a man might put his thumbe in the mouthes of them. They certainly affirme that in these there groweth a certaine slimie substance, which at the length flipping out of the shell and falling in the sea, becommeth those foules which we call *Barnacles*.”



Fig. 4. „...there stand certaine trees upon the shore of the Irish Sea, bearing fruit like unto a gourd, which, at a certaine time of the yeere doe fall into the water, and become birds called Barnacles...” (HAKLUYT 1599, drawing from *Typographia Hiberniae*” by GIRALDUS CAMBRENSIS 1186, <https://vle.courtauld.ac.uk/course/view.plp?id=323>

In an earlier account about the expedition to Russian Arctic near the Pechora River in the same volume, Hakluyt was close to the explanation of the nascency myth (without realizing it) as he reported that the expedition met a “...*Samoed, which was a young man: his apparell was then strange unto us* (it was the first Samoyed they ever saw), and he presented me with three young wild geese, and one young barnacle.” (HAKLUYT 1599).

Surgeon and botanist JOHN GERARDE, who published his book *The Herball or Generall Historie of Plantes* in 1597, claimed that in the north of Scotland and in the Orkney Islands (called Orcades at the time) there were trees where

special white mollusks form, little geese grow inside them and fall in the water when shells open (Fig. 5), “do become fowls, whom we call barnacles, in the north of England brant geese, and in Lancashire tree geese.” (GERARDE 1597). He describes “what our eyes have seen and our hands have touched” and reported that there was a small island in Lancashire, where a lot of shipwrecks and giant rotten trees were found : “whereon is found a certain spume or froth, that in time breedeth into certain shells, in shape like those of the mussel, but sharper pointed, and of a whitish colour; wherein is contained a thing in form like a lace of silkwhen it [a bird] is perfectly formed the shell gapeth open, and the first thing that appeareth is the foresaid lace or string; next come the legs of the bird hanging out, and as it groweth greater it openeth the shell by degrees, till at length it is all come forth and hangeth only by the bill. In short space after it cometh to full maturity, and falleth into the sea, where it gathereth feathers and groweth to a fowl, bigger than a mallard, and lesser than a goose; having black legs and bill, or beak, and feathers black and white, spotted in such a manner as is our magpie ...”. (GERARDE 1597).

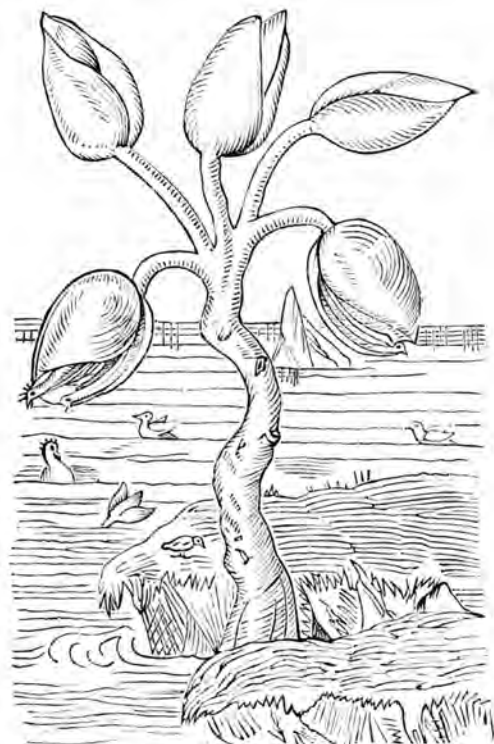


Fig. 5. “Goose Tree” on the Orcades (GERARDE 1597)

However, according to his contemporaries, Gerarde borrowed the description of a “goose tree” from an earlier version of the barnacle story, published by the Flemish physician and botanist MATHIAS DE L’OBEL (Matthijs de Lobel or LOBELIUS, 1538–1616) in *Stirpium Adversaria Nova* and *Kruydtboeck* (Fig. 6; PENA & L’OBEL 1571, L’OBEL 1581, SCOTT 2015).



Fig. 6. Geese developing from Barnacles (after L’OBEL 1581)

The barnacle myth was widespread and over a few centuries the description of such a miraculous origin of Barnacle Geese appeared in many publications including the encyclopedia of the Middle Age *Speculum Majus* by a Dominican friar VINCENT OF BEAUVAIS (VINCENTIUS BURGUNDUS, 1190–1264), in one of the most popular books of the 16th century. It was published in Germany 300 years later

and has gone through 24 editions, *Cosmographia* by SEBASTIAN MÜNSTER (MÜNSTER 1552, cited from RACKWITZ 2007), and in *Ornithologiae* by ULISSE ALDROVANDI (ALDROVANDI 1599; Fig. 7), as well as in the 16th century publications of the French scholar JOSEPHUS JUSTUS SCALIGER (1540–1609) (LYDIUS 1750).

One of the most detailed descriptions of the evolution of this myth, with many references and citations in the original languages is given in *Barnacles in Nature and in Myth* by EDWARD HERON-ALLEN (1928). The author confesses that the English ornithologist F. C. R. Jourdain, who by chance attended his lecture in Oxford, helped him to dispel this myth completely. He explained that Barnacle Geese nest only in Svalbard and Eastern Greenland. According to Jourdain, nesting Barnacle Geese were first found in Svalbard by A. Koenig in 1907; the following year he found the second nest there. The next time the nests of Barnacle Geese were found was in 1921 and 1922 by F. C. R. Jourdain himself and B. W. Tucker, who visited the archipelago with an Oxford University expedition.



Fig. 7. “Goose Tree” by ALDROVANDI (1603), <http://wellcomeimages.org/indexplus/image/M0005645.html>.

Later nesting Barnacle Geese were observed at the eastern shore of Greenland (HERON-ALLEN 1928, WITHERBY et al. 1948).

Actually the first Barnacle Goose nest was found by sailors of the Netherlands expedition of Willem Barentsz (c. 1550–1597) in search for the Northeast passage on an island in the Arctic Ocean in 1597 (VEER 1598).

Skeptics of the myth

Heron-Allen and Jourdain were not the first sceptics of the myth of the tree-growing Barnacle geese. For example, as mentioned above, Frederick II and Albertus Magnus called this myth completely absurd as early as in the 13th century. In the 16th century a French natural scientist PIERRE BELON (1517–1564) found the hypothesis of Barnacle Geese origin from ‘*inanimate materials*’ ridiculous (HARTING 1841). The hypothesis was also rejected in *Onithologiae libri tres* and *The Ornithology of Francis Willughby* by FRANCIS WILLUGHBY (1635–1672) and JOHN RAY (1627–1705) (RAY 1678, ROBERTSON 1685, WILLUGHBY & RAY 1676). A friend of John Ray, the Fellow of the Royal Society Dr. TANCRED ROBINSON (1658–1748) claimed that the anatomy of Barnacle Geese clearly indicated that they could lay eggs and breed like other birds: “... *the Bernacle ... is Oviparous, and of the Goos-kind; and the shells themselves contain a testaceous Animal of their own species. ... That the Bernacle and Macreuse [scoter] are oviparous, is beyond all doubt; the Anatomy of their parts serving for Generations; many late Voyages into the North; their laying Eggs; and sometimes breeding among us, are all evident proofs thereof*” (ROBINSON 1685). In 1640 the Dutch preacher JACOBUS LYDIUS (1610–1679) released the first print of his “*Vrolicke uren des Doods*”, in which he rejects the hypothesis that birds can develop from fishes, oysters or barnacles and points to the travel report of 1598 by Gerrit de Veer (LYDIUS 1750). GERRIT DE VEER (c. 1570–c. 1600), a Dutch ship officer of the Willem Barentsz arctic expeditions in search of the Northeast passage to China 1594, 1595 and 1596/97, reported that they found breeding Brent Geese during the visit to an arctic island north of Spitzbergen on 21 June 1596. He stated that these birds were real Brent Geese, like the birds that were wintering and caught in great numbers in Holland, near Wieringen, and of which it was previously unknown where they breed. He noticed that this lack of knowledge had led to the myth that these birds grew on trees in Scotland, which definitely was shown to be wrong by the findings of the Barentsz expedition (VEER 1598).

In 1751 a British botanist and pharmacist JOHN HILL (c. 1714 – 1775) published a refutation of the hypotheses about the Barnacle Goose originating from shellfish or tree fruits (HILL 1751). In his opinion, the ignorant fishermen took thin legs hanging from shells for feathers. To prove that Barnacle Geese hatch like other geese, Hill referred to the accounts of Dutch seamen who found numerous nests, incubating females and nestlings of these birds in the Arctic.

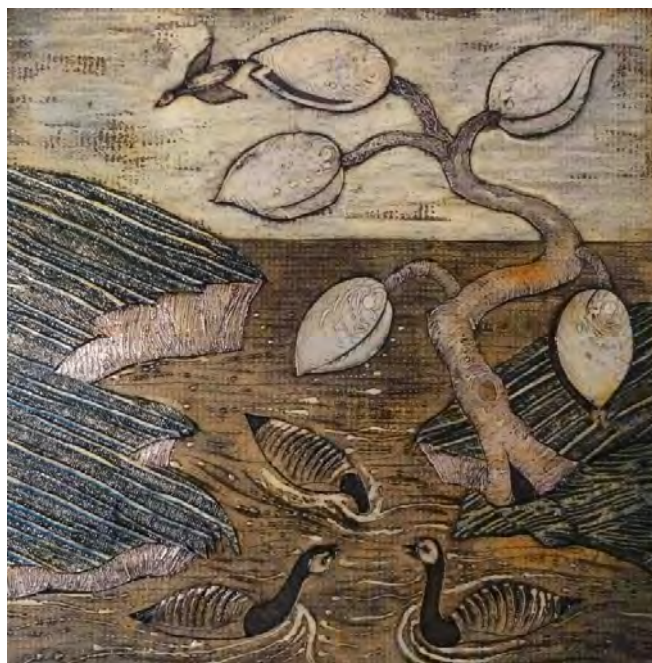


Fig. 8. Barnacle Geese grow on trees (collagraph print by PHILIPPA MITCHELL 2015)

Nevertheless, in spite of the arguments of famous natural scientists, the legend about the miraculous origin of Barnacle Geese existed until the beginning of the 18th century. Could it be caused by other reasons other than ignorance?

Fasting and kosher

In the Middle Ages, up to 200 days a year were subject to some kind of fasting restrictions and these restrictions were strict. All meat and dairy products (milk, cheese butter, yoghurt) were prohibited, as well as eggs. At the same time, people undertook hard physical work, which made them extremely ingenious at circumventing these regulations of abstinence. In 1491, the fasting laws were relaxed for the first time and all Christians were allowed to eat dairy products and eggs during Lent, but consuming meat remained prohibited. However, eating fish was allowed, which led to an extended definition of “fish”, which varied from “*animals with scales* (e.g., beaver with a scaly tail) *are fishes*” to “*all animals living in or around water* (e.g., waterbirds) *must be fishes*”. In this context the myth of ‘shell geese’ or ‘geese fruit’ was most welcome, well-known and spread into the ecclesiastic culture and there were very good reasons for it. First, this myth was announced by clergyman like bishop Giraldus Cambrensis, who referred to the things he saw with his own eyes and second, at that time an idea was popular in natural science as well as theology that under favourable conditions species could originate from others and even from inanimate matter and later could lead a perfectly ‘normal’ life, the only difference from the others being the absence of parents. The example of Barnacle Geese turned out to be very suitable for the theological arguments about Immaculate Conception. The Bishop of Wales himself used this point in his arguments with the Jews. It seems that this point did not convince them, but according to some accounts they believed in the existence of these geese (GIRALDUS CAMBRENSIS 1188 in FORESTER 2000, JACOBS 1893).

Besides, the legend about ‘geese growing on trees’ allowed Irish and other western European lay people and clerics to eat the meat of these geese during Lent, without worrying about committing a sin: after all these geese were not born from flesh... It is worth mentioning that Giraldus Cambrensis himself condemned Irish priests for it, stating that Adam was not born of flesh either, but there would hardly be a deeper sin than to eat, for example, his leg (GIRALDUS CAMBRENSIS 1188 in FORESTER 2000, JACOBS 1893).

The question of the Barnacle Goose origin and whether they could be counted as meat or fish was also raised in theological comments on Jewish laws, based on the texts of the Torah. JACOB BEN MEIR (c. 1100 – 1171), also known as RABBEINU TAM, one of the most influential rabbies in France, considered them kosher, under the condition that they are slaughtered by the rules of Kashrut (<https://en.wikipedia.org/wiki/Shechita>), i.e. “*with respect and compassion*”.

At the Fourth Council of the Lateran in 1215 Pope Innocent III forbade eating the meat of these geese during Lent, reasoning that in spite of the unusual way of coming-into-being, these geese live and feed like ducks, so they cannot be regarded as differing in nature from other birds (LANKESTER 1919). But it seems that his command did not reach the Irish shores: some hundreds of years later, on the eve of the World War I, a librarian of the Zoological Society, Martin Duncan, when lecturing on marine mammals in Northern Ireland, was told by a local priest that the Pope had recently published an edict allowing the people of the County of Derry to eat the meat of the Barnacle goose during Lent, following the ancient tradition. The people of the County of Kerry had the same permission – not because they believed in the mystical origin of Barnacle Goose, but because they were sure that these birds spent more time at sea than on land and therefore were closer to fish than to birds (DANAHER 1972; cit. in ROBERT 2014).

It is evident that Anglican priest Edward Topsell, a contemporary of Shakespeare, did not believe in this legend either, since he knew that Dutch travelers saw the Barnacle Geese nests on an island north of Spitzbergen. However, it did not stop him from repeating that old myth in one of his books (he was neither a researcher, nor a natural scientist and merely retold publications by C. GESNER and U. ALDROVANDI). He used this legend for religious reasons: “spontaneous” birth emphasized the greatness of the Creator of all animals and men (HOENIGER & HOENIGER 1969).

Literary metamorphosis and metaphors

This amazing story also left an imprint on literature. For example, it had an honour of being mentioned in the works of William Shakespeare, who was deservedly considered to be one of the most educated authors of his time and repeatedly showed his brilliant knowledge of natural history and ornithology. Unfortunately, a lot of metaphors used in his works do not make sense to a modern reader, because very few people are familiar with their source. Shakespearian scholars considered that the legend about the Barnacle Goose origin was used by him to illustrate the metamorphosis in his tragicomedy “The Tempest” where Caliban says: “*We shall lose our time, and all be turn’d to barnacles.*” (HARTING 1841; THISELTON DYER 1883). It is interesting that in Russian translations Shakespearean *barnacles* became completely different animals such as Brants (translation by T.L. Shchepkina-Kupernik), gulls (translation by M. Donskoy), geese (translation by M. Kuzmin), and ducks (translation by O. Soroka).

This myth was reflected in other literary works of the Middle Ages. For example, the English bishop, moralist and satirist JOSEPH HALL (1574–1656) wrote in his “*Virgidemiarum*”: “*The Scottish barnacle, if I might choose, That of a worme doth waxe a winged goose*” (HALL 1825).

The English satirist SAMUEL BUTLER (1612–1680) referred to this story in his poem “*Hudibras*”, using it to ridicule lying and hypocritical clergymen: “*And from the most refin’d of Saints, / As naturally grow Miscreants, / As Barnacles turn’d Soland Geese / In th’ Islands of the Orcades*” (BUTLER 1739). An English poet JOHN MARSTON (1576–1634) mentioned this legend in his tragicomedy “*Malecontent*”, telling about the incredible metamorphosis of the main character: “*Like your Scotch barnacle, now a block, instantly a worm, and presently a great goose*” (MARSTON 1604; cit. by: THISELTON DYER 1883).

Barnacle or Brent?

The majority of engravings illustrating these medieval legends (being the plain truth in their authors’ opinion) featured Barnacle Geese. But it is often not possible to understand which goose – Barnacle or Brent – the authors called “barnacle goose”, or just “barnacle”. It is evident that in the Middle Ages, like now, geese of both species wintered in Ireland and Scotland. The Barnacle Goose does not winter and is a rare vagrant species along the Atlantic coast of France, nor along the coast of southern and central England – in the coastal counties of Lancashire and Devon, the Thames estuary and on the Channel Islands mentioned in connection to the myth about the origin of these geese (see, for example, HARLAND & WILKINSON 1867). On the contrary, the Brent Goose is a common wintering bird in these places. People undoubtedly distinguished the two species, but it is unlikely that these geese had different names in the 12th-13th centuries, taking into consideration that not all bird species in Europe (e.g. gulls) were described even by the beginning of the 19th century.

GERRIT DE VEER, the secretary of Willem Barentsz, who had to spend the winter of 1596/97 on Novaya Zemlya, wrote in his travelogue that they hunted and ate Brent Geese, recognizing in them those birds that regularly winter in The Netherlands and whose nests

nobody had ever seen, but “of which some authors could not resist to write that in Scotland they grow on trees and that the fruits of the branches hanging over water fall into the water and turned into little geese whereas the fruits falling on land break into smithereens” (VEER 1598). He only mentions Brent Geese (Dutch: *Rotgans*) and even describes their cries ‘rot-rot-rot’ heard by the seamen who visited the breeding colony on 21 June 1596. In the memorial museum of Willem Barentsz in Terschelling, the Netherlands (Museum 't Behouden Huys) we were told that W. Barentsz was the first to bring Brent Goose goslings and nests from his expeditions to Novaya Zemlya. It seems that in the past Brent Geese of nominotypical subspecies (*Branta bernicla bernicla*) were common on Novaya Zemlya and Kolguyev Island (TREVOR-BATTYE 1895).

Barnacle: a bird or a crustacean?

Though nowadays it is well-known where Barnacle and Brent Geese winter and nest, both their names and the name of a crustacean bear a trace of history. One goose is called “Barnacle Goose” (*Branta leucopsis*) in English, the other has a Latin name “*Branta bernicla*” (Brent Goose), and crustaceans of order Pedunculata, infraclass Cirripedia are now called “Goose Barnacles”.

In the Middle Ages, both goose species and their crustacean “pre-stage” were called *barnacles*. This is not surprising, because at that time people believed them to be one and the same creature at different stages of development. Over time, this name was fixed for the crustacean and the bird became *barnacle goose*, i.e. a retronym arose (AMERICAN HERITAGE DICTIONARY ... 2011). The word *barnacle* itself (Late Latin *bernaca*, Old French *bernac*) could be a transformed Latin *hibernicula*, from Hibernia (Ireland), i.e. it could reflect the Irish origin of these animals (WEBSTER'S 1828, 1913). Interestingly, we came across another name of these birds – *Hibernian goose* (LEY 1968, cit. by: FOSTER & CHESNEY 1998). With regard for the modern English names, ‘barnacle goose’ and ‘goose barnacle’, most of the authors give priority to the birds. And even though the opposite opinion exists (if the goose was born from the crustacean, the bird should be named after it – see, for example, <http://eol.org/pages/1020694/overview>), it seems quite logical. It is interesting that Carl Linnaeus, who was definitely familiar with the myth of the goose origin from crustaceans, described Brent Geese and one of the Goose Barnacles of infraclass *Cirripedia* at the same time: in 1758 the goose got a scientific name *Branta bernicla*, and Goose Barnacle was named *Lepas anatifera*, i.e. “duck-bearing”; nine years later Linnaeus described another species of Goose Barnacle as *Lepas anserifera* (“goose-bearing”). The first description of Barnacle Goose was made by Johann Matthäus Bechstein almost fifty years later, in 1803.

Despite the fact that nobody believes in this medieval legend anymore, it still attracts attention of both scientists who try to solve complicated problems speciation (BUCKERIDGE & WATTS 2012) and those who want to discuss inconsistencies in religion and ecclesiastic traditions (ROBERT 2014). Artists are also still inspired by the queerness and charm of the myth (Fig. 8).

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