



GOOSE BULLETIN

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GOOSE BULLETIN is the official bulletin of the Goose Specialist Group of Wetlands International and IUCN.

GOOSE BULLETIN appears as required, but at least once a year in electronic form. The bulletin aims to improve communication and exchange information amongst goose researchers throughout the world. It publishes contributions covering goose research and monitoring projects, project proposals, status and progress reports, information about new literature concerning geese, as well as regular reports and information from the Goose Database.

Contributions for the **GOOSE BULLETIN** are welcomed from all members of the Goose Specialist Group and should be sent as a Word-file to the Editor-in-chief. Authors of named contributions in the **GOOSE BULLETIN** are personally responsible for the contents of their contribution, which do not necessarily reflect the views of the Editorial Board or the Goose Specialist Group.

Editor-in chief: Johan Mooij (johan.mooij@t-online.de)
Biologische Station im Kreis Wesel
Frybergweg 9, D-46483 Wesel (Germany)

Editorial board: Fred Cottaar, Tony Fox, Carl Mitchell,
Johan Mooij, Berend Voslamber

Goose Specialist Group of Wetlands International and IUCN

Board: Petr Glazov (chair), Bart Ebbinge, Tony Fox, Thomas Heinicke, Konstantin Litvin, Jesper Madsen, Johan Mooij, Berend Voslamber, Ingunn Tombre

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<http://www.geese.org/gsg/>

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Editorial

Currently in most developed countries, international teams undertake more than 50% of the research projects and scientific publications. Science and research only can flourish in an open and cooperative atmosphere between the scientists from all countries. International exchange of knowledge always was the basis for the development of science.

In addition, in recent decades, volunteers have become an integral part of modern research, especially in field ornithology. Without the engagement of thousands of volunteers that share their observations and data with on-going research programs, most goose research programs could not obtain many of the results that are ultimately published. Only through the co-operation of scientists and volunteers has it become possible to delineate phenology and migratory routes of the Palearctic goose species, assemble counts of their number and sample age ratios.

Norbert Wiener (1894-1964, American mathematician and philosopher) stated that 95% of the most important scientific papers come from less than 5% of scientists, but that most of these papers would not have been written at all, if the remaining 95% of scientists had not contributed. In goose research we have to add that besides “the remaining 95% of scientists”, the contribution of thousands of volunteers is also crucial for the success of most goose research programs.

The awareness of these facts was the reason why the Goose Specialist Group of Wetlands International and the IUCN-Species Survival Commission was founded as an international group to strengthen contacts between all researchers and volunteers interested in migratory goose populations of the northern hemisphere. The Goose Specialist Group is an open group, open for anybody interested in geese and goose research.

To maintain contact between the members of the Goose Specialist Group as well as to inform all group members about the activities in the field of goose research the GOOSE BULLETIN was started in 1991. It is an open journal for all people interested in geese and goose research, not only for reading but also for publishing. Everybody who wants to publish interesting stuff about wild geese is welcome to send a manuscript to the Editorial Board of the Goose Bulletin. All manuscripts that meet the scientific standards of the Goose Bulletin will be published.

The next issue of the GOOSE BULLETIN is planned to appear in May 2020, which means that material for this issue should have reached the editor-in-chief not later than the 31st of March 2020.....but earlier submission is, of course, always permitted, if not actively encouraged!

The Editorial Board



First announcement of the 19th Goose Specialist Group meeting, 28-31 January 2020, in Leeuwarden (NL)

The Goose Specialist Group will hold its 19th conference in Leeuwarden, in the province of Friesland in The Netherlands, from 28-31 January 2020.



The Netherlands is one of the most important countries for migratory geese in Europe. And within the country, about 40% of wintering numbers concentrate in Friesland. Its vicinity to the Wadden Sea area, vast grassland areas and numerous wetlands which provide suitable roosts, make the province highly attractive for geese. Species commonly wintering in Friesland include Barnacle Geese, Black-bellied Brent

Geese, Greater White-fronted Geese, Tundra Bean Geese, Pink-footed Geese and Greylag Geese. Red-breasted Geese occasionally mix with flocks of other geese.

Venue and how to get there

The conference will be held in Stadsschouwburg De Harmonie, Ruiterskwartier 4, 8911 BP Leeuwarden (<https://harmonie.nl/>).



Leeuwarden is the capital of the province of Friesland, in the northern part of The Netherlands. It has frequent train connections to all surrounding larger cities (Groningen, Zwolle). From Schiphol Amsterdam airport it is about 2 hours by train (direct connections). The city also has numerous convenient hotel facilities and a well-developed scene of restaurants and cafés.

Program

Conference days with presentations and posters will be held on Tuesday, Wednesday and Friday. We are very happy to announce that Ingunn Tombre, Jeff Black and Stuart Bearhop will present keynote talks on these days. On Thursday we will go on an excursion to visit the best places in Friesland for viewing geese.

Organizing committee

Goose 2020 is organized by the Netherlands Institute of Ecology (NIOO), the Dutch Centre for Avian Migration and Demography (Vogeltrekstation) and the Sovon Dutch Centre for Field Ornithology (Sovon).

Important dates

Deadline submitting abstracts: 30 September 2019

Deadline submitting posters: 31 December 2019

Deadline subscription: 31 October 2019

Abstracts

Abstracts must be in English, and can be no longer than 300 words. A scientific committee will decide whether your contribution is admissible and in what session it will fit. The organising committee intends to accept as many contributions as possible, provided that the contribution meets the minimum standards, set by the committee. Abstracts can be submitted until 30 September, but the organising Committee kindly asks to submit abstracts as soon as possible, to enable the organisers to assemble the program shortly.

Further information can be found at the conference website:

www.sovon.nl/nl/gsg2020



A ‘crested’ Pink-footed Goose observed in Norway, and possible explanations why crested waterfowl are rare in the wild

Kees H.T. Schreven¹ & Aija E. Lehikoinen²

¹ Netherlands Institute of Ecology (NIOO-KNAW), Wageningen, The Netherlands, k.schreven@nioo.knaw.nl

² aija.lehikoinen@gmail.com

On 5 October 2018 a flock of 700 Greylag Geese (*Anser anser*), 500 Pink-footed Geese (*Anser brachyrhynchus*) and five Barnacle Geese (*Branta leucopsis*) was observed at the peninsula of Nettet, Levanger, Nord-Trøndelag, Norway (63°45' N, 11°13' E), on a partly harvested cereal field surrounded by a flooded field, two potato fields, and a road verge with grass and herbs.

In this flock, one Pink-footed Goose had a ball-formed crest of upwards pointing white down feathers on top of its hind-head (Fig. 1). The crest had a diameter of approximately four centimetres (as measured relative to head length from photos) and was moving only a little in the wind, so it was well attached. The normal brown head feathers were wrapped around the base of the crest. The bird was a juvenile and was closely accompanied by one juvenile and two adults, probably its family, that did not have a crest on their heads. Here, we discuss our observations with literature on the background and consequences of crestedness, to explore why it may be rare in the wild.



Fig. 1. Crested juvenile Pink-footed Goose observed in Nettet, Levanger, Norway, 5 October 2018 (Photo: Kees Schreven).

Occurrence

An inquiry among people who regularly observe (Pink-footed) Geese revealed that only two people had ever seen a crest in the wild. Jørgen Peter Kjeldsen had probably seen the same individual as we observed: a similar looking juvenile Pink-footed Goose, first just southeast of Fjerritslev, Denmark, on 8 November 2018 (57°05' N, 9°16' E, Fig. 2), later in Klim Fjordholme, Ullerup, Denmark, on 11 February 2019 (57°04' N, 9°10' E) and finally west of Birkelse, Denmark, on 16 March 2019 (57°09' N, 9°38' E).



Fig. 2. Crested juvenile Pink-footed Goose (probably the same individual as in Fig. 1) observed near Fjerritslev, Denmark, on 8 November 2018 (Photo: Jørgen Peter Kjeldsen).

Eckhart Kuijken and Christine Verscheure had observed another juvenile Pink-footed Goose near Jabbeke, Belgium, on 14 November 2018 (51°11' N, 3°05' E). It had on its hind-head a tuft of elongated brown feathers that were not densely growing (Fig. 3).

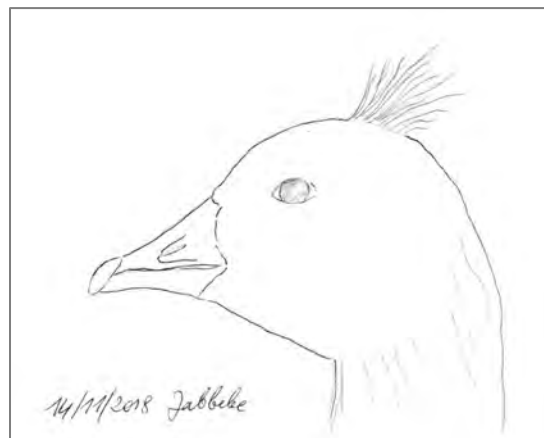


Fig. 3. Tufted juvenile Pink-footed Goose observed near Jabbeke, Belgium, on 14 November 2018 (Drawing: Eckhart Kuijken).

We did not find any other documented observations of crests in wild geese of the genus *Anser*. In Canada Geese (*Branta canadensis*) crested forms were reported by PHILLIPS (1913) and BREDER (2010), both in the USA.

Although crests are an exceptionally rare phenomenon in the wild, similar crests have been known in captive chickens, ducks and geese for a long time and have been maintained in many breeds (DARWIN 1875, BOTTEMA 1978). In geese, relatively few crested breeds exist, such as the Roman Tufted, Diepholzer Goose, and South African Gray Goose (*Anser anser* f. dom.) (GERICKE 1958, REQUATE 1959).

Anatomy

In captive chickens, ducks and geese, crestedness is associated with alterations in the structure of the skull and brain. The crest feathers grow from a cushion of fat and connective tissue which often covers a hole in the skull (DARWIN 1875, BARTELS 2003).

In chickens, the hole is in the forehead, whereas in ducks and geese it is in the hind-head and may also exhibit a bony spike through the hole (VAN GROUW 2018). In chickens and ducks, the fat deposit under the crest often extends into the brain cavity through the skull perforations (FRAHM & REHKÄMPER 1998, FRAHM et al. 2001). These fat bodies vary in size and oppress the adjacent brain parts (CNOTKA et al. 2007). Crests are bigger when the skull perforations are larger, but the crest size is not related to the size of the fat body (REQUATE 1959, FRAHM et al. 2001).

Genetic basis

In domestic chickens, ducks and geese, crestedness inherits as a (incomplete) dominant allele (REQUATE 1959). In chickens, homozygous individuals have a bigger crest and more severe skull lesions. In ducks, however, some breeders report that the homozygous form is lethal: embryos have such a deformed skull and brain that they die young in the egg (RÜST 1932 cited in REQUATE 1959, and internet forums, e.g. www.feathersite.com, www.fairvalleywaterfowl.com, www.backyardchickens.com). On the other hand, REQUATE (1959) did not find this in his ducks. He argues that the lethality and different degrees of genetic linkage between crestedness and skull lesions may have been caused by a different extent to which poultry breeders have selected for the combination of these traits. It is unknown to what extent the lethality and correlation between crestedness and skull lesions hold for wild birds.

If we assume that the observed crest was also caused by a dominant allele, it must concern a spontaneous mutation, since neither of the adults accompanying our observed crested juvenile (assuming they were its real parents) had no crest.

Consequences

Having a crest may have several possible consequences for our observed Pink-footed Goose. If the skull is perforated, there is a weak spot under the crest. Breeders report that this can be detrimental for a female during copulation, as the male may damage the tissue while holding the crest with its bill (e.g. internet forum www.backyardchickens.com). If it is a male, it may be more vulnerable in a fight, although fighting males mainly hold each other's neck or breast rather than head. However, the sex of our observed goose is unknown. A crest may also not be watertight and thus difficult to keep clean and free of infections. As there may be a fat body present inside the goose's skull, the functioning of the adjacent brain parts may be impaired. In domestic ducks, the most obvious effect on behaviour has found to be bad motoric coordination in stressful situations, by oppression of the cerebellum (CNOTKA et al. 2007). However, it is not known whether intracranial fat bodies also occur in crested geese, and to what extent they would disturb normal functioning. Our observed goose did not seem to be motorically impaired, not even in a stressful situation.

The family was feeding on grain stubble against the edge of an unharvested part of the grain field, in a group of eight Pink footed Geese and eighteen Greylag Geese. Here, geese competed for food and frequently chased each other away. In 25 minutes of observation, the crested goose was chased away eight times by Greylag Geese. However, it also chased away Greylag Geese seven times, and once another Pink-footed Goose. During chasing it clearly displayed the threatening posture with a low neck (see JONES 1960).

After foraging here, the family walked away approximately twenty meters from the grain edge and started preening while the crested goose started sleeping. The crested goose had an abdominal profile score of two so was in normal body condition (for scale, see MADSEN & KLAASSEN 2006).

Conclusion

In conclusion, we did not observe that the goose experienced any disadvantages of having the crest. Although literature on domestic birds suggests that disadvantages are likely, it is unknown to which extent these occur in wild birds. Together with the presumed dominant inheritance and possibly lethal homozygous form, they may explain why crested waterfowl are exceptionally rare in the wild.

Acknowledgements

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

E. G. Lappo¹, A. B. Popovkina², J. H. Mooij³

¹ Institute of Geography, Russian Academy of Sciences, Moscow, Russia; ellappo@mail.ru

² Lomonosov Moscow State University, Moscow, Russia

³ Biological Station Wesel, Wesel, Germany

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.

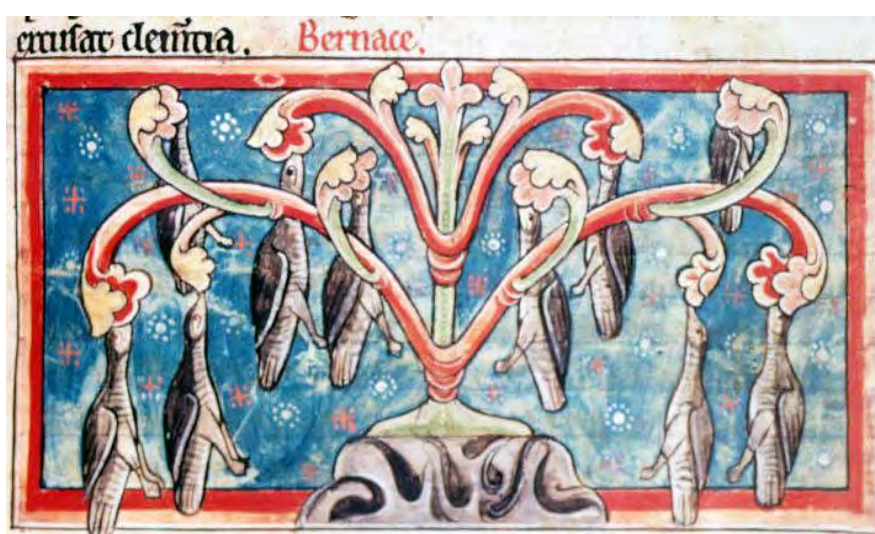


Fig. 2. “Barnacle hang from trees enclosed in shells until they can grow feathers and fly” (drawing inspired by the description by Giraldus Cambrensis (1186), from *The Medieval Bestiary*, <http://bestiary.ca/beasts/beast1195.html>).

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).

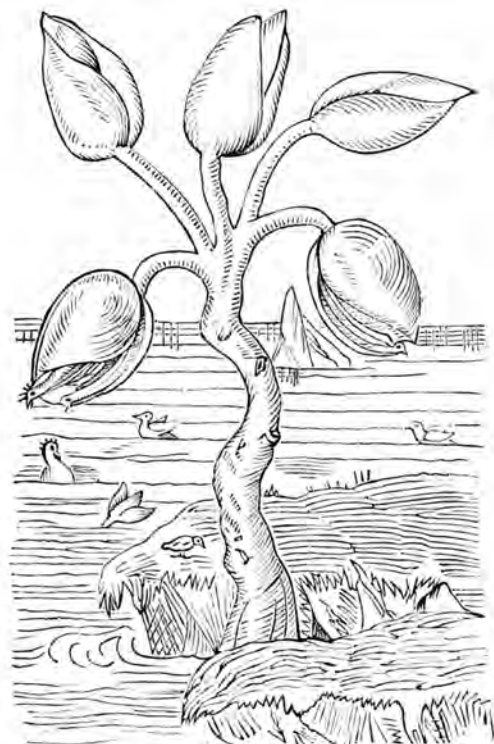


Fig. 5. “Goose Tree” on the Orcades (GERARDE 1597)

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 & RAIUS 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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Obituary: Aivar Leito (1954 – 2018)

Johan H. Mooij

johan.mooij@t-online.de

Aivar Leito (24-08-1954 - 21-09-2018) was a leading ornithologist from Estonia, who passed away on the 21 September 2018.

Aivar was born in Otepää in southern Estonia and grew up together with three brothers and a sister. He studied biology at the Department of Biology and Geography at the University of Tartu, where he graduated as an ecologist (Candidate, PhD) in the field of the rational use and conservation of natural resources in 1981. Subsequently he worked as a researcher in the Estonian Forest Institute and after its dissolution in 1996 as a senior researcher at the Estonian University of Life Sciences in Tartu.



Aivar Leito undertook research on bird migration and nesting ecology of a number of species (e.g. cormorants, cranes, geese, eagles, tortoise and salmon) and was internationally well-known for his studies on Greylag and Barnacle Geese. He developed a methodology for assessing the damage to agriculture caused by migratory birds as well as a damage compensation scheme and introduced in Estonia radio- (1999) and satellite tracking (2001) to delineate home range movements and migratory routes of wild living birds. In addition, he was one of the leading ornithologists and nature conservationists of



Aivar Leito
at the Goose 2007
conference in Xanten

Estonia. He produced a compilation of the most important nature sites of his country and developed a concept to protect them. Besides writing over 200 scientific articles, he wrote books and articles and produced films about the natural world for a broader public. He published books i.a. about bird-watching localities as well as the Barnacle Goose and the Eurasian Crane in Estonia, as well as local bird faunas and participated in the realisation of the Estonian Bird Atlas of 2018.

Besides his scientific work, Aivar was engaged in nature protection and ornithological organisations. He was President (1991-2000) and Vice-President (2000-2003) of the board of the Estonian Ornithological Society (EOÜ).

In 1989, I organised the “International Symposium on Western Palearctic Geese” in Kleve, where more than 200 goose specialists from 22 countries reviewed population development as well as knowledge about population dynamics and ecology, agricultural damage and hunting of geese. In the middle of the nervous last preparations for the conference I received a phone call from Airport Düsseldorf: Aivar Leito had arrived a day early.

A shuttle service was planned, but started the next day, hotels were booked from the next day too. So, I drove to the airport, met Aivar and brought him to my place. It was the first time we had met and we had an afternoon and an evening to get to know each other. Since that evening we were friends. We kept regular contacts and met each other since 1994 on the regular goose conferences.

In 2018 we planned to meet again during the 18th Conference of the Goose Specialist Group that was held on 27-30 March 2018 at Klaipeda University, Lithuania. But his health did not allow him to attend the goose meeting. So, after the conference, my wife and I drove to Tartu, where we met Aivar again. It was obvious that he was not as fit as a fiddle and after a few hours of our visit he looked exhausted, so we left. As we said goodbye he gave me some papers and books he had written and told me that he never would forget the first time we met. After that day we exchanged some emails.

Aivar was a thorough and conscientious researcher and an extremely warm-hearted and aimable person. I am very happy I knew him.

All people who knew him, surely will miss him.



© Arne Ader / Loodusemees



Obituary: Tanyo Michev (1939 – 2018)

Pavel Simeonov

lebalkan@lebalkan.org

It is with deep sadness that we inform you of the end of an era! Our dearest friend and my mentor Tanyo Michev passed away on Christmas Day 2018.

As we all know, Tanyo was a great Bulgarian ornithologist, naturalist and scientist who dedicated his life to wetland conservation and bird protection, and who inspired several generations of successors.



Born on the 14 March 1939 in Chirpan, he attended Sofia University in 1961 where he studied biology. After his degree he specialized in the study of the Dalmatian Pelican colony at Srebarna Nature Reserve. He dedicated the next sixty years of his life to the protection of this globally endangered species.

In the early 1970s he became one of the first Eastern Europeans to study at the Biological Station Tour de Valat in France, where he specialized in wetland conservation. While he was there, he worked with Alain Crivelli, Alan Johnson, Olivier Biber and Luc Hoffman. The vital lessons learned there he then promulgated in Bulgaria.

In 1977, together with Dimiter Nankinov, Bojidar Ivanov, John Roberts and myself, he initiated the first mid-winter census of waterfowl in Bulgaria. Since then, this Bulgarian contribution to a large-scale international initiative has continued every January, now into its second generation of ornithologists and volunteers.

Another seminal event took place in 1978 with the first systematic and documented study of autumn migration of soaring birds in the Burgas region. Tanyo and I published the first 10-day's observations made from the roof of the pumping station at Atanasovsko Lake. Now, hundreds of birding enthusiasts from all over the world gather at this magical place every year!



Here are just a few more of Tanyo's many accomplishments:

- Editor-in-chief of National Action Plan for the Conservation of the most Important Wetlands in Bulgaria (1995).
- National Contributor to Handbook of Cramp & Simmons.
- Co-Author of Inventory of Bulgarian Wetlands and their Biodiversity (2007)
- Editor of the bird part of The Red Data Book of Bulgaria (both 1985 & 2011 editions)
- Co-author of both volumes of Fauna of Bulgaria (Birds) (1990 & 1997).
- Project Leader for the development of a National Action Plan for conservation of Dalmatian Pelican (*Pelecanus crispus*) in Bulgaria (2012).
- Co-author with Simeon Simeonov of the first ever field guide Birds of the Balkan Peninsula (both 1991 & 2012 editions).
- Conservation Director of Le Balkan Bulgaria Foundation since 1995.

Moreover, Tanyo initiated the establishment of the Bulgarian Society for the Protection of Birds and was its first chairman.

He will be sadly missed by all who knew him.



Outstanding Ornithologist of the past: Peter Markham Scott (1909 – 1989)

Johan H. Mooij

johan.mooij@t-online.de

Sir Peter Markham Scott (born 14 September 1909 in London and died 29 August 1989 in Bristol) was a British ornithologist, author, nature conservationist and painter. He was the only son of the arctic explorer captain Robert Falcon Scott, who died during an expedition in the Antarctic in 1912, and the sculptress Kathleen Bruce Scott. Peter Scott inherited his artistic talent from his mother and his engagement for nature from his father. Already as a boy he was interested in nature and was drawing wildlife before he could read. After his education at Oundle School (where his affection for waterbirds, especially geese was aroused) he moved to Trinity College, Cambridge, where, after an initial study of Natural Sciences, he switched to study History of Art and Architecture and graduated in the History of Art in 1931. Subsequently he studied Art in Munich and London. During his time as a student he became an enthusiastic wildfowler and became well known as a painter of wildlife (particularly birds), with his first exhibition in London in 1933.

Because of his wealthy background Scott had the possibility to follow his personal interests in art and wildlife as well as hunting (especially waterbirds) and sailing. He wrote about this episode of his life, that painting was his profession, natural history was deeply embedded in his system, zoological training was a part of his background, wildfowling was his obsession and sailing was his summer's and free-skating on ice his winter's delight. He was rather good in sports, but refused an offer to be trained for the World Skating Championship in 1931. At the other hand he won a bronze medal in sailing at the Olympic Games of Berlin 1936.

From the early 1930s, Peter Scott lived in a disused lighthouse at the mouth of River Nene in Eastern England. The lighthouse was surrounded by mudflats, saltmarsh and tidal pools, which were an Eldorado for waterbirds. Here he started his own collection of living waterbirds, caught in Britain, Hungary, USA and Canada. During his travels he learned all about punt gunning (waterbird shooting with puntgun boat), catching waterbirds in a decoy and with nets as well as the keeping and breeding of waterbirds. But the war interrupted his idyll.



Steam Gun Boat, MGB S309, under the command of Lieutenant Commander Peter Scott (© Wikipedia)

In the Second World War he served in the Royal Navy, as his father had. He served as a commanding officer on several ships, commanded a squad of steam gun boats and developed camouflage schemes for naval ships. During the war Peter Scott married his first wife, Elisabeth Jane Howard and early 1943 their daughter Nicola was born. The family found a common home in London. Peter Scott left the military service at the end of the war as a Lieutenant Commander.



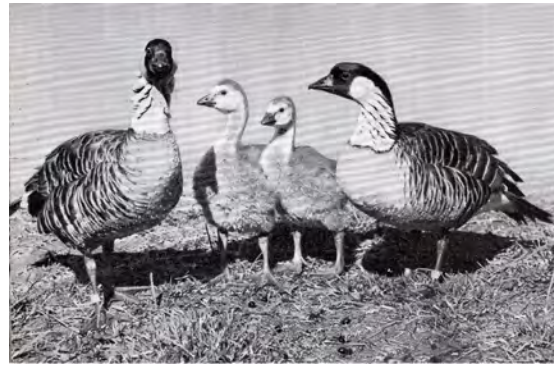
Peter Markham Scott in 1954
(© Wikipedia)

After a short intermezzo as a politician, as he tried to become elected as a member of the parliament of the United Kingdom and narrowly failed, he started his career as a nature conservationist. At the end of the war Scott's marriage was desolved and both partners departed as friends.

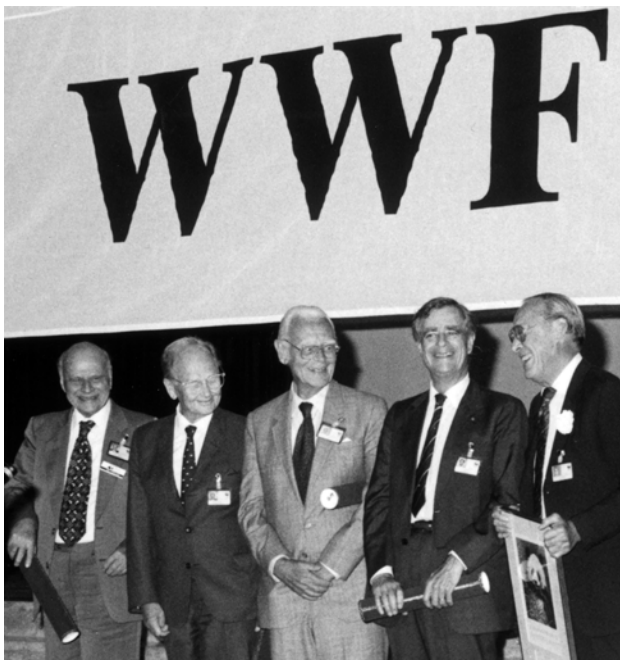
Peter Scott wanted to pick up his old life and looked for a new home, where he could live near nature, study and paint waterbirds and build up a new waterbird collection. In 1945 he found this new residence in the New Grounds in Slimbridge, on the edge of the River Severn.

The main reasons for the selecting this site was the large numbers of wintering European White-fronted Geese, the high diversity of wintering waterbird species, the unique possibilities to observe and keep birds and a functional duck decoy. In November 1946, Scott founded a society called "The Severn Wildfowl Trust", for the scientific study and conservation of wildfowl, which is the ancestor of "The Wildfowl & Wetlands Trust (WWT)".

In the subsequent years, Peter Scott systematically built up a collection of waterbirds from all over the world and was drawing and painting hard. His observations of waterbirds and his long-year experience shooting geese changed his attitude to waterfowling, hence he sold his guns and gave up shooting. Instead of shooting, Scott revived the Berkeley duck decoy at the New Grounds and developed rocket nets to catch and ring ducks and geese. Besides he travelled, studied goose ecology, learned to fly small aeroplanes and gliders and made portraits of the Princesses Elizabeth and Margaret.



Néné of Hawaiian Goose
(*Branta sandvicensis*)
(© J.R. Woodworth, Honolulu Zoo)



Sir Peter Scott (second man from the left) with i.a. Guy Mountfort, Luc Hoffmann and HRM Prins Bernhard of the Netherlands, (foto WWF)

In 1948, together with his friend Christopher Dalgety, he published the first description of a new sub-species of the White-fronted Goose, named "Greenland White-fronted Goose *Anser albifrons flavirostris* Dalgety & Scott" and started breeding the rarest goose species in the world, the Hawaiian or Nene Goose *Branta sandvicensis*, from 1950. This breeding programme was so successful that from the early 1960s offspring of the Slimbridge captive breeding stock could be released in Hawaii. In the early 1950s, under the lead of Peter Scott, the Trust started a study on the Pink-footed Goose *Anser brachyrhynchus* in Iceland. After the Pinkfeet expedition of 1951 Scott married his assistant Felicity Philippa Talbot-Ponsonby in Reykjavik (Iceland). In 1952 their daughter Dafila and 1954 their son Richard Falcon were born.

In 1948, the IUPN (International Union for the Protection of Nature) was founded (after 1956 known as IUCN International Union for the Conservation of Nature), Peter Scott became Vice President of the organisation and at the same time became the chairman of two of the IUCN's most important Commissions: the Commission on National Parks and Protected Areas, and the Survival Service Commission.

Whereas the IUCN was planned to be the scientific and technical arm of international nature conservation, it was also planned to found a separate fund raising and campaigning branch. Peter Scott started lobbying for a professional fund raising organisation for the conservation of nature. His engagement led to the foundation of the World Wildlife Fund WWF (now: Worldwide Fund for Nature) in 1961. Although originally planned as a sister organisation of IUCN under the roof of UNESCO, WWF developed rather quickly to an independent international NGO, with Prince Bernard of The Netherlands as first President. In 1973 he was knighted by Queen Elisabeth II.



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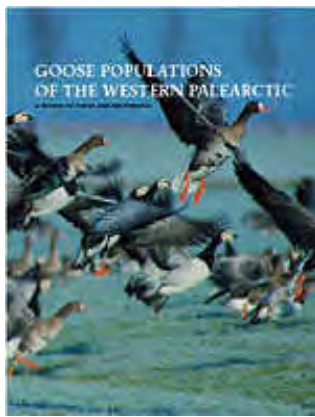
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Literature

Goose populations of the Western Palearctic



The Goose Specialist Group made an impressive compilation (edited by Jesper Madsen, Tony Fox & Gill Cracknell) of our knowledge on the status and distribution of the goose populations of the Western Palearctic. This book is not for sale anymore, but a digital copy can be downloaded for free from:

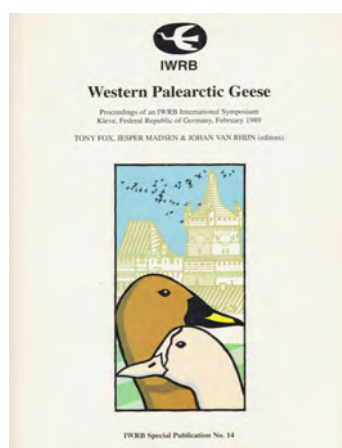
http://issuu.com/jesper_madsen/docs/goosepopulationswestpalearctic

or from

<http://bios.au.dk/en/knowledge-exchange/about-our-research-topics/animals-and-plants/mammals-and-birds/goose-populations-of-the-western-palearctic/>

Proceedings of the Klever, the 10th and the 12th meeting of the GSG

Furthermore it is still possible to receive a printed copy of the official proceedings of earlier meetings of the Goose Specialist group, as there are:



Proceedings Goose Meeting 1989
(Kleve, Germany)
Interested? Please contact:
johan.mooij@bskw.de



Proceedings Goose 2007
(Xanten, Germany)
Interested? Please contact:
johan.mooij@bskw.de



Proceedings Goose 2009
(Höllviken, Sweden)
Interested? Please contact:
leif.nilsson@zooekol.lu.se

Proceedings of the 14th meeting of the Goose Specialist Group

The proceedings of the 14th meeting of the Goose Specialist Group held in Steinkjer, Norway in April 2012 have been published in the online journal *Ornis Norvegica*, which is the scientific journal of the Norwegian Ornithological Society (Norsk Ornitologisk Forening – NOF). You can find articles from the 2012 meeting, as well as a number of other ornithological papers which are surely of interest on the journal website:

<https://boap.uib.no/index.php/ornis/issue/view/62>

Proceedings of the 15th meeting of the Goose Specialist Group



The proceedings of the 15th meeting of the Goose Specialist Group held in Arcachon, France in January 2013 have appeared as a special edition of the journal **Wildfowl**.

By sending an email to wildfowl@wwt.org.uk a printed copy of this Special Issue (nr.3) can be ordered at the cost of £17 plus an additional £3.50 for credit card transactions.

It also can be downloaded for free at:

<http://wildfowl.wwt.org.uk/index.php/wildfowl/issue/view/285>

The journal Wildfowl

Wildfowl is an international scientific journal, recognised by the Web of Science and published annually by the Wildfowl & Wetlands Trust (WWT).

The journal appeared originally as the Annual Report of The Severn Wildfowl Trust at the end of the Trust's first working year in 1947. From the outset it presented the results of scientific research in order to improve knowledge and understanding of wildfowl populations. It now disseminates original material on the ecology, biology and conservation of wildfowl (Anseriformes) and ecologically-associated birds (such as waders, rails and flamingos), and on their wetland habitats. The journal is completely free to contribute to as an author (there are no page or article changes at all) and is open access, freely available to anyone who may wish to read the contents.

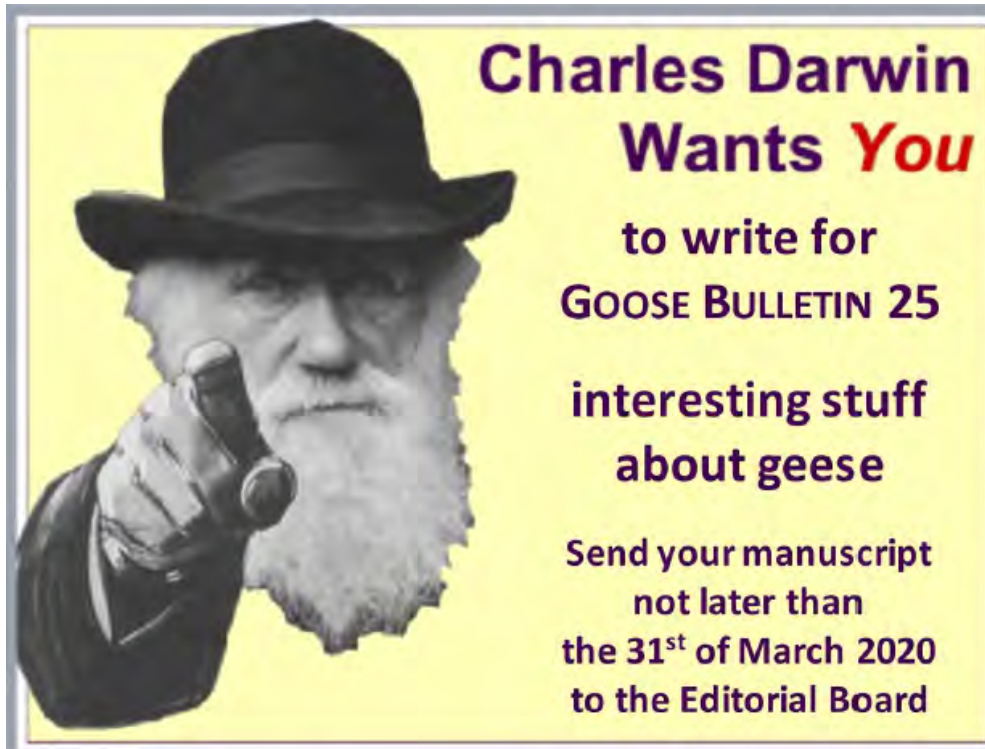
The complete back catalogue of Wildfowl is available via the Open Journal System at <http://wildfowl.wwt.org.uk>



Call for help:

As discussed during the Höllviken meeting we invite all goose researchers to send their publications to our data bank of geese literature. Not only international but also local publications (including those in languages other than English) are most welcome.

Please send your publications, preferably as a pdf file, to Fred Cottaar - fred.cottaar@tiscali.nl.



Instructions to authors

The Goose Bulletin accepts all manuscripts dealing with goose ecology, goose research and goose protection in the broadest sense as well as Goose Specialist Group items.

All manuscripts should be submitted in English language and in electronic form. Text files should be submitted in “.doc”-format, Font “Times New Roman 12 point”, tables and graphs in “.xls”-format and pictures in good quality and “.jpg”-format.

Species names should be written with capitals as follows: Greylag Goose, Greenland White-fronted Goose etc. Follow an appropriate authority for common names (e.g. Checklist of Birds of the Western Palearctic). Give the (scientific) Latin name in full, in *italics*, at first mention in the main text, not separated by brackets.

Numbers - less than ten use words e.g. (one, two three etc) greater than 10, use numbers with blank for numbers over 1 000.

In case of doubt please look at the last issue of the Goose Bulletin.



