Nautical Archaeology Part One

Geert and Sara Nijs
examine the links between Nautical Archaeology and Early Golf.

DURING the last half a century, especially since metal detectors have become popular, hobbyists are combing the fields in the Netherlands to find all kind of metal artefacts. Regularly pieces of metal are found which turned out to be club heads of the ancient game of colf, the so-called 'slofs'. Also in the centre of ancient towns such slofs are found during excavations.

To the amazement of the colf connoisseurs and the naval archaeologists such slofs are not only found on land but at sea as well. In the 1970s and 1980s, several wreckages of Netherlandish merchant vessels from the 16th and 17th centuries were discovered on the bottom of the sea, in which slofs and even complete colf clubs were excavated. These finds throw interesting new light on the history of colf and the equipment used in this game.

In this first part of 'Nautical Archaeology' we would like to discuss the excavation of the so-called 'Biddinghuizer colf ship' which sank in the Zuiderzee, present-day's IJsselmeer, in 1540. (See Figs 1 and 2)

In part two we would like to discuss the excavations of two merchant ships that were wrecked in respectively 1653 and 1662 near the Shetland Isles.

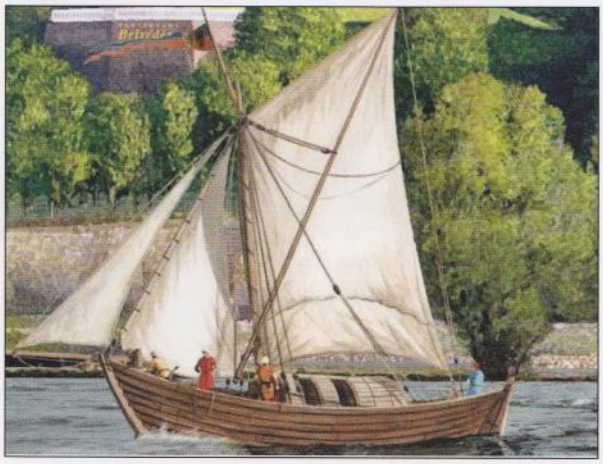


Fig 1 Reconstruction of the OM 11 or 'Biddinghuizer colf ship' which sank around 1540 in a heavy storm in the Zuiderzee. The length of the original cargo ship was approximately 20 metres the width was about 5 metres. Such ships were used for transport of goods between the two economic centres on the west- and east-side of the sea. – www.gelderlander.nl

Fig 2 The Zuiderzee was a bay of the North Sea entering deep into the heart of the North Netherlands. Contacts between the economic centres on both sides of the bay were done mainly by boat. – Map of the Netherlands by Janssonius, 1658 – http://www.let.rug.nl

The OM 11 or 'Biddinghuizer colf ship'

Until the 20th century the Zuiderzee, a relatively large bay, part of the North Sea, separated the western part of the North Netherlands from the eastern part. In the west one found the important towns, such as Delft, Leiden, Haarlem and Amsterdam, while on the eastside there were several Hanseatic towns, for instance, Deventer, Kampen and Zwolle. Transport of goods between these two economic centres took place by small cargo ships. During stormy weather, it was not unusual for ships to go down with all hands and sink deep into the muddy bottom of the bay.

At the beginning of the 20th century there was a growing need for more agricultural land to feed the ever-growing population on both sides of the bay. After several land reclamations in the past, work started in 1950 to reclaim new parts of the Zuiderzee for that purpose.

One part of the reclaimed land was called East Flevoland. In 1957, the sea was 'driven' back and farmers could start to farm five metres under sea level. Since the reclamation and cultivation of Flevoland at least 422 shipwrecks have been found, and

it is therefore the largest ship graveyard in the world.

On the 27th of August 1984 during agricultural work on a piece of land numbered OM 11, and west of the village of Biddinghuizen, the remains of a ship were unearthed by chance. Although this find was considered as very exceptional, it was not until 1992 that the wreck of the ship was excavated. (See Fig 3) The OM 11, the professional, archaeological name of the ship, turned out to be a coaster, 20 metres long and 5 metres wide. The cargo ship was on its way from Amsterdam, at the west side of the bay, towards the town of Kampen, the main Hanseatic harbour on the east side of the bay.

The coins found in the shipwreck were of help to determine that the ship sank around 1540. Several parts of the ship remained in surprisingly good order such as the rudder, the anchor, two hooks and some pulleys. The contents of the coaster could be divided roughly into cargo and other finds: tools, cutlery, personal belongings, etc.

Fig 3 In the picture is the wreck of the Biddinghuizer colf ship. After the reclamation of this part of the Zuiderzee the ship was discovered and excavated. Between the debris of the cargo, after four hundred fifty years, six slofs and ten complete colf club were found. This was the most remarkable find in the history of the related games colf, crosse, mail and golf. The wreck is reburied in the ship archaeologic graveyard near the town of Nijkerk. – http://www.gebroedersvanlimburg.nl

Fig 4 One of the ten complete colf clubs recovered after almost five hundred years from the wreck of the Biddinghuizer colf ship. All clubs were in a remarkably good shape and are now stored in the maritime collection of the Rijksdienst voor het Cultureel Erfgoed, Lelystad, The Netherlands – From 'Oud Hout' by Lies Resink, 2007

Not much was left of the original cargo. It could well be that part of the cargo was lifted from the sunken ship, shortly after it was wrecked. The remaining cargo consisted of, among other things, seventeen wooden barrels with what was left of herring, and to the surprise of the archaeologists several slofs and no less than ten complete practically undamaged colf clubs. (See Figs 4, 5 and 6) Because of this find the coaster is now known as the Biddinghuizer colf ship. These clubs were probably ordered by players from the club makers in Leiden or Middelburg, early centres of colf club manufacture.

Fig 5 A beautiful picture of a four hundred and fifty year old colf club. The club is practically undamaged after remaining for centuries in a sunken ship below sea level. Hundreds of thousands of people in the early Renaissance period had used such clubs in the towns, on the fields and on the frozen canals, lakes, ponds and probably on the frozen Zuiderzee. – NGA Early Golf Webmuseum

Fig 6 Picture of an undamaged colf club showing a 1 metre long ash wood shaft with a leaden club head.

During the excavations three lead objects with a piece of wood at one end were discovered, and immediately recognised by the archaeologists as slofs (colf club heads). It was an interesting find though not exceptional. That the slofs were made of lead was not unusual. By 1429, the magistrates of the city of Zierikzee, in the southwest of the North Netherlands, had already issued an ordinance enacting 'that nobody strikes the ball on the streets with clubs with lead or iron heads'. Somewhat later there was an air of great excitement, when together with three more slofs, ten complete colf clubs were found.

Never before in the history of colf nor in the history of the related stick and ball games have complete clubs from the 16th century been found. From the total of sixteen slofs twelve were made for adults and four were clearly meant for children. Nine adult slofs were made for right-handers and three for lefties. Two children's slofs were for right-handers, the other two could be used by both left- and right-handers. The complete clubs consisted of leaden slofs, wooden shafts and grips made of cord or leather.

The club heads were made of a lead alloy. The adult club heads were all smaller than ten centimetres and weighted approximately 125 grams. The children's club heads were much smaller, between six and seven centimetres, and approximately 75 grams. Some of the slofs show decorative lines and some have cleek marks. We do not know whether these marks refer to the club maker, the guild to which the club maker belonged or to the town in which the club maker lived and worked.

The shafts, made of ash wood, are on average 1 metre long. The diameter of the oval to round shaft reduces from 3 centimetres at the top end to 2 centimetres in the middle. Near the place where the shaft is inserted in the club head the shaft is again somewhat thicker. Four of the shafts still have their original grips made of cord and leather wound as a spiral around the shaft and secured with small nails. The grips have a length of 30 centimetres. Some shafts have no special grip but small dimples to improve the grip of the hands on the shaft.

Part of the above information is derived from:

- *'Biddinghuizer Colfschip'* by Dr. J-M A W Morel, article in *'Drooggelegd land blootgelegd verleden. Cultuur Historisch Jaarboek voor Flevoland'*, (Impoldered land- the past laid bare.) J P A Gruijters, L. Noordegraaf, H R Reinders & G H L Tiesinga (Red.), 1993
- Summary of the bachelor paper *'Het Biddinghuizer Colfschip'* by Koen Blok, Rijksuniversiteit Groningen, Art History and Archaeology, 2010
- *'Knooppunt Zuiderzee. Een ruimtelijke analyse van scheepsvindplaatsen in Flevoland (Junction Southern Sea. An analysis of sites of ship wrecks in Flevoland)'* by Yftinus van Popta in *'Paleo-aktueel 23.'*, yearly publication of the University of Groningen, Institute of Archaeology, 2012.
- *'Oud Hout. Een bundeling van columns over 'Scheepshistorie in de Flevopolders (Old wood. A compilation of columns about the ship history in the Flevo polders'*), Lies Resink, 2007.

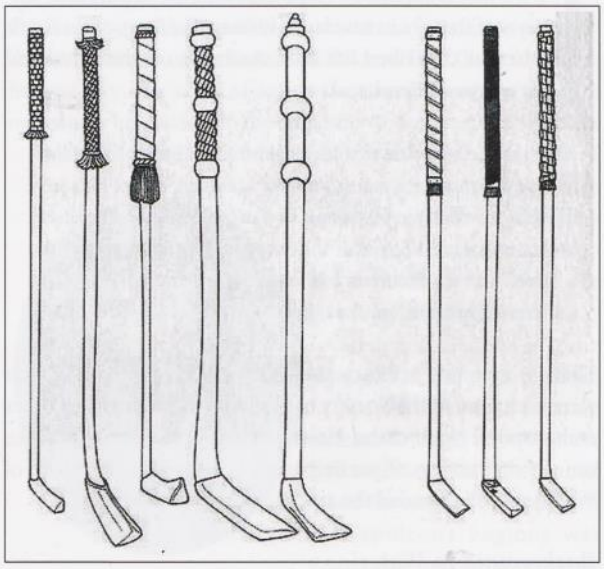


Fig 7 A drawing of various colf clubs from the 16th and 17th centuries. The five clubs on the left in the drawing show that colf clubs in the 17th century looked very much alike. They were copied from the many colf paintings of that period. The three clubs on the right are drawings from clubs found in the wrecked Biddinghuizer colf ship. – Drawing by Dr. J-M A W Morel – Article 'Biddinghuizer Colfschip' in 'Cultureel Historisch Jaerboek voor Flevoland' 1992

For Sale

Honorary Membership Certificate Edinburgh Bruntsfield Links Golfing Society 1825 c/w Wax Seal.
Membership Certificate Montrose Golf Club 1821.
Royal Perth Golfing Society, Rules and Regulations 1839.
Royal Perth Golfing Society, Rules of the Game 1839.
Royal Perth Golfing Society, Rules of the game 1864.
Royal North Devon Golf Club Rules of Government 1875.
R&A Rules 1852. R&A Rules 1858.
Rules of Montrose Royal Albert Golf Club 1851.
Aberdeen Golf Club Rules No date
Contact Graham Walters - walters-g@sky.com

The Shetland colf ships

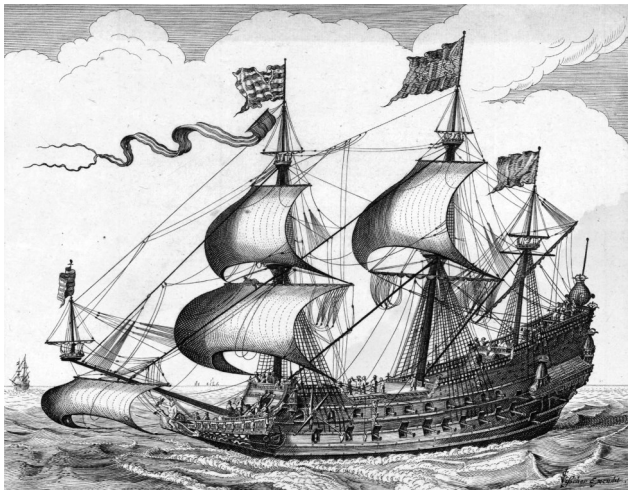
Great Britain and the Netherlands (at that time the Republic of the Seven Provinces or the United Netherlands) have not always been good friends. In the 17th and 18th centuries, in many battles during the four naval wars, they both tried to 'rule the waves of the seven seas'. Both nations wanted to secure the sea routes to discover new lands to set up trade settlements, to transport profitable goods to Europe and for the British to build new colonies.
Acting like buccaneers they attacked each other's merchant ships. Therefore these ships were often equipped with cannons or accompanied by war ships to keep the enemy away from the valuable cargo.
For the Netherlandish ships another way to avoid attacks from English naval ships and from buccaneers in the narrow Channel between France and Britain was to take a northerly route via Scotland, the Shetlands and Ireland to Kaap de Goede Hoop (Cape of Good Hope, South Africa) and continue eastward to the many settlements in Asia. This alternative course was dangerous as well. There were no reliable sea maps and the weather could be extremely rough. An unknown number of ships were shipwrecked on the rocks near the Shetland isles. In the 1970s, two of these wrecked ships could be located by maritime archaeologists and as far as possible excavated.

The Lastdrager (literally 'load carrier')

The Lastdrager, belonging to the Verenigde Oostindische Compagnie (V.O.C. [Dutch East India Company]), the first limited company in the world, was a 640-ton flute ship, approximately 44 metres long with a maximum width of approximately 8.5 metres.
The Lastdrager made two successful return voyages from the harbour of Texel to Batavia, the commercial centre of all trade settlements in Asia in the then 'Dutch Indies', now the capital Djakarta of Indonesia.

The ship, with miscellaneous cargo, sailed on the 4th February 1653 for the 3rd time to the East Indies. It chose the north of Scotland route to avoid the military activities of the 1st Anglo-Dutch war (1652-1654) in the English Channel between France and England. Unfortunately the ship was wrecked on the 2nd March 1653 on the reefs of the northeast coast of the Isle of Yell (Bluemull Sound), one of the Shetlands. Of the fifty members of the crew only twenty-six men survived.

In 1971, Robert Sténuit and his team of the 'Groupe de Recherche Archéologique Sous-Marine Post-Médiévale' located, studied and excavated the scattered wreckage of the Lastdrager. Almost 3,000 artefacts were found. Amidst these artefacts four of them could not be identified and in the excavation reports these pieces of brass were described as 'fragments of cast brass supports, possibly the feet of a cauldron'. Therefore these fragments were put away in a cardboard box labelled 'cauldron feet' and stowed away in a depot where they were almost forgotten.



In present-day terms, these ships were small and very vulnerable; they brought all kinds of provisions, personnel belongings and merchandise to the various settlements in Asia. On their way back they took loads of quite profitable spices to Europe. – 'Seascape with a Dutch flute-ship', c.1640, published by Claes Jansz. Visscher – © Trustees of the British Museum

It was only in 1987 that the archaeologists found out by accident that the cauldron feet were some of the 'oldest golf club heads' ever found. According to a paper by M Christopher Dobbs about the excavation of the cargo ship 'Kennemerland' (see here-after) Robert Sténuit, the archaeologist, learnt that the artefacts found in this wreck were 'golf club heads'. He recognised that the artefacts found in the Lastdrager were similar and therefore must have been slofs as well. The identification prompted their detailed study as relics of the "early days of a game that today is practised world-wide".
Being outsiders in the history of golf, Sténuit and his team were unaware of the difference between Scottish golf and Netherlandish colf.

Top: The sea routes between the many small islands of the Shetlands were not very well-known but the possibility of being confronted with the British enemy or buccaneers along the coast of the continent was considered by the Netherlandish merchants as more dangerous than trying to pass the treacherous coasts of the Shetlands. – www.shetlandhamefarin.com

Bottom: One of the Lastdrager's brass slofs seen from different angles; the strike face, the top and the back of the head. The club head is covered with green patina over orangish surfaces, triangular in cross section with an upward sloping end. The hard brass metal of the slofs could stand the constant movement of the sea very well. They are almost undamaged. – www.icollector.com

The brass metal as used for the head was exceptional. Until now in land-excavations only lead and lead alloy colf club heads were found. The dimensions are not much different from the leaden heads.
The length of three of the brass slofs was 99 millimetres; the fourth one measured only 91 millimetres. The weight of this small slof, 145 grams (including the wooden insert), could mean that it was the head of a children's colf club. The weight of the other heads were respectively 226 grams (including the wooden stump), 205 grams (also including the stump) and 189 grams (excluding the wooden remains). All pieces are cast brass hollow shells with an opening at the rear end in which the ash shaft was inserted.
The thickness of the brass shell varies between 2.9 millimetres and 3.5 millimetres.
The shafts with the stumps still inserted in the hollow shell were made of robinia pseudoacacia (false acacia or black locust). These trees were indigenous to North America and were imported into the Netherlands as well as into Britain at the beginning of the 17th century. It is said that the wood of the false acacia is as strong as hazel and ash: the wood can be easily manipulated (bending) by means of hot steam. The stump (bended end) of the shaft was inserted in the opening at the rear end of the hollow club head and secured with a natural pine resin. In the stump some rough grooves were cut to obtain a better adhesion between glue, wood and metal.
The shafts were completely rotted away in the course of the centuries. The use of false acacia for the shafts is fairly exceptional. Most of the club heads with remnants of the shaft found on land by accident or by excavations are made of hazel or ash.
There are no decorative lines, heel marks or cleek marks visible on the heads.
With the exception of the smaller (children?) colf slof, the other club heads were almost exactly the same. Because colf was played with only one club, this could mean that it wasn't several players who ordered a colf club, but that one or two players ordered some spare clubs in case the original club got broken.
It could well be that there were wooden colf balls or perhaps hair-filled leather colf balls on board as well, but they would have completely decayed in the course of the centuries.

The colf clubs were probably meant for one or more colvers in Batavia who ordered them from club makers in the Netherlands. Because the brass clubs with robinia pseudoacacia shafts must have been rather expensive, it could well be that the clubs were ordered by Governor-General Carel Reyniersz. However if the Lastdrager had not been wrecked and had arrived in Batavia, the Governor-General had died in the meantime. If his successor Joan Maetsuycker was an addicted colf player too, is not known.

heraldscotland
The Herald | sundayherald

'Golf debate rekindled as club heads are auctioned'
by Davide Steele

[…] A rare discovery by divers on the wreck of a seventeenth century Dutch merchant ship will form the centrepiece of an auction of golf memorabilia to be held in Glasgow today. The two golf club heads were recovered recently by Belgian divers from the wreck of the Lastdrager, which sank off Shetland in 1653, and were passed to Sotheby's for auction. They will fuel the rival historical claims of the invention of the game of golf in its present form, and their existence off the coast of Scotland adds weight to theories of likely cross-national influence and fertilisation between lands on either side of the North Sea.
Mr Christopher Proudlove of Sotheby's said: "We are delighted to be offering these club heads for sale, as such items have never before been offered at auction. There are only some 23 in existence, most in British or Dutch museums, and others in private collections.
"It is difficult to put a price on them as they have never been offered in this form before. We will just have to wait and see." […]
From www.heraldscotland.com, 17 July 1989

The New York Times

'Auctions'
by Terry Trucco

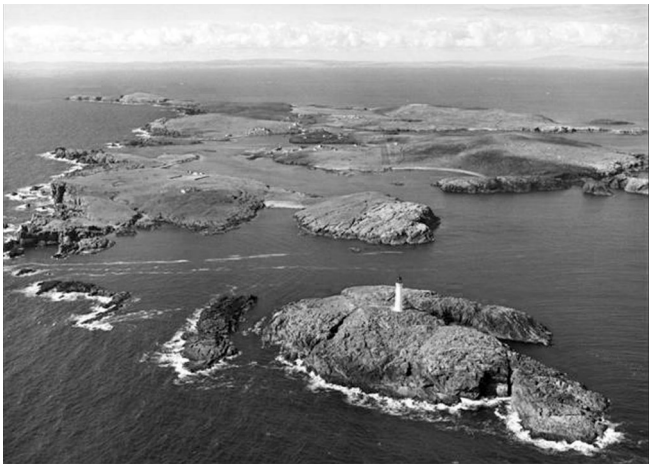
[…] Sotheby's recent sale featured two 17th-century golf-club heads recovered from the wreck of a Dutch East India Company ship that sank off the Shetland Islands in 1653. The earliest heads ever offered at auction, they each brought a mere $15,840. The problem was that the Dutch played their early version of golf on ice. "People looked at them out of curiosity, but they didn't bid," said Ms. Kurke. […]
From www.nytimes.com, 25 August 1989

Part of the information about the Lastdrager is derived from the article 'Some mid-17th century golfclub heads found during underwater excavations and their significance for the study of the early history of the game of golf' by Robert Sténuit, published in 'The International Journal of Nautical Archaeology', number 20.1, 1991.

The Kennemerland (named after a region)

Some ten years later in December 1662, another cargo carrier from the V.O.C., the Kennemerland, stranded during a heavy storm on the rocks near the Stoura Stack of the Out Skerries, northeast of the Shetland Isles. From the hundred and fifty people on board only three survived the shipwreck.
The Kennemerland was an armed merchant vessel, a relatively common class of ship in the 17th century. The ship of 940 tons was 45 metres long and had a maximum width of 11 metres. The cargo included a consignment of gold, mercury, clay pipes, tobacco boxes and 'golf clubs'. The vessel left the harbour of Texel on the 14th December for its second voyage to Batavia (Djakarta) and to avoid trouble with the British military vessels and the Channel buccaneers, it took the northerly route.

The remains of the Kennemerland were located in 1971 by members of the Aston University Sub Aqua Club. During an extensive sub-marine archaeological expedition in 1978, five leaden artefacts were discovered and excavated, but it is possible that more club heads were onboard the ship. The lead alloy artefacts remained unidentified for several years although a photograph of the artefacts was published in the hope that identification would be forthcoming. It was only in 1984 that the five objects were identified by Ian Tait of the Shetland Museum as 'golf clubs'. He noted the similarity of the club heads recovered from a 17th century archaeological site in Amsterdam. His identification was later confirmed by David Stirk, a British expert on golf history.



The Kennemerland stranded during a heavy storm on the rocks near the Stoura Stack of the Out Skerries. From the hundred-fifty crew members only three men survived. The routes between these small rocky islands were not well-known. A heavy storm could easily swipe a ship off course. Many other not yet discovered ships sunk near the Shetland Islands. – www.rightmove.co.uk

Noteworthy is that three of the five club heads were made for left-handed players.
All five lead alloy club heads were between 10.2 and 10.6 millimetres long and between 42 and 45 millimetres high. Although the shafts have not survived, it shows that the clubs were constructed by casting the lead alloy exterior around the hooked end of the wooden shaft.
The club head has a triangular form. The 'strike face' is flat and is set at approximately 9° to the perpendicular. The sole is flat and the back of the head is somewhat rounded.
The back of the heads are provided with some decorative striated lines 3.5 millimetres wide near the end of the heads where the wooden shaft is inserted. A further pair of striated lines runs almost parallel at a distance of 17 millimetres. Between the two pairs of lines there are three crosses with ten 'plus' signs in the interstices. It is not clear whether these crosses are just decorations or that they reflect the three saltires (Andreas crosses) of the coat of arms of the city of Amsterdam. Outside the second pair of lines there are three stamps of a crowned rose which could be the hall mark of the metal used for the head or the cleek mark of the club maker or the club head maker. Three of the club heads are fairly eroded but show faintly the same kind of striated lines; the same imprints are visible. The fifth club head is too damaged to recognise any possible signs and lines.
The other lead-tin alloy heads are severely damaged by the age-long movements of the sea; the double striated lines are hardly visible.

Picture of the somewhat-rounded back of the slightest-damaged club head. The slof weighs 300 gram and, is 103 millimetres long and 42 millimetres high. The thickness of the shell wall is 3.4 millimetres. The club head is decorated with double-striated lines, three Andreas crosses and three crowned roses. Also the letter D and perhaps I are visible. The meaning of these letters is unknown. – © 1991 The Nautical Archaeology Society

The colf clubs were probably for colf players in Batavia who ordered them from club and ball makers in the Netherlands, just like so many Scottish golf players in the British settlements and colonies did more than a hundred years later with the golf club and ball makers in Scotland.

Slofs made of lead alloy make lower prices on auctions than the rare brass slofs. The value depends on the finding place, the state of preservation and possible marks of the club maker, the guild of club makers or other decorations. Lead club heads are very common and therefore the asking price is much lower than that of the rare brass heads.

The slofs are now held at the Shetland Museum in the town of Lerwick, the capital of the Shetland Islands.

Part on the above information was derived from the article 'The Kennemerland site. An Interim Report. The sixth and seventh seasons, 1984 & 1987, and the identification of five golf clubs' by C.T.C. Dobbs and R.A. Price, published in 'The International Journal of Nautical Archaeology', number 20.1, 1991.

Some observations

In the interim report, the authors Dobbs and Price were of the opinion that the discovery of the 'golf clubs' in the Kennemerland together with the find of similar 'golf clubs' in the Lastdrager "constitute the earliest visible evidence for the spread of golf from Northern Europe". And Robert Sténuit described the 'golf club heads' as "relics of the early days of a game that is practiced world wide today".

Throughout the reports there is a constant mix-up between the games of colf and golf. It is understandable that specialists in underwater archaeology are unaware of the distinction between the games of golf and colf, nor of the history of these games. It is however remarkable that an expert in this matter, the late David Stirk, did not correct the views of the reporters. The slofs, which is their correct name, have no relation with Scottish golf whatsoever.

In general, we experience in other contexts that the Flemish /Netherlandish colf game is called more regularly 'golf' but not the other way around.

In the report on the Kennemerland excavations, it is explained that three of the five club heads were meant for clubs for left-handers. We see the same in the game of crosse (or crossage) where a good few people are playing left-handed while generally only 10% of mankind is left-handed. Up to now we have not find the reasoning of it.

There is a difference in the thickness of the shell wall between the finds in the Lastdrager and the Kennemerland. The Lastdrager brass club heads have shell walls of between 3 and 5 millimetres while the Kennemerland lead/tin alloy club heads have between 2- and 4-millimetre shell walls. It could well be that the lead-tin alloy heads were made of a thin sheet of lead-tin which is folded around the stump of the shaft (see chapter ‘Clubs for hitting far and sure’). The brass club heads of the Lastdrager could have been forged with a hole in the rear in which the stump of the end of the shaft was inserted and secured.