

Joint Nautical archaeology Policy Committee

Comments on Odyssey Paper 4 - Deep-Sea Fishing Impacts on the Shipwrecks of the English Channel and Western Approaches

by

David Parham

The document, whilst not the first to consider fishing damage to wrecks in the UK is the first to quantify such damage across such a broad area. As such it is a useful introduction to the subject and makes some interesting points. For example it points out that modern fishing has been in existence since the 1880s, with levels of activity rising to the post WWII boom in fishing which peaked in the 1960s and 1970s and has since been in serious decline, which would suggest that fishing impact on shipwrecks has been going on for some time and is now in decline. Interesting facts include fishing methods that barely skim the surface whereas others impact the seabed to a depth of up to 200mm (P3). However in general the paper expresses a number of unsubstantiated opinions that may reflect a lack of familiarity with material which it is discussing and fails to consider alternative causations to those which it is presenting. On appearance the paper has been written by Sean Kingsley of Wreck Watch International, however in a meeting with the JNAPC Dr Kingsley has confirmed that it has been subject to some editing by Odyssey Marine Exploration (OME) staff.

Large areas (pages 3-12) appear to have been gleaned from other literature with little attempt made to make it more readable for an archaeological or lay audience to explain specialist terms such as 'demersal and pelagic' fish, or to relate the data on the impact of fishing on the marine environment to an appropriate archaeological context. It could for example discuss the various types of fishing and the likely impact each could have on archaeology but it fails to do this. It could also have been more tightly edited, in particular it is inconsistent, using common references for the sites, jumping between using the ships identified name (or OME given name) and the OME site code which makes it difficult to identify which site is being referred to and when.

The tone of the paper suggests that OME has discovered something new, stating that when it started the project it had an *image of pristine deep sea wrecks displaying superior levels of preservation in contrast to shallow sites* (P34), but instead it found that *preservation of archaeologically*

significant deep-sea shipwrecks in the English Channel seems to be generally extremely poor (P1). The paper suggests that this is due to five factors, extreme storm waves, significant bottom currents (and sediment transport), trawling / dredging impacts, wreck fishing and depth charging in WWII. This statement could perhaps be compared to Columbus's discovery of America - a great surprise for him, but not for those that already lived there. This suggests a surprisingly ill-informed understanding of the maritime archaeology of the English Channel prior to beginning the survey. Some basic research amongst the local maritime archaeological and diving communities would have provided a better informed picture.

It may also be noted that two other Odyssey Papers (1 and 3) relate to OME's earlier work on two sites in which conditions similar to those found in the English Channel were found. These are the alleged *Sussex* site off Gibraltar (Odyssey Paper 1) and the Jacksonville 'Blue China' site (Odyssey Paper 3). OME's own work would thus suggest that it would have to have been excessively over optimistic when they started in the English Channel to expect pristine shipwreck sites.

Some of the claims that the paper makes are open to question. The discussion of impact to a ceramic cargo (P29) fails to discuss the wider evidence for Asian ceramic cargos where fishing activity damages upper layers but leaves those beneath untouched, similar to plough damage on terrestrial sites, which would appear to be a good terrestrial analogy for fishing impact on maritime archaeology. In discussion with Dr Kingsley it was stated that one of the reasons that OME considered that the site was subject to fishing is the apparent lack of ceramics on the site. However, archaeological evidence from a Royal Navy wreck of the same period, HMS *Invincible* (lost 1758) would suggest that Royal Navy ships of this period did not carry large quantities of ceramics.

A good deal of the material presented refers to more recent (20th century) wrecks, particularly that relating to wreck fishing (P13) and abandoned nets choking a site and forcing fishermen to search for other sites (P14). The paper uses the protected wreck sites in Alderney and Studland Bay, Dorset as examples of archaeological wrecks that have been found by fishing activity (P13), but fails to note that they are both still fished, with negligible impact on the sites. It claims that *Traditionally, they (fishermen) tend to be very protective and secretive about their 'hang lists' featuring the locations of shipwrecks, which are often handed down from generation to generation as a treasured asset* (P13). This is not the UK experience, some (like farmers and divers) are happy to share

information freely (much of the maritime component of England's National Monument Record consists of 'fishermen's fasteners'), it depends on the individual and the circumstances. The paper also claim that a single incident in which they were *involved demonstrates that the commonly cited argument that fishermen are fully knowledgeable of wreck locations and actively avoid them to protect their gear is incorrect* (P38). A single incident is not a statistically viable sample, quoting it also implies that this was the only time it occurred on the many days that they have spent over wreck sites. What is certain is that fishing gear is expensive and repairing or replacing gear means time away from fishing, hence fishermen have an economic reason for not snagging major obstructions. They also have a safety reason as several fishing vessels have been lost as a direct result of such an event, such as the *Scaldis* lost in January 1974 off the Dorset coast and the *Radiant* off Isle of Lewis in April 2002. In the Marine Accident Investigation Branch report into the latter's loss it states that the vessel often snagged the seabed, around twice a day and that her gear was designed for freeing herself from such situations, the crew had a set procedure for doing so and that in these situations the vessel could generate upward forces of up to 40 tons. The report assumes (they could also be as yet undiscovered wrecks) that these fasteners are coral reefs known to be in the area and states that *All the known wrecks at these locations were marked on the vessel's plotter and were avoided during trawling*. It is thought that the *Radiant* snagged the wreck of another trawler, the *Le Parrin* that sank in the area a few months before. Despite the depth of water, in excess of 915m, *Radiant's* wreck was quickly located by another fishing vessel.

As the paper states, the low relief of older wrecks would make them difficult / impossible to see on the equipment carried on many fishing vessels (P2) but constant impact with wreck material would result in such material being recovered by fishermen. The paper states that 40% (P29) of the boats fishing in the channel are of British origin and so one would expect some (admittedly perhaps only a small percent) of wreck coming into the hands of the Receiver of Wreck, but since 1993 only one pre-1800 find has been declared as a result of trawling offshore in the English Channel.

The paper states that OME have found 267 wrecks in their search area of which 112, less than half (41.9%), show impact from fishing. It also suggests that 10 sites (3.7% of the total) would warrant archaeological survey or excavation, which would extensively expand our knowledge of the maritime history of the English Channel. The criteria used to select these candidates are not detailed. Only three pre-1800 sites are

mentioned; HMS *Victory* (OME ref MUN-T1M25c-1); a site OME has identified as the *Marquise de Tournay* (OME ref MUN-T1M33c-1) a Bordeaux armed privateer captured by the British and lost in 1757 (P12); and the 'Ivory Cargo' site (OME ref T7a35f-5) which the paper describes as a 17th-century merchant vessel (P34). It claims that working on two of the archaeological sites found would only impact on 0.7% of 'rich maritime heritage' located (P34), which is of course also 66% of the pre-1800 sites mentioned.

The paper states that HMS *Victory* and the *Marquise de Tournay* are located at the epicentre of the deep-sea fishing industry within the Western Channel. A variety of sources demonstrate that both sites have been heavily ground down, with trawlers and dredges clearly an active cog in that process. The 'Marquise de Tournay' site has stabilized to some extent due to the profound level of deterioration and dominance of thick concretions on site, a combination of iron cannon and apparent cargo-related storage units. Unfortunately, on the surface of the HMS 'Victory' site delicate organic remains, including human skeletal bones and wooden planking, are currently contextualized and comprise just the latest stratum of archaeology to be exposed and scoured. Consequently, damage to the site will certainly continue (P34).

The paper offers no other argument for damage to *Marquise de Tournay* site other than an image of cannon and concretions (Figure 43 P36) and one of a cannon and debris, possible net or fragments of net (Figure 44 P37). Without any other evidence the impact on the site cannot be established.

The site of the Ivory Cargo site is a different matter¹. In this case the paper has presented evidence of fishing damage. Most convincing is Figure 40 (P33), a side scan image showing a 'raked' seabed which is described as showing *parallel-sided furrows produced by a scallop fishing vessel towing 18 dredges per side* (P29). Other evidence for damage to this site is to cannon and ballast stones (P29), a length of steel

¹ OME makes no mention of the site's potential identity in the paper under discussion. OME have claimed elsewhere (Discovery TV program *Treasure Quest* shown on the 20th February 2009 in the UK) that the site may potentially be the 'Merchant Royal', one of the most valuable wrecks of all time, which was lost 40 miles off Lands End on 23rd September 1641.

wire (which cannot have drifted onto the site) trapped under a cannon (Figure 47 P29) and a fragment of net trapped on a cannon (Figure 46 P39). The paper states that on 25th September 2006, a passing trawler warned the *Odyssey Explorer* to move off station so it could trawl the area (P38).

The general interpretation of the side scan image of the site would appear to be correct. Whilst the damage to cannon and ballast may have other explanations and the net fragment shown may have drifted onto the site, the steel cable cannot have drifted onto the site. Whilst this may have been dumped from a surface vessel, its position under a cannon would suggest otherwise.

The paper's interpretation that this site is being impacted upon by fishing and is therefore under threat is probably correct. In the interest of archaeological conservation OME should now disclose the location of this site so that fishing vessels can actively avoid it.

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However the paper provides little evidence to support its claim. HMS *Victory* suffered a serious structural failure (through poor design or wrecking), fell 100m and then decayed for 265 years. Cannon from the upper decks are now mixed with those from the lower decks and the ballast from the bottom of the hold because the organic structure that held them in place has decayed. This might well have taken over a century, considering sites like the *Mary Rose* and the *Royal George*. During that time objects will have fallen to the seabed and been displaced, in many cases by over 15m, eventually lying next to each other. OME have previously stated that *of major concern is the origination of the cannon, some of which ought to reflect their original dispositions at right angles to the line of the keel. Instead 59% of the guns lie parallel to the postulated longitudinal axis of the keel* (OME 2 P5). This statement is countered by the one it made about the Ivory Cargo site in the Discovery TV program *Treasure Quest* shown on the 20th February 2009. On that occasion it said of the Ivory Cargo site, *exactly what you would expect from an armed vessel when it has gone down there is no particular pattern to it*. It is suggested that what we see on the *Victory* site is exactly

that and the site appears to be in the state could be expected from decay and natural destruction.

Figures 17–19, 21-23, (P20-23) and 27–31(P23-27) show a variety of modern debris, including fragmentary remains of net and rope, which might be debris found drifting anywhere in the sea until it catches on an obstruction such as a wreck. No substantial areas of netting are seen on a similar site shown in Figures 9 and 10 (P9). The paper claims that modern rubbish on the site shows that it is far from undisturbed and that rubbish is being mixed into archaeological deposits, adversely affecting the site's coherence (P15). This is a natural process and also a common phenomenon which archaeologists are accustomed to dealing with.

Figures 25-28 (P24-25) and 32-34 (P27-28) show cannon with differential concretion, which the paper claims is evidence of trawl damage and possible cable marks. However, only Figure 32 shows convincing marks, and these are limited to a small area. The paper claims that Figure 20 (p21) shows a possible shoe from a beam trawler. Dr Kingsley has explained that this identity was provided by a fisheries expert who presumably has no level of expertise in the identification of 18th century ship structure and it is perhaps understandable that they interpret the object as a piece of fishing gear. As it appears it would not look out of place on an 18th century shipwreck site, although the lack of scale means that its size cannot be gauged. The active corrosion present on the object may suggest that it is relatively recent, or has been damaged and had the older concretion knocked off. It could be original, or a more recent piece of debris or a piece of fishing gear, however the report makes no consideration of other origins. Figures 13 and 14 (P18) show cannons outlying from the visible main site which the paper claims have been dragged there by fishing gear, but they could equally show a larger site than is currently visible on the surface. Figure 24 (p23) shows a lobster pot and Figure 12 (p16) indicates that the sites lies in an area where the predominate fishing activity is potting / whelking, although there is no evidence of whelks or whelk fishing on the site. Figures 15-16 (P19) show possible beam trawler marks within 500 – 1000m of the site. Lobsters live in holes and tunnels on rocky substrata, or shipwrecks which are similar, not out in flat open seabed. This kind of seabed is ideal for trapping trawl nets and dredges and so may tend to be avoided by boats deploying this kind of gear.

The paper makes much of the density of fishing traffic that crosses the area in which the HMS *Victory* and *Marquise de Tournay* lie (P12). It has not however been able in much of its report to qualify that activity

with regard to impact on the wrecks under discussion and this possibly indicates that this surface activity does not automatically equate to damage to wrecks on the seabed beneath which that activity takes place.

The paper claims *The rarity of identified shipwrecks predating 1800 is a serious anomaly and concern. Within the geographical catchment area of the English Channel* (followed by a list of 20 inshore wrecksites ranging in date from the 3rd century to the 19th century AD) (P36)*The chronological pattern of Odyssey's deep-sea wrecks, with an evident rarity of pre-1800 sites, is a distorted archaeological reflection of commercial and military reality.* The paper goes on to explain the wealth of historical losses known in the area and that many of these losses were ships that *obviously traversed open waters* (P36).

As a result the paper states that *This report concludes that arguably the principal reason for the current low level of preservation on the wreck of HMS Victory and the rarity of wrecks pre-dating 1800 is a result of fishing impact.....*

However the report fails to address other possibilities. Ships made from naturally buoyant material are only likely to survive as shipwrecks in any form if they contained heavy cargo or armament that was of sufficient weight to pin the wreck to the seabed and are lost on a seabed consisting of material that is conducive to the survival of archaeological material. Evidence from the known history of the wrecks of the British warships *Mary Rose* and *HMS Royal George* indicates that the hulls survive as major obstructions for many decades, in a similar condition to the many of the 20th century wrecks present on the seabed around the coast of the UK today. As 3 dimensional structures they cause scour around them before they eventually break up and then are often naturally reburied within their own scour pit, as can be seen with the Studland Bay and Swash Channel Wrecks.

The hypothesis proposed above suggests that historic wrecks survive only in certain circumstances and in many cases buried naturally, making them highly difficult to detect even with modern surveying equipment. It could be argued that OME's lack of finds offshore compared to its list of inshore finds would seem to support this hypothesis.

In conclusion, as was already known, fishing vessels have the ability to generate enough force to tear archaeological sites apart, wreck sites also have the ability to damage fishing gear and sink fishing boats and as such fishermen avoid them whenever possible. This is a long term problem

that has been ongoing since the last quarter of the 19th century and peaked (in terms of fishing activity) in the decades following WWII and is now in decline. The paper has demonstrated that this is the case on at least one site (Ivory Cargo) and that fishing activity is extensive in the English Channel. It has however failed to demonstrate that this activity has impacted heavily on 2/3rd of the pre1800 sites that it discussed in the paper.

While the paper provides some useful general insights and survey data, the lack of locational data in particular means it falls short of being a replicable study that could be independently verified. The evidence cited as indicating fishing damage is not convincing in several instances, but even where it is, there remain issues about whether damage is ongoing; even then the assertion that excavation is the only way forward (rather than marking wrecks as fishing hazards) is unsubstantiated and leaves entirely unresolved what then happens to the rest of the wreck site.

The issues raised in this paper are of sufficient importance for further research to be conducted into the real impact of fishing on shipwreck sites and how this can best be managed. It is not felt that OME has established a convincing case that the *Victory* site is at immediate threat from trawling. It is perhaps telling that after finding 267 sites OME only recommends work on the two sites that it believes may have carried a valuable cargo.