A Survey of Shipwreck Sites off the Southwestern Coast of Turkey

John A. Gifford


Stable URL:
http://links.jstor.org/sici?sici=0093-4690%281974%291%3A1%2F2%3C23%3AAASOSO%3E2.0.CO%3B2-O

Journal of Field Archaeology is currently published by Boston University.

Your use of the JSTOR archive indicates your acceptance of JSTOR’s Terms and Conditions of Use, available at http://www.jstor.org/about/terms.html. JSTOR’s Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at http://www.jstor.org/journals/boston.html.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is an independent not-for-profit organization dedicated to creating and preserving a digital archive of scholarly journals. For more information regarding JSTOR, please contact support@jstor.org.
A Survey of Shipwreck Sites
Off the Southwestern Coast of Turkey

John A. Gifford
American Institute of Nautical Archaeology,
Kyrenia, Cyprus

Using a combination of remote sensing techniques (side-scan sonar and underwater television), and visual inspection by SCUBA-diving, 18 wrecks ranging in age from preclassical to 19th century A.C. were located between Bodrum and Cape Gelidonya. The majority of wreck sites were known to local sponge divers. All except one site have been looted; nevertheless, eight sites are judged worthy of further investigation.

Between 21 August and 15 October 1973 the American Institute of Nautical Archaeology conducted an underwater survey of shipwrecks off the southwestern Turkish coast with the aim of compiling a register of wrecks for the Turkish Department of Antiquities and for possible excavation. Partial underwater surveys of the area have been undertaken on several occasions. The coastline is in general rocky and steep, with the rocks continuing underwater in sheer drops to less steep, sediment-covered slopes between 30 and 40 m.

The first half of our survey was based on remote sensing of wrecks in high-probability areas determined either by coastal topography or sponge divers' reports of artifacts being discovered in the area. The transducer of a side-scan sonar unit, which uses high-frequency sound waves to map irregularities in bottom topography, was towed behind a small Turkish fishing boat. Any target observed on the chart print-out that might possibly represent a wreck projecting above the general level of the bottom was buoyed by making several right-angled passes over the area. The sonar was shut down and an underwater television camera was lowered into the buoyed area to allow a visual inspection of the target on a monitor in the ship's cabin. A video tape recording of the target was also made for future reference. Searching was limited to depths of 50 m. or less so that any wreck discovered might be excavated within the limitations of compressed-air, repetitive-diving technology.

Our success in pinpointing wreck sites with these remote-sensing instruments was notably poor. Although we were often positioned directly over a wreck by local sponge divers, and in several instances observed the wreck ourselves from the surface with mask and snorkel, sonar runs over the site did not produce definitive targets. The one "wrecklike" target observed (in the course of a random survey along the south side of the Ceramic Gulf) was discovered by diving to be a rock of shape and dimensions comparable to a pile of amphorae modern masks and wet suits (hooka equipment) to depths of 60 m. below which sponge boats tow nets over the level muddy bottom, scooping up on occasion artifacts from wrecks. At depths within the capability of the hooka divers, it appears that the entire southern Turkish coast has been combed for sponges, and all visible wrecks at least seen.

1. This survey was made possible by a generous grant from the Committee for Research and Exploration of the National Geographic Society. Dr. G.F. Bass, President of the American Institute of Nautical Archaeology, directed the survey; Yüksek Edemir of the Turkish Department of Antiquities served as archaeological commissioner and unofficial co-director. Other staff during the first half of the survey included: Joseph K. Alexander, John Broadwater, Donald A. Frey, John A. Gifford, and Donald M. Rosencrantz. During the second half of the survey, Turkish divers Merih Karabag and Cemhur Ilkil participated in the underwater work.
3. Frederic Dumas, “Ancient Wrecks,” in Underwater Archaeology: A Nascent Discipline (Paris 1972) 27-34, illustrates in Fig. 4 a typical submerged cliff in the Mediterranean.
4. Although not prospering, the Turkish sponge diving industry perseveres thanks to a constant demand for natural sponges in applications unsuitable for synthetic types. Two techniques are presently used to collect sponges: divers use surface-supplied air with
from a wreck. As previously mentioned, however, the depth zone in which we were searching is steeply inclined and contains many rock outcrops, conditions which prevent the sonar from operating at maximum efficiency. The one wreck that was located by the sonar/television combination is in an area of atypical bottom topography: in the muddy (less than 2 m. visibility), flatbottomed (average depth 25 m.) Mandalya Korfesi, north of the Myndus Peninsula, a poor but highly anomalous target was buoyed in 23 m. of water. Divers probing in the mud discovered scattered sherds that almost certainly come from a wreck, due to the distance from shore. Because of its exposed location and poor bottom conditions, it is not considered a potential excavation site at this time.

During the second half of the survey emphasis shifted to compressed-air SCUBA diving as the primary method of pinpointing and investigating wreck sites reported by sponge divers. Transportation, living accommodations, and a diving platform were all incorporated in the 20 m. Turkish fishing trawler *Kardesler*. A two-man, double-lock recompression chamber with low-pressure air bank and compressor were temporarily installed on the stern, thus enabling immediate treatment of decompression sickness and air embolisms. Fortunately no diving accidents occurred during the survey. The underwater television system was used (with divers operating the camera) to produce video tape recordings of several of the sites.

Seventeen wreck sites were identified in this fashion, ranging in depth from 5-46 m. Eight of these 17 wrecks, either because they broke up in very shallow water or fell on a rocky bottom in deeper water, consist solely of scattered pottery fragments with no hull remains and are therefore not worthy of further investigation or excavation. The ninth wreck was described by local divers as containing copper metal (with the implication of a Bronze Age date). We dived with guarded optimism on the site, only to find a 19th century paddlewheel steamer with copper boiler tubing. This wreck was not cataloged.

The remaining eight wrecks, because of their proximity to shore (yet deep location) and burial in sediment (as protection against degradation by the marine environment), are potential excavation sites. They are listed in chronological order.°

1) A preclassical wreck located east of Bodrum on the north shore of the Ceramic Gulf (Kerme Korfesi) in 36 m. of water. A large pithos and krater (both intact) were found partially buried in sediment, and fragments of amphorae (including a reconstructed belly-handled example) were recovered from a nearby rock slope. A date of the 6th or 7th century B.C. is suggested by the pottery. The American Institute of Nautical Archaeology plans to excavate this wreck during the summer of 1974.

2) A Classical wreck carrying a cargo of Knidian amphorae lies at a depth of 36 m., along the coast north of the Greek island of Rhodes.

3) A Hellenistic wreck near Knidos (Triopium Peninsula) lies partly on rock, again at a depth of 36 m. The cargo of lamps and two-handled bowls indicates a date of the 2nd or 1st century B.C.

4) Another Hellenistic wreck near Knidos, located only a few hundred meters from number 3 (above) and at the same depth, carried a cargo of terracotta tiles, with some amphorae and cooking ware. It seems also to be of the 2nd or 1st century B.C.

5) A Roman wreck near Cape Gelidonya lies scattered down a partly sand-covered rock slope at depths of 40-44 m. The cargo consists of large plates and bowls which await precise dating.°

6) A Roman wreck off the north coast of the Ceramic Gulf, further east than number 1 (above). The cargo of Rhodian amphorae, and some traces of the hull, are exposed as a stratum outcropping along a sandy slope at a depth of 35 m. It probably dates from the 1st or 2nd century A.D.

7) A Byzantine wreck containing amphorae near Bozburun in the Gulf of Symi lies at a depth of 36 m., less than 10 m. from a precipitous rock shoreline. The hull is probably very well preserved in deep sand.

8) An undated wreck carrying a cargo of scrap glass, glass ingots, and some amphorae is located very near wreck number 2 (above), at a depth of 36 m. The pottery suggests a preliminary date of Late Byzantine or later.

The occurrence of most of the wrecks at depths of 35-36 m. is more than a statistical accident and is due again to the geomorphology of the coastline. These ships seem to have sunk as a result of collision with rocks along the shore (as opposed to their capsizing, burning, or sinking through naval action), and came to rest at the base of steep rock slopes on more gentle talus slopes. The upper depth limit of these characteristically Mediterranean talus slopes is partly controlled by the depth of wave base (the depth at which wave action ceases to stir sediment), and possibly also in part by depositional features formed during low sea level stands of the Pleistocene Epoch.

Except for the preclassical wreck, all of the above-

6. Photographs of artifacts from these wrecks are included in an article by George F. Bass to appear in *TurkAD*.  

7. This wreck, and a less well-preserved wreck nearby, were both visited in 1970 by Donald A. Frey during the course of a survey he conducted for the University Museum of the University of Pennsylvania.
noted have been looted to varying degrees. At one site on which we dived, an estimated 200 amphoras were visible only two years ago; now the surface of the site is denuded. It is apparent that the rapid increase in looting of underwater sites is linked to the increase in tourism to the area, both by foreign yachts and by charter boats from Bodrum and Marmaris. For this reason, exact locations of the wrecks discovered in this survey have been given only to the Turkish Department of Antiquities, and random checks of the coast are being made by Turkish Navy patrol boats.

One point of consolation is that many more wrecks must lie at depths presently beyond the technological capability of both looters and underwater archaeologists, and will remain untouched until the resources are available to properly excavate them.

John Gifford was born in Strasbourg, France in 1947. He received a B.S. in Geology in 1969 from the University of Massachusetts, Amherst, and an M.S. in Marine Science in 1973 from the University of Miami. Mr. Gifford has been engaged in various scientific diving projects for the past eight years, and is presently a Research Associate in Marine Science with the American Institute of Nautical Archaeology.