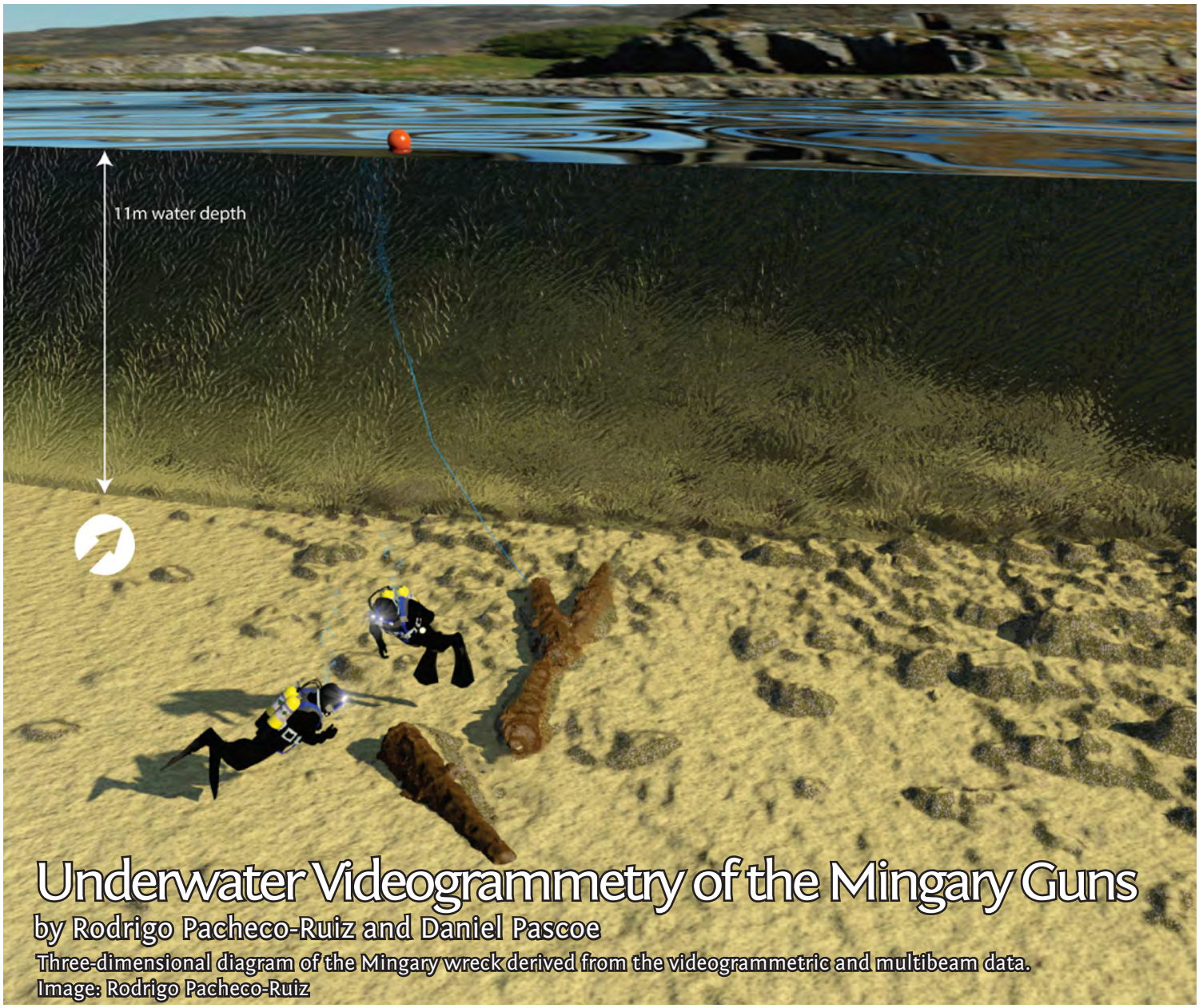
Nautical Archaeology

The Newsletter of Nautical Archaeology Society • Summer 2015

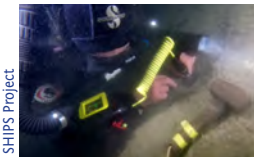


Underwater Videogrammetry of the Mingary Guns

by Rodrigo Pacheco-Ruiz and Daniel Pascoe

Three-dimensional diagram of the Mingary wreck derived from the videogrammetric and multibeam data. Image: Rodrigo Pacheco-Ruiz

A. J. Parker



SHIPS Project

Mergor in Mosam

Bill Jeffery

ARCHAEOLOGY TRAINING FORUM ATF Training Award Winner 2011

Nautical Archaeology Society

Guest Editorial

The guest editorial gives the opportunity to individuals invited by the Editor to express their opinions and expectations for the Society and nautical archaeology in general. This issue features:

Peter Marsden

Peter was a founder member of the Committee for Nautical Archaeology 50 years ago and subsequently of NAS, and was City of London archaeologist at the Guildhall Museum and the Museum of London. He obtained his PhD in maritime archaeology at Oxford University. He founded the Shipwreck Museum in Hastings, and has campaigned for nautical archaeology to become a fully integrated part of British archaeology.

I attended a reunion dinner at Oxford University on 25 March 2015 with a few members of the old Committee for Nautical Archaeology that was established 50 years ago. It was organised by David Blackman, an original member, and Damian Robinson who represented the new generation of archaeologists. The conversation, of course, covered our successful fight to gain recognition for our discipline by the passing of the Protection of Wrecks Act 1973, but we reflected on the need for fundamental improvements still necessary to bring nautical archaeology in line with archaeology on land.

During the 1960s and 1970s we encountered huge problems as rival groups of divers competed to salvage some wrecks, museums did not want to collect antiquities from wrecks because they were not part of local history, and the Receiver of Wreck insisted that valuable antiquities had to be sold under salvage law even if the finder wanted to give them to museums. Even on land wrecks could not be scheduled as they were classified as chattels – because ships were originally designed to move! Our discipline was the Cinderella of archaeology.

Much that is good has happened since then, especially in the founding of the Nautical Archaeology Society, and that English Heritage, now renamed Historic England, and the other national heritage bodies have become involved. The policy of Historic England to have a seamless transition for the care of sites on land to those underwater is entirely commendable.

But that is not happening. Serious problems are being highlighted by the Joint Nautical Archaeology Policy Committee, successor to the Committee for Nautical Archaeology. There are now too many laws and too many government departments involved causing muddle. The Protection of Wrecks Act 1973 only protects wrecks in the seabed, whereas the Ancient Monuments and Archaeological Areas Act 1979 is far superior as it can protect any type of site on land and in the seabed. In addition there is the Protection of Military Remains Act 1986 for ships that were sunk whilst in military service, and the Marine and Coastal Access Act 2009 that forbids any disturbance of the seabed except under licence.

Moreover, several government departments own historic 'wreck' and each has a different policy towards them. The Ministry of Defence (MoD) owns warships as early as the 15th century, the Department for Transport owns merchant ships that were sunk in both World Wars, and the Foreign and Commonwealth Office owns the cargoes of East Indiamen. Each of these has a history of mismanagement towards their property. I have a letter from a Secretary of State at the Foreign & Commonwealth Office, for example, saying that he did not want to claim former East India Company property recovered from a wreck in the Goodwin Sands so as to pass it to museums – because he did not want to upset the government of India!

The result is mismanagement, confusion and excuses. Even English Heritage has been caught up in the tangle when it recently decided not to recommend protecting the government-owned hospital ship *Anglia*, sunk of Folkestone in 1915 with the loss of at least 164 lives.

A bizarre reason given was that it did not qualify under the Planning (Listed Buildings and Conservation Areas) Act 1990. Of course not! The MoD also refused protection because, it said, the wreck had been sold for salvage – a status that did not stop the MoD protecting the SS *Storaa*, sunk in 1943 with far fewer dead. But even that decision was forced on the MoD when I and my colleagues took the MoD to Judicial Review in the High Court!

The ongoing case of HMS *Victory*, the warship that sank in the Channel in 1744, has opened up new realms of muddle. A salvage company negotiated a deal with the MOD that apparently allowed the wreck to be exploited commercially through the sale of its antiquities. When objections were raised the MOD backed off and gave the wreck to a new charitable trust that had insufficient funds to mount a full archaeological excavation. In turn the trust agreed a salvage plan with the same company. So, how will the excavation of the wreck be financed? And what would be the fate of the antiquities recovered?

There still is a false assumption by government bodies that museums have the funds and facilities to accept, conserve and exhibit finds from wrecks. But without a partnership between the government and charitable museums, perhaps by relieving their VAT charges, there is little to encourage them to acquire maritime antiquities.

The solution to all of this is actually rather simple – by following Historic England's policy of a seamless plan of care between sites on land with those under water. Firstly, the Protection of Wrecks Act 1973 should be repealed, leaving only the Ancient Monuments Act 1979 to care for all archaeological sites. And secondly, all wrecks of 'cultural importance', whether for their history or as war graves, should come under the Department of Culture Media and Sport and be managed by the national agencies with an over-arching policy of care.

From the bleak beginnings of 50 years ago we are still left with the basic values of British archaeology being compromised because the government has no clear policy that embraces maritime sites. Consequently, there is much basic work for the younger generations to sort out and carry forward from where our small group started long ago. ◆

Important NAS Announcement

After this Summer 2015 edition of *Nautical Archaeology* – The Newsletter of Nautical Archaeology Society, there will be three more printed editions: Autumn 2015, Winter 2016, and Spring 2016. From the summer of 2016, *Nautical Archaeology* will be migrating to an electronic-only format.

Members who currently receive a print version will instead receive a PDF of the newsletter by email. For most readers, this will mean no change to the current situation.

The shift is a response to changing readership patterns. Savings on printing and mailing costs will support the Society's financial position and enable it to pursue its charitable objectives in support of global Maritime Archaeology.

United Kingdom

Underwater Videogrammetry of the Mingary Guns

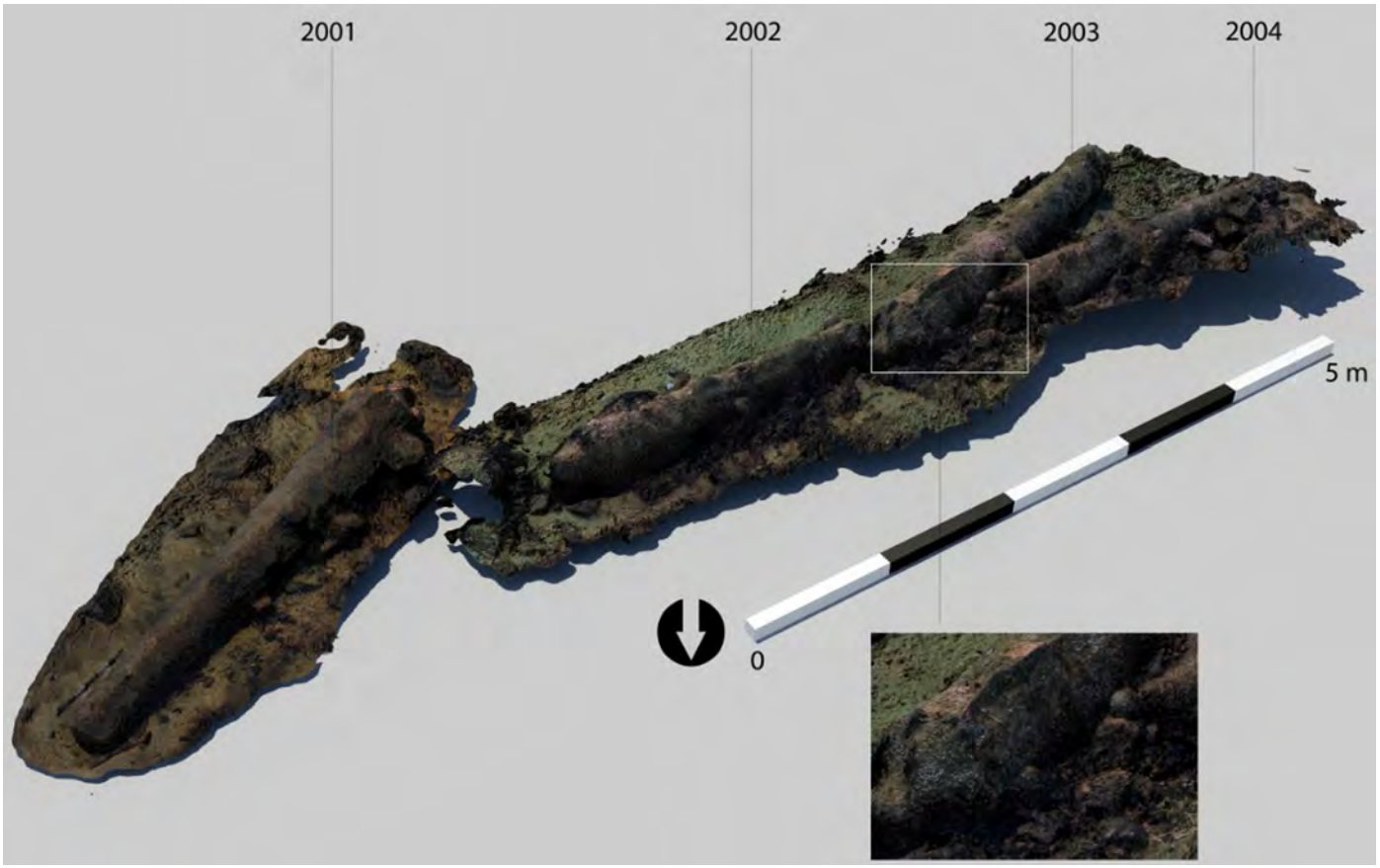
Rodrigo Pacheco-Ruiz and Daniel Pascoe

Rodrigo (PhD) is a research fellow at the Centre for Maritime Archaeology of the University of Southampton and his research is centred on developing new ways of recording and understanding underwater sites. Daniel is currently an independent maritime archaeologist and commercial diver with over 10 years of experience working in both the commercial and non-commercial sector. Here they present the application of underwater videogrammetry.

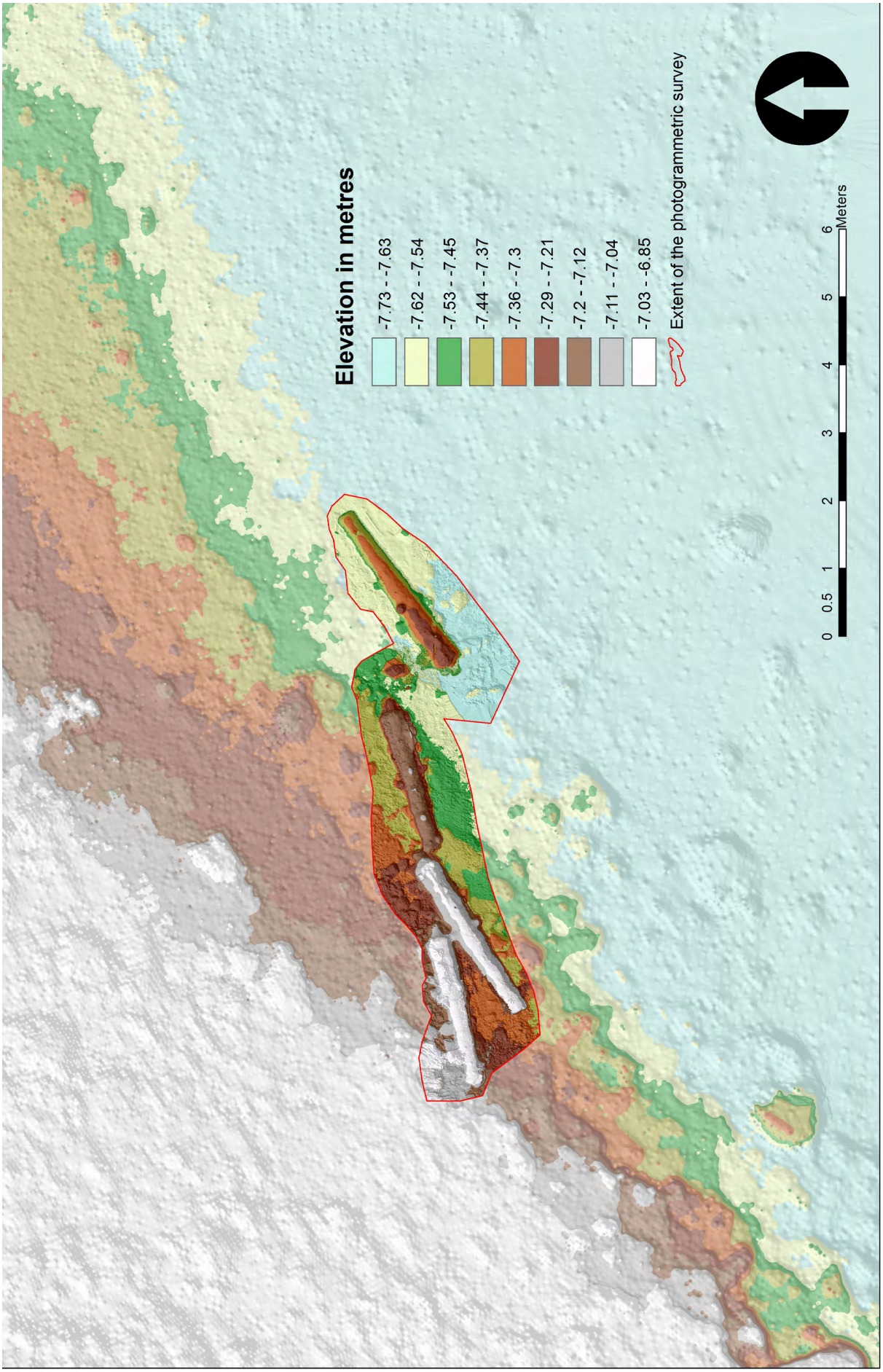
In December 2014 we were contracted by Cotswold Archaeology to form part of a team to undertake investigations on the three designated wrecks lost in the Sound of Mull. The work was carried out for Historic Scotland and formed part of the contract for Heritage Assessment in Relation to Marine Designation: Scottish, Welsh and Northern Irish Territorial Waters. The team from Cotswold Archaeology also included Mark James from MSDS Marine, Rodrigo Ortiz-Vazquez from the University of Southampton and Steve Webster.

With three wrecks to inspect in four days, time on each site was limited. To make the most of the time a rapid recording technique was therefore essential. Having previous success with underwater photogrammetry on the site of HMS *Invincible* we realised its potential for this task. Photogrammetry uses a collection of overlapping photographs taken from different angles to produce a three-dimensional representation of the recorded features (see *Nautical Archaeology* Winter 2013, p. 11).

Tackling our issues of time constraints required an even quicker and efficient method of capturing data without losing quality. We decided, therefore, to use a GoPro



Three-dimensional model of four of the Mingary guns produced from the results of the videogrammetric data. Image: Historic Scotland and Cotswold Archaeology



Plan of the Mingary site with the integration of the videogrammetric survey and multibeam data. Image: Historic Scotland and Cotswold Archaeology

Hero 3 Plus to capture constant HD video footage of selected features. This footage is then processed using a series of software packages that extract the relevant data to produce a 3D model. The site, known as the Mingary wreck, was chosen to test this method. It is a relatively small site with the known visible remains consisting of a group of four iron guns and another isolated gun within a few metres. The wreck is believed to be the remains of a 17th century vessel.

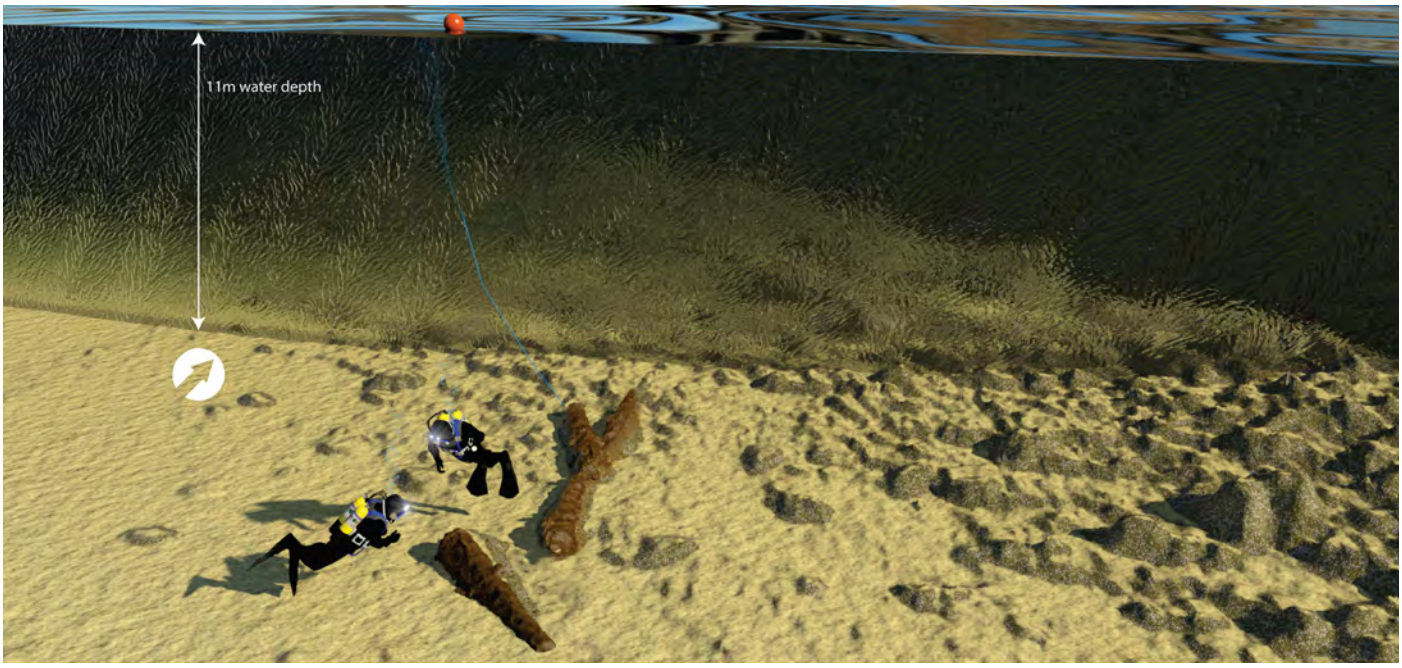
Due to previous surveys based on traditional tape measurements—carried out by Wessex Archaeology in 2007—our results could be compared with these to determine levels of accuracy between the two methods. Two dives were required to carry out the survey. The first pair of divers had the task of removing kelp from the guns.

From previous trials on HMS *Invincible* (see *Nautical Archaeology* Winter 2013, p. 11) and on HMS *Colossus* by archaeologist Kevin Camidge, it was known that the motion of marine growth would hinder the results of the processing. The second pair of divers carried out the actual survey. This involved swimming with the camera over and around the guns at a close range to obtain the highest resolution possible.

Following the dive, post-processing was conducted back at the project base at the Lochaline dive centre and a 3D model was left to process overnight. The results demonstrated that this rapid survey method had a mean difference of less than 3cm, compared against previous tape measure surveys. Considering that the guns were heavily concreted, and the inaccuracies that can stem from measurements taken from such objects, then the differences between the surveys are within accepted tolerances. The 3D model was also geo-rectified with 2003 multibeam data. This enabled the precise positioning of the guns as well as demonstrating the accuracy of the survey.

The advantage of videogrammetry compared to traditional techniques is that it will not only produce an accurate representation in a short time but it will also add volume and texture. The advantage of videogrammetry over photogrammetry is that it is an even quicker technique of collecting data, yielding a much larger data set, from which to choose the overlapping frames. The videogrammetry survey of the Mingary guns demonstrated just how useful this survey technique is for making a rapid yet accurate record of a site in a short period of time.

We would like to thank the warm hospitality and assistance of Mark and Annabel Lawrence and Alan Livingstone of the Lochaline Dive Centre and Philip Robertson of Historic Scotland. ◆



Three-dimensional diagram of the Mingary wreck derived from the videogrammetric and multibeam data. Image: Rodrigo Pacheco-Ruiz

QUARTERDECK

Dr A. J. 'Toby' Parker is interviewed by Panagiota Markoulaki

Toby was for nearly 30 years on the academic staff of Bristol University, where he taught Latin and several kinds of Archaeology to undergraduate, postgraduate and extra-mural students. He organised or took part in nearly a dozen underwater expeditions as well as running the Classics Department's training excavation, spoke about marine archaeology at Dartington Hall, Fort Bovisand and numerous universities and diving clubs. He has recently retired as Advisory Editor of IJNA, *a position he held almost from the Journal's start.*

What drives you in nautical archaeology?

At first – 50 years ago – it was an obvious specialism within Classical Archaeology which offered great openings for research. I soon realised that I had the background and opportunities to get a grip on the vast amount of information, whether shipwrecks or loose finds, which was beginning to overwhelm the ability of scholars to understand it: hence my index of Ancient Mediterranean Shipwrecks (1992, BAR International Series 580, Archaeopress) and my fieldwork focused on wrecks in shallow water. I was inspired by some wonderful pioneers, especially Peter Throckmorton, Gerhard Kapitän and Elisha Linder, and fortunate in being helped by some terrific friends and colleagues, of whom I can mention David Blackman and Bob Yorke.

Being a typical Gemini butterfly, I was diverted from time to time into other subjects, not excluding a futile attempt to answer the ancient historians' demand to know the 'cash value' of collating ancient shipwrecks; nonetheless, I was keen to advance the discipline academically, and so set up an MA degree in Maritime Archaeology and History at Bristol, which survives in a rather reduced form. I became fascinated by the challenge of applying the ideas of landscape archaeology to the sea, and was beginning to develop this when, in 2002, I had to retire. Since then I have been able to do little serious academic work, though I am committed to a long-term study of historic Bristol, in which both marine and riverine shipping play an essential role.

How did you get into nautical archaeology?

Having grown up in Portsmouth, I was familiar with boats, ships and the sea, but I did not make the connexion with classical archaeology until 1966, when I was just beginning research at Oxford into Roman amphoras and other material culture as evidenced in Spain, when I came across the work of Nino Lamboglia, including his pioneering exploration of shipwrecks off Liguria. Shortly afterwards, Joan du Plat Taylor came to give a lecture to the Archaeological Society, and I went up to her and said what I was doing, and that I would like to be more involved with underwater exploration; the rest is pretty much history! Of course, there were many other reasons for sticking with the nautical specialisation, not least the friendship and example of the much-regretted Keith Muckelroy and the extraordinary achievement of the late Eric McKee, as well as the inspirational thinking of others still with us, such as Nic Flemming, George Bass, Cheryl Ward, Christer Westerdahl and André Tchernia.

You have been actively involved with the NAS since its early days, where did your involvement originate, and where does it stand today?

Well, some years before the Society, in fact! I was never a member of the Society for Nautical Research, but Joan had stimulated a breakaway group called the Committee for Nautical Archaeology which met at the Institute of Archaeology, and she 'invited' me to join. I recall a meeting, in 1968/9, when I had come down from Newcastle upon Tyne (where I had a temporary lectureship); Joan said that the committee had no funds, and that all present were to put £5 on the table. Five pounds was a lot of

money to me in those days, and I can still remember the feeling as I parted with my last note for the cause! Anyway, the Committee turned into the Council, the Council spawned the Trust and then morphed as the Society, with which the Trust was eventually merged. The Society was the brainchild of Alexander Flinder, who was experienced at heading up the British Sub-Aqua Club and other bodies, and his chairmanship was critical to getting the Society going; when he stepped down, he briefed me on how to chair the Society, and so I served my term. I don't suppose much of importance occurred during that period, but, thanks to the energetic initiative of Martin Dean, we managed to turn the Society away from a negativistic condemnation of looting and treasure-hunting in favour of a positive statement of principles and a focus on educating both divers and public. I suppose things are different today, at least in Britain, thanks to the benevolent management by the heritage agencies of the regulatory provisions now in place: but I doubt it can ever get as exciting as those times in the sixties when competing dive-teams jostled and even drew their knives over a site in Scilly!

What is your current research?

Apart from the project on a Bristol parish which I mentioned, I hope to write up the extraordinary boat of unknown, perhaps recent, date found at Grange Pill, Wollaston, on the western bank of the Severn in Gloucestershire, and perhaps expand on some details of wrecks we investigated in Sicily.

Which of your numerous past underwater archaeological investigations has remained in your memory as the most challenging/exciting?

The most exciting was the first one, without a doubt! In 1968 a five-male team from Oxford spent two months diving off a rocky headland near Siracusa. One day, a fisherman called by with a hook embedded in his hand; our Medical Officer, Richard Marsh (then a first-year medical student) cut the hook free using a scalpel and our medicinal whisky, and, in gratitude, the fisherman told us where there was 'a mountain of amphoras'. It was in quite shallow water, not very far from a mostly deserted shore known as Terrauzza, and careful analysis of the almost entirely shattered sherds revealed a cargo of little-known Greek amphoras of the Roman period, which we were able to publish in the third volume of *IJNA* (1974). There have been many challenges, but the most intractable was certainly getting a date for the Grange Pill boat: we had a complete storehouse full of wet wood, oak with some elm, yet the combined forces of dendrochronology, radiocarbon dating, and even intertidal stratigraphy, completely failed to come up with a reasonable answer.

What advice would you give to aspiring maritime archaeologists?

Don't aspire to be any kind of archaeological specialist! Seize opportunities as they appear, and hitch your wagon to a star if you can, but remain an archaeologist. Above all, try not to think of the term 'Maritime (or Nautical, or Underwater) Archaeologist' as a job-description or as the letters on your brass plate: to be an archaeologist is a way of thinking, of living, of being, and is not a skill-set to be acquired off the shelf. If you have the good fortune to join a research project, as well as mastering how to start engines, etc., do study the background of the period or region you are involved with, and mug up as much as possible the pottery, etc., you are likely to find.

Where does the subject and/or the Society stand today and where should it be heading?

Robots are the solution, whether actually or potentially, to most fieldwork difficulties, and the Society must obviously be as technically advanced as possible. The explosion of underwater discoveries in the Far East demands that the Society works hard to get the Handbook and the training courses taken up as widely as possible, and to try to make them as inspiring as possible, and adapted to every region's needs.

The Society needs to retain control of editorial standards in *IJNA*, while considering whether to join forces with other societies in order to have a viable core membership. Ultimately we have to get completely clear of the Cousteau legacy or the treasure galleon maps, and achieve a wider public understanding of the intellectual force of archaeology in the 21st century. ◆

United Kingdom

The *A7* Project

Peter Holt

NAS regional co-ordinator Peter is based in Plymouth where he currently runs maritime archaeology projects for ProMare UK. Peter has worked on archaeology projects since 1989, whilst in 1998 he started 3H Consulting Ltd. He is a visiting research fellow at the University of Plymouth. Here he presents the A7 Project.

The *A7* Project is an investigation by the SHIPS Project of the early Royal Navy submarine HMS/M *A7* lost with all hands during a training exercise in Whitsand Bay, Cornwall, on 16th January 1914. The *A7* Project started in October 2013 with a proposal to the Ministry of Defence (MoD) to undertake an archaeological investigation of the submarine; the *A7* is a controlled site under the Protection of Military Remains Act 1986 and unauthorised access to the site is prohibited. The project proposal was accepted by the MoD and the first-ever license to visit a controlled site was issued to the SHIPS Project for a two-month fieldwork in the summer of 2014.

As with many projects the work started with an archives search. This research produced a detailed narrative on the origins and development of the Royal Navy A-class submarines of which *A7* is one of the 13 built, and collated information about the last crew of the *A7*. The A class were developed rapidly and in secret by a Royal Navy officer with no previous experience in submarines, yet what was produced was the forerunner of the British submarines that fought in World War I.

Measuring the hull plating thickness with a UT gauge. Image: SHIPS Project

The story of the loss of *A7* was pieced together from a diverse collection of sources. Once the submarine sank, it was lost to the salvage team for a week, and was finally found with its stern deeply buried in the seabed 300 metres from where she was last seen on the surface. Attempts to free the hull from the seabed failed, so a funeral service was held over the site for the crew within and the wreck was then forgotten. It was relocated in 1972 when it snagged on fishing nets, but it was not visited by divers until 1981. On that first dive the brass compass binnacle was raised from the seabed leading to the eventual designation of the site.

The next step in the project was to undertake an assessment of the site. The wreck lies about 37 metres deep in Whitsand Bay, 4 kilometres to the south-west of the well-known wreck of the *James Eagan Layne*. At the start of the project the condition of the A7 was unknown as it had not been seen by divers since 2002. With the help of Plymouth University the site was relocated using side scan sonar and an initial assessment showed that it was still upright, intact, and buried up to its waterline afloat. The work continued as an MSc Hydrography project including a debris-field survey using high-resolution side scan sonar and the creation of a detailed 3D model using multibeam sonar.

Once the site was mapped by remote sensing, a detailed condition assessment of the remains was completed, including ultrasonic

Virtual reality model of the *A7* in Wembury dock.
Image: HITT, University of Birmingham

hull thickness measurements used to investigate corrosion of the hull. The visibility on site is 3-4 metres at best, so the methods used for recording had to be simple and efficient. No plans for this submarine could be found, so the way in which this submarine was constructed and operated was a mystery. The remains of the *A7* are still largely intact so drawings of the earlier A class boats were used as the starting point for the site plan. Detail differences were recorded using a combination of video, photographs, and measured sketches. All of the external features were recorded in enough detail to create new engineering drawings for this submarine.

A marine biology survey of the wreck was completed first by Allen Murray and Dr Keith Hiscock before some of the marine life was evicted in order for the features on the submarine to be recorded. An ultrasonic thickness survey of the hull was done as part of the requirements for the license from the MoD. This involved removing a small area of concretion from the hull then using an ultrasonic gauge to measure the thickness of the remaining steel plating. Previous work had highlighted difficulties in making hull thickness measurements so a Cygnus DIVE II UT gauge was obtained for the project allowing experiments to be done to determine the best method. The experiments showed that using a different measurement method gave better results on corroded hulls.

Steve Fletcher and the conning tower backlit with an Orcalight. Image: SHIPS Project

The story of this forgotten submarine has since been the subject of media attention, international conferences, social media, and publications, while the relatives of the lost crew were also involved. Virtual Reality models of the submarine afloat and as a wreck on the seabed have been created by the HIT Team at the University of Birmingham used for training divers and to bring this hidden heritage to the public in a simple but dramatic way. The documentary research and the results of the condition assessment were used to formulate a new theory about why the submarine was lost. The submarine was found to be largely intact on the seabed with no obvious cause for its sinking, but the research suggested that the loss was caused by a combination of factors during an uncontrolled dive; The A class boats often suffered uncontrolled dives during training.

The *A7* Project is now complete, but further work may be done on the site if permission is granted: this will include monitoring any preservation changes, further corrosion studies, and more detailed recording of more features of the submarine. The project report has been published by Archaeopress (BAR British Series 613), while the project's website (www.promare.co.uk/a7project) includes some of the source material used for research, links to other sources, photographs and site plans. It is hoped that the considerable amount that has been learned during the study of this small submarine can now be applied to future projects on similar sites. A digital archive of material has been created about the life and loss of this submarine which can now be shared publicly with a number of organisations and institutions. ◆

Netherlands

In Search of a Roman Bridge

Joost van den Besselaar and Peter Seinen

Peter and Joost are on the board of the foundation Mergor in Mosam, which is involved in all kinds of underwater archaeological and paleontological projects (www.mergorinmosam.nl). Here they report their work at Venlo, Netherlands.

The Dutch city of Venlo on the east bank of the river Meuse has an archaeologically well-recorded Roman settlement (see Hupperetz, W. M. H. 2009, De Romeinse bewoning in de binnenstad Venlo, *De Maasgouw* 112: 205-210), sometimes identified as Sablones. During archaeological digs on the west bank of the river in 2008 and 2010 (see Dolmans, M. 2009, Een Romeinse weg in Venlo, *Westerheem* 58: 210-212), parts of a Roman road were revealed, which ran straight towards the centre of this settlement. It was very tempting to assume that some kind of river crossing would have existed, possibly a bridge.

Back in the 19th century, during the construction of the railroad bridge nearby, pointed oak piles equipped with iron pile shoes were found. Although not dated, these piles were suspected to be of Roman origin, possibly a harbour or bridge. In 2010, on request of the town archaeologist Maarten Dolmans, the foundation Mergor in Mosam organised a survey to trace possible remains of a Roman bridge.

The project started with a multi beam sonar survey, which revealed structures that might have been remains of bridge foundations. All structures were checked out by professional divers, but most structures turned out to be modern waste. The discovery of stone blocks that showed tool marks as well as remains of iron clamps fixed with molten lead, at first caused some excitement until they were identified as the remains of the 19th century railroad bridge, which was heavily damaged in the aftermath of World War II.

The excitement was sparked off again by the discovery of a large squared and pointed oak pile with traces of the mounting of an iron pile shoe, very similar to the foundation piles discovered at a Roman bridge at Cuijk. This somewhat eroded pile was fortunately fit for dendrochronology dating, which, however, provided a rather disappointing date of 1574-1590 AD. Although not what we hoped for, the pile is part of the rich history of Venlo. The dating would fit rather well with the famous siege of Venlo by the duke of Parma, during the Dutch rebellion against the Spanish rulers (known as the “80 years war”). A contemporary etching of this siege shows the employment of a boat bridge, which would have required a solid pile foundation to keep it in place. Although definitively not a Roman bridge, it might be a part of a Spanish one. ◆

The over 2.4 metres long, squared and pointed, oak pile. Image: Mergor in Mosam

Samoa

NAS Intro and the Small Island Developing States (SIDS) Conference

Bill Jeffery

Bill has been a maritime archaeologist for over 30 years. He holds a PhD in maritime archaeology (James Cook University) and is a consulting maritime archaeologist to ERM Hong Kong, and Research Associate at the Hong Kong Maritime Museum. He is teaching NAS training programs in 10 different countries, one of which courses has recently taken place during the SIDS Conference in Samoa, about which he reports here.

On 1 September 2014, I conducted a NAS Introduction course in Apia, Samoa. The timing coincided with one of the biggest talkfests in the Pacific: the Third International Conference on Small Island Developing States (SIDS). Over 40 countries are members of SIDS, essentially small island nations, of which many are low-lying coralline islands and some of the most scenic marine places. The aim of the conference was to focus the world's attention on pressing issues of this group of countries, such as population increase, limited natural resources, and climate change. The conference that ran from 1-4 September was a huge event with over 4,000 delegates; the United Nations and UNESCO played an important role in organising and running the conference.

Many parallel events took place; one such event was a day-long seminar titled 'Researching, Protecting and Managing Underwater Cultural Heritage in Small Island Developing States'. This event was attended by maritime archaeologists, representatives of UNESCO and various government representatives, with the aims being: 1) to share the latest developments on Underwater Cultural Heritage management and potentials for sustainable development in SIDS; 2) to increase SIDS ratification of the legal protection of the cultural heritage of these countries, especially through the ratification of the 2001 Underwater Cultural Heritage Convention; 3) to prepare a strategy for the post SIDS Conference period.

It was a stimulating collection of presentations and the discussion that followed helped to plan a way forward for Samoa and other island nations in the Pacific to implement underwater cultural heritage activities. A prelude to this event was the implementation of the NAS Introduction course. Attended by 18 young Samoans, local dive-shop owners, and a lecturer and students of the National University of Samoa, the course proved to be a big hit and appeared to open up a door for future diving, research and study opportunities. Of particular interest was the combination of the Underwater Cultural Heritage and UNESCO's Intangible Cultural Heritage.

The participants of the NAS Introduction Course in Apia, Samoa. Image: Bill Jeffery

After the course, we snorkelled a large blue hole and the surrounding reef and saw first-hand examples of the coral bleaching that is taking place in the Pacific. An added bonus was a visit to Robert Louis Stevenson's house, which is now a museum. The author of *Treasure Island* and other great classics lived with his family in Samoa for the last four years of his life (1890-1894). ◆

United Kingdom

Underwater Cultural Heritage and NAS Part III in Plymouth

Brian Minehane

Brian completed his NAS Part IV in February 2015 and is now leading the NAS Executive Committee membership sub-group. He plans to continue with NAS Part III courses, while he has some projects planned for 2015. Here he reports on a NAS course on Law of Underwater Cultural Heritage.

"The law seems like a sort of maze through which a client must be led to safety, a collection of reefs, rocks and underwater hazards through which he or she must be piloted" so spoke John Mortimer, the English novelist, barrister, and dramatist in his 1982 memoirs entitled *Clinging to the Wreckage* (London, Weidenfeld & Nicolson).

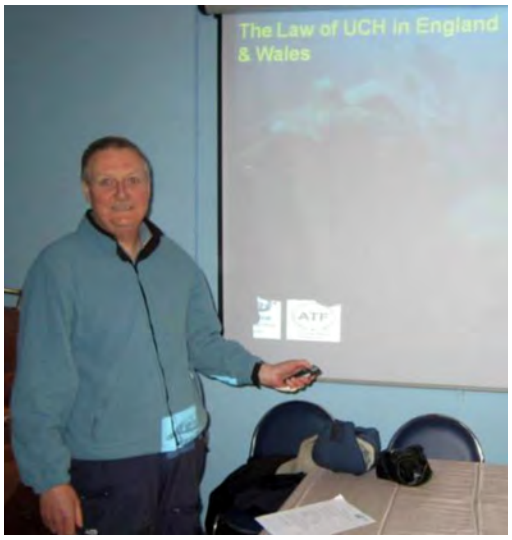
Well, a more apt phrase could not be applied to the first ever NAS Part 3 course on the Law of Underwater Cultural Heritage (UCH) in England and Wales. Our pilot for the day was NAS secretary Mike Williams and an eager bunch of attendees in ProMare's offices in Plymouth.

While archaeology may view the Law Codes of Hammurabi (1792-50 BCE) and King John's Magna Carta (1215) as the defining works which set legal precedent, the modern equivalent for the maritime archaeologist is the 2001 Convention on the Protection of the UCH.

Under Mike's keen legal mind we were led through jurisdiction and sources of law, the definition and extent of maritime jurisdictional zones, e.g. Territorial waters to the Exclusive Economic Zone (EEZ), and on to the United Nations Convention on the Law of the Sea (UNCLOS). This introduction was judiciously followed by Common, Admiralty, Statute and Customary International Law as well as Acts of parliament and secondary legislation, while Literal, Golden and Mischief rules followed.

The Merchant Shipping Act of 1995 led us on to Flotsam, Jetsam, Lagan and Derelict kinds of shipwrecks, when we all discovered that we are not actually wreck divers but derelict divers – or more precisely, divers of derelicts. Further cases include the *Lusitania*, SS *Tubantia*, HMS *Bounty* and the Jutland wrecks swiftly followed by the 'uncertainties' and 'interpretations' within law and the Ancient Monuments and Archaeological Areas Act of 1979.

Fully refreshed after lunch and eager for more, we entered the domain of licenses and consents, littoral (not literal) zones and rules for removing and/or depositing objects, including shot lines, on derelicts. At this stage American Chief justice Earl Warren's words "In civilised life, law floats in a sea of ethics" came to mind. An absolutely interesting and necessary course for any maritime or foreshore archaeologist, and others, who wish to participate in projects or activities that may encounter UCH in and around the sea. ◆



Our legal pilot - NAS Secretary Mike Williams. Image: Brian Minehane

NAS Training & Announcements 2015

NAS Part III

Coracle Building • Dorset • 11–12 July • £137/£130 (Non-members/ Members)

Environmental Archaeology • Fort Cumberland • 19–20 Sept • £137/£130 (Non-members/ Members)

Advanced Geophysics • Plymouth • 17–18 Oct • £105/£100 (Non-members/ Members)

Research using original documentation at the National Archives • London • 28 Nov • £53/£50 (Non-members/ Members)

The full list of courses can be found on the NAS website.

FOR MORE INFORMATION OR BOOKINGS CONTACT THE NAS HEAD OFFICE:

Telephone: + 44 (0) 23 9281 8419 or email: nas@nauticalarchaeologysociety.org

NAS ELearning

The NAS ELearning programme currently offers the NAS Introduction and Part I Theory courses. Here you can learn the theory aspects from these two courses from the comfort of your own home and then have fun learning the practical elements on a Fieldschool weekend of your choice.

Contact the NAS Office for more details or visit our website: http://www.nauticalarchaeologysociety.org/content/online-courses

Congratulations to the following for successfully completing their NAS Part II Reports

Esther Unterweger

for the Report: 'Survey of World War II Beetles at Dibden Bay, Hythe'

and

Julia Earle

for the Report: 'Survey of Prehistoric Cache Pits at Samels Farm'.

Congratulations to

Esther Unterweger

for also completing the NAS Part III Certification

Did you know that the NAS has its own diving club? The Nautical Archaeology Sub-Aqua Club (NASAC) is run by NAS members for NAS members.

The purpose of the club is to provide project-based diving opportunities for NAS members. The club operates as a branch of the Sub–Aqua Association (SAA Branch 1127) and welcomes divers from all the training agencies. The club does not teach diving, but aims at developing NAS members' diving and archaeological skills through involvement in specific projects.

Several club members are licensees of Protected Wreck sites, including HMS *Invincible* (1758) and the Norman's Bay Wreck (probably 1690) providing great project opportunities.
Guest divers with archaeological interests are welcome to join in club activities. The club meets at Fort Cumberland on the first Thursday every month – often followed by a curry.

Website: http://www.nasac.org.uk/ **Contact the club: club@nauticalarchaeologysociety.org**

For Contributors

The editor is seeking stories and notes for inclusion in *Nautical Archaeology*. Stories should not exceed 700 words and should include at least two images in JPEG format at 300dpi attached separately from the text document along with caption and copyright details. Authors must also include a short biography and a profile picture. Please send your contributions to nmarkoulaki@yahoo.com or visit http://www.nauticalarchaeologysociety.org/content/newsletter

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