Report

BSAC Regional Expedition Diving Scheme

Croatia 2009

Author: Andy Seddon
Jane Maddocks
Owner: Andy Seddon
BSAC West Midlands Coaching Scheme

Document History

Document Location

This is a snapshot of an on-line document. Paper copies are valid only on the day they are printed. Refer to the author if you are in any doubt about the currency of this document.

The source of the document will be found in C:\Documents and Settings\Administrator\My Documents\BSAC REDS\croatia report 2009 V1.doc

Revision History

Date of this revision: 22/06/2010	Date of next revision: when required

Revision Number	Revision Date	Summary of Changes	Changes marked
	N/A	Initial Release	(N)

Acknowledgements

I would like to thank everyone who has taken part in the expedition giving up time and money to ensure it happened.

Many thanks to the Trustees of the British Sub-Aqua Jubilee Trust for the grant to meet transportation costs.

Thanks to Jane who filled me in on the more detailed nature of navigation and sailing season of the roman period as well as being able to look at a small rock and tell you it's really a handle from a pot!

A special thanks to Steve and Jan Collett at Dupin Dive Centre who sorted out accommodation, ferried people around, filled tanks and saw the funny side of the expedition when things didn't go as we expected.

Contents

1. Introduction

As part of the West Midlands REDS a team of eleven divers went out to the Island of Korcula in Croatia working with Dupin Dive Centre a BS-AC Premier School on the island.

The aim of the expedition was to;

> *"Survey the St Ivan Roman wreck site, and produce a simple photo mosaic of the debris field and expand the measurement carried out in 2007"*

Reaching Croatia, the situation changed, the Croatian Cultural Ministry, which heads up the Archaeology Department, had decided to change the classification on the wreck and halted all diving. Steve and our local Korculan Archaeologist petitioned for the Dive Centre via the Tourist Ministry, which issues dive centre permits, to be allowed to dive the site again. The Dubrovnic Area Archaeologist said that we still could possibly dive as they were uncertain of the status, as the Tourist Ministry had not recieved the change.

Since this was an authorised expedition via BSAC REDS I decided that we needed to use out fallback plans.

Our local Korculan Archaeologist gave us two sites that she saw of interest and wanted more information on to expand her knowledge

1. The first location was the South Side of the Island of Otocic Majsan. The island is on the Strategic entrance to the Pejeliac Channel and has a ruin on it dating from the roman period, known locally as the roman villa. Her thought was that it was used for another purpose and wanted an idea of what was in the bay.

2. This location Steve, from Dupin Diving, also knew about. In one of the bays on the east of the main island there were large number of pottery close together, his observations had shown that the site was being disturbed.

The expedition also provided training opportunities for members about diving with a purpose, basic surveying and learning about how archaeologists work.

2. Team

The final team consisted of

- Andy Seddon
- Mark Callaghan (Video)
- Steve Hodgkins
- Morris McSkimming
- Jane Maddocks (Archeologist)
- Sarah Jepson
- Gary Stroud (Equipment)
- Jim Mills (Photo)
- Dave Warren (Photo)
- Simon Pilsworth
- Ian Clarke
- Dupin Dive Centre

Overall the team worked well together but became frustrated at the news that they couldn't dive the original site.

The luxury of the additional day by the overland team would have menat that a more effective plan could have been created. Even with a plan B the weather meant that we had to dive other sites not originally covered.

We also managed to give divers rebreather taster sessions in the evening out in the bay by the dive centre for those who were interested.

One team member, Ian Clarke, has also take his interest from the expedition a stage further and taken the NAS Foreshore Course.

The team spent a total of 29 hours underwater averaging 2.6 hours each although the rebreather divers did stay longer in some cases.

3. History

This area of Croatia is particularly rich in maritime archaeology in the form of sunken vessels from the third millennium BC (Bass 1974:16) to the development of steam driven vessels in the mid 1800s AD.

The research into trade and seafaring in the Mediterranean and Adriatic has led to a large amount of archaeological investigations and serious scholarly work; see for example Forenbaher, 2009; Whallon 2007 and Gaffney 2006. Jurisic's work on ancient shipwreck sites of the Adriatic explores trade routes along the Adriatic coast using the evidence from 1st and 2nd century BC shipwrecks. The known vessels are catalogued and the material carried by the vessels is discussed. These include trade goods, personal possessions and ship's equipment. Analysis of the pottery suggests that most of the remains come from a range of sites including the Aegean, Hispania, Italy and Africa.

The wide ranging sources Jurisic (2000) identifies for the cargoes, ships fittings and possessions could be interpreted as evidence for a coast-hopping trade in which ships would sail in an anti-clockwise direction along the northern coasts, before coming back along the African coast. The traders would also have access to goods from much further afield that had been brought by stages to the shores of the Mediterranean before being loaded on to ships for trade further down the coast (Casson 1991:22). The variety of sources for trade materials means that any assessment and characterisation of the archaeological material will need to use the expertise of many people. The international trade was a product of the advantages and disadvantages of sailing in the Mediterranean from the third millennium BC onwards.

Early seaborne trade and sailing in the Mediterranean Sea from the Straits of Gibraltar in the west to Palestine and Antioch in the east was both seasonal and dependent on the known pattern of winds. The early sailing ships were able to sail fast downwind, but could not get close to the wind to sail back against it. This lack of mobility, which became critical in shifting winds and a lee shore, has led to a lot of wrecked sailing vessels, only some of which have been located.

A further complication was that for the winter (October to April) the Mediterranean was closed to sailing ships because the conditions were just too dangerous. Trade may well have continued overland but that trade was not the concern of our group. Again, some ship owners or masters may have pushed the weather window just a little too far, and lost the ship with its cargo, or been forced to throw cargo, personal possessions and anything weighty, overboard in an attempt to save the ship.

The known wrecks on the Croatian coastline (also known as Illyria in historical writings) are just a fraction of the vessels that would have foundered. The Croatian government are aware of the importance of their maritime heritage and are keen to protect it: they operate a no-dive policy on some of their historic wrecks. Certainly the wreck we had been intending to survey was made a no dive area just before we went out. It would have been useful for us to have surveyed the wreck mound because we could have recorded the extant remains as a benchmark against which the Croatian heritage authorities could have monitored any deterioration in her condition. They would also have had quantifiable evidence to use if they needed to prove the wreck was under

threat. However, the area of the wreck is well protected, with an observation post just above it.

4. Dive Sites

Figure 1 - View of Korcula, Eastern End of the Island

With the main dive site unavailable to the team the discussions then started on where with our local contacts on where we would dive to provide the best information to our local archaeologist.

This could be done through photography and video, keeping the tasks and dives very simple. From this we could highlight areas of interest

The site that proved most interesting from a historical point of view were

- Otocic Majsan
- U. Przina

The weather also came into play meaning that after day 1 on Otocic Majsan alternate dave site were needed in sheltered conditions

4.1 Otocic Majsan

Figure 2 - Island of Otocic Majsa (Circled)

Our local archaeologist has been interested in the island for a number of years and explained to us that it had been inhabited in the roman period.

Her theory was that the island was not a Roman Villa, as it is known locally, but another building that provided some sort of service to vessels moving through this stretch of water.

The team divided into two with Sarah, Steve and Morris heading for the anchor in 35 metres to locate it for the second survey dive.and surveyed using tapes and boards, details on video.

The rest of the team carried out an hours dive in 12 to 15 metres of water on the pottery field to understand the area and work out a plan for the second dive, see Figure 3 - Site Location.

Back at shore Jane went through basic surveying with some of the team members who needed updating on those skills.

At the dive site the team laid out a 60 metre datum using two 30 metre tapes (Figure 4 - Laying out Survey tapes and Figure 5 - Lnking Two Tapes) along the apparent main debris field.

This mainly ran along a south west to north east orientation; see Figure 6 - Layout for quick survey.

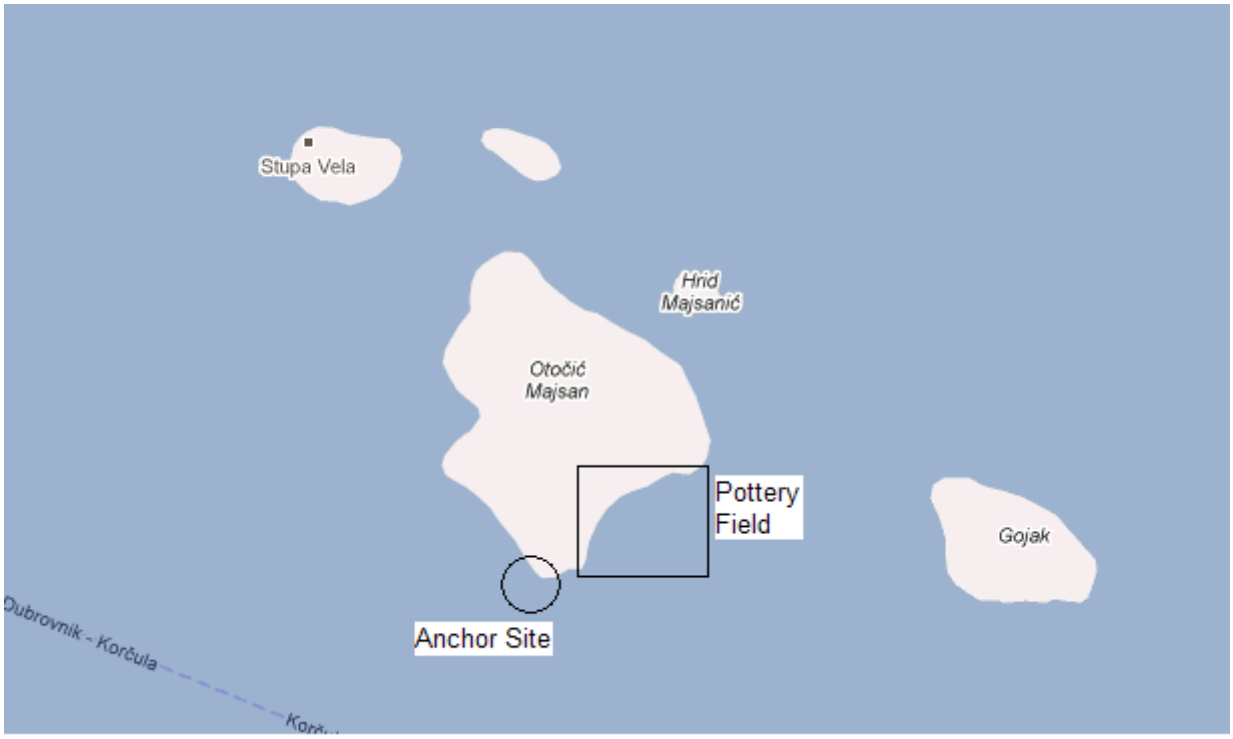

Figure 3 - Site Location

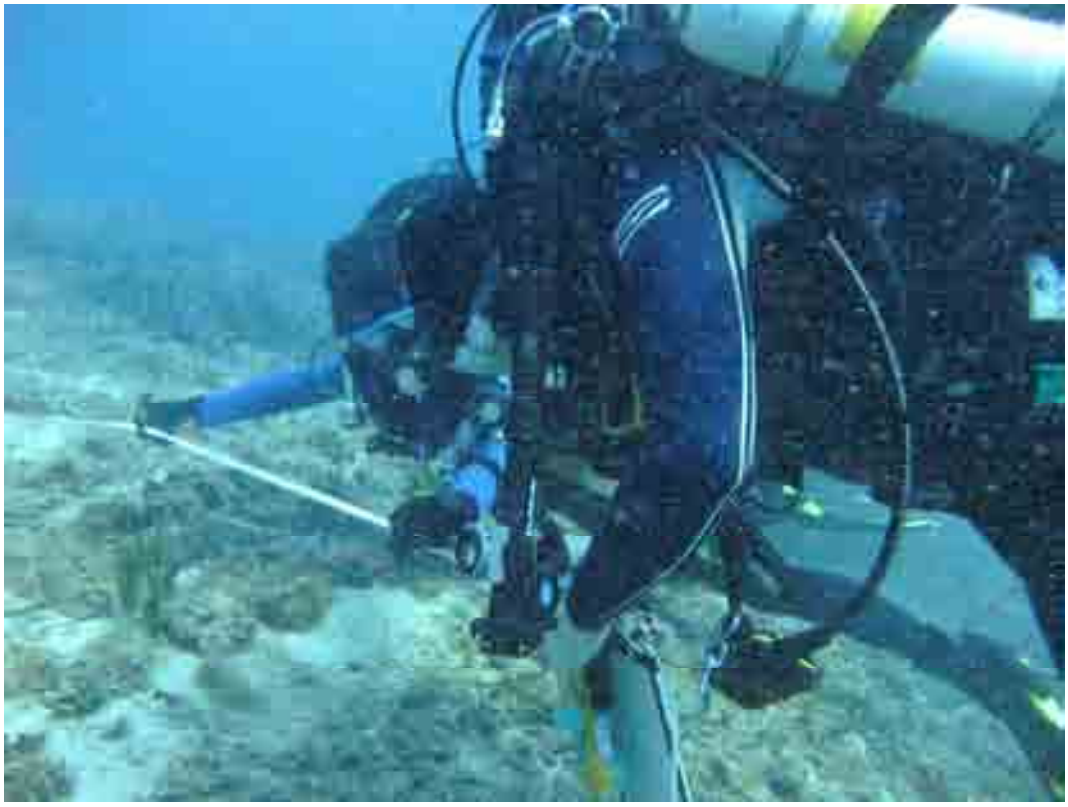

Figure 4 - Laying out Survey tapes

Figure 5 - Lnking Two Tapes

Figure 7 - Anchor Survey

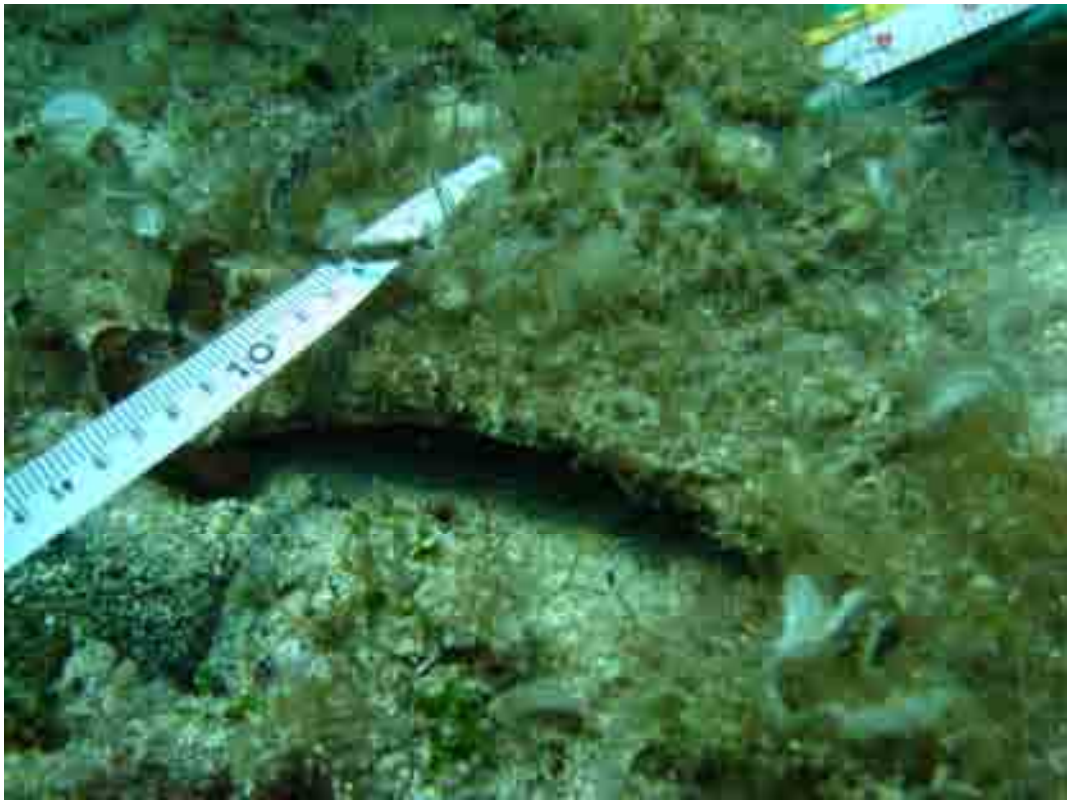

Figure 8 - Example of Shard on south west scatter field

Figure 9 - Shard with Handle and Rim in South west scatter field

Figure 10 - Flat Portion of Pottery in North eastern scatter field

Figure 11 - Amphora rim on the slope. Photo S. Collett.

4.2 Rt. Kneze

Figure 12 - Rt. Kneze Site (Circled)

Day two should have put us back on the site at Otocic Majsan but the plan had to be changed due to the Bora wind.

The Bora typically is a winter wind but appeared earlier in our case, it can get up to Beaufort Force 6 to 7 from the north east. This is then channelled by the island and mountains making most of the area undiveble.

Steve suggested that we hug the south side of the Pejelac Channel and dive behind a headland Figure 12 - Rt. Kneze Site.

This area would appear to be a good candidate for some evidence of wrecking. We dived along the wall on the northern face. Several large fragments of pottery were found. Some body-sherds measured 330 by 167mm, some were not badly abraded, and two pieces had fresh breaks. There appeared to be little coherence in either colour or form of the remains, although it is possible that some rims and bases might be underneath the small rocks and boulders. This is a deep site, and although the pieces found did not appear consistent with a wrecking event it is possible that the remains are much deeper, between 50-60 metres.

The positioning of this site suggests high potential for wrecking events as the ships try to weather the point to get into the anchorage marked in the bay. Anchorages tend to have a long history and this would be a good shelter from the north-westerly winds.

Figure 13 - Looking North into the Deep Channel at Rt. Kneze

Figure 14 - Large Amphora found at Rt Kneze

4.3 Otok Lucnjak

The second dive of day two had to be aborted. A current runs between the islands which the island funnels and amplifies due to a reduction in depth in the channel.

The original aim was to locate a debris field in 25 metres of water.

Within 22 minutes divers had deployed DSMB's surfaced and waited to be collected.

Figure 15 - Divers Struggling in Current

4.4 Uvala Duba West

Lying approx 1 nm north west of Sv Ivan's point of the original wreck surveyed in 2007. To the north are steep mountains.

Figure 16 - Uvala Duba West Site

The site shelves down to 14 metres, then has a more pronounced drop off down to 50/60 metres towards the centre of the channel. The site has a large partial fragment of the bottom half of a rounded pot. This was used as a focal point the team split into three with one team going west, one east and the rebreather divers heading south into deeper water.

Figure 17 - Partial Fragment at 32 Metres Uvala Duba

Figure 18 - Deep Water off Slope to South of Uvala Duba West Dive

Apart from the known fragment nothing was discovered even though the the approach to the channel and depths/condition would make this a possible wrecking location.

This section of coast has no inhabitants and access is only by sea to very steep sides. A more detailed study of this area in deeper water with technical dives could provide more artefacts.

4.5 Uska Banja

On the South side of the channel this dive site has a small cave at 17 metres of water.

In a depth of 20 metres due north of the mouth of the cave is the upper part of an amphora with both handles.

Simple semicircular search was done out from where the amphra lies but no other artefacts could be seen.

Figure 19 - Amphora Top Uska Banja

Figure 20 - Side View Showing Body

Lots of small amphora shards which are well abraded providing another location for more research.

4.6 U. Przina

Figure 21 - U. Przina Site

This area, on the South East tip of the island, hides a settlement that was once a small port serving ships trading in wine, oil and other commodities. The results here were different in numbers and quality from any of the previous sites. Some of the body sherds were large; in excess of 600mm by 215mm. On three occasions large boulders were protecting the broken remains of amphora in which four or five body sherds were in association with rims or bases, or whole neck with handle assemblages.

This site would repay a serious survey in which the distribution of the vessel was plotted, photographs were taken of the diagnostic sherds which could then be tied into the position on the sea bed.

The next step should be some form of dating and identification of place of origin with this an interesting distribution map can be created.

We also know that the site is being disturbed and artefacts being removed and have kept specific information out of the public domain.

Figure 22 - Fragements in the Seabed U. Przina

Figure 23 -Wider view of Fragments as in Figure 22

Figure 24 - Rounded Top at U. Przina

Figure 25 - Same Location as Figure 24, 1 metre to left

Figure 26 - Fragment of Bowl with Lip

Figure 27 - Deeper water with more distinct pottery

5. Travel

This phase of the expedition required the largest amount of planning due to the equipment needed.

5.1 Flights

This task was the responsibility of the individual diver having to find the best deal getting to Dubrovnic.

Once at the airport they were then transferred to Korcula by Steve via minibus.

5.2 Overland

Four divers took the 50 hour drive through France, Germany, Austria, Slovenia and Croatia.

The main reason was to transport the video, gas and rebreathers to allow the expedition to have three divers that would be able to have extended bottom times with minimal risk.

Even though all four people could drive, only two drivers did the driving. This meant that additional breaks had to be factored into the plan to ensure safety.

These additional breaks meant that ferry connections were not made in Croatia and the overland team had to spend an unplanned overnight at the port of Ploce.

This did not impact on the overall project as both teams arrived on the same day. It did impact on prep and planning time for the expedition leader meaning that not as much time was allocated on working out a plan C on the U. Przina site.

On the return the overland team took a different route and went through Italy missing out Slovenia and using the Autostrada into Austria. This proved to be faster than the trip down.

6. Expedition Finance

Date	Amount	Team member	Expense	Comment	Cash In	Cash Out	Balance
10/08/09	£2,000.00	Andrew Seddon	Deposit	Deposit of Grant Cheque into Account @ Barclays	£2,000.00		£2,000.00
12/08/09	£ 148.10	Simon Pilsworth	Air Ticket	Re emburse airfare cheque no 100122		£ 148.10	£1,851.90
12/08/09	£ 148.10	Jim Mills	Air Ticket	Re emburse airfare cheque no 100122		£ 148.10	£1,703.80
12/08/09	£ 113.70	Gary Stroud	Air Ticket	Re emburse airfare cheque no 100123		£ 113.70	£1,590.10
12/08/09	£ 182.30	Dave Warren	Air Ticket	Re emburse airfare cheque no 100124		£ 182.30	£1,407.80
12/08/09	£ 109.20	Ian Clarke	Air Ticket	Re emburse airfare cheque no 100125		£ 109.20	£1,298.60
28/08/09	£0	Andrew Seddon	Accomodation	Deposit Paid to Dupin Ref 00151013678006485 6		£ -	£1,298.60
28/09/09	£ 66.02	Andrew Seddon	Fuel	Fuel france		£ 66.02	£1,232.58
28/09/09	£ 65.07	Andrew Seddon	Fuel	Fuel Germany		£ 65.07	£1,167.51
29/09/09	£65.91	Andrew Seddon	Fuel	Fuel Austria		£ 65.91	£1,101.60
29/09/09	£ 55.27	Andrew Seddon	Fuel	Fuel Croatia		£ 55.27	£1,046.33
05/10/09	£ 60.43	Andrew Seddon	Fuel	Fuel Croatia		£ 60.43	£ 985.90
05/10/09	£ 64.86	Andrew Seddon	Fuel	Fuel Italy		£ 64.86	£ 921.05
06/10/09	£ 68.73	Andrew Seddon	Fuel	Fuel Germany		£ 68.73	£ 852.32
06/10/09	£ 62.08	Andrew Seddon	Fuel	Fuel france		£ 62.08	£ 790.24
06/10/09	£ 78.21	Andrew Seddon	Fuel	Fuel UK		£ 78.21	£ 712.03
06/10/09	£ 142.10	Andrew Seddon	Tolls	Europe		£ 142.10	£ 569.93
05/10/09	£ 58.73	Andrew Seddon	Tolls	Croatia		£ 58.73	£ 511.20
20/09/09	£ 64.04	Andrew Seddon	Ferry Ticket	Ploce/Trpany/Orebic/Dominca		£ 64.04	£ 447.16
05/10/09	£ 34.80	Andrew Seddon	Ferry Ticket	Ploce/Trpany - return		£ 34.80	£ 412.36
06/10/09	£ 11.66	Andrew Seddon	Ferry Ticket	Charge for earlier ferry Calais		£ 11.66	£ 400.70
29/09/09	£ 35.31	Andrew Seddon	Tolls	Austria and Slovenia Vignette		£ 35.31	£ 365.39
20/09/09	£ 80.00	Andrew Seddon	Ferry Ticket	Dover Calais and Return		£ 80.00	£ 285.39
12/08/09	£113	Jane Maddocks	Air Ticket	Re emburse airfare		£ 113.00	£ 172.39
05/10/09	£22.80	Sarah Jepson	Ferry Ticket	Orebic/Dominca - return		£ 22.80	£ 149.59
03/11/09	£ 176.00	Mark Callaghan	Air Ticket	Re emburse airfare		£ 176.00	£ 26.41
03/11/09	£ 154.00	Andrew Seddon	Misc	Transfer cost		£ 154.00	£ 180.41
04/11/09		Andrew Seddon	Misc	Additional Funds	£ 180.41	£ -	£ -

The grant from BSA Jubilee Trust was used only for transportation of people and equipment. This included;

- Airfares
- Ferry/fuel/tolls
- Rebreathers and consumables
- Rebreather gas
- General diving equipment
- Underwater video equipment including housings, cameras and lights
- Camping/sleeping equipment

Each diver self funded £355 to cover the following costs;

- Accommodation
- Diving
- Food and sundries

- Gas
- Rebreather consumables

The original plan was to take 8 divers, this grew to 11 based on requirement to have experienced divers with video and survey tasks.

Funds allocated as contingency were used as toll costs were higher as the vehicle taken was classed as a commercial van. Also fuel price fluctuations meant a transfer charge had to be added for collecting divers from the airport.

These factors along with Euro/Sterling/Kuna exchange rates ate away at the contingency element factored into the grant. The expedition ran into a deficit of £180.84 which was made up by the expedition leader.

7. Summary

Overall the team was disappointed that access to the original site had been withdrawn, especially two of the team member who had done the original survey in 2007. The experience has shown that even when you have local permits and permissions to dive things can still change.

I'm happy with the general work carried out over the 4/5 day period especially when you factor in that we are sport divers and amateurs. We have given the local archaeologist more information about sites she is interested in but cannot investigate due to lack of funds and not having qualified divers locally. All dives were carried out safely without any issues typically in 30 metres or less of water to minimise DCI. Safety stops were built into each dive to minimise any risk.

A longer expedition would have allowed the team to go back to sites but this had to be tempered against individual's holiday allowance from work.

With the initial basic photo and video data we now need to see if we assemble another expedition focusing on;

- The site at U. Przina has a wealth of material but has been heavily disturbed. As this resource is possibly being depleted a detailed survey should be carried out to record the current items.

- The weather meant that alternate dive sites provided tantalising evidence at Uvala Duba and Rt. Kneze of what could lie in deeper water. A project team of 8 technical divers with NAS backgrounds would allow us to see if our theories are correct and more sherds of pottery lie past normal sport diving limits.

Getting divers to a location in the U.K. can prove a challenge under normal circumstances. Doing this across Europe with getting two teams and equipment proved to be the hardest part of the expedition.

It has proved that we can do it allowing specialist equipment to be taken should a deep survey be needed. We also have a greater understanding of costs of getting to/from Croatian meaning we can create a more accurate set of costs for expedition members.