ECU Underwater Cultural Heritage Legislation Survey Results

- Nautical Archaeology Graduate Student opinion survey -

"Opinions Regarding Present and Future U.S. Underwater Cultural Heritage Legislation"

Graduate Students Survey:

For the quantitative survey of graduate students, the next generation of senior UCH managers, a census was conducted of all the graduates of the M.A. and Ph.D. programs in nautical archaeology from the two American universities that have offered advanced degrees in nautical archaeology for over twenty-five years, Texas A&M University at College Station, Texas, and East Carolina University at Greenville, North Carolina. Texas A&M offers a M.A. in Nautical Archaeology and Ph.D. in Archaeology from the Department of Anthropology. Since 1976, Texas A&M has awarded degrees to nearly 140 graduates.¹

East Carolina University offers a M.A. in Maritime Studies from the Department of History and a Ph.D. with an emphasis in Maritime Studies from the Coastal Resources Management Program. Since 1981, ECU has awarded degrees to over 140 graduate students. In 2006, East Carolina graduated their first Ph.D. from the Coastal Resources Management Program with an emphasis in Maritime Studies. Since the total population of all possible respondents numbered 280, I chose to do a census of all graduates rather than a randomized survey.

Texas A&M's Nautical Archaeology Program website listed 139 students with the titles of their theses or dissertations. Utilizing some listings provided by TAMU faculty, plus Internet searches using Peoplefinders.com and WhitePages.com, I was able to locate addresses for 129 TAMU graduates. East Carolina University's Maritime Studies Program listed 141 students on their website with the titles of their theses. By using the alumni listing on the Maritime Studies Program website, as well as the "Where Are They Now?" listings in their annual program newsletter, *Stem to Stern*, and internet searches using Peoplefinders.com and WhitePages.com, I was able to locate addresses for 133 ECU graduates.

TAMU and ECU graduates were first mailed an announcement postcard in early October 2007, followed by a second mailing approximately two weeks later that included the survey with a cover letter and a stamped return address envelope. TAMU and ECU students that didn't respond by the end of December were sent a postcard reminder. By mid-January 2008, I had received completed responses from sixty-four TAMU students and sixty-one ECU students. Of the population pool of 280 possible TAMU and ECU graduates, I was able to locate mailing or e-mail addresses for 262 former students. Of the 262 students who were sent the survey, 125 responded by mail or e-mail, a response rate of 47.7 percent.

Part A of the graduate student survey asked each student for background information about degree awarded, institution attended, employment experience, and memberships in professional organizations. From the TAMU and ECU websites, I was able to gather additional information about gender, degrees awarded, and graduation dates. This information combined to yield my survey's independent variables. Part A survey response data is summarized in the following tables.

Part A. - Background Information on Survey Participants

1. Are you a graduate of a M.A. or other	er advanced degree program in anthropology or maritime history
that specialized in nautical archaeology	
YES[] NO[] PhD[]

¹ Texas A&M University, Nautical Archaeology Program, http://nautarch.tamu.edu/academic/ index.htm.

² East Carolina University, Program in Maritime Studies, http://www.ecu.edu/maritime/

2. If yes, from which institution did you graduate?

Texas A&M U.	East Carolina U. [] Other

	Male		Female	:	Total	
ECU - MA	45		16		61	48.8%
ECU - MA %		73.77		26.23		
TAMU - MA	36		17		53	
TAMU - MA %		56.25		26.56		
TAMU - PhD	9		2		11	
TAMU - PhD %		14.06		3.12		Tot. 51.2 %
Total	90		35		125	
Total %	72			28		

Decade of graduation:

	1970s	1980s	1990s	2000s
ECU - MA		6	19	36
TAMU - MA	1	21	20	11
TAMU - PhD			7	4
%	.8	21.6	36.8	40.8

3. Since you completed your M.A. course work (NOT your graduation date), how much time have you spent working primarily as an intern, or volunteer, or part-time or full-time employee, in each of the following fields?

(For each occupation that applies to you please round the length of time to the nearest .5 year)

Number of Respondents indicating some experience:	ECU	TAMU	TOTAL	%
a. Artifact Conservation	11	28	39	31.2
b. Federal Agency dealing with UCH	11	5	16	12.8
c. Further Education (Ph.D., Other Advanced Degree)	21	31	52	41.6
d. Historian	23	6	30	23.2
e. Historic Preservation	11	7	18	14.4
f. Historic Site Management	5	3	8	6.4
g. Librarian	2	3	5	4.0
h. Marine Technology/Engineering	1	5	6	4.8
i. Maritime Archaeology Field Research	22	34	56	44.8
j. Media / Television Productions	2	2	4	3.2
k. Museum Curator or Manager	19	14	33	26.4
1. Private CRM Contract Archaeology	23	22	45	36.0
m. Public Outreach & Education	14	10	24	19.2
n. State Agency dealing with UCH	11	6	17	13.6
o. Teaching (University)	11	28	39	31.2
p. Teaching (Community College)	8	7	15	12.0
q. Teaching (High School & Middle School)	5	4	9	7.2
(Other) Private Sector	2	9	11	8.8
(Other) Military Service	2	1	3	2.4
(Other) Health Professions	1	2	3	2.4
(Other) Seaman	1	0	1	.8
(Other) Other Science Field	0	1	1	.8
Number of Respondents indicating some experience:	ECU	TAMU	TOTAL	%

4. Are you currently a member of the following professional organizations? Please check $\lceil \sqrt{\ } \rceil$ your answer

a. AAAS - American Association for the Advancement of Science	YES[]	NO []
b. AAUS - American Academy of Underwater Sciences	YES[]	NO[]
c. AIA - Archaeological Institute of America	YES[]	NO[]
d. MTS - Marine Technology Society	YES[]	NO[]
e. RPA - Register of Professional Archaeologists	YES[]	NO[]
f. SAA - Society for American Archaeology	YES[]	NO[]
g. SHA - Society for Historical Archaeology	YES[]	NO[]

	AAAS	AAUS	AIA	MTS	RPA	SAA	SHA
ECU	2	14	6	4	11	4	35
ECU %	3.28	22.95	9.84	6.56	18.03	6.56	57.38
TAMU	0	5	11	0	11	9	22
TAMU %	0	7.81	17.19	0	17.19	14.06	34.37
TOTAL	2	19	17	4	22	13	57
Total %	1.6	15.2	13.6	3.2	17.6	10.4	45.6

Part B. - Opinion Survey Regarding Present and Future Underwater Cultural Heritage Legislation

I assigned numerical values to each of the four Likert scale responses [1-4]. Answers that reflect a pro-preservationist, restricted access, strong government management approach are coded with a value of "1." Answers that reflect a pro-free enterprise, open access, limited government approach are coded with a value of "4." Twelve questions use Likert scale responses. Six are worded so that "Strongly Disagree/Strongly Oppose" translates to a value of "1," and six are worded so that "Strongly Disagree/Strongly Oppose" translates to a value of "4."

1. The Abandoned Shipwreck Act (ASA) is coming up on its 20th anniversary in 2008. It was intended to give the states control over certain categories of abandoned shipwrecks on submerged lands under their waters.

a. Despite passage of the ASA, many problems remain regarding the management of historic shipwrecks. Do You: Strongly Disagree [4] Disagree [3] Agree [2] Strongly Agree [1]

	4	3	2	2	1			
ECU	6	3	3	35	17			
ECU %	9.8	34	4.92	57.38		27.87		
TAMU	2	1	3	39	20		2	
TAMU %	3.1	'2	1.56	60.94		31.25		3.12
Total	8	4	7	74	37		2	
Total %	6	.4	3.2	59.2		29.6		1.6
D/A %		9.	6	88.8			1.	6

b. All shipwrecks should be considered "historically significant" and their access limited to scientific researchers.

Do You: Strongly Disagree [4] Disagree [3] Agree [2] Strongly Agree [1]

	4	3	2	1	
ECU	16	35	8	2	
ECU %	26.23	57.38	13.11	3.28	
TAMU	12	39	9	4	
TAMU %	18.75	60.94	14.06	6.25	
Total	28	74	17	6	
Total %	22.4	59.2	13.6	4.8	
D/A %		81.6	18.4		

c. Recreational sport and technical divers should be allowed access to most shipwrecks.

Do You: Strongly Disagree [1] Disagree [2] Agree [3] Strongly Agree [4]

	1		2	3	4	
ECU	1		13	42	5	
ECU %		1.64	21.31	68.85	8.19	
TAMU	7		22	30	5	
TAMU %		10.94	34.37	46.87	7.81	
Total	8		35	72	10	
Total %		6.4	28	57.6	8	
D/A %			34.4	65.6		

d. A multiple use management approach (preserving some wreek sites and allowing selective access to

d. A multiple-use management approach (preserving some wreck sites and allowing selective access to other sites by groups such as nautical archaeologists, or sport divers, or treasure salvors) is a workable concept.

Do You: Strongly Disagree [1] Disagree [2] Agree [3] Strongly Agree [4]

	1		2		3		4			
ECU	4		11		39		7			
ECU %		6.56		18.03		63.93		11.48		
TAMU	4		15		32		12		1	
TAMU %		6.25		23.44		50		18.75		1.56
Total	8		26		71		19		1	
Total %		6.4	·	20.8		56.8		15.2		.8
D/A %		•	27	7.2		72				8

e. Changes to the ASA should be made, such as clearly defining "abandoned," to avoid confusion and lawsuits

Do You: Strongly Disagree [4] Disagree [3] Agree [2] Strongly Agree [1]

	4		3		2		1			
ECU	2		2		39		18			
ECU %		3.28		3.28		63.93		29.51		
TAMU	0		1		41		18		4	
TAMU %		0		1.56		64.06		28.12		6.25
Total	2		3		80		36		4	
Total %		1.6		2.4		64		28.8		3.2
D/A %			4	4		92.8				3.2

f. Treasure salvage should be permitted within state waters.

Do You: Strongly Disagree [1] Disagree [2] Agree [3] Strongly Agree [4]

	1		2		3		4		
ECU	23		29		9		0		
ECU %		37.7		47.54		14.75		0	
TAMU	45		14		5		0		
TAMU %		70.31		21.87		7.81		0	
Total	68		43		14		0		
Total %		54.4		34.4		11.2		0	
D/A %		•	8	8.8		11.2			

g. Treasure salvage should be permitted in the U.S. Exclusive Economic Zone (EEZ) outside of state waters.

Do You: Strongly Disagree [1] Disagree [2] Agree [3] Strongly Agree [4]

	1		2		3		4			
ECU	18		28		14		0		1	
ECU %		29.51		45.9		22.95		0		1.64
TAMU	41		14		8		0		1	
TAMU %		64.06		21.87		12.5		0		1.56
Total	59		42		22		0		2	
Total %		47.2		33.6		17.6		0		1.6
D/A %			80.	8	1	7.6				1.6

h. The goals of underwater archaeology and treasure salvage operations are mutually exclusive.

Do You: Strongly Disagree [4] Disagree [3] Agree [2] Strongly Agree [1]

	4	3	2	1	
ECU	4	17	23	17	
ECU %	6.56	27.87	37.7	27.87	
TAMU	2	8	24	30	
TAMU %	3.12	12.5	37.5	46.87	
Total	6	25	47	47	
Total %	4.8	20	37.6	37.6	
D/A %		24.8	75.2		

2a. Do you disagree or agree with the Annex Rules #1 (*in situ* preservation as the first option), and #2 (UCH shall not be traded, sold, bought, or bartered as commercial goods) that UNESCO has recommended regarding UCH management?

Strongly Disagree [4] Disagree [3] Agree [2] Strongly Agree [1]

	4		3		2		1		
ECU	1		8		30		22		
ECU %		1.64		13.11		49.18		36.06	
TAMU	0		3		21		40		
TAMU %		0		4.69		32.81		62.5	
Total	1		11		51		62		
Total %		.8	·	8.8		40.8		49.6	
D/A %			9	3	9	90.4			

3a. The USCOP report suggests development of a multiple-use management approach in an expanded offshore zone, similar to the Abandoned Shipwreck Act; do you disagree or agree with this approach? Strongly Disagree [1] Disagree [2] Agree [3] Strongly Agree [4]

	1		2	3	4	
ECU	1		7	43	10	
ECU %		1.64	11.48	70.5	16.39	
TAMU	6		18	34	5	1
TAMU %		9.37	28.12	53.12	7.81	1.56
Total	7		25	77	15	1
Total %		5.6	20	61.6	12	.8
D/A %			25.6	73.6		.8

4a. Should the U.S. exert its claim to all underwater cultural heritage out to **24** NM? Yes [1] No [0] If so, who should manage access to historic shipwrecks in this area? (pick only one)

- (1) The states (ASA jurisdiction should be expanded seaward)

 Yes [1] No [0]
- (2) A single federal agency (NOAA or NPS or MMS)

 Yes [1] No [0]
- (3) A joint federal interagency group (NOAA, NPS, MMS, & Navy UAB, etc.) Yes [1] No [0]
- (4) Federal district courts, imposing an archaeological duty of care on salvors

 Yes [1] No [0]

	No	Yes	States	1 Fed Ag	Jt Fed Gp	Fed Cts
ECU	4	57	9	12	33	3
TAMU	1	63	11	28	22	2
Total	5	120	20	40	55	5
%	4	96				
% 120 Yes			16.7	33.3	45.8	4.2

4b. Should the U.S. <u>also</u> exert its claim to all underwater cultural heritage out to **200** NM? Yes [1] No[0]

If so, who should manage access to historic shipwrecks in this expanded area? (pick only one)

- (1) The states (ASA jurisdiction should be expanded seaward)

 Yes [1] No [0]
- (2) A single federal agency (NOAA or NPS or MMS)

 Yes [1] No [0]
- (3) A joint federal interagency group (NOAA, NPS, MMS, & Navy UAB, etc.) Yes [1] No [0]
- (4) Federal district courts, imposing an archaeological duty of care on salvors

 Yes [1] No [0]

	No	Yes	States	1 Fed Ag	Jt Fed Gp	Fed Cts
ECU	19	42	2	10	25	5
TAMU	20	44	3	21	19	1
Total	39	86	5	31	44	6
%	31.2	68.8				
% 86 Yes			5.8	36	51.6	6.97

5a. Would you oppose or favor the concept of having federal district courts in admiralty cases impose an archaeological duty of care (ADC) on treasure salvors as part of the salvage award agreement? Strongly Oppose [4] Oppose [3] Favor [2] Strongly Favor [1]

	4	3	2	1	
ECU	4	6	15	36	
ECU %	6.56	9.84	24.59	59.02	
TAMU	5	5	16	35	3
TAMU %	7.81	7.81	25.0	54.69	4.69
Total	9	11	31	71	3
Total %	7.2	8.8	24.8	56.8	2.4
O/F %		16	81.6		2.4

6a. Would you oppose or favor guidelines allowing for cooperation between tr. salvors & archaeologists? Strongly Oppose [1] Oppose [2] Favor [3] Strongly Favor [4]

	1	2	3	4	
ECU	8	18	21	14	
ECU %	13.11	29.51	34.43	22.95	
TAMU	21	15	18	8	2
TAMU %	32.81	23.44	28.12	12.5	3.12
Total	29	33	39	22	2
Total %	23.2	26.4	31.2	17.6	1.6
O/F %		49.6	48.8		1.6

In comparing the means between ECU and TAMU student responses on these fourteen questions, my SPSS analysis found that the differences on seven of the questions were not statistically significant. These were questions B.1.a., B.1.b., B.1.d., B.1.e., B.4.a., B.4.b., and B.5.a. However, on seven of the questions my SPSS analysis found that the differences of the means were statistically significant. These were questions B.1.c., B.1.f., B.1.g., B.1.h., B.2.a., B.3.a., and B.6.a. These questions dealt with the issues of sport diver access to shipwrecks, treasure salvage in state waters, treasure salvage in the EEZ, goals of archaeologists and treasure salvors, the UNESCO Convention Annex Rules, the USCOP recommendations on multiple-use management, and voluntary cooperative agreements between archaeologists and treasure salvors.

The means tests and ANOVA analysis performed on each graduate student question showed statistical significance for the results of seven questions: B.1.c., B.1.f., B.1.g., B.1.h., B.2.a., B.3.a., and B.6.a. Multiple regression analysis was conducted on those questions. The variables included in each multiple regression were:

- 1. Degree (M/P); 2. University (TAMU/ECU); 3. Federal Agency (Y/N); 4. Higher Education (Y/N);
- 5. Private CRM (Y/N); 6. State Agency (Y/N); 7. Teaching-Univ. (Y/N); 8. SHA Membership (Y/N).

	B.1.c.	B.1.f.	B.1.g.	B.1.h.	B.2.a.	B.3.a.	B.6.a.
Model	Sig.						
(Constant)	.000	.001	.002	.000	.002	.000	.000
Degree	.226	.698	.760	.052	.867	.031	.497
University	.457	.003	.001	.023	.007	.013	.032
Federal Agency	.466	.296	.372	.342	.843	.858	.023
Higher Education	.310	.144	.511	.002	.732	.767	.006
Private CRM	.927	.374	.013	.508	.147	.571	.501
State Agency	.423	.352	.197	.004	.341	.090	.488
Teaching - Univ.	.222	.515	.230	.780	.374	.337	.323
SHA Member	.025	.161	.020	.145	.448	.319	.054

Table. Multiple Regression summaries for seven questions showing "statistical significance."

An additional graduate student survey data category was constructed for testing means, standard deviation, ANOVA, and multiple regressions. The numerical values assigned to the four Likert scale response values (Strongly Disagree - Disagree - Agree - Strongly Agree) were chosen so that answers that reflected a pro-preservationist, restricted access, strong government management approach were coded with a value of "1." Alternatively, answers that reflected a pro-free enterprise, open access, limited government approach were coded with a value of "4." Of the twelve questions using Likert scale responses, six are worded so that "Strongly Disagree/Strongly Oppose" translates to a value of "1," and six are worded so that "Strongly Disagree/Strongly Oppose" translates to a value of "4." Combining the answers of the twelve questions could yield a score value of 12-48. For those questions that students chose to not answer, I arbitrarily added a value of "2.5," the midpoint between the two opinion values. This new data category was labeled "T12Q." The T12Q combined sums ranged from 15 to 36.

Table. Means test for combined scores T12Q category.

Univ.	Mean	N	Std. Dev.	Median	Min.	Max.	ANOVA	F	Sig.
ECU	27.4508	61	4.13088	28	18	36	Between		
TAMU	24.4219	64	4.13777	25	15	32	Groups	16.763	.000
Total	25.9000	125	4.38932	27	15	36			

The TAMU students as a group uniformly scored lower, or more inclined toward pro-preservationist, restricted access, strong government management approaches, than did the ECU students as a group.

- Current UCH Experts opinion survey -

For my qualitative survey of current UCH professionals or experts, I developed a list of over sixty current professionals who included federal and state government agency officials, nautical archaeologists, maritime attorneys, scuba certification agency representatives, treasure salvors and archaeologists who have worked with treasure salvors. My goal was to seek out a broad range of responses regarding possible future directions for legislation by using open-ended questions that allowed for extensive narratives.

I was able to locate and contact fifty of the experts, and had active participation from thirty-five. Each expert was first contacted by phone or e-mail, and if they agreed to participate in the research survey, they were sent the three-page survey as a Word attachment to an e-mail. I then followed up with a second phone call or e-mail to establish an appointment date to conduct the survey by phone. The phone interviews were conducted from mid-November 2007 to early February 2008.

Most of the experts spent 30 to 45 minutes on the phone discussing the survey's issues. The survey questions were open-ended, and many of the experts took the opportunity to tutor me on the history and background of the issues they were involved with over the past twenty years. I took written notes during the interviews, but I did not record the conversations using electronic media. Not all of the experts addressed every question on the survey. Nine of the thirty-five experts who participated sent me their completed surveys via mail or e-mail. Fifteen experts either declined to participate or were unable to connect due to schedule conflicts.

Many of the experts who were interviewed emphasized that the opinions they were expressing were their own, and did not necessarily reflect the official positions of their organizations or agencies. Some were concerned about being identified by name in my research. Since all of them agreed to being identified in a generic manner with terms such as a "federal agency archaeologist" or a "maritime law attorney," I used that form in identifying their personal comments in my dissertation. Because this group of experts was not selected at random and the number of respondents was small, I summarized their data but did not attempt to perform any statistical analysis on the data collected from this group.

List of participating Experts:

Kathy Abbass, Ph.D., Archaeologist - Rhode Island Maritime Arch. Project; Chris Amer, M.A., Archaeologist - SC Inst. of Archaeology & Anthropology; Michele Aubry, M.A., Archaeologist -National Park Service; Michael Barnette, M.A., Wreck Diver - Assn. of Underwater Explorers; David Bederman, J.D., Attorney - Emory University; Caroline Blanco, J.D., Attorney - National Science Foundation; John Broadwater, Ph.D., Archaeologist - NOAA, Dept of Commerce; John Chatterton, Underwater Explorer, Wreck Diver, Author, TV Host; Art Cohn, J.D., Archaeologist - Lake Champlain Maritime Museum; John de Bry, Ph.D., Archaeologist - Center for Historical Archaeology; James Delgado, Ph.D., Archaeologist - Institute of Nautical Archaeology; Ricardo Elia, Ph.D., Archaeologist -Boston University; John Foster, M.A., Archaeologist - CA State Parks; Gary Gentile, Underwater Explorer, Wreck Diver, Author; Anne Giesecke, Ph.D., Archaeologist, Former Cong. Staffer - H.R. MM&F Comm.; James Goold, J.D., Maritime Law Attorney; Peter Hess, J.D., Maritime Law Attorney; Porter Hoagland, Ph.D., Research Specialist - WHOI Marine Policy Center; David Horan, J.D., Maritime Law Attorney; Al Hornsby, Senior Executive - PADI; Paul Johnston, Ph.D., Archaeologist - Smithsonian Institution; Ken Kinkor. Historian - Whydah Museum; Susan Langley, Ph.D., Archaeologist - MD Historical Trust; Richard Lawrence, M.A., Archaeologist - NC Underwater Archaeology Unit; Robert Marx, Archaeologist, Underwater Explorer, Author; Victor Mastone, M.A., Archaeologist - MA Board of Underwater Arch. Resources; R. Duncan Mathewson, Ph.D., Archaeologist - Blue Water Ventures; Anna McCann, Ph.D., Archaeologist; Patrick J. O'Keefe, Ph.D., Cultural Heritage Law Attorney; Richard Robol, J.D., Maritime Law Attorney; Roger Smith, M.A., Archaeologist - FL Underwater Archaeology Program; Greg Stemm, Underwater Explorer, CEO - Odyssey Marine; Melanie Stright, Ph.D., Archaeologist - MMS, Dept. of the Interior; Charlotte Taylor, M.A., Archaeologist - RI Hist. Preservation & Heritage Comm.; and, Ole Varmer, J.D., Attorney - NOAA, Dept. of Commerce.

- Combined results for Experts opinion survey & Graduate Students opinion survey -

The table below provides a summary of the opinion survey responses by the Experts and Graduate Students to the fourteen key questions. The response of the majority of the participants is indicated with an "X." If the opinion survey responses were approximately equally distributed between the "Disagree/Oppose" and "Agree/Favor" responses, then the "Mixed" choice is indicated.

Key issues and majority opinions	Disagree / Oppose	Mixed	Agree / Favor
Problems with ASA and shipwreck management			
Experts			X
Graduate Students			X
Changes to the ASA are necessary			
Experts			X
Graduate Students			X
Multiple-use management is a workable concept			
Experts			X
Graduate Students			X
All shipwrecks are historically significant			
Experts	X		
Graduate Students	X		
Allow sport divers access to most shipwrecks			
Experts			X
Graduate Students			X
UNESCO Convention Annex Rules			
Experts			X
Graduate Students			X
USCOP recommendations for SCR (multiple-use)			
Experts			X
Graduate Students			X
U.S. claim UCH out to 24 NM			
Experts			X
Graduate Students			X
U.S. claim UCH out to 200 NM			
Experts			X
Graduate Students			X
Permit treasure salvage in state waters			
Experts		X	
Graduate Students	X		
Permit treasure salvage in EEZ			
Experts		X	
Graduate Students	X		
Federal courts impose ADC on salvors			
Experts			X
Graduate Students			X
Goals of archaeology and salvage mutually exclusive			
Experts		X	
Graduate Students			X
Guidelines for archaeologist-treasure salvor coop.			
Experts		X	
Graduate Students		X	