# **The Kyrenia Ship Conservation Project**

# **Kyrenia Ship Collection:**

# Recommendations for Future Care and Maintenance

# June 2017





Cassy Cutulle
MA, MSc University College London
Chief Objects Conservator
Kyrenia Ship Conservation Project
c.cutulle.11@alumni.ucl.ac.uk

Veronica Ford
MA, MSc University College London
Assistant Objects Conservator
Kyrenia Ship Conservation Project
veronica.ford89@gmail.com

# **Contents**

- General Introduction
- Environmental Monitoring
- Ceramic Objects
- Metal Objects
- Appendices:
  - 1. Plan of the Storeroom
  - 2. Instructions for extracting TinyTag data
  - 3. List of objects and box numbers

#### **General Introduction**

To ensure the future wellbeing of the Kyrenia Ship Collection, it is important that the collection continues to be repeatedly assessed and monitored to ensure that the conservation work undertaken between 2015 and 2017 does not go to waste. Several recommendations for the future care of the collection have therefore been outlined in this document. Broadly these recommendations can be split into two main categories: environmental monitoring tasks and routine assessments of the objects. These tasks should ideally be carried out every 6 months by a qualified conservation/museum professional. As the Kyrenia Ship Conservation Project was completed in May 2017, the first check is due in November 2017. The following pages of the document constitute a number of checklists which can be printed and completed to ensure the objects are receiving proper care.

#### **Health and Safety**

It is important that anyone working with the Ship collection is aware of the potential health and safety hazards. In the Storeroom, objects have been labelled in red tape where there are any health concerns. In particular, workers should be aware of the presence of **lead**, although attempts have been made to box up the lead objects, there is potentially lead dust in the environment. In addition, several of the objects have been treated with potentially dangerous chemicals, including several copper alloy objects treated with benzotriazole (BTA). Gloves should be worn at all times when handling objects (nitrile gloves provided in storeroom as of May 2017), and additional personal protectional equipment including a respirator and lab coat worn during work. The individual working should take responsibility for carrying out a risk assessment and researching and obtaining the appropriate equipment for working in the Storeroom. They should also be aware that there may be additional unidentified health and safety risks and be prepared to take responsibility for their own health and safety. The conservators and other members of the Kyrenia Ship team take no responsibility for injury or illness arising from work.

# **Environmental Monitoring**

Name: Date:

**Ideal environment:** <60% relative humidity and temperature of 21°C.

Pest traps and environmental conditions should be assessed by a qualified museum or conservation professional every 6 months in the Ship Storeroom, Shipwreck Museum Gallery and Ship Gallery.

O IIIOIIu	is in the only storeroom, onlywieck indocum callery and only callery.
	Ship Storeroom: Check environmental conditions on the display on the silver loggers, change air conditioner settings if necessary. If humidity is above 60% raise the temperature on the unit* Extract data from TinyTag data loggers (see appendix 2 for instructions) Examine pest traps, record findings and lay new traps (see appendix 1 for locations; record findings below)
,	Shipwreck Museum Gallery Extract data from TinyTag data loggers (see appendix 2 for instructions)
	Ship Gallery Extract data from TinyTag data loggers (see appendix 2 for instructions) Check air conditioning is operational Check ship hull for cleanliness. Clean hull every 12 months Check hull for damage, or loss of wooden members

\*Previously the best setting was found to be 27°C on the heating setting which reduced the relative humidity to less than 60%. However as the air conditioning was only installed towards the end of the project in 2017, this may not be the ideal setting in the long term. Ideally therefore a professional conservator should be involved if changes are made to the air conditioning.

Trap Number	Date checked and changed	Results: Pests Observed on Trap (e.g. 5 ants, 1 cigarette beetle, 1 moth)
Trap #1		
Trap #2		
Trap #3		
Trap #4		
Trap #5		

**Ceramic Objects** 

Name:	Date

A selection of ceramic objects in both the Kyrenia Ship Storeroom (box numbers 44-64 – see appendix 1 for locations) and on display in the Kyrenia Shipwreck Museum Gallery should be briefly examined for damage and changes. It is suggested that at least **5** objects from **each location**, a total of **10** ceramics altogether are assessed every 6 months by a qualified museum or conservation professional.

Each of the 10 ceramics chosen for assessment should be checked in the following way:

Friability: does the object show signs of loss of ceramic material from its surface?*
Accretions/Growths: are there any signs of growths to the objects? Are these biological or crystalline? White,
powdery or fibrous?*
Stability: are any restored/reconstructed areas (if present) stable? Is there any sign that the adhesive used has
become tacky or has begun to fail?
Restorations: if there are restored areas present, do they show any sign of degradation, including any color
change which has resulted in a dissatisfactory result? (This is particularly relevant for objects on display in the
Kyrenia Shipwreck Museum Gallery).

\*If the answer to either of these question is yes, it is possible that mold or salt growth is present and the ceramic needs urgent further conservation treatment. In addition, a more broad survey should be carried out on the rest of the ceramics in the collection to identify other objects which may be affected by this problem. A review of the environmental conditions in which the objects are stored should also be undertaken.

Metal Objects

Name:	Date:

A selection of the metal objects in both the Kyrenia Ship Storeroom (box numbers 1-44 – see appendix 1 for locations) and on display in the Kyrenia Shipwreck Museum Gallery should be briefly examined for damage and changes. It is suggested that at least 5 objects from **each location**, a total of **10** metal altogether are assessed every 6 months by a qualified museum or conservation professional. In addition, many of the copper alloy objects will require regular maintenance in order to ensure that relative humidity within the local environment is kept low.

Each of the 10 metals chosen for assessment should be checked in the following way:

Friability: does the object show signs of loss of material from its surface?*
Corrosion: does the object show signs of powdery voluminous corrosion products? Does this appear to be
active corrosion, or a luminous green/blue color?*
Stability: are any restored/reconstructed areas (if present) stable? Is there any sign that the adhesive used has
become tacky or has begun to fail?
Restorations: if there are restored areas present, do they show any sign of degradation, including any color
change which has resulted in a dissatisfactory result?

In addition to the above, the following metal objects should be checked **at least every 6 months** (for locations of these objects please refer to the plan in Appendix 1). These objects contain silica gel and some of them relative humidity cards. The relative humidity cards (where present) should be read and recorded below, with the local relative humidity corresponding to where the blue meets the pink on the scale. Relative humidity for these objects should be <50% ideally. If there are signs that the silica gel has **turned green** then this must be replaced by orange silica gel (in the Supplies cupboard in the far left corner of the Storeroom), in a dated archival quality sample bag with small holes to allow the silica gel to work.\*\*

Box 1: Cu6, Cu7, Cu9, Cu14, Cu20, Cu3, Cu26, Cu15. Silica Gel.
Box 2: Cu4. Silica Gel.
Box 3: Coins C1-C7, C8/Pb11. Silica Gel and Humidity Card. RH reading:
Box 4: Cu18. Silica Gel.
Box 6: Cu11. Silica Gel.
Box 7: Cu19. Silica Gel and Humidity Card. RH reading:
Box 8: Copper Tacks [75 in all]. Silica Gel and Humidity Card. RH reading:
Box 9: Cu21, Cu22, Cu23. Silica Gel.
Box 10: Copper Nails [28 in all] Silica Gel and Humidity Card. RH reading:
Box 11: Cu17. Silica Gel and Humidity Card. RH reading:
Box 16: BL2 –VT without flange. Silica Gel.
Box 17: VU-AIH without flange. Silica Gel.
Box 21: AIK-C.13.G without flange. Silica Gel and Humidity Card. RH reading:
Box 22: Flanged lead rings. Silica Gel and Humidity Card. RH reading:
Box 26: Lead objects Pb23, Pb25, S9. Silica Gel and Humidity Card. RH reading:

\*If the answer to this question is yes, it is possible that corrosion is present and the object needs urgent further conservation treatment. In addition, a more broad survey should be carried out on the rest of the metals in the collection to identify other objects which may be affected by this problem. A review of the environmental conditions in which the objects are stored should also be undertaken.

\*\*Green colored silica gel can be dehydrated and reused. To do this place the silica gel in an oven at 100°C (212°F) for 2 hours. Every 30 mins the silica gel should be stirred. After removal store the regenerated silica gel in an airtight container until use.

#### **Appendix 1: Plan of Storeroom** Amphoras Supplies Wood Lead Sheathing **Amphoras** (Box #'s 111-151) (Box #'s 77-110) Supplies Supplies Lead rings; bottom number lead (Box #'s 12-43) Metal Objects (Box #'s 1-11) Ceramics (Box #'s 50-64) **Lead Sheathing** Not **Amphoras** (underneath) Kyrenia (Box #'s 65-76) (underneath) Wood Objects Ship Ceramics (Box #'s 44-49) Supplies **Amphoras** Test material **Amphoras** Stone Iron; moulds = pest traps = metal cabinets = wooden shelves

= tables

### Appendix 2: Instructions for extracting TinyTag data.

#### Please follow these steps for the extraction of data from EACH TinyTag data logger device

- 1) Collect the yellow Tiny Tag data logger devices from each area:
  - 2 the Kyrenia Ship Storeroom—one above the lead sheathing, where the amphoras are stored and one in the metal objects cupboard.
  - 2 in the Shipwreck Museum Gallery—one in case #1 and one in case #10.
  - 2 in the Ship Gallery—one under either side of the hull.
- 2) Within the "Tiny Tag Stuff" folder on the computer desktop, make a new folder by right clicking, select "new". Name this folder for the date range of the data to be extracted. For instance, the next extraction folder will be called "May-August 2017".
- 3) In this folder, create 6 new folders by right clicking and selecting "new". Name them by right clicking and selecting "rename". Name them according to their location and date range. Below are the names for the 6 folders (just make sure to change the date range to the appropriate date range):
  - Hull #1 Done (Date range, year)
  - Hull #2 Done (Date range, year)
  - Gallery #3 Done (Date range, year)
  - Gallery #4 Done (Date range, year)
  - SR #5 Done (Date range, year)
  - SR #6 Done (Date range, year)
- 4) After creating the appropriate folders, plug the first data logger into the computer using the USB cord stored in the supplies cupboard near the sinks, on the top shelf. After plugging in the device, open the program called "TinyTag Explorer" on the computer desktop, with this icon:



5) Then click the button, "Get Data from Logger", which is this icon:



- 6) Wait for the data to be extracted. This can take a minute or so. Then a small graph will appear. When this happens, follow these steps:
  - Click "File" at the top left of the screen
  - Click "Export Graph"
  - A new window will pop up for you to save the graph. Make certain that you are saving in the correct
    folder by looking at the top bar of this window. Make certain you are in the folder that corresponds to
    the data logger you are extracting from. For instance, if you have extracted the small graph from the
    Hull #1 logger, make certain that you are saving that graph in the Hull #1 May-August 2017 Done"
    folder.

- Name the small graph file appropriately. For instance, if it is the Hull #1 logger, then name it "Hull #1 May-August 2017 Done Small Graph".
- 7) Expand this small graph by clicking the "maximize" button on the top right of the window. Once you have this large graph, follow these steps (similar to previous steps):
  - Click "File" at the top left of the screen
  - Click "Export Graph"
  - A new window will pop up for you to save the graph. Make certain that you are saving in the correct
    folder by looking at the top bar of this window. Make certain you are in the folder that corresponds to
    the data logger you are extracting from. For instance, if you have extracted the small graph from the
    Hull #1 logger, make certain that you are saving that graph in the "Hull #1 May-August 2017 Done"
    folder
  - Name the large graph file appropriately. For instance, if it is the Hull #1 logger, then name it "Hull #1 May-August 2017 Done Large Graph".
- 8) After you have successfully saved a copy of both the small and large graphs, then click the, "Open table of readings view" button to get the raw data. The button looks like this:



- Then, you click "File" at the top left and "Export all cells"
- Again, make sure you are saving in the correct folder. A new window will pop up for you to save this
  raw data. Make certain that you are saving in the correct folder by looking at the top bar of this window.
  Make certain you are in the folder that corresponds to the data logger you are extracting from. For
  instance, if you have extracted the raw data from the Hull #1 logger, make certain that you are saving
  that graph in the "Hull #1 May-August 2017 Done" folder.
- Name the raw data file appropriately. For instance, if it is the Hull #1 logger, then name it "Hull #1 May-August 2017 Done Raw Data".
- 9) Then, you need to save the **data logger device information**. To do this, click the top button, "**Open Information Table View**". The button looks like this:



- Then, you click "File" at the top left and "Export all cells"
- Again, make sure you are saving in the correct folder. A new window will pop up for you to save this
  logger information. Make certain that you are saving in the correct folder by looking at the top bar of this
  window. Make certain you are in the folder that corresponds to the data logger you are extracting from.
  For instance, if you have extracted the small graph from the Hull #1 logger, make certain that you are
  saving that logger information in the "Hull #1 May-August 2017 Done" folder.
- Name the logger information file appropriately. For instance, if it is the Hull #1 logger, then name it "Hull #1 May-August 2017 Done Logger Info."
- 10) Check that you have successfully saved the **small graph**, **large graph**, **raw data** and **logger information** by going into the folder from the computer desktop.
  - Get onto the computer desktop

- Click the "Tiny Tag Stuff" folder
- Click on the appropriate date range folder that you created before the data extraction (for instance "May-August 2017 Done").
- Then click on the appropriate data logger you have just extracted the data from. For instance, if you have extracted from Hull #1, go into the "Hull #1 May-August 2017 Done" folder.
- Open the files to make certain that they have saved correctly. They will open up in the "TinyTag Explorer" program, so it is important that you do not close this beforehand.
- 11) Lastly, after you have successfully saved all the data from the logger, you will want to erase the data and re-launch it. To do this you click, "Erase current measurements". The icon looks like this:



- Here, you can also change the frequency of the logging. It is currently set to log every seven minutes
  for three months. This can be changed as necessary. Just make certain to take note of the date listed
  as to when the logger is full as it will erase and overwrite data if not extracted when full. This
  information is at the bottom of this configuration window.
- Click "Launch" at the bottom of this window.
- Then, cancel out of already saved graphs and raw data by clicking the "X" at the top right corner of the graph, NOT the program.
- Click "discard" when asked if you would like to save (you should have already saved the graphs at this
  point).
- Unplug the logger.

\*Note: When opening the Excel program files that you saved which include the raw data and logger information files, a window may appear saying that the files are corrupted. Ignore this and click "yes", it is fine.

## **Appendix 3: List of box numbers and contents**

# Kyrenia Ship Object Storeroom

## **Object Boxes List\***

\*Note: This list only contains those objects that were re-housed by conservators Cassy Cutulle and Veronica Ford in 2017.

#### **Metal Objects (Copper, Copper Alloys)**

- Box 1: Cu6, Cu7, Cu9, Cu14, Cu20, Cu3, Cu26, Cu15 (contains silica gel, placed on May 21st, 2017 and no humidity card)
- Box 2: Cu4 (contains silica gel, placed on May 21st, 2017 and no humidity card)
- Box 3: Coins C1-C7, C8/Pb11 (contains silica gel, placed on May 21st, 2017 and also contains humidity card)
- Box 4: Cu18 (contains silica gel, placed on May 21st, 2017 and also contains humidity card)
- Box 5: Cu10 (does not contain silica gel or a humidity card)
- Box 6: Cu11 (contains silica gel, placed on May 1st, 2017 and no humidity card)
- Box 7: Cu19 (contains silica gel, placed on May 21st, 2017 and also contains humidity card)
- Box 8: Copper Tacks [75 in all] (contains silica gel, placed on March 31st, 2017 and also contains humidity card)
- Box 9: Cu21, Cu22, Cu23 (contains silica gel, placed on May 1st, 2017 and no humidity card)
- Box 10: Copper Nails [28 in all] (contains silica gel, placed on March 31<sub>st</sub>, 2017 and also contains humidity card)
- Box 11: Cu17 (contains silica gel, placed on May 21st, 2017 and also contains humidity card)

## Lead Objects (Including rings and bottom number lead)

- Box 12: Post stern lead sheathing AEK 6A
- Box 13: Bottom numbers lead sheathing, starboard
- Box 14: Bottom numbers lead sheathing, port
- Box 15: Bottom numbers lead sheathing, port
- Box 16: BL<sub>2</sub> –VT without flange (contains silica gel placed on April 10th, 2017 and no humidity card)
- Box 17: VU-AIH without flange (contains silica gel placed on April 10th, 2017 and no humidity card)
- Box 18: Bottom numbers lead sheathing, port
- Box 19: Bottom numbers lead sheathing, port
- Box 20: Pb 27 lead curse tablet (on display), Cu28, W76
- Box 21: AIK-C.13.G without flange (contains silica gel placed on April 10th, 2017 and also a humidity card)

- Box 22: Flanged lead rings (contains silica gel placed on April 10th, 2017 and also a humidity card)
- Box 23: Bottom numbers lead sheathing, port
- Box 24: Nails, tacks from lead trays 2008, trays I-XXVI
- Box 25: Lead fishnet weights and curse tablet
- Box 26: Lead objects Pb23, Pb25, S9 (contains silica gel placed on January 12th and May 1st, 2017 and also a humidity card)
- Box 27: Lead patches ALS Pb31, Pb32, Pb26, Pb28, Pb29, Pb30, Pb33, and unlabeled patch
- Box 28: Bottom numbers lead sheathing, keel-bow, port 384,729,793, AQB, ANJ, 730
- Box 29: Bottom numbers lead sheathing, starboard
- Box 30: Bottom numbers lead sheathing, starboard
- Box 31: Bottom numbers lead sheathing, starboard
- Box 32: Bottom numbers lead sheathing, starboard
- Box 33: Bottom numbers lead sheathing, bottom layer: starboard, middle layer: AMG [starboard bow], top layer: ALV Pb104 [starboard]
- Box 34: Bottom numbers lead sheathing, starboard
- Box 35: Bottom numbers lead sheathing, starboard
- Box 36: Bottom numbers lead sheathing, starboard
- Box 37: Bottom numbers lead sheathing, starboard
- Box 38: Bottom numbers lead sheathing, starboard
- Box 39: Bottom numbers lead sheathing, starboard
- Box 40: Bottom numbers lead sheathing, starboard
- Box 41: Bottom numbers lead sheathing, starboard
- Box 42: Bottom numbers lead sheathing, starboard
- Box 43: Bottom numbers lead sheathing, starboard

#### **Ceramics**

- Box 44: P7, P88, P93, P103, P127, P132
- Box 45: P18, P20 + P22, P22, P23
- Box 46: P28
- Box 47: AIX 404
- Box 48: P89, P95, P100, P123, P134, P145
- Box 49: P19/P29
- Box 50: P9/P110, P13, P146
- Box 51: P8, P84, P98, P109
- Box 52: P24, P121
- Box 53: P1, P26, P96, P107
- Box 54: Knucklebones

- Box 55: P99, P126, P160, P97, P125, P144, P140, P153, P161, P154, P141, P158, P159, P148
- Box 56: P94, P27, P104
- Box 57: P11, P85, P105/P106, P120, P123, P124A/P124B
- Box 58: P112, P131, P136, P137, P140
- Box 59: P92, P130, P142, P147, P152, P155
- Box 60: P25, P101, P129, P135, P138, P143
- Box 61: P139
- Box 62: P133
- Box 63: P14, P102, P151
- Box 64: P5, P128, P157

#### **Lead Sheathing**

- Box 65: Port side lead sheathing P11-P12?
- Box 66: Lead sheathing, bow extremity port or starboard? S8?
- Box 67: Starboard side lead sheathing, S? Starboard
- Box 68: Starboard side lead sheathing, S10 Starboard stern
- Box 69: Starboard side lead sheathing, S10
- Box 70: Keel lead sheathing, keel piece 115, Pb100, Pb101
- Box 71: Starboard lead sheathing, S9 F9-F22, Futtock, ES2? EF6-15
- Box 72: Starboard lead sheathing, S4 F25-F29, ES7-EF18-21, S10 tray IV
- Box 73: Starboard side lead sheathing, tray 2 on tray 1, Pb210, Pb207, S7-S8
- Box 74: Starboard side lead sheathing barnacles, S10, ZB, S9, Pb222, location?
- Box 75: Starboard side lead sheathing S3-S6
- Box 76: Starboard side lead sheathing, S3-S6, S9
- Box 77: Starboard lead sheathing EF12/13, F18-F20, S9?
- Box 78: Starboard lead sheathing S? starboard F31-F33
- Box 79: Starboard lead sheathing, Pb217
- Box 80: Starboard side lead sheathing, S6 Pb211, S7, Pb216, EF1-5
- Box 81: Starboard side lead sheathing east wale, \$10, Pb208, \$8
- Box 82: Starboard lead sheathing SR4 +SR5 under F42, S9 at F9, S? F17-F20
- Box 83: Starboard side lead sheathing S10 wale
- Box 84: Starboard side lead sheathing S4, S5, S9
- Box 85: Starboard side lead sheathing, starboard sheathing
- Box 86: Starboard side lead sheathing F11-F16, S6 F9 F10 at S6
- Box 87: Wood plus lead sheathing sternpost + lead, Pb215, Pb105
- Box 88: No identity lead sheathing
- Box 89: Port side misc. tray IX + X, strake F7 + F8, Forward or aft? Lead sheathing
- Box 90: Port side lead sheathing P10? Main wale, more than between F28 +F29, WS 10J Port P10 at F28-F29, Sample B [orange gunge], LW2, lead metal stip 4, Pb229, Pb228

- Box 91: Port side lead sheathing P4 [location?] P12, port strakes [various Ps]
- Box 92: Lead sheathing no identity P? or S?, Ratty's house
- Box 93: No identity lead sheathing
- Box 94: Tray IX-X bow extremity port or starboard? Starboard bow area attached to port bow, Pb227
- Box 95: Port side lead sheathing P4, P12, Pb209, Pb212, Pb213
- Box 96: Port lead sheathing P11 and P12 wale
- Box 97: Starboard lead sheathing F25-F29, Pb222, EF18-21
- Box 98: Starboard side lead sheathing S4, S6-S7, Pb200, Pb 205
- Box 99: Lead sheathing barnacle plaques Pb201, Pb202, Pb206
- Box 100: Starboard side lead sheathing S9-S10?, F25-F29
- Box 101: Keel lead sheathing keel piece 5-6, keel piece 95 + 85
- Box 102: Keel lead sheathing Pb204, Pb214
- Box 103: Keel lead sheathing Pb226, tray XX, Pb230, S1 plus others
- Box 104: Keel lead sheathing Pb100, Pb102, 2N
- Box 105: Starboard side lead sheathing S10 wale
- Box 106: Starboard side lead sheathing S5, Pb218, Pb219, Pb220, Pb221
- Box 107: Disassociated lead found under chicken wire trays
- Box 108: Keel corrosion product, bad stuff
- Box 109: Port side lead sheathing P11?, Pb225, P12, Pb223, Pb224
- Box 110: Lead sheathing S10

#### Wood

- Box 111: I Misc strake frags.
- Box 112: Il Misc. strake frags.
- Box 113: III Misc. strakes; garboard; stem?
- Box 114: IV Misc. strakes starboard
- Box 115: V Misc. strakes starboard
- Box 116: VI Misc. strakes small frags.
- Box 117: VII Misc. strakes small frags.
- Box 118: VIII Misc. strakes small frags.
- Box 119: Logs 1, 2, 4
- Box 120: Logs 5, 6, 9, 10, 11 [includes bark for logs 8, 10, 11]
- Box 121: Logs 14, 15, UM28, WF 48, WF 50, UM117 [prob. Logs], bark frags. From logs 14-19 or WF48
- Box 122: Log 8 (on PEG tray)
- Box 123: Log 12 (on PEG tray)
- Box 124: Logs 16, 17, 18, 19
- Box 125: UM31 (on PEG tray)
- Box 126: Log 3 (on PEG tray)

- Box 127: Limber boards ["MP"] 1, 3, 4, 5, 6, 7, 8, also contains: "maybe MP", unlabeled pieces in limber board tray.
- Box 128: Limber boards ["MP"] 9, 10, 11, 12, 13, 14, 15, 16, 17 [?] 19, 20-21
- Box 129: Port ceiling PC1 [CP6 parts 1 and 2]
- Box 130: Port ceiling PC2/CP5 and PC3/CP4
- Box 131: Filler old WF45 (wrapped on Jiffy foam on shelf)
- Box 132: Filler boomerang (wrapped on Jiffy foam on shelf)
- Box 133: Port ceiling PC4/CP3
- Box 134: Port ceiling PC5/CP2 and PC6/CP1
- Box 135: Strake SG2 treated with alcohol (in bag on shelf)
- Box 136: UM61 found S under mast step (in bag on shelf)
- Box 137: Wood from sockets of spear/javelin heads, FE38, FE40, FE41, FE42, FE43, FE44, KS 11, wood shafts
- Box 138: Misc. Ums [unknown members]
- Box 139: Old WF 5 short piece, UM100, bow 5, UM114, {UM99A, UM99 which are both W81} UM32A, UM68 with an eyebolt Cu24, 216 which is bow strake with internal lead patch
- Box 140: Starboard ceiling planking [includes ECPs and UMs]
- Box 141: Bow sheathing [shoe under keel] and UMs + bow pieces
- Box 142: W80/UM32 and UM37, UM12, UM49, UM39, UM29 frag., stern elements, find UM38
- Box 143: Wedges and shims
- Box 144: Misc. ceiling, strakes + limber boards
- Box 145: UM16 wood
- Box 146: Frame frags.; keel; stern post
- Box 147: Under hull: P1+2, S1+2
- Box 148: Interesting UMs and frame frags.
- Box 149: W82/UM36 quarter rudder/steering oar
- Box 150: Unknown members: UM9+10, 64 [on display], 65, 67, 69
- Box 151: W77/UM 77, W78/UM78, UM96 group, W79/UM96, W18, W85/UM107, UM201