

# The Basic Principles and Practices of Maritime Archaeology



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# What is Archaeology?

- The study (i.e. identification and interpretation) of physical traces left by past ways of life.

Koster  
Site,  
Illinois



# What is Maritime Archaeology?

- Broadly speaking it is archaeology that relates directly to historic and prehistoric interactions with the Oceans, the Seas, Rivers, bogs, swamps, lakes, etc.



# The Basic Principles and Practices of Maritime Archaeology: Today's Topics

The Archaeological Site and its Formation

Stratification vs. Stratigraphy

2 Main Project Types: Survey vs Excavation

Information and Insights Gained

The Big Picture



Just when you thought it was safe to...



# Principles

- An Archaeological Site such as a shipwreck is a concentration of material remains which indicate how people lived in the past

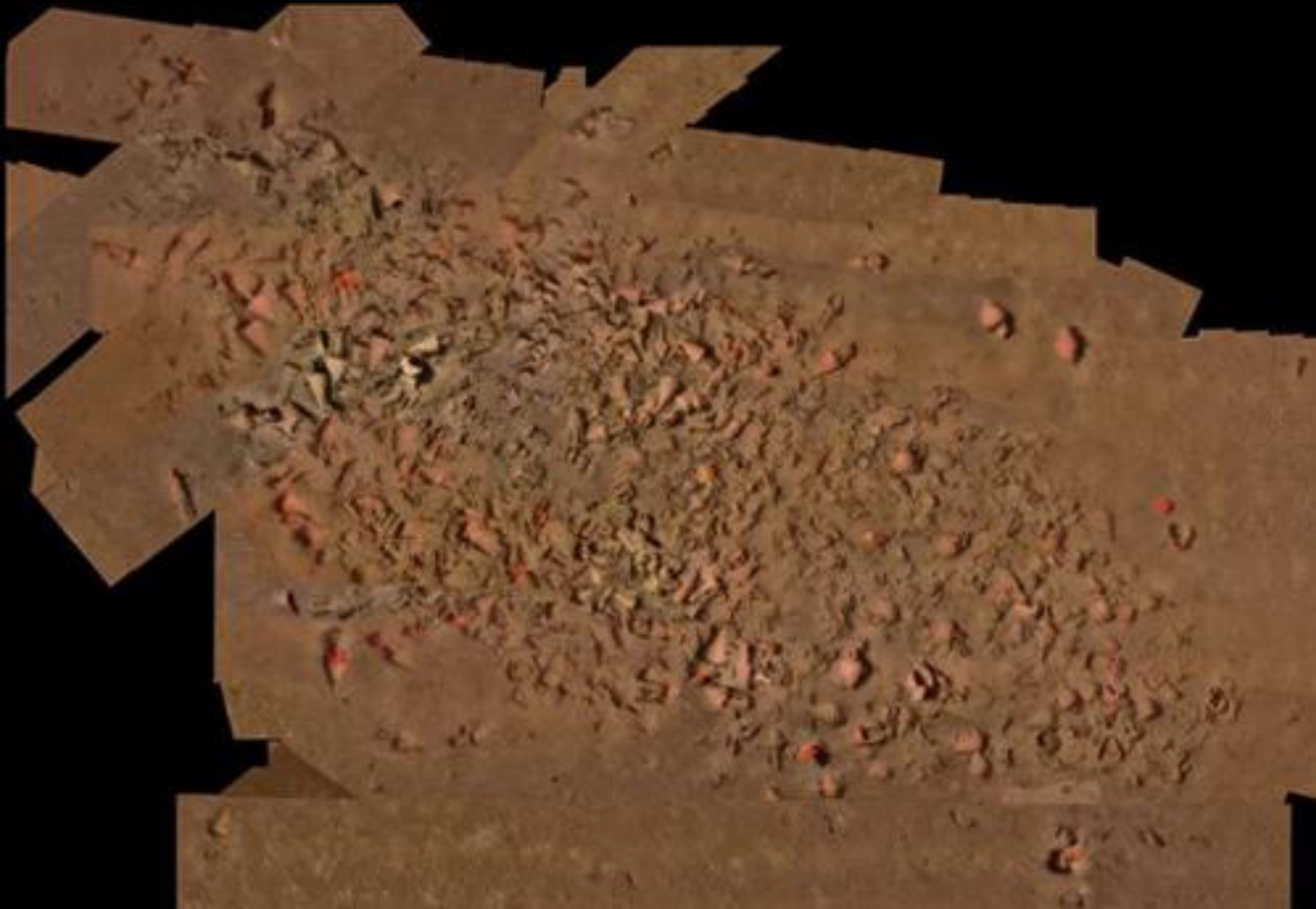
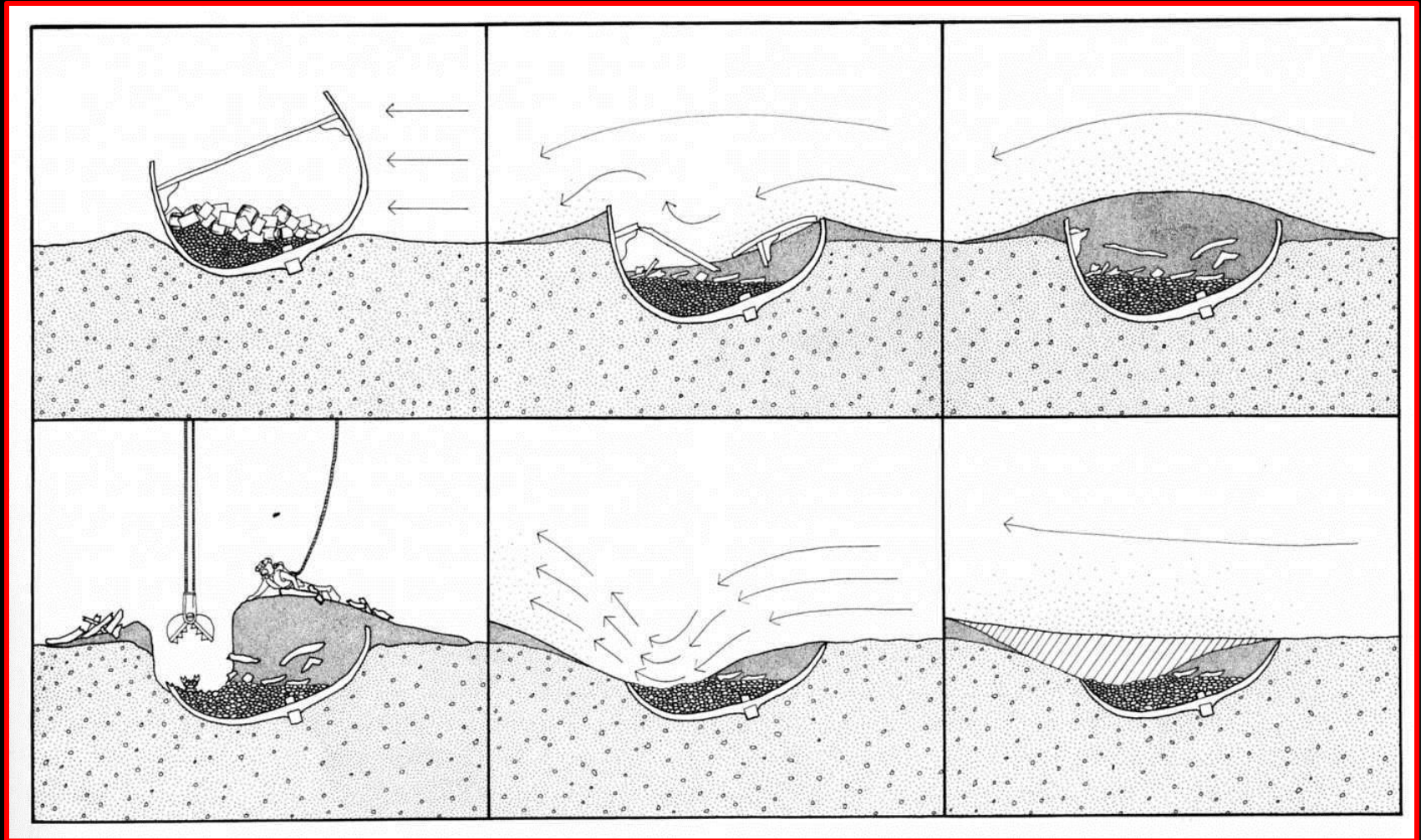


Photo mosaic, Chios Shipwreck Survey 2005

# Wreck Site Formation



Bowens, 2009

# Important Factors

- Nature of the Wrecking: Slow or Fast
- The Geographical and Topographical Area
- Type of Seabed: Flat and Sandy or.. Steep and Rocky..
- Depth of Seabed: Shallow or Deep



# Important Factors

- Prevailing Current(s) and Wave or Tidal action
- Sedimentation Rate: Fast, Slow or Intermittent
- Level of Oxygen: High, Low or NO
- Organisms: Living and Dead

# The Dreaded Shipworm



*Teredo navalis*  
Spain, Canarias Lanzarote  
NMR 37462.  
Total length of tube 185 mm

# Teredo Navalis: Damage



# Stratification vs. Stratigraphy

Stratification: the laying down of layers (strata) one above the other, like brickwork

Stratigraphy: the study of the formation, composition, sequence and interrelations of strata

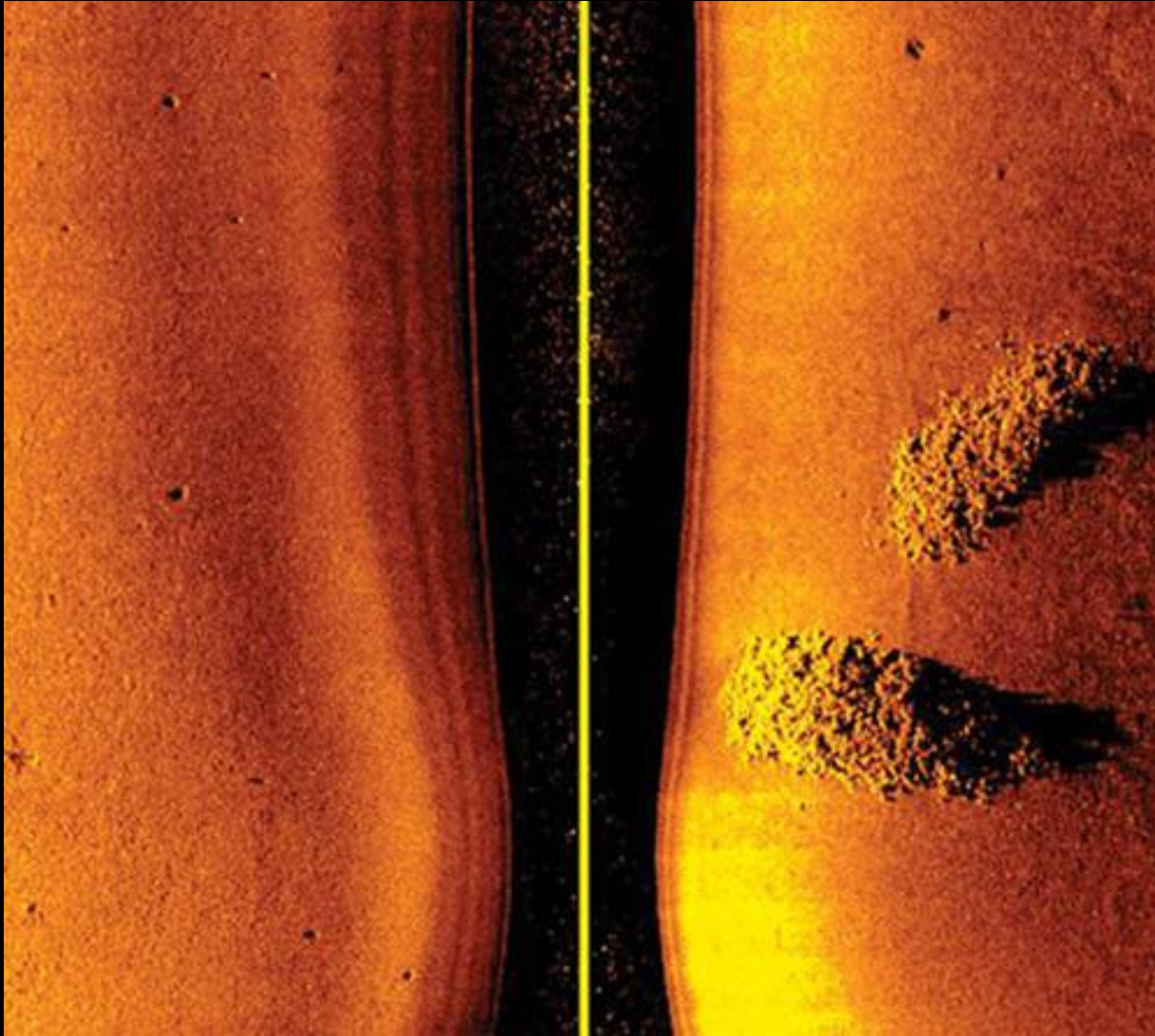


Bowens, 2009

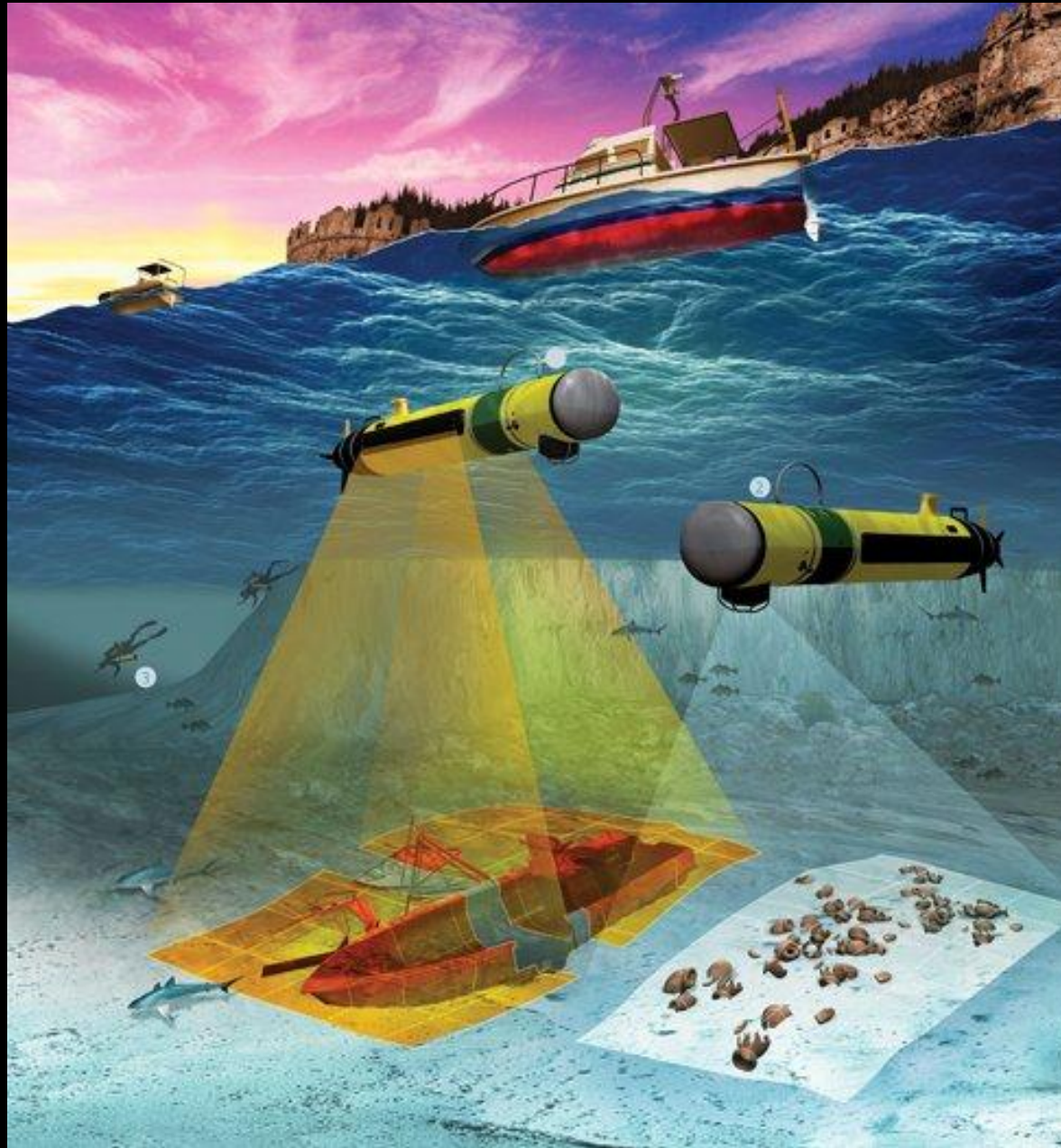


# Survey: 1<sup>st</sup> Type of Project

Survey: the systematic visual recording of archaeological remains without the removal of the materials covering and accompanying them



# Survey



# Survey

- Relatively Inexpensive
- Non-destructive
- Little or No need for Conservation or Storage Facilities

# Survey

- Low level of Skills required
- A large amount of Territory can be covered in a relatively short period of time
- Use of Robots (sometimes)



# Excavation: 2<sup>nd</sup> Main Project Form

Excavation: the systematic uncovering of archaeological remains by the removal of the materials covering and accompanying them

Mazotos,  
Cyprus

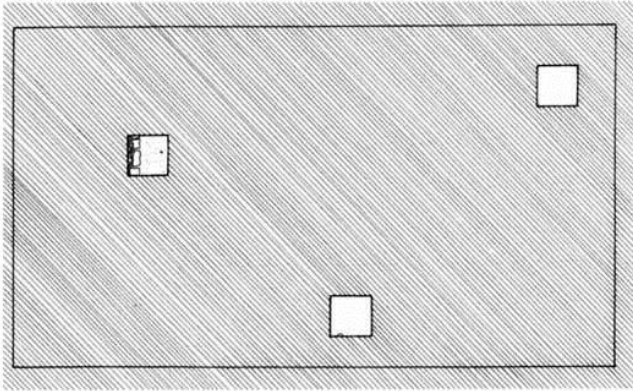


# It's All About the Layers..

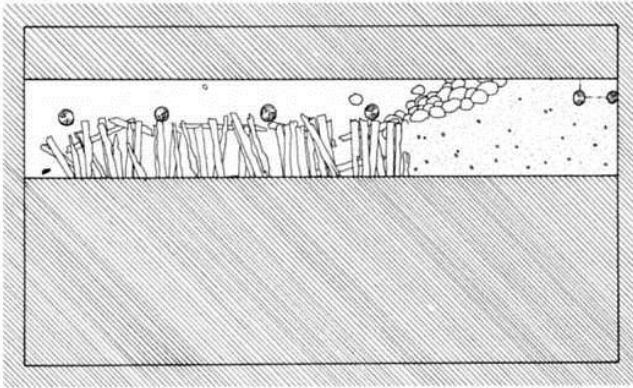




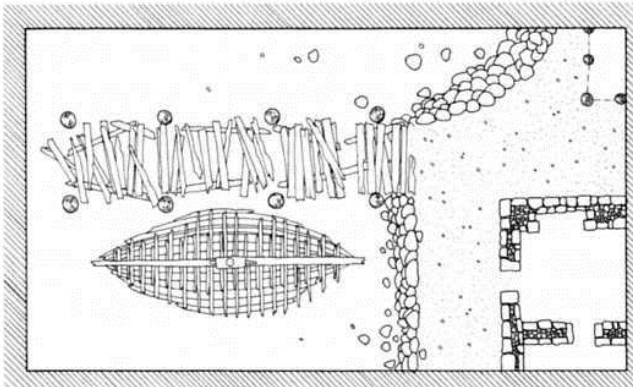
# Excavation



Test Pits

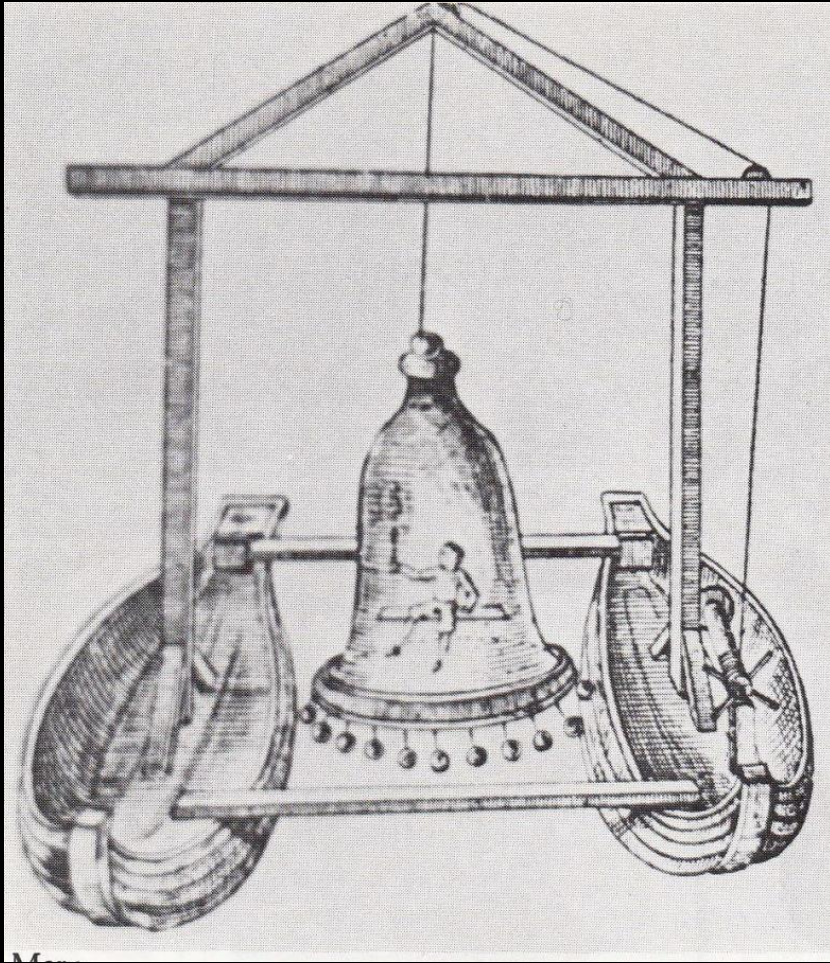


Trench



Whole Site

# Basic Tools of the Trade



A.D .1500's



1935

Scuba Gear: allows excavators to breath and work underwater

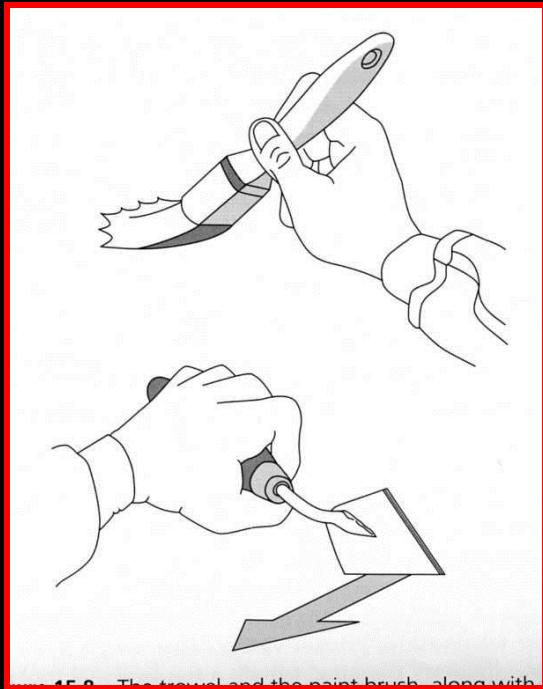


# Basic Tools of the Trade



The Reference Grid:

# Basic Tools of the Trade

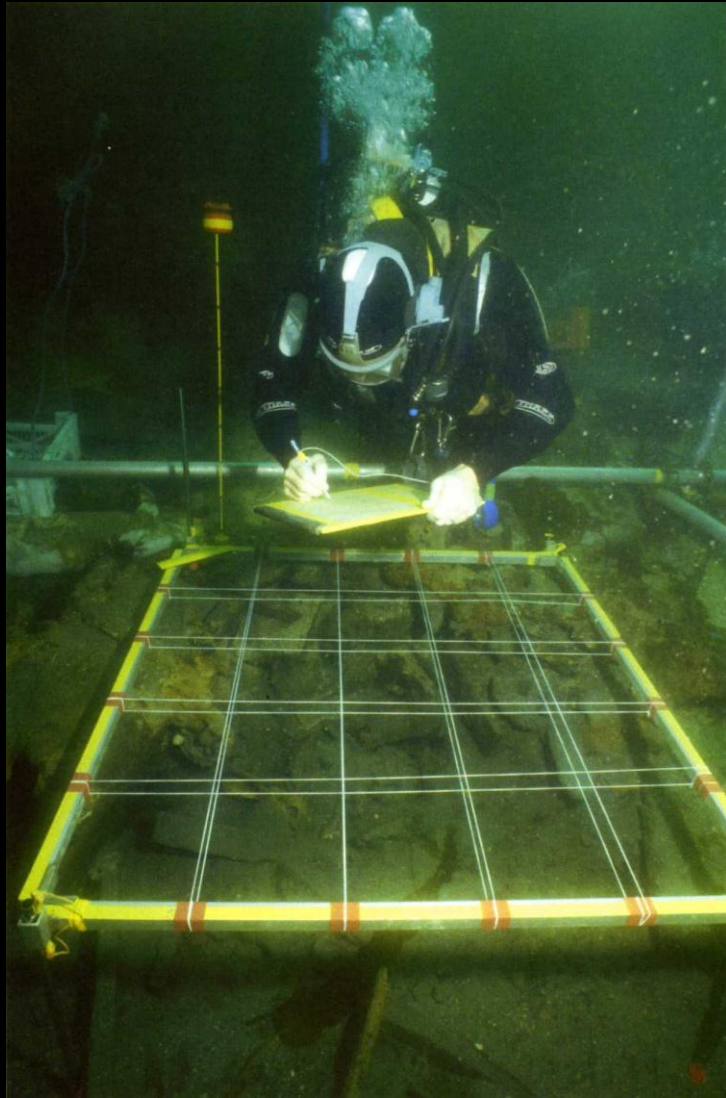


(a) Hand; (b) Paint Brush  
(c) Trowel

The Airlift



# Basic Tools of the Trade



Recording tools: pens, drawing paper, measuring tapes

# Basic Tools of the Trade



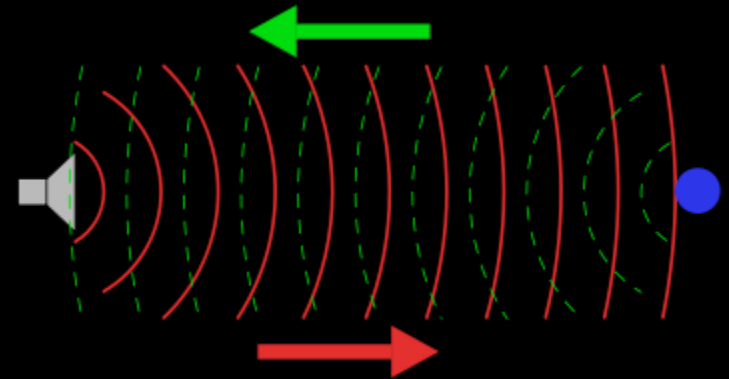
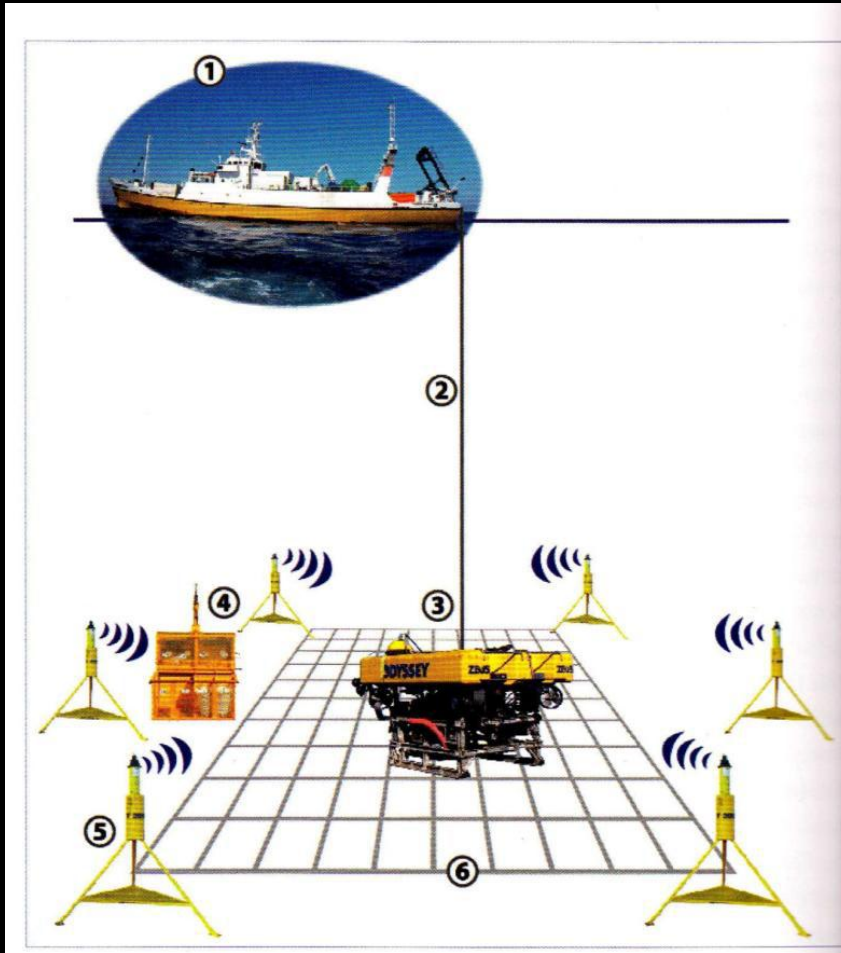
The Balloon Lift



Imax Omnimax Camera



# Basic Tools of the Trade



Reliable Positioning System

# Excavation

- Expensive
- Need for Conservation and/or Storage Facilities
- A Slow Time-consuming Process

# Excavation

- Destructive and Irreversible
- A Large Amount of Data
- Higher Level of Skills required



# Information/Insights gained from Survey and Excavation Include

- Either a Relative or an Absolute Date
- Sailing Routes
- Types of Cargo Carried
- Extent or Sophistication of  
Commerce/Trade/Gift Giving

# Information/Insights gained from Survey and Excavation Include

- Technological Sophistication/Development
- Ethnicity of Seafarers
- Corroboration of Written and/or Pictorial Sources

# The Big Picture

