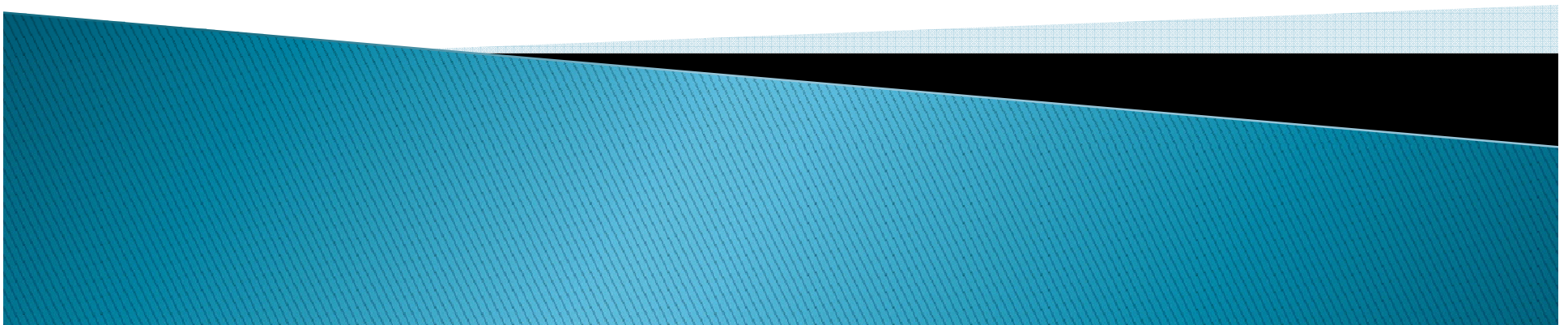


MARITIME ARCHAEOLOGY

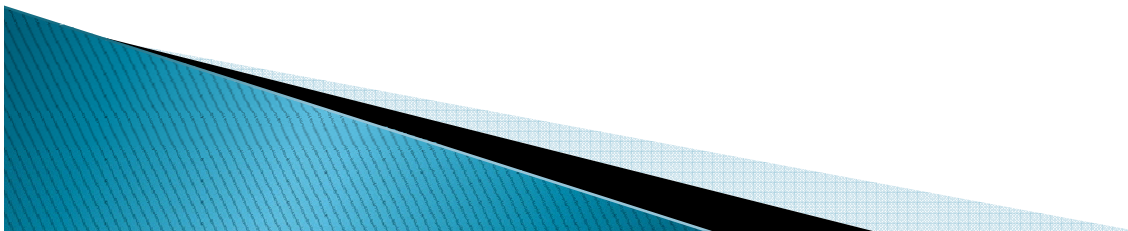
History or Science?

DR. JESUS VEGA



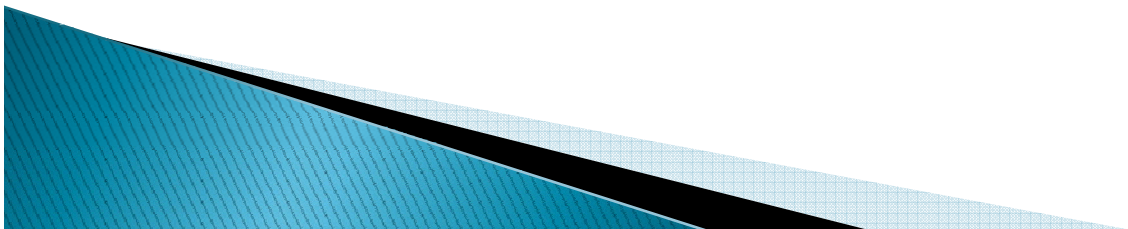
MARITIME ARCHAEOLOGY:

- ▶ 1) A scientific discipline within anthropology that studies past human interaction with the sea, through the excavation of ports, shipwrecks, inundated prehistoric sites, etc.
- ▶ 2) A historic discipline that studies the maritime heritage of nations.



OPPORTUNITIES

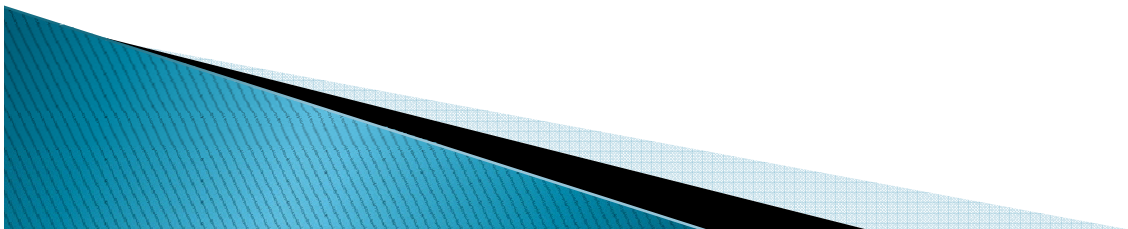
- ▶ Extend PR prehistory from 4000 to 7000 BP
- ▶ Public awareness of maritime heritage
- ▶ Combine natural and cultural preservation
- ▶ Develop undersea archaeological parks
- ▶ Attract attention of global tourism
- ▶ New vision of Puerto Rico's past



ISLA VERDE SITE

First excavation of a submerged prehistoric site in the Caribbean (1980)

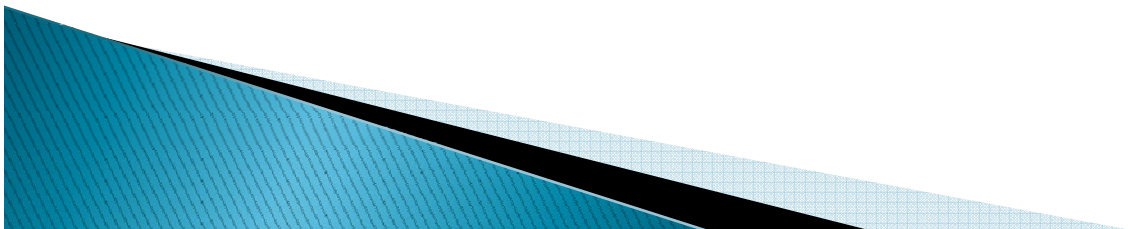
- ▶ Found in early 1970's by JV and A. Camacho
- ▶ 800 to 1200 BP
- ▶ Ceramics, stone adzes, human bones
- ▶ Manatee & turtle bones
- ▶ Near Spanish shipwreck (16th century)

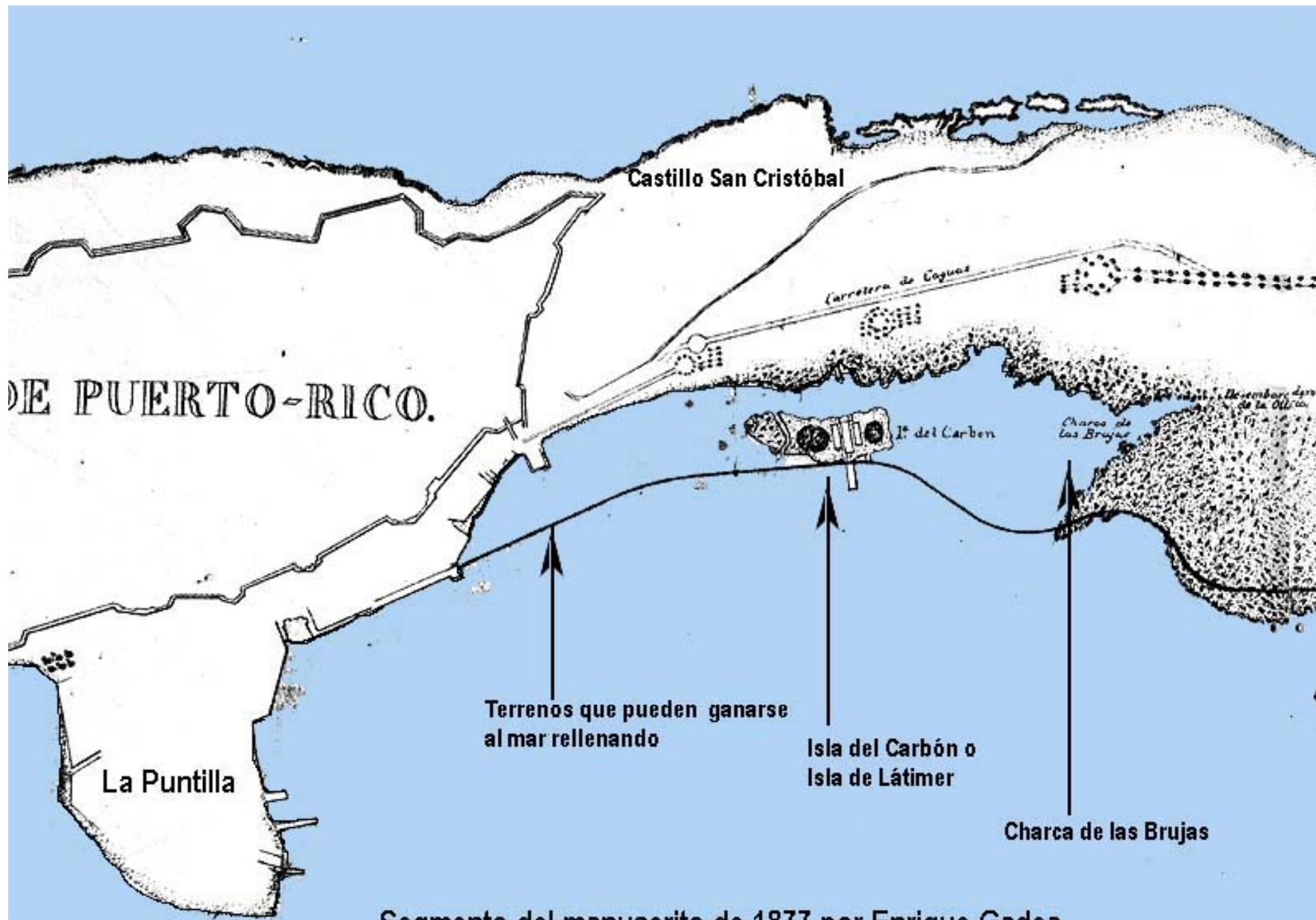




PIER 6 AS HISTORY

- ▶ Modern pier built over “Isla del Carbón”
- ▶ Transition from sail to steam
- ▶ Two anchors and two cannon excavated in fill
- ▶ Diving inspection of magnetic anomaly from previous magnetometer survey
- ▶ Charcoal sample from seabed



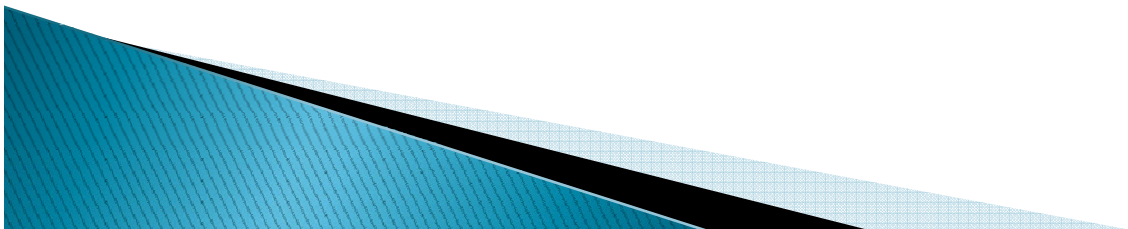


Segmento del manuscrito de 1877 por Enrique Gadea

AGPR, Fondos: Gobernadores Españoles, caja 577, Folio 117, San Juan

PIER 6 AS SCIENCE

- ▶ San Juan Paleo–River
- ▶ San Antonio Paleo–River
- ▶ Use of Historic Charts for reconstructing evolution of the San Juan Bay Estuary
- ▶ Issues in Cultural Evolution

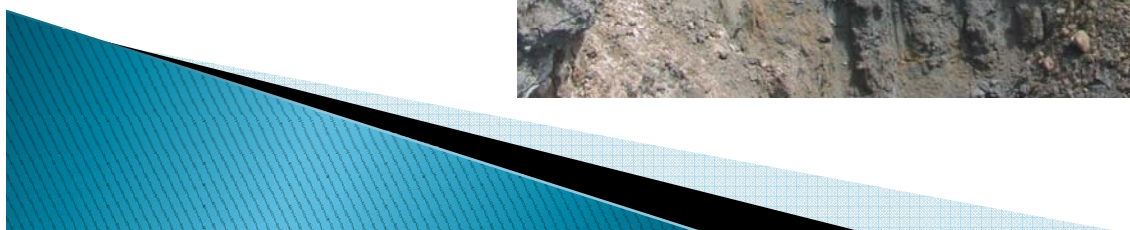




























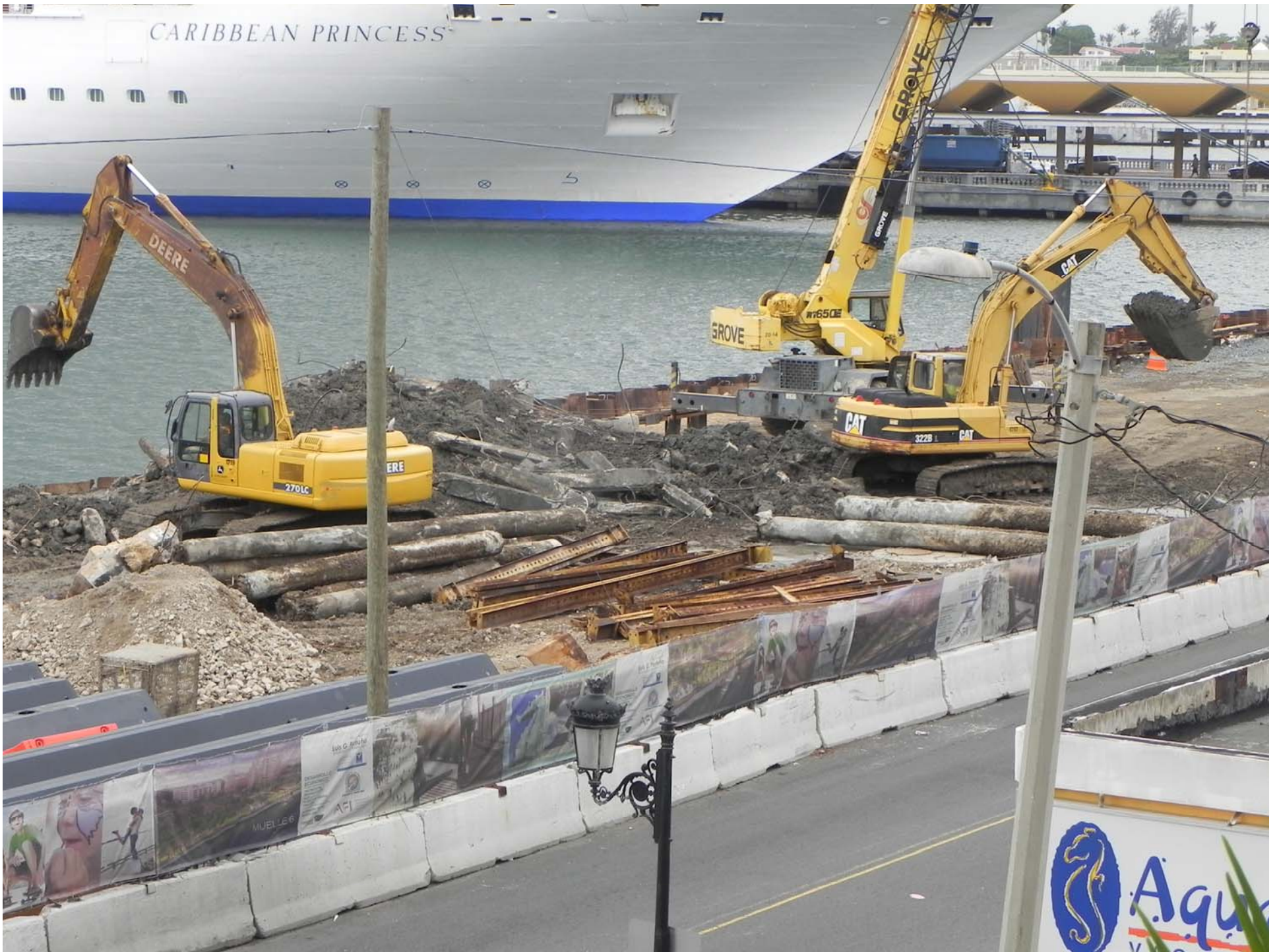


















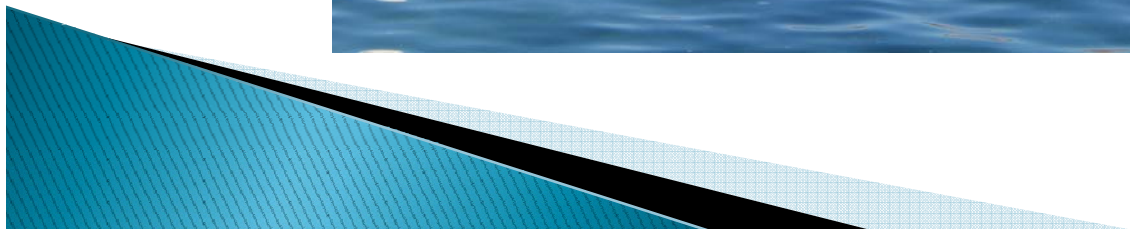
NUESTRA CULTURA

www.bahiaurbana.com

NA
VIDA

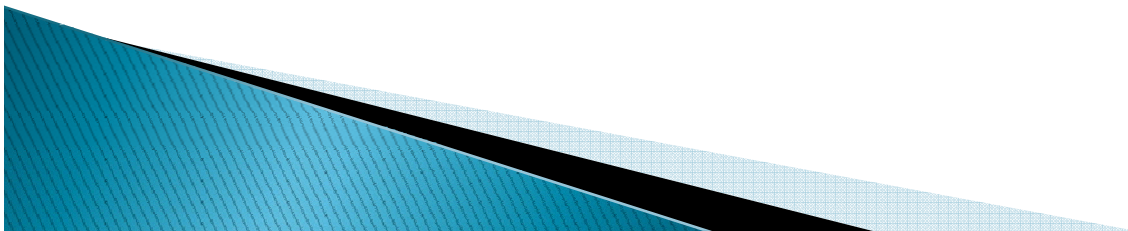
VIVA

FORT SAN GERONIMO, 1587-1940



FORT HISTORY

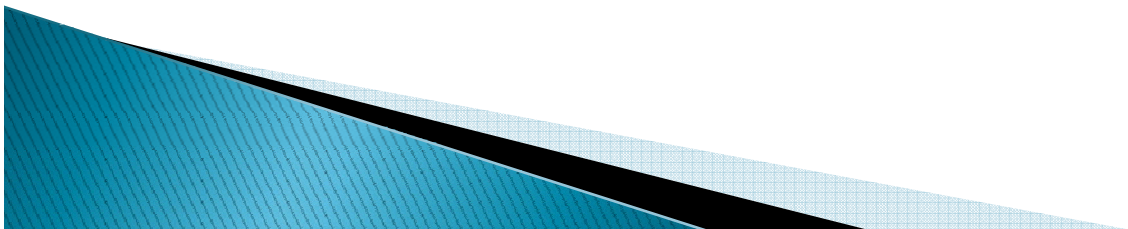
- ▶ Advanced Defense Line of San Juan
- ▶ Invasions of Puerto Rico
- ▶ Wreck of British warship in 1598
- ▶ Use of the fort from 1898 to 1940
- ▶ Museum built by Dr. Ricardo Alegría
- ▶ Abandonment & Future Rehabilitation
- ▶ Center versus Periphery





FORT SCIENCE

- ▶ Coastal Geoarchaeology & Zooarchaeology
- ▶ Erosion, Tectonics, Eustasy
- ▶ Mortar Analysis
- ▶ Masonry Compaction
- ▶ Artifact Drift



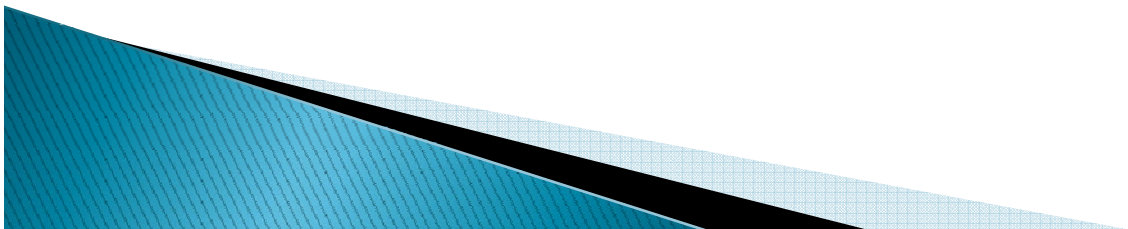






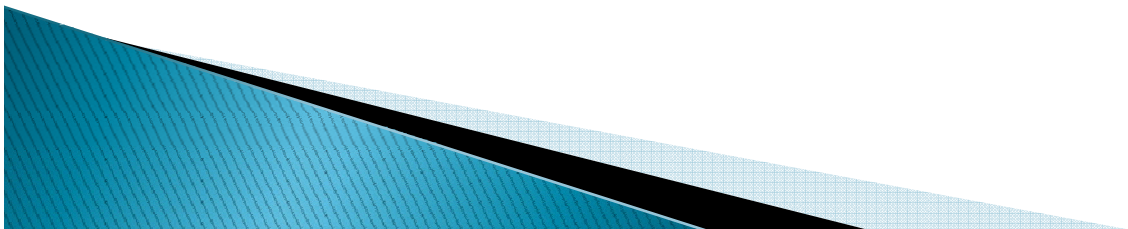
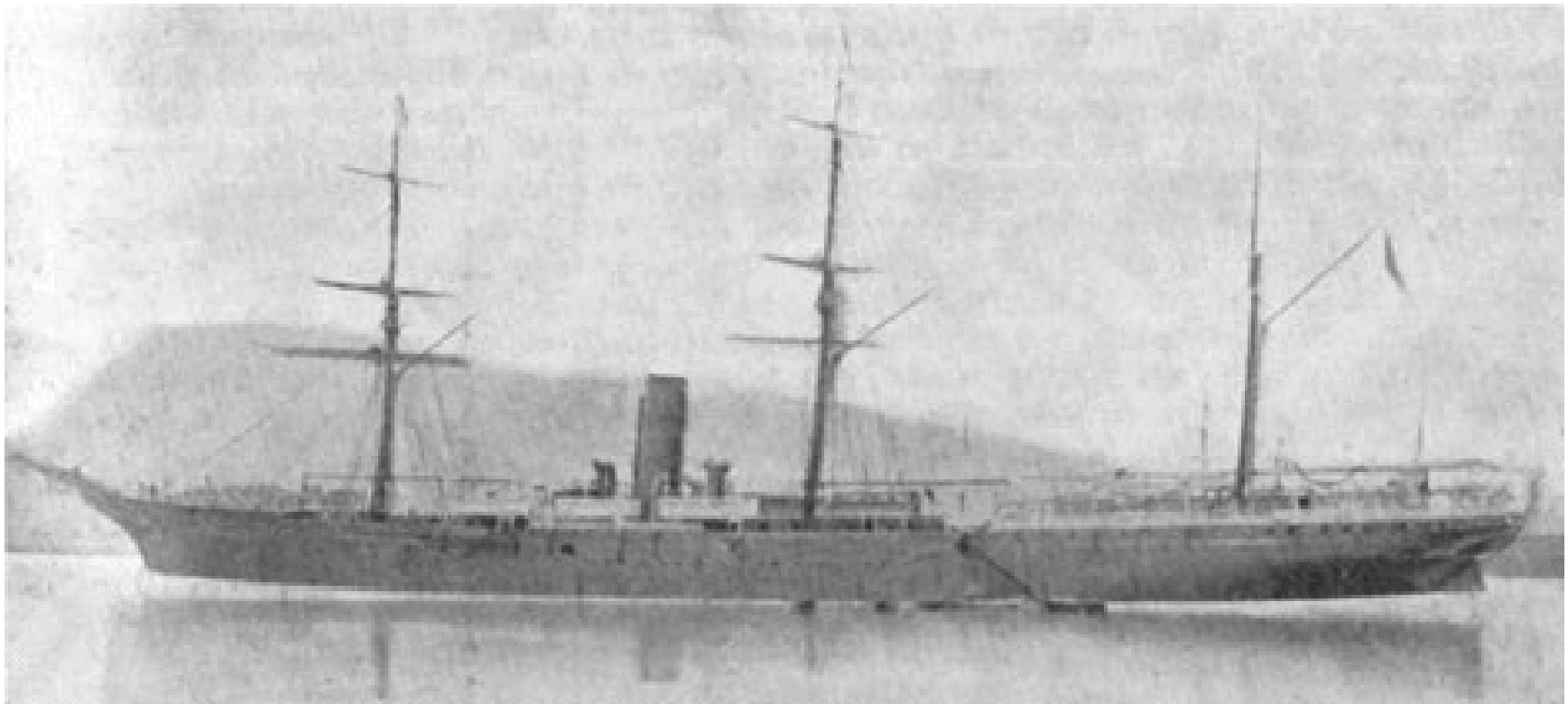
SANTA MARÍA DE JESÚS (1550)

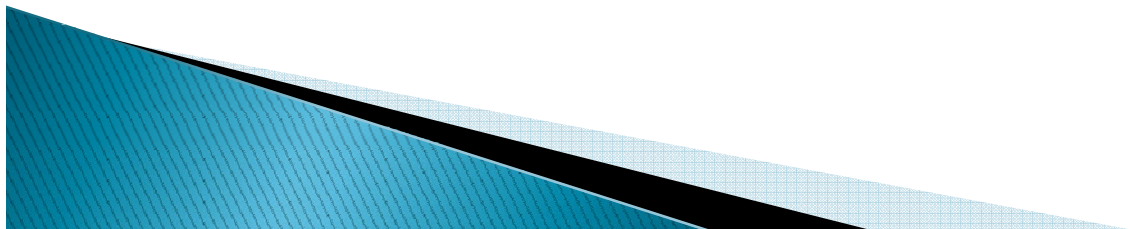
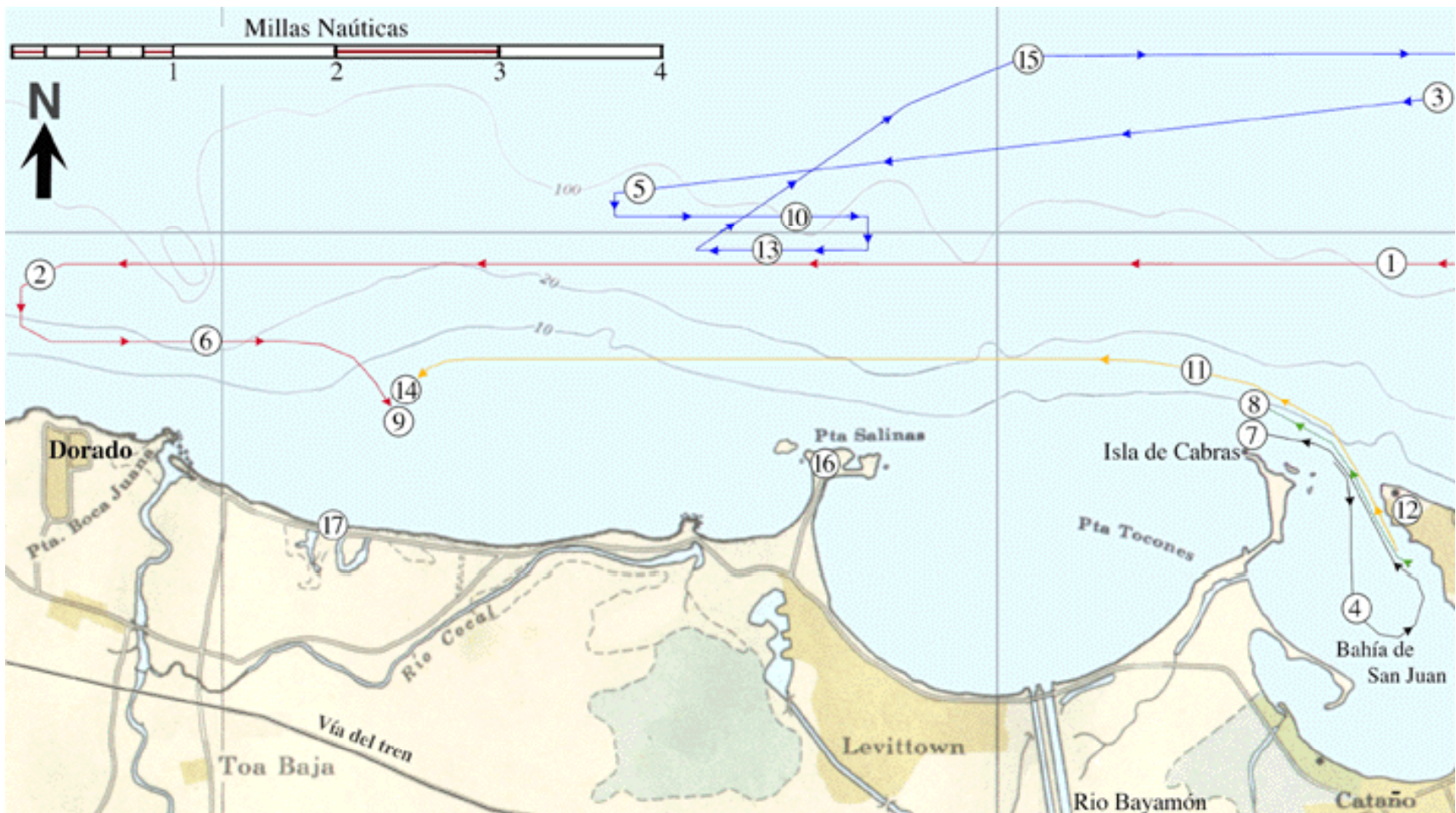
- ▶ The “Big Galleon” in treasure diving books
- ▶ “La nao más rica que a Indias había pasado”
- ▶ First search permit granted by PR Government
- ▶ Found in 1989 by J. Vega and W. Cardona
- ▶ Oldest identified shipwreck in the Western Hemisphere





S.S. ANTONIO LÓPEZ, 1898







Investigating the ANTONIO LOPEZ

NPS Files



Jesus Vega, Ph.D.

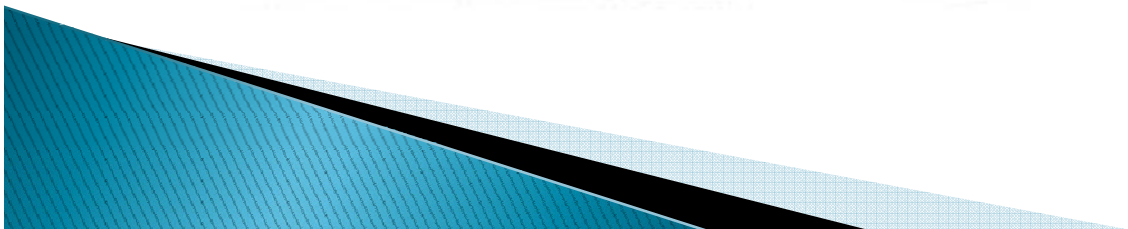
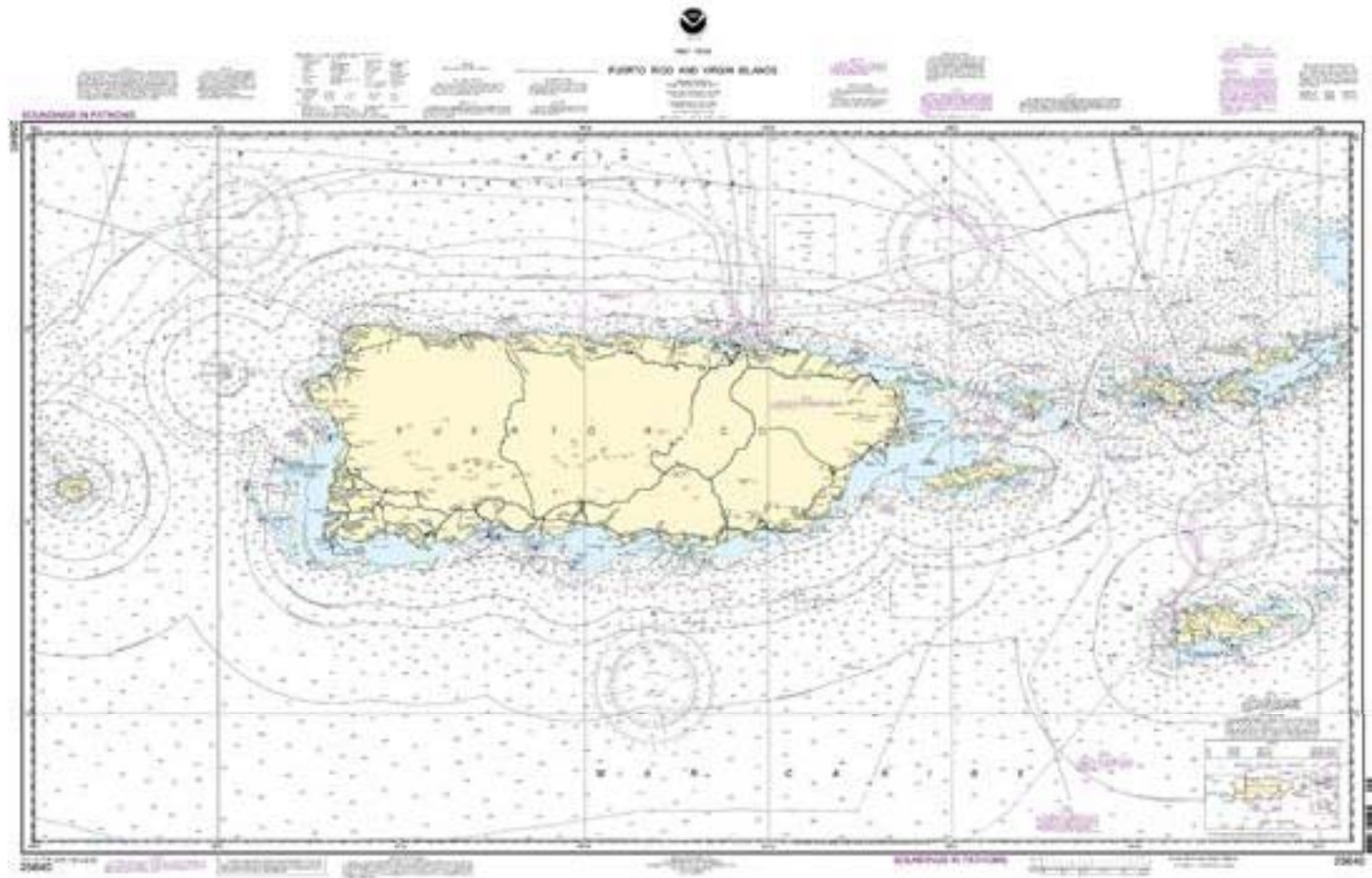
Culturas en Azul



Naufragios, Tesoros
y Arqueología
en Aguas de
Puerto Rico

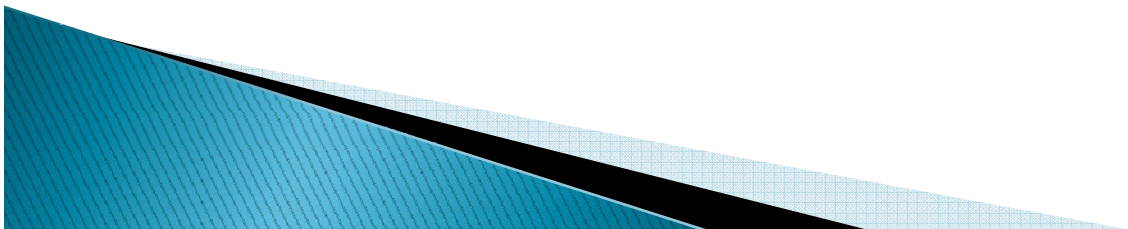


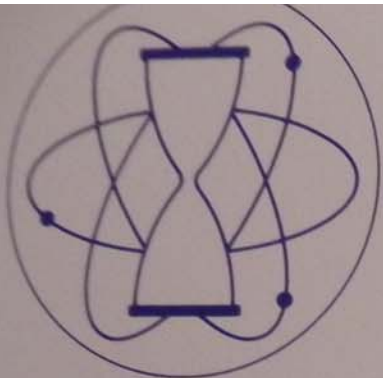
“PUERTO VIRGEN”



THE OLDEST SITES

- ▶ The oldest prehistoric sites in Puerto Rico are found under the sea
- ▶ Oldest, certified terrestrial site is Angostura, in Barceloneta
- ▶ Ten shell and charcoal samples dated at Geochron Laboratories, Cambridge, Mass.
- ▶ Oldest sample is 4120 + 80 BP (Vega 2002)





GEOCHRON LABORATORIES

a division of Krueger Enterprises, Inc.

711 Concord Avenue ♦ Cambridge, Massachusetts 02138-1002 ♦ USA
t (617) 876-3691 f (617) 661-0148 www.geochronlabs.com

RADIOCARBON AGE DETERMINATION

REPORT OF ANALYTICAL WORK

Our Sample No. **GX-28812**

Date Received: 01/11/2002

Your Reference: Angostura Site, Barceloneta, Puerto Rico

Date Reported: 01/31/2002

Submitted by: Dr. Jesus Vega
Terrestrial & Underwater Archaeology
PO Box 366064
San Juan, Puerto Rico 00936-6064

Sample Name: **ANGOSTURA #5**

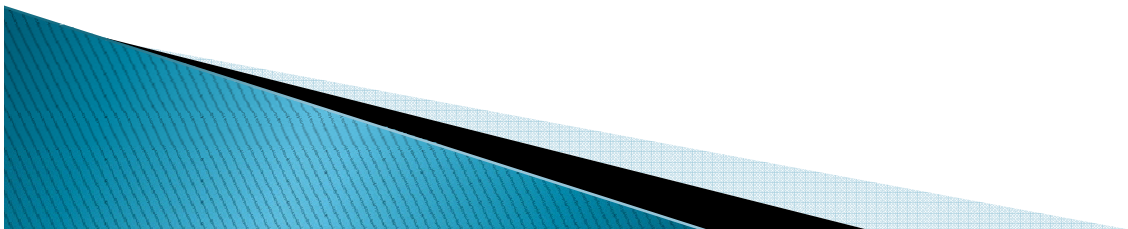
AGE = **4120 ± 80 ¹⁴C years BP (¹³C corrected)**

Description: Sample of shells.

Pretreatment:

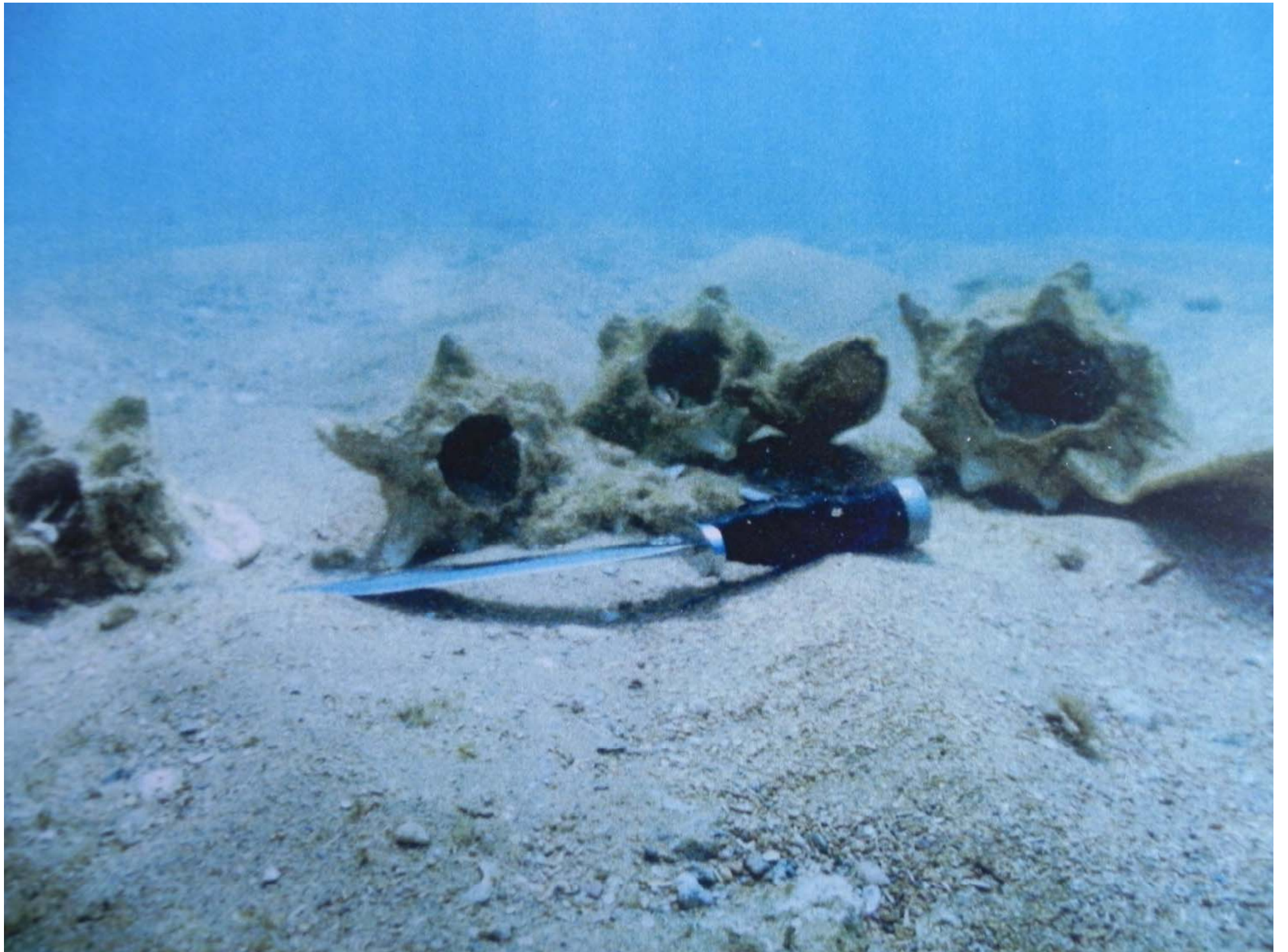
VEGA-VICENTE SITE

- ▶ Submerged Preceramic Site off Condado
- ▶ Discovered by JV and Dr. Vance Vicente
- ▶ Depth of 6.7m (22 ft.), 205m from shore
- ▶ Strombus conchs with tips removed, worked shell tips, rudimentary lithics, no pottery
- ▶ Dated to 6250 BP using sea level curve
- ▶ If confirmed, this is the oldest known prehistoric site in Puerto Rico



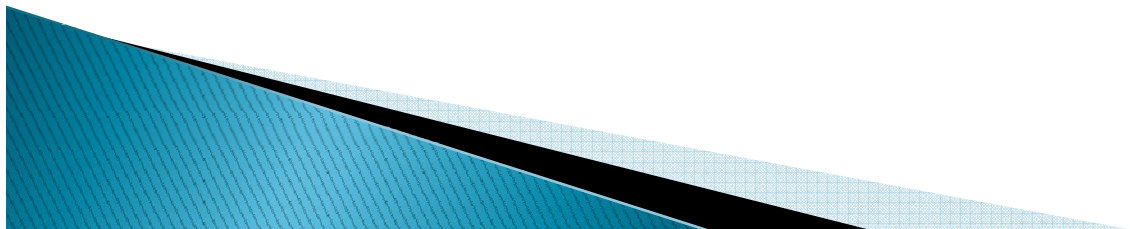
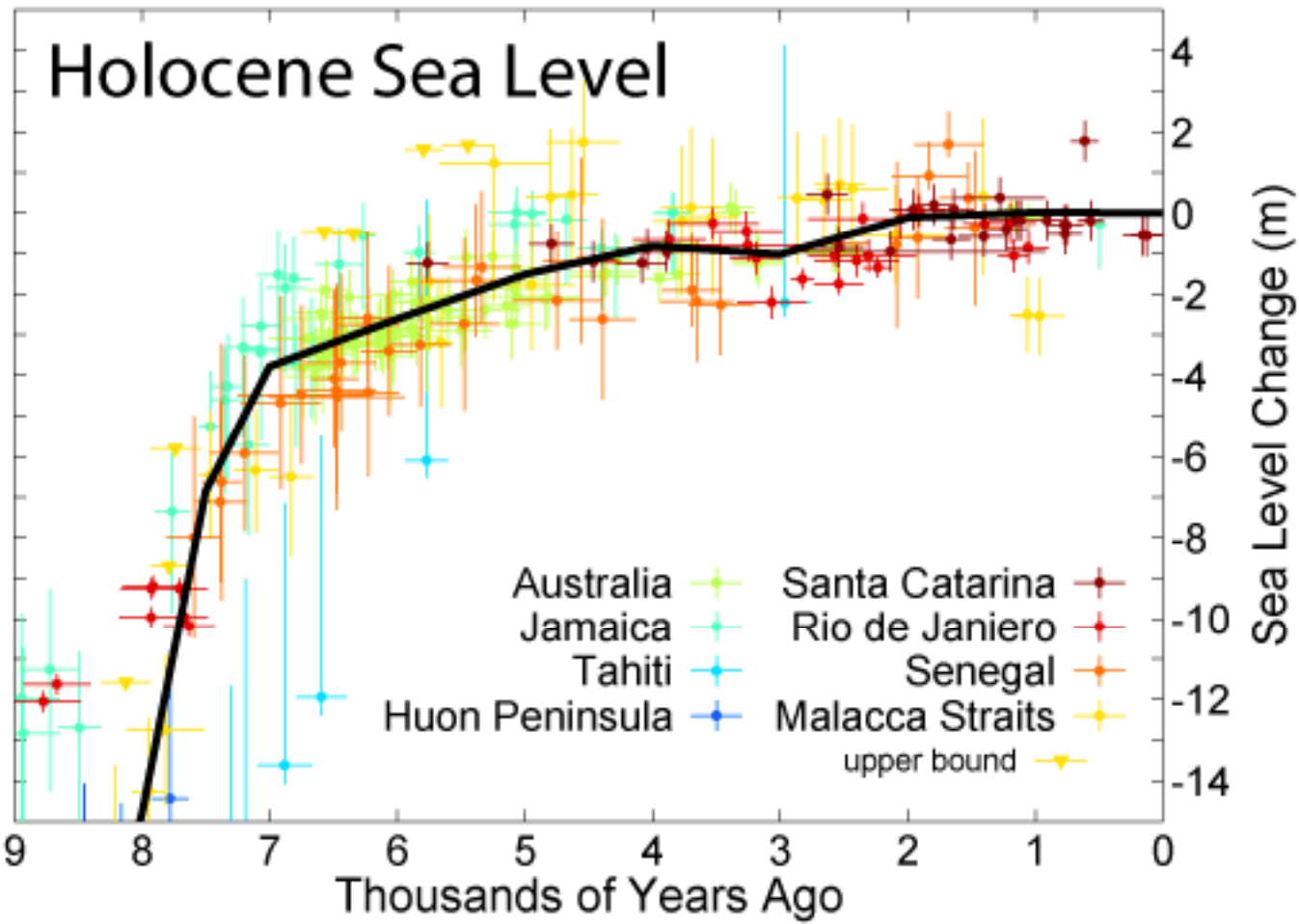












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