

# Maritime Scale Modeling

## • The Range of Maritime Subjects

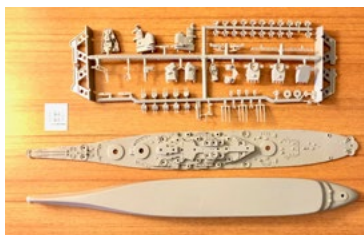
The panorama of vessels is immense; it includes rafts, canoes and kayaks, rowing skiffs, competition shells, fishing and hunting boats, whaling ships, ore carriers, yachts, submarines, liners, recreational runabouts, sailing ships of war and exploration, tugs and barges, Cup racers, hydroplanes, ancient traders, cargo ships, river paddle wheelers, iceboats, multi-hulls, freighters, steamers, ferries, container ships, tankers plus associated items such as weapons and infrastructure like docks, ore loaders, lighthouses, etc.

## • Why do it?

Each builder practices for his own reasons. "His," because there are very few female practitioners. As a pastime, to document and illustrate research, for competition, to demonstrate manual and/or technical skills, as art and decor, or to separate oneself from the daily grind. One common thread is an interest in history.

## • Scratch and Kit building

Model makers build from plans only (scratch) or from kitted materials. For reasons of economics, kit manufacturers often compromise on components supplied and so, builders driven by historical accuracy will tend to set those less authentic parts aside and substitute their own, made from scratch. And then, there is an industry called "after-market," which supplies parts that are difficult to make by hand, such as photo-etched railings, radar towers and mini gun barrels. In addition, complete, tiny aircraft may be printed by 3D technology for an aircraft carrier, for instance.



Injection-molded styrene by Atlantis Toy & Hobby, USS Iowa, scale 1/535.

Solid hull wood kit of NY Pilot Boat Phantom, by Model Shipways, 1/96.

## • Scale

Scale, the ratio of model size to that of the actual vessel, varies widely to create manageable artifacts. Huge ships dictate smaller fractions such as 1/700, while small craft might be built to the larger scales, like 1/12.

Sample Scale:	Ht. of Average Man
1/700	1' = 0.017" 0.10" (Small Scale)
1/12	1' = 1" 5.83" (Large Scale)

## • Materials

Ship models are built of paper, wood, sheet, injection molded, thermoformed and foam plastics, cast resin, metal, bone and ivory. Lasers, acid etching, 3D printing and computer-controlled routing are routine for both manufactured and custom parts.



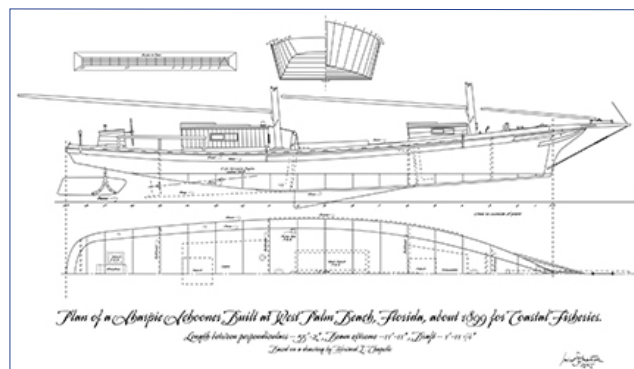
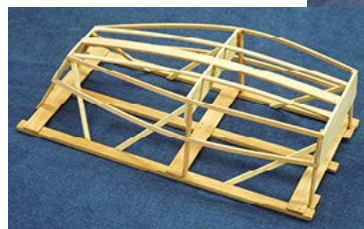
Illustrating the range of sizes and eras. Scratch-built, post-Civil War Seminole canoe by author, Irwin Schuster, Tampa, and USS Henderson DD 785, US Navy Gearing class destroyer, TehnoArt 1/192 model by Steve Sobieralski, Tampa.



Clark Mills' Optimist Pram, scratch-built model by Tim Roberts, Clearwater.



This shows Mills' jig system for making multiple, identical hulls for fleet racing.



Typical historical documentation that might be used by a scratch-builder.



1/350 (3.4") Iron Shipwright Tug, Hoga. Resin kit model by Tim Roberts, Clearwater.

1/16 Scratch-built model by author (Cedar Key Sharpie, ca. 1894).

• **Methods of Classic Modeling**

**Ships-in-Bottles:** Fabricated and rigged outside, then folded down to be re-erected.

(Boy, that makes it sound simple, no? It is not.)

**Half models:** Traditionally, builders carved hulls, then took the lines from the model, as a guide for the shipyard. Additionally, modelers will build simplified halves for display. Finally, "rigged halves" are seen as vertical dioramas.



Classic half hull model of 1871 sloop **Shadow** by Nathanael Herreshoff.

**Solid hulls:** Carved by hand or machine of a single block or from horizontal or vertical lifts. These are often hollowed out to reduce splitting.

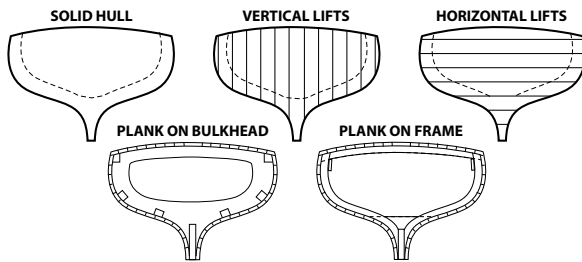
**Plank on bulkhead:** Bulkheads are formers typically erected on a keel structure.

**Plank on frame:** Frames are typically built up or shaped just as in full-size vessels.

**Dioramas:** These are scenes, usually with shaped water surface, demonstrating action.

**Admiralty models:** A special class of ship models built as "sales tools" by the Royal Navy in the 18th and 19th centuries. Often some planking is omitted to show internal structure.

The term is also used for contemporary models built in similar style.



• **On-water Models/Pond Yachts**

**Sail-Wind Propelled:** Broadly, there are two types; historically configured boats and racing classes designed strictly for competition.

**Fuel Powered:** Propulsion by steam, electric, liquid fuel rotary and jet engines. Here too we find historically accurate models and flat out racers. Separate radio channels adjust direction and speed.

**Free Sailing:** (set, launch and chase from land or boat) and **Braine or Vane** steering are traditional. The latter sailboats use elaborate mechanisms to control the rudder to maintain a desired course.

**Radio Control:** These systems use, well, **radio** transmissions to **control** direction of rudder and sails by electric servomechanism adjustments from shore.

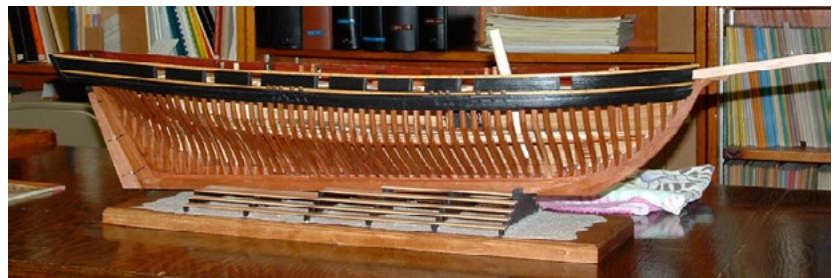
Scratch-built Ship-in-Bottle by Alex Bellinger, Newburyport, MA. (Clipper, **Flying Cloud**).



**Florida One-Design** by George S. "Gidge" Gandy, Jr. 1919, for St. Petersburg YC. scratch-built model by author.



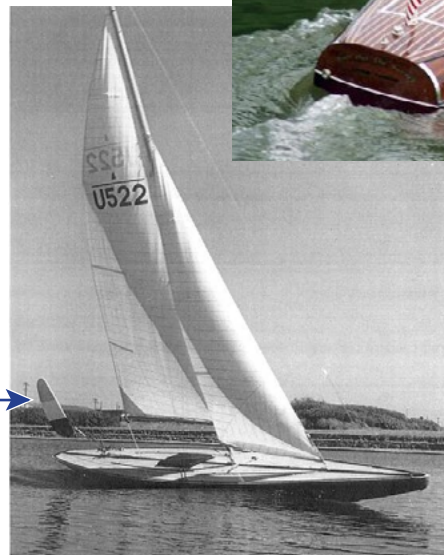
1/18 Florida **Fish Class One Design** by Rathbone de Buys, 1919. Scratch-built model by author.



1812 Baltimore clipper, **Chasseur**, scratch-built Admiralty-style ship model by Arthur Ortner, Sarasota.



Classic **Chris Craft**, "ready-to-run," radio-controlled runabout by ProBoat.



Int'l. A-Boat, Frank Stout's vane steered, **Magic**. Photo by Jeanne Stout Burke, US Vintage Model Yacht Group archives.

Steering Vane