



# HERMIONE

*Frigate of the American War of Independence*

1779 - 1793

A 1/48 SCALE MONOGRAPH

*The book includes all timbering plans*

Jean-Claude Lemineur

Patrick Villiers

**O**n March 10, 1780, The Marquis de Lafayette boarded *Hermione* on his way to the coasts of North America. He left to announce the arrival of royal troops to fight the English occupier on the side of the insurgents. The crossing was accomplished in the record time of 48 days. This performance was due to *Hermione*'s excellent nautical qualities. In fact, *Hermione* was a new-generation frigate built before the revolution. Started on the ways in December 1778, she benefited from important advances that were brought about by a new concept developed during the second half of the 18<sup>th</sup> century that translated into seagoing capabilities well beyond those of vessels built according to older designs. Like the other frigates of her generation she allied speed and firepower, allowing her to rival those of the Royal Navy. But what did *Hermione* look like?

Surprisingly, nothing specific remains concerning her, except for the information that she was constructed on the same plans as *Concorde*, built in 1777. As it turns out, *Concorde*'s lines were taken off by the Royal Navy after her capture in 1783, and the plans were kept at the NMM in Greenwich.

It is fair to believe that *Hermione* is similar. However, the plans reveal some peculiarities specific to *Concorde*, which is and not present on *Hermione*. Her battery is pierced for 14 gunports to each side, not counting the chase ports. The arrangement of the gunports, which is obviously different, results in a reduction of the quarter-galleries volume. Finally, between 1777 and 1783, the existing frigates were the object of many modifications that *Concorde* was not spared. What were they compared to the original? Did they also apply to *Hermione*? Although she was built on the same plans as *Concorde*, *Hermione* was distinguished by some notable differences in her overall aspect.

Her looks were thus undefined and remained to be discovered!

Gathering all historical and archeological elements, referring to different works dealing with contemporaneous naval construction and examining the plans of similar frigates, on the strength of his experience on the subject Jean-Claude Lemineur attempts to give to *Hermione* a look that is the most probably close to reality.

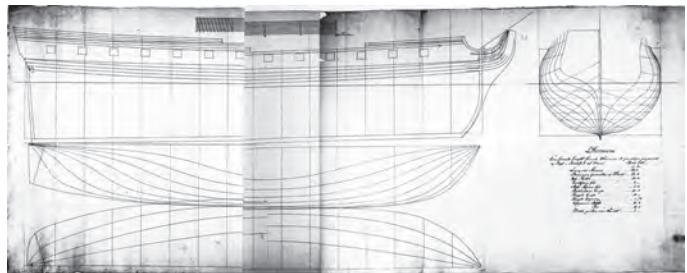
## COMPOSITION OF THE MONOGRAPH

An initial chapter is concerned with the nautical qualities that warships must have possessed. They were especially mediocre for vessels built during the 17<sup>th</sup> century and the first half of the 18<sup>th</sup> because of the use of obsolete concepts. The new design concepts that were adopted toward the end of that period are described next, as well as the improvements in performance and sea-going capabilities that resulted.

A second chapter is the object of a detailed study of documents concerned with the architecture and characteristics of sister-frigates, a study that allows the identification in a plausible manner, of the various poorly

known aspects of *Hermione*.

Thirty-four plates, most of them with comments, provide a detailed picture of the ship.



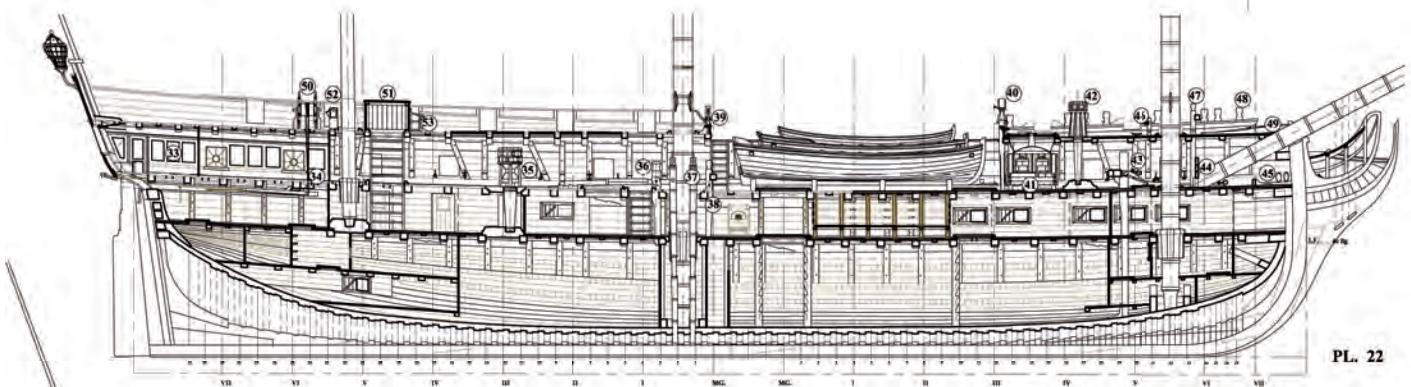
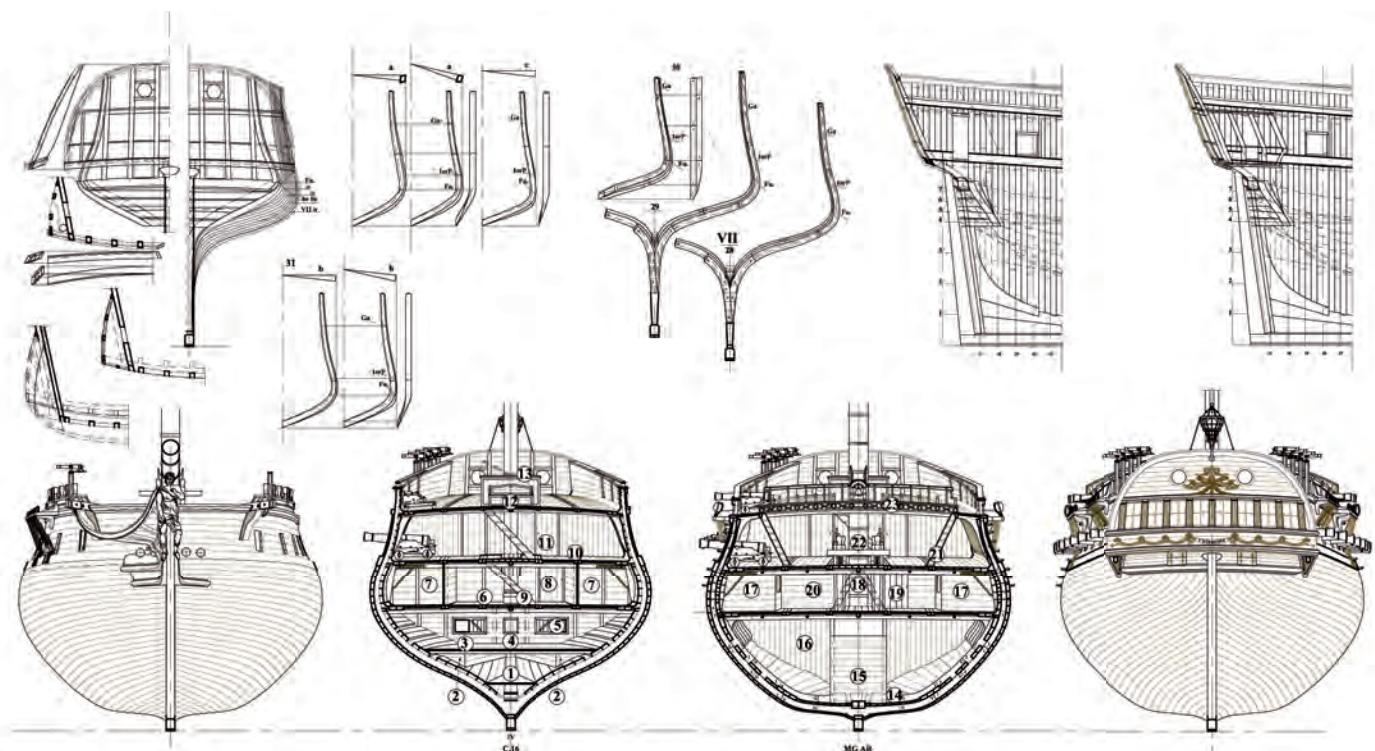
## LISTE OF THE PLATES au 1/48<sup>th</sup>

1. Schematic elevation
2. Schematic plan view
3. Vertical view of frames
4. Construction of the stern
5. Construction of the stern-frame
6. Construction of the hawse pieces I
7. Construction of the hawse pieces II
8. Profiles of aft frames 1 to 6
9. Profiles of aft frames 7 to 12
10. Profiles of aft frames 13 to 19
11. Profiles of aft frames 20 to 29
12. Profiles of the main frame and forward frames 1 to 5
13. Profiles of forward frames 6 to 11
14. Profiles of forward frames 12 to 18
15. Profiles of forward frames 19 to 24
16. Timbered elevation
17. Plan of the bottom of the hold
18. Between-decks plan
19. Timbering of the gundeck and castles
20. Gundeck and its furniture
21. Castles and their furniture
22. Lengthwise section
23. Cross-sections
24. Built-up elevation
25. Decoration of the stem and stern-frame
26. Artillery and furniture
27. Elements of furniture
28. Plans of masts and yards
29. Mast fittings
30. Mainmast masts and rigging
31. Foremast masts and rigging
32. Mizzen masts and rigging
33. Running rigging (1/72 scale)
34. *Hermione* under sail (1/72 scale)

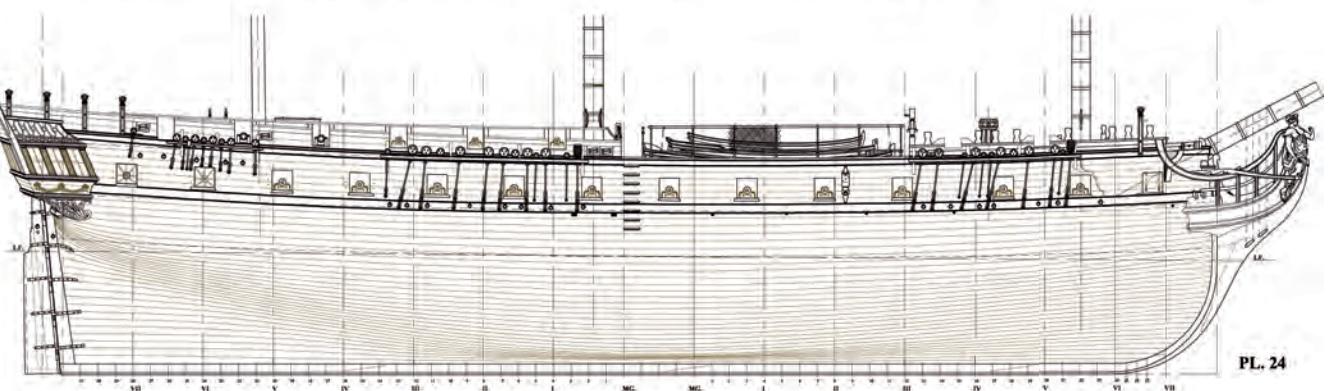
RIGGED MODEL			HULL ALONE		
Length	Width	Height	Length	Width	Height
140	70	110	101	24	22

Centimeters

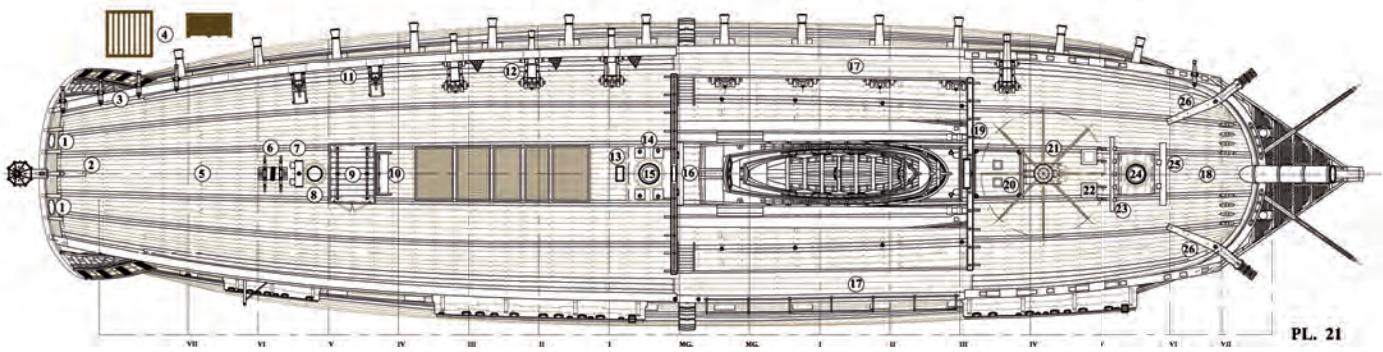
## Extracts from the plans



PL. 22



PL. 24



PL. 21



# HERMIONE

## LAFAYETTE'S FRIGATE

*at the service of the American independence*

A study accompanied by historical documents from 1764 to 1793

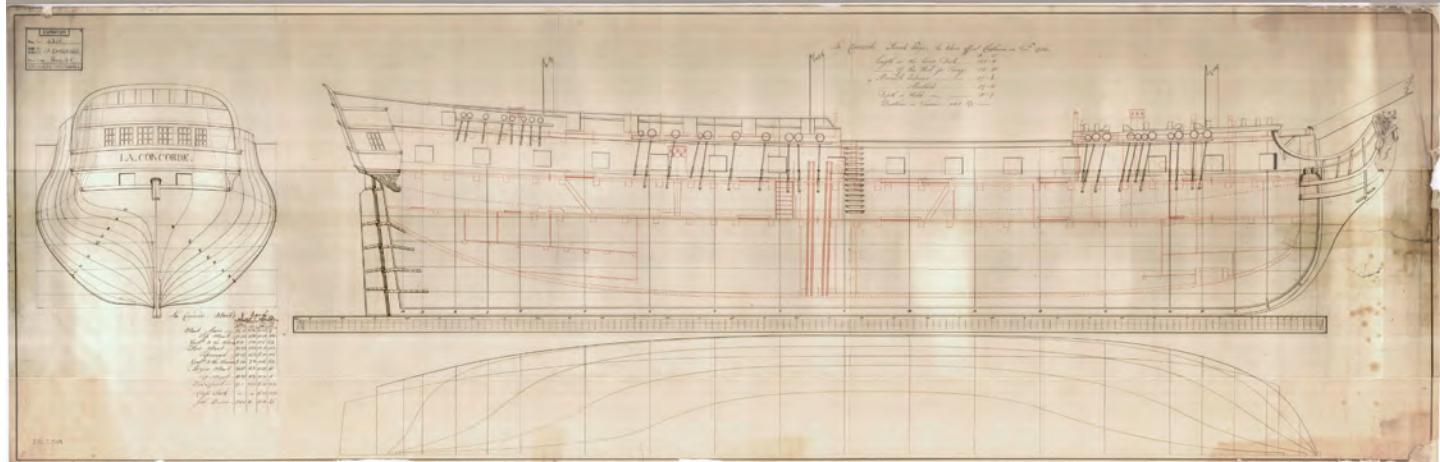
**Patrick Villiers**  
*Jean-Claude Lemineur*

*Hermione*, Gilbert de Lafayette financed his own ship *Victoire* in 1777, with the assistance of Louis XVI's secret service. The sale of its cargo of weaponry financed his glorious 1777 to 1778 campaign that owed him the rank of an American general, and allowed him to become the friend of Washington and other main insurgent generals. The crossing of the Atlantic by Lafayette and *Hermione* symbolizes four years of indefectible support of the American cause by France. Here Patrick Villiers and Jean-Claude Lemineur offer us the opportunity to join the destinies of two heroes of the Amerivan War of Independence with a beautiful frigate, representative of the victorious struggle for control of the Atlantic Ocean indispensible for the independence of the United States. From the names of the crew members to the commissioning of *Hermione* trough the cargo of weaponry of *Victoire*, many documents had been lost in archives up to now, or were only known by a few specialists.

## BOOK MAKEUP

- A book in the 23x31 cm format.** The book has 220 pages full color, with over 230 illustrations.
- I. Lafayette, the legends and realities of the first engagement in the service of the Patriots.  
Lafayette, a minor under the control of his inlaws, the *Victoire*'s cargo, what value and for what profit? Lafayette in the face of his destiny.
  - II. 1775-1778, first the warships, the frigates from 1764 to 1767, Choiseul's plan, the threat to Rochefort and the renewal.
  - III. The importance of maritime trade and its protection by both sides, the rôle of corvettes while waiting for frigates, the beginning of war in Europe, the victory of Ushant and the necessity for an alliance with Spain.
  - IV. The conflict in the United States. Lafayette from Brandywine to Valley Forge, Lafayette becomes a soldier and Washington's adopted son.
  - V. 1778, the French Navy on the American coasts, Lafayette and Admiral d'Estaing, from Newport to Boston.
  - VI. Return to France, Comte de Broglie's plan and the 1779 landing attempt. Lafayette at Le Havre.
  - VII. A new start for America, Ternay and the expedition's preparations, Lafayette and Rochambeau.
  - VIII. *Hermione*, from the decision to build it to the choice of the engineer Henri Chevillard, so-called The Elder.
  - IX. A frigate that was built in six months, a model construction.
  - X. Latouche-Treville, from the *Rossignol* to *Hermione*.
  - XI. *Hermione*'s crew in 1780.
  - XII. *Hermione* and Lafayette, the voyage to Boston
  - XIII. *Hermione* and Latouche-Treville in the service of the insurgents, 1780 - 1781: the combat against *Iris*, in patrol along the East coast, in the service of Ternay, the first battle of the Chesapeake.
  - XIV. Lafayette and Yorktown, *Hermione*'s contribution to the conflict: the Louisburg combat.
  - XV. From the American missions to the service of comte de Grasse and the return to France.
  - XVI. From Peru, a new captain and missions in the South Atlantic and in the Indian Ocean in Suffren's service 1782 - 1784.
  - XVII. *Hermione* from the end of Louis XVI's reign to the Revolution and the wreck.
  - XVIII. The wreck of the *Hermione* in the twentieth century.
  - XIX. Annexes: The *Hermione*'s muster book.  
*Hermione*'s guns  
The frigates' figureheads and decorations  
Plot of Lafayette's 1780 voyage from the ship's logbook.  
Extract from the *Hermione*'s and *Rossignol*'s logbooks

## Extracts from the plans



## Extracts from some illustrations



▲ Combat between Belle-Poule and Arethusa by Rossel de Cercy. This first engagement heralded the start of a long series of victories by French frigates. The drafts of Belle-Poule, built a Bordeaux in 1766 were a considerable inspiration for the construction of the Rochefort frigates, and in particular Hermione. Commissioned by Louis XVI to produce representations of the combats of the War of Independence, Rossel de Cercy is a precious and particularly reliable reference.

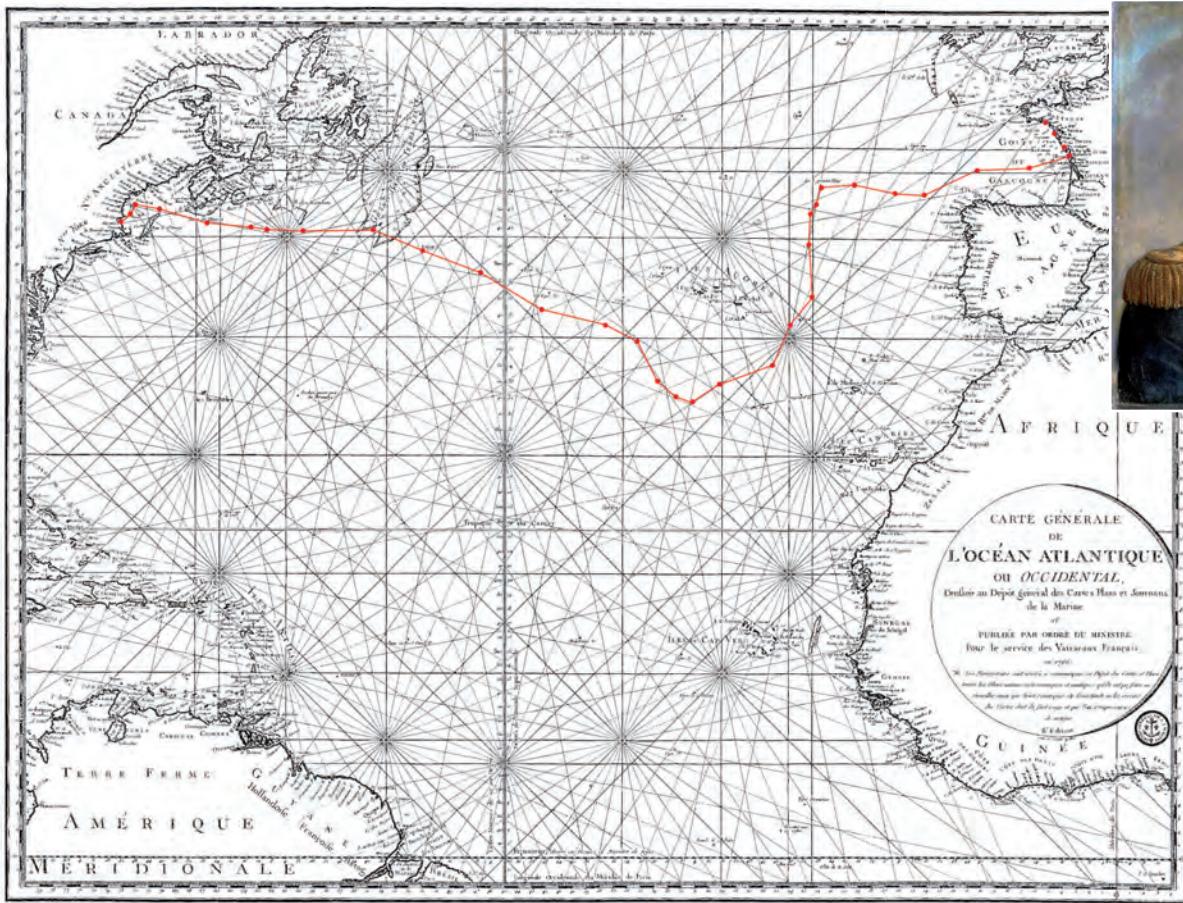


▲ Lafayette and Washington at Brandywine in 1779: under Washington's eyes, Lafayette asserted himself in the eyes of Americans by his bravery as well as his tactical ability. He earned his stars as an American general in combat.

◀ Logbook of the Hermione, one of three written by Latouche-Tréville



► A portrait of Latouche-Tréville by George Rouget in 1841, from the Musée de l'Histoire de France at Versailles. According to Napoléon the 1<sup>st</sup>, who made him an admiral in 1803, Latouche-Tréville was the best French admiral of the Revolution and Empire eras. He showed himself to be one of the best frigate commanders of the War of Independence, not only by transporting Lafayette, but also in the service of the American cause from Louisburg to Yorktown.



◀ A sidescript on Lafayette's voyage from Latouche-Tréville's logbook that enabled us to recreate precisely Lafayette's trip aboard Hermione, the speeds that were attained and the struggle against bad weather.

**CAVELIER de LA SALLE  
THE 1684 EXPEDITION  
LA BELLE  
A 1/36<sup>th</sup> SCALE MONOGRAPH**

*The book includes all timbering plans*

Jean BOUDRIOT

This new monograph originated from the exceptional discovery, in 1995, of the remnants of this small ship that was part of Cavellier de la Salle's expedition in 1684. The information given by the ship wreck could then be added to archives information in order to reconstitute in a plausible way this modest ship rightly named *La Belle*, as you can see with her representation on this document cover. This monograph has an archeological, historical and artistic value. It also stems from our concern to continue studying 17<sup>th</sup> century French naval architecture (see M. de Tourville's Three-decker ship). Of course, *La Belle* is much reduced in size, but she is nevertheless a tremendous learning experience.

Hardback Volume John de Bry wrote the historic part of the book (page 8 to 21), relating Cavellier de la Salle's life, his 1684 expedition and his tragic death. Then James E. Bruseth and Layne Hedrick relate the ship wreck's discovery, the use of extensive means to explore it and then they describe the results of the search (pages 22 to 34).

The first part being presented by historians and archeologists, the second part is dedicated to reconstituting *La Belle*, first by examining the sources (pages 35 to 46), which are fundamental to this work.

The monograph itself includes twenty plates followed by the rigging rules, illustrated with schemas in order to complement the various drawings and notes.

Jean-Claude Lemineur's study then deals with the volumetric definition of the hull.

Nearly 90 pages were necessary to constitute a "real construction file" (pages 47 to 134).

The monograph ends with an outstanding series of shots of three models of *La Belle*, built by the talented Bernard Frölich, Henri Defresne and Etienne Piette (pages 135 to 155).

### PRESENTATION OF THE MONOGRAPH

24 x 31cm format, full grey-blue cloth strong binding, laminated inside dust jacket.  
160-p. (including 22 color pages) square spine pasted and sewn booklet, 160 gr. offset paper

The plates are already reproduced in the hardback volume at 1/48<sup>th</sup> scale.

They are gathered here to build the model at 1/36<sup>th</sup> scale.



### LISTS OF PLATES at 1/36<sup>th</sup>

- 1 Elevation
- 2 Horizontal sections
- 3 Vertical sections
- 4 Frames (1)
- 5 Frames (2)
- 6 Longitudinal timbers
- 7 Frame elevation
- 8 Bow timbers
- 9 Stern timbers
- 10 Cross sections
- 11 Longitudinal section
- 12 Deck, first stage
- 13 Deck second stage

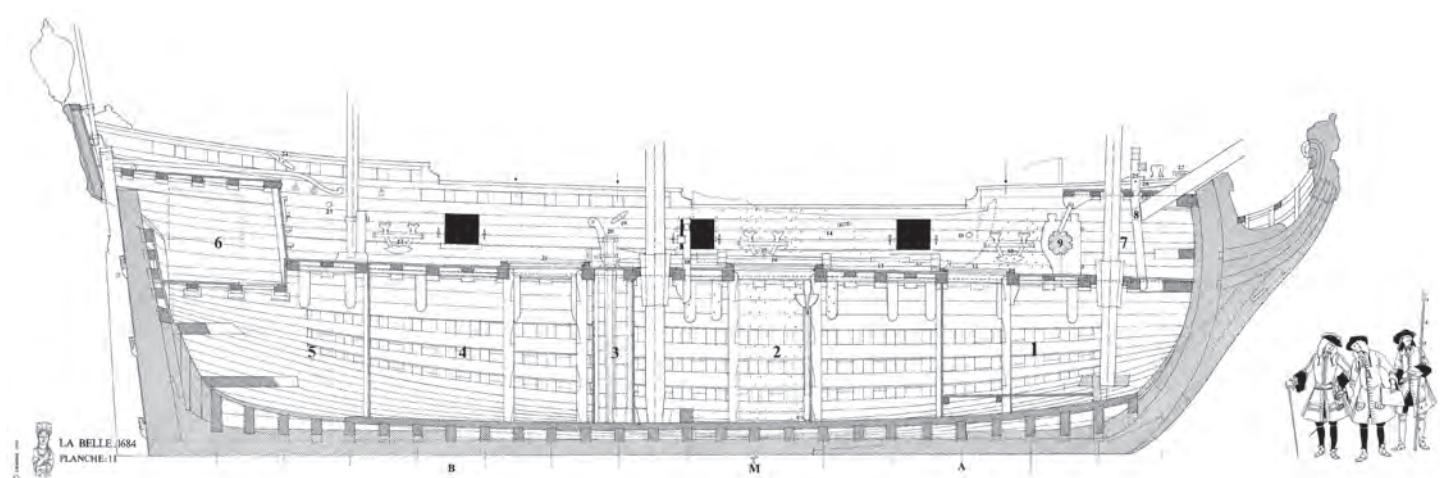


- 14 Deck third stage
- 15 Fitted elevation
- 16 Front et rear views
- 17 Fitting, guns, décoration etc.
- 18 Mast and spars, rigging
- 19 Sails (1/48)
- 20 *La Belle* sailing (1/36<sup>th</sup>)



MODEL RIGGED			HULL		
Lenght	Width	Height	Lenght	Width	Height
90	45	77	82	22	27

### Extracts from the plans





# FLEURON

**64 GUN SHIP**

*from the shipbuilders  
Joseph and Blaise Ollivier*

**1729**

## Monograph

*Accompanied by twenty four 1/48<sup>th</sup>  
plates, two 1/96<sup>th</sup> and 1/72<sup>nd</sup> plates*

archives, it is extremely rare for us to have been able to collect so much material from irrefutable historical sources.

Gérard Delacroix, who did the drawings for the monograph, is a professional draftsman and a talented ship's model builder. He assisted his mentor, Jean Boudriot, in developing and completing this study which we are particularly pleased to offer in our collection. The distinguished features of the vessel will attract the attention of discerning model builders. Its superb hull, elegant timbers perfectly defined and described, oblique inner planking, iron knees, bronze and iron cannon, French riggings with round tops all make the construction of this model a formidable challenge. An alternative model of the rigging without timbers may also be built using the instructions at 1/72<sup>th</sup> scale.

The *Fleuron* was actively involved in very few combat operations but her career was an unusual one in that she cruised the Baltic Sea, where French squadrons rarely ventured, on three occasions. One of these expeditions affords us the opportunity to describe the preparation of a royal ship for a ball that was given on board.

## COMPOSITION OF THE MONOGRAPH

- 135 p. monograph, 24 x 31cm format, including:
- Blaise Ollivier's manuscript
- J.J. Caffieri's decorations, rigging manuscript, 1732
- A biography of B. Ollivier with a bibliography
- A computer-assisted note on the drawings
- The history of the *Fleuron* 1729-1745
- Archival excerpts on the Baltic cruises and on a ball given on board the Bourbon
- Annotated Study of the plates

- Measurements and scantlings of timber pieces
- Description of the rigging
- Complete retranscription of B. Ollivier's manuscript



## LISTS OF PLATES

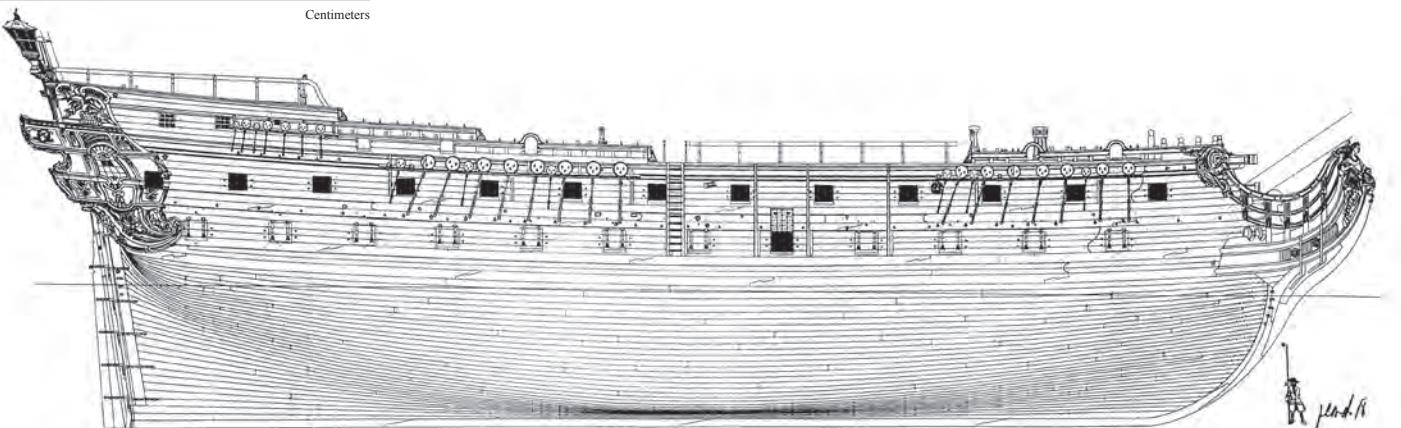
1 -	Schematic views	bow	20·21·22-	Fitting	(1/72 <sup>th</sup> scale)
2 -	Vertical sections	12 -	Ceiling of the hull	23 -	Masts and yards
3 -	General view of the timbers.	13 -	Cross sections	24 -	Fitting of the masts
4·5·6 -	Drawings of 62 frames	14 -	Longitudinal section and accommodations in the hull	25·26 -	Sails (1/96 <sup>th</sup> scale)
7 -	Axial timbers and longitudinal section of the timbers	15 -	Gun deck	27 -	Full view under sail
8 -	The riders and deck cambers	16 -	Upper deck	28 -	Belaying plan. Blocks (in the text).
9 -	Fore woodwork	17 -	Forecastle, quaterdeck and poop	29 -	Various.
10 -	Stern woodwork	18 -	Over view and overhead views		
11 -	Construction of the	19 -	Front and rear views		



RIGGED MODEL			HULL ALONE		
Length	Width	Height	Length	Width	Height
148	58	115	116	27	34

Centimeters

## Extracts from the plans





# JACINTHE GOËLETTE 1823

*1823 History of the schooner in the french navy & monograph method of model building*

The DE LA MORANDIÈRE Engineer Schooner

quite appealing.

Those readers who are more specifically interested in naval archeology will find in this monograph a necessary addition to previous studies, as it deals with brigs, cutters, and luggers. These constructions complement the building of schooners. The historical and technical study of this type of ship is given with an extended iconography.

## COMPOSITION OF THE MONOGRAPH

**Text and iconography, format 24x31cm including:**

- History
- Remarks on the avisos
- Schooners in the French navy
- General points on schooner rigging
- Various schooner designs
- Notes on schooner rigging
- Presentation of *La Jacinthe* with a study of the 12 French carronade

- Various representations of schooners (P. Ozanne - F. Roux - J.J. Baugean)
- Monograph
- Commentaries on the plates
- Rigging rules
- Photos of the *Topaze* model's hull

**Set of 5 plates, 1:48<sup>th</sup> scale**

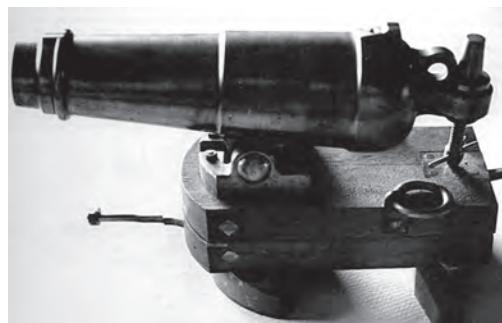
1. Defining the hull, drawing out the waterlines, drawing the frames in order to make the model and draws for the stem and the stern with lower counter and stern.
2. Disposition of the planked hull, front and back views. Longitudinal section of the deck. Plan of planked deck and upper works.
3. Half plan of the deck for bulwark making. Cross sections. Drawings of fittings, bits, partners etc.
4. Spars, guns, anchors, boat etc. Representation of square sails (topsail and topgallant) and their foremost rigging.
5. *La Jacinthe* sailing.

Two sets of plans are provided. One is incorporated into the text, with plates 1 to 4 at 1:48<sup>th</sup> scale, plate 5 at 1:100<sup>th</sup> scale. The other set is independent with five plates at 1:48<sup>th</sup> scale.

### Building method

- Foreword
- Suggested method
- Photos illustrating the method
- Photos of a model in progress.

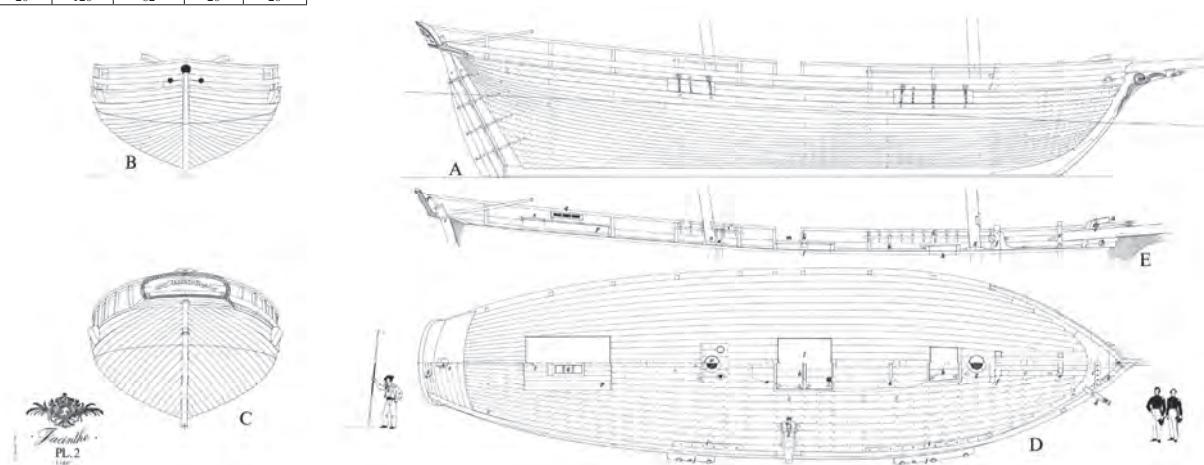
## Some photos



MODEL RIGGED			HULL		
Lenght	Width	Height	Lenght	Width	Height
90	20	120	62	20	20

cm.

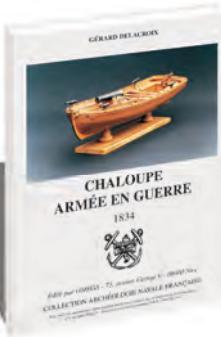
## Extracts from the plans



This monograph is intended for those who want to practice ship's model building but do not have extensive experience. A basic model building method is included for them in this monograph.

With a little care and skill, the method leads to the construction of a model from prime quality material, since wood will be exposed on a planked hull. This monograph must be considered as an initiation to «The art of model building».

Confirmed ship's model builders will also be interested in the elegance of this small schooner, created by its fine underwater hull and its light rigging. They should find the lines of *Jacinthe*



# ARMED LONGBOAT

1834

MONOGRAPH WITH 6 PLATES,  
1:36<sup>TH</sup> SCALE

*The book includes all timbering plans*

Gérard DELACROIX

meters wide under the planking and 1.40 meters depth-in-hold. The plates with comments are from a plan dated 1834 of the Atlas de Génie Maritime.

Gérard Delacroix, a talented modeler, describes (in 40 pages and 52 color photographs) his construction method for modeling beginners who may only have simple tools.

8 pages booklet with comments on the plates and 40 page construction method for beginners.

## COMPOSITION OF THE PLATES

Set of 6  
plates,  
1:36<sup>th</sup> scale

- I forms the basis for the reconstruction, all lines taken from the original draught.
- II shows the framing of the boat by bending frames over a mold or plug.
- III gives the details of the skeleton of the longboat.
- IV illustrates precisely the details of the boat. The plan view, inboard profile and the four transverse sections define all the elements used to complete the hull. As with the previous Plate,

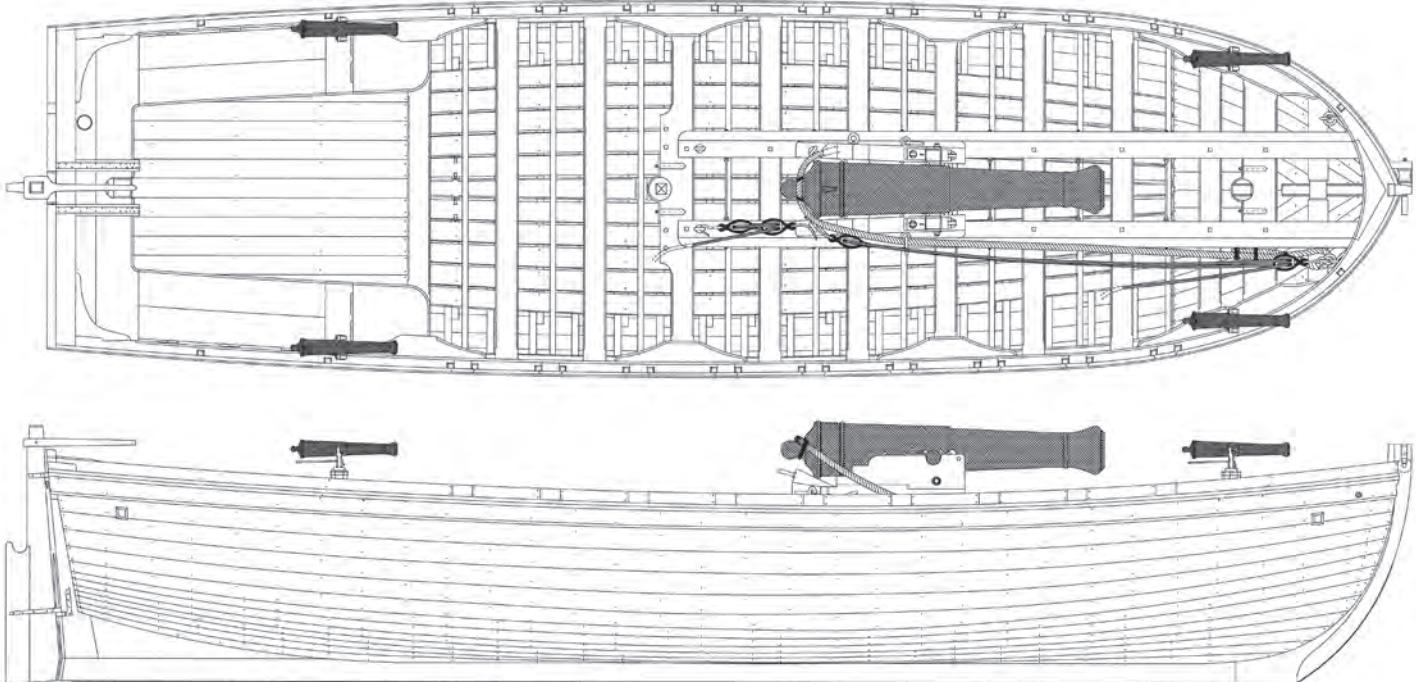
- V the drawings should be examined together, thus allowing a better understanding of the whole.
- VI contains details regarding the fashioning and installation of the armament. In addition, there are details of certain other fittings such as the rudder-irons and the method of stepping the small mizzen-mast known as a jigger-mast.
- VI This plate shows the completed longboat, armed, and with the gun rigged.

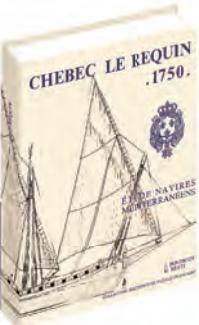


HULL ALONE		
Length	Width	Height
37	10	7

Centimeters

## Extracts from the plans





# REQUIN

## XEBEC

1750

*A monograph including all plans of the timber works*

Jean BOUDRIOT  
Hubert BERTI

The ships of the Mediterranean are not often well-known or documented. As a consequence we felt it necessary to preface this monograph with a study of those ships, limited to those in the service of the Royal Navy in Toulon, with the addition of those ships that constituted the commercial version of the xebec. As usual our sources are comprised exclusively of documents of the period, with no "second hand" information. We follow our usual order of presentation. Not a simple booklet that is merely a companion-piece to the plates, this volume is a complete study whose subject justifies its importance.

Feluccas, brigantines, oared galiots, half-galleys, tartans, lateen bark, polaccas, pinks, and finally xebecs are successively examined. This monograph on the xebec *Le Requin* is based on documentation that gives us a complete picture of this ship. Painstaking research has allowed us to collect period plans of this vessel, exhaustive information on its rigging as well as the full history of the ship in peace time, at the beginning of its career, then through its racing campaign during the Seven Years' War, and finally a full account of a 1762 squadron expedition under the orders of Monsieur de Bompard.

## COMPOSITION OF THE MONOGRAPH

153 p. booklet,  
24 x 31 cm  
format,  
including:

- A study of Mediterranean ships in the port of Toulon
- A study of the xebec
- Xebecs in the Royal Navy, 1750-1779,
- The xebec *Le Requin*, its description, history, 1762 expedition
- Detailed commentary with full explanation of the plates

- at 1:48<sup>th</sup> scale
- Commentary on 21 photographs of a period model of *Le Requin*
- All rigging rules for xebecs
- Glossary
- Commentary on 13 photographs of details of the rigging.

A set of  
23 plates  
including:

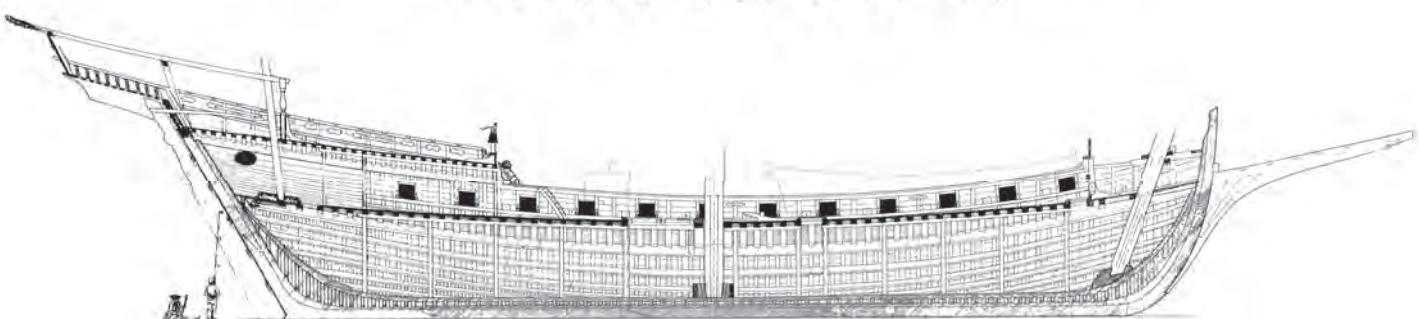
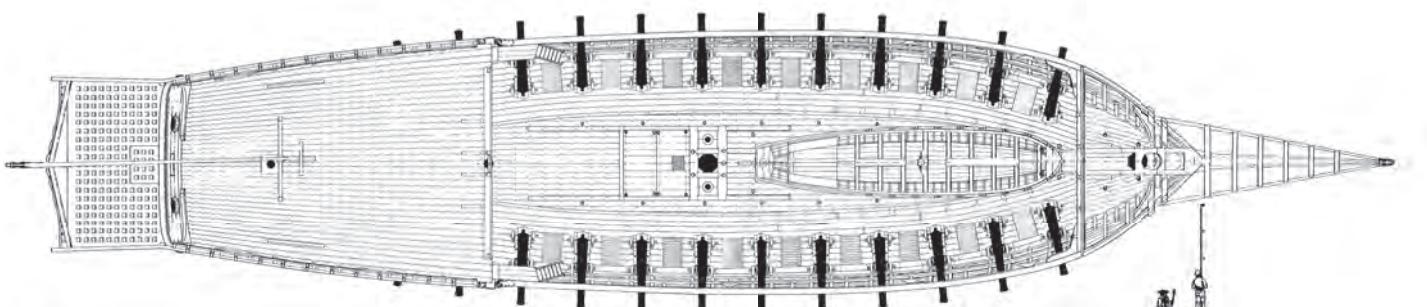
- 22 plates at 1:48<sup>th</sup> scale showing details of the timber works, the rigging and fitting with an illustration of all the frames and full details of the prow and stern formations at 1:48<sup>th</sup> scale.
- A plate at 1:72<sup>th</sup> scale which may be used for building the model at this scale.

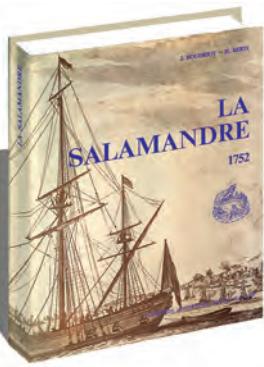


MODEL RIGGED			HULL		
Lenght	Width	Height	Lenght	Width	Height
124	26	82	110	23	24

Extracts from the plans

cm.





# SALAMANDRE

*The bomb ketch*

1758

## MONOGRAPH

*Including all timbers plans (1/48<sup>th</sup>) and interior accomodations of the ship.*

Jean BOUDRIOT  
Hubert BERTI

Lieutenant Perrot du Bourget.

We were therefore able to match official documents with the observations and very pertinent remarks of this vessel's own captain.

Such documentation is unique. With it we were able to improve upon our usual presentation by including multiplying drawings so that ship's model builders could construct the ship's framework with the utmost precision. The basic structure is of particular interest because of the installation of two very large sea-mortars.

The numerous models of the *Salamandre* that our readers have shown us attest to the fact that by reading this monograph they were able to build excellent models and occasionally a masterpiece.

Bomb ketches were invented by the French in the 1660s in order to bombard port towns on the Barbary coast more efficiently.

Despite our thorough research, we were unable to find enough documents to present you with a ship's model from this period with our usual rigueur. But we did gather some exceptional historical and technical documents on the 1752 *Salamandre*.

The monograph on *La Salamandre* gives a detailed description of the timbers and interior accommodations of the ship. In fact, our patient search resulted in the discovery of the personal archives of the *Salamandre*'s Captain,

## COMPOSITION OF THE MONOGRAPH

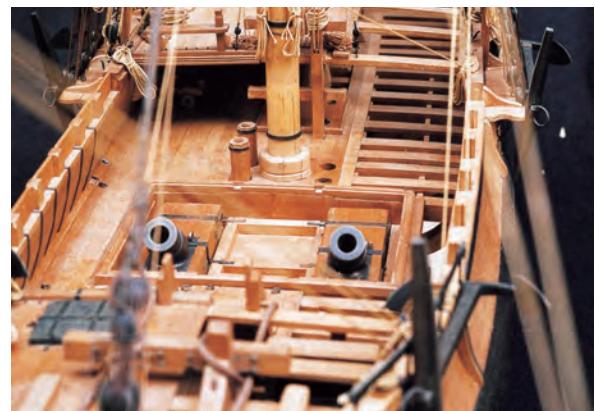
A 138 page brochure,  
24x31 cm format,  
including:

- The history of bomb ketch in the French style, and the history of other sea-mortars holders.
- The description of the French bomber galiot and its use.
- *La Salamandre* 1752-1791 - a detailed report of the 1765 campaign.
- The Bombardments of the Moroccan ports of Sale and Larrache.
- Detailed commentaries giving extensive explanations of the thirty four plates at 1:48<sup>th</sup> scale.
- Commentaries on thirty-one photos of the model of a bomb ketch of the period, 1:18<sup>th</sup> scale.
- Complete nomenclature of fittings and rigging.

## COMPOSITION OF THE PLATES

A 38-plate set including

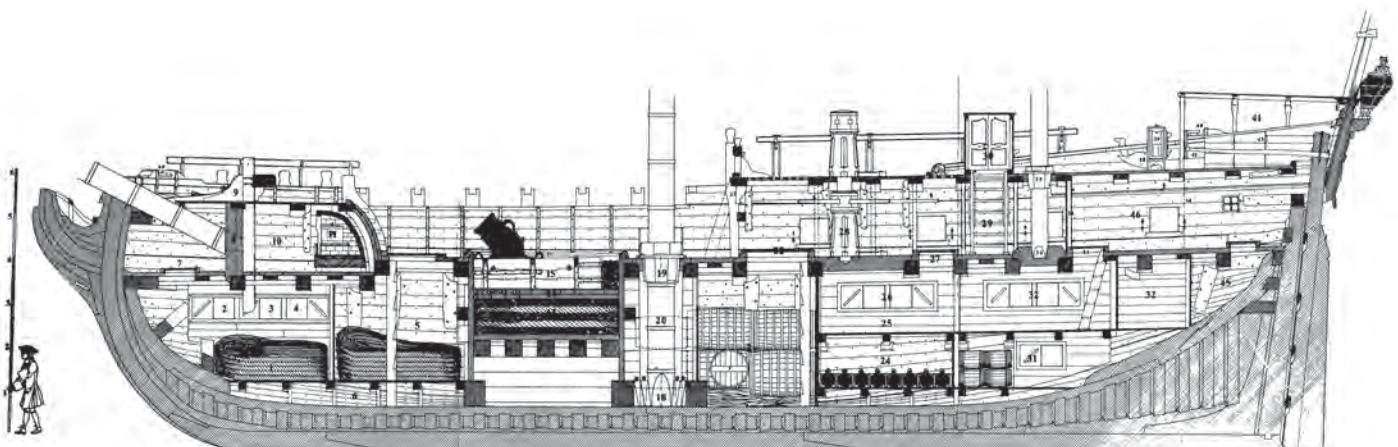
- 1 color plate giving the color scheme of the period
- 3 plates with detailed commentaries on the blocks
- 34 plates at 1:48<sup>th</sup> scale representing :
- Details of the timbers, with all the frames and details of the head and stern structures at 1:48<sup>th</sup> scale.
- Details of the fittings
- Details of the rigging.



RIGGED MODEL			HULL ALONE		
Length	Width	Height	Length	Width	Height
90	20	120	62	20	20

Centimeters

## Extracts from the plans

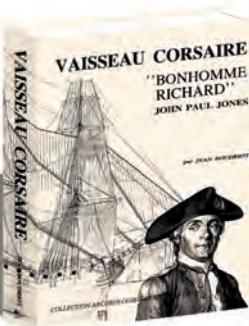


# BONHOMME RICHARD

*Pirate ship*  
A 1/48 SCALE MONOGRAPH

*Set of 26 plates at 1:48 scale*

Jean BOUDRIOT



This book deals with a vessel belonging to the early navy of the United States of America. The ship won fame during the American Revolutionary War under the command of the famous captain John Paul Jones. A former East India Company 900-ton ship, it was repurchased by Louis XVI in order for John Paul Jones to take its command.

*Le Bonhomme Richard* (whose name is an homage to Benjamin Franklin's Poor Richard's Almanack) headed up a division in a very bold privateer campaign on the English coasts. This campaign ended in a violent and spectacular fight against the English vessel *Serapis* and its capture in September 1779.

The goal of this monograph is a reconstruction of *Le Bonhomme Richard* in its most genuine form. Jean Boudriot was the only person capable of doing so, with his intricate knowledge of the East India Company's navy. He presents here a vessel built in France but sailing under the Stars and Stripes, thus furthering our knowledge of the French navy at the time of the American Revolutionary War.

## COMPOSITION OF THE MONOGRAPH

A 64-page brochure,  
24x31cm format,  
including:

- John Paul Jones, US NAVY vessel captain
- The battle of Cape Flaniborough
- Remarks on reconstructing *Le Bonhomme Richard*
- Commentaries on the plates
- Rigging rules
- Guns
- Note on metal works
- Marks and flags, paint
- Presentations of models
- The designs are intended to facilitate construction of the framework.

## COMPOSITION OF THE PLATES

Set of 26 plates  
at 1:48<sup>th</sup> scale  
(except plates  
24, 25 and 26 at  
1:64<sup>th</sup> scale)  
including:

- Frame, waterlines, sections
- Wooded frame; structure
- Layout of the structure of the hull, drawing of all frames at 1:48<sup>th</sup> scale
- Design of decks
- Cross and longitudinal sections
- Ship's boat, anchors, guns

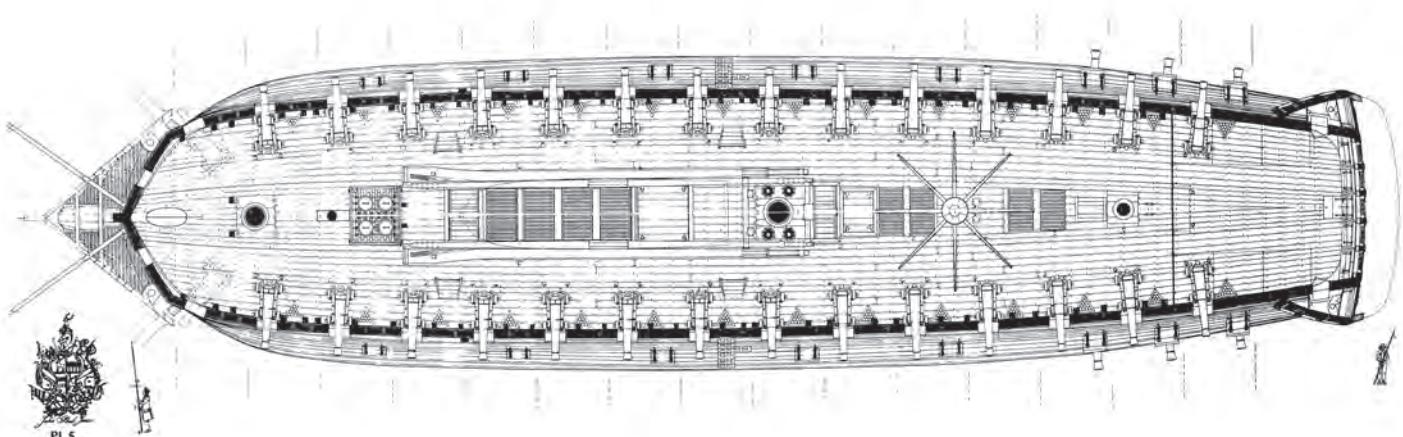
- Fittings
- Masts and spars, rigging, sails
- Definition of the hull at 1:64<sup>th</sup> scale

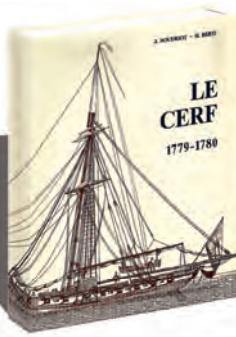


RIGGED MODEL			HULL ALONE		
Length	Width	Height	Length	Width	Height
110	62	87	86	22	24

Centimeters

## Extracts from the plans





# LE CERF

*Cotre*

1779 - 1780

A 1/48 SCALE  
MONOGRAPH

*Build by Denys*

Jean BOUDRIOT  
Hubert BERTI

The renewal of the French Navy after the Seven Years' War was responsible for the commission of many new naval constructions, in particular, the building of a series of large cutters, begun in 1779, some measuring 75 feet in length, bearing 14 guns and others measuring 81 feet in length, armed with 18 6-pdr guns. As the prototype of this model, we have chosen *Le Cerf* which was built at Saint Malo according to the shipbuilder Denys's plans and launched on 2 March 1779.

Command of the ship was confided to ship's ensign Varages who sailed the Brittany coast and engaged in the ship's first active combat with two English cutters on 21 June of the same year. After repairs were completed, the *Cerf* resumed sailing but was struck by lightning on 17 July. We have a detailed account of this fortunately rare occurrence.

After putting in at Lorient, the *Cerf* was put under the command of John Paul Jones, Captain of the U.S. Navy, as part of a division sailing under the American flag - including *Le Bonhomme Richard*, *La Pallas*, *L'Alliance* and *La Vengeance* - that cruised the British coastline.

On 23 August off the Irish coast, the *Cerf* is enlisted to search for the long boat of the *Bonhomme Richard* carrying seven deserters. Foul weather interrupts the search and the disabled *Cerf* abandons its mission.

In his vivid and detailed reports up to February 1780, Varages fully represents the role of a ship of lighter tonnage which was essential to a great military navy for bearing dispatches, as well as for protecting the coastline, coasting vessels and fishing fleets.

## COMPOSITION OF THE MONOGRAPH

A 138 page brochure,  
24x31 cm format,  
including:

- Evolution of the brigantine from the Bermuda-rigged sloop to the cutter
- History of the cutter in the French Royal Navy
- List of 27 cutter-rigged ships appearing in the lists of the French navy 1756-1781.
- Commentary and analysis of 14 photographs of models of cutters in the collection of the Musée de la Marine.
- History of the campaigns of the cutter *Le Cerf*.
- Detailed commentary with all necessary information on the 11 plates with the drawings of details.
- Full glossary of superstructure and rigging terms.

## LISTS OF PLATES at 1/48<sup>th</sup>

A set of 11 plates on cartographer's paper at 1:48<sup>th</sup> scale including:

- 1 Definition of the hull, longitudinal drawings, vertical sections of the ribs
- 2 Definition of the hull, drawings of the planking.
- 3 Plan of the deck and profile of the midship frame.
- 4 View of the hull, long. section, front view.
- 5 Plan of the fitted-out deck, rear view.
- 6 Cross-sections
- 7-8 Fitting
- 9 Masting elements, mast yards rigging.

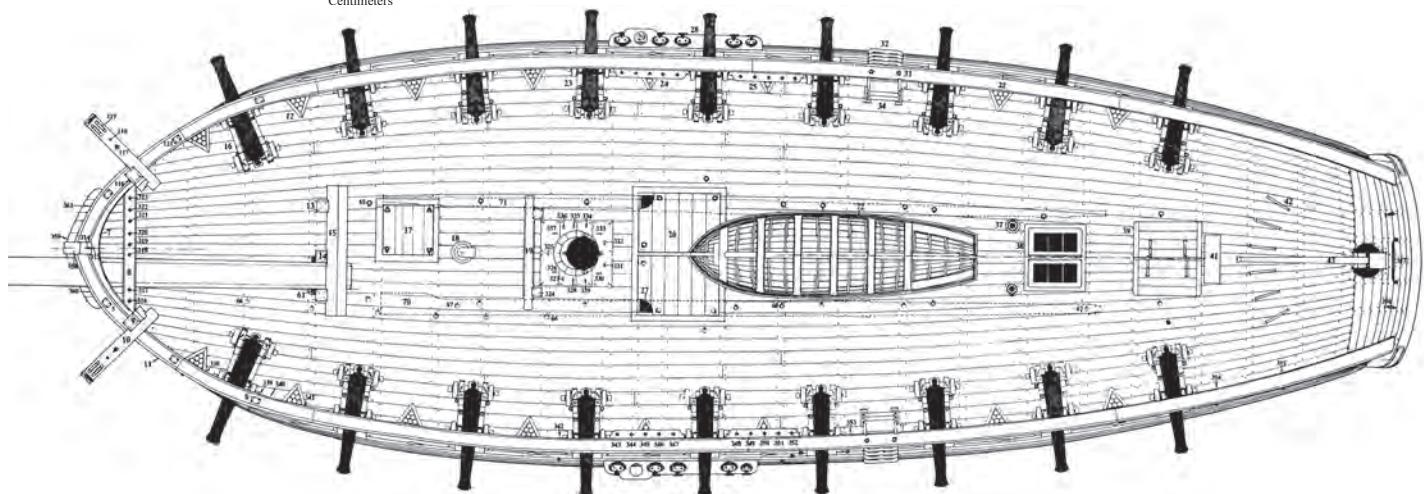
- 10 Square sails
- 11 General view of the fore-and-aft sails.



RIGGED MODEL			HULL ALONE		
Length	Width	Height	Length	Width	Height
90	20	120	62	20	20

Centimeters

## Extracts from the plans





# VÉNUS

## 18 GUNSHOT FRIGATE

### 1782

of SANÉ engineer

A 1/72<sup>th</sup> Monograph

Jean BOUDRIOT  
Hubert BERTI

The frigate *La Vénus*, referred to as an 18-pdr because of the caliber of her main artillery, was conceived and designed by the engineer Sané and built in Brest in 1782. It is one of the prototypes of the 143 similar frigates which were to be built in every port of France and continental Europe from 1780 to the end of the French Empire.

Often imitated by the British, Sané's 18-pdr frigates enjoyed remarkable success during their lengthy career. The last ones, built at the end of the Empire (1813) were not dropped from the lists until about 1850.

The French archives abound in accounts of the valorous actions led by Sané's frigates. Other episodes, like the story of the *Médusé* whose wreck was found on the banks of the Arguin are less commendable.

The documentation we offer here brings the *Vénus* to life. Further research, which was facilitated by documents in French and British archives, as well as archives in the many other countries occupied by the French Empire, enables the construction of the *Vénus* and other frigates of the same type with a particular decoration or distinguished military career. The *Vénus* herself had a non-combative and humanitarian career. Her captain, de Rossily, the former commander of the lugger *Le Coureur* at the time of the famous battle of *La Belle Poule*, sailed her on a voyage of discovery in the Red Sea, the Persian Gulf, and the Indian Ocean before her complete disappearance during a hurricane with all crew and cargo, on 31 December 1788 after having set sail from Saint Paul de la Réunion.

## COMPOSITION OF THE MONOGRAPH

75 p. booklet,  
24x31cm  
format,  
including:

- I The history of frigates in the French navy
- II Analysis of the results of research which enabled the writing of the monograph
- III Commentary and analysis of 13 photographs of ship's models in the Musée de la Marine in Paris, two paintings by François Roux and two plates from the *Atlas du génie maritime* (The Atlas of Naval Genius)

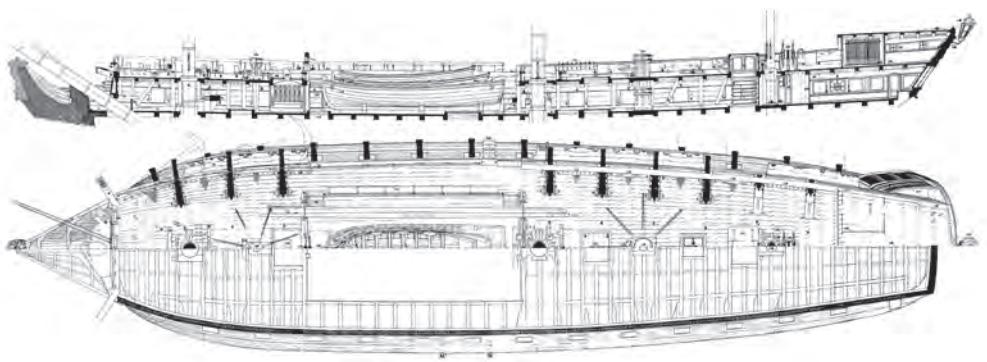
- IV History of the campaign of the *Vénus* in the Indian Ocean from 1785 to 1788
- V Detailed commentary with all necessary information on the 13 plates at 1:72<sup>th</sup> scale, with several drawings of details of fitting at 1:36<sup>th</sup> scale
- VI Complete vocabulary of fitting and rigging.

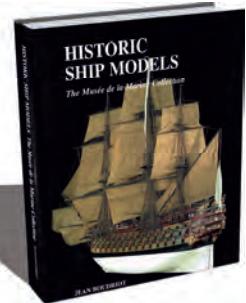
A set of 13  
plates at 1:72<sup>th</sup>  
scale  
including:

- I Shape of the hull, longitudinal plans
- II Shape of the hull, cross-cut plans, front and rear views of the frigate, cross-sections
- III Planking of the hull
- IV Construction of the head, and the quatergalleries in the stern.
- V Plan of the ship's battery and a partial longitudinal section.
- VI Plan of the forecastle and partial longitudinal section.

- VII Fitting and details
- VIII Elements of the masting
- IX Elements of rigging for masts and various pieces of fitting
- X Longitudinal sails and standing rigging
- XI Installing the square sails of the foremast and mainmast, issue of rigging on the outside of the hull
- XII Installing the square sails of the mizzenmast, issue of rigging on the deck.

## Extracts from the plans and photos





# HISTORIC SHIP'S MODELS

## *in the "Musée de la Marine".*

*The book has 288 pages on the collections of the Museum of the Navy.*

*359 color photographs.  
commented by Jean Boudriot*

specialists, be they ship's model builders or not, as well as to amateurs who will be enchanted by the beauty of the models. The combination of beautiful illustrations and an intriguing text make this an incomparable work. Superior quality photography allows the viewer to scrutinize the models more closely than if he or she were standing before the piece itself in its museum case.

Our concern has also been to preserve this collection of photographs for future viewers as well as to expand its audience. These models constitute an exceptional body of documentation that is now safe from harm's way.

The models are an evocative reminder of the sailing ships of yesteryear. Moreover they provide a storehouse of information not readily available from archival or printed sources. Recognizably an important element of our cultural heritage, they must be valued as such. We hope that readers will appreciate the caliber of the models as they discover the richness of the collections in the celebrated Musée de la Marine in Paris.

## TABLES OF CONTENTS

<b>LE REQUIN Xebec</b>	24 guns - <b>1750</b> (22 photos)
<b>74- GUN SHIP</b>	1755 (33 photos)
<b>LE SANS PAREIL</b>	110 guns - <b>1757</b> (42 photos)
<b>L'ARTÉSIEN</b>	64 gun ship- <b>1762</b> (29 photos)
<b>L'OCÉAN Three-decker</b>	(118 guns) - <b>1786</b> (14 photos)
<b>LE TRIOMPHANT</b>	74-gun ship - <b>1804</b> (18 photos)
<b>LE FRIEDLAND</b>	80- gun ship - <b>1807</b> (16 photos)
<b>LE RIVOLI</b>	74 gun ship - <b>1807</b> (29 photos)

<b>LA FLORE</b>	18-pdr frigate - <b>1804</b> (25 photos)
<b>LA CRÉOLE</b>	24-gun sloop-of-war - <b>1827</b> (25 photos)
<b>L'ESPÉRANCE</b>	16- gun brig - <b>1810</b> (30 photos)
<b>LE COTRE</b>	16- gun cutter - <b>1811</b> (16 photos)
<b>LA LIONNE</b>	380 tx transport-ship - <b>1811</b> (16 photos)
<b>LA FOUDROYANTE</b>	<b>1803</b> - (15 photos)

## Extracts from the book

*L'Artésien*



The entering-ladder is formed by moulded cleats serving as steps. Two iron pillars support rope hand-rails called side-ropes; the knots make them easier to use.

As we have seen, the 24-pdr guns on the lower deck and the 12-pdrs on the upper decks are not original. Careful examination reveals the gouges in the lower port-sills of the gundeck ports and the rebates for the upper deck lids and half-lids. The cross-nailing of the inner face of the lids has been shown, as have the two transverse beams which are held by means of a handspike lashed across with a few turns of rope.

The pumps discharge onto the upper deck; note the rectangular scuppers. Note also the lower double-block of the winding-tackle hooked in the ship's side and the lower single-block of the main-tackle hooked on an eyebolt in the channels and strengthened below by a bracket. As a rule, it is the winding-tackle which is hooked here, between the two stanchions of the main-tackle in this art, between the last pair of shrouds. The four-fold fixed-block bolted to the planksheer takes the fore-sheet and preventer-brace, the fore studdingsail tack and sometimes the fore-topmast studdingsail tack. Note also the plank forming the breastrail supported by forked iron pillars and the preventer-plates of the chains made of strip- rather than bar-iron.

Close-up of the companion. The bannister-mall of the officers' stairs is supported by half-bars. The helmsman's armrest of the helm is clearly visible. Against the fore bulkhead of the companion, the bench for the watchkeeping officers once stood, as evidenced by the small cleats nailed to the deck to secure its legs. In the background can be seen a 6-pdr gun with a shot-rocket to the left of it and a large range-cleat used to lead the mainsheet.

The poor boatswain's work is equally sober. In front of it can be seen the companion of the officers' staircase, while behind the axminster to the left of the picture can be seen the foremost cabin on the starboard side and the ladder providing access to the quarterdeck. Note the fine attention to detail in the joiner's work, giving the appearance of raised panels and beads. Shroud-cleats are visible in the shrouds, and one can also see the main topsail-yard jeer-tackle.



A fluke of lighting illuminates the wheel, delicately finished in ivory. The spindle of the drum is supported by two pillars. Afore the mizzen-mast there is a unique example of an aximeter in the form of a cursor sliding between two rails; the cursor is moved by a thin rope (the "spurling-line"), wound round an extension of the spindles of the wheel; the two legs of the line lead to blocks. This arrangement was used to facilitate the use of the wheel of the rudder (see "74-G.S., vol. III, p. 216). A treble-sheaved fixed-block is bolted to the planksheer forward of the hance of the upper drift. These sheaves take the mainsheet in heavy weather, and the tacks of the lower main studdingsail and the main-topmast studdingsail.



*L'Espérance*



The same general comments apply here to the maintop as made on the previous page for the foretop. Note the two double-blocks below the point of the crow's-foot, for the foreyard and fore topsail-yard braces.



Another view of the foretop; as you can see, there are no jeer blocks for the lower yard, these being rigged only when required. All the lower yards have English-style trusses. The crow's-foot and the mousies of the stays were abandoned in the 1820s.





# THE FRIGATES

French Marine

1650-1850

*Contents of the Historical Study of Frigates*

Jean Boudriot  
Hubert Berti

This book is devoted to the history of a ship whose very name evokes deep historical resonances, the *frigate*. The reader follows the evolution of *frigates* in the French navy from their origin in the 1660s to the mid-19<sup>th</sup> century when the sailing wood military navy reached an end.

The evolution of frigates may be divided into two phases. The first phase is characterized by the use of small two-decker vessels and of modest ships called *light frigates*. This period ended around 1750 when small vessels were no longer used, to the “benefit” of the *frigate*. No longer qualified as “light”, *frigates* then gained characteristics and qualities that were to transform them into “modern frigates”, with guns and

dimensions that increased constantly in this second phase.

This historical study begins with a general orientation presenting an overview of subsequent chapters. Each chapter deals with a *specific class of frigates*, characterized by the caliber of their guns. Each chapter opens with a text that historically and technically locates the main characteristics of the class of frigate presented in the chapter. Guided by this over arching presentation, the reader can then proceed easily through the various plans, diagrams, tables, commentaries and notes relating to the study of each class.

The following chapter gathers general and comparative data whose collective elements give an overall evaluation of previous chapters, thanks to numerous sketches, graphs and tables which sometimes analyze frigates in relation to other vessels. The chapter ends with a recapitulation that summarizes the designation and main characteristics of 600 frigates in the French Navy.

The following chapter deals with all aspects of the evolution of frigates: accommodations, guns, decorations, masts and spars, sails, etc. over two centuries.

The final chapter gathers nearly 70 photos of ship models belonging to the collections of the Musée de la Marine.

The original period documents reproduced and gathered in this book constitute a corpus that is without equal. This study is unprecedented in the history of French naval architecture.

Illustrations are abundant, with 106 plans of ships, 92 reproductions of documents of the time, 68 photos and 48 statements, numerical tables, graphs and indexes. In short, this book is a genuine *encyclopedia of frigates*.

## CONTENTS OF THE HISTORICAL STUDY OF FRIGATES

Large volume 24 x 31cm format, full grey-blue cloth binding, sewn with headband. Inside cover with a four-color reproduction of the frigate *La Pomone* by F. Roux. 350 pages, 115 g paper with an inset plate replica of the inside cover.

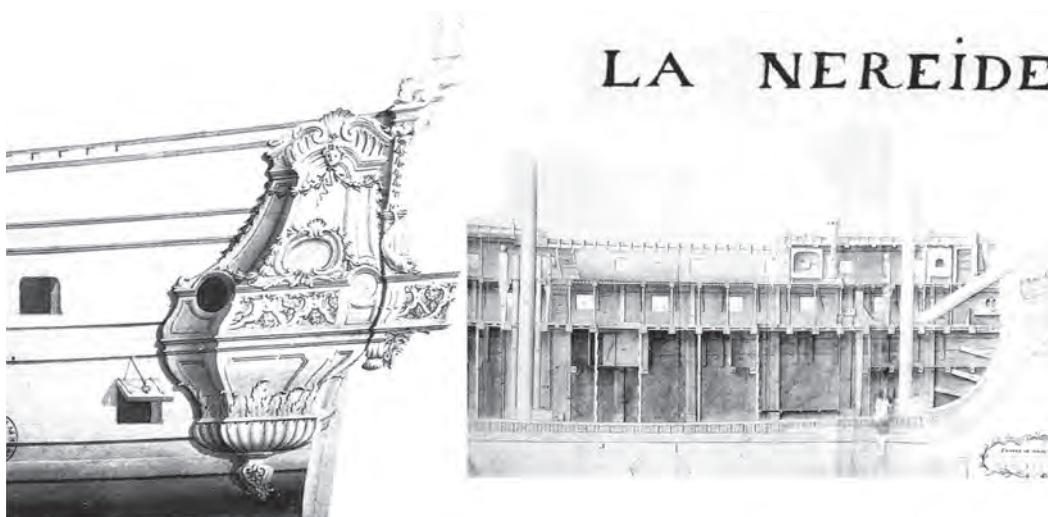
Contents :  
Foreword  
General remarks  
Chap. I - The Frigate-Vessels, 1640-1756  
II - The Light Frigates, 1659-1744  
III - The 8-pdr Frigates, 1740-1774  
IV - The 12-pdr Frigates, 1748-1798  
V - The 18-pdr Frigates, 1781-1813  
VI - The 24-pdr Frigates, 1772-1843  
VII - The 30-pdr Frigates, 1805-1846  
VIII - Comparative and General Data  
IX - Aspects of Development  
Collection of photographs of ship models.

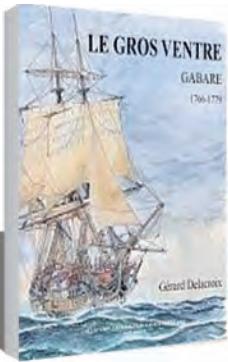


The Frigate  
*La Belle Poule*  
Modèle:  
B. Frölich  
Paris

### Extracts from the pages

## LA NEREIDE





# GROS VENTRE

*Gabare*

1766 - 1779

34 plates at 1:48<sup>th</sup> scale

Gerard DELACROIX

This monograph presents the gabare; a transport vessel used by the Navy to supply the dockyards, squadrons at sea and the colonies. The first gabares appeared around 1715. They were used for the transport of masting and framing timbers. Originally small vessels of 40 to 130 tons, their size will increase; up to 480 tons by the beginning of the 19<sup>th</sup> century and these vessels were fitted and laid out according to their use as they had diverse functions.

Fortuitously a gabare will participate in the Kerguelen expedition in 1772. She was adequately named *Le Gros Ventre*. She will eventually be abandoned by

Kerguelen and sailing alone under the command of M. de St Allouarn, she will discover the west coast of Australia in March of 1772. The ownership of this land was written in the name of the King, placed in glass bottles and buried at the location of this landing. In 1998, the bottles were unearthed, which provoked great interest for *Le Gros Ventre* and her commander M. de St Allouarn. This would be a determining factor in the choice of this gabare as a subject since her draughts are preserved in Vincennes at the Service Historique de la Marine.

In consequence of the excellent work by Gerard Delacroix, the French Naval Archeology Collection is greatly enriched with this monograph; an original work treating of this type of vessel.

## COMPOSITION OF THE MONOGRAPH

132 page book  
24 x 31 cm  
format  
including  
forewords by  
Jean Boudriot

The gabares

- Presentation of the vessels.
- The gabares at sea and their comportment.
- The reconstitution of *Le Gros Ventre*.
- The Main sources.
- Reconstitution of the draughts.
- The voyage of *Le Gros Ventre*
- The Kerguelen Islands
- Transcript of the logs kept by M. Boigueheneuc and M. de Rosily.
- The west coast of Australia, the "Baie des Chiens Marins" in Nouvelle Holland, on March 30, 1772.
- The fitting of the gabares as exploration vessels: Commentary of 7 draughts by M. d'Auribeau for the gabare "*La Recherche*", expedition of d'Entrecasteaux in 1791.

*Le Gros Ventre* monograph

- Commentary on the 34 plates.
- Note about the orlop deck.
- The water hold and barrels.
- Metal work.
- The rigging of *Le Gros Ventre*.
- Contracts for the timbers
- Paint - colours for *Le Gros Ventre*.
- Photos of the model by Vincent Davenas, 29 photos captioned by Gerard Delacroix.

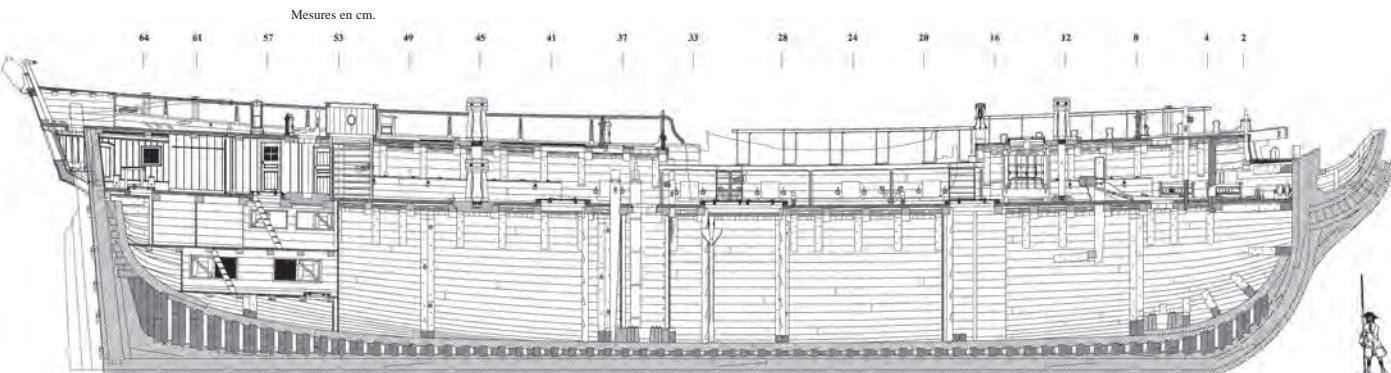


## THE LIST OF THE 1:48<sup>th</sup> SCALE PLATES; including all the framing timbers

1	Defining the hull.	13	The deck plan.	24	Top view.
2	Vertical sections.	14	Forecastle and quarter deck.	25	Great view: with all the arrangements.
3	Hull horizontal sections.	15	Longitudinal framing section.	26	Front and stern views.
4	Axial timbering.	16	Construction of the head	27	Masts and yards.
5 · 6 · 7	The frames and riders	17	Stern and quarter gallery.	28	Mast fittings.
8	Stern framing.	18 · 19	Fittings	29	Blocks.
9	Framing the front.	20	Layout of the hold.	30 · 31	Sails
10	Framing.	21	Layout of the deck fittings.	32	Belaying points.
11	The transversal sections.	22	Forecastle and quaterdeck layout.	33	Standing rigging and longitudinal sails.
12	Plan of the hold.	23	Longitudinal layout.	34	<i>Le Gros Ventre</i> under sails

MODÈLE GRÉE			COQUE SEULE		
Longueur	Largeur	Hauteur	Longueur	Largeur	Hauteur
110	42	78	88	17	21

## Extracts from the plans

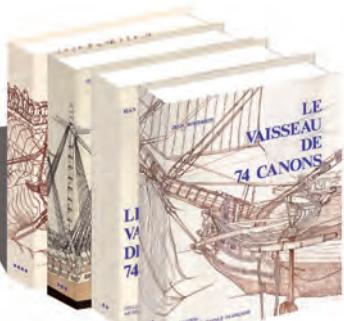


# THE 74 GUN SHIP

1780

## Studying naval archeology

Ancre - Jean Boudriot,  
Hubert Berti - French  
Naval Archeology Collection



This 4 volume set is the starting point of our collection and as such is almost essential to the understanding of all our other books. It gives the definitions of all parts of a ship, "from keel to mast's truck", illustrated with many detailed drawings. It also explains how to manoeuvre and operate a ship, and what shipboard life was like. In order to avoid unnecessary repetitions, these explanations and definitions are not given in our other publications, in which you will find numerous cross-references to "The 74 Gun Ship".

**The Method:** while the shape of things to come is not set at the beginning of the book, principles are well established there. Boudriot started with primary sources by systematically studying models in the arsenals and by doing daily archival research in every

harbour in France. He neglected nothing: neither the theoretical contributions brought by such authors as Duhamel du Monceau, Romme, Bouguer or Vial du Clairbois, nor the valuable iconographic documents provided by such draughtmen as Puget, Ozanne, Vernet, Guérault du Pas and Sponsky de Passebon, etc. But the practical drawing booknotes of anonymous engineers, the more modest wood estimates by master carpenters or the inventories of a warehouse were even more important. Only the irrefutable document is to be taken into account: engineers' plans, construction, equipping and campaigning estimates; correspondence and manuscripts of the time.

Because of his talent as a draughtman and because of his architect's training, Jean Boudriot is convinced that naval archeology - because it is a restitution of the past - can only be approached through drawing, the only true means of expression and understanding it. His rigorous and magical lines, with their lively and familiar style, immerse the reader in the atmosphere of the 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> ports and ship building sites throughout his numerous books.

**The Ship:** as the main naval war machine at the end of the 18<sup>th</sup> century, the 74 Gun Ship was the result of a compromise, like every successful vessel. Her balance between strong guns and manoeuvrability offered by the 28 gun lower gundeck and firing 36 pound cannon-balls, made the "74" the perfect ship of the line. Since she moved more easily, she was much more useful in combat than the heavy 100 gun three-decker. Her hull alone represented half of 3.000 tons moving. 2.800 hundred-year-old oak trees (a whole forest), and 600 tons of iron and wood bolts were needed for her construction. The hold and its orlop-deck could contain victuals for 6 months and water for 12 weeks. The gundeck had to bear the considerable weight of enormous 36-pdr guns, weighing 4 tons each. The upper deck, covered front and back with castles, carried lighter guns. This hull rose 7 meters above water and carried prodigious flights of sails. Each of the three masts, in three elements, rigged three floors of square sails and the main top-mast truck towered at 60 meters. This ship was well designed by her engineer and when correctly used by her crew, she performed superbly at sea in all weathers. In a fair breeze, she could exceed ten knots by sailing quartering.

## THE COMPOSITION OF THE BOOKS

### BOOK 1

- I ADMINISTRATION OF THE PORTS AND DOCKYARDS:
  - 1. General organisation - 2. Surveyors - 3. Summary table
- II THE WORK OF THE SURVEYORS:
  - 1. Qualities demanded of a warship - 2. Study of the hull shapes
  - 3. Ships' draughts - 4. Calculations - 5. Specification
- III THE WORK OF THE SHIPWRIGHTS:
  - 1. Moulding in the loft - 2. Marking out and fashionning in the yard
- IV MATERIALS:
  - 1. Timber - 2. Hemp - 3. Metals
  - 4. Others materials
- V DOCKYARD INSTALLATIONS:
  - 1. Slipway and keel blocks - 2. Raising and horning of the timbers - 3. Launching

### BOOK 2

- VI HULL TIMBERS:
  - 1. Keel and stem timbers - 2. The station frames - 3. Stern-frames 4. Filling timbers - 5. Reinforcement and planking of the hold - 6. Construction of the decks - 7. Internal planking above the hold - 8. Description of other inboard works
  - 9. External planking of the hull
- VII FASTENING - CAULKING:
  - 1. Nails, fastening - 2. Nailing, fixing of bold - 3. Oakum, pitch
- TABLES, ETC

- VIII HULL FITTING:
  - 1. The bow - 2. The ship's sides - 3. The stern

- IX INTERNAL ARRANGEMENTS:
  - 1. The hold and orlop - 2. The gundeck - 3. The upper deck - 4. The forecastle, quaterdeck and poop - 5. The officers' quarters - 6. Paintwork

- X BALLAST AND STOWAGE:
  - 1. Ballast - 2. Stowage - 3. Victuals

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#### SUPPLÉMENT

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## ABOUT THE AUTHOR



**Jean BOUDRIOT** is an exceptional Frenchman. Originally an architect, he is an outstanding draughtsman and in only a few years' time became the first specialist in 17<sup>th</sup> and 18<sup>th</sup> century naval architecture. He was first interested in the study of French statutory arms, on which he published four books that were accepted

as authorities. In 1960, he moved on to studying naval archeology.

J. Boudriot's first studies on naval guns, published in 1969 in *Neptunia*, are true revelations for amateurs. Between 1973 and 1977, he published

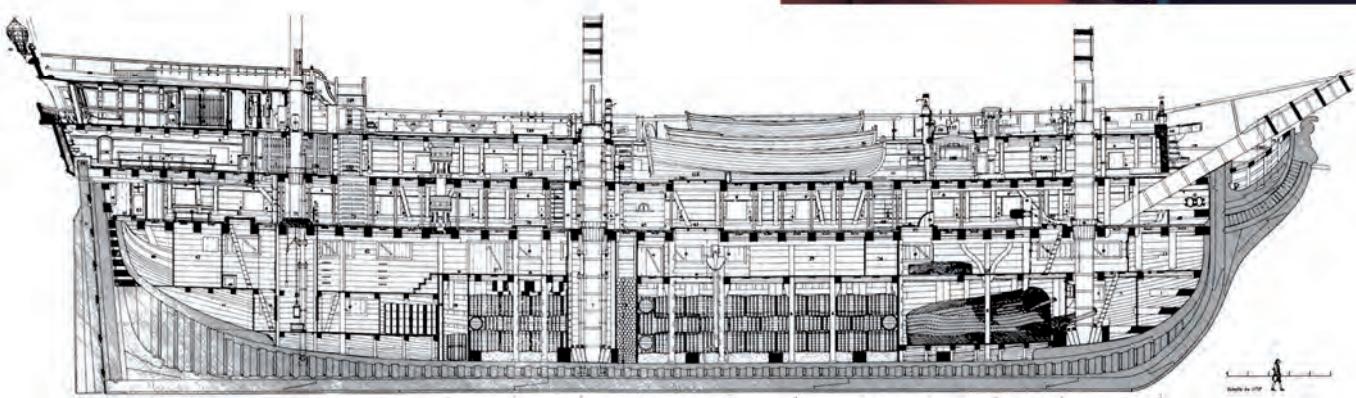
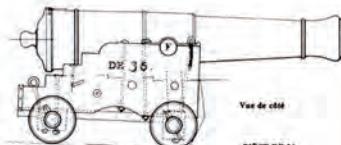
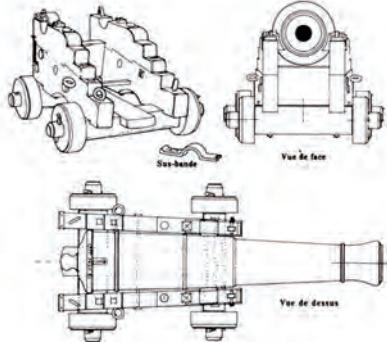
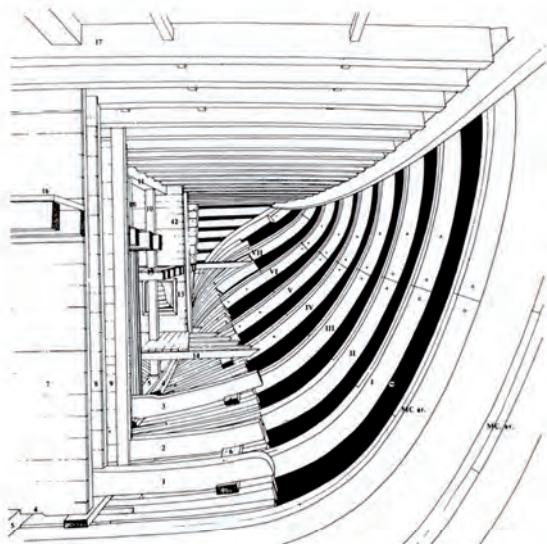
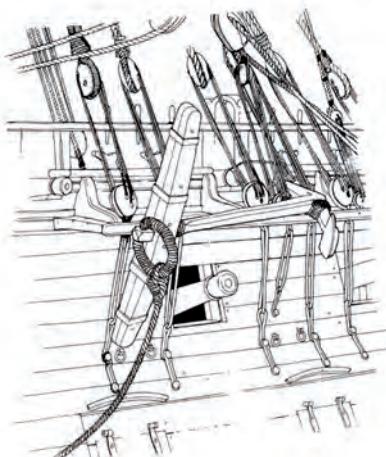
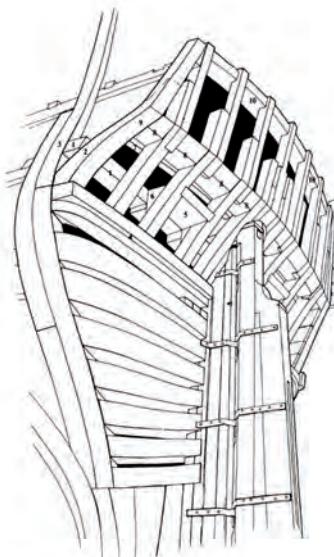
the four volumes of "The 74 Gun Ship" thus creating the Boudriot myth. Since then, he has dedicated his time to scouring the archives in Paris in winter, and to drawing in Charente in summer. For our utmost pleasure, Jean Boudriot regularly publishes the monographs and historical studies that constitute the French Naval Archeology Collection.

Boudriot is both an author and a publisher. He also teaches the weekly naval archeology seminar that takes place in the Musée de la Marine, and gives numerous lectures, most of them in the Sorbonne. He is a talented speaker and hearing him speak on his topic is an enchanting event.

### Extracts from the plates and photos

RIGGED MODEL			HULL ALONE		
Length	Width	Height	Length	Width	Height
90	20	120	62	20	20

Centimeters





# 18<sup>th</sup> SHIP BUILDING

1737

## Remarks on the Navies of the English and the Dutch

Blaise Ollivier  
David H. Roberts

The book contains the full text of the "Remarks" in both the original French and in translation, fully annotated and with a lengthy explanatory introduction. It is lavishly illustrated with nearly 100 contemporary engravings, plans, ship draughts and other iconographic material.

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24 x 31cm format, full green cloth binding, sewn section with headband.  
380 pages, 135 gr paper, with nearly 100 illustrations and iconographic material.

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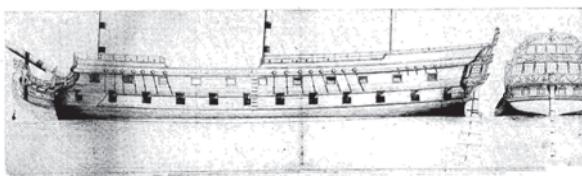
V Remarks on the Dutch Navy  
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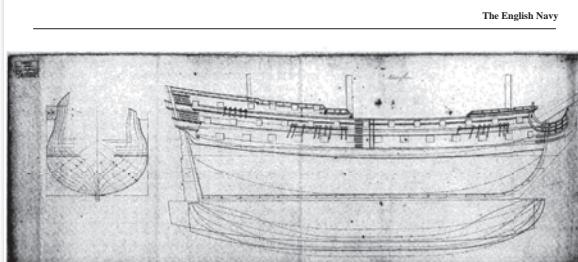
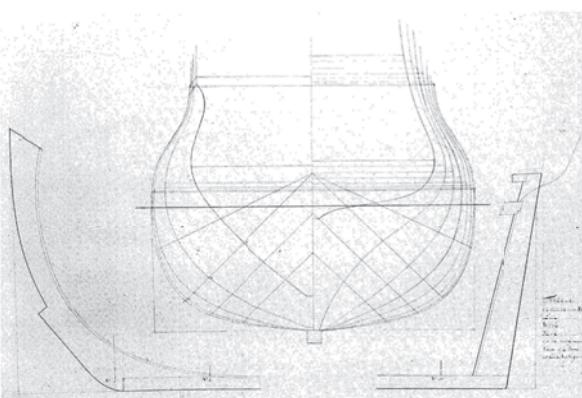
Appendix I: List of Dutch Ships in 1737  
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## Extracts from the pages

Remarks on the Navies of the English & the Dutch



92. & 93. Profiles of the Tjukkela (56), built in 1725.  
According to the "Algemeen Sintens' s Lands Scheepvaart" (MS Nq G 16) the master was Pieter van Zuyndregt. However, a manuscript list of ships "Gedraagt van het College ter Administratie op de Maze" (MS Nq H 52), indicates that she was in fact built by Paulus. This is confirmed by his initials on the draught. (Courtesy Maritime Museum Prins Hendrik, Rotterdam)



31. Draught of the Nottingham. (Courtesy National Maritime Museum, Greenwich)

works which he saw in him, such a high opinion of his skill. He has scrupulous orders to draw the true form of building a ship, which made me think perhaps he aims to spoil her deliberately in order to make a more brilliant show of the new manner of building in which he has played some part. I should not remain silent over the fact that he follows strictly the moulds of a ship of the same Rate which was very successful. If this be true, then I myself am in error in the opinion which I have formed of her.

Among the ships which are moored in the Medway before Chatham and which I have been to see, the most remarkable for their excellent building in all their parts which can be seen above the waterline and within, are the Royal George<sup>51</sup>, ship of 100 guns, the Grafton<sup>52</sup> and the Nottingham<sup>53</sup> of 70 guns, and the Dragon<sup>54</sup> of 60 guns. The first is much admired by the English, and I think them to be right in this. She is a very fair ship. Her lines are similar to those of the Royal Sovereign; I have seen her draughts. Yet she is superior to her, by the greater space which she has upon her decks, by the lines of her hull above the waterline, and by the fact that she is better executed in her upper works and has less sheer.

LXVI. I should add to what I have already said about the keels of the English ships, Remarks IV and XL, that in all their ships the skeg of the keel is cut short. I had already remarked that the skegs of ships at Deptford, yet I was not certain of it as I am led to believe that all the English ships are the same in this respect. I have seen draughts in the office of Mr Ward where the long skeg is still shown, I asked him why I did not see it in all the draughts and he replied that for about the last ten years they have cut off this timber, finding it of no usefulness. In this we are nearly in accord with the English shipwrights, for we have already greatly reduced the projection of this skeg. See Remark IV.

51. i.e. the 1719 Establishment.  
52. Royal George formerly Royal Charles, 1<sup>st</sup> Rate (100). Built Portsmouth Dockyard 1673 as 1443 tons b.m. length 170' x 49' x 20'. Subsequently renamed again in time as the Royal Anne (January 1756), finally renamed in 1770.

53. Grafton<sup>55</sup> 3<sup>rd</sup> Rate (70), 151'0" x 40'6", 1095 tons b.m. Built by Swallow & Fowler at Limehouse and launched August 1709. Rebuilt at Woolwich in 1725 as 1133 tons b.m. Broken up in 1744.

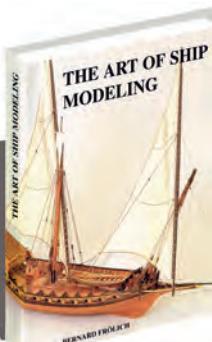
54. Nottingham<sup>56</sup> 4<sup>th</sup> Rate (70), 149'0" x 38'0", 1000 tons b.m. Launched Deptford Dockyard June 1698.

55. Roborough<sup>57</sup> 4<sup>th</sup> Rate (70), 149'0" x 38'0", 1000 tons b.m. Subsequently rebuilt at Sheerness in 1745 as 1077 tons b.m. Finally sunk as a breakwater at Sheerness in September 1773. Her draughts are shown above.

56. Dragon<sup>58</sup> 4<sup>th</sup> Rate (60), 1067 tons b.m., 144'0" x 42'0". Built at Woolwich Dockyard in 1736 and sunk as a breakwater at Sheerness in July 1757.

## Ships of Various Rates

## Kell



# THE ART OF SHIP MODELING

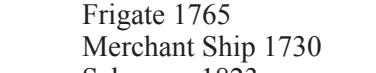
*Over 600 photographs in full color*

Bernard FRÖLICH

In this book, Frölich describes in detail all the crafts that a shipmodeler must master: he must be in turn a shipwright; a carpenter; a cabinetmaker; a marqueter; a blacksmith; a ropemaker and a sailmaker. He shows that any beginner, if he is industrious and persevering, can master this art. This fact becomes all the more evident since we can see the tremendous progress made by the author himself through the use of photographs of his own work.

This book itself is a tremendous learning experience. In the first twenty pages Fröhlich describes his studio, his tools and equipment and his library. He then devotes about one hundred pages to the timbers of a 1730 merchant vessel, the *Mercure*, and to M.de Tourville's three-decker vessel of 1680, *L'Ambitieux*. In the next one hundred twenty pages, the author discusses the equipment, fittings, guns, decoration and sculptures, ship's boats and rigging. The final sixty pages offer a description of Fröhlich's own models (all at 1:48<sup>th</sup> scale) : the schooner *Jacinthe*; the lugger *Coureur*; the brig *Cyclope*; the bomb ketch *Salamandre*; the 12-pdr frigate *Belle Poule*; the merchant vessel *Mercure* and the xebec *Requin*. The unfinished model of *l'Ambitieux* - the Chevalier de Tourville's three-decker vessel - is abundantly described in the chapter on framework. Although the author denies it, this book is a genuine treatise on historical naval shipmodeling. The photographs included show that the skills of today's shipmodelers match the talent of the creators of the period model pieces preserved and displayed in our museums.

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