



DESCRIPTION of several POINTS which serve as LAND-MARKS for Navigating the Channel of the Harbour of PORTO RICO.

- A. Watch-tower on the Rock at the Mouth of the river.
- B. Watch-tower or Fort opposite to the South-side of the Morro.
- C. Castle of San Juan.
- D. Angle of the Castle of St. Juan Battery.
- E. Watch-tower or the Powder Magazine next to S. Juan Battery.
- F. Watch-tower or the castle of La Punta.
- G. Watch-tower or the castle of the Government House.
- H. The fort of San Felipe.
- I. Eastern Edge of the Morro adjoining the Forts.
- J. Edge of the Park of Arroyo, a very noticeable building.
- K. Edge of the Park of Arroyo, a very noticeable building.
- L. Watch-tower on the Hill on the East-side and near the outer edge.
- M. Watch-tower where the Longitude was determined by Observation.
- N. The house used as an Observatory.

SITUATION of the SHOALS.

Sabana Shal. lies to the eastward of the Point of Callejo, and is about 10 fms. from the shore. It has two small shoals, one to the west & another to the east of the main. - San Agustín's Shal. situated between the Point of Callejo & the Callejo. - Tafarela Shal. lies to the south of the Point of Callejo, and is about 10 fms. from the shore. It has two small shoals, one to the north & another to the south of the Point of Callejo. - Punta Larga (Long Point) Shal. situated at the intersection of Gravel V. and the Morro.

NOTE.

The sounding taken at La Punta, shows the number of Spanish Fathoms of fathoms contains the following proportions: - The depth of the water is 10 fms. at the point of Callejo, and increases to 12 fms. at the Point of Callejo, and again to 15 fms. at the Point of Callejo. At 20 fms. it is 18 fms. at the evening, and the greatest depth is nearly equal to 22 fms. English.

**GEOMETRICAL PLAN
of the
PRINCIPAL HARBOUR
in the**

ISLAND OF PORTO RICO;

Surveyed in 1781, by

DOÑ COSME DE CHURRUCA,

Captain in the Spanish Navy

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Scale of one Nautical Mile, Spanish.

REMARKS.

At the S.E. corner of the Island of Porto Rico, there are small hills of moderate elevation, but of no great height. The top of the highest hill is covered with a dense forest of trees, and is the only prominent object in the distance. The hills are situated on the North side of the Island, and are called the "Hills of the Morro." The water-side of these hills may be readily ascertained by being the termination of the hills above them, and the range of small hills to the West. The several points and objects here mentioned, which exceed 100 feet in height, may be distinguished from the sea-side of the Island.

DIRECTIONS for entering the HARBOUR of PORTO RICO.

If you enter the Harbour with the wind, you must run into the Channel with all the upper sail well out, in order to bring your ship under the lee of the Morro, and then turn to the right, and run under the North shore of the harbour until you have the point of Callejo a little open with the V. part of the Isle of Gibara to the south of the Harbour, and stand on until the Morro or Field Hill appears by the point of the Morro.

When you are in the position you must bring the ship head on with the Castle of Callejo bearing due east, and, in passing over the channel, you must keep the castle to the left, so that the castle will be to the right of the ship.

Again, if you enter the Harbour with the wind at the North, however strong it may be, you must run down the north-side of the Morro, in order to stand on until the castle of Callejo appears to the left, and then bring the castle more open on the starboard side than port, and you have passed the Castle of La Punta, put the ship head on the south of the Callejo, and when you are in the position you must bring the castle to the left, so that the castle will be to the right of the ship.

Again, if you enter the Harbour with the wind at the South, you must pass the castle of La Punta, and then bring the castle to the left, so that the castle will be to the right of the ship.

The following directions suppose you to have this wind, which is by no means common in these parts. On the other hand they make for the anchorage by tacking and tacking. Emerging in either of these ways, by large tacks, might be anchor ahead of Balboa's Gut, or later on in the south-westerly course of the River, when they run beyond the castle of La Punta.

Again, if you enter the Harbour with the wind at the West, however strong it may be, you must run down the north-side of the Morro, in order to stand on until the castle of La Punta appears to the left, and then bring the castle more open on the starboard side than port, and you have passed the Castle of La Punta, put the ship head on the south of the Callejo, and when you are in the position you must bring the castle to the left, so that the castle will be to the right of the ship.









