

I dedicate this ship to the people of Italy and Australia. When admiring this model, they will perhaps be reminded of the patient, accurate and painstaking work of research which I carried out from 1980 to 1986, to commemorate those brave workers of 12 different nationalities who were on board the flagship of the First Fleet, which headed for Australia carrying 160 people and 20 guns, under the leadership of Captain Arthur Phillip and Lt. Phillip Gidley King. We Australians and all the other peoples of the world admire the achievements of those brave men and their leaders and feel that such a feat is unlikely to be equalled by any future generation.

#### HISTORICAL NOTES ON 17th CENTURY MERCHANT SHIPS

In "Architectura Navalis Mercatoria" published in 1768, the Swedish master shipbuilder Fredrik of Chapman classified the various merchant vessels of his time and divided them into five categories according to the features of their hull: the frigate had a flat stern because the planking extended as far as below the upper stern. Around the middle of the 17th century, the frigate became a very popular vessel in view of the slenderness of its body and profile and the proportionally larger size of its sails.

It was used for reconnaissance, expeditions, transport and, above all, for the destruction of enemy trade. It was equipped with a covered single gun deck. In the 17th century, a typical gun deck would comprise 30-40-50 or 60 guns. In my opinion, H.M.S. Sirius probably carried 24 guns and a crew of at least 160 people. At the time, this type of ship featured a series of gangplanks which ran alongside the rails, thus leaving in between room for life rafts and spare masts and provided a good ventilation to the whole vessel. This louvered central part, which exposed the lower deck to sunlight, was termed "ventilation of the middle deck" and was considered to be a modern technique. This type of ship was also used in tropical seas. In my version, H.M.S. Sirius will have at least 4 service

rafts and 4 anchors, as the original ship would surely have carried two 750 kg. anchors and two 1000 kg. anchors. Further to its normal load, this type of vessel was duly equipped to house and feed, for relatively long periods of time, its crew, its gunners, its officers, etc. Its design made it suited to both rough and calm sea conditions.

In 17th and 18th century France and England, the design and equipment of this type of vessel were covered by special laws and regulations which, inter alia, set out in detail the required sizes of the ship's sections. For instance, the keel of an English or French first class vessel was to be made of planks with a width of 1 foot 9 inches, the helm of a first class ship had to be built from top quality timber and be of a size as recommended by the Royal regulations. For example, in 1761, the Navy Board, which supervised all naval constructions in England, ordered that the body of vessels be covered with copper plating in order to prevent a kind of fish, named shipworm, from literally eating the hull. Such copper plates were 40-50 cm by 130-160 m in size, with a thickness of approximately 0.75 mm, and were applied in a staggered fashion, like bricks in a wall, and were overlapped in an imbricated pattern for about 4 cm., starting from the keel and extending towards the stern and the waterline, respectively.

I would define the frigate as the forerunner of the clipper. In fact, towards the middle of the last century, trade with the East recorded a sharp increase and commercial exchanges between the Old World on one side, and India, China, Ceylon, etc., on the other, became more intensive. Ships were coming home from those lands with their holds laden with precious spices, after journeys lasting several months. Thanks to those vessels which handled the sea so well, their sails which made the most of the slightest breeze and the skills of their crews, ship-owners were making such large profits that often one single voyage would cover all expenses, including the cost of the ship. Later, when it was sought to build faster vessels so as to further increase the volume of trade, ships began to incorporate all the possible desirable features from both the shipowners' and the merchants' point of view, and strive for perfection as far as navigation was concerned.