

their progress in astronomy. Perhaps they also kept this knowledge secret, for there are many indications that they were possessed of many of its practical applications to the art of navigation. At the dawn of history, and before all the other peoples of antiquity, we find them sailing over the open sea without a compass or coast to guide them. They even navigated the open ocean at night. The Phœnicians did this before the time of Homer, while the Greeks and Romans, for a long time after that period, never lost sight of the coasts, and sailed only during the day.¹

The notions with reference to the sea inherited by the Greeks from the Phœnicians THE GREEKS. appear to have been extremely vague, even regarding the Mediterranean, which must have been the best known to them. Greek philosophers and navigators first directed attention to the scientific problems of the ocean, and aided in solving them by their progress in branches of knowledge connected with physical geography. Their influence was profound, and traces of the oceanographical ideas of the Greeks survived for centuries in literature. The Greeks, so admirably endowed in most respects, had not a sufficient number of accurate observations to form a solid basis for induction; they did not possess the rigorous methods of modern science, which do not admit of deductions beyond the range of the observations. Their theoretical conceptions cannot, however, be passed over, any more than the ancient Greek myths relative to the earliest voyages of their race. "Popular myths," says Humboldt, "mixed with history and geography, do not altogether belong to the ideal world. If vagueness be one of their distinctive traits, if the symbols which cover the reality be wrapped in a veil more or less thick, the myths closely associated with them show, nevertheless, the first dawn of cosmography. The statements of primitive history and geography are not entirely ingenious fictions; the opinions which have been formed about the actual world are reflected in them."²

The first step in the geographical history of the Greeks is the legendary voyage of MYTHICAL VOYAGE OF ARGONAUTS. the Argonauts, although this myth gives no certain facts regarding the physical geography of the sea. The poetical elaboration of the story took place, according to Grote, between 600 and 500 years before the Christian era. If the voyage has any foundation in fact, it was probably as much a Phœnician as a Greek adventure in search of gold.³ All that can be said with reference to the poetical accounts of the wars of Troy is that, at the WARS OF TROY. period immortalised by the genius of Homer, the Greeks were so familiar with navigation as to be able to transport an army across the Ægean Sea as far as the Hellespont.⁴

¹ The Phœnicians steered by the Pole star, which, from this circumstance, was named by the Greeks the Phœnician star (Enc. Brit., art. "Phœnicia"). The Greeks, it is said, steered by the Great Bear (Bunbury, *op. cit.*, vol. i. p. 34).

² Humboldt, *op. cit.*, tom. i. p. 112.

³ The name *argo* is possibly of Phœnician origin (the Semetic word *ark*, long), having reference to the "long ships" or fighting ships as distinguished from the round or cargo ships. The *argo* may have been the first long ship built by the Greeks. The voyage of *Argo* is readily enough understood as the attempt of a people, ignorant of geography and physics, to combine in one narrative the Phœnician voyages in every quarter of the then known world, (see John Kenrick, *History and Antiquities of Phœnicia*, p. 92, London, 1855). Alexandrian critics confused the story by transferring the wanderings of Ulysses to the Outer Ocean, while retaining the idea of this ocean such as it was known to them.

⁴ Bunbury, *op. cit.*, vol. i. p. 17.