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BY CECIL TORR, M.A.

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PREFACE.

FOR some while I have been at work upon a history of ancient shipping; and the following pages are meant to form a portion of that history. Assuming that ancient shipping means shipping in the Mediterranean between 1000 B.C. and 1000 A.D., and that a history of shipping should deal with everything connected with ships, I find that I have upon my hands a task of no small magnitude; and I do not quite know when this task will be accomplished. That being so, I am bringing out this portion of the work before the rest; this portion being tolerably complete already, and dealing with a question that may conveniently be discussed apart from any other, namely, the character of the ships themselves.

Ancient ships have already formed the subject of dozens of books and pamphlets; and I necessarily have made myself acquainted with the bulk of this literature, from Dr Assmann's latest article in the *Archäologisches Jahrbuch* back to the treatise *De Re Navali* published by L. de Baif in 1536. I do not wish to underrate my obligations to previous writers on the subject, for they have informed me of many things that I was not at all likely to discover for myself. But, taking them altogether, I have found their works more voluminous than valuable. As a rule, they have relied too much upon their predecessors. A great many of their works are nothing more than careless compilations from those of earlier date; and hardly any of them fail to repeat a few exploded

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blunders. And then a great deal of energy has been mis-directed. Author after author has written as though the question was simply how he would set to work, if he were called upon to build a trireme; and accordingly there has been a crop of so-called restorations, which are principally works of the imagination, and do not always agree with the evidence on the few points that happen to be known for certain. And while many of the writers on the subject have thus contented themselves with a very slender knowledge of the evidence available, nearly all of them have shewn more zeal in collecting evidence than in sifting it sufficiently to ascertain its value.

The best of the written evidence comes from inscriptions. In digging the foundations for a building at the Peiræus in 1834, the workmen came upon a Roman or Byzantine drain, and found that it was lined with slabs of marble covered with inscriptions. These were some of the inventories of the Athenian dockyards, and a few others have come to light since then, the earliest of them dating from 373 and the latest from 323 B.C. or thereabouts. Unhappily, these inscriptions are shattered and defaced in many places; but where the reading is clear, their testimony is conclusive*.

Next in importance are the statements that occur in ancient literature: but, unfortunately, very few of these are more than passing allusions; and the only one that enters into details is open to suspicion. This is the account that Athenæos gives of some stupendous ships that were built about 400 years before his time. In my opinion, this account is not to be accepted as a description of those particular ships: but I imagine that its authors based their statements on what they knew of ships in general; so that, with due allowance for exaggerations and anachronisms, every detail is

* All these inscriptions are printed in the *Corpus Inscriptionum Atticarum*, vol. ii, nos. 789—812. The original set were edited by August Böckh in 1840 from copies by Ludwig Ross.

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admissible as evidence in dealing with the ships of ancient times^b. Of course, the literary evidence has all to be subjected to the ordinary tests, each statement being estimated by the value that we put upon its author and his means of information about the matter in hand. And peculiar difficulties arise when a thing is mentioned only once in literature, the question being whether this is due to chance, or must be taken to imply that the thing was not in vogue for any length of time. But that conclusion is not inevitable, even when a thing is mentioned several times by authors of one period and never once by those of earlier or later date; for those authors may only be repeating a simile or illustration that had struck the fancy of their generation. And, conversely, authors might go on repeating phrases that were no longer applicable; just as Plutarch and Lucian talk about akatian sails, although these sails had probably gone out of use some centuries before: the explanation being that the akatians were mentioned in a famous saying of Epicuros^c.

There are also the statements of the scholiasts and lexicographers: but their evidence may be rejected altogether. So far as their assertions relate to matters that admit of proof, they are oftener wrong than right; and there is no reason for supposing that they were any better informed on matters that do not admit of proof. Such people felt bound to find a meaning for every word or phrase that came within their range; and if they did not happen to know, they simply had to guess.

The evidence from written sources is supplemented by evidence from material sources. There are the ruins of the docks at Athens to give a notion of the dimensions and proportions of the war-ships: and there are some rams and

^b Athenæos, v. 37—39, quoting Callixenos, and v. 40—44, quoting Moschion. See especially pp. 9, 10 and 27 to 29 as to the reasons for suspecting these descriptions; and also note 118 on p. 50 for an example of the mode of dealing with such evidence.

^c See p. 86 as to this.

figure-heads and anchors, but practically no other remnants of the ships themselves. A few models have been found: but these are all too rough to be instructive; and the chances are against our finding the splendid model that Lysander placed at Delphi—a trireme, three feet long, and made of ivory and gold^d. There are plenty of pictures of the ships on painted vases and in frescos and mosaics, and figures of them on reliefs and coins and gems and works of art of every class; for they were constantly in favour with the artists of antiquity. But these works of art must all be taken at a discount. In dealing with so large a subject as a ship, an ancient artist would seize upon some characteristics, and give prominence to these by suppressing other features; and then would modify the whole design to suit the space at his disposal. Moreover, the treatment would vary with the form of art, painters and sculptors seeing things from different points of view; and it would vary also with the period, as art went through its phases. So, works of art may easily be taken to imply a difference in the ships themselves, when the difference is only in the mode of representing them.

The greatest caution is necessary in getting this evidence at second hand from books. If a restorer has handled the original relief or painting, his mistakes are sure to be embodied in the copy; and generally some fresh mistakes are introduced by draughtsmen and engravers and the people who touch up photographs. The result is that very few of the published copies are trustworthy in every detail, while many of them might rank as caricatures: and yet those copies are handed on from book to book, and quoted as authorities. But obviously the authors of these books have never made a search for the originals, for then they would have discovered that not a few of these supposed copies have no originals at all^e.

^d Plutarch, Lysander, 18. 2, *τρίρης, διὰ χρυσοῦ πεποιημένη καὶ ἐλέφαντος, δυνεῖν πηχῶν.*

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The evidence from all sources falls short of what is needed for a complete description of the ships; for although our information on certain points is ample and conclusive, there are many points on which we have no information whatever. Practically, this is not a matter of importance, as nobody is likely to resuscitate the ancient style of ship-building in its entirety; and hitherto no attention has been given to devices that might still be serviceable. Thus, for example, the ancients saw their way to supplement a square-sail by a triangular topsail with its base along the yard and its apex at the top of the mast, so that no additional yard was needed; and to reinforce the ram by a series of auxiliary rams above, which not only increased the damage to an

° For example, in the last edition of Smith's *Dictionary of Greek and Roman Antiquities*, vol. ii, p. 218, there is a picture of an ancient anchor with flukes to its arms and no stock. A note says that the picture is taken from Baumeister. It occurs on p. 1614 in vol. iii of Baumeister's *Denkmäler des klassischen Altertums*; and there the statement is that the picture is taken from Kekulé, and that the original may be seen upon the balustrade round the temple of Athena Nike at Athens. But in Kekulé's *Reliefs an der Balustrade der Athena Nike* the picture is given on p. 12 among the *Ergänzungsskizzen*, merely as a suggestion of what might have filled a vacant place; and on the balustrade itself there is not the slightest trace of any anchor at all.—Again, in Smith's Dictionary, vol. i, p. 361, a picture of a boat, or coracle, is introduced with these remarks:—"The illustration, given both by Rich and Saglio, is taken from Scheffer, *De Militia Navali Veterum*, who describes it as from an ancient MS. of Vitruvius (Polenus, *Supplementum ad Grævium et Gronovium*, v. p. 831)." Saglio gives the picture on p. 915 of vol. i of Daremberg and Saglio's *Dictionnaire des Antiquités Grecques et Romaines*, saying that he took it from Scheffer, who took it from a MS. of Vitruvius, and that Rich had given it before. Rich gives it on p. 117 of his *Dictionary of Roman and Greek Antiquities*, third edition, saying that he took it from Scheffer, who took it from a MS. of Vitruvius. But Scheffer himself, p. 81—and Polenus reprints him rightly—says that he took it from a MS. of Vegetius. As a matter of fact, he did not take it from Vitruvius or Vegetius or from any MS. at all. An edition of Vegetius, *De Re Militari*, was printed at Paris in August, 1532. An edition of Robertus Valturius, *De Re Militari*, had been printed at the same press in July. And as the volumes were uniform, they generally were bound up together. Scheffer took the picture from an engraving on p. 316 of the treatise by Valturius. The engravings in this edition of Valturius are copied from the engravings in the original edition printed at Verona in 1472, and refer to matters of that period.—This sort of thing is not at all uncommon.

enemy, but also protected the stem from being crushed against her sides. Such devices as these, which proved of service in antiquity, would certainly be worth a trial on modern ships.

I must warn the reader that in the passages quoted in the notes I have silently omitted any subordinate clauses that do not bear upon the matter in hand. And also that I have made a rough use of round numbers in dating Egyptian monuments; my opinion being that the evidence does not justify the popular system of chronology.

The illustrations in plates 1 to 7 are by Mr J. A. Burt and those in 8 by Mr H. W. Bennett. I have never seen the originals of fgs. 10, 11, 29 to 31, and 40; but I can guarantee the accuracy of all the rest in every point on which I cite them as authorities. Unfortunately, the illustrations were arranged some while ago, before the book had assumed its present form; and they fall short of what would be desirable. But I hope that the complete work will contain a satisfactory copy of every monument that can elucidate the subject.

C. T.

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