

## CORRESPONDENCE.

## PROFESSOR BUECHELER'S JUBILEE.

On the 13th of March 1906 Professor Buecheler's friends will celebrate his golden jubilee as Doctor of Philosophy. Since 1870 he has laboured as Professor at Bonn and worthily maintained the credit of the University of Niebuhr, Ritschl, and Otto Jahn. A committee of his pupils, in the wider as well as in the narrower sense of the word, is raising a fund to procure a bust, by Dr. Walter Lobach in Berlin, for which subscriptions will be received ('Buechelerbüste') by the Berg-Märkische Bank, Kaiserplatz, Bonn, and by Barclay's Bank (Mortlock's branch), Cambridge. Any surplus will be

applied to found a 'Buecheler-Stiftung' (there already exists a 'Welcker-und-Usener-Stiftung') at Bonn.

Readers of the *Classical Review* do not need to be told what services Professor Buecheler has rendered to ancient letters, in many departments, from very early days. As one of the Committee I shall be glad to receive names of scholars who will join the Committee, and also to take charge of subscriptions.

JOHN E. B. MAYOR.

ST JOHN'S COLLEGE, Nov. 11.

## ARCHAEOLOGY.

## TRIREMES.

LIKE many other recent writers on this subject, Messrs. Richardson and Cook have misconceived the nature of the problem. We do not want to know how they would build a trireme. We want to know how triremes actually were built. And, if we are to know this, we must take account of these five points at least:—

I. The remains of the Athenian docks show that the triremes were not more than 150 ft. long and 20 ft. wide.

II. Vase-paintings, coins, etc. show that the oars were confined to about three-fifths of the length of the ship, not extending further forward than the cat-heads nor further aft than the steering-gear.

III. Inscriptions show that the Athenian triremes had 62 thranite oars, 54 zygite oars, and 54 thalamite oars.

IV. The Kouyunjik relief and several vase-paintings depict vessels with two tiers of oars arranged in this way . . . . .

V. The Acropolis relief and the relief on Trajan's Column depict vessels with three tiers of oars arranged in this way : . . . . ., that is, *in quincuncem*.<sup>1</sup>

<sup>1</sup> See the diagram in my article *navis* in Daremberg & Saglio's *Dictionnaire des Antiquités*, Fig. 5275 on p. 29 of fascicule 36.

There can be very little doubt about the arrangement of the oars. The difficulty is about the arrangement of the rowers. And the difficulty is aggravated by Messrs. Cook and Richardson, p. 377, when they make the midship-section of a trireme just like the midship-section of a modern steel-built steamer. If the midship-section of a trireme was something like the midship-section of a mediaeval galley, the difficulty nearly disappears.

Suppose that the vessel's sides curved sharply outward, and that the rowers' seats were fixed against the vessel's sides, so that the middle line of the vessel was nearer to the thalamites than to the zygites, and nearer to the zygites than to the thranites: the rowers could then work three tiers of oars *in quincuncem* without any inordinate difference in the lengths of the oars or in the heights of the tholes above the water-line.

This, I think, may prove to be the true solution of the problem. At present the problem is insoluble, because we have not got sufficient information. And it is mere waste of time to give solutions that run counter to the information that we have got.

CECIL TORR.

<sup>2</sup> *Ibid.* Fig. 5270 on p. 27.