

mediate. If hand charts are desirable it is expedient to reserve one chart for each of the great divisions of physics, dynamics, molecular physics, acoustics, heat, light and electricity. I attach such a chart of names bearing on the history of dynamics, in which the main coordinates only have been indicated, as the smaller divisions should be in a subordinate color. It shows, for instance, the dearth of interest in such subjects in the middle of the sixteenth century and toward the beginning of the seventeenth century, except on the part of a few men of irrepressible genius, as well as the terrific general onslaught which occurred with the beginning of the nineteenth century.

To make the chart more useful the chief date in each life should be indicated by a crossline (not shown), as for instance in case of Newton, the date of publication of the "Principia," of the "Optiks," etc.

I am writing this note with the hope that somebody will undertake the work seriously and with some degree of completeness. It seems to me clear that available wall diagrams of this kind would not only enliven the work of the teacher of a forbiddingly difficult subject, but would suggest the vast array of profound investigation to which the physics of the present day owes its assurance and trenchancy.

CARL BARUS

BROWN UNIVERSITY,
PROVIDENCE, R. I.

SPECIAL ARTICLES

ON THE OCCURRENCE OF THE LITTORAL BARNACLE
CHTHAMALUS STELLATUS (POLI) AT
WOODS HOLE, MASS.

To one acquainted with the world-wide distribution of this barnacle, it would seem rather superfluous to call attention to its presence in any specific locality. It is a rather curious fact, however, that this abundant and almost cosmopolitan species seems to have hitherto escaped the notice of those who have listed the New England fauna. Neither Gould ("Invertebrate Animals of Massachusetts," 1840), nor Verrill ("Invertebrate Animals of Vineyard Sound," 1873), nor Miss Rathbun ("Fauna of New England: List of the

Crustacea," 1905) have included this barnacle among the New England species, though certain far less common forms are listed by each of these writers; and the only reference of which I am aware to its occurrence on the Atlantic coast of North America is contained in Darwin's "Monograph of the Cirripedia," in which he refers to "some specimens attached to oysters sent to me by Professor Agassiz, from Charlestown" (p. 457). It would seem more than possible that *Charleston* is here intended, for on a previous page (456), Darwin includes "Southern United States (Charlestown)" among the localities from which *Chthamalus stellatus* is recorded. I am informed by Miss Rathbun that no specimens of this barnacle from New England are known to be contained in the U. S. National Museum collections. Through the kindness of the curator, Mr. C. W. Johnson, I have examined specimens of this species (varieties *communis* and *fragilis*), contained in the collections of the Boston Society of Natural History. The locality has not been recorded, however, and there is nothing to indicate whether or not the specimens came from New England waters.

The author was first led to look for this species at Woods Hole during the present summer, when he found it to occur in considerable numbers on Penzance Point, along the shore of Woods Hole passage. Further search has revealed its presence on the piles of piers at Woods Hole, New Bedford and Vineyard Haven, and on rocks at Nobska Point, Nonamesset Island, and the shore of Buzzards Bay near Woods Hole. It is probable, indeed, that its local distribution is very general. At the last named point this species seems to be particularly abundant. It extends considerably higher up on the boulders than does *Balanus balanoides*, with which, however, it is associated at a lower level. It thus occurs at points which must be uncovered by the tide for the greater part of the time. In local waters, so far as I have seen, *Chthamalus* never grows in such dense clusters as does *Balanus balanoides*, and indeed it appears unable to compete very successfully with the latter in its proper zone.