

percentage of taxed property rising in Rhode Island to 60, though it falls in Connecticut to 38.4, and in Vermont to 30. In Vermont, also, the tax is very small (only \$1,745,000); while New Hampshire, with scarcely more population, raised \$2,698,000 by taxation, and Rhode Island, with 56,000 less people, raised \$2,603,000. The estimated wealth of Rhode Island, however, was \$420,000,000, while that of Vermont was but \$289,000,000, and that of New Hampshire, \$328,000,000.

The mode of exhibiting property, debt, taxation, etc., by pyramidal diagrams, — the largest states at the bottom, and so on, upward, — is a very effective one to the eye, far more so than the map-form of making such statistics impressive. A map, and an arrangement of divided disks and parallelograms, are also used to illustrate the ownership of the national debt, etc. These devices are a novel and increasing feature of statistical reports, and are doubtless useful to the general and casual reader; but scientific inquirers must be warned against making too much of them. Statistics themselves, in their most exact form, are apt to mislead as soon as comparisons are attempted; for then a multitude of qualifying circumstances come into view, or, if not seen, make the result of the comparison deceptive. To make these statistics still less exact by reducing them to the pictorial form, introduces a new element of error. The investigator must therefore be prepared to see these general views become dissolving views, as he extends his inquiry into the real facts, which the best collected statistics do but disguise with a thicker or thinner veil of imperfect classification.

THE ABORIGINES OF CHILE.

Los aborígenes de Chile. Por JOSE TORIBIO MEDINA. Texto i láminas. Santiago, Imprenta Gutenberg, 1882. 427 p. 4º.

The original sources on which we must depend for a knowledge of the ethnology of Chile are difficult of access, and Señor Medina has performed a meritorious work in collecting them in this volume. Nor is it a mere compilation. To a very full description of the Araucanian Indians he adds a discussion of the archeological relics of that country, such as up to the present we might have sought in vain. Some of his conclusions will be read with interest.

Although no unequivocal signs of quaternary man have been found in Chile, Medina mentions two or three discoveries of stone implements at great depths, one of which, as figured,

has every appearance of a genuine quaternary celt. As is well known, in the contiguous territory of the Pampas, Ameghino has described undoubted and abundant human remains from quaternary deposits. At any rate, the state of preservation of the remains in the graves of the Araucanians seems to leave no doubt that they were relatively a late immigration. To the antecedent population the author attributes the curious petroglyphs which are not uncommon on the Chilian rocks. His effort, however, to make it appear that this earlier people was of a more civilized type, cannot be said to be successful.

Appended to the text are two hundred and fifty-two lithographs of archeologic finds. They include articles in stone, copper, silver, bronze, and pottery. Those in stone present some forms which are not at all, or not often, found with us. Such are the rounded and polished sling-stones, — a weapon popular in South America, but scarcely known in the northern continent. Stone implements for net-making are another curiosity. They are of the shape and size of a cigar, with grooves around each end. Perforated circular stones, about three inches in diameter, are extremely common, and, the author thinks, were used principally to add weight to agricultural implements, — a quite improbable theory. Both the stone implements and the pottery present markedly different degrees of technical skill. This the author explains chronologically, attributing the ruder to a much more ancient date; but the opinion that they merely represent different degrees of contemporary skill is equally probable.

Shell-heaps are numerous along the Chilian coast, some of them six metres in height; but mounds, earthworks, or walls are not described. No fresh information is furnished on the Araucanian language, and this part of the volume has slight value. The history of the Incarial conquest is detailed at length; but the influence of the Incarial culture on the southern tribes, which was very widely felt, is not allowed its proper prominence.

NOTES AND NEWS.

THE Chesapeake zoölogical laboratory of the Johns Hopkins university was stationed this year at Beaufort, N.C., and was open from June 1 to Sept. 19. Owing to the illness of the director, it was most of the time under the charge of Prof. H. W. Conn. The embryology of echinoderms, annelids, and medusae, formed the principal studies. Dr. Brooks nearly completed his monograph of the medusae of Beaufort, and studied the embryology of *Eutimia*, besides