

by people who did not know their own ages; but probably only a small part of it is due to that cause, at least in the more intelligent portions of the population. In so intelligent a state as Rhode Island, for instance, we find for the years 29, 30, 31, the numbers 3,965, 6,550, 3,112; which is not much better than in the aggregate of the United States. How much is due to guessing by relatives, servants, masters, etc., and especially to suggestions and guesses by the census-gatherers themselves, — who, of course, do not regard the exact ages as important, and most of whom have probably no strong views on the subject of the 'personal equation,' — no one can tell, but probably very much more than to people's ignorance of their own ages. An examination and comparison of the original note-books of the various census-takers would furnish materials for an interesting exercise, if nothing more, in statistical research, and might reveal approximately the extent to which the personal qualities of the census-takers has affected the result; while a comparison of the table with well-established tables of mortality might enable us to estimate the force of the tendency to understate age which would doubtless be found to exist. The whole thing makes a very pretty problem, and serves to illustrate in a rather gross and exaggerated way the complexity of statistical investigations.

— We learn from *Nature* that a meeting which may have an important result upon science and art instruction in England has been inaugurated at Manchester. An association has been established to effect the general advancement of the profession of science and art teaching by securing improvements in the schemes of study, and the establishment of satisfactory relations between teachers and the Science and art department, the city and guilds of London institute, and other public authorities. It proposes also to collect such information as may be of service to teachers professionally; and it will endeavor, by constant watchfulness, to advance the status and material interests of science and art teachers in all directions. The president of the new association is Professor Huxley, and the vice-presidents are Dr. H. E. Roscoe, Mr. Norman Lockyer, Professor Boyd Dawkins, Professor Gamgee, Professor Ayrton, Professor Silvanus Thompson, Dr. John Watts, Mr. S. Leigh-Gregson, Mr. John Angell, Mr. W. Lockett Agnew, Mr. C. M. Foden, and Mr. J. H. Reynolds. Mr. W. E. Crowther, of the Technical school and mechanic's institution, Manchester, is the honorary secretary; and all communications should be addressed to him, especially by those who are desirous of forming affiliated unions in other districts. We believe that branches are already being established at Newcastle-upon-Tyne and Liverpool.

— The attorney-general of the United States has approved the title to the proposed site of the fish-commission establishments at Wood's Holl, Mass.; and the contracts for the work on the breakwater, pier, and basin, will, it is expected, soon be made.

— King's Dictionary of Boston, after the manner of Dickens's Dictionary of London, has recently

been published. Edwin M. Bacon is the editor. A short introduction is written by George E. Ellis, D.D. The brief notices of the libraries and scientific associations of Boston are satisfactory, and well brought down to date.

— For the last two years a couple of buck mountain sheep have been running with the flock of Mr. Bailey of Bull Run Basin, Nevada; and there are now between twenty and thirty half-breed lambs in the lot. According to the Tuscarora mining news, they are mostly covered with hair, although there is some wool amongst it. They carry their heads high, like the wild sheep, but are as easily herded as those of pure domestic blood. They are of no value for shearing, but are said to make excellent mutton.

— The subsidence of land in the Cheshire salt-districts of England is again becoming alarming. The bed of the river Weaver has widened out below Northwich, forming a lake of about two miles square, called the Flashes. Crater-like holes suddenly fall in, forming in a day or two deep ponds of saltish water. In one instance, two years ago, the river itself flowed backwards into the subsidence for the space of two minutes, filling up several old rock-salt mines in the neighborhood: from these the water is now pumped, and used as brine. Land-owners in the neighborhood brought a bill into Parliament during the session of 1882, to obtain compensation for the damage done by the salt-works; but it was argued that subsidence would occur by natural filtration, even if the brine were unworked, and the bill was thrown out.

— Mr. Albert Marth, F.R.A.S., has succeeded Dr. W. Doberck as astronomer at Col. Cooper's observatory, Markree, Ireland.

RECENT BOOKS AND PAMPHLETS.

Albert-Levy. Les nouveautés de la science. Paris, *Hachette*, 1883. 192 p. 18°.

Alvarez, Llanos, C. Electricidad estática. Madrid, *libr. militar*, 1883. 238 p., illustr. 8°.

Bell, A. Melville. Visible-speech reader for the nursery and primary school. Cambridge, *King*, 1883. 4+52 p. 16°.

Bernimolin, H. Catalogues des plantes spontanées et cultivées du Tournaisis, avec indication des localités où on les rencontre. Tournai, *Vasseur-Delmée*, 1883. 133 p. 12°.

Beringer, A. Kritische vergleichung der elektrischen kraftübertragung mit den gebräuchlichsten mechanischen kraftübertragungssystemen. Berlin, 1883. 8°.

Brandza, D. Prodromul florei romane san enumeratiunea plantelor pana astade cunoscuta in Moldova si Valachia. Bucuresci, 1883. 652 p. 8°.

Bureau, Th. Technologie des matières textiles. Gand, 1883. 235 p., 17 pl. et figures. autogr. 4°.

Carnoy, J. B. Biologie cellulaire; étude comparée de la cellule dans les deux règnes, au triple point de vue anatomique, chimique et physiologique. Liège, 1883. illustr. 8°.

Centralbureau der europäischen gradmessung. Verhandlungen der vom 11 bis zum 15 September, 1882, im Haag vereinigten permanenten commission der europäischen gradmessung, redigirt von den schriftführern A. Hirsch, und Th. von Oppolzer, zugleich mit dem generalbericht für die jahre 1881 und 1882. Berlin, *Reimer*, 1883. 6+155 p., 2 maps. 4°.

Cervera Bachiller, J. Creencias y supersticiones, tradiciones, leyendas, consejos, historias místicas y preocupaciones populares de todos los siglos y de todos los pueblos. Madrid, *impr. Riva*, 1883. 204 p. 8°.

Chamberland, C. Le charbon et la vaccination charbonneuse d'après les travaux récents de M. Pasteur. Paris, 1883. 324 p. 8°.