

workers of different nationalities. Appropriately, Prof. Barger deals in his introductory lecture with the history of internationalism in science. The belief that scientific research is one of the most international forms of human endeavour, possibly only second to music in this respect, is illustrated by a remarkable range of examples that connects the brotherhoods of the schools of Vesalius, Fabricius, and other great masters of the Italian universities of the sixteenth century with the international contributions that led to the isolation, identification, and synthesis of adrenaline. Many other examples may be derived from the five lectures which follow and which deal with important recent developments in biochemistry. The chemistry of the hormones is presented in an able and comprehensive review, no small part of which is devoted to the fascinating story of the steps by which the constitution and synthesis of thyroxin was achieved. Other lectures deal with the chemistry of the vitamins, chemical constitution and physiological action, chemotherapy, and finally the nature of the curious blue adsorption compounds of iodine. A very interesting and stimulating volume.

*Niels Henrik Abel: eine Schilderung seines Lebens und seiner Arbeit.* Von C. A. Bjerknes. Umgearbeitete und gekürzte Ausgabe aus Anlass von Abels 100-jährigem Todestag von Prof. Dr. V. Bjerknes. Ins Deutsche übertragen von Else Wegener-Köppen. Pp. v+136+1 Tafel. (Berlin: Julius Springer, 1930.) 6.60 gold marks.

PROF. V. BJERKNES has condensed the longer work of his father by omitting the details of Abel's mathematical work, so as to make accessible to all the biography of that ill-fated genius.

Abel was born in 1802. His abilities were dormant until he met with a sympathetic teacher, who soon prophesied his future greatness. However, a local reputation in a country like Norway required support from abroad. In spite of his poverty, Abel had a paper printed at his own expense and sent a copy to Gauss, the acknowledged leader of mathematical thought, whose appreciation would have made Abel's position secure. But the paper was poorly printed, with portions of the argument omitted, and Gauss tossed it aside. Later, Abel was given a travelling scholarship, but his resentment prevented him from meeting the only man who could have fully understood his work. In Berlin, Abel was welcomed by Crelle, who published in his newly founded *Journal* several of Abel's papers. But a professorship in Christiania, which Abel had confidently expected, was awarded to another. Fresh disappointments awaited him in Paris. He sent to the Academy what is now known as Abel's theorem. This should have assured his fame, but by some amazing mischance it was not printed until fifteen years later. Long before this, Abel had returned home and for two years struggled with financial cares. Then at last recognition came, and in 1829 he was offered a professorship in Berlin. Too late! He had died two days before.

H. T. H. P.

*Clouds.* By Prof. Alexander McAdie. Pp. iii+22 +52 plates. (Readville, Mass.: Blue Hill Observatory.)

MORE attention has probably been given to the study of clouds at Blue Hill Observatory, Massachusetts, than anywhere else in the world, and the appearance of a volume containing the cream of the many fine photographs of clouds taken there, in addition to a selection of photographs from other sources, is to be welcomed. The reproduction of these varies. According to the very high standard of the present day, many of the photographs of cirrus cloud can only be classed as poor, the essential fibrous structure being replaced by a wool-like appearance almost suggestive of fracto-cumulus at a first glance. Even the comparatively easily reproducible cumulus and cumulo-nimbus are not as a rule entirely satisfactory, a common fault being the total lack of detail in those parts of the cloud that are in shadow. Against these drawbacks must be set the exceptionally interesting view-point from which some of the low forms of cloud have been photographed, and the amount of light thrown upon their physical structure in consequence. It will come as a revelation to those who have not had many opportunities of studying clouds from above, the extent to which fog sheets can form 'surges' and cascades when drifting over hills, without being broken up or dissolved.

An important feature of the work is the historical sketch with which it opens. We cannot recall having seen a more comprehensive guide to the most important attempts at a scientific treatment of the study of clouds, from the tentative observations and speculations of Socrates to the recent intensive study of cloud formations in relation to moving pressure systems made by the French National Meteorological Office. Prof. McAdie has done good service to meteorology by this piece of work.

*The Measurement of Men.* By J. A. Harris, C. M. Jackson, D. G. Paterson, R. E. Scammon. Pp. vii+215. (Minneapolis: University of Minnesota Press, 1930.) 2.50 dollars.

FOUR lectures, delivered under the auspices of Sigma XI of the University of Minnesota, are here published as a contribution to the exact study of man by means of measurement. Prof. L. Arthur Harris deals with "The Measurement of Mankind in the Mass", an exposition of statistical methods and some results; Prof. Clarence M. Jackson deals with "Normal and Abnormal Human Types", Prof. Donald S. Paterson with "Personality and Physique", and Dr. Richard E. Scammon with "The Measurement of the Body in Childhood". Prof. Jackson gives some interesting comparative figures from the army and from university students which will probably be new to most English readers; while Prof. Paterson makes some amusing and destructive comments, supported by statistics, on the distinction popularly drawn in the United States between the mentality of blondes and brunettes, and on the claims of physiognomy and phrenology to gauge character.