break that let the waters enter here, it else seems impossible that this stream could have cut through such rocky masses by a gorge so narrow, and leaving so little sign of abrasion on the perpendicular cliffs" (p. 32). If there were really reason to regard this gap as the result of a convulsion of nature it would deserve to be carefully described; and such a rarity would become a mecca for geologists and geographers; but as there appears to be no sufficient ground for thinking it different in origin from the hundred other water gaps of the Appalachians, the people of Alabama ought to have a reasonable explanation of its method of production.

MASSANUTTEN MOUNTAIN, VIRGINIA.

A PRELIMINARY account of this peculiar sandstone mountain, rising from the limestone floor of Shenandoah Valley, is given by A. C. Spencer (Johns Hopkins Univ. Circ., No. 121, Oct., 1895, 13, 14). The mountain is of complicated synclinal structure, the resistent sandstone which forms its rim being bent into the form of a long, narrow, deep and wrinkled trough, whose bottom dips 1,000 feet or more beneath the surrounding valley floor. The greater part of the crest line of the mountain represents the much dissected Cretaceous peneplain of the Appalachian province; but certain points rise to greater elevations by as much as 500 or more feet. Passage creek, draining the northern portion of the valley enclosed by the mountain rim, is peculiar in cutting its outlet gap at the apex of the syncline, instead of to one side, as is commonly the case in Pennsylvania.

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CURRENT NOTES ON ANTHROPOLOGY.

ETHNOGRAPHIC SURVEYS.

IT has been already mentioned in these notes (see SCIENCE, Feb. 10, 1893,) that an ethnographic survey of Great Britain and Ireland had been instituted under the auspices of the British Association for the Advancement of Science. Already two preliminary reports have been made, and quite lately the Honorable Secretary of the Committee, Mr. E. Sidney Hartland, has published some explanatory notes about the plan, in the 'Transactions of the British and Gloucestershire Archæological Society.' These are very useful and suggestive, and together with the forms of schedule prepared by the Committee should be secured by students of ethnography as showing the well-matured methods of investigation decided upon by the high authorities in charge of the survey. They may be had by addressing 'the Secretary of the Ethnographic Survey, British Association, Burlington House, London, W.'

THE EARLY USE OF METALS IN EUROPE.

DR. JULIUS NAUE, the well known editor of the *Prähistorische Blätter* in Munich, contributes to the 'Revue Archæologique' an instructive article on the Hallstatt Epoch in Bavaria and the Palatinate, principally from his own researches.

His epoch is that of 'the first age of iron' and begins about 800 B. C. At its beginning bronze was much more abundant than iron, and the forms given it were graceful. The bodies were generally incinerated and placed in stone tombs. Long, leaf-shaped swords of iron were laid with the warriors, and ornamented vases of pottery beside them. Knives, daggers, pins, lance points and ornaments of both metals are common. The ethnographic conclusion is that these were Celtic tribes, probably the Licatii, of Latin authors. In agriculture they were skilled and in commerce had established distant relations.

Their contemporaries in the Upper Palatinate were less advanced, being addicted to human sacrifices and more warlike.

ANTHROPOMETRY OF THE AMERICAN INDIANS.

At a session of the Berlin Anthropological Society, in May last, Dr. Franz Boas reported the results of numerous measurements of American Indians and half-breeds, which he had carried out. A few of his conclusions may be mentioned.

On the whole, the Indian is rather tall, and the half-breeds slightly taller than the pure blood. The women are 92 to 94 per cent. the height of the male. As usual, the tallest tribes are dwellers in plains. The head-form varies extremely, but is persistent over wide regions, the Mississippi valley being peopled with mesocephalic tribes, the extreme north with dolichocephalic, while others, as the Téné, both north and south, are brachycephalic. There is no general type of native American skull. The facial diameter rarely sinks below 147 mm., and when such is the case foreign blood may be suspected.

The article is furnished with abundant tables and diagrams, and offers a fine example of scientific work.

THE MONUMENTS OF YUCATAN.

The first number of the anthropological series published by the Field Columbian Museum, Chicago, is the 'Archæological Studies among the Ancient Cities of Mexico,' by the curator, William H. Holmes. The first part, which alone has appeared, is devoted to the architectural remains of Yucatan. These were explored by the author in a visit there last winter, which included an inspection of the relics at Mugeres Island, Cozumel, Uxmal, Izamal, Chichen Itza, and some places of less note.

The results fill a volume of 137 pages, abundantly illustrated and rich with accurate observations and careful deductions. Several sketch maps and panoramas of the sites are inserted which give a much clearer notion than can be obtained from verbal descriptions. The analysis of the elements of Mayan architecture are especially original and valuable and impart a peculiar worth to this monograph. The same may be said of the observations on the materials employed, the orientation, the necessity for instruments of precision, the function of the buildings, the dressing of stone, the evolution of the ground plans, stairways and substructures, etc. In fact, the reader will find on almost every page something to catch his attention and to cast new light on the many obscure problems connected with the ancient Mayas.

D. G. Brinton,

SCIENTIFIC NOTES AND NEWS.

A PERMANENT SCIENTIFIC HEAD FOR THE U. S. DEPARTMENT OF AGRICULTURE.

An amendment to the Agricultural appropriation bill has just been sent to Congress providing for a "Director-in-Chief of scientific bureaus and investigations, to serve during good behavior, to have authority to act as Assistant Secretary, and to perform such other duties as the Secretary may direct."

This amendment, which has received the endorsement of the Secretary and Assistant Secretary of Agriculture, is the outgrowth of an effort to secure a permanent non-political organization and administration of the various bureaus and divisions engaged in the scientific work of the Government, and at the same time bring about a more intelligent and more effective coöperation than has been heretofore possible.

The chief promoters of this movement are well-known public-spirited educators and men of science entirely outside of the Government service.

The Department of Agriculture as at present organized comprises a large number of scientific and administrative divisions having for their object the discovery, exploration and development of the agricultural and other natural resources of the country. The scientific divisions are engaged in researches requiring the highest technical skill, and some of them in the solutions of problems requiring long years of preparation and scientific training.