

the Museum, distract them for a moment by a mechanical carriage, a street procession or an April shower, and I doubt if the *distinct* recollection of one shell, one bird, one gem or one mineral could be satisfactorily traced upon their minds.

Of course, the Museum helps the great populace; it gives them a pleasant and desirable environment of order and beauty and interest, but its educational power in a specific sense is limited almost entirely by knowledge, previously acquired amongst its visitors, of the things it contains. But let no maleficent construction be given to these words. The Museum of Natural History is a wonderfully helpful adjunct to all forces leading to sanity and happiness. To the most untutored it brings delightful revelations of the variety and the mystery of nature, and to those who love that wide retinue of facts and impressions which the fields and the woods, the tenanted air and the resounding sea, constantly yield, how full and eloquent it seems!

The consecrated attitude of mind which in Wordsworth's Ode on the Intimations of Immortality, expressed its ecstasy in the wonderful lines:

"And O ye fountains, meadows, hills and groves,
Think not of any severing of our loves!
Yet in my heart of hearts I feel your might;
I only have relinquished one delight,
To live beneath your more habitual sway;"

or that intensity of absorption with Nature which made the hand of Thoreau pen these salient phrases in his Cape Cod: "We often have to think now of the life of men on beaches—at least in mid-summer when the weather is serene; their sunny lives on the sand, amid the beach-grass and the bay berries, their companion a cow, their wealth a jag of driftwood, or a few beach-plums, and their music the surf and the peep of the beach-bird;" both of these relations to Nature so contrasted, rediscover in the museums of natural history the stimulus

and the justification to their satisfying joys.

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AMERICAN MUSEUM OF NATURAL HISTORY.

GEORGE BAUR.

THE telegraphic despatches have brought us the sad information of the death of Dr. George Baur, of the University of Chicago.

About a year ago Dr. Baur was compelled to quit his work and to seek rest. It has been known to some of his friends that his state of health was not improving, but his death must come as a surprise to all. Some of his more intimate friends will doubtless give us a biographical sketch of this young, but already eminent naturalist. The writer, who enjoyed somewhat close association with him for a space of four years, desires to pay a tribute to his memory.

Dr. Baur was a native of Germany and he took his doctor's degree at the University in Munich in 1882. Here he studied histology under Dr. Kupffer and paleontology under the distinguished Dr. Karl Zittel. He had previously spent some months with Dr. Leuckart in Leipzig. He gave special attention to osteology and vertebrate paleontology, and his inaugural dissertation was entitled 'Der Tarsus der Vögel und Dinosaurier.' It appeared in the *Morphologisches Jahrbuch* for 1882.

Unless the writer is in error, Dr. Baur came to this country in 1884. He became assistant to Professor O. C. Marsh, in the paleontological laboratory of the latter at New Haven, and continued in this position until January, 1890. During this period he devoted his energies to the fossil reptiles, a group to which he ever afterwards gave especial attention, and upon which he published a number of papers. During the summer of 1890 he spent some time in western Kansas, where he collected fossil reptiles and fishes for Dr. Zittel. Shortly after leaving New Haven he received a call

to Clark University, Worcester, Mass., where he lectured on his favorite subjects. By this time he had become interested in the problems of geographical distribution of organisms and his attention was turned to the Galapagos Islands. Having succeeded in interesting influential persons in his scheme, he left New York for these islands on May 1, 1891, and arrived at Chatham Island, June 8th. He visited in succession Hood, Barrington, Indefatigable, Albemarle, Duncan, Indefatigable again, Jervis, Albemarle again, James, Chatham again, Tower, Bindloe and Abingdon islands, and everywhere made abundant collections of animals and plants. He had intended to visit all the islands of the group, but tidings of sickness in his family compelled him to hasten home. He reached New York on October 2d.

At the opening of the University of Chicago, in 1892, Dr. Baur was called to the chair of comparative osteology and vertebrate paleontology in that institution, and this he occupied until his death. His age did not exceed forty years. He leaves a wife and four children.

Dr. Baur's contributions to science consist of probably one hundred or more papers. Other and more extensive works were in process of preparation. Among these is an account of the tortoises of North America, which was to have been published by the National Museum. This work must have been completed or nearly so, and will probably appear in due time.

Dr. Baur's especial interest was in the morphology of the vertebrate skeleton. Although he recognized the great value of descriptive osteology, such work alone did not satisfy the demands of his mind. Although he wrote much on vertebrate paleontology, he was the describer of few new genera and species. His constant effort was to discover the relationships of forms and the way in which they had originated.

He was thus impelled to study the homologies of the various bones and to attempt to connect them with the skeletons of more primitive forms. In many of his papers we find attempts made to unravel the genealogy of groups and to base classifications on this genealogy. His views regarding the scope and the methods of comparative osteology may be learned from a lecture published in *SCIENCE*, 1890, Vol. XIV., p. 281.

Some of the parts of the skeleton to which he gave especial attention are the carpus and tarsus, the vertebral column, and the bones of the temporal region. His opinions on all questions resulted from a careful study of the material objects involved, from a comparison of these with one another, and from examination of the views of other scientific men. His ideas were expressed in clear and simple language, quite in contrast with the usual German style, and one reads after him with pleasure and profit, even if one does not agree with him. His acquaintance with scientific literature was extensive, and his papers are usually enriched by a full bibliography of the subject discussed. He possessed an independent spirit, and in the utterance of his opinion he stood in awe of no authority. He had strong convictions; and, possibly, sometimes in the heat of discussion he may have expressed himself with some asperity. Although he maintained his opinions with vigor, he was open to conviction; and an examination of his papers will show that he later held views quite different from those advocated at an earlier period. Dr. Baur's studies on the carpus and tarsus resulted in several papers which appeared in the *Morphologisches Jahrbuch*, *American Naturalist*, *SCIENCE*, and the *Zoologischer Anzeiger*. His views were summed up in a short paper published in the *American Naturalist* for July, 1885.

In studying the development of the limbs Dr. Baur held that the Amniota which possessed more than five fingers were highly

specialized forms and not primitive ones presenting transitions from the fishes. His view is now probably very generally accepted.

A number of his papers related to the structure and the systematic position of the leather-back turtle, *Dermochelys*. He opposed strongly the views of Cope, Dollo, Boulenger and Lydekker that this reptile forms a suborder distinct from all other living tortoises. He regarded it as belonging to merely a highly specialized branch of the Pinnata, a group which contains our living sea-turtles.

The structure and relationships of the Mosasauridæ form the subject of several interesting papers. In opposition to Professor Cope, who maintained that these extinct reptiles bore special relationship to the snakes, Dr. Baur held that they were true lizards, closely related to the Varanidæ, but modified for adaptation to an aquatic existence. An excellent paper on the structure of the skull of the Mosasauridæ was published in the *Journal of Morphology* for 1892.

As early as 1886 Dr. Baur wrote a paper on the homologies of the bones of the otic and temporal regions. His interest in the subject never relaxed and some of his latest papers were written in a discussion of the subject with Professor Cope.

In the same year above mentioned, 1886, Dr. Baur became interested in the morphology of the vertebral column, and he published a paper of considerable length in the *Biologisches Centralblatt* of that year, stating his conclusions. He gave his adherence to the opinion of Cope, who held that the vertebral centrum in all the Amniota has developed from the pleurocentrum, an element which is found distinct in the Stegocephali. He found confirmation of his views in the vertebral axis of the Pelycosaurian reptiles, in *Sphenodon*, certain lizards, birds and even mammals. He ad-

vocated the same views in one of his latest papers.

In the *American Naturalist* for May, 1891, occurs an important paper by Dr. Baur on the reptiles known as the Dinosauria. In a characteristic manner he gives the history and the literature of the subject and his own conclusions. His opinion was that 'the Dinosauria do not exist.' He believed that this group is an unnatural one, and is made up of three special groups of archosaurian reptiles which have no close relation to one another.

Two of Dr. Baur's most important later efforts are probably one entitled 'The Stegocephali,' a phylogenetic study, published in the *Anatomischer Anzeiger* for March, 1896, and one, a joint paper with Dr. E. C. Case, having the title 'On the Morphology of the skull of the Pelycosauria and the origin of the Mammalia,' and appearing in the *Anatomischer Anzeiger*, 1897, pages 109-120. In the first mentioned paper Dr. Baur compares the skeletal structure of the Stegocephali with that of various fishes and comes to the conclusion that the Batrachia took their origin from the Crossopterygia, rather than from the Dipnoi. The second paper was based on the fine materials collected by Dr. Case in the Permian formation in Texas. The authors concluded, on the one hand, that the Pelycosauria are closely related to the Rhynchocephalia and that, on the other hand, they could not have been the ancestors of the mammals. The authors were inclined to regard the Gomphodontia as the ancestors of the mammals.

After Dr. Baur's return from the Galapagos Islands, he devoted a considerable portion of his attention to the study and discussion of the problems which arose from the examination of the materials which he had there collected, and which had to a great extent been turned over to specialists. His conclusion with regard to the origin of those islands was that they had originally been

connected with the continent of America and were the result of enormous subsidence. Previously the opinion was almost universal that they had resulted from elevation and volcanic action. He supported his views in a number of papers and lectures; and, while meeting with strong opposition, he had the satisfaction of making several distinguished converts.

About a year ago we were called upon to mourn the departure of a leader in the study of the beings of long-gone ages, Professor E. D. Cope; now paleontology has suffered the loss of Dr. George Baur, cut off in the midst of a brilliant career.

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CURRENT NOTES ON ANTHROPOLOGY.

THE LATEST ASIATIC-AMERICAN AFFINITY.

It is painful to see good ink and paper wasted to prove affinities between American and Asiatic tribes, when the only fact proved is the ignorance of him who asserts them.

The latest example is M. Ed. Blanc, who in the *Journal de la Société des Américanistes*, of Paris, No. 3, undertakes to exhibit the relationship between the Nahuatl, spoken by the Aztecs, etc., in Mexico and the language of the Avars in the northern Caucasus! He also considers the incidents of this imaginary migration.

When, by turning to General von Erckert's fine volume on the Caucasian languages or the earlier works of Professor F. Müller, M. Blanc could have learned that the Avar (Awarisch) is a well recognized member of the Lesghian linguistic stock and is quite familiar to students of such matters, it is scarcely pardonable that he should have burdened the pages of a scientific periodical with his fantastic hypothesis.

THE STUDY OF LOCAL ETHNOGRAPHY.

PROFESSOR M. D. LEARNED, of the Uni-

versity of Pennsylvania, has undertaken the study of the ethnography of Pennsylvania on lines which it were well to have generally adopted. He distributed circulars of inquiry relating to ethnographic material, such as dialectic peculiarities; ballads; local history, traditions and folk-lore; changes in names of persons and places; collections of books and antiquities; manuscripts, etc.

The answers he has received have been gratifying, and he expects to incorporate the results in a series of publications treating separately each ethnic element, the German, English, Swedish, Welsh, etc. Ethnographic charts will be added 'setting forth the cultural epochs and racial complexion of the present population and indicating the speech boundaries.'

This is in the line of what the proposed 'Ethnographic Survey of the United States' hoped to accomplish. (For further particulars see the *University Bulletin*, Vol. II., No. 4, May, 1898.)

WOMEN AS ANTHROPOLOGICAL STUDENTS.

We have in Washington the only 'Woman's Anthropological Society' in the world, but by no means all the women who study anthropology.

The roll of French anthropologists contain not a few names of the fair sex who have accomplished notable work. Madame Clementine Royer, of Paris, is one of distinction; Madame Chantre, of Lyon, has published excellent anthropometric material; and in the last *Bulletin* of the Anthropological Society of Paris for 1897 Madame Martin presents an instructive study of the statistics of the population of France in 1895, and Madame Chellier a series of anthropometric observations from Aurès, French Africa.

It might be difficult to name an equal array among the Germans; but in the *Globus*, May 21st, Dr. the Countess von Lin-