

some kind of a guard, which is generally a thick ring. "The releases vary in their efficiency and strength. The two strongest and perhaps equally powerful ones are the Mediterranean and Mongolian; and it is interesting to note the fact that the two great divisions of the human family who can claim a history, and who have been dominant in the affairs of mankind, are the Mediterranean nations and the Mongolians. For three or four thousand years, at least, each stock has had its peculiar arrow-release, and this has persisted through all the mutations of time to the present day. Language, manners, customs, religions, have in the course of centuries widely separated these two great divisions into nations. Side by side they have lived; devastating wars and wars of conquest have marked their contact; and yet the apparently trivial and simple act of releasing the arrow from the bow has remained unchanged. At the present moment the European and Asiatic archer, shooting now only for sport, practise each the release which characterized their remote ancestors."

We wish it were in our power to follow our author through his detailed investigations of the peculiarities in the use of the bow he has discovered in his truly marvellous study of the ancient monuments; but that is impossible. In a classified list he has given, under the heads of 'recent' and 'ancient,' all the tribes and nations who have practised the five different kinds of release described, and he concludes by begging for further information:—

"Travellers and explorers ought also not only to observe the simple fact that such and such people use bows and arrows, but they should accurately record, 1°, the attitude of the shaft-hand; 2°, whether the bow is held vertically or horizontally; 3°, whether the arrow is to the right or to the left of the bow vertical; and, 4°, whether extra arrows are held in the bow-hand or shaft-hand. The method of bracing the bow is of importance also. . . . Particularly does he desire to learn the release as practised by the Veddahs of Ceylon, the Hill tribes of India, the tribes of Africa, South America, and especially the Fuegians. Indeed, any information regarding the methods of arrow-release in any part of the world will be acceptable."

In answer to his inquiry, we venture the suggestion whether it is not possible that the so-called 'pierced tablets,' which are described and figured by Professor Rau (*Archeological collection of the Smithsonian institution*, p. 33) and other writers, and which have given rise to so much discussion among American antiquaries, may not have been guards worn to protect the wrist against the recoil of the bow-string.

H. W. H.

THE BUTTERFLIES OF NORTH AMERICA.

ONE welcomes an old friend more cordially than a new; so that when Mr. Edwards, after some hesitation, starts a third series of his renowned and incomparable illustrations of our native butterflies, begun twenty years ago, we are ready to render the full meed of praise for his unwearied energy, the success of his breeding experiments, and the more than liberal, almost profuse illustration with which they are published. When we know, in addition, that he has parted with a considerable portion of his unique collection to obtain means wherewith to launch this new series, we can only hope he will find a public properly appreciative of such zeal and sacrifice.

This first number is a reminiscence of the past. Two of the three plates represent hitherto unfigured species of that wonderfully prolific boreal genus *Argynnis*, one from Assiniboia, and the other from Utah and Arizona, with brief merely descriptive text—which remind us especially of his first series, where nearly seventy figures of this genus were given. The remaining plate gives not only the butterfly with its variations, but also all the earlier stages of our Californian species of *Megonostoma* (or, as Mr. Edwards prefers to class it, *Colias*), with many enlarged figures of minor details, accompanied by a tolerably full account of the insect—which recalls the more definitely biological character of the second series. To obtain the earlier stages, eggs were sent from California to West Virginia, and the caterpillars raised on an *Amorpha*, previously sent, in Mr. Edwards's garden.

The text is not so full or interesting as the later parts of the last series; but to say that the same care as before has been taken with the illustrations, whether in faithfulness of delineation to the last detail, or in truthfulness of coloring with an absence of all gaudiness, is quite enough. Nothing has ever surpassed them; they are a perfect model for such work. The same artists have been connected with the work almost from the first; and though the chief artist, Mrs. Peart, can no longer undertake the lithography with her own hand, they receive her careful supervision.

We can only congratulate naturalists on Mr. Edwards's determination to continue publishing on the same scale as before, and beg to remind them, that, but for this liberality, we should hardly have advanced in knowledge of the life-histories of our butterflies beyond what we knew when Boisduval and LeConte published their little octavo—a half-century ago.

The butterflies of North America. By W. H. EDWARDS. Third series. Part I. Boston, Houghton, Mifflin & Co. 4°.