

THE
YEAR-BOOK OF FACTS

IN
Science and Art: 1853

EXHIBITING

THE MOST IMPORTANT DISCOVERIES & IMPROVEMENTS
OF THE PAST YEAR;

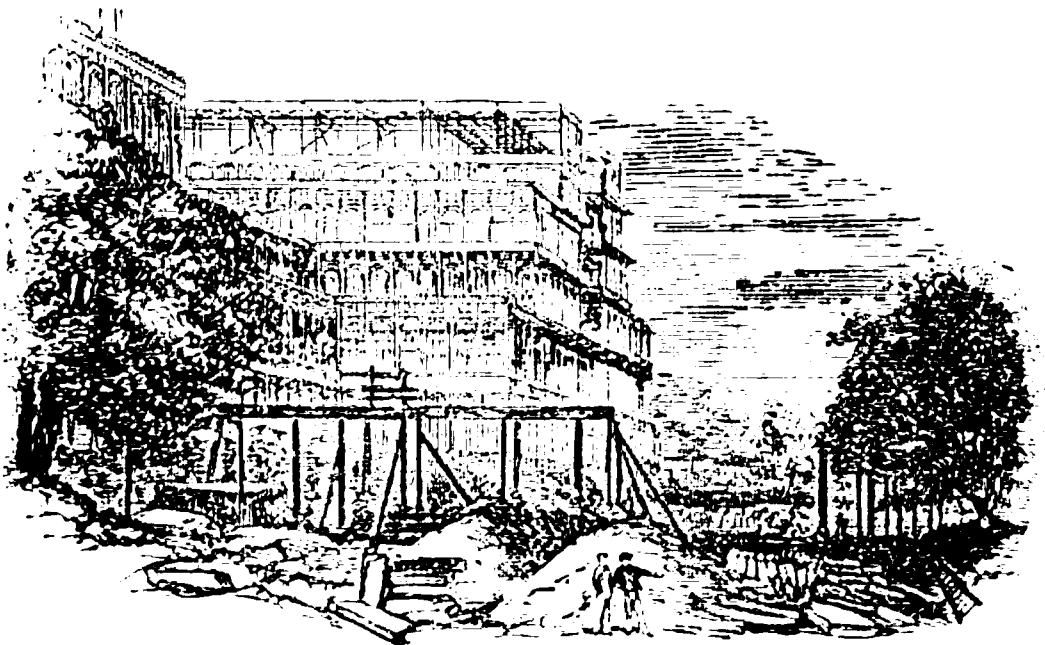
IN MECHANICS AND THE USEFUL ARTS; NATURAL PHILOSOPHY;
ELECTRICITY; CHEMISTRY; ZOOLOGY AND BOTANY; GEOLOGY
AND GEOGRAPHY; METEOROLOGY AND ASTRONOMY.

By JOHN TIMBS,

EDITOR OF "THE ARCANA OF SCIENCE AND ART."

"The wider the spread of Science, the wider will be the sphere of its usefulness. One great duty which we owe to the public is, to encourage the application of abstract science to the practical purposes of life—to bring, as it were, the study and the laboratory into juxtaposition with the workshop."

MR. HOPKINS, *President of the British Association*, 1853.



The Crystal Palace, at Sydenham.—See p. 16.

LONDON:
DAVID BOGUE, FLEET STREET.
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Museum, were exhibited to the meeting. Their peculiarity consists in the forward direction of the lower horn, the end of which is evidently worn away by contact with the ground in feeding.

WHY DOES THE CHAMELEON CHANGE COLOUR?

MR. H. N. TURNER has, in the proceedings of the Zoological Society, and, more recently, in the October number of the *Annals of Natural History*, called attention to Van der Hoven's researches on the well-known colour-changing peculiarities of the Chameleon. Mr. Turner writes from personal observation of the phenomenon, having had a live chameleon for some time in his possession. It has been generally imagined that the purpose of this singular faculty accorded to the chameleon, is to enable it to accommodate its appearance to that of surrounding objects, but the observations of Van der Hoven and Turner do not favour the idea, but rather seem to negative it. The box in which Mr. Turner's chameleon was kept was of deal, with a glass at the top, and a piece of flannel laid at the bottom, a small branching stick being introduced by way of a perch. He introduced at various times pieces of coloured paper, covering the bottom of the box, of blue, yellow, and scarlet, but without the slightest effect upon the appearance of the animal. Considering that these primary colours were not such as it would be likely to be placed in contact with in a state of nature, he next tried a piece of green calico, but equally without result. The animal went through all its usual changes without their being in any way modified by the colours placed underneath it. The general tints approximate, as may be readily observed, to those of the branches of trees, just as those of most animals do to the places in which they dwell; but Turner did not observe the faculty of changing called into play with any apparent object. It is only when the light is removed that the animal assumes a colour which absorbs but little of it.

THE GREAT ANT-BEAR.

A FINE living specimen of this comparatively rare animal has been exhibited in the Zoological Society's Gardens in the Regent's Park. It is stated to be the first specimen brought alive to England; and has accordingly excited considerable attention. In the *Literary Gazette*, No. 1916, we find the following scientific yet popular account of the animal, from the pen of a Cuvierian contributor:—

“When we were introduced to this, the latest novelty at the noble vivarium in the Regent's Park, we found the animal busy sucking and licking up—for his feeding is a combination of the two actions—the contents of a basin of squashed eggs. The singularly long and slender head, which looks more like a slightly-bent proboscis, or some such appendage to a head, was buried in the basin, and the end of the lithe and flexible tongue, like a rat's tail, or a writhing black worm, was ever and anon seen coiling up the sides of the basin, as it was rapidly protruded and withdrawn: the yellow yolk was dripping with the abundant rosy saliva secreted during the feeding process from the exceedingly small terminal mouth; for the jaws are not

verb in a definite proposition, and other signs of the inferior intellectual condition of the children, accord with this malformed state of the brain. Professor Owen detected other indications of a malformed state in the boy—viz., the congenital absence of one of the joints of the little finger in each hand; and a contracted state of the elbow-joint in both arms. The height of the boy is 36 inches, and his weight is 23 lbs. : the height of the girl is 31 inches, and her weight 20 lbs. The pulse in both is 80 per minute, becoming more rapid on exertion."

The Professor's general conclusion is that these children are not the representatives of any Aztec or other Indian race, but accidental instances of arrested growth and development of particular individuals, either of pure Spanish Mexican origin, or with some slight admixture of Indian blood.—*Literary Gazette*, No. 1904.

Dr. J. Warren, of Boston, has been led by his examination of them to the following conclusions :—

"1. That these children are possessed of a very low degree of mental and physical organization, but are not idiots of the lowest grade. 2. That they probably originated from parents belonging to some of the mixed Indian tribes. 3. That they do not belong to a race of dwarfs, because history teaches us the truth of the doctrine stated by Geoffroy St. Hilaire, that dwarfs cannot perpetuate their kind."

Mr. E. G. Squier thus corroborates Dr. Warren's view :—

"The Commandant of the Port of La Union, in the State of San Salvador, Central America, informs me that they were born somewhere near the town of Santa Ana, in that State, of parents, one of whom certainly, if not both, was dwarfed or deformed and imbecile. The Indians residing in the vicinity of Santa Ana are civilized, and centuries ago adopted Spanish customs and the Spanish language. So far as I could discover from a few words of their ancient language which came into my possession, they belong to the Cholultecan or Chorotegan stock, which, before the conquest, extended over a part of San Salvador, Honduras, and Nicaragua, but which was chiefly concentrated around the Gulf of Fonseca."

Dr. R. J. Latham, the Ethnologist, has stated to the British Association his opinion, as follows :—

"Considering that representations of heads similar to those of the two so-called Aztecs are found on certain Mexican monuments—that in the case of the Lacondon and Indians, on the frontiers of Vera Paly and Yucatan there is an actual instance of a still-existing imperfect independence : that there is special evidence to the existence of goitre in the localities around, it is considered that the individuals in question represent the American analogies of the European cretin, where the same conditions that have made arrest of development endemic, have preserved an imperfect independence."

NEW RODENT.

MR. WATERHOUSE has described to the Zoological Society a new species of Rodent from South America, remarkable for having a very short tail and strong fore-feet, furnished with large and nearly straight claws. It was from the province of Mendoza, having been recently sent by Mr. Bridges, after whom it was named by Mr. Waterhouse *Heesperomys Bridgesii*.

NEW RHINOCEROS.

A LETTER has been read to the Zoological Society, which had been addressed to Dr. Gray by Mr. Oswell, respecting the discovery of a Rhinoceros by himself and Captain Vardon, in the country about the river Limpopo, which they at the time considered to be a new species, as it probably is. The horns of this animal, brought home by Colonel Steele, and about to be presented by him to the British