

ARCANA
OF
SCIENCE AND ART:
OR, AN
ANNUAL REGISTER
OF
USEFUL INVENTIONS AND IMPROVEMENTS, DISCOVERIES AND
NEW FACTS
IN
MECHANICS, CHEMISTRY, NATURAL HISTORY,
AND SOCIAL ECONOMY;
ABRIDGED
FROM THE TRANSACTIONS OF PUBLIC SOCIETIES, AND FROM OTHER
SCIENTIFIC JOURNALS, BRITISH AND FOREIGN,
OF THE PAST YEAR.
WITH SEVERAL ENGRAVINGS.

"To combine individual effort, to render parts capable of combination into a whole, to economize time, and thus virtually to lengthen the lives of those whose exertions are valuable in the cause of science, may be considered as humble, yet surely most important, contributions to its advancement."—PROFESSOR FORBES'S *Address to the British Association*, 1834.

EIGHTH YEAR.

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The specimen of *halæna rostrata* examined by the author was 9 feet 11 inches in length, 3 feet from snout to ear, and 4 feet 8 inches in girth at the termination of the plicæ and folds.*

HOUSE FLIES.

On April 7, the Secretary of the Entomological Society read a paper by Mr. Spence, detailing a curious mode, adopted in Italy, of excluding the house-fly from houses. The plan consisted simply in straining a net, made of white thread, across the aperture of an open window: the meshes of the net were about half an inch in diameter. It had occurred to Mr. Spence, whether it could be the dread of a spider's net which caused the flies to avoid the thread net, but on consideration he had determined otherwise, and he was totally at a loss how to account for so singular a circumstance. Mr. Spence expressed a wish that the metaphysical history of insects might be more attended to than had at present been the case; he thought much instruction would result from it.†

A YOUNG RHINOCEROS.

This fine specimen of the Indian one-horned rhinoceros was brought to England last spring, for the Surrey Zoological Gardens. The great value attached to the possession of a living specimen of this animal, and the difficulty of procuring one, may be inferred from the fact, that the cost of the present, from the time that it was taken in the Birman empire, and the charge of its food and conveyance to England, exceeded one thousand pounds.

This rhinoceros was, on its arrival, somewhat more than a year and a half old. It was, however, though so young, (for the rhinoceros is only full grown at twenty years of age,) strong and apparently healthy; yet not the least remarkable were its close points of resemblance to the adult animal, which might not be expected in so young an animal. It has, in miniature, the thick rugous folds or plaits of skin, so conspicuous in the full-grown rhinoceros: and which the older naturalists, with their usual love of marvellous exaggeration, figured as armour, completely encasing the stupendous body.

The height of this young specimen was thirty-one inches, or about that of a good-sized Hampshire hog, to which, when lying down, it had some similitude; but this resemblance was lost when the animal walked about; while it was much stouter and stronger made in the shoulders and legs than a hog, and greatly

* Jameson's Journal, No. 35.

† Entomological Magazine, No. 8.

exceeded in girth any hog of its height ; its length, from the extremity of the snout to the insertion of the tail, was 58 inches, and the tail 9 inches ; its weight being about 650lbs. The head is long, and the eyes very small : its sight is weak, but its hear-



(The Young Rhinoceros in the Surrey Zoological Gardens.)

ing and sense of smelling are remarkably acute, as it perceives the approach of man at a great distance. That portion of the snout which belongs to the upper jaw is very flexible, can¹be protruded at will to some extent beyond the jaw, and is thus

particularly formed for collecting food in the manner of the tapir: the lower portion of the snout resembles that of the hog. In adult animals there are no fore-teeth; but in young specimens, like the present, a few straggling cutting teeth are found, which stand at a considerable distance apart. About two or three inches above the snout is a protuberance, the germ of the future horn. According to Mr. Burchell, whose opportunities for examination were abundant, the horns of this genus do not envelope a bony core, like those of the ruminating animals; nor do they partake of the osseous nature of the horns of stags, but appear to be formed of horny fibres growing from the skin, like thick hairs closely cemented together.* The colour of the skin is grey, with a violet tint; it is tuberculated, very hard, and hangs loose about the neck and shoulders; that under the plaits or folds thus formed being of a flesh colour.

The present rhinoceros is quiet and harmless, and will follow its keeper, or any one who offers it bread or biscuit, which it will eat greedily. Its chief food is rice, mixed with sugar, in equal quantities; but it will also eat bran and hay, and seems pleased with prickly plants, and the small branches of thorny shrubs.

A rhinoceros was brought to England twenty years since, and was for a considerable period in the collection of Mr. Cross, of Exeter 'Change; a full-grown specimen, that was on his voyage to this country from Calcutta, a few months since, became so furious that he was fastened down to the ship's deck with part of a chain cable round his neck; and even then he succeeded in destroying a portion of the vessel, till a heavy storm coming on, the rhinoceros was thrown overboard, to prevent the serious consequences of his getting loose in the ship.†

CHANGES OF BIRDS BY CLIMATE.

ON Jan. 13, at the Paris Academy of Sciences, a paper was read on this interesting subject by M. Gloyer, of Breslau. It is observed, that in Germany the number of southern birds increase yearly; about 150 years ago, the sparrow was not to be met with in Asiatic Russia. It follows towards the Oby and the Lena the progress of cultivation, and is never seen farther than the line which separates the crops from the barren plains. It is the influence of these alterations that M. Gloyer has studied. According to him, the black colour, or dark brown, becomes darker as the animal approaches the south; lighter towards the north. The grey, or brown grey, remains nearly the same when it is not mixed; but when it is rust colour, or blue grey, or slate

* A specimen of the adult horn, to be seen in the Gardens, measures 1 ft. 10 in. long, and 9 in. diameter at the base; and weighs 14lbs.

† Abridged from the Mirror, No. 658.