

animal possesses a kind of crest, increasing in height from before backwards, and formed principally of a thickness in the scalp. This crest the animal draws forward when enraged, increasing his naturally hideous appearance, which is rendered still more horrible by the lower lip consisting of a large muscular flap, very distensible and dropt over the chin in moments of anger.

The muscles of the neck, arms, thighs and trunk are enormously developed: the wrist was one foot in circumference. The specimen examined, the skeleton of which was presented to the Academy, had been eviscerated before it was brought to Dr. Ford, but even thus it weighed one hundred and eighty pounds, from which some idea may be formed of the enormous size of the animal. The arms are proportionately longer than in the *Chitapanzie*.

The *Ngeua* is represented as the most terrible monster of his native forests, an idea which his hideous appearance and implacable enmity to man sufficiently justifies. The moment that he scents a man he prepares for the attack, and acts on the offensive. With crest erect and projecting forward, nostrils dilated and under lip thrown down, uttering his peculiar cry, which is more of a grunt than a growl, he rushes on his antagonist, and unless disabled by a well directed shot, generally succeeds in dashing him to the ground and tearing him to pieces with his tusks.

He is said to seize a musket and instantly crush the barrel between his teeth.

His natural enemy seems to be the leopard, with whom he wages a not always successful warfare. Young specimens have exhibited such an implacable disposition as to resist the most persevering efforts at taming them.

The flesh is by some tribes considered as delicate eating; he feeds on roots and fruits, but is evidently to some extent carnivorous.

The height of the mounted skeleton is four feet nine inches.

*Proceedings of the Academy of Sciences of Philadelphia, Feb. 1852.*

*Human Footprints in Solid Limestone.*—At a meeting of the Academy of Natural Sciences of Philadelphia on 1st June, Mr. Lea called attention to the stone slabs containing supposed imprints of human feet, deposited by him in the museum that evening. This slab is from the limestone formation immediately under-lying the coal near Alton, Illinois. The impressions have evidently been sculptured, and bear the marks of some blunt instrument with which they have been executed. Mr. Lea observed that these are not the first instances of this kind which have been noticed, and referred to a description of a similar slab published in Silliman's *Journal* several years since.

Dr. Owen stated that the slab of limestone alluded to by Mr. Lea, as found on the Mississippi near St. Louis, is the same which is now preserved in his (Dr. Owen's) collection, and on which two articles have appeared in Silliman's *Journal*; one by Mr. Schoolcraft and one by himself. Dr. Owen in that paper gave it as his opinion that these feet marks were carved on the rock by the aborigines.

Since that article appeared, Dr. Owen had obtained the most satisfactory corroboration of this inference in two large slabs of magnesian limestone of lower Silurian date, obtained at Moccasin-track Prairie in Missouri, which slabs contained a great many carvings of human feet, as well as those of animals, and rude imitations of the human form, something like figures made in gingerbread. The foot marks bear indubitable tool marks, and some are deficient in the true number of toes, while in others the foot is distorted, with the little toe standing out almost at right angles.

These specimens, as well as that of Mr. Lea's, show clearly that the aborigines of Missouri had the same propensity for carving the imprint of feet as the Southern and Western aborigines of this continent had for representing the hand on the walls of the ancient edifices, and other situations.

Any one acquainted with Indians knows that there is no subject which they study more closely than all kinds of tracks; in fact their life, their maintenance and their whole security depend upon an intimate and cunning knowledge of podology.

*Proceedings of the Academy, June, 1852.*

*Extracts from the Proceedings of the British Association at Belfast, September, 1852.*

1st.—'Anastatic Printing,' by S. Bateson, Esquire.—'The term 'Anastatic' means raising up, or reproducing as it were, and very significantly does the name express the result; for by it any number—thousands upon thousands—of reproductions of any printed document may be obtained, each of which is a perfect *fac simile* of the original, no matter how elaborate the engraving may be, or how intricate the design. I will now endeavour to describe the actual operation of Anastatic printing. The print of which an Anastatic copy is required is first moistened with very dilute nitric acid (one part of acid to seven of water,) and then being placed between bibulous paper, all super-

abundance of moisture is removed. The acid being an aqueous solution, will not have attached itself to the ink on the paper, printers' ink being of an oily nature; and if the paper thus prepared be placed on a polished sheet of zinc and subjected to pressure, two results follow:—In the first place, the printed portion will leave a set-off or impression on the zinc; and secondly, the nitric acid attached to the non-printed parts of the paper will eat away and corrode the zinc, converting the whole, in fact, into a very shallow stereotype. The original being removed (perfectly uninjured,) the whole zinc plate should next be smeared with gum water, which will not stick to the printed or oily part, but will attach itself to every other portion of the plate. A charge of printers' ink being now applied, this in its turn only attaches itself to the set-off obtained from the print. The final process consists in pouring over the plate a solution of phosphoric acid, which etches or corrodes more deeply the non-printed portion of the zinc, and produces a surface to which printers' ink will not attach. The process is now complete, and from such a prepared zinc plate any number of impressions may be struck off.—The uses to which this invention may be applied are various—copies of rare prints may be obtained without the aid of an engraver. Reproductions of books, or of works out of print, may be had without setting up the type, authors may illustrate their own works, and amateur artists may have fac-similes of pen-and-ink sketches at a very inconsiderable expense.

2nd.—'On the Koh-i-noor Diamond,' by Prof. Tennant.—At the last meeting of the British Association, Dr. Beke read a paper 'On the Diamond Slab supposed to have been cut from the Koh-i-noor.' He stated:—"At the capture of Coohar there was found among the jewels of the harem of Reza Kooli Khan, the chief of that place, a large diamond slab, supposed to have been cut from one side of the Koh-i-noor, the great Indian diamond now in the possession of Her Majesty. It weighed about 130 carats, showed the marks of cutting on the flat and largest side, and appeared to correspond in size with the Koh-i-noor." Prof. Tennant was induced to record his opinion of the probability of this being correct. He had made models in flour spar, and afterwards broken them, and obtained specimens which would correspond in cleavage, weight, and size with the Koh-i-noor. By this means he was enabled to include the piece described by Dr. Beke, and probably the large Russian diamond, as forming altogether but portions of one large diamond. The diamond belongs to the tessellar crystalline system: it yields readily to cleavage in four directions, parallel to the planes of the regular octahedron. Two of the largest planes of the Koh-i-noor, when exhibited in the Crystal Palace, were cleavage planes,—one of them had not been polished. This proved the specimen to be not a third of the weight of the original crystal, which he believed to have been a rhombic dodecahedron; and if slightly elongated, which is a common form of the diamond, would agree with Tavernier's description of it bearing some resemblance to an egg.—Sir D. Brewster made some observations, and stated that the English translation of Tavernier's work left out the minute details which were fully given in the original. Sir David expressed his satisfaction with Mr. Tennant's illustration,—which clearly proved the diamond to be only a small part of a very large and fine stone.

3rd.—'Notice of a Tree struck by Lightning in Clandeboye Park,' by Sir David Brewster.—The tree stood in a thick mass of wood, and was not the tallest of the group. The lightning bolt struck it laterally about 15 feet above the ground, exactly at the cleft where the two principal branches of the tree rose from the trunk. A large part of the bark and a piece of the solid wood were driven to some distance, and the electric fluid passed down the trunk into the ground, splitting the tree in two by a rent through the whole of its thickness. The fact contained in this notice, that an object may be struck by lightning in a locality where there are numerous conducting points more elevated than itself, shows that a lightning bolt cannot be diverted from its course by conductors, and that the protection of buildings from this species of meteor can only be effected by conductors stretching out in all directions.

4th.—'On the Aurora Borealis,' by Admiral Sir John Ross.—This was the theory of auroras originally explained by Sir John Ross at the Dublin Meeting in 1835. He gives the opinion of Schumacher in favour of his theory, and of Arago against it; and asserts that Messrs. Gaincaud, Martius and another were sent to Hammerfest in 1842 to test its accuracy, and returned impressed with the correctness of his views.

5th.—'On the Aurora,' by Lieut. W.H.L. Hooper.—This is a theory pretty nearly the same as that of Admiral Sir John Ross. The author says: "I believe the aurora borealis to be not more nor less than moisture in some shape (whether dew or vapour, liquid or frozen,) illumined by the heavenly bodies, either directly or reflecting their rays from the frozen masses around the pole, or even from the immediate proximate snow-clad earth." This opinion he supports by facts and argument.

6th.—'On the Re-concentration of the Mechanical or Energy of the Universe,' by W. J. M. Rankine.—Mr. Rankine observed that—it has long been conjectured, and is now being established by experiment,