

vessels appear to derive their origin from the alburnous tubes; he now thinks it not improbable that the lateral, as well as the terminal orifices of the alburnous tubes, may possess the power of generating central vessels, and that these vessels give existence to the reproduced buds and leaves.

Mr. Knight attempted to discover in seeds a similar power to regenerate their buds; but no experiments he could make were decisive, as he was never able to satisfy himself that all the buds could be eradicated without the base of the plumula being destroyed.

The power of reproducing buds here treated of, is not possessed, Mr. Knight says, by annual or biennial plants; but he relates that a turnip, from which the greater part of its fruit-stalks had been cut off, and of which all the buds had been destroyed, remained some weeks in an apparently dormant state; the first seed in each pod then germinated, and, bursting the seed-vessel, seemed to perform the office of a bud and leaves to the parent plant during the short remaining term of its existence.

Mr. Knight takes this opportunity to correct an inference drawn by him, in a former paper, from an experiment in which, after inverting a shoot of a vine and removing a portion of its bark, more new wood was generated on the lower lip of the wound, now become uppermost, than on the opposite lip. He has there inferred, that this effect was produced by sap which had descended from the leaves above. But as the branch was employed as a layer, the matter which would have accumulated on the opposite lip of the wound had been expended in the formation of roots; a circumstance which, at that time, escaped Mr. Knight's attention.

Some Account of two Mummies of the Egyptian Ibis, one of which was in a remarkably perfect State. By John Pearson, Esq. F.R.S.
Read June 13, 1805. [*Phil. Trans.* 1805, p. 264.]

After some general observations on the art of embalming, as it was practised by the ancient Egyptians, and on the various kinds of animals embalmed by them, Mr. Pearson proceeds to give a particular description of the very perfect mummy of an Ibis, which forms the chief subject of the present paper.

This mummy was taken out of the catacombs at Thebes, by the late Major Hayes, in the year 1802 or 1803. It was enveloped in cloth, and contained in an earthen jar, similar to those which are found at Saccara. Upon unrolling the bandage with which the mummy was covered, it was found to consist of strips of cloth, about three inches broad, which were strong and firm. The first circumvolutions of this cloth separated easily; but as the work proceeded, they were found to adhere more firmly, and at last were so closely united, that it was necessary to divide them by means of a strong knife. Each layer of cloth seemed to have been imbued with some bituminous substance in a liquid state; and the bandages were further secured by means of thread, in such a manner that the whole mass

was rendered firm and coherent; when the bandage was removed, the bird appeared to be covered with the same kind of bituminous substance that had cemented the strips of cloth. As much of this substance as could be removed without injuring the bird was now carefully taken off; and after the labour of several hours, Mr. Pearson succeeded in displaying the whole bird as it had been originally deposited by the embalmer.

The neck of the bird was twisted, so that the vertex of the head lay a little to the left of the sternum. The bill descended between the feet, and reached to the extremity of the tail. The feet were bent upwards, and placed one on each side of the head. The wings were brought close to the sides of the body. The feathers of the back and wings were white, tipped at their extremities with dark brown. The tail feathers could not be sufficiently cleared from the bituminous substance, to determine their colour. From the state of the quills of the wing feathers, it appeared that the bird had attained its full growth.

The dimensions of this bird were as follows: inches.

From the termination of the neck to the extremity of the tail	12 $\frac{1}{2}$
Length of the neck	6 $\frac{1}{2}$
— head and bill	8
— sternum	4
— metatarsal bone	3 $\frac{1}{2}$
Longest toe	3 $\frac{1}{2}$
Width at the shoulders	4 $\frac{1}{2}$
Circumference of the body	13 $\frac{1}{2}$

Weight of the whole, 16 $\frac{1}{2}$ ounces, Troy.

No particular marks of decay can be perceived in this mummy, although it is probable, Mr. Pearson says, that the greater part of 3000 years has elapsed since it was embalmed. It was, he thinks, immersed in the bituminous matter, while that matter was in a liquid state; but that it was not boiled therein, as Grew supposed, is evident, from the feathers not being corrugated, or otherwise materially changed from their natural state.

Mr. Pearson unrolled another mummy of an Ibis, also sent from Thebes by Major Hayes, which appeared to have been embalmed in a different manner. The cloth of this latter was of a coarser texture; it had not been so thoroughly imbued with bitumen, nor were the circular bands continued to the body of the bird, which was merely wrapped in several pieces of cloth. This mummy was in such a state of decay, that no remains of the head or bill could be discovered. The exterior layer of feathers was in general of a dark colour, some of them tipped with white. The plumage of the neck and tail was white; the latter had a tufted appearance.

Whether the two birds here described were what authors have called the white and the black Ibis, Mr. Pearson cannot, he says, presume to determine. With respect to the mode in which such birds were embalmed, it appears, he thinks, contrary to what is

stated by Herodotus to have been the practice in embalming human bodies, that the stomach and intestines were not removed, as upon examining the interior parts of the last-mentioned Ibis, Mr. Pearson met with a soft spongy substance, containing several scarabæi in an imperfect state. These, he supposes, had been taken as the food of the bird, and were not digested at the time of its death. He also observes, that as larvæ of dermestides and other insects have been detected among the dust and bones of the mummy of an Ibis, it may be presumed that this bird was not always in a fresh state at the time when it was embalmed.

Observations on the singular Figure of the Planet Saturn. By William Herschel, LL.D. F.R.S. Read June 20, 1805. [*Phil. Trans.* 1805, p. 272.]

Notwithstanding the variety of extraordinary phenomena already observed respecting the planet Saturn, there remains, Dr. Herschel says, a singularity which distinguishes the figure of Saturn from that of all the other planets.

He had, in the year 1776, observed that the body of Saturn was not exactly round, and had found in the year 1781 that it was flattened at the poles, at least as much as Jupiter. In the year 1789 he measured the equatorial and polar diameters, and supposing there could be no other particularity in the figure of the planet, ascribed a certain irregularity he perceived in other parts of the body, to the interference of the ring.

Dr. Herschel now relates a series of observations made in the months of April, May, and June, of the present year, of which the following are the most remarkable.

April 12.—The flattening of the polar regions appeared not so gradual as in Jupiter, and seemed not to begin till at a high latitude.

April 18.—The situation of the four points of the greatest curvature was measured with Dr. Herschel's angular micrometer, power 527. Their latitude was found to be $46^{\circ} 38'$; but as neither of the cross wires could be in the parallel, no great accuracy, Dr. Herschel says, could be expected.

April 19.—Ten-feet reflector, power 400. The figure of Saturn was somewhat like a parallelogram, with the four corners rounded off deeply. A measure of the position of the four points of the greatest curvature, taken this night, gave their latitude $45^{\circ} 44' 5''$.

May the 5th, 12th, and 13th.—Ten-feet reflector, with different powers. Jupiter and Saturn were viewed alternately, and compared. A greater curvature was evident at the polar and equatorial regions of Jupiter than at those regions in Saturn. These alternate observations were many times repeated, and the oftener the planets were compared, the more striking appeared the difference in their shape.

May 26.—Ten-feet reflector, power 400. The difference in the three diameters of Saturn was evident without measurement. That which passes through the points of the greatest curvature being the