

which he could only explain by referring them to parallax. Among these stars, α Aquilæ exhibited the greatest change of place.

In consequence of the Astronomer Royal having doubted the correctness of the author's conclusions upon this point, he has anxiously engaged in observations relating to it during the last sixteen months; and although the results in respect to α Lyræ and to Arcturus have not been very uniform, the recent observations on α Cygni are consistent with the former ones, and exhibit the same discordance between the summer and winter observations as before. In regard to α Aquilæ also, the observations detailed in the present paper are remarkably coincident with those formerly detailed; and the author thinks that it is to this star we must look for the final decision of the question concerning parallax.

Referring to Mr. Pond's observations, Dr. Brinkley is led to entertain doubts of the fitness of an instrument similar to the Greenwich mural circle for so delicate an inquiry, founded upon remarks detailed in the paper respecting the elements used in computing the index error, and which are independent of the uncertainties to which the observation itself is also subject. It is, however, from the uncertainty of the elements used in the reductions, and not from any errors of the observations, or from any defect in the construction of the instrument alluded to, that Dr. Brinkley is induced to consider the observations hitherto made at Greenwich as not affording conclusive results as to the existence or non-existence of parallax. In the present state of astronomy, however, it will be allowed that the relative fitness of instruments for ascertaining with precision the smaller motions, whether real or apparent, of the fixed stars, is an object of importance.

On the Urinary Organs and Secretions of some of the Amphibia. By John Davy, M.D. F.R.S. Communicated by the Society for the Improvement of Animal Chemistry. Read April 2, 1818. [*Phil. Trans.* 1818, p. 303.]

In several species of serpents which were examined by Dr. Davy, the kidneys were nearly as large as the liver, long, narrow and lobulated, and without a pelvis. Each lobule sends a small duct to the ureter, which terminates in a papilla situated in the cloaca, between the mouths of the oviducts, and having its point directed towards a receptacle for the urine, which, though a continuation of the intestine, may be considered as distinct from the rectum and cloaca, with which it communicates only by sphincter orifices.

The urinary ducts often contain a white matter, visible through their coats, which gradually accumulates in the receptacle till it forms a mass which, when of so large a size as to distend the part, is usually expelled by an extraordinary effort of the animal, most commonly in the act of devouring its food. The urine, at first soft, gradually hardens by exposure, and then looks like chalk; it consists of nearly pure uric acid.

The author next relates his experiments and observations upon the urine and urinary organs of lizards. He examined four species, —the gecko, iguana, the kobbera-guion, (described by Knox,) and the alligator. The kidneys vary in size; each ureter has a papilla situated in the receptacle; in other respects the structure resembles that of snakes. The secretion is also nearly similar; that of the alligator contains, besides uric acid, carbonate and phosphate of lime; in one case it smelt strongly like musk.

In two species of the testudo, Dr. Davy found the kidneys lobulated like those of the preceding animals. In the bladder both of the turtle and tortoise he found flakes of uric acid in a transparent liquid, containing mucus and common salt, but no urea.

On a Mal-conformation of the Uterine System in Women; and on some Physiological Conclusions to be derived from it. In a Letter to Sir Everard Home, Bart. V.P.R.S. from A. B. Granville, M.D. F.R.S. F.L.S. Physician in ordinary to H. R. H. the Duke of Clarence; Member of the Royal College of Physicians, and Physician-Accoucheur to the Westminster General Dispensary. Read April 16, 1818. [Phil. Trans. 1818, p. 308.]

The uterus described in this paper had acquired its full development upon the right side only. The left side exhibited a straight line, about half an inch distant from its centre. Upon this side also all the appendages of the uterus were deficient, though their rudiments might be traced. This woman was the mother of eleven children of both sexes, and had been delivered of twins, male and female, a few days before her death, which was occasioned by diseased heart and aneurism of the aorta.

Dr. Granville remarks that this is the first case upon record which disproves the opinion that the different sides of the uterus are concerned in the production of the two sexes. It also shows that twins of both sexes may be derived from one ovarium.

This paper concludes with some remarks upon supposed cases of superfœtation.

New Experiments on some of the Combinations of Phosphorus. By Sir H. Davy, LL.D. F.R.S. V.P.R.I. Read April 9, 1818. [Phil. Trans. 1818, p. 316.]

Since the author's former communication upon the above subject to the Royal Society, various researches have been brought forward, differing in their results from his own as well as from each other. Sir Humphry concluded that the phosphoric acid contained about three fifths its weight of oxygen, or twice that contained in the phosphorous acid. Berzelius considers the phosphoric acid as composed of 100 phosphorus + 128·17 oxygen; and Dulong, of 100 phosphorus + 124·5 oxygen: and both these chemists consider the