

found in the same position (the middle third of the posterior limb) as the degenerations resulting from lesions of the hallux and thumb centres. In this backward movement of the facial fibres in the capsule there is necessarily a level in which they envelope the genu, which would account for the fact that they are generally described as occupying that position. As in the other lesions, most of the fine degeneration passed from the internal capsule to the thalamus. In the crus the degeneration was scattered pretty evenly over the area of the middle third, exactly corresponding to the situation of the pyramidal fibres in the other experiments, and not occupying the position usually assigned to them, mesial to the pyramidal fibres. No degeneration was found in the accessory bundle to the fillet. As in the other experiments, degenerate fibres were found passing from the crus to the substantia nigra. The remaining degenerate fibres began to leave the left pyramidal tract at the junction of the pons and medulla, passing as single degenerate fibres to the facial nucleus of one or the other side. Below the level of the facial nuclei these fibres passed to the motor nuclei of the glossopharyngeus and vagus on both sides, the majority crossing the raphe to reach the nuclei on the opposite side. Occasional fibres were observed which apparently passed to some termination dorsal to these nuclei. This movement of degenerate fibres continued as far as the sensory decussation. A few degenerate fibres (probably thumb or finger fibres) remained in the pyramid and crossed in the decussation to the right lateral column, and disappeared in the lower cervical or upper dorsal region. In some of the facial lesions there were appearances of degeneration in the right internal capsule, but its connection with the lesion could not be demonstrated.

## PARIS.

**Academy of Sciences, August 19.**—On matches tipped with explosive mixtures, by M. Th. Schloesing. The author has experimented with a number of mixtures of substances with the view of finding a paste endowed with the properties of that mixture containing white phosphorus, and not having its poisonous character. The results show that it is necessary to use potassium chlorate, red phosphorus, ground glass, and glue or its equivalent, and that it is by no means a simple matter to find a perfect substitute for the paste used in tipping common matches.—On the storms and earthquakes in Austria during June, by M. Ch. V. Zenger. It is shown that during this period: (1) Solar activity has been very great. (2) Magnetic perturbations have been very ample and frequent. (3) Earthquakes and cyclonic storms of extraordinary violence have coincided with the appearance of numerous and brilliant meteorites, and with the passage of numerous shooting stars.—On equilateral hyperbolæ of any order, by M. Paul Serret.—On permanent deformations and the rupture of solid bodies, by M. Faurie.—On the conducting power of mixtures of metal filings and dielectrics, by M. G. T. Lhuillier.—Researches on the combinations of mercury cyanide with chlorides, by M. Raoul Varet. A thermochemical study on the combinations of mercury cyanide with the chlorides of sodium, ammonium, barium, strontium, calcium, magnesium, zinc, and cadmium. The solutions of these double salts do not give the isopurpate reaction with a picrate at 30°, and hence the cyanogen remains wholly in combination with the mercury at this temperature. On boiling, however, there is evidence of interchange of a small proportion of cyanogen for chlorine.—Thermal researches on cyanuric acid, by M. Paul Lemoult. As in the case of phosphoric acid, the addition of each of three equivalents of alkali is marked by a different evolution of heat; the acid is a tribasic *mixed* acid.—Heat of combustion of some  $\beta$ -ketonic ethereal salts, by M. J. Guinchant.—Determination of heat disengaged in alcoholic fermentation, by M. A. Bouffard.—On the gum of wines, by MM. G. Nivière and A. Hubert.—On the migration of phosphate of lime in plants, by M. L. Vaudin.—Origin and rôle of the nucleus in the formation of spores and in the act of fecundation, among the Uredineæ, by M. Sappin-Trouffy.

## BERLIN.

**Physiological Society, July 5.**—Prof. Munk, President, in the chair.—Prof. H. Munk spoke on contractures he had observed in monkeys after removal of the motor areas of the cerebral cortex.—Prof. Gad reported some experiments of Prof. Nicolaides (of Athens), which had demonstrated the presence of fat granules in the pyloric gastric glands and in Brunner's glands. July 19.—Prof. du Bois Reymond, President, in the chair.—Dr. Schultz demonstrated micro- and macro-scopically the contraction of the unstriated muscle fibres of the stomach of Sala-

mander. It was seen that the excised strips only contract when they are cut out in the direction of the long axis of the fibres, not when the fibres are cut through at right angles to their axis. Dr. Rawitz had stained the lymphatic glands in the mesentery of *Macacus cynomolgus* by his "additive" method. He found the nuclei of the cells were generally placed excentrically, and contained a minute round chromatin patch. The linen network was marked by minute nuclei at the points of intersection and attachment. The structure of the plasma was quite indeterminate, but it appeared to contain a small round body, 2 to 3  $\mu$  in diameter, which stained somewhat deeply, and which he regarded as van Beneden's "attraction sphere." Dr. Schultz had examined the optical properties of unstriated muscle-fibres of vertebrates in polarised light. It was found that although single fibres were not doubly refracting, a thicker layer of them was so quite distinctly. From this he concluded that the *single* fibres are in reality doubly refracting, but too feebly so to be perceptible. The double refraction became less during contraction, from which he concluded that, in accordance with von Ebner's theory, the anisotropic property of the fibres is due to differences in their internal tensions, the latter being greater in a transverse than in a longitudinal direction.

## BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—Erdmagnetische Messungen in Oesterreich: J. Liznar (Wien).—Durham College of Science, Calendar (Reid).—Die Schöpfung des Menschen und Seiner Ideale: Dr. W. Haacke (Williams and Norgate).—Elements of Coordinate Geometry: Prof. S. Loney (Macmillan).—A Laboratory Manual of Organic Chemistry: Prof. Lassar-Cohn, translated by Prof. A. Smith (Macmillan).—Astronomische Mittheilungen von der Königlichen Sternwarte zu Göttingen: Prof. W. Schur, Vierter Theil (Göttingen, Kaestner).—Symons's British Rainfall, 1894 (Stanford).—Forty-second Report of the Department of Science and Art (Eyre and Spottiswoode).

PAMPHLETS.—Geological Survey of Alabama: Report upon the Coosa Coal Field: A. M. Gibson (Montgomery).—Plants and Gardens of the Canary Islands: Dr. D. Morris (Spottiswoode).

SERIALS.—Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie, Einundzwanzigster Band, 3 Heft (Williams and Norgate).—Journal of the Institute of Jamaica, April (Kingston).—L'Anthropologie, Tome 6, No. 4 (Paris).—Quarterly Journal of Microscopical Science, August (Churchill).—Journal of the Royal Horticultural Society, August (117 Victoria Street).—Longman's Magazine, August (Longmans).

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