

Spitting movements were obtained from stimulation at the level of the supra-optic commissures in the region of the subfornical component of the medial fore-brain bundle.

G. W. T. H. FLEMING.

*Hypothalamus and Temperature Control.* (*Arch. of Neur. and Psychiat.*, vol. xxx, p. 728, Oct., 1933.) Bazett, H. C., Alpers, B. J., and Erb, W. H.

The writers studied the brain-stems of cats with anterior decerebrations. They found that the animals had the capacity of reacting to cold and of regulating their own body temperature at a normal level (and probably of developing fever), in the absence of the corpus striatum and thalamus, which were not, therefore, essential. The presence or absence of temperature control appeared to be associated with the preservation of the hypothalamus just cephalic to the corpora mamillaria; the area included the nuclei surrounding the walls of the third ventricle and the infundibular nuclei. Such animals did not, however, show a normal hyperpnoea when exposed to excessive heat.

G. W. T. H. FLEMING.

*The Localizing Significance of Spasticity, Reflex Grasping and the Signs of Babinski and Rossolimo.* (*Brain*, vol. lvi, p. 213, July, 1933.) Kennard, M. A., and Fulton, J. F.

The authors investigated certain signs in tame chimpanzees before and after circumscribed surgical lesions of various excitable regions of the cerebral hemispheres. They found that lesions of area 4 cause flaccid paralysis of the contralateral extremities, a Babinski response and diminution of tendon reflexes. These signs became more pronounced after bilateral lesions. Lesions limited to area 6 are followed by spastic paralysis of the contralateral extremities, together with forced grasping, and increase in tendon reflexes, the Rossolimo response and fanning of the toes. These signs were present for a longer period after bilateral lesions. Recovery of motor power may be extensive, but the sign of Rossolimo persists permanently, even after a unilateral lesion. When areas 4 and 6 are both removed from one cortex, very marked spasticity and forced grasping appear. The extensor Babinski becomes exaggerated, Rossolimo's sign is increased and tendon reflexes become permanently exaggerated. In monkeys and baboons complete bilateral extirpation of areas 4 and 6 is followed by permanent and complete loss of voluntary power. Forced grasping and spasticity are extreme, and the involuntary postural and righting reflexes of Magnus and de Kleijn may be demonstrated readily. The bodily reflex status of such animals appears to be identical with that of thalamic preparations.

G. W. T. H. FLEMING.

*Rôle of the Anterior Roots in Visceral Sensibility.* (*Arch. of Neur. and Psychiat.*, vol. xxx, p. 99, July, 1933.) Stone, T. T.

The author found from experiments on cats that the anterior roots do not contain antidromic sensory fibres conducting painful impulses from the viscera, such as that produced by forceful dilatation of the gall-bladder. Section of the posterior roots, if a sufficiently large number are severed, will abolish visceral pain produced in this way. The author concludes that the posterior roots are the pathways into the spinal cord for certain painful impulses from the viscera.

G. W. T. H. FLEMING.

*Neuro-muscular Irritability in Relation to the Biochemistry of the Minerals. II. Influence of Changes in the Ca/P and Na/K Ratio in the Food.* (*Biochem. Zeitschr.*, vol. cclxii, p. 367, 1933.) Seekles, L., and Sjollem, B.

On a diet with a normal mineral composition, the physiological irritability is low and the AC/AO quotient (anode closing or opening) is less than 1. The composition of such a diet is Na/K = 1 : 6.1, Ca/P = 1 : .78, Ca/K = 1 : 3.52, Ca/Mg = 1 : .132. With an abnormally high Na/K ratio of 1 : 542, the AC/AO quotient is generally, but not always, increased, but it is regularly and more definitely

increased with an abnormal Ca/P ratio of 1 : 8.4. By a combination of both mineral abnormalities of very high Na/K or Ca/P the AC/AO quotient is greatly increased, and is subject to large daily variations, and even tremors of individual muscle-groups are not uncommon. However, food with such an anomalous mineral composition is not well tolerated by the animals, but the effect upon the irritability is not a fasting effect. Neither is it thought to result from the base excess. The failure of the appearance of an increased irritability which is occasionally found in the food with an abnormal mineral composition is attributed to the antitetany influence of the increased Ca/Mg ratio.

S. MORGULIS (Chem. Abstr.).

*The Action of Veratrine, Curare and Strychnine on the Responses of Medullated Nerve.* (Journ. Physiol., vol. lxxix, p. 67, 1933.) Fromherz, H.

Frog sciatic nerve is unaffected or only slightly affected by veratrine, curare or strychnine in concentrations sufficient to cause characteristic effects on muscle-nerve systems. Presumably the drugs do not penetrate into the nerve. When the nerve is completely asphyxiated in hydrogen the drugs penetrate into the nerve, and when oxygen is readmitted the characteristic effects are found.

J. S. LYMAN (Chem. Abstr.).

*Effect of Veratrine on the Heat Production of Medullated Nerve.* (Proc. Roy. Soc., B., vol. cxiii, p. 386, 1933.) Hill, A. V.

In the presence of oxygen 1 : 50,000 veratrine solution has little effect on the heat production of medullated frog nerve. Treatment with veratrine and complete asphyxia, followed by recovery, produces a characteristic effect. The heat production in response to a single shock attains its maximum rate in a few seconds, may be 1,000 times normal in amount, and may last many minutes. Heat production during slow stimulation may be greatly increased. This veratrine effect requires time for its restoration.

J. S. HEPBURN (Chem. Abstr.).

*Cerebral Circulation. XXIV. (A) Action of Epinephrine on Pial Vessels; (B) Action of Pituitary and Pitressin on Pial Vessels; (C) Vasomotor Response in the Pia and in the Skin.* (Arch. of Neur. and Psychiat., vol. xxx, p. 957, Nov., 1933.) Forbes, H. S., Finley, K. H., and Nason, G. I.

Pitressin causes dilatation of arteries in the pia, constriction of those in the skin. Epinephrine (adrenaline), by intravenous and intracarotid injection, usually causes a similar response; when applied locally it causes constriction of arteries in both pia and skin, the reaction appearing to be about four times more intense in the skin than in the pia. Sympathetic stimulation constricts arteries in both situations, in the skin about ten times as strongly as in the pia. Vaso-constriction in the pia (of the kind described) may be overcome by a rise in blood-pressure.

*XXVII. Action on the Pial Arteries of the Convulsants Caffeine, Absinth, Camphor and Picrotoxin.* (Ibid.) Finesinger, J. E., and Cobb, S.

Caffeine convulsions caused by the intravenous administration of large doses were preceded by an acute constriction of the pial artery under observation, a drop in systemic arterial pressure, and a decrease in cerebro-spinal fluid pressure.

Absinth convulsions were preceded by slight constriction of the pial artery, a drop in blood-pressure, and a slight drop or rise in cerebro-spinal fluid pressure. Convulsions following large doses of absinth were, in most cases, preceded by dilatation of the pial artery, a drop in systemic pressure and a rise in cerebro-spinal fluid pressure.

Homocamfin convulsions were preceded by slight constriction of the pial artery, a drop in systemic arterial blood-pressure and, as a rule, a decrease in cerebro-spinal fluid pressure. Monobromated camphor convulsions were preceded by