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ABSTRACTS OF COMMUNICATIONS.

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79 (896)

A comparison of the effects of labyrinthine and cerebellar lesions in the turtle.

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It is of some interest, in view of the tendency in some quarters to insist upon the essential similarity of the effects of lesions of the labyrinth and of the cerebellum, to ascertain whether this supposed constancy of relationship obtains in animals with a relatively small cerebellum. It may be mentioned that, anatomically, the floor of the mid brain (the pons) and that portion of the roof represented by the vermis cerebelli are phylogenetically old. The lateral lobes of the cerebellum are new developments. The cerebellum of turtles is represented by the vermis. The cerebellum in the genera of turtles used for experiment—*Nanemys* and *Chrysemys*—is smaller than in the sea turtles.

We have already pointed out the fact that there is a great uniformity in the effects of labyrinthine lesions in all animals so far studied[1] and that the effects in the turtle are much the same as in other animals.[2]

[1] Wilson and Pike, *Philosophical Transactions of the Royal Society of London*, 1912, Series B, Vol. 203, p. 157.

[2] Wilson and Pike, PROCEEDINGS OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE, 1913, XI, p. 52.

Ablation of the cerebellum in the turtle does not give rise to the same train of symptoms that is observed after labyrinthine extirpation. We find, in agreement with Fano,[1] that the righting reaction is not abolished by ablation of the cerebellum. There was a small, scarcely noticeable, disturbance of coördination in swimming, manifested most clearly in a slight awkardness in approaching the side of the tank. Occasionally, lack of precision of limb movements on the injured side was observed after unilateral operations. One other symptom was that the animal was rarely or never seen to swim deep in the water after cerebellar removal. Our observations substantiate those of Fano, Bickel[2] and Sergi,[3] whose experiments were done on different genera of turtles.

The results on turtles are in substantial agreement also with those of Steiner,[4] Loeb,[5] Bethe[6] and Corso,[7] who report no noticeable motor disturbances in sharks (*Scyllium*) after cerebellar ablation.

It is clear that, in certain of the lower vertebrates, there is a constant and striking difference between the effects of labyrinthine and of cerebellar lesions, and it is equally clear that in these forms the cerebellar connections of the labyrinth are not the important connections.[8]

80 (897)

The involvement of the blood and blood vessels in infantile scurvy.

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Infantile scurvy is a disease characterized by malnutrition, and a tendency to bleeding, especially in the gums, and under the

[1] Fano, *Archives italiennes de Biologie*, 1883, III, pp. 365–368.

[2] Bickel, *Archiv für [Anatomie und] Physiologie*, 1901, pp. 52–80; pp. 495–498.

[3] Sergi, *Arch. di Farmac. sper. e Sc. affin.*, 1905, IV, pp. 474–515.

[4] Steiner, Die Funktionen des Zentralnervensystems und ihre Phylogenese. II. Die Fische; Braunschweig, 1888.

[5] Loeb, *Archiv für die gesammte Physiologie*, 1891, L, pp. 68–85.

[6] Bethe, ibid., 1899, LXXVI, pp. 470–493.

[7] Corso, *Archives italiennes de Biologie*, 1895, XXII, p. xciv.

[8] Luciani, "Physiologie des Menschen," 1907, Bd. III, pp. 482–489.