

Laurent, of Marseilles, who refers one to Unger's genus *Artocarpidium* and does not venture beyond *Phyllites* in the identification of the other.

While not absolutely unique, even if the age is as great as is assigned to them, since some of the leaves described by Fontaine from the Neocomian of Virginia may be dicotyledonous, the New Zealand examples are less ambiguous. It may be pointed out however that Lower Cretaceous and Neocomian are not synonymous terms, as one might infer the author to believe, and no evidence is presented which would indicate that these New Zealand deposits could not be Barremian, Aptian or even Albian in age, and in the last stage dicotyledons are fairly common in both America and Europe.

A table giving the distribution of the New Zealand species in other regions would have added much to the usefulness of the report.

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SPECIAL ARTICLES

THE FACTORS INFLUENCING THE ATTITUDE OF THE HEAD IN ANIMALS WITH INJURY TO ONE OTIC LABYRINTH

MAGENDIE, more than a century ago, recognized that the central nervous system participated in the maintenance of the attitudes of the body as well as in its movements. Recently Sherrington has called attention to this function under the head of the postural activity of muscle nerve. The attitude of the head is one of the characteristics of experimental removal of one otic labyrinth in animals, and the analysis of the factors involved becomes of importance from the point of view of the relation of the attitude of the head to the maintenance of the position of the body in space and hence, to the problem of the maintenance of equilibrium, as well as from its own intrinsic interest. This analysis was begun by Dr. A. L. Prince, of Yale,¹ in this laboratory more than two years ago, but his service in a base hospital of the American

Forces in France led to an interruption of the experiments. We desire to add a brief statement of new experiments at this time. We hope later to publish the data in full with Dr. Prince as the senior author.

The torsion of the head, always seen after removal of one otic labyrinth, with the occiput turned toward the injured side, largely disappears after removal of the homolateral cerebral motor cortex in dogs. The torsion reappears if the heterolateral cerebral motor area is removed some weeks or months after the ablation of the homolateral area.

The torsion of the head is greatly increased, and the rolling movement toward the side of the injured labyrinth, together with the ocular movements (ocular nystagmus) reappear, if the heterolateral cerebral motor cortex is removed some weeks after the time of the labyrinthine operation. Rolling movements of the animal to the side of the remaining cerebral motor area reappear, but no nystagmus, if one cerebral motor area is removed some weeks after bilateral labyrinthine operation.²

Our experiments have given a new interest to Magendie's statement that the division of the central nervous system into segments, *e. g.*, medulla oblongata, cerebellum and cerebrum, is an artificial division from the point of view of the physiologist, and that all parts must be considered together in arriving at an estimate of its functions. B. ARONOVITCH,

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A SLOW-SPEED KYMOGRAPH

PHYSIOLOGISTS and others using the "medium-spring" kymographs of the Harvard Apparatus Company, which are not provided with a slow-speed mechanism, may be interested in a simple device I have used for materially reducing the speed of the drum. It is shown in the appended figure. A small hole is drilled in the upper corner of the largest fan, and into it is tied a strong but flexible

¹ *Proceedings of the Society for Experimental Biology and Medicine*, 1916, XIII., p. 156.

² Unpublished experiments by Drs. Strauss and Friesner.