

discussed in relation to some phylogenetic problems of the floral structure.

One of the chief objects of this research was to see how far the data obtainable would agree with Van Tieghem's view that five of the vascular bundles of the corolla represent the supply of a suppressed second whorl of stamens. The bundles in question traverse the tube of the corolla in an antiseptalous position, and usually each of them forks into two just below the limb, the two branches then passing out into the adjacent lobes of the corolla so as to form lateral bundles in them. Van Tieghem regards the suppression of the stamen as having led to its vascular supply being utilised by the neighbouring lobes of the corolla.

The author has carefully traced the vascular bundles from the floral axis upwards into the two perianth-whorls. This has revealed the fact that, in those species which possess lateral bundles in the calyx-lobes, the origin of these bundles is precisely comparable to that of the lateral bundles of the corolla-lobes. In each perianth-whorl the lateral bundles are derived (and in a similar way) from the strands which become the median bundles of the lobes of the other perianth-whorl. Thus any theory applied to the origin of the lateral bundles of the corolla and inapplicable to the calyx gains no support from the course of the vascular strands.

A comparison of the different forms, including those with "staminodes," yields further data, which also appear to militate against Van Tieghem's theory, and to supply some interesting material relating to floral phylogeny.

- (1) *New South Wales. Historical, Physiological and Economic.* By A. W. Jose, T. Griffith Taylor, Dr. W. G. Woolnough. Edited by Prof. T. W. Edgeworth David, F.R.S. Pp. xii+372. (Melbourne: Whitcombe and Tombs, Ltd., n.d.) Price 4s. 6d.
- (2) *Cambridge County Geographies: Radnorshire.* By Lewis Davies. Pp. xi+156. *Renfrewshire.* by Frederick Mort. Pp. ix+177. *Perthshire.* By Peter Macnair. Pp. xii+180. *Dumfriesshire.* By Dr. James King Hewison. Pp. ix+170. *North Lancashire.* By Dr. J. E. Marr, F.R.S. Pp. xii+180. (Cambridge University Press, 1912.) Price 1s. 6d. each.

(1) THE interaction between the relief of the land and its climate, between the passive, or physiographic, factors and the active, or human, factors in the development of the life of a country is strikingly illustrated by this book on New South Wales, which summarises the latest information regarding that region. The student, who has hitherto had to search through the volumes of various scientific societies for his facts, will be grateful to the authors, not only for this concise summary, but also for the coherence with which the facts have been collated. The treatment of climate and that of the development of the physical features of the country seem the most valuable parts of a thoroughly sound exposition.

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(2) The well-known features of the Cambridge County Geographies are preserved in the new volumes. It remains but to mention points of special interest. Radnorshire is strong regarding the agriculture and the military history of the county; Renfrewshire on the relationship between the county and the estuary of the Clyde; Perthshire includes a panorama of the mountains and a population map showing the influence of the valleys on the distribution of the people; Dumfriesshire has an interesting map connected with the place names of the locality; and North Lancashire emphasises the relation between the geology and the scenery of the county. Perthshire contains a map of the rainfall of Scotland by Dr. Mill, which differs, especially in the case of the Southern Uplands, from the more detailed map by Mr. Andrew Watt which is printed in the other volumes. B. C. W.

LETTERS TO THE EDITOR.

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The Moon and Poisonous Fish.

MR. E. G. BRYANT, in NATURE of November 14, asks a question regarding the effect of moonlight in "turning" fish. I have lived many years in South Africa, and have encountered the same belief, that moonlight will hasten the turning bad of fish; and at one time, when living at Muizenberg, I obtained some experimental proof of the moon's action on fish. It seems curious, at first sight, that moonlight, which has so little effect on meteorological instruments, should have this effect on fish. I have thought it probably due to insects or some low form of life which would be abroad, or be stimulated to action, on moonlight nights and not on dark nights.

The action of moonlight in stimulating the rise of sap in trees is widely believed in by practical wood cutters in almost every quarter of the world.

D. E. HUTCHINS.

Ridley, Kent, November 23.

What the British Caves might tell us.

WILL you kindly allow me, as one who has made considerable additions to our Pleistocene fauna, vertebrate and invertebrate, to support Mr. Hunt's appeal for the resurrection of that vast amount of material now stored away that was obtained in Kent's Cavern? Those of us who have paid attention to the subject are aware that the recorded lists give us but a poor idea of what the caves could tell us, and that from the waste dumps have been obtained a large number of new species, and even from the lowest layers these bones include those of man himself. In these circumstances we feel the time has come, not only for this material to be put into competent hands, but for the caves to be reworked on modern lines and in the light of recent research.

W. J. LEWIS ABBOTT.