

By C. W. Younghusband, Esq., Lieut. in the Royal Artillery. (*Forms 1 and 2.*)

6. "Of the ultimate distribution of the Air-passages, and of the modes of formation of the Air-cells of the Lungs." By William Addison, Esq., F.L.S., Surgeon, Great Malvern. Communicated by R. B. Todd, M.D., F.R.S.

After reciting the various opinions which have prevailed among anatomists regarding the manner in which the bronchial tubes terminate, whether, as some suppose, by cells having free communication with one another, or, as others maintain, by distinct and separate cells having no such intercommunication, the author states that having been engaged in investigating, with the aid of the microscope, the seat and nature of pulmonary tubercles, he could never discover, in the course of his inquiry, any tubes ending in a *cul-de-sac*; but, on the contrary, always saw, in every section that he made, air-cells communicating with each other. He concludes from his experiments and observations, that the bronchial tubes, after dividing dichotomously into a multitude of minute branches, which pursue their course in the cellular interstices of the lobules, terminate, in their interior, in branched air-passages, and in air-cells which freely communicate with one another, and have a closed termination at the boundary of the lobule. The apertures by which these air-cells open into one another are termed by the author *lobular passages*: but he states that the air-cells have not an indiscriminate or general intercommunication throughout the interior of a lobule, and that no anastomoses occur between the interlobular ramifications of the bronchiæ themselves; each branch pursuing its own independent course to its termination in a closed extremity. Several drawings of the microscopical appearances of injected portions of the lungs accompany this paper.

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April 14, 1842.

FRANCIS BAILY, Esq., V.P., in the Chair.

The Rev. Henry Christmas, M.A., was balloted for and duly elected into the Society.

A paper was read, entitled, "Remarks on the probable natural causes of the Epidemic Influenza as experienced at Hull in the year 1833; with a delineation of the Curves of the maximum, the mean, and the minimum Temperatures in the shade, and the maximum Temperature in the sun's rays at Hull, during the years 1823 and 1833." By G. H. Fielding, M.D. Communicated by the Rev. Wm. Buckland, D.D., F.R.S.

The meteorological causes to which the author ascribes the sudden accession of the influenza at Hull, and its continuance from the 26th of April to the 28th of May 1833, are, first, the unusually cold

weather during March, and also the cold and wet which prevailed during April in the same year: secondly, the sudden rise of temperature, amounting to  $21^{\circ}$  of Fahr., which occurred in a few hours on the 26th of April: and thirdly, the continuance, through May, of extreme vicissitudes of temperature between the day and the night; the burning heat of the days and the cold thick fogs, with easterly winds, commencing generally about sunset, and prevailing during the night.

A paper was also read, entitled, "Report of a remarkable appearance of the Aurora Borealis below the Clouds." By the Rev. James Farquharson, LL.D., F.R.S., Minister of Alford.

The phenomenon recorded in this paper occurred on the night of the 24th of February 1842, when a remarkable aurora borealis was seen by the author apparently situated between himself and lofty stratus clouds, which extended in long parallel belts with narrow intervals of clear sky in a direction from north-west to south-east. The author gives, in detail, the particulars of his observations.

April 21, 1842.

WILLIAM THOMAS BRANDE, Esq., V.P., in the Chair.

The following papers were read:—

1. "On the Organic Tissues in the bony structure of the *Coral-lidæ*." By J. S. Bowerbank, Esq. Communicated by Thomas Bell, Esq., F.R.S., was in part read.

"Papers from the several Magnetic Observatories established in India, addressed to the Secretary of the Royal Society, by direction of the Honourable East India Company." Communicated by P. M. Roget, M.D., Sec. R.S.

1. From the Magnetic Observatory at Madras:—

Magnetic and Meteorological Observations for October, November and December 1841; as also for January 1842.

Term-day Observations for October and November, and Curves for August, September, October and November 1841.

Observations of the Direction and Force of the Wind, and the state of the Sky, during October and November 1841.

Extraordinary Magnetic Curves for September, October and December 1841.

2. From the Magnetic Observatory at Singapore:—

Magnetic Observations from March to October, 1841, with Curves for the same period.

Anemometer Curves for March, April, May, June, July, August, September and October 1841.