

## OUR BOOK SHELF

*The Literature and Curiosities of Dreams.* A commonplace Book of Speculations, concerning the mystery of Dreams and Visions, records of Curious and well-authenticated Dreams, and Notes on the various modes of Interpretation adopted in Ancient and Modern Times. By Frank Seafeld, M.A. 2nd. Ed. Revised; pp. 518. (London: Lockwood and Co. 1869.)

IN this book the author has gathered together almost every kind of information on the subject of which it treats. The compilation of it has doubtless been a labour of love, and the author's great object has been to select, from all sources, whatever is most characteristic of his opinions which have been held on the subject of Dreams, and also all the best examples upon which these opinions have been founded. He tells us that no amount of research has been considered irksome or irrelevant, so that, in his opinion, "there is nothing extant in the way of dream-speculation or anecdote which is not fairly and impartially represented." The book is, in fact, a rich and methodically arranged storehouse of dreams and of opinions thereon, which will be valued by many who are merely curious, as well as by those who are more seriously interested about their causes and phenomena. It is likely to serve as a book of reference, or as one which may be had recourse to in spare half-hours, rather than as a work which will be taken up to be at once read and mastered.

*Untersuchungen über Psychologie. Anmerkungen zu Robert Zimmermann's "Philosophische Propädeutik." Mit Rücksicht auf Herbart, F. H. v. Fichte, Ulrici, Fechner, Lindner, Drbal, Flügel, Nahlowsky, Lange, Darwin, C. Vogt, L. Büchner, Moleschott, Lotze, Hoppe, u.s.w.* Von Dr. F. A. v. Hartzen. (Leipzig, 1869.)

*Untersuchungen über Logik. Mit Rücksicht auf Apelt, Bolzaus, Drbal, Grätry, Kuno Fischer, Hegel, Herbart, Kant, Maudsley, J. Stuart Mill, Strümpell, W. Schuppe, Trendenburgh, Ueberweg, R. Zimmermann, u.s.w.* Von Dr. F. A. v. Hartzen. (Leipzig, 1869.)

THESE publications by Dr. Hartzen are somewhat discursive criticisms of disputed matters in psychology and logic, and of the opinions of the different authorities whose names are mentioned on the title-pages. Neither of them lays claim to give a systematic account of the subject with which it deals, and both of them have the character of critical articles suited to a review, rather than of treatises. The "Psychological Inquiries" consist entirely of discussions upon Zimmermann's "Empirical Psychology," paragraph by paragraph, references being made to the numbered paragraphs in the original work. It will be obvious that this plan of procedure is rather trying to the reader who is obliged to guess from the critical observations at the nature of the opinions that are in question, and whose interest is not easily kept up in so desultory a disquisition. Nevertheless, if he is content to persevere, he will meet with much that is suggestive and instructive. The "Logical Inquiries," though not systematic and complete, will in like manner repay perusal; they are contributions to the foundation of a system of scientific logic.

*Kurzes Lehrbuch der Physiologie des Menschen.* Von Dr. E. Larisch. (Marburg: Oscar Ehrhardt. London: Williams and Norgate.)

THIS is very similar to Budge's little work, but smaller, and written in more of a narrative style. It therefore contains less matter, and this is especially the case in the part relating to the nervous system. Dr. Larisch has not the scientific eminence of Prof. Budge, and therefore speaks with less authority; on the other hand, he is free from the temptation of attaching too much importance to his own researches and views.

## LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his Correspondents. No notice is taken of anonymous communications.]

## Formation of Ground Ice

I THINK the enclosed letter contains as good a description of the formation of ground ice as I have hitherto seen; I therefore send it to you, thinking it of sufficient interest to appear in NATURE.

JOHN TYNDALL

Royal Institution, March 27

To PROFESSOR TYNDALL

I have been engaged since September last in making a survey for the Intercolonial railway, up the valley of the Matapediac, a stream about two hundred feet in width and four or five feet in depth, which discharges into the Restijnche river, about twenty miles above the head of the Baie des Chaleures.

The Matapediac, which is fed by large fresh water springs, runs over a rocky bottom covered with loose stones, ranging in size from coarse gravel to boulders as large as a hoghead, and the average current is about four miles an hour.

Early in November last the temperature went down in one night to 12° F., and on going out of camp the following morning I noticed large quantities of what appeared to be snow saturated with water floating down the stream, but not a particle of snow had fallen near us or for many miles round, as far as I could see by the mountain tops, nor had any ice formed on the surface of the river.

The water opposite where I stood was about six feet deep, and perfectly clear, so that I could see every stone on the bottom, and with the exception of the floating slush, the river was as it had been the previous day when the temperature was about 50° F.; I got into a canoe and paddled with the current for half a mile or so, and in shooting some small rapids, where the water in places was not more than two or three feet deep, I noticed on the bottom, masses of the slush clustered round and between the boulders, and a slight touch with the paddle was sufficient to free these clusters, when they rose to the surface, and were carried away by the current. I continued down the stream for three or four miles, and noticed the same thing in every rapid, where the water was shallow and ruffled by stones at the bottom.

The buoyancy of this slush was such that when detached from the bottom it rose so rapidly as to force itself well out of the water, and then floated off about half submerged.

I watched this forming of slush for many days, and in several cases found small stones imbedded in the floating slush, having been torn from the bottom when the buoyancy of the slush, aided by the running water, caused it to rise.

The temperature continued getting lower daily, and the slush in the rapids formed more rapidly than it was carried away, so much so that a bar or dam was formed across the river at each rapid, backing up the water in some cases five and six feet, when it generally found an outlet over the adjoining land, and into its natural bed again, or the head of water became sufficient to tear away the obstruction, which by this time had become a solid frozen mass.

All this time, no properly crystallised ice had formed on the surface of the river, the current being too rapid, but the slush or "anchor ice" as the trappers call it, was forming in deeper water than it had formed in before, indeed all over the river bottom, and was rising and floating away as I have already described. Eventually the temperature got down to two and three degrees below zero, when the river surface began to freeze in the eddies and along the edges, and the open water space became narrower every day, and was filled with floating "anchor ice" and detached masses of solid ice, which here and there became jammed and frozen together, so as to form ice-bridges on which we could cross.

These ice-bridges served as booms to stop much of the floating ice, which froze solid the moment it came to rest; and in this manner the river at last became completely frozen over for about forty miles of its length, but not until after we had experienced five weeks of steady cold, with the thermometer never above +12° F., and frequently down to -16° F.

It is just possible that what I have endeavoured to describe may suggest something to you, or it may be an old story; if so, please pardon the intrusion.

W. G. THOMPSON

Dalhousie, N.B., February 18