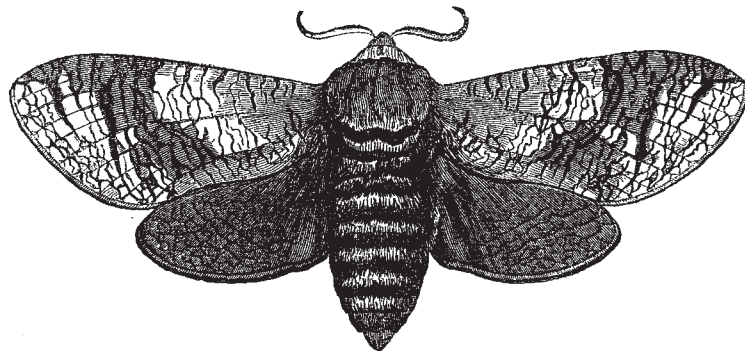


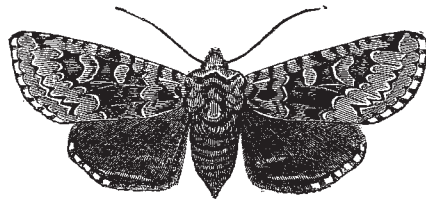
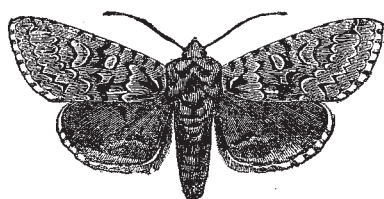
these insects are represented on coloured plates, these figures, accompanied as they are by good descriptions, will prove an invaluable boon; and we can only hope

that Mr. Newman's book, the result of years of study, may meet with the success which it so well deserves.

W. S. DALLAS



THE GOAT MOTH (*Cossus ligniperda*)



THE MERVEILLE DU JOUR (*Agriopis aprilina*)

OUR BOOK SHELF

Text Book of Botany.—*Lehrbuch der Botanik für Gymnasien, Realschulen, &c.* By Dr. Otto W. Thomé. 1 vol. 8vo. 358 pp., with 621 woodcuts. Price 3s. (Brunswick, 1869.)

DR. THOMÉ'S name is new to us. He is a teacher in what we may call the Upper Grammar School at Cologne. Because he has not published original observations it does not follow that he should be a bad teacher. Rather, indeed, this is a point in his favour; for original observers, unless they be men of wide grasp of mind, or of great experience, are apt to ride special hobbies too far, and to be very unfair and crotchety.

A cursory inspection of this book leaves a favourable impression. It is German, of course, and the first chapter is entitled *Die Zelle als Individuum*, but so far as we can judge it is a handy book for a beginner, and if not all pure milk, it does not seem very badly diluted: much cream now-a-days it is hardly fair to look for. It is very copiously illustrated; the cuts by no means all original, and not a few borrowed from this side the Channel, but none the less well adapted to their purpose. D. O.

The Retardation of the Beat of the Heart.—*Das Hemmungsnervensystem des Herzens.* By Adolf Bernhard Meyer. (Berlin, 1869. London: Williams and Norgate.)

A CRITICAL and experimental inquiry into the inhibitory action of the pneumogastric nerve on the beat of the heart. The chief features of the experimental investigation are—first, the extension of the facts of inhibition to many animals (chiefly reptiles) not hitherto specially examined in reference to this point. Curiously enough, in *Emys lutaria* the left pneumogastric is inert; unfortunately Dr. Meyer has not worked out the cause of this singularity. Second, the author brings experiments to show that the effect of stimulation on the pneumogastric may be kept up for a very long time—more than an hour. In frogs the effect may be carried as far as complete stoppage for this time; in mammals as far as retardation only of the beat. M. F.

Exotic Lepidoptera.—*Lepidoptera Exotica; or, Descriptions and Illustrations of Exotic Lepidoptera.* By A. G. Butler, F.L.S., &c. (London: E. W. Janson.)

MR. BUTLER, who is well known as an ardent and careful student of the diurnal Lepidoptera, has undertaken, in conjunction with Mr. Janson as publisher, what will no doubt prove a very valuable and beautiful work. Many new species of Lepidoptera have been described—by Mr. Butler himself amongst others—without any figure: this practice is exceedingly inconvenient to those who attempt to identify species; and though, as Mr. Butler observes, it enables those who adopt it to "call the beautiful their own" to a larger extent than if they had to wait for figures, it is nevertheless a reprehensible proceeding, and has afflicted the conscience of one at least who has been guilty of it. Mr. Butler is a very skilful artist, and evidently an intense admirer of the lovely colours and forms of the insects he deals with. Consequently it is a matter for congratulation that he has undertaken to make up for the shortcomings of past times, and intends to bring out once a quarter a part of his "*Lepidoptera Exotica*," with three coloured plates of new or unfigured species. In the two parts already issued, which are before us, the figures are admirably done, and very handsome; whilst the descriptive text is concise, and in Latin in part. Some of Mr. Wallace's Bornean butterflies are figured in the second part. E. R. L.

Physiology of the Human Voice.—*Physiologie und Pathologie der Menschlichen Stimme.* By Dr. M. J. Rossbach. (Würzburg. London: Williams & Norgate.)

A TREATISE on the physiology of the voice, intended by the author to be useful not only to physiologists and pathologists, but also to those engaged in singing or in teaching singing. A chapter on the nature and qualities of sounds, based on Helmholtz' well-known work, and a short one on musical instruments, introduce the main topic, the physiology of the human organ of voice. There are also separate chapters on the vocal register, the different kinds of voice, and the relations of voice, speech, and song.