

included in it. The illustrations are good and numerous; they are to a large extent either drawn specially for the work, or are taken from Briosi and Tognini's work on *Cannabis sativa*.

Dr. Montemartini has succeeded in getting a large quantity of sound information into his short treatise on "Plant Physiology," and he has made it more useful by citing the chief literature of each subject in a list at the end of each chapter. It is curious to note that he quotes the ringing experiment, as used by Hales, to demonstrate the ascent of water in the wood. In the "Vegetable Statics," however, this experiment is described to prove that there is no great downward motion of water in the bark. With regard to the problem of the ascent of water in trees, Dr. Montemartini accepts the hypothesis which maintains that the sap is drawn up in a tensile state. In each section the principal facts are well described, and the book is well up to date. The section on growth is perhaps the best in the book, and contains a short account of the author's own researches. The last section in the book is on reproduction, and too short to be of much use.

Glass Blowing and Working. By Thomas Bolas. Pp. 212. (London: Dawbarn and Ward, Ltd.)

CONSIDERING the practical importance of glass-blowing, not only in physical and chemical laboratories but in many manufactures, it is remarkable that so few works have been written on the subject. English students are practically restricted to Mr. Shenstone's well-known little book, and the chapters in Prof. Threlfall's "Laboratory Arts." The present work, which is based upon a course of lectures given by the author in connection with the Technical Education Committee of the Middlesex County Council, is quite distinct in character from either of these, and in some respects, perhaps, is less suitable for a beginner. The opening chapters are devoted to glass-working tools, the most important of which, of course, are the blowpipe and the bellows. The remarks on these are practical and lucid, the author showing that the ideal blowpipe and bellows differ considerably from those usually found in chemical and physical laboratories. The chapter on minor tools and appliances is very full, although many of the instruments described are but rarely used by professional glass-blowers. The chapters on glass manipulation contain nothing essentially new, the only points which seem somewhat unorthodox to one accustomed to the German style of glass-blowing being the method of making the inside seals in "traps," and the use of lead glass. The author is a strong advocate of the use of the latter, and indeed regards the blackening in a reducing flame as a positive advantage to the beginner, as compelling him to work with a flame in which the combustion is complete. The latter part of the book gives instructions for making small decorative articles at the blowpipe, with notes on the preparation of enamels and coloured glasses. Many useful recipes are given throughout the book, mostly published for the first time, of which the various inks for etching and printing on glass may be specially mentioned. If only as a collection of practical hints, the book is certain to be found on the shelves of all amateurs in this fascinating art.

Experimental Mechanics. By G. H. Wyatt, B.Sc., A.R.C.S. Handbooks of Practical Science, No. iii. Pp. 54. (London: Rivingtons, 1898.)

A NUMBER of simple experiments in mechanics, most of them quantitative, are described in this book. The experiments are capable of being performed by pupils who can understand the descriptions of them, and they will train the hand, mind and eye to work together.

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LETTERS TO THE EDITOR

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Notes on the Bugonia-Superstitions.—The Occurrence of *Eristalis Tenax* in India.

IN consequence of a notice published by Baron C. R. Osten-Sacken in NATURE (vol. xlix., p. 198, December 23, 1893), requesting the public for information about the folk-lore of the Oxen-born bees, I made to him several communications, most of which were incorporated in his subsequent works: namely, "On the Oxen-born Bees of the Ancients" (Heidelberg, 1894), and "Additional Notes in Explanation of the Bugonia-Lore," &c. (*ibid.*, 1895).¹ Continuing since in the researches, I have collected the following notes, which I trust you will allow me a space to publish, inasmuch as the latter work (p. 4) contains the author's indication that he shall thereby conclude his publications on this subject:—

(1) *The Occurrence of the Bees in a Skull.*—Besides the two instances of this incident quoted in "O. B." (pp. 64, 3) from Herodotus and from Patterson, we find another case in Purchas's "Pilgrimes," 1624, Part III., l. iii. p. 627, where Geo. Berkeley, the English merchant (c. 1605), narrates from his personal observations that Livonia was then so much devastated by the Russians that, her woods were "strowed with bones of the dead carcasses, and himself did once in one of those woods, eate Honey out of a man's skull wherein a swarm of bees were, and bred as it hanged on a Tree."

(2) *Chinese Loves in Relation to the Bugonia.*—Mr. G. B. Buckton, in his "Natural History of *Eristalis tenax*," 1895, p. 79, gathering from "O. B.," includes Japan and China among the countries that "have been all more or less affected by this strange idea." Should a reader infer from this passage that the Japanese and the Chinese ever dreamt of the breeding of honey-bees from bovine carcasses, gross must be his blunder. He can find in "O. B." a reproduction of my clear statements of the absence from those nations of this belief (p. 20), and of the early Japanese discrimination established between bees and drone-flies (p. 33).

However, the exposition of Mr. Buckton could excellently apply to the case of the Chinese, provided the term "Bugonia-superstition" be used in such an extensive sense as to cover all allied beliefs derivable from the confusions of bees and drone-flies. As the result of my research for three years past, I can now enumerate altogether three instances of such beliefs from Chinese source: firstly, a notice of a literatus in the beginning of the seventeenth century, who apparently mistook some *Eristalis* for honey-bees (see NATURE, vol. i. p. 30, May 10, 1894); secondly, an inveterate fallacy current among the renowned naturalists in China, that the bees use human urine for manufacturing honey² ("O. B.," p. 19; "A. N.," pp. 17, 19-20); and thirdly, a passage which I have lately found in "Koo-kin-tu-shu-tseih-ching" (Peking, 1726, Sec. IV., tom. lxviii, "Ki-i-pu-wei kau," i. fol. 2, b.), and reads thus:—"Should a hen's egg turn into bees or wasps, it would portend the town where it happens to become totally evacuated in subsequent time."

Here I may add that, although the Chinese were singularly free from the barren speculations on the artificial breeding of honey-bees from dead oxen, yet they did not escape the invasion of another enterprising illusion, which might have rivalled the Bugonia-craze in its absurdity. It is described by Chang Hwa (232-300 A.D.) in his "Poh-wuh-chi" (tom. iv. f. 7, a, Jap. ed., 1683):—"Tear the Turtle (*Trionyx*) into pieces about as large as stones used in the game of Ki (a sort of chess); mix them well with the juice of the Chih-hien (the red variety of *Amaranthus mangos(anus)*), and bury them underground in a thick envelope made of the Imperata-grass; thus, after ten days, you will find each piece of flesh changed into a turtle." Another book, named "Pi-ya Kwang-yau," is said to relate: "If a carapace of the turtle be wrapped with the Amaranth and placed

¹ For brevity's sake I shall use in this article the abbreviations "O. B." and "A. N." respectively for these works.

² So, Li Shi-Chin, one of the greatest naturalists China has ever produced, praises the Bees in a similar tone to Samson's riddle by saying: "Out of the fetor came forth deity; and out of the decay came forth mystery" ("Pan-tsau-Kang-muh," 1578, *sub.*, "Mih-fang").