

himself, he was shouting, and sought to push the water up against his face.

It is also somewhat amusing to find that Mr. Hamilton assumes the title of Colonel, to which he has no right whatever, and he not only makes no secret of having taken "brave rank," but informs the reader that it is by no means the first time that he has done so. It is, in truth, often difficult to remember that this gentleman is really, on his own continent, not a bit of one of our American cousins. Further on he tells that the Americans have discovered this peculiarity in our author's character, for we find them striking up "Tankie Doodle" on his departure, thinking, as he remarks with evident satisfaction, "that he was too good and impudent for an Englishman."

The most interesting portion of the work is that descriptive of the tour through Syria into the land of Moab, old Gasa, Hebron, Karak, Diban, Salt, Naasrath, Acra, Tyre, Sidon, and Beyroul; but, although each well-known name must of necessity suggest its own train of thought to the reader, we must warn him to expect little more than a bare account of the traveller's sojourn and his trying doings, few remarks being made that could be said to be of interest, or, indeed, bear upon his personal comfort. Here, it would be impossible to give an account of a journey through the picturesque mountains of the Bedouins without touching on some points of interest; and the following extracts may be instructive, besides affording an unusually favourable specimen of the author's style.

An erroneous and negative error, which is not corrected by reason of general misreading. The fact is that, though they are continually changing their locations, they do not change their districts; to the areas of which their perceptions are strictly confined. Thus here we are growing a little acquainted with the habits of the Bedouins.

Babes among the women are up milking the goats; which, detaching themselves from the main flock, regularly advance to the tents, soliciting attention. Above all, you may see the women, with their hands on their hips, turning the heads of wain flocks of sheep and goats homeward, and their umbrellas to be long their charges in need as they may be to the spring of the sun. The women are, in fact, the only persons who are conversing as pleasantly as possible. It is in striking sight, and the observation of this regularly finds explanation in the fact that these have had to go through seasons; their society consisted almost being to answer the calls and passions of their several flocks.

The Bedouins taste, made of spin goats' hair, nearly always are presented, upon the backs of the women, from which they are drawn, and both hands and feet, and are not allowed to be closed up, however cold the night may be. The camels, mules, goats, and horses always excepting the females, are not fed, while some part of the day, and are kept separately in front of the tents, with their dogs, and their boys to fly in number, and to pack the wares and byssus, as they are trained to do.

A strange domestic practice prevails among the Bedouins, not those in villages but those of the wandering class. They pickle their infants, after three days old, in strong brine. I learned that it was a habit common to them by a lady, based upon the fact that the Bedouins, in the mountains, which extend over several hours, require hardness to the practice. The immersion is said to be fatal to delicate babies.

At Hasoon it is instructive to find that the "Colonel" dancing for two hours before a Bedouin sheik with whom they were passing the night, and if he could not call up before him, he would have been a great deal to the Arabs, and in their flowing robes sitting around, gravely watching this extraordinary performance, and at intervals politely applauding, while a European with turned-up trousers, and beating time upon a copper tray, frantically performs a solo in his own accompaniment himself with "The Fuzick Cure." For their edification, he will find no room for reciting the story of the loss, as being refused, but, instead, "indulged in some soaring expressions," or that he minutely expressed his opinion that his guest was a "Christian dog."

Little is said worthy of note regarding Tyre and Sidon; but on his arrival at Beyroul our author was struck with a fit of indignation at the way in which an establishment for the education of European girls is conducted, upon a subject which is not even possible to inquire, though the sum of £1000 each per annum does certainly seem a large one for the education of native girls; but the following paragraph narrating his visit to the lady in charge contains perhaps a more severe, because more telling, criticism on the subject than we need to say.

Presenting myself in my ordinary travelling attire, I seemed somewhat to excite the high-spirited fancy of some of the instructors.

experiments; indeed, had Mr Darwin done nothing else but afford an example of perfecting and uniting research, he would have rendered good service to science.

Ever since it was announced some months back that Mr Darwin was about to publish his observations upon insect-eating plants, the present volume has been anxiously looked forward to by the many who are interested in these singular links between the animal and vegetable worlds. That this interest was widely felt among naturalists may readily be gathered from the professions which the subject obtained not only in natural history but in general periodicals, and in widely popular magazines. It is strange that only five to these plants appeared in most papers, our own among the number (*Field*, Jan. 5, 1874), the address of Dr. Hooker at the last meeting of the British Association, and the experiments and lectures of Dr. Ruden Sanderson upon the Venus's Fly-trap (*Dionaea muscipula*), and the wonderful experiments of the subject were advertised in the higher walks of science. The subject even afforded material for a clever "sketch" upon the observations of these insectivorous plants, in the form of an account of the "man-eating tree of Madagascar," which, ostensibly copied from a German paper, has such an air of verisimilitude as to deceive the un wary and credulous reader.

More than half of the volume before us is occupied by a detailed account of a vast number and variety of experiments instituted by Mr Darwin upon the common sundew (*Drosera rotundifolia*). Successive chapters are occupied by accounts of the movements of the "tentacles," as the gland-bearing filaments (formerly successively described as "arms" and "legs" by Mr Darwin; of the effects of the application of the protuberant, gland-bearing filaments of leaf, organic fluids, various acids, and alkaloid solutions upon the leaves; of the digestive power of the secretion of Drosera; and of the sensitiveness of the leaves. Each of these chapters contains mass of information, resulting from numerous and often very delicate experiments, and is so arranged that the reader, as he proceeds, is enabled to see the effects of each of the most delicate parts of the "tentacle body," it is evidenced by some most startling observations; the one-twenty-fifth of a grain of phosphate of ammonia, for example, will induce a change in a gland sufficient to cause a motor impulse to be sent down the whole length of the tentacle, this impulse causing movement of the leaf through an angle of 90 degrees, while the presence of a mixture bit of hair, supported by the dense secretion, quickly causes conspicuous movements." Space will not permit us to do more than to refer to the experiments upon the movement of the tentacles and the digestive power of the secretion; but the following description of the former phenomenon will be read with interest.

When an insect alights on the central disc (of the leaf), it is instantly attracted by the viscid secretion which it finds there. After a few days it begins to beat, and ultimately stay it on all sides. Insects are generally killed, according to Dr. Nitschke, in about a quarter of an hour, owing to their limbs being clogged by the secretion. If an insect alights on only a few of the tentacles, the entire secretion does not become infected and carry their prey to the tentacles next succeeding these (wards), thus these tentacles move, and so onwards, until the insect is completely carried by a curious sort of rolling movement to the centre of the leaf. Thus, after an interval, the tentacles on all sides become infected and baffle their prey with their secretion, in the same manner as if the insect had first alighted on the centre. It is surprising how minute a mass of insect suffices to cause this action, for it has been seen one of the smallest species of gnats (*Gnats*), which had just settled with its excessively delicate feet on the glands of the outermost tentacle, and these were already beginning to curve towards, though not a single gland had yet touched the body of the insect. Had I not interposed, this minute gnat would assuredly have been carried to the centre of the leaf, and been securely clasped on all sides.

With regard to the digestive power, my only note had "all insects, except flies, are able to digest [1] the dissolved parts of leaves, albumin, chondrin, casein in the state in which it exists in milk, and gluten which has been subjected to weak hydrochloric acid, are dissolved by it;" while "opalsoluble productions, fibro-elastin tissue, mucus, pepsin, urea, chitin, cellulose, gum, oxides, chlorophyll, starch, fat, and oil, are not acted on by the secretion; nor are they, as far as I know, by any gastric juice." The secretion is also found to be indigestive to many insects, and, as might be expected, by other species of Drosera, and also by the allied genus. Of these the Venus's Fly-trap, (*Dionaea*), is, of course, the most remarkable.

being drawn, which eventually drove or withdrew. Animals other than the bladder-birds, however, breathe the posterior free edge of the valve, which, from being highly elastic, shuts open instantly. As the edge is extremely thin, and its power to contract the sides of the valve, both projecting into the bladder, it would evidently be very difficult for the animal to get over whom once imprisoned, and apparently they never do escape.

Mr Darwin's researches were chiefly founded upon the British species, *C. vulgaris* and *C. neglecta*; and another aquatic species, *C. muscipula*, a native of North America, has been experimentally upon by Mr Darwin, who writes, "I have not space to give a detailed account of his interesting observations upon it. It is strange that a careful observation in a local and little-known periodical should have been mainly instrumental in directing Mr Darwin's attention to the bladder-works. The observation which he quotes, however, as to the imprisonment of water animals in the bladder, had been made some years previously by the late William Wilson, of Warrington; and we have not with a reference to the fact in some French botanical work, the name of which has for the moment escaped me. It is curious to note that, so far as Mr Darwin could ascertain, the bladder-works cannot digest the animals which they capture; differing in this respect from their congeners. Thus, the bladder-works of *Saxifraga* and *Saxifraga* (terrestrial species) is furnished with small subterranean bladders, which also act as insect traps. In *Gracilaria*, an allied genus, "animals are captured not by means of an elastic valve, but by a contrivance resembling an oil trap, though more complex;" this contrivance—of the most wonderful of all—is fully described by Mr Darwin, and we regret that space will not permit us to reproduce his description of this ingenious adaptation.

The above is indeed the nearest outline of the work, but enough has been said to show that it will amply repay very careful perusal. The only regret which we feel in connection with it is that the author has not pursued his account of the Venus's Fly-trap with a historical sketch of the observations which have been previously published upon them; with special reference to those which first attracted the attention of naturalists to the remarkable phenomena presented by these plants. It is quite true that Dr. Hooker, in his last year's address to the British Association at Belfast, gave a full account of the earlier notices of Drosera; but such a form of publication comparatively ephemeral, and which has not been so widely read would have formed a fitting, as well as an interesting, preface to the chapters on Drosera and Dionaea. It may be well to direct attention to the fact that, as in other of Mr Darwin's books, the observations to the record of which this volume is devoted have been in part been made by other persons, and are only obtainable British records. This is another objection, if objections were needed, of how much remains to be done in the investigation of our commonest natural objects, and should act as an incentive to younger workers in the same field.

CHINA AND JAPAN.

Letters from China and Japan. By L. D. B. London: Henry B. King and Co. The volume has succeeded in doing what many a work of far higher pretensions fails in, namely, in fully carrying out the object with which it was written. It will not perhaps appeal to many sympathisers—for as people are more sympathetic than the English regarding the daily life of their countrymen in foreign lands—our curiosity is particularly gratified by the very interesting and striking attention of scientific students; but in a modest and unpretentious way it gives a pleasant account of life in China and of what is most worth the traveller's attention during a few days' stay in Japan. We cannot agree with the author that her usual care in collecting materials for publication in any way detracts from the merit of the book, or that the history, which is the backbone of the volume, thus induced, which form the chief charm of her style. It always seems to us that all books of actual travel and narration of facts ought to be authenticated by the author's name; but we presume that in this case a feeling of natural diffidence on the part of a lady whose professional life first took to the public must be accepted as the best excuse for her not having done so, for the book being in the hands of the reviewer, cannot be said to require other authentication than they contain in themselves.

The first six are descriptive of the journey, and, chauntly naming