

leca Galpini. There are strong grounds, however, for suspecting that *Satyrium Guthriei* is not a true species, but a natural hybrid. It was described from a single living specimen found growing with *S. candidum*, Lindl., in burnt-off places on the Cape Flats, Tokai, near Cape Town, by Mr. F. Guthrie. Mr. Bolus remarks that the column "resembles in some degree that of *Satyrium bicallosum*, Thunb., while both are in this respect very different from that of any other *Satyrium* known. In every other character this differs greatly from *S. bicallosum*, and I very much doubt if it is a natural hybrid." This remark shows that Mr. Bolus had suspicions about the matter. It is a remarkable fact, however, that in every character in which *S. Guthriei* differs from *S. bicallosum* it approaches *S. candidum*; in fact, with the exception of the column, it bears a much closer resemblance to the last-named species, and as the organs generally are intermediate in character between those of the two species, there seems little doubt that it is a natural hybrid between them. Many such organisms are now known, and as both the species grow in the district, there is nothing improbable about the matter.

There are several points of interest about the work, one or two of which may be mentioned here. The discovery of a new species of *Pachites* is very interesting, as the original one has only been met with on four occasions. Burchell found a single specimen in 1815; Krausse met with another twenty-four years later; and now, after a lapse of fifty years, Mr. Schlechter has discovered two more specimens. Mr. Bolus hopes to publish a figure in the next part of his work. It is a curious coincidence that the new species is only known from a single specimen. An interesting note is given as to the affinities of *Schizochilus*. Sonder had indicated it as a member of the *Habenariaeae*, but Bentham transferred it to *Diseae*. Mr. Bolus again places it near to *Habenaria*, and his drawings unmistakably show that this is its real position. Mr. Bolus calls attention to a very curious character found in *Satyrium pumilum*, Thunb., which Lindley referred to a separate genus. The flowers are transversely striped with brown, like a *Stapelia*, and to make the resemblance more complete, they also have a heavy odour of putrid flesh. As it differs so markedly from its allies in these characters, it is evident that we have here an adaptation to secure the visits of the insects which fertilise the *Stapelias* of the same region. And this reminds us that scarcely anything is known of the fertilisation of South African orchids. Mr. Bolus figures a beetle on the plate of *Disa elegans* (t. 35), which he found upon one of its flowers, with a pollinium attached to its thorax. It is said to be a species of *Peritrichia*, belonging to a group of well-known fertilisers. "This being only the second instance," remarks the author, "of an insect actually carrying orchid pollen which I have seen during many years' study of Cape orchids, I have thought it desirable to figure it with the plant." Among the undoubtedly handsome species may be noted *Disa ferruginea*, Swartz, and *D. graminifolia*, Ker. The former is noted as "abundant on Table Mountain," and its dark orange-vermilion flowers are "largely sold in bouquets in the streets." The latter was called *Herschelia graminifolia* by Lindley, though Mr. Bolus considers *Herschelia* as only a section of *Disa*. We are told that

"it is one of the commonest species within our limits, has a rather long flowering period, and attracts universal observation by its beauty and brilliancy; so much so, that Lindley, in dedicating it to the great astronomer Herschel (who also was a great orchid-lover and cultivator), felicitously speaks of it as "species hæc pulcherrima colore cæli australis intense cæruleo superbiens!" Future parts of this useful work will be awaited with interest.

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OUR BOOK SHELF.

An Astronomical Glossary. By J. E. Gore. (London: Crosby Lockwood and Son, 1893.)

FIFTY years ago it was the fashion to insert a glossary or dictionary of astronomical terms in every work on astronomy, but few of the books published in late years include these helpful explanations. Mr. Gore endeavours to supply the need in the volume before us. And if the science of astronomy had made no advances during the last half-century, we should have been able to give the highest commendation to his compilation. But since celestial science has had its limits considerably extended, and the old astronomy is giving place to the new, we naturally expect to find the new terms defined in a glossary which pretends to contain "an explanation of all the terms and names generally used in books on astronomy." We were greatly surprised therefore, upon looking through the book, to notice the omission of many common and important words to be found in almost every work on astronomy. Among other omissions are the words corona, prominences, chromosphere, photosphere, spectroscope, and prism. Zones are correctly described, and are exemplified by "torrid zone," "frigid zone," and "temperate zone," but the term "sun-spot zone" is unexplained. No mention is made of spectroscopic binaries, or of motion in the line of sight, or of zodiacal constellations. Stereograms are defined, but not spectrograms—that useful word coined for spectroscopic negatives. Neither meridian instrument, nor meridian circle are indexed. In fact, so many words constantly employed in astronomy at the present time are omitted, that we have come to the conclusion that Mr. Gore has only attempted to include in his glossary words used when he was a schoolboy. The tables of data merely refer to members of the solar system, and their value would be increased if the solar parallax were given which formed the basis of their computation. Lists of remarkable red stars, variable stars, and stars for which orbits have been computed, conclude the book—a book that might have been very handy to latter-day astronomers, but which in its present form is of no use whatever.

With the Woodlanders and By the Tide. By "A Son of the Marshes." Edited by J. A. Owen. (Edinburgh and London: William Blackwood and Sons, 1893.)

THE author of this book is well known as a close observer of nature; and a more enthusiastic lover of natural creatures and things for their own sake it would be difficult to find. To look at flocks of bramble finches feed in some particular old beech-woods at sunrise, he trudged for five miles through snow-covered woodlands; and the book is filled with accounts of similar sights observed at all times of the day and seasons of the year. In fact, "A Son of the Marshes" is imbued with the true spirit of a naturalist—the spirit that leads men to sacrifice everything in order to obtain a clearer insight into nature.

An interesting instance of protective colouration is given on p. 163. Some broken egg-shells of the fern-owl having caught the author's eye, he looked closer into the fragments, and saw what appeared to be a short, crooked