

a blank. A monk of Canterbury, who crossed the Great St. Bernard late in the twelfth century, piously prayed that none of his brethren might come into that place of torment, and till long after that, though Leonardo da Vinci set a better example, and pilgrimages even began

everything which appears in print. But before long in De Luc and Bourrit, and lastly in the really great De Saussure, scientific mountain travel begins, and the new era may be said to dawn. Now science finds in the Alps a workshop as well as a playground, and special memoirs such as that on Mont Blanc, noticed in these columns on June 15 (p. 152), are becoming common. Yet it is only just over a century since the last volume of "Voyages dans les Alpes" appeared.

Many curious illustrations, as we have intimated, are reproduced by Mr. Gribble, some indicating the strides which have been made in the representation of scenery, especially Alpine, during the last two centuries. The one given below was published about the year 1760, yet it bears little resemblance to nature, while some earlier than it are still more completely conventional. Incidentally the quotations in this volume throw light on the fauna of the Alps, showing, for instance, that bouquetin were common in districts from which they have long vanished. Indeed, odds and ends of curious lore abound in these pages; so that we have to thank Mr. Gribble, not only for an amusing book, but also for a valuable addition to Alpine literature.

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FIG. 1.—John Tinner's Dragon.

to be made to the top of the Roche Melon, the Alps found few to praise them. Fancy invested them with superstitious terrors, of which the legend of Pilatus is an apt example, but here and there we come on the track of a sceptical traveller. In the first rank of these forerunners of the modern man of science is Conrad Gesner, who laughed at those stories, and was a true lover of the mountains. His successor, Josias Simler, even describes, about the year 1574, the precautions to be taken in crossing snowfields and glaciers, but the seventeenth century had begun before any careful note was taken of the latter. Then the fact of their motion was observed, and was communicated some years later, in 1669, to our own Royal Society; but the first speculations as to its cause appear to have been published by J. J. Scheuchzer, a professor, like the two first-named, at Zürich. Though evidently ill-adapted for mountain walking, he stuck bravely to it for some years at the beginning of the eighteenth century, and at last published two bulky volumes with numerous illustrations. These, in many respects, are interesting as a picture of Switzerland long before the coming of the tourist. But his book testifies to other changes, for it is full of dragon stories, and gives us portraits (such as that now printed) of many a loathly worm which now finds no representative on land, whatever it may do in the sea. Scheuchzer, in fact, though a good mathematician and a keen observer of minerals, plants, and even glaciers, had no critical faculty. He represents a type of student not yet extinct—the man whose first care is for "the literature of the subject," and who attaches an equal value to

BOWER-BIRDS.

SINCE the year 1840, when Gould communicated to the Zoological Society an account of their extraordinary "runs," as they are locally called, the Bower-Birds of Australia and Papua have always attracted a large share of interest on the part not only of ornithologists but of students of the habits of animals. For in the construction of the "bowers" or "runs," from which they take their name, these birds stand absolutely alone, although the "playgrounds" of the Argus pheasant are comparable to the smooth patches cleared in the jungle by one species of Bower-Bird. On such an interesting subject it is of the utmost importance to have as much definite information as possible at first hand, and we are therefore glad to welcome the paper on the Australian representatives of the group, from the pen of an original



FIG. 2.—Grüner's view of the Lower Grindelwald Glacier.

observer—Mr. A. J. Campbell, of Melbourne—which appears in the last issue of the *Proceedings* of the Royal Physical Society of Edinburgh, special value attaching to this communication from the excellent photographs of "runs" and nests with which it is illustrated.

As there may be a lingering idea that the "runs" of these birds have some connection with nesting, it may be well to state that this is altogether a mistake. The nests, of which beautiful examples are figured by Mr. Campbell, present indeed no special features, being built at a height of from ten to fifteen feet above the ground, and usually containing at the proper season two, or sometimes three, eggs. These latter, however, cannot

Spotted Bower-Bird, the Great Bower-Bird, the Queensland Bower-Bird, and the Regent Bird; the third of these being herewith reproduced. The photographs confirm previous statements as to the two types of decoration employed in these bowers, the taste of the Satin Bower-Bird displaying itself in the selection of bright coloured parrot-feathers, while the other species named prefer bones and shells. The Spotted Bower-

Bird may be described as a collector of sheep's bones (especially the vertebræ), whereas the Great Bower-Bird accumulates bleached shells. As is the case with the "Viscacheries" of the Argentine Pampas, in a Bower-Bird haunted country it is well to search the "runs" for any glittering objects, such as money or jewellery, which may have been lost in the neighbourhood. The amount of grass and sticks employed in some of these "bowers" is enormous, one structure being described as ranging from four to six feet in height.

In one respect Mr. Campbell does not agree with some writers, who have stated that the Cat-Birds (*Aeluroedus*) differ from other members of the group in that they build no bower, but content themselves with clearing a space of ground. No such spaces have, however, according to our author, yet been observed; and it is suggested that the birds may merely play on some fallen log. On the other hand, the Tooth-billed Cat-Bird (*Scoenopæus*) of North Queensland does undoubtedly clear such spaces, upon which are laid at intervals a few leaves of one particular kind of tree. This represents the simplest type of "run," the most complex being that of the Gardener-Bird (*Amblyornis*) of New Guinea, which builds an orchid-covered hut, with a mossy lawn in front, ornamented with brilliant flowers and berries.

As to the object of these strange structures, Mr. Campbell has no new suggestion to offer, and we may therefore conclude that he accepts the old "playground theory." R. L.



"Run" of Great Bower-Bird. From a photograph taken in Western Australia by Mr. H. H. Johnston. (From the *Proceedings* of the Royal Physical Society of Edinburgh.)

fail to attract the collector by their porcelain-like polish and beautifully pencilled markings. Thanks to the energy of Australian ornithologists, the nests and eggs of most of the species are now known, although some are rare and difficult to find.

Among the more elaborate types of "runs" or "bowers," the author figures those of the Satin Bower-Bird, the

some authors that these fragments are to be looked upon as representing the relics of prehistoric glass-manufacture; but, as recently noted in the columns of NATURE, Herr J. Baréš has lately brought forward experimental proofs to refute the theory of the artificial origin of moldavite glass. Additional stimulus has been given to the study of this problem by the recent enunciation of a

#### THE COSMIC ORIGIN OF MOLDAVITE.

MUCH attention has recently been devoted by Austrian and Bohemian geologists to the solution of an interesting question, that of the origin of those peculiar glassy bodies which are known collectively as moldavite or bouteillenstein. It has been considered by