

of the landlord made amends for many shortcomings, and give good promise for the future of his house. It stands in full view of the Orteler, on the meadows on the right side of the valley, immediately opposite the church and 'widum,' where travellers are still accommodated. The ascent of the Orteler, without local knowledge and with the snow-slopes in bad condition, took less than ten hours (all halts included) going and returning from St. Gertrud.

The most direct pass from St. Gertrud to Santa Catarina, is undoubtedly that between the Kreilspitze and Schrottenhorn, called by Lieut. Payer the Passo di Forno. In a snowy year, when the crevasses on the north side of the col are choked, it is easy even for a lady, and involves scarcely seven hours' actual walking. The name selected by Lieut. Payer can hardly be accepted, as the pass has no more connection with the Forno glacier than the St. Theodule with the Gorner. Passo di Cedeh, or Kreiljoch, may be suggested as more appropriate.

Ladies will be glad to learn that competent donkeys and a side-saddle may be procured at Santa Catarina. By such aid not only the Confiale, but the Tresero and Pizzo della Mare (Punta di San Matteo of Payer), are brought within the reach of moderate walkers.

The route over the Passo dei Tre Signori to Pejo, seems proverbially dull and monotonous, and Mr. Tuckett found it occupy eight hours. Mountaineers thinking of taking this road will do better, and only add an hour to their walk, by passing over the top of the Pizzo della Mare, ascending by the Gavia and descending to Pejo by Payer's route. The whole expedition is free from any serious difficulties, and offers a series of most glorious views of the Orteler and Adamello groups, besides the chance of a panorama unsurpassed in the Alps. Beware in the descent of being beguiled by a tempting path leading along the hill side to the left, which comes to a sudden end in a wood. It is better to go down at once into the bottom of Val del Monte.

DOUGLAS W. FRESHFIELD.

REVIEW.

TYNDALL'S HOURS OF EXERCISE IN THE ALPS.*

WE should perhaps have noticed Professor Tyndall's book sooner. Most of the articles, however, are already familiar to our readers; we know the history of his assaults on the Matterhorn, of his conquests of the Weisshorn, and of the various adventures in which he has proved conclusively that, if distinguished as a scientific observer of Alpine phenomena, he has no less claim to be distinguished as an active mountaineer. We may, however, briefly express our satisfaction that he has collected articles scattered in various places, where reference to them was more or less difficult. Some writers, perhaps, though we should have a difficulty in mentioning any name except that of Mr.

* *Hours of Exercise in the Alps.* By JOHN TYNDALL. London: 1871. Longmans.

Ruskin, have given more eloquent descriptions of Alpine scenery than Mr. Tyndall; others, it may be, have reflected more fully in their writings that spirit of simple adventure and athletic enjoyment, in which most of us have been content to approach the high Alps; but no other writer has been so able an interpreter of the complex feeling which Alpine scenery produces in the worshipper qualified alike by a love of beauty and a love of science. And, from this point of view, we may possibly be inclined to find fault with a passage in the preface. Mr. Tyndall quotes Mr. Herbert Spencer to the effect that great part of our enjoyment of natural scenery is due to 'certain deeper, but more vague, combinations of states that were organised in the race during barbarous times, when its pleasurable activities were amongst mountains, woods, and waters.' This theory is a corollary from Mr. Herbert Spencer's philosophical principles, and we by no means deny that there is a great deal of force in it. The limitations, however, to which it is liable seem to us to be well illustrated by Mr. Tyndall's own pages. According to Mr. Spencer's doctrine, Mr. Tyndall may be regarded, if the quaintness of the comparison may be excused, as an animated onion. The outside coat is the man of science. Peel that off, and we come upon the feudal baron, who delighted in the pursuit of bears, wolves, and foxes in the fastnesses of the hills. Deeper down, again, we should find the savage of the stone period, who once picked up a precarious existence in the wildernesses now full of railroads and monster hotels. The instincts inherent in these deeper strata of his being still survive, and find a satisfaction identical in kind, though modified in their manifestations, by driving Mr. Tyndall to the rocks of the Matterhorn and across the glaciers of the Oberland. The doctrine, we have said, may probably be true in great measure, though it would explain much more fully the pleasure enjoyed by the race of simple scramblers, than that which absorbs a cultivated and scientific mind. Matthew Arnold has called our nobility the 'barbarians,' and would doubtless assert that their love of field-sports may be a relic of barbarian tastes. On the same principle, the love of climbing, pure and simple, shows that the pleasure of pure muscular exertion, which finds an inadequate vent in our ordinary town life, sends us to attack the Alps. But surely this leaves out of account one, and, as we venture to think, the most important ingredient in our delight. The love of mountains, in fact, is a purely modern passion, and has increased, instead of diminishing as man became more civilised, and as the barbarian presumably died out within him. If we endeavour to discover the nature of this phenomenon, nobody can supply a better answer than Mr. Tyndall. There is scarcely a description in his pages which is not, so to speak, saturated by the ideas derived from scientific observation. We need hardly give examples from pages so familiar to our readers, but we will take one at random. Here, for example, are some fragments from his descriptions of sunset under the Weisshorn. The moon, he says, 'finally appeared exactly behind the peak of the Rymfischhorn, the cone of the mountain being projected for a short time as a triangle on the lunar disc. Only for a short time, however; the silver sphere soon cleared the mountain, and bore away through the

tinted sky. The motion was quite visible, and resembled that of a vast balloon. All the lower portions of the mountains were deeply shaded, whilst the loftiest peaks, ranged upon a semicircle, were fully exposed to the sinking sun. They seemed pyramids of solid fire, whilst here and there long stretches of crimson light drawn over the higher snow-fields linked the summits together. An intensely illuminated geranium flower seems to swim in its own colour, which apparently surrounds the petals like a layer, and defeats by its lustre any attempt of the eye to seize upon the sharp outline of the leaves. A similar effect was here observed upon the mountains; the glory did not seem to come from them alone, but seemed also effluent from the air around them, &c. Now we feel, as our readers will willingly acknowledge, the truthfulness and power of this description. We have all witnessed such sights, and we have all been dimly sensible of the influences described, though few, if any, of us could put the sentiment into such appropriate language, or so accurately analyze the sources of our emotion. And we may boldly put it to our readers whether the images thus forcibly described could by any possibility have occurred to the supposed savage in prehistoric times, or whether they were not rather indicative of a mind thoroughly prepared by familiarity with scientific observations, and with that whole current of feeling which has only become manifest at a recent period. We should just as soon expect a savage to be thrown into ecstasies by the beauty of the most abstruse theorems of the undulatory theory of light, as to see him moved by the peculiar effects of light so forcibly described by our author. The love of mountain scenery is in truth a highly complex emotion; it has its root in thoughts and feelings which we cannot even attempt to indicate, as, indeed, nothing like an exhaustive account has ever been given of them. So much, however, we may venture to say; that whoever will attempt to analyse the pleasure which he derives from such a sunset as that described, or from any of the innumerable scenes which have delighted his soul in the high Alps, will find that an explanation which takes into account only the physical pleasure with which a savage might enter, or even the dumb pleasure of a chamois-hunter, is grossly inadequate. The mountains can only be fully appreciated by one of a cultivated mind, by a man in whom the poetry and the science of the most civilised races awakes a sympathetic emotion. We could not wish for a better exemplification of this truth—one which the Alpine Club, at any rate, will be slow to deny—than the pages of Mr. Tyndall; and for that reason, amongst others, we have great pleasure in recommending them to our readers.

We will only add a few remarks on a subject specially interesting to the Alpine Club. When Mr. Tyndall made his ascent of the Matterhorn in 1868, he reached the point from which he had been repulsed in 1862. He makes the following remarks in explanation of that failure:—‘I think there must have been something in the light falling upon this precipice that gave it an aspect of greater verticality when I first saw it than it seemed to possess on the present occasion. We had, however, been struggling for many hours previously, and may have been dazed by our exertions. I cannot otherwise account for three

of my party declining flatly to make any attempt upon the precipice. It looks very bad ; but no climber with his strength unimpaired would pronounce it without trial insuperable. Fears of this rock-wall, however, had been excited long before we reached it. It was probably the addition of the psychological element to the physical—the reluctance to encounter new dangers on a mountain which had hitherto inspired superstitious fear—that quelled further exertion.'

It is no disparagement to Professor Tyndall, who was not, we fancy, one of the three refusers, if we say that we suspect this 'psychological element' to have been the chief cause of the retreat. Indeed, the psychological element prevented nearly all mountaineers from even attacking the base, to say nothing of the summit, of the mountain. And we only notice the statement as a frank explanation of a circumstance which may have struck some readers as singular, and as explaining further the curious difference which all climbers of any mountain have discovered between the first and all subsequent ascents. Though the fact is recognised in words, few people succeed in fully realising how greatly the success of mountain expeditions depends, not upon the intrinsic difficulties, or the state of the weather, important as those conditions are, but upon the state of the adventurers' nerves, stomachs, and imaginations. That is a lesson which cannot be too fully impressed on all new aspirants.