OUR BOOK SHELF

The Deviation of the Compass in Iron Ships considered Practically. By W. H. Rosser. Second Edition, with considerable additions. (London: James Imray and Son, 1887.)

REMEMBERING the number of books already published treating in a practical form of compasses, their deviations on board iron ships, and the consequent adjustments, some persons may be disposed to ask, "What purpose will be served by an addition to them?" In answer it may be said that this, the second edition of a useful work by an author who bases his knowledge on the teaching of the "Admiralty Manual," and knows from instructing others their many difficulties, can hardly fail to be welcome to those having neither time nor ability to assimilate the subject without a guide at every turn.

Whilst we hope that Mr. Rosser's later edition will be duly appreciated, there is a certain definition which, for the sake of simplicity and accuracy, we would fain see removed from it. At pp. 30 and 31, clear definitions are given of true, magnetic, and compass courses Why not let well alone, and not complicate the matter by introducing the term "correct" magnetic course? A reference to the later editions of the Admiralty publications on the deviation of the compass shows that the word "correct" in connection with "magnetic course" has been entirely omitted, apparently as no longer serving any purpose.

The concluding paragraph of the preface on patent compasses is hardly fair to Sir William Thomson's. The principles involved in the construction of his compass are not in themselves novelties, but he has done world-wide good by showing in it how that enemy of compasses—friction—may be avoided, whilst at the same time he has produced a card which is almost free from oscillation when the ship rolls heavily.

Travels in the Wilds of Ecuador. By Alfred Simson. (London: Sampson Low, 1886.)

"NO one with the spirit of roaming within him," says the author of this book, "can live long in Ecuador without cherishing a growing desire to explore its unknown parts." Some time ago, accordingly (the exact date is not mentioned), he started with a companion from Guayaquil for Baños, and from Baños they went through the forest to the village of Aguano, on the River Napo, completing the road in eighteen days' actual walking, or forty-five days' foot journey, including necessary stoppages. At Aguano they were obliged to remain forty-two days, which they spent partly in collecting Lepidoptera, partly in making voyages of discovery by land and water in search of provisions. They then made their way in canoes down the Napo to the Amazon, which they reached after a voyage of twenty-five days. At Iquitos the two friends parted, Mr. Simson's companion setting out to explore the Ucayali, while Mr. Simson himself joined a Mr. Reyes in an expedition up the River Putumayo.

The story is very simply and pleasantly told, and those who like to read about distant lands of which little is generally known, will find much to interest them in the author's record of his adventures. The best parts of the book are those in which he describes the Indian tribes of Ecuador, whose habits and modes of thought and feeling he closely observed. He also notes some rather curious facts in natural history. Probably few persons have ever heard of "the roaring of an alligator." "I heard it myself," says Mr. Simson, "on one occasion in the case of a huge beast who appeared to be following a female of his species." The animal was swimming very rapidly, diving and rebounding up to the surface of the water. Mr. Simson was in a small Rob Roy canoe, and remained still to watch his manœuvres. Immediately the alligator saw the canoe, he "came towards it, roaring like a bull at each bound above water." As he was diving, Mr. Simson (who was unarmed) forced the canoe straight over him, and so escaped. "Curiously enough," we are told, "not half an hour after this episode, an alligator jumped from a steep bank over my canoe, and only just cleared it, as I was distractedly paddling along under the shore, and inadvertently startled the reptile above me."

LETTERS TO THE EDITOR

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.*

[*The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to insure the appearance even of communications containing interesting and novel facts.*]

Tabasheer

AS I have occasionally found the curious stony plug of which Mr. Thiselton Dyer writes (NATURE, vol. xxxv. p. 396), in the joints of bamboos accidentally broken, and been much exercised as to the nature and origin of the phenomenon, I have been much interested by his paper. May I further suggest that it is to a certain extent pathological—due, that is, to *arrested growth*, either longitudinal or lateral, in the shoot next above the joint in which the stony secretion or sediment is found.

In the onrush of tropical growth in the young shoot, Nature, after flooring the knot, has poured in, as it were, sap and silica sufficient for a normal length and width of stem to the knot next above it. But by some check to the impulse, or irregularity of conditions, the portion of stem thus provided for is shorter or narrower than intended; and the unused silica is left behind as a sediment, compacted by the drying residuum of sap. It is a question only to be settled by close examination of a great number of examples.

Something like it occurs, however, in the case of our own wheat. Larger joints, that is, and stronger walls are commonly found where the length of stem between joint and joint is a short one. As in the bath for electroplating the same amount of silver is deposited in a given time on a single penny as on a tea service of many pieces, so in the case of quick-growing silicated stems it would seem as if the same average amount of material were provided by the mounting sap, and the constructive use actually made of it determined by many accidents. In the wheat stem the silica is differently placed; in the fiercely-growing bamboo shoot the mineral in excess is left behind in a crude form, and disregarded. That is what I should expect to find.

HENRY CECIL

Bregner, Bournemouth, March 1

Temperature and Pressure in Jamaica

THE following table of elevations and averages is not as perfect as might be wished, but as some years must pass before it can be greatly improved, it is here given as one of many results obtained by the Meteorological Service in Jamaica:—

Station	Elevation Feet	Pressure Inches	Max.	Mean	Min.	Range
			°	°	°	°
Kingston	0	30·00	87·0	78·2	71·0	16·0
Kempshot	1773	28·20	80·5	72·7	68·0	12·5
Cinchona Plantation ...	4907	25·27	68·5	62·6	57·5	11·0
Portland Gap	5477	24·71	69·0	59·7	54·6	14·4
Blue Mountain Peak...	7423	23·14	71·1	55 7	46·3	24·8

In NATURE, vol. viii. p. 200, it was suggested that the fall of temperature, δT was connected with the fall of pressure δP by the equation

$$\delta T = \lambda . \delta P,$$

where λ was taken equal to $3^{\circ}\cdot23$.

We can now correct this expression and take

$$\delta T = \lambda . \delta P + \mu (\delta P)^2,$$

where $\lambda = 2^{\circ}\cdot92$, and $\mu = 0^{\circ}\cdot08$. But these values relate to mean temperatures; for minimum temperatures $\lambda = 0^{\circ}\cdot96$, and $\mu = 0^{\circ}\cdot40$.

These expressions and their connection are important, and it