

ground in the midst of Islám, is referred to the beginning of the fifteenth century. But the fair state of preservation of this wooden image bespeaks a much more recent date.

On the concluding plates are figured numerous designs of bronze drums or gongs from every part of the Archipelago and Further India. These instruments, which play so large a part in the social economy of the Indonesian and Indo-Chinese peoples, are here brought together for the purpose of elucidating the obscure and hitherto little studied history of their origin and diffusion throughout South-Eastern Asia. Those interested in the subject will find much instructive matter embodied in the accompanying text.

A word of thanks is also due to Dr. Max Uhle, the Curator's able assistant, not only for his general co-operation, but more especially for the great care he has bestowed on the map of the regions in question. On it are accurately indicated all the places in Malaysia where Hindu antiquities have at any time been discovered, or where monuments dating from pre-Muhamadan times are found.

A. H. KEANE

### OUR BOOK SHELF

*The Antananarivo Annual and Madagascar Magazine*, No. VIII. Christmas, 1884. (Antananarivo: Printed at the London Missionary Society's Press by Malagasy Printers.)

ALTHOUGH the previous number of this interesting periodical was, I believe, noticed in NATURE, I should like to call attention to the present issue, inasmuch as it is a token of the valuable scientific work which, amid great difficulties, is being bravely carried on by Christian missions in the sorely troubled island of Madagascar.

One of the editors of the *Annual*, the Rev. R. Baron, is an accomplished botanist, indefatigable in his efforts to explore the botany of his adopted home, and unwearied in his efforts to obtain materials for Mr. J. G. Baker and other workers at home; and his colleagues, no less than himself and his fellow editor, the Rev. J. Sibree, seem devoted to the double duty of teaching the Christian religion and civilisation to the Malagasy and of advancing our scientific knowledge of the strange land in which they are for the time being dwelling.

The present number, besides a spirited account of a Royal Kabary or coronation ceremony, contains valuable philological articles on the Malagasy pronouns, by the Rev. L. Dahle; on Malagasy dictionaries, by the Rev. W. E. Cousins; and on the want of new words in the Malagasy language and the way of supplying them, by the Rev. S. E. Jorgensen, the latter having a more than philological, indeed a personal, interest to scientific writers, who, like the Madagascar missionaries, are continually in "want of new words" and not always very judicious in their "way of supplying them." Articles on Malagasy superstitions, on the Sakaklava, and on Malagasy proverbs, contain much valuable matter for the anthropologist; while a paper on medical mission work, by a non-professional; an instructive critical exposure of a geographical fiction, by the Rev. L. Dahle; notes on natural history, by the Rev. R. Baron; a four years' record of rainfall, by the Rev. J. Richardson; and various notes, such as one recording the arrival, on Malagasy shores, of worn fragments of pumice-stone, supposed to be from Krakatoa, complete the number.

The technical printing does great credit to the native printers, for, though one German quotation has gone a little wrong, the press errors are otherwise exceedingly few.

I feel sure that I may bespeak the sympathy of the

readers of NATURE with the *Antananarivo Annual*, and that we may look forward with confidence to much scientific as well as other fruit from the continued labours of the editors and their confrères.

M. FOSTER

### 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.]

#### The Forms of Leaves

I HAVE read Mr. Henslow's letter with interest; and of course any criticisms from him are worthy of all attention. At the same time I may observe that as yet he has only seen what may be called an abstract of an abstract. A Friday evening lecture is scarcely the occasion to work out a special statement in detail; but he is apparently criticising not even my lecture itself, but merely an abstract of it. He commences by saying that it is "self-evident" that the size of the leaf is regulated mainly by the thickness of the stem. This may be, but, so far as I am aware, the importance of this consideration had not been previously pointed out. Having, however, first disposed of my statement as "self-evident," he proceeds next to deny it altogether, and quotes cases in which the size of certain leaves bore no reference to the thickness of the stem. With regard to these, however, I must observe that I was referring to leaf-area, and as Mr. Henslow does not mention the number of leaves his illustration is incomplete. Moreover, as he was dealing merely with an abstract of what I said, he does not recognise the qualifications to which, in the lecture itself, I called attention.

As regards holly leaves, Mr. Henslow denies my statement, and questions my explanation. With reference to the fact, I should have thought there was no question. It has been stated over and over again in standard works. Sir J. D. Hooker in the "Student's Flora," for instance, says that the leaves are spinous, adding, those on the upper branches often entire." This is entirely in accordance with my own experience. Next, as to the explanation. Mr. Henslow observes that it "seems to be attributing to the holly a very unexpected process of ratiocination." Surely, however, this would apply to any explanation, and in this world there must be some cause for everything. Mr. Henslow would not maintain that the pitchers of pitcher plants imply any process of ratiocination?

Mr. Henslow's next point is with reference to fleshy leaves, and he observes that, "Surely the usual explanation that it is this thick cuticle which prevents rapid exhalation is a better reason." A better reason for what? I was not speaking of the thickness of the cuticle but of the unusual development of the parenchymatous tissue.

Again, he questions whether "cut-up" leaves present a greater extent of surface in proportion to their mass, but surely he cannot seriously deny this.

Lastly, he doubts whether it is an advantage to water-ranunculi to have filiform leaves, because he saw a pond last summer which was dried up, and yet covered with a "carpet composed of the erect filiform branchlets of the cut-up leaves of *Ranunculus aquatilis*." But it does not follow that a plant placed in an abnormal situation should at once alter its habit, any more than an individual duck would lose its webbed feet because it was kept from water. Any one who will take an ordinary plant of *R. aquatilis* out of water will see at once that the leaves cannot support themselves.

I admit that my suggestions require more evidence than can be given in a single lecture, and I shall hope to develop them at greater length elsewhere; but in the mean time, though I think that Mr. Henslow's criticisms admit of answer, I am much obliged for his suggestions.

JOHN LUBBOCK

#### Aurora at Christiania

ON the evening of March 15 an aurora appeared of unusual proportions for our part of the country. It was seen for the first time at 7.45, and then consisted of diffused and faint arches high on the northern sky. By degrees its sphere extended, and