

would, if collected, form in itself a goodly library. One of these most valuable reports forms the subject of the present notice, closely printed, teeming with information, and illustrated by a multitude of excellent woodcuts. The amount of sound biological teaching is very great, and put forward in a manner that renders it intelligible alike to the "scientist" and to those for whose benefit it is more particularly intended. The author notices all the insects (mostly in great detail) feeding on particular trees, such as oak, elm, hickory, willow, pine, &c., &c., without special reference, in the first instance, to the particular *species* of these trees. This is a good plan, for it is only occasionally that certain insects are attached particularly to certain species in a *genus* of trees: these are specially indicated under the larger headings. We have often found ourselves in a dilemma in attempting a notice of these American reports, and this condition is strikingly in force with regard to this one in particular. Almost without exception, they are sound and lasting additions to the scientific literature of entomology; this one is especially so. But then there is the economic side of the question to be considered, and that is the most difficult. Naturally every insect that is attached to a particular species of plant, by feeding upon it, may in a certain sense be said to be "injurious" to that plant. Thus, in this present Report, under "Willow" we find even the "Camberwell Beauty" (*Vanessa antiopa*) included in the list of enemies; but we are quite sure that no one (not even the author) seriously imagines that it (with myriads of other species mentioned) is an "injurious insect" from an economic point of view. Certain insects feed on certain plants, and will eat no other; if the plant is exterminated, the insect disappears, and to keep up the balance of nature, it is quite possible that if the insect were exterminated in the first instance, some more destructive enemy (or disease) might eventually attack the plant. But the greater part of the enemies to trees commit their ravages by attacking the wood or bark, and here especially we think economic entomologists keep too much in the background the fact that many insects (and many of those here under consideration) act mainly the *role* of scavengers. Undoubtedly a leaf-feeder often attacks the most healthy trees, and as a rule it only becomes really injurious when present in extraordinary numbers; but with regard to what may be termed lignivorous insects, we strongly incline to refuse to see in the insect itself (in the majority of instances) the initial cause of the unhealthy condition; on the contrary we regard it as only stepping in to hasten decay commenced by causes quite unconnected with its presence. Our author, apparently unconsciously, virtually acknowledges this in his suggestions of remedies with regard to a beetle infesting the spruce (p. 277), and also elsewhere, by recommending, above all, preventive measures, these consisting in destroying all dead and dying trees, in which the insects especially abound. An unhealthy condition of the tree is the most favourable for the development of the beetle; but we are not of those who suppose a prescience in the latter which induces it to attack healthy trees for the benefit of prospectively remote generations of its descendants.

We wish Dr. Packard had not gone out of his way to coin worse than useless "English" names, many of which must prove more difficult to the class for whose benefit they are intended than are the scientific ones. With this exception, we thank him heartily for having produced a most valuable report. R. MCLACHLAN

*The Law of Kosmic Order: An Investigation of the Physical Aspect of Time.* By Robt. Brown, jun. (London: Longmans, Green, and Co.).

A SHORT while ago we gave an account of the origin of the zodiacal signs so far as recent Assyrian researches enable us to determine it. Mr. Robert Brown has now

published a little book on almost the same subject, the object of which is to trace the mythological conceptions to which the names given to the signs by the Accadians were due. He comes to the conclusion that the year was regarded by them as an extended nycthemeron, half the signs being diurnal or relating to the deities of day, and the other half being nocturnal, concerned with myths of the night. Early man thus recognised that there was one and the same law of "Kosmic Order" pervading all conceptions of time. In the course of his investigation Mr. Brown draws upon Egyptian and Iranian sources, but his chief materials are necessarily derived from the monuments of ancient Babylonia. Unfortunately the progressive nature of Assyrian study often renders what was written on the subject a few years ago more or less obsolete, and hence it happens that some of the statements on which he relies have been corrected or modified by subsequent research. Thus the name of the second zodiacal sign, as has already been mentioned in NATURE, meant "the directing Bull" in Accadian rather than "the propitious Bull," as Mr. Brown gives it. It is true that the word had both significations, but the signification of "propitious" was a later and derivative one. The name of the seventh sign again was "illustrious mound," not "illustrious altar," and seems to have referred to the story of the Tower of Babel, whose building was placed at the autumnal equinox, while the builder himself was called "the king of the illustrious mound." Such corrections, however, seldom, if ever, touch Mr. Brown's arguments or diminish the value of his interesting book. We can thoroughly recommend it to those who care to study a curious chapter in primitive astronomy.

*Uganda and the Egyptian Sudan.* By the Rev. C. T. Wilson, M.A., F.R.G.S., and R. W. Felkin, F.R.G.S. Two vols. (London: Sampson Low and Co., 1882.)

THIS double narrative is one of great interest. Mr. Wilson was one of the Church Missionary Society's missionaries sent out to King Mtesa on account of the favourable report of Mr. Stanley with regard to the eagerness of the Uganda potentate for instruction. Uganda, our readers will remember, is a district on the north and north-west of Victoria Nyanza, visited long ago by Speke, when Mtesa was quite a youth. Mr. Wilson's stay extended over two years, 1877-79. During that time, he had excellent opportunities of becoming acquainted with Uganda and the Victoria Nyanza and the districts on its south shores. He reached his destination by travelling west and north from Zanzibar, and was favourably received by Mtesa. He had much intercourse with that monarch, and gives a very rational estimate of his character, not by any means so enthusiastic as that of Mr. Stanley. Mr. Wilson's notes of his journey contain many additions to our knowledge of the region he traversed. The most important part of his narrative is that which relates to the country and people of Uganda. His chapters on Life in Uganda, on Uganda and the Waganda, and on the government and language of the Waganda, are full of fresh and interesting information, and will be valued both by ethnologists and geologists. Mr. Wilson is a favourable type of the missionary, thoroughly practical, a good observer, and a hard worker. He collected many specimens of plants, a list of which is given in the appendix, with vocabularies, and meteorological and hypsometrical observations. Mr. Felkin reached Uganda by proceeding from Suakin to Berber on the Nile, and up that river to Uganda—the first time that the Victoria Nyanza had been reached by that route. Both he and Mr. Wilson returned to Suakin by making a circuit round by the sources of the Bahr-el-Arab, and across by Obeid to the Nile. They accompanied the ambassadors sent by Mtesa to this country. Mr. Felkin's notes on the hydrography and natural history, as well as on the social and political condition of the country