

Egypt, owing to the immense power it attained when blended with that of Amen of Thebes, and administered by the most powerful priesthood the ancient world ever produced. Dr. Budge, however, very clearly demonstrates its position as the religion of the court and aristocracy of Egypt, as that of Osiris was the creed of the people. From an early period there was a fusion of the two creeds, and with the Theban school this was carried to the extreme, where Amen Ra assumes the function of Osiris and all the other gods as well, but with the fall of the ambitious hierarchy the old creeds once more asserted their power. This portion of the book is a most interesting and valuable account of one of the greatest religious movements of ancient times.

The revival of the Heliopolitan ritual, and especially the teaching as to the Heaven of the victorious Osirian, is very fully described, and there is here matter of immense value. Here the deceased who has become justified "becomes god the son of god," he takes his seat by the side of God, and eats of the Tree of Life, which is in the midst of the Field of Peace. He lives on light, becomes a being of light, and, as Dr. Budge points out and we must add very quietly, that as this cult was known among the people of Lower Egypt until two centuries after the Christian era, we have here the source from which the writer of the Apocalypse drew his description of the life of the Christian who had "overcome" the world. There is material under the study of the important mother goddess cults which should certainly attract attention from the New Testament critics, for here we have the basis of the Theotokos controversy. This is not the place to discuss theology, so we pass to the more interesting subject of the worship of Horus Behutet, the opponent of Set, with his curious guild of "Blacksmiths." Dr. Budge's remarks on this subject are of importance, as they show how often history is found interwoven with myth. Essentially a solar myth, there is interwoven with it the story of the invasion of Egypt from the south by a superior race who used iron or metal weapons against the flint weapons of the aborigines. To quote Dr. Budge:—

"It is of course impossible to say who were the blacksmiths that swept over Egypt from South to North, but the writer believes that they represent the invaders in predynastic times who made their way from a country in the East, by way of the Red Sea, by some road across the eastern desert. They brought with them the knowledge of working in metals and of brickmaking, and having conquered the indigenous people of the South, that is those around Edfu, made that city the centre of their civilisation."

In later times the material conflict was blended with the mythic, and hence the confused legend of Ptolemaic times. Sufficient has been said to show the rich material Dr. Budge has collected in these two great volumes, but we can only dip into them in this review. The valuable analysis which Dr. Budge gives of those strange works the "Book of the Tuat" and the "Book of the Pylons" will be welcome, for hitherto no authoritative English description of these works has been accessible. The curious illustrations of the journey of the sun through the night hours, which are found on the sarcophagus of Seti I. in the Sloane Museum and in the royal tombs of the nineteenth and twentieth dynasties, certainly depict all the horrors of hell to the simple and uninitiated. The works were, however, essentially sacerdotal, and inscribed in places not accessible to the people, so whatever their teaching might be, it did not affect the popular religion. Dr. Budge is probably right in denying the theory that

NO. 1782, VOL. 69]

the Egyptians believed in eternal punishment, but they supplied all the material for a most elaborate illustrated edition of the Egyptian inferno to those who held that doctrine. Hence we find the early Christians giving such vivid descriptions of the fate of the damned.

There are some points on which, however, we must differ from the author. After the very lucid description which he gives of the Egyptian Tuat or Land of Night, he gives us a most valuable excursus on the Hebrew Gehenna and the Babylonian Hell, and would attribute the Rabbinical ideas to Egyptian influence. Great as was the influence of Egyptian theology on early Christianity, the Apocalypse and Coptic writings, it is very doubtful if it attracted the Jewish mind. The Seven-headed Serpent of Revelation is the Serpent of the Week of the Babylonians with seven heads and tails—certainly not the seven-headed serpent of the Egyptians.

In conclusion, we must give a high word of praise to the preparation of the work; the beautiful plates and illustrations, the various tables and indices, render



FIG. 1.—Horus of Behutet Armed (Edfu). From "Gods of the Egyptians."

it a work that should win the gratitude of all Egyptologists, and add still more to the writer's reputation as an indefatigable worker and a painstaking scholar.

SCIENCE IN SOFT RAIMENT.¹

IN these six agreeable volumes there is an extraordinary family likeness, which the authors themselves perhaps would be very unwilling to recognise. — 1 "Wild Nature's Ways." By R. Kearson, F.Z.S. With 200 illustrations from photographs taken direct from nature by Cherry and Richard Kearton. Pp. xvi+296. (Cassell and Co., 1903.) Price 20s. 6d. net.

"A Little Brother to the Bear, and other Animal Studies." By William J. Long. Illustrated by Charles Copeland. Pp. xix+280. (Boston, U.S.A., and London: Ginn & Co., 1903.) Price 7s. 6d.

"Wee Tim'rous Beasts; Studies of Animal Life and Character." By Douglas English. With 150 illustrations from his photographs of living creatures. Pp. vi+223. (London: S. H. Bousfield and Co., Ltd., 1903.) Price 5s. net.

"Popular Natural History of the Lower Animals (Invertebrates)." By Henry Scherren, F.Z.S. Pp. 288; with 168 illustrations. (The Religious Tract Society, 1903.) Price 3s. 6d.

"Nature's Riddles; or the Battle of the Beasts." By H. W. Shephard-Walwyn, M.A., F.Z.S., F.E.S. With coloured plate and over 100 illustrations by the author. Pp. xvi+295. (Cassell and Co., 1903.) Price 6s.

"Nature—Curious and Beautiful." By Richard Kerr, F.G.S., F.R.A.S. With sixty-nine illustrations from drawings made by the author. Pp. 274. (London: The Religious Tract Society, 1903.) Price 3s. 6d.

Even "the point of view," on which Mr. Long insists, does not very greatly vary. From book to book we come across the same animals, house-mouse and dormouse, sparrow and kingfisher, fox and squirrel, remarkable shells and strange leaf-insects. The problems are the same—the boundaries of instinct and reason, the methods and reality of protective resemblance, and all the general mystery of life. If Mr. Shepheard-Walwyn aims at inducing his readers "to study for themselves wild nature and her wonderful ways," Mr. Kearton makes the same appeal on his title-page. Mr. Walwyn gives his book an alternative title, "The Battle of the Beasts," his beasts proving in the sequel to be chiefly birds and insects. In like manner Mr. Douglas English chooses for one of his "wee tim'rous beasties" the purple emperor, although among butterflies *Apatura iris* is not tiny, and in Mr. English's own account of it is not timorous. He describes it as displaying while still a mere caterpillar "paroxysms of fury," and by help of its hard and formidable horns successfully repulsing the attacks of an ichneumon-fly. He leaves it to us in the end as a vision of triumphant beauty on its nuptial flight soaring boldly into the empyrean.

The three authors above mentioned compete with one another in a very delightful manner, their illustrations being evidently the result of extreme ingenuity and skill in the art of photography. Mr. Kearton and



FIG. 1.—Dormouse. (From "Wee Tim'rous Beasties.")

others are now making known the devices, sometimes rather comical, by which the wary children of the wilderness have to be outwitted. It is not so easy to win the grace of naturalness in the portrait of a willing sitter. One can scarcely, therefore, expect a cool and unconstrained demeanour from creatures shy and nervous, surprised in their most secluded haunts, and expecting only that they and their young ones are to be robbed and murdered by the camera-fiend. That centaur-like compound of man and machine has in consequence to manage its movements with consummate caution and hours of patience. The plan of stretching a wire, by stepping on which the wild creature will itself open the magic shutter, is no doubt hopeful. But there are ledges of precipitous rocks, accessible only at serious risk of life or limb, to which it is as difficult to attach an electric wire as to put salt on the tail of a hunted bird.

The unelaborate care with which nature moulds and paints her savages, the mild and the merciless alike, so as to make them undistinguishable from their surroundings, has a singular effect on the pictorial success of a photograph. It might almost be said that the better it is the less we like it. The finish and excellence of the scene that is reproduced in all its minutiae often beguiles the eye to such an extent that it becomes nearly as great a puzzle to find the bird, the nest, the caterpillar or the butterfly, the spider and the

spider's web in the picture as it was to detect the real objects in their actual environment of reeds and moss and grass, dead leaves and bare twigs, or a medley of sticks and stones. In this respect Mr. Long in his humorous and entertaining book has a certain advantage. With the help of a clever artist he can make his incidents highly dramatic. He can emphasise what points he pleases in the life and actions of his coons and cats, moose and mink, fat familiar toad or woodcock with an astounding genius for surgery worthy of Hutton the bone-setter.

All the writers seem to agree in lamenting "That villainous saltpetre should be digg'd Out of the bowels of the harmless earth," to destroy their particular favourites, though they cannot help gloating over the hundreds of flies and other insects destroyed by toad or sparrow. But Mr. Long goes a step further in the cause of humanity. It is not only the ordinary gun of which he deprecates the use. The photographic gun must also be tabu. He celebrates the man "who goes to the woods for rest and for letting his soul grow," who is "content just to see and hear and understand," who "has no fret or sweat to get the sun just right and calculate his exact thirty-foot distance and then to fume and swear," as Mr. Long has "heard good men do" (though that, of course, is incredible and a mere aural delusion), "because the game fidgets, or the clouds obscure the sun, or the plates are not quick enough, or," &c. Thus do we scoff at other men's pursuits, and at our own! Mr. Kerr in turn might well laugh to scorn Mr. Long with his canoe and his camp, and his creeping up "through the brûlée to where bear and her cubs are gathering blueberries in their greedy, funny way." What if they should suddenly take a fancy to gathering Mr. Long?

Mr. Kerr says of his own excellent studies, "wherever possible I have made my sketches direct from Nature," with this ingenuous finish to the sentence, "and for this purpose I have spent many hours in the Natural History Museum, Cromwell Road." There, to be sure, no living bears are likely to quicken the pulse or to make the directness of nature-study over exciting. But in compensation, as Mr. Kerr's book will help its readers to perceive, our National Museum contains many of the most wonderful specimens that the globe produces, and though the game is dead and the life is still, they are trophies of all that is most artful and most artistic in nature's handiwork. If, however, the illustration of the watering-pot shell is faithfully reproduced, the example copied cannot be a very good one, since it shows far too faintly the two rudimentary embedded valves to which attention is directed in the text. Protective resemblance is finely exemplified in Mr. Kerr's figure and description of the leaf-butterfly, *Kallima*, from Mr. Rothschild's museum at Tring, and again by several figures of moths and butterflies in Mr. Walwyn's "Riddles." On the other hand, this much debated hypothesis is ill supported by the unnamed "submarine shellfish" in the latter work. There a species of *Pteroceras* is represented, a moderately flattened shell with seven long projecting processes, and Mr. Walwyn asks us to believe that this "mimics a crab, whose coat of mail affords him a very complete protection." The author does not trouble himself to say what crab is mimicked, or whether its coat of mail is harder than that of the *Pteroceras*, or anything like as hard. He does not say whether he ever saw a crab with its legs sprawling about in such impossible positions as the processes of the shell would represent. Above all, he seems to have forgotten that to look like a crab is the worst possible disguise to assume in the sea, unless you wish to say to the first passer-by that has a wide enough mouth, "please, come and eat me."

Mr. Henry Scherren's attractive and compendious little book stands rather apart from the rest. It aims, and aims successfully, at giving the young naturalist a pleasant idea of the invertebrates as a field of study. It is unfortunate that a wrong adjustment of the type on p. 49 has obscured the grouping of the cephalopods. The passage reads as if the second group no less than the first was subdivided into eight-armed and ten-armed species. The confusion is increased by a further accident on the following page, where the name of "the Pearly Nautilus" is attributed to the figure of "the Paper Nautilus," *Argonauta argo*, although it is

of technical names, but of Indian and English. Hence we learn that Mooweesuk is "the coon," and that Nemox is "the fisher," but whether the world has more than one coon or more than one fisher we are left wondering, and what in the world Mr. Long's "fisher" may be remains a problem, one of nature's riddles for Mr. Shephard-Walwyn to solve.

It may be said of all these books, though their merits are various and their individual merit unequal, that they are good both to give and to receive.

T. R. R. S.

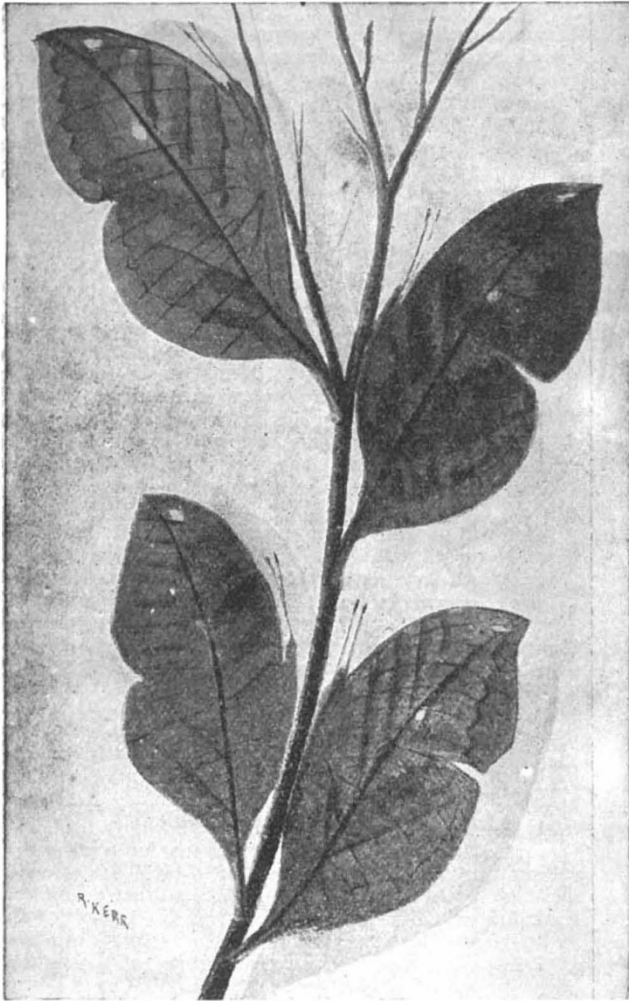


FIG. 2.—The Leaf-Butterfly. Rothschild Museum. (From "Nature—Curious and Beautiful.")

properly given later on to the *Nautilus pompilius* figured and discussed on p. 56. Such mistakes are likely enough to arise so long as publishers entertain a superstitious dread that the popularity of a book will be impaired by the introduction of technical scientific names. Alone among our authors, Mr. Kerr has been allowed to set this superstition at defiance. The public are seemingly expected to hail with delight such names as Mooweesuk and Musquash, and Chigwooltz and Unk Wunk. Perhaps they are pleasantly resonant of Longfellow's "Hiawatha." Otherwise they are no easier to remember than Linnean Latin. Mr. Long understands this, and kindly supplies a glossary, not

INDIAN METEOROLOGICAL MEMOIRS.¹

IT was only quite recently that there was noticed in these columns the volume containing the record of rainfall of each Indian station, printed in such a form that the reader could at a glance see the monthly, yearly, or monsoon fall for any year up to 1900. This important volume, published under the direction of Sir John Eliot, is now followed by another equally valuable, embodying all the pressure observations of each station for the whole period of observation up to the end of the year 1902. These pressures are all reduced to 32° F. and constant gravity (lat. 45°), but not for height above sea-level; the elevation of the cistern is, however, added in each case.

Previous to the year 1889, the monthly means given are those of the mean of the ten and sixteen hours' monthly mean, but after that year the 8 a.m. monthly values alone are employed. At the foot of each table the necessary information is given for converting one series into the other, so that no difficulty should be encountered in this respect.

As an indication of the thoroughness with which this compilation has been attended, the attention of the reader may be directed to appendix i., which contains notes on the positions of the observatories and the character of the barometric observations. Appendix ii. includes further important data, for here are collected for each station such valuable notes as makers and kinds of barometers employed, periods of use, positions, corrections to Calcutta standard, &c.

The data included in this volume refer to 121 different stations, and the records in most instances date from the year 1875.

Another memoir that has just recently been published is one which deals with the movements of the upper clouds. The observations were made at six stations, namely, Simla, Lahore, Jaipur, Allahabad, Vizagapatam, and Madras, and were recorded by means of Fineman's nephescopes, a description and illustration of which are given in the text.

The period of observation extended over the years 1895–1900, and in this volume not only is a monthly summary of the data for each of these stations inserted, but also the results of a brief discussion, and a series of twelve plates illustrating the mean directions of the different classes of clouds for each month of the year.

The following are among the chief results which have been gathered from this series of observations, but it is pointed out that a more extended series at

¹ Vol. xv., part i., Brief Discussion of the Cloud Observations Recorded at Six Stations in India. Pp. 112. Vol. xvi., part i., Monthly Normals of Air Pressure Reduced to 32° F. and Constant Gravity 45°. Pp. 184. (Published under the direction of Sir John Eliot, M.A., F.R.S., K.C.I.E., Meteorological Reporter to the Government of India and Director-General of Indian Observatories.)