

from the special function which it claims by its title.

It appears to be an orderly, well-written account of the principles of dynamics, but rather over-burdened with formulæ, as, for instance, where a whole page of mathematics, in small print, is devoted to proving that the reading of a weigh beam of an ordinary platform scales is not affected by the position of the load.

Apart from these minor blemishes, and under the limitations mentioned above, the work is a favourable specimen of the American college text-book.

E. G. C.

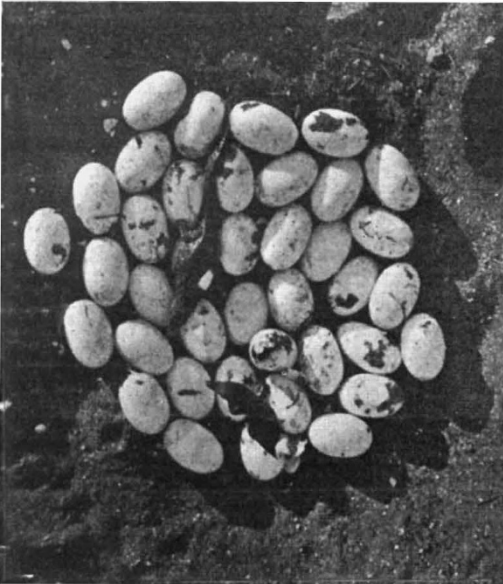
LETTERS TO THE EDITOR.

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A Crocodile's Nest.

THE accompanying photograph was taken in the bed of the river Rahad, south-west of Gallabat, and only a few miles west of the Abyssinian frontier, in May, 1907. This tributary of the Blue Nile begins to come down in flood in about June, continues to flow until the beginning of winter, and after this the bed is left dry, with the exception of a series of pools in the sandy river-bed.

I came across the nest through finding a depression in the sand about 4 feet above the level of a neighbouring



pool, and a number of sinuous tracks leading down to the water's edge at once suggested a crocodile's nest. The hollow was about 1 foot deep, and the eggs were 2 inches or 3 inches below the sand at the bottom of it. My guide soon pulled out a number of eggs and young crocodiles, which were quite willing, though not powerful enough, to sample one's fingers. The find was of interest, and next evening, on returning to photograph it, I was surprised to find another depression about a yard further along the bank, and, covered with sand at the bottom of this, we found the eggs and crocodiles shown in the picture. The eggs were of the usual cylindrical shape, and about 3 inches long. The crocodile on hatching is about 10 inches long, perfectly formed, and makes a noise like the croaking of a frog. There is generally a blood-like stain about the place that would correspond to the navel in higher animals.

NO. 2056, VOL. 80]

For the purpose of photography the eggs were taken out of the sand and laid in the hollow. A crocodile is seen just hatching out, and another is resting on the eggs. The shells are hard, and the dark patches on some of them are due to adhering sand.

About a yard away, again, the presence of another nest was made evident by the croaking of young crocodiles beneath the sand, and it would appear that this enables the parent to know when to release its young by excavating a hollow to such a depth that only a thin covering of sand is left over the eggs.

The first nest of eggs was not counted; a number of crocodiles had already escaped into the water, about eight were hatching out, and there were a good many eggs besides. In the second nest there were thirty-nine eggs, as the photograph shows, and the first probably contained about the same number. The third nest was not uncovered. There is no definite evidence for ascribing all three to one parent, but in view of their being so close together, and the young hatching out within two days in the different nests, there is a strong presumption in favour of doing so. If this is the case, the total number of eggs laid by one individual can hardly have been less than a hundred, and among the two batches seen only one egg was found to be addled.

I do not know whether nesting is confined to a particular period of the year, but in the case of a variable river like the Rahad there is a considerable risk of the eggs being either washed away or left at a distance by the retreating water, except during the late winter and spring months.

Young crocodiles, up to about a yard in length, appear to be far more active than the older ones. They leave the pools, climb out of the river channel, and may be met at a distance of fifty yards away. They are able to run at a considerable pace. The older ones are generally seen floating about or lying on the banks close to the water.

Khartoum, March 3.

G. W. GRABHAM.

A Winter Retreat for Snails.

SOME of the reaction phenomena of *Helix aspersa* would probably account for the presence of thirty-seven specimens in an empty tea-pot as described by Prof. McKendrick in NATURE of March 4.

This species is, as is well known, *negatively phototropic*—"seeks" dark places—and is also, especially at hibernation, *stereotropic*, "attracted by surfaces."

The empty tea-pot lay on its side by an herbaceous border, where many snails would be hidden from view. In November, when preparing to hibernate, these snails would wander restlessly, and by the combined reactions would find their way "with mechanical certainty" into the dark cavity of the tea-pot, and there come to rest. The number collected together in the tea-pot would increase, as, on arriving in the cavity, movement in each individual would cease; and, moreover, the individuals would cling together.

As a result, the tea-pot would act like a trap in which the snails were caught, and where they would remain until metabolic changes in their own bodies made them restless and compelled them to move about.

W. HOSKYNs-ABRAHALL.

The Golden Fleece.

IN the review of Dr. Bowman's book on "The Structure of the Wool Fibre, &c." (NATURE, March 4), there occurred the statement that the introduction of the domestic sheep into Greece was "probably enshrined in the legend of the golden fleece." Strabo, however, long ago gave a plausible explanation of this legend in stating (Book xi., ii, § 9): "The Soanes occupy the heights of Caucasus above Dioscurias" (the present Iskuria, at the mouth of the Kodor in Abkhasia). . . . "In their country the winter torrents are said to bring down even gold, which the barbarians collect in troughs pierced with holes and lined with fleeces; and hence the fable of the golden fleece."

FELIX OSWALD.

Nottingham.