portrait of the Cape Giraffe for his model, and he may have copied Paterson’s specimen in the British Museum.” It should, I think, be remembered that Richard Bennett Davis was an artist of good reputation. He was afterwards animal-painter to William IV., and the Court Officials of that day must have been aware of his presence for the express purpose of painting the Giraffe, and indeed of his whole history. He owed his education as an artist to royal favour. His father had been huntsman to the royal harriers; George III. took favourable notice of some of the boy’s sketches, and placed him under Sir William Beechey. In 1806 he sent to the Academy a painting, “Mares and Foals from the Royal Stud at Windsor.” His appointment as animal-painter to the King was made in 1831, and he painted the cavalcade which formed the coronation procession of that monarch.*

There is, moreover, incontestable evidence that he did paint the Giraffe, and practically all that we know about the habits of the animal in captivity came from his pen. He contributed a very interesting account of the Giraffe to the ‘Literary Gazette’†; and in the following passage occurs the first mention of the bilobed teeth known to me:

“The upper lip is longer than the lower one, which assists the tongue in drawing in the boughs; but when grinding its food it is contracted. It has no teeth or nippers in the upper jaw, and the outside ones are divided to the socket. It is a ruminating animal, and lies down when it chews the cud.”

The fact that Davis painted a picture of the Giraffe was stated by the editor of the ‘Literary Gazette,’ who expressed “our obligation for this paper to Mr. R. B. Davis, who, while painting the picture of the animal for His Majesty, had many opportunities of observing its peculiarities.” In ‘Menageries’ (p. 348) Davis’s account of the bilobed teeth is quoted, but this important part of his narrative is omitted from the ‘Zoological Magazine’ and the ‘English Cyclopaedia.’

5. On the Breeding-Habits of a Cichlid Fish (Tilapia nilotica).

By Charles L. Boulenger, B.A., F.Z.S.

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During a short expedition in the spring of last year to Lake Qurun, in the Fayûm province of Egypt, I was able to make some observations on the breeding-habits of Tilapia nilotica, the “Bolî sultani” of the native fishermen.

These interesting Cichlids abound in the brackish waters of the lake and are extensively fished for by the natives, the Birket el Qurun supplying most of the markets of Lower Egypt with this excellent food-fish.

Isolated observations have been recorded on the habits of the

† Dec. 1, 1829.
Bolti; but a complete account of the nesting-processes has never been published.

On visiting the fish-markets on the shores of the lake, and inspecting the baskets full of Boltis, the first thing to strike one is the fact that some individuals are more brilliantly coloured than others: these the natives declared to be males, the females being less vividly coloured. I accordingly dissected and sexed a few examples, and found this statement to be correct.

The males, which grow to a larger size than the females, have the whole of the ventral surface of the head and belly, almost as far back as the commencement of the anal fin, of a bright red colour; the throat is of a particularly brilliant hue. The pectoral and pelvic fins are bright red, and the top of the head also bears red pigment—not, however, so vivid as on the ventral side, and inclining rather to violet.

In the females, on the other hand, the red colour is absent from the top of the head and from the pectoral fins; the throat and belly are pink.

The brighter colours and the large size of the males render these easily distinguishable from the females, even when viewed in the water.

In common with many other Cichlid fishes, *Tilapia nilotica* excavates holes for breeding-purposes; these were first observed by Loat in Lake Menzaleh. In Lake Qurun these nests or, as the natives call them, "houses" of the Bolti are to be found close to the shore in two to three feet of water. I found them to occur almost exclusively on the north or desert side of the lake. The reason for this is, I think, quite evident to anyone familiar with the Birket el Qurun; for on this side the water becomes rapidly deeper offshore, enabling the fish when disturbed to dart off into deep water, where they are safe from their numerous enemies. On the south side of the lake the conditions are very different, there being often fifty yards of muddy shallows to cut off their retreat.

The nests are merely basin-shaped holes scooped out in the sand, usually among reeds or tamarisk bushes. The largest one I saw measured just over a yard in diameter and one and a half feet deep. I had the good fortune to be able to watch a Bolti at work on one of these nests. The latter was nearly completed when I commenced my observations at the beginning of May and was occupied by a large male with brilliantly coloured head and fins; there were no signs of a female in the neighbourhood. The male remained by himself in the nest during the two days that I observed him, and was occupied chiefly in smoothing down the sides of the excavation; this he did by revolving round and round with his tail in the centre, brushing away dirt from the sides of the nest with his fins. On the third day I returned early to the nest and found it unoccupied. A short distance away, however, the same male was to be seen now accompanied by a female; courtship was evidently in progress, the male swimming