

On the Natural History of the Past Year.

BY THE REV. W. R. CROTCH.

THE object of the present paper is to bring before the notice of the meeting, such facts connected with Natural History, as have come to our knowledge during the past year. They are few in number, and not, perhaps, of much importance, except as possessing a local interest.

Many, perhaps, now present, have only heard vaguely, if at all, of the singular discovery of fossil oaks made last autumn, in the excavations at the gaol in this town.

The facts are briefly these.—At a depth of 18 feet from the surface, a bed of vegetable matter was dug into, consisting of matted leaves, fragments and trunks of trees, and amongst them a quantity of hazel nuts and decayed acorns. The leaves were capable of separation, and still exhibited the autumnal tint, being undecayed, and belonging to different species of willow, hazel, and oak. The trees are both oak and alder; eleven oaks were found, for the most part perfectly sound, and capable of taking a high polish, but quite blackened. One portion of one of the stems was 60 feet long, and 2 feet thick; another was 4 feet 4 inches thick, and apparently at least 40 feet long; the branches of one of the trees can be traced. The

alders still exhibit the red color of their wood when cut through. These trees were not lying in any definite direction, but across each other in confusion; the roots were still attached to the trunks, but without fibres; and fresh bark still clothed several of the stems; no marks of axe or hatchet have been discovered. The bed of vegetable matter in which they were found inclines and deepens towards the north, being about a foot thick at the upper end, and about 5 feet at the lower. This bed rests on a thin layer of blue clay, scarcely one foot deep; immediately above it is another layer of the same blue clay, of about the same depth; above this, a layer of 5 feet of a reddish clay, then another seam of blue, and lastly, nearly 8 feet of a yellowish clay, with a still thinner seam of blue, about the middle. All these seams and beds are sharply defined, and for the most part horizontal.

In another excavation made a few years since, for the new Gas works, near the river, trees were also found, some of which had become so hard that they could not be cut, while others were in a similar condition with those now discovered. At that time, also, a pair of horns were dug up which are supposed to be those of the Elk.

In excavating a further portion of the ground at the gaol, there has been found, 6 feet above the level of the trees, the skull and teeth, with some bones, of a pachydermatous animal; and a comparison of these bones, and especially the teeth, with some previously determined specimens from other localities, leaves little, if any, room to doubt that this animal was a *Rhinoceros*.*

To an early portion, therefore, of the post-tertiary period, we must refer these remains, and therefore the

* It has since been identified by Prof. Quekett as a *Rhinoceros tichorinus*.

trees which lie beneath them; and, instead of the Bishop of Winchester's Porcarium, as I had last year ventured to suggest, from the scanty data then afforded, a grander picture rises before us of the vale of Taunton in its youthful days, clothed with mighty forests, and every eminence at least capped with noble oaks, under which disported, not pigs, but the hyæna, the wild deer, the tiger, the bear, the elephant, the rhinoceros.

I have another geological fact to announce—the discovery of what is commonly called a petrifying spring, on Pickeridge Hill, I believe, by the Rev. Mr. Stretch. These springs, holding calcareous matter in solution, and in such excess, that they readily part with some of it, and deposit it on whatever substance may lie in their course, which substance frequently perishes, and leaves only the calcareous case, though not uncommon, are yet sufficiently rare to justify our noticing them on such occasions as this.

In ornithology, it may be worth mentioning, that the doubt which seems to have existed as to the plumage of the adult Montague's Harrier, one of the hawks, has been removed by the acquisition of a nest of young birds and both the parents. The plumage of the male is of an uniform leaden grey, with only very faint indications of bars on the tail. Mr. Yarrell has observed, that this bird has been found in Devonshire and Cornwall, and mentions a specimen from Dolgelly, but farther westward than this he had not traced it. Its occurrence, therefore, in Somersetshire, was only a thing to be expected; and the wonder is, that it should not have been observed—or rather perhaps I should say distinguished—here, till within these last few years; for the bird was known under the name of the black hawk, the specimens shot not having arrived at their adult plumage.

Any deviation from the instinctive habits of birds, will, perhaps, be allowed to be deserving of record. Everyone, we may suppose, knows that the swallow almost always builds its nest in unused chimneys, and hence is commonly called the chimney swallow. Last spring, a pair of these birds chose for their habitation a magnolia tree, growing near a house at Corfe; such deviations as these, however, are not so uncommon as we should most of us in our ignorance suppose. Yarrell has recorded, that in the north of England, these birds frequently build in the unused shafts of mines, or in old walls, sometimes under the roof of a barn or open shed, between the rafters and the thatch or tiles. Turrets intended for bells are often resorted to, and unused rooms, or passages in out-houses, to which access can be gained by the round hole to be observed cut in the doors to such buildings, and within which the birds take advantage of any projecting peg, or end of a beam, that will serve as a buttress to support the rest. "I have heard," he says, "of a nest made by a pair of swallows in the half open drawer of a small deal table, in an unoccupied garret, to which access was obtained by a broken pane of glass." Pennant mentions an instance in which a pair of swallows attached their nest to the body and wing of an owl, nailed against a barn. Mr. Yarrell, however, concludes with saying that another most unusual selection of a situation for a swallow's nest is the branches of a tree, which he moreover thinks deserving of a spirited vignette, and which justifies me in bringing our similar example before your notice.

In zoology, I am enabled to add another habitat for the *Lisso-triton palmipes*, or palmated smooth newt, which was found by my son in the pond at Stoke Court. There were only three species of newt or water eft known in Britain

up to the year 1843. The first discovery of the *Lissonotriton palmipes* was made by the late lamented Mr. Baker, of Bridgwater. Since then the same species has been found near Edinburgh, and still farther north; also at Ryde in the Isle of Wight, and near Poole, in Dorsetshire. The principal distinctions, according to Professor Bell, between this and the more common species are, that in the male, the hinder feet are palmate, the toes being connected by a web, which, however, in the winter, becomes a mere fringe, and the tail, which terminates abruptly, is furnished at its extremity with a small filament, which in the male varies in length from two to four inches, and in the female dwindles to a mere mucronation.

In botany, I have observed the *Ornithogalum umbellatum*, or star of Bethlehem, in great plenty, in a corn-field, at Stoke St. Mary. I am not aware that it occurs anywhere else in this part of Somersetshire, but I find that Mr. Watson, in his *Cybele Britannica*, regards it as an introduced plant wherever it occurs in this country. I have also gathered the *Lathyrus sylvestris*, or narrow leaved everlasting pea, at Stoke; and the *Anagallis cærulea*, or blue pimpernell. The range of both these plants being limited, I consider their occurrence worthy of record; botanists have not yet decided whether the scarlet and blue pimpernell are distinct species, and Mr. Borrer has suggested that the discrepancies which occur may be resolved by considering them as distinct, and that each species varies with red and blue flowers.

If we could but induce the members of the Society to note down whatever they may observe in Natural History, and communicate it to the secretaries, or write a statement of it themselves, we might hope to arrive in time at a complete Natural History of Somersetshire.

Even fresh discoveries in English botany have not yet ceased; about a month ago, a plant was gathered in Herefordshire, which the lady who found it could not make out; she sent it to me, and I also was unable to reduce it to any known British genus; I therefore sent it to Mr. Watson, who pronounced it to be the *Epipogium aphyllum*, an orchideous plant, not uncommon in some parts of the Continent, but never before found in England.

I mention this to stimulate the zeal of explorers, and to caution them against passing by, as mere monstrosities or varieties, plants which they cannot make out by such books as the *Manual of Botany* by Mr. Babington, which is the most complete record we have of British plants.

It is not impossible that some may find a yet unrecorded plant, but, at the least, we should gain a complete list of the flora of our own county. In the lower tribes of plants, the confervæ and the fungi, there is an abundant harvest; and those who delight in microscopical investigations will find their labor amply repaid. The *Peziza badia* (Hook) grows at Stoke St. Mary, and the *Polyporus lucidus* has been found in the neighbourhood of Taunton.

Allow me, in conclusion, to urge the importance of a suggestion, which has been made in the circular lately issued to the members, that specimens of all the different rocks and minerals of Somersetshire should be collected and labelled, and deposited in the Museum. The very extensive collection which the Society purchased of the late Rev. Mr. Williams is too excursive not to render a strictly Somersetshire series desirable and valuable.