

**NATURAL HISTORY
RAMBLES.
UNDERGROUND**

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Natural History Rambles. Underground by J. E. Taylor

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J. E. TAYLOR

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BY

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CONTENTS.

CHAPTER	PAGE
I. INTRODUCTION	5
II. TENANTS FOR LIFE	7
III. INVERTEBRATE DWELLERS UNDERGROUND ..	43
IV. UNDERGROUND SOCIETIES	67
V. EARTH-WORMS	94
PART II.—OUR GEOLOGICAL RECORDS.	
VI. THE GENERAL STORY OF THE ROCKS ...	108
VII. HEAT-FORMED ROCKS	117
VIII. PROOFS OF UNDERGROUND MOVEMENTS AND CHANGES	129
IX. ON THE CLASSIFICATION OF THE ROCKS UNDERGROUND... ..	140
X. THE PRIMEVAL LIFE OF THE GLOBE... ..	147
XI. NATURE'S COAL-CELLARS	166
XII. THE MIDDLE-AGE OF OUR GLOBE	181
XIII. THE WHITE CHALK OF ENGLAND	197
XIV. THE LATER LIFE OF THE WORLD	210
XV. THE "GREAT ICE AGE"	222
XVI. FOSSILIFEROUS LOCALITIES	233
XVII. CONCLUSION	253

UNDERGROUND.

CHAPTER I.

INTRODUCTION.

IF we had not been long familiarized with the fact, nothing would have seemed more strange than that the ground beneath us should have its peculiar set of inhabitants. We are accustomed to speak of the fish of the sea and the fowls of the air, but we rarely refer to the dwellers underground. And yet to many creatures the soil is their habitual home, just as the water is to fish, or the atmosphere to birds. If we removed them from it they would sicken or die.

Nor is this underground habitation confined to particular kinds of animals. Both vertebrate and invertebrate creatures make it their home; and although the latter are more abundant, they are not more wonderfully adapted to their subterranean existence than the former. The soil, like the atmosphere and the sea, receives into its bosom as tenants animals of various classes. The wonderful modification of the finger-bones, covered with skin, which enables a bat to fly, is not a more striking adaptation of means to ends than the peculiar structure of the bones of a mole's forelegs which enables that animal to burrow. Aërial

and aquatic animals have their skeletons and members so constructed that we can tell at a glance the nature of the medium they are intended to live in. The same is true of the structures of worms, mole-crickets, and moles. So that we no longer need regard these underground dwellers as deserving of our pity. On the contrary, we ought to see in their special adaptation to subterranean existence, the operation of the same Wisdom which fits the bird for the air and the fish for the water.

This fitness of animals for a life underground may be found in all degrees. Some of them could not long live anywhere else, as the earthworm and the mole. Others seek a refuge, rather than a continual existence, underground, as the shrew, vole, rabbit, the fox, and the badger. Some creatures are assigned subterranean habits only for part of their lives, as the wireworms, and various other larvæ of insects. Numerous species of ants excavate their remarkable galleries, and conduct their well-arranged republics, underground. The humble-bee burrows in the hedge-banks, in order to lay there the foundation of its singular nest, at no small expenditure of skill and labour. Mason and other bees and wasps seek both underground shelter and convenience; and there can be little doubt that since these various creatures first appeared in the earth, in distant geological epochs, some have acquired many of the habits which it will now be our purpose to describe.

CHAPTER II.

TENANTS FOR LIFE.

AMONG the vertebrates, the Mole (*Talpa vulgaris*) may be taken as the type of underground animals. Whether we consider the structure of its fore-limbs, so admirably adapted for travelling beneath the soil, or the peculiarity of its silky fur, so arranged that it will lie smoothly whether we stroke it to or fro, and thus calculated not to harbour dirt or interfere by its friction with the Mole's subterranean movements, we cannot but feel that it is peculiarly constructed to live where we find it. Those who are apt to apologize for an animal "doomed," as they call it, to dwell amid perpetual darkness, might take a hint from Waterton's remarks on the sloth, which had been pitied by Buffon and other early naturalists for being fashioned in such an apparently clumsy and uncomfortable fashion. Nature needs no human apology—she asks only to be understood. But if men prefer to proffer pity where they should attentively study and observe, we cannot be surprised if their remarks appear frivolous to those who fully understand the subject. The insects which gambol in the sunshine, the minnows which sport in the village brooks, are not one whit happier than the Mole. Its very unlikeness to other animals is a proof of the highest wisdom.

Just regard it for a moment—its long, round body,

covered with fur capable of lying smooth any way, its pointed snout, short stout limbs, and small eyes nearly hidden in the head—for the Mole is not “blind,” as many careless observers have imagined, although its eyes are rudimentary and small compared with those of its own order which live above-ground. But this apparent deprivation is benevolent. We have heard of men who have been imprisoned in complete darkness, and who complained of the acute pain caused by their aching eyeballs unconsciously straining after the absent light. The defective sight in the Mole, therefore, ought to be accepted as proof of its special underground adaptation. When caught, its bewildered habits in the sunlight perhaps cause it to appear stupid and awkward; but a fish is equally so when taken out of the water, and, indeed, so is any animal when we change its usual habitat. Now, examine first the peculiar structure of its forearms. The bones are short and strong, and the palms are directed outwards. The terminal joints of the toes are genuine diggers, and we have unconsciously imitated them in the steel instruments of gouge-shape which we use for rooting-up living ferns, and for garden purposes; that is to say, the terminal joints or claws are convex on the outside, and concave inside, and they taper to a point, as is usual in animals' claws. Each of the five digits is so fashioned that when they lie close together the entire hand becomes a strong shovel for excavatory purposes, actually contrived on the same principle as the individual toes. When at work the Mole thus excavates in front of itself, and is enabled easily to throw the soil behind it. Meantime its hind feet are not idle, and the observer