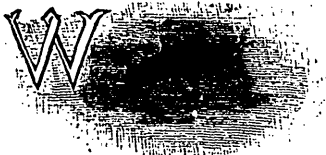


FROZEN OUT AND BAKED OUT.

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WE require more food in winter than in summer. A greater amount of bodily heat has to be forthcoming. That heat can only be produced by the combustion of fuel. And the fuel of the body is food.

Now it would seem that the same rule must hold good with animals—that they, too, would require more food for precisely the same reason. Yet by an apparent contradiction, at the approach of winter, in very many cases indeed, their supply of food is wholly withdrawn.

Bats, for instance, feed entirely upon insects; and many birds do the same. But in winter there are no insects to be found. Snakes feed upon frogs; but the frogs are all in hiding. Blindworms feed upon slugs; but the slugs are in hiding too. How is the lack of food to be made good?

This question is answered in various ways. Insects, as a rule, settle the question very simply, by dying. The first chilly breath of autumn brings death to millions. Frost is as fatal to them as it is to a hothouse plant; and butterflies, moths, beetles, flies, and others too numerous to mention are swept away in countless hosts.

Birds, being provided with wings, and possessed of great powers of endurance, follow their food to countries over the seas. In August the great exodus begins. The swift and the cuckoo are the first to go; and they are quickly followed by the nightjar, the whitethroat, the martin, and the swallow, while the quaint little chaff-chaff almost invariably brings up the rear. There are insects in plenty to be had in warmer countries, where winter is unknown; so they fly away to seek them, while visitors from climates colder far than ours come to take their place.

But what are those animals to do which cannot follow their food? Bats have wings, it is true; but those wings are not sufficiently strong to carry them over the ocean. The squirrel, the hedgehog, the dormouse, and the lizard have no wings at all; so they must stay behind too. Then there are many insects which, though they appear in the autumn, do not lay their eggs until the following spring; and some provision must be made for these, or they would pass out of existence altogether; while toads, and frogs, and slugs, and snails, and many, many more—all must somehow exist without food for six long months at least. How is this to be managed?

Nature is equal to the difficulty. If her creatures have to be kept alive during the winter, and there is no food for them here, while they cannot seek it over the sea, she simply sends them to sleep! In their case the French proverb is certainly true, that "He who sleeps, dines." But it is not such a sleep as that into which we ourselves pass almost every night of our lives. During that the bodily functions are still carried on. We breathe, although less frequently than by day; our hearts beat; our blood flows through



BLINDWORM.

SNAKE.



FLIES. BEETLE. MOTH. BUTTERFLY.