

Rodents, though they do not pass the winter in a state of absolute torpidity, retreat to what may be called their winter quarters, in which they have laid up a store of provisions against the evil days of winter. Of this description are many of the *murine* tribes, particularly the *hamster*,* which is furnished with a pouch on each side of its mouth, that it fills with grain to deposit in its burrow, for a winter store. Some will thus carry as much as three ounces at a time. The lemmings,† also, whose destructive ravages I have before noticed,‡ especially that called the *economist*,§ have similar habits, storing up roots instead of grain.

Generally speaking, it is the lowering of the temperature that induces Mammalians, as well as cold-blooded animals, to hibernate, and brings on a state of torpidity, or a cessation of the usual stimulus to locomotion and action: in which state, Mr. Owen remarks, *warm-blooded* animals become, as it were, *cold-blooded*. As a watch, not wound up, remains without motion, still retaining the power of resuming it, and when the mainspring recovers its elasticity is again enabled to act upon its wheels: so to animals, *heat* is the key that winds up the wheels, and restores to the mainspring its powers of reaction. Hibernating animals have supernumerary cells, and generally become very fat in autumn, and it has been said that this fat supports them in their torpid state; it is found, however, that there has been but little of it consumed during the state of torpidity, but that it wastes very fast immediately after that state is ended. The Indians remark, with respect to the black bear, that it comes out in the spring with the same fat which it carries in in the autumn: but after the exercise of only a few days it becomes lean.|| A state of periodical rest may be necessary to the animals we are speaking of,

* *Cricetus*.† *Arvicola*. Lemmus.

‡ Vol. i. p. 120.

§ *L. œconomus*.

|| Fr. Boreal. Americ. i. 20.