cumstance that naturally happens when the thermometer is not above ten or eleven degrees above the freezing point. This is the real cause of the torpor of these animals, a cause which has been overlooked, although it extends to all animals which sleep during winter. Alike are its effects upon these animals, the hedge-hog and bats; and though I have never had the opportunity of trying them upon the marmot, I am persuaded its blood is not less cold, since like them it is subject to a torpor during winter.

The torpor continues as long as the cause which produces it, and ceases with the cold. A few degrees of heat above ten or eleven is sufficient to reanimate them, and if kept in a warm place during winter they do not become torpid, but go about and eat and sleep, from time to time, like other animals. When they feel the cold they crowd close together, and roll themselves up like balls, in order to present a smaller surface to the air, and to preserve some warmth. It is thus they are found during winter in hollow trees, and in holes of walls exposed to the south : in these they lie without motion, on moss and leaves, and when taken, if tossed or rolled about they never stir, or shew any signs of life; it is by a mild and gradual

218