

stant struggle going on throughout nature between the instinct of the one to escape its enemy and of the other to secure its prey. If the instinct of the Spider be admirable, that of the Fly which rushes into its toils is so far inferior. Rare and occasional sources of danger are not avoided: if death inevitably ensues, and creatures cannot have learnt by seeing others suffer, it seems that no guardian instinct is acquired: thus the ground within a solfortara in Java is strewn with the carcasses of tigers, birds, and masses of insects killed by the noxious exhalations, with their flesh, hairs, and feathers preserved, but their bones entirely consumed.* Migratory instinct not rarely fails, and the animals, as we have seen, are lost. What ought we to think of the strong impulse which leads Lemmings, Squirrels, Ermines,† and many other animals which are not regularly migratory, occasionally to congregate and pursue a headlong course, across great rivers, lakes, and even into the sea, where vast numbers perish; and ultimately it would appear that all perish? The country being overstocked seems to cause the original impulse; but it is doubtful whether in all cases scarcity actually prevails. The whole case is quite inexplicable. Does the same feeling act on these animals which causes men to congregate under distress and fear; and are these occasional migrations, or rather emigrations, a forlorn hope to find a new and better land? The occasional emigrations of insects of many kinds associated together, which, as I have witnessed, must perish by countless myriads in the sea, are still more remarkable, as they belong to families none of which are naturally social or even migratory.‡

* Von Buch, *Descript. Phys. des Iles Canaries*, 1836, p. 423, on the excellent authority of M. Reinwardts.

† L. Lloyd, *Scandinavian Adventure*, 1854, vol. ii, p. 77, gives an excellent account of the migration of Lemmings: when swimming across a lake, if they meet a boat, they crawl up one side and down the opposite side. Great migrations took place in 1789, 1807, 1808, 1813, 1823. Ultimately all seem to perish. See Högström's account in *Swedish Acts*, vol. iv, 1763, of ermines migrating and entering the sea. See Bachman's account in *Mag. of Nat. Hist.*, N.S., vol. iii, 1839, p. 229, of the migration of squirrels; they are bad swimmers and get across great rivers.

‡ Mr. Spence in his Anniversary address to the Entomological Society, 1848, has some excellent remarks on the occasional migration of insects, and shows how inexplicable the case is. See also Kirby and Spence, *Entomology*, vol. ii, p. 12; and Weissenborn in *Mag. of Nat. Hist.*, N.S., 1834, vol. iii, p. 516, for interesting details on a great migration of Libellulæ, generally along the course of rivers.