

the moment that they are hatched ; and this instinct remains dormant, while generation after generation passes away, till it suddenly displays itself in full energy when their numbers happen to be in excess.

Not only peculiar species, but certain types, distinguish particular countries ; and there are groups, observes Kirby, which represent each other in distant regions, whether in their form, their functions, or in both. Thus the honey and wax of Europe, Asia, and Africa, are in each case prepared by bees congenerous with our common hive-bee (*Apis*, Latr.); while, in America, this genus is nowhere indigenous, but is replaced by *Melipona*, *Trigona*, and *Euglossa*; and in New Holland by a still different but undescribed type.* The European bee (*Apis mellifica*), although not a native of the new world, is now established, both in North and South America. It was introduced into the United States by some of the early settlers, and has since overspread the vast forests of the interior, building hives in the decayed trunks of trees. "The Indians," says Irving, "consider them as the harbinger of the white man as the buffalo is of the red man, and say that in proportion as the bee advances the Indian and the buffalo retire. It is said," continues the same writer, "that the wild bee is seldom to be met with at any great distance from the frontier, and that they have always been the heralds of civilization, preceding it as it advanced from the Atlantic borders. Some of the ancient settlers of the west even pretend to give the very year when the honey-bee first crossed the Mississippi. † The same species is now also naturalized in Van Diemen's Land and New Zealand.

As almost all insects are winged, they can readily spread themselves wherever their progress is not opposed by uncongenial climates, or by seas, mountains, and other physical impediments ; and these barriers they can sometimes surmount by abandoning themselves to violent winds, which, as I before stated, when speaking of the dispersion of seeds (p. 596.), may in a few hours carry them to very considerable distances. On the Andes some sphinxes and flies have been observed by Humboldt, at the height of 19,180 feet above the sea, and which appeared to him to have been involuntarily carried into these regions by ascending currents of air. ‡

White mentions a remarkable shower of aphides which seem to have emigrated, with an east wind, from the great hop plantations of Kent and Sussex, and blackened the shrubs and vegetables where they alighted at Selborne, spreading at the same time in great clouds all along the vale from Farnham to Alton. These aphides are sometimes accompanied by vast numbers of the common lady-bird (*Coccinella septempunctata*), which feed upon them. §

It is remarkable, says Kirby, that many of the insects which are occasionally observed to emigrate, as, for instance, the *Libellulæ*, Con-

* Kirby and Spence, vol. iv. p. 497.

† Washington Irving's Tour in the Prairies, ch. ix.

‡ Description of the Equatorial Regions — Malte-Brun, vol. v. p. 379.

§ Kirby and Spence, vol. ii. p. 9. 1817.