quit the tree till they have devoured all its verdure. In thoſe ſeaſons which are favourable to their pro­pagation, they are ſeen in an evening as thick as flakes of ſnow, and hitting againſt every object with a ſort of capricious blindneſs. Their duration, however, is but ſhort, as they never ſurvive the ſeaſon. They begin to join ſhortly after they have been let looſe from their priſon; and when the female is impregnated, ſhe cautiouſly bores a hole in the ground, with an inſtrument fitted for that purpoſe with which ſhe is furniſhed at the tail; and there depoſits her eggs, gene­rally to the number of threeſcore. If the ſeaſon and the ſoil be adapted to their propagation, theſe ſoon multiply as already described, and go through the various ſtages of their contemptible exiſtence. This inſect, however, in its worm ſtate, though prejudicial to man, makes one of the chief repaſts of the feathered tribe, and is generally the firſt nouriſhment with which they ſupply their young. Hogs will root up the land for them, and at firſt eat them greedily; but ſeldom meddle with them a ſecond time. Rooks are particu­larly fond of theſe worms, and devour them in great numbers. The inhabitants of the county of Norfolk, ſome time ſince, went into the practice of deſtroying their rookeries; but in proportion as they deſtroyed one plague, they were peſtered with a greater; and theſe infects multiplied in ſuch an amazing abundance, as to deſtroy not only the verdure of the fields, but even the roots of vegetables not yet ſhot forth. One farm in particular was ſo injured by them in the year 1751, that the occupier was not able to pay his rent; and the landlord was not only content to loſe his income for that year, but alſo gave money for the ſupport of the farmer and his family. In Ireland they ſuffered ſo much by theſe infects, that they came to a reſolution of letting fire to a wood, of ſome extent, to prevent their miſchievous propagation.

“Neither the ſevereſt froſts in our climate (ſays Mr Rack), nor even keeping them in water, will kill them. **I** have kept ſome in water near a week@@; they appear­ed motionleſs; but on expoſing them to the ſun and air a few hours, they recovered, and were as lively as ever. Hence it is evident they can live without air. On examining them with a microſcope, I could never diſcover any organs for reſpiration, or perceive any pul­ſation. When numerous, they are not deſtroyed with­out great difficulty; the beſt method is, to plough up the land in thin furrows, and employ children to pick them up in baſkets; and then ſtrew ſalt and quick-lime, and harrow in. About 30 years ſince I remember many farmers crops in Norfolk were almoſt ruined by them in their grub-ſtate; and in the next ſeaſon, when they took wing, the trees and hedges in many pariſſies were ſtripped bare of their leaves as in winter. At firſt the people uſed to bruſh them down with poles, and then ſweep them up and burn them. One farmer made oath that he gathered 80 buſhels; but their number ſeemed not much leſſened, except juſt in his own fields.”

The ſcarabaeus carnifex, which the Americans call the *tumble-dung,* particularly demands our attention. It is all over of a duſky black, rounder than thoſe animals are generally found to be, and ſo ſtrong, though not much larger than the common black beetle, that if one of them be put under a braſs candleſtick, it will cauſe it to move backwards and forwards, as if it were by an

inviſible hand, to the admiration of thoſe who arc not accuſtomed to the ſight: but this ſtrength is given it for much more uſeful purpoſes than thoſe of exciting human curioſity; for there is no creature more labori­ous, either in ſeeking ſubſiſtence, or providing a proper retreat for its young. They are endowed with ſagacity to diſcover ſubfiſtence by their excellent ſmelling, which directs them in flights to excrements juſt fallen from man or beaſts, on which they inſtantly drop, and fall unanimouſly to work in forming round balls or pellets thereof, in the middle of which they lay an egg. Theſe pellets, in September, they convey three feet deep in the earth, where they lie till the approach of ſpring, when the eggs are hatched and burſt their neſts, and the infects find their way out of the earth. They aſſiſt each other with indefatigable induſtry in rol­ling theſe globular pellets to the place where they are to be buried. This they are to perform with the tail ſoremoſt, by raising up their hinder part, and ſhoving along the ball with their hind-feet. They are always accompanied with other beetles of a larger fize, and of a more elegant ſtructure and colour. The breaſt of this is covered with a ſhield of a crimſon colour, and ſhining like metal; the head is of the like colour, mixed with green; and on the crown of the head ſtands a ſhining black horn, bending backwards. Theſe are called the *kings of the beetles;* but for what reaſon is uncertain, ſince they partake of the fame dirty drudgery with the reſt.

The *elephant-beetle* is the largeſt of this kind hitherto known; and is found in South America, particularly in Guinea and Surinam, as well as about the river Oroonoko. It is of a black colour; and the whole body is covered with a very hard ſhell, full as thick and as ſtrong as that of a ſmall crab. Its length, from the hinder part to the eyes, is almoſt four inches; and from the fame part to the end of the proboſcis or trunk, four inches and three quarters. The tranſverſe diameter of the body is two inches and a quarter; and the breadth of each elytron, or cafe for the wings, is an inch and three-tenths. The antennæ or feelers are quite horny; for which reaſon the proboſcis or trunk is moveable at its inſertion into the head, and ſeems to ſupply the place of feelers; the horns are eight-tenths of an inch long, and terminate in points. The proboſcis is an inch and a quarter long, and turns upwards; making a crooked line, terminating in two horns, each of which is near a quarter of an inch long; hut they are not perforated at the end like the proboſcis of other infects. About four-tenths of an inch above the head, or that ſide next the body, is a prominence or ſmall horn; which, if the reſt ot the trunk were away, would cauſe this part to reſemble the horn of a rhinoceros. There is indeed a beetle ſo called; but then the horns or trunk has no fork at the end, though the lower horn reſembles this. The feet are all forked at the end, but not like lobſters claws. See Plate CCCCXLIV.

SCARBOROUGH, a town of the North Riding of Yorkſhire, ſeated on a ſteep rock, near which are ſuch craggy cliffs that it is almoſt inacceſſible on every fide. On the top of this rock is a large green plain, with two wells of freſh water ſpringing out of the rock. It has of late been greatly frequented on account of its mineral waters called the *Scarborough-Spa;* on which account it is much mended in the number and beauty of the buildings. The ſpring was under the cliff, part of

@@@ [mu] *Bath Papers,* vol. i. p. 265