

*living northern* species, and which are moreover characteristic of the drift or *glacial* deposits of Europe. Among these *Nucula pygmaea*, *Telina calcarea*, *Mya truncata*, and *Saxicava rugosa* were conspicuous.

So fresh is the ivory throughout northern Russia, that, according to Tilesius, thousands of fossil tusks have been collected and used in turning; yet others are still procured and sold in great plenty. He declares his belief that the bones still left in northern Russia must greatly exceed in number all the elephants now living on the globe.

We are as yet ignorant of the entire geographical range of the mammoth; but its remains have been recently collected from the cliffs of frozen mud and ice on the east side of Behring's Straits, in Eschscholtz's Bay, in Russian America, lat. 66° N. As the cliffs waste away by the thawing of the ice, tusks and bones fall out, and a strong odour of animal matter is exhaled from the mud.\*

On considering all the facts above enumerated, it seems reasonable to imagine that a large region in central Asia, including, perhaps, the southern half of Siberia, enjoyed, at no very remote period in the earth's history, a temperate climate, sufficiently mild to afford food for numerous herds of elephants and rhinoceroses, *of species distinct from those now living*. It has usually been taken for granted that herbivorous animals, of large size, require a very luxuriant vegetation for their support; but this opinion is, according to Mr. Darwin, completely erroneous:—"It has been derived," he says, "from our acquaintance with India and the Indian islands, where the mind has been accustomed to associate troops of elephants with noble forests and impenetrable jungles. But the southern parts of Africa, from the tropic of Capricorn to the Cape of Good Hope, although sterile and desert, are remarkable for the number and great bulk of their indigenous quadrupeds. We there meet with an elephant, five species of rhinoceros, a hippopotamus, a giraffe, the bos caffer, the elan, two zebras, the quagga, two gnus, and several antelopes. Nor must we suppose, that while the species are numerous, the individuals of each kind are few. Dr. Andrew Smith saw, in one day's march, in lat. 24° S., without wandering to any great distance on either side, about 150 rhinoceroses, with several herds of giraffes, and his party had killed, on the previous night, eight hippopotamuses. Yet the country which they inhabited was thinly covered with grass and bushes about four feet high, and still more thinly with mimosa-trees, so that the waggons of the travellers were not prevented from proceeding in a nearly direct line."†

In order to explain how so many animals can find support in this region, it is suggested that the underwood, of which their food chiefly consists, may contain much nutriment in a small bulk, and also that the vegetation has a rapid growth; for no sooner is a part consumed, than its place, says Dr. Smith, is supplied by a fresh stock. Nevertheless, after making every allowance for this successive production

\* See Dr. Buckland's description of America, &c., 1832—1836, in voyage of these bones, Appen. to Beechey's Voy. of H.M.S. Beagle, p. 98. 2d Ed. London.

† Darwin, Journal of Travels in S. London, 1845, p. 86.