but its waters, generally occupying a wider channel, are more loaded with bars and sand-banks, and the navigation is more intricate. (James’s Expedition, iii. 259.) The Platte, Kansas, and some other tributaries of the Missouri, often extend to a breadth of one or two miles, and during the warm sea­son dry up entirely. But these, and all the branches of both rivers, generally admit of boat navigation for nine tenths of their course, during a longer or shorter period every year. In the Ohio, the boating season is from 20th February to the middle of June. Before this period the waters are ice­bound ; after it they are too shallow except for very small craft. The length of the Mississippi, from its mouth to the junction of the Ohio, is about 1200 miles, and to its junction with the Missouri, 1300. The length of the Missouri, above the junction to its remotest branch, is, by Lewis and Clarke’s measurement, 2575 miles. The length of the Ohio, above the point of confluence, is 1188 miles. The other large branches of the Mississippi are the Red River and Arkansas, in the lower part of its course. The chief tributaries of the Missouri are the Osage, Platte, Kansas, and Yellow­stone ; of the Ohio, the Tennessee, Cumberland, and Wa­bash. The whole extent of the navigable waters above the confluence of the Missouri and Mississippi has been esti­mated at 23,000 miles, to which, if we add 12,000 for the Ohio, Arkansas, Red River, &c., and their branches, we shall have 35,000 miles of boat navigation in the basin of the Mississippi. To this we may add 10,000 miles more for the eastern section of the states, with 5000 for the lakes and their tributary streams, and 2000 for the river Colum­bia, making altogether 51,000 miles of river navigation, which is probably three times greater than all the rivers of Europe afford. Except in New England, Pennsylvania, and New York, the rivers of the United States flow over a surface which has rather a small declivity. Of the two sides of the great central valley, the western is the steepest. The base of the Rocky Mountains is computed to have an elevation of 3000 feet. That of the beds of the rivers, where they begin to be navigable, may be about 2000 ; and estimating their average length of course to the sea to be about 2500 miles, the mean fall will be about nine or ten inches per mile. The Mississippi proper, at 2500 miles from the sea, has a height of 1330 feet, or a mean fall of six or seven inches per mile. The Ohio, at Pittsburg, 2200 miles from the sea, has a height of 600 feet, or a mean fall of four inches. In the Amazon and the Ganges, from the point where they leave the mountains, and in the Wolga from its source, the average rate of descent is from four to five inches per mile. In the middle and south of Europe generally, the fall of the rivers is probably twice as great.@@1

The variety of cultivated plants in North America cor­responds to the diversity of its climates. At one extremity, the sugar-cane of the tropical regions thrives; and at the other, oats and barley, the staple crops of the arctic regions, are leading articles of cultivation. The high summer heat, however, in all parts of the United States, makes some plants which cannot be raised in England succeed in the coldest districts of the north. Of this description is maize, or Indian corn, an indigenous American plant, which is cul­tivated from Maine to Louisiana. It is a vegetable in uni­versal use in the United States, yields generally double the produce of wheat, and is adapted to a variety of situations. The maple tree, which grows in all the states, yields a juice from which sugar is made. Nearly ten millions of pounds of maple sugar were made in 1810. Wheat is raised from one extremity of the Union to the other, but succeeds best in the middle and western states anti in the uplands of the southern. The cultivation of tobacco begins in Maryland, about the parallel of 39° or 40°, and continues through all the southern states, and through those in the west, south of the Ohio. The climate favourable for cotton is not found farther north than about the latitude of 37°, though it can be raised as far north as 39° on both sides of the mountains. The best grows in South Carolina and Georgia, in dry situ­ations, upon the sea-coast. The rice crops, which require a marshy soil and a great heat, commence about the same parallel with cotton, and have nearly the same geographical range. The sugar-cane grows in low and warm situations, as high as the latitude of 33°, but the climate favourable for its cultivation does not extend beyond 31½°. Oats, barley, hemp, and flax, succeed well, except in the low grounds of the southern states. The vine can be advantageously raised as far north as Pennsylvania. The olive, orange, lemon, and fig. are injured by the frost in South Carolina; but it is believed that these trees, as well as the banana, will suc­ceed in Florida.@@8 The forest trees of the United States com­prise almost all the valuable and useful species of wood.

The United States contain about one fourth of the known species of quadrupeds. Some are common to both conti­nents, others are pecιdiar to the western. Comparing indi­viduals of the same species, some are perfectly similar ; between others there is some difference in size, colour, or other circumstances. In a few instances, the animal of the eastern continent is larger than the American ; in most, the reverse is the case. The following is a catalogue of the quadrupeds of the United States: Mammoth (an extinct species), bison or buffalo, moose-deer, caribou, red deer, fallow deer, roe, bear, wolverene, wolf, fox, catamount, spot­ted tiger, sallow cougar, gray cougar, mountain cat, lynx, kincagou, weasel, ermine, marten, mink, otter, fisher, skunk, opossum, wood-chuck, urchin, hare, racoon, fox squirrel, gray squirrel, red squirrel, flying squirrel, field-mouse, field-bat, ground mouse, wood cat, American rat, shrew mouse, purple mole, black mole, water rat, beaver, musquash, morse, seal, manati, sapajou, sagoin.

Nine tenths of these animals yield a fur, which is used for dress or in manufactures. The bison, or wild ox (im­properly called the buffalo), is, according to some American naturalists, of the same species with the common neat cattle of the United States, the difference being the effect of the domestication of the latter. Buffon, however, thinks other­wise. The bison is larger than the domestic ox, has a fleshy or grisly substance extending along his shoulders and back, and has on his neck and shoulders a woolly hair, which ad­mits of being spun or wrought into hats. The moose-deer, now rare, is a gigantic animal, one variety sometimes reach­ing the height of twelve feet. The caribou is probably the rein-deer of Scandinavia. the bear is of two species. The short-legged lives chiefly on vegetable food, and is probably not carnivorous. He dozes away the winter in a torpid state, sucking his paws, and expending the fat he had pre­viously acquired. the ranging bear is larger, but more lean. He destroys calves, sheep, pigs, and sometimes chil­dren, and in winter migrates southward. The wolf, like the bear, is found in all the states. It is a voracious animal, stealing into sheep-folds at night, attacking deer, hogs, and small cattle, and sometimes hunting in packs. The cata­mount is of the size of a large dog, and extremely ferocious, but it is rarely seen. The spotted tiger is scarcely seen. except near Louisiana. It is from five to six feet long. The cougar or American panther is about the same size, but more common. It destroys sheep, calves, and hogs, and when hungry will attack large cattle. The urchin differs in several respects from the European hedgehog. The lion, leopard, striped or true tiger, hyena, elephant, rhinoceros, hippopotamus, camelopard, are unknown in the New World. The horse, the ass, the sheep, the goat, the

@@@1 Warden. i. 115. Mell!ish. 32. Major Long’s Memoir, in James’s Expedition, with the Sectional Maps.

@@@s Warden's Introduction, 27 ; ii. 399 ; iii. 222. Humboldt, proleg. 196.