

their relation to human knowledge, have in consequence increased. In 1848 (in the first edition of the "Physical Atlas") Mr Waterhouse estimated the oxen at thirteen species ; in 1856 (in the second edition) he estimates them at twenty. In 1848 he estimated the sheep at twenty-one species ; in 1856 he estimates them at twenty-seven. In 1848 he estimated the goats at fourteen species ; in 1856 he estimates them at twenty. In 1848 he estimated the deer at thirty-eight species ; in 1856 he estimates them at fifty-one. In short, if, excluding the lamas and the musks as doubtfully *clean*, tried by the Mosaic test, we but add to the sheep, goats, deer, and cattle, the forty-eight species of unequivocally *clean* antelopes, and multiply the whole by seven, we shall have as the result a sum total of one thousand one hundred and sixty-two individuals,—a number more than four times greater than that for which Raleigh made provision in the ark, and considerably more than twice greater than that provided for by the students of Buffon. Such is the nature and amount of the increase which has taken place during the last half-century in the mammaliferous fauna. In so great a majority of cases has it increased its *bulk* in the ratio in which it has increased its numbers, that if one ark was not deemed more than sufficient to accommodate the animal world known to the French naturalist of eighty years ago, it would require at least from five to six arks to accommodate the animal world known in the present day.

Even in the days of Buffon, however, and at a still earlier period, the ark, regarded as a natural means of preservation from death by *drowning*, was usually coupled, in the case of at least the carnivorous animals, with certain miraculous provisions against death by *starving*. It seems to have been generally taken for granted, that the flesh-eating animals, when introduced to the shelter of the ark, entirely changed the nature indicated by their form of teeth, the character of