

When the population of any one of the 35 smaller herbivorous species in the Tropical Life-zone begins to increase it may be that the carnivorous species concentrate on that particular prey species because of the ease with which it may be obtained. Because the carnivores are concentrating on only 1/35 of the smaller herbivorous species, the carnivores exert a checking effect that may be sufficient to control the particular species of herbivore.

In the Arctic Life-zone, predation by carnivores is certainly insufficient to stem the increase in numbers of any given species of small herbivore. Were it otherwise these herbivores probably would not reach their peaks at relatively regular intervals. Also, population density of an Arctic carnivorous mammal itself fluctuates more or less cyclically lagging approximately one year behind that of its principal prey species in its increase, peak, and crash. This is evidence that the size of the population of the carnivorous species is actually determined by the size of the population of the prey species instead of vice versa. When the several carnivorous species concentrate in their feeding on the particular herbivorous species of small mammal that is increasing in numbers, the carnivores of the Arctic Life-zone are concentrating on roughly 1/5 of the total population of small herbivores --not on only 1/35 as has been postulated concerning the Lower Tropical Life-zone. Be that as it may, in the Arctic the carnivores do not prevent peaks in abundance of species of small herbivores even if they do so in the Tropical Life-zone. In the life-zones of the geographically intermediate Temperate region the carnivores could be supposed to exert a checking effect on any increases that get underway in the species of smaller herbivorous mammals and the checking effect would then sometimes greatly delay or even prevent