

Facts are cited to show that this power is tremendous and almost inconceivable. Then sets in the struggle for existence. One species of weed in your garden will displace another. The very trees are waging a war with one another. The beech, with its thick foliage and tufted bushy top, crowds out the birch, whose branches being more open allow the rays of the sun to pass through. Wild plants battle with one another, so do wild animals, in their struggle for existence, crowd one another out; those best adapted to the conditions of the soil and climate are the survivors. In complex and often unexpected ways each species of animal and plant affects many others. Out of many illustrations we select one: A single flesh fly produces 20,000 larvæ which mature in five days, hence a dead horse would be devoured by three of these as quickly as by a lion. If they were unchecked the whole atmosphere would be dense with flies and all animal food and much of animal life would be destroyed by them. Hence war is waged incessantly against these insects by insectivorous birds and reptiles, by the action of the elements and by other causes, and so we are saved from famine. The contemplation of this terrible warfare, which, thousands of times a minute, sends forth sighs and groans like those heard by Dante at the gate of hell, leads some to believe that there is blood upon the hand which all the perfumes of Arabia will not sweeten, and that the world can not be governed by what we call Benevolence. Our author, however, takes a different view: Animals suffer no pain in their death, when sudden and violent, have no serious dread even when pursued by enemies; cold produces sleep before death; hunger even is scarcely felt, for when food is scarce the excitement seeking for it is greatest and they die of gradual exhaustion. So he concludes that the struggle for existence brings the maximum of life and of enjoyment with the minimum of suffering and of pain. Given the necessity of death and of reproduction and it is difficult to imagine a system by which a greater balance of happiness could have been secured.

2. The offspring always varies slightly from the parents. So as the fittest survives an improvement takes place. The peculiarity which causes this fitness survives as long as it is found to be useful. But when it reaches the maximum of usefulness and some other quality would help in the struggle, then the individuals which vary in the new direction would survive. Thus, though variation is