

Birds, relatively to the volume of their body, have lungs considerably more extended than man or quadrupeds. Reptiles, even those with a voice, as frogs, instead of lungs have a simple bladder. Insects which have little or no blood breathe the air only by some pipes, &c. Thus taking the degree of the temperature of the earth for the term of comparison, I have observed that this heat being supposed ten degrees, that of birds was nearly thirty-three, that of some quadrupeds more than thirty-one and a half, that of man thirty and a half, or thirty-one, whereas that of frogs is only fifteen or sixteen, and that of fishes and insects only eleven or twelve, which is nearly the same as that of vegetables. Thus the degree of heat in man and animals depends on the force and extent of the lungs; these are the bellows of the animal machine: the only difficulty is to conceive how they carry the air on the fire which animates us, a fire whose focus seems to be indeterminate; a fire that has not even been qualified with this name, because it is without flame or any apparent smoke, and its heat is only moderate and uniform. However, if we consider that heat and fire are effects, and even elements of the same class; that heat rarefies air, and, by extending its  
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