

Pelicanus onocrotalus, or white Pelican, which is five feet in length, was found by the Parisian Academicians to weigh only twenty-three ounces, while the entire bird weighed nearly twenty-five pounds. The cavities in the bones communicate with large air cells, which are distributed in various parts of the body, and which contribute still farther to diminish its specific gravity; and by means of canals which open into the air passages of the lungs, this air finds a ready outlet when it becomes rarefied by the ascent of the bird into the higher regions of the atmosphere.*

The conditions in which birds are placed with regard to the density of the surrounding medium, as well as their mode of progression, are so opposite to those of fishes, that we should expect to find great corresponding differences in their conformation. These two classes of vertebrata, accordingly, are remarkably contrasted with respect to the structure of their skeletons. In fishes we have seen that the chest and all the viscera are carried as far forwards as possible; the respiratory organs and the centre of circulation being close to the head, the neck having disappeared, and the trunk being continued into the lengthened tail, in which the chief bulk of the muscles are situated. In birds, on the con-

* This air, being contained in the interior of the body, which preserves a very elevated temperature, must be constantly in a state of greater rarefaction than the cooler external air; a condition which must contribute in some slight degree to render the whole body lighter than it would otherwise have been. It appears to me, however, that considerably greater importance has been attached to this circumstance than it really possesses. Many have gone so far as to represent the condition of a bird as approaching to that of a balloon filled with a lighter gas than atmospheric air; and have been lavish in their expressions of admiration at the beauty of a contrivance which thus converted a living structure into an aerostatic machine. A little sober consideration will suffice to show that the amount of the supposed advantages resulting to the bird from the diminution of weight, occasioned by the difference of temperature between the air included in its body and the external atmosphere, is perfectly insignificant. Any one who will take the trouble to calculate the real diminution of weight arising from this cause, under the most favourable circumstances, will find that, even in the case of the largest bird, it can never amount to more than a few grains.