

But what of the termination,—the ultimate distribution of these elaborately constructed tubes? And what of the purpose they are intended to subserve? With regard to their distribution; no one, perhaps, has gone so far in demonstrating their universality and extreme fineness, as Dr. Beale, with his 25th-inch object glass, and with this, which gives a magnifying power of nearly 3000 diameters, he has traced both air tubes and nerve fibres interlacing and spreading over the sarcolemma of muscular fibre, taken from the larva of the blow fly, a single fibre of this insect's muscle being completely encased in a net work of these inconceivable minute and wondrous air tubes, whose very existence requires a power of 3000 diameters to reveal?

And not only do they thus intertwine about the fibres of an insect's muscles, but they penetrate the very substance of the nerve ganglia of the body; entering the head, and spreading over that optic nerve which receives impressions through ten thousand compound eye lenses; penetrating the wings, and giving lightness and energy to those untiring organs of flight; spreading over the stomach and other abdominal viscera; and aerating every particle of that blood which bathes and surrounds all the internal organs! I know not, gentlemen, what your feelings may be when you examine with your microscopes such unspeakably wonderful and complicated organisms, condensed and crowded within an almost invisible point of space; and this mechanism vitalized, directed and controlled during the period of its existence by an individual will, and by an unerring instinct. I know not, I say, what you may think and feel about the origin and design of such manifestations of constructive wisdom and skill; but for myself, I can say, it produces in my mind the most profound emotions of humility and awe; nay, rather, I would say, of adoring gratitude to that Infinite Being, who, while he displays to my astonished sight a spectacle so grand and glorious, as I look through my telescope at a starry universe, has also stooped so low, as to lay at my very feet the same incontestible proofs of His own "Infinite power and Godhead."

But what of the Physiological necessity for such a complicated mechanism? Can we suppose that the mere general aeration of the blood, such as is supposed to take place in the pulmonary respiration of higher animals, calls for this excessive elaboration and minute sub-division of air tubes in the insect economy. These tubes penetrate and twine about the interior of organs,