LXIII. Note regarding the structure of muscle

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LXIII. *Note regarding the Structure of Muscle.*

By MARTIN BARRY, M.D., F.R.SS. L. and E.*

IN Part I. of the Philosophical Transactions for the present year (p. 99) I mentioned having often seen a muscular *fibril* becoming a *fasciculus*; and gave delineations of fibrils undergoing this change. I happen to have just made a preparation in which the transition is remarkably well seen, and have sketched it (chiefly in outline) in the accompanying figure. At A, the young fasciculus still exhibits the double spiral; while at B, it is so far advanced as to present the usual transverse striæ. Here the striæ are too minute for examination. The preparation is from muscle of a fish. In the fasciculus C (from the Turtle), the transverse striæ are obviously produced by the windings of spiral threads. D represents an enlarged fibril or young fasciculus, varying in its appearance at different parts from being twisted on itself. The preparations themselves are in a state in which they may be viewed by my friends.

It is a striking fact, that the conversion of the fibril into the fasciculus is more frequently met with in the *ever-acting heart*, than in any other part that I have examined. The heart of the Turtle is that which I usually employ and recommend. The

muscle may be preserved in very dilute spirit, a drop of which is preferable to water as a medium for the examination. It will be found advantageous to freeze the muscle, as then it is possible, by means of a razor, drawn in the direction of the fibres, to slice off an exceedingly thin lamina, which being thawed, a narrow strip of it should be detached and teased out with needles.

Fibrils are reproduced and multiplied by means of nuclei, which in certain states present the appearance of rows of bead-like particles. These,—the mere elements of spirals,—seem to be what some observers have supposed to represent the structure of the *formed fibril*.

* Communicated by the Author.