

studded with small rounded papillæ. Beneath the outer cuticle is an inner cuticular layer, underneath which is a thinner stratum composed of a granular matrix containing a few nuclei. This stratum sends up through the next layer, to be described later, a thin perpendicular lamella, which expands into a thickened rod or cylinder lying longitudinally upon the muscle layer. It may be likened to the hypoderm ridges projecting inwards from the subcutaneous layer in the Nematode *Ascaris*. *Ascaris* possesses four such internal ridges, dorsal, ventral and two lateral, these last being pierced by a minute canal, probably excretory in nature. If this comparison be justified, the ventral ridge (Grenacher's "Bauchstrang") is the sole representative of the hypoderm ridges in *Ascaris*. A thick muscular layer lies internal to the cuticular and granular layers mentioned. Its greatest thickness is midway along the body, and it is of a most interesting character. The fibres are flattened and longitudinal: but in transverse vertical section the cut ends look like radial fibres converging upon the internal organs. They are really large muscle cells, naked and pressed against each other, and are the simplest form of muscular tissue known, if we except the neuro-muscle cells in the Cœlenterates, or the peculiar transition cells in *Ascaris*. Each fibre exhibits a slight cavity which is much reduced, owing to their mutual pressure and flattened form. To this thick layer of muscle cells *Gordius* owes its marvellous power of contortion, of tying itself up in complex knots, and ceaselessly untying them.

Inside the muscle layer is the perienteric tissue, composed of irregular nucleated cells and fibrous intercellular tissue. In the midst of this tissue the central digestive tube passes, and on each side of the tube the genital glands lie. The latter, as long ovaries and cylindrical testes, pass backward and finally unite with a large terminal chamber, above which lies, in the female *Gordius*, the *receptaculum seminis*. When the ova are nearly mature, the ovaries become greatly expanded, and along the inner margin of each of these organs, passes an efferent canal, called the egg sac in the female, which further back becomes a slightly convoluted oviduct, or *vas deferens*, according to