

A Brief Note on the Spinal Nerves of the Red Cod (*Physiculus bachus*).

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WHILE engaged in dissecting Red Cod in the laboratory, I observed a peculiarity in the origin and branching of the spinal nerves which appears to be of interest. Some half-dozen cod were examined, and in each case the peculiarity of the origin of the spinal nerves was observed; but the branching of these nerves was followed out only in the one case. The nerves were dissected out from a segment lying about the middle of the body of the cod, approximately the third segment following that one in which lies the posterior end of the coelom. In no instance was any other type of origin observed.

As may be seen in the diagram both the dorsal and ventral roots are double, each root bifurcating immediately after leaving the cord. The half roots thus formed pass out of the vertebral column in opposite directions, one dorsad and one ventrad. I propose to call the two members of the dorsal root D.D. and D.V. (Dorsal Dorsad and Dorsal Ventrad) respectively, and the two members of the ventral root V.D. and V.V.

Each member of the dorsal root bears a ganglion which lies near the point where the root member emerges from the vertebral column. The dorsal member of the dorsal root, D.D., unites some distance beyond its ganglion with the dorsal member of the ventral root of the segment in front, which half-root I shall call V.D.1 to distinguish it from V.D., which passes back to join the dorsal half-root of the segment behind. The ventral member of the dorsal root, D.V., unites a short distance beyond its ganglion with the ventral member of the ventral root, V.V., of its own segment.

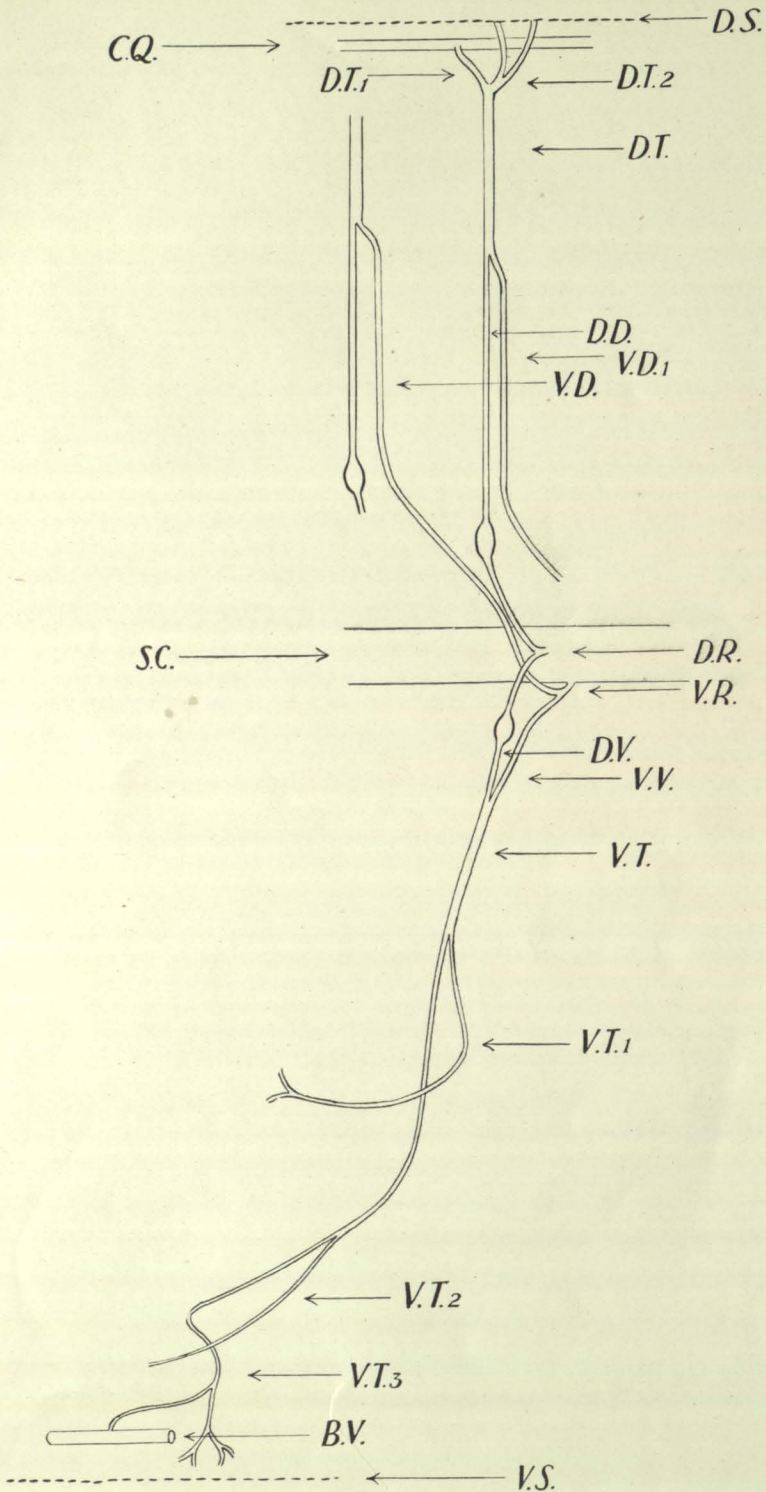
The effect is to give two spinal nerves instead of one. These I am referring to as the Dorsal Trunk and the Ventral Trunk.

The Ventral Trunk, soon after its origin, gives off a small branch, V.T.1, presumably motor, which supplies the muscular tissue of the corresponding myotome in the region of the horizontal septum.

The larger branch of the nerve passes outwards and backwards beneath the smaller branch and then dips downward toward the ventral fin. Before it nears the latter, however, it gives off another slender branch, V.T.2, which runs into the more ventral portion of the myotome. The remaining branch, V.T.3, ramifies diffusely just before reaching the skin next to the ventral fin, one of its branches apparently innervating a small blood vessel; this latter suggests that the nerve may contain sympathetic fibres, for which I have not sought. I have not traced any branches of this nerve to the skin.

The Dorsal Trunk runs straight up to the dorsal fin, where it breaks up into two or three branches. One of these branches, D.T.1, anastomoses with the Dorsal Fin branch of the Cutaneous Quinti of its side. It is possible that this anastomosing branch contains the motor fibres that have entered the trunk in V.D.1. The remaining branches, D.T.2, of the Dorsal Trunk disappear in the areolar tissue lying immediately beneath the skin to the side of the dorsal fin.

It is proper to say that in a dissection of a larger specimen previously made I had come to the conclusion that D.D. united with the ventral dorsad member, V.D., of its own segment and not with V.D.1 (that of the segment in front).



EXPLANATION OF LETTERING.

B.V. = blood vessel; C.Q. = dorsal fin branch of cutaneus quinti; D.R. = dorsal root; D.S. = skin of back; D.T. = dorsal trunk; S.C. = spinal cord; V.R. = ventral root; V.S. = skin of belly; V.T. = ventral trunk.
 For other lettering see text.