

NOTES

SOME FEATURES OF BEHAVIOR IN THE COURTSHIP DISPLAY OF THE PALMATE NEWT (*Molge* *palmata* Schneid)

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The Palmate Newt (*Molge palmata* Schneid), widely distributed in Great Britain, but absent from Ireland, presents in its courtship display certain features of behavior to which particular attention has not yet been drawn. Sexual dimorphism is strongly marked, the male being handsomely colored along the sides of the body and possessing a very long, fine filament, extending beyond the end of the tail. Generally speaking the male follows the female through the water pressing his lips against her side or against her cloaca. When the sexual fever becomes more intense, the active little male rushes forward in front of the female and bars her progress. At the same time, he bends back the distal half of his tail and vibrates it at a wonderfully rapid rate, alongside the proximal half. The female will move away and, the male following, the performance is repeated. At the beginning of each of these spasms, the male hollows out one side of its body and bends it around towards the female. As the excitement dies down, the body assumes a straight position, though the tail with its caudal filament continues to vibrate. There are two features which must appear striking to any observer, particularly if he is firm in a faith in sexual selection. First, the display always takes place in front of the female. The male swims along by her side till he is in front, before displaying. Secondly, should the female, in the middle of a display, move away so as to be unable to see the male's tail vibrating, the male unbends his tail and turns it right around so as to vibrate it on that side which is in view of the female. In regard to the vibrating of the tail, too, it is suggestive to recall that *motion* in an object attracts the newt sooner than an object motionless. The female, if willing to be courted looks at the male with a dull hypnotic stare. It was once believed that the vibration of the tail set up a current in the water which carried the spermatozoa towards the female. This is now known to be incorrect.

In my opinion, the tail vibration is simply a method of eliminating a surplus of nervous activity stored up, at the sexual season, — is without any definite purpose. The question requires further analysis, however, and it is worth consideration. For example, the male bends its body towards the female. This movement brings the head and especially the cloaca nearer the female. Supposing that the male's body is curved around in that direction simply from sexual desire, it is clear that the tail can be bent and vibrated most easily on the inside of this curve, that is to say towards the female. No alteration in the side on which the tail vibrates is made without the preliminary spasm and bend of the body. Last spring, I had several ill-conditioned males which, through ill health, looked superficially as dull in color as females. On more than one occasion, I saw a male displaying in front of these animals. Whether this signifies that the female is recognized by sight alone, I cannot say. The evidence is insufficient.