THE MENTAL GLAND OF THE SALAMANDER *DESMOGNATHUS WRIGHTI* KING. The mental hedonic gland clusters of male plethodontid salamanders have been neglected in systematic studies. Most of our present knowledge is reviewed by Truffelli (1954), who discussed the comparative morphology of these glands in several neotropical genera. Throughout the family Plethodontidae, the mental gland cluster is round, oval, gum-drop shaped, or broadened posteriorly; but in *Desmognathus wrighti* King (and *Aneides aeneus* Cope and Packard), I have found that the cluster is elongate and bifurcate. This uniquely shaped gland cluster permits rapid and accurate identification of adult male *D. wrighti*.

Within the genus *Desmognaihus*, all species except *D. wrighti* have a small mental hedonic gland cluster (mental gland for brevity) which is restricted to the tip of the chin, and which overlays and obscures the apex of the mandible. For an illustration of the mental gland of *D. fuscus* (Rafinesque) see Noble (1927, fig. 5) or Bishop (1941, fig. 61c). The latter paper also illustrates the mental gland of *D. ochrophaeus* Cope (fig. 65a). In *D. wrighti* the gland cluster fits within the curve of the dentary, and extends posteriad to the jaw hinge (fig. 1). Thus, in

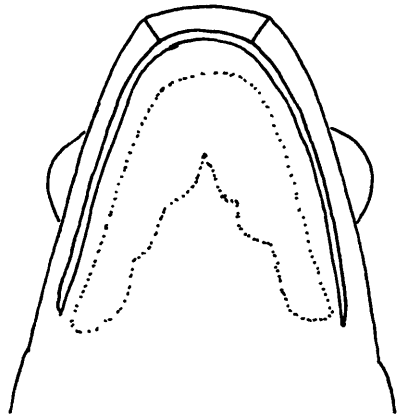

FIGURE 1. Ventral view of the head of a male *Desmognathus wrighti* from the top of Grandfather Mountain, Watauga County, North Carolina, Sept. 9, 1947 (B. D. Valentine and J. C. Nicholls). The mental gland outline is stippled.

D. wrighti, the gland is not only larger and differently shaped, but it is also positioned differently, lying adjacent to the dentary, while in the remainder of the genus it lies astride that bone. The distinction between these two types of mental gland implies that *D. wrighti* is quite isolated within the genus *Desmognathus*, and that this is so is shown by such additional features as the unusually short tail, the absence of a free-living larva, and the retention of vomerine teeth in adult males. The fact that *Desmognathus wrighti* has evolved a mental gland widely different from its congeners, and indeed from almost all other salamanders, suggests the need for more detailed studies, especially on the courtship behavior of the species.

Studies by Organ (1961a, 1961b) of *Desmognathus* courtship and life history reveal no clue to the possible significance of mental gland configuration.—BARRY D. VALENTINE, *Department of Zoology and Entomology, The Ohio State University, Columbus 10, Ohio.*

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