carotid artery; it passes ventrally, and slightly medially and forwards, before turning rostrally into the floor of the mouth (Fig. 1). Externally there is no evidence of the complicated internal configuration of the labyrinth.

The common carotid artery terminates (Fig. 2) in the proximal half of the labyrinth as a slightly dilated cavity—*the main chamber* (mch)—which feeds distally into a number of channels which form a rete—*the internal carotid rete* (icr)—leading to the internal carotid artery. Openings in the ventral, medial and lateral walls of the main chamber lead to an irregular plexus of channels—*the external carotid rete* (ecr)—which lies ventrally in the proximal part of the organ and passes recurrently to the commencement of the external carotid artery (Fig. 2).

The lumen of the *common carotid artery* is 90–100μ across and extends for about 200μ into the labyrinth, enlarging to a diameter of some 150μ as it forms the main chamber. In three labyrinths this chamber led directly to the internal carotid rete, but in one (Fig. 3) it first divided into two large passages separated by a substantial septum (s) disposed dorso-ventrally.

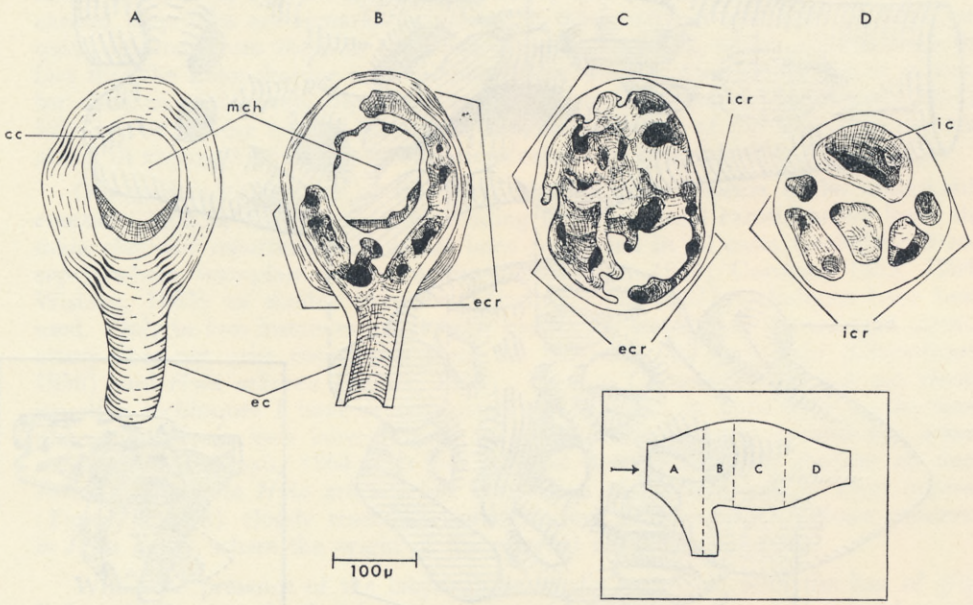

Fig. 4.—A wax-plate reconstruction of another carotid labyrinth in *Breviceps*. The segments indicated in the inset are seen from their proximal aspect. Dorsal is above.

The *internal carotid rete* occupies the entire distal half of the labyrinth and comprises a number of short, wide, intercommunicating passages which arise from the main chamber. The smallest are about 15μ in diameter but most are wider than this. They communicate freely, and distally they quickly reunite to form the *internal carotid artery,* which has a bore of 80μ (Fig. 4, D). In one labyrinth (Fig. 3) the ventral part of this plexus ended blindly in the distal pole of the organ as a number of small pockets, although blood from these ventrally-placed channels could easily reach the internal carotid by communications with the dorsal part of the rete.

The *external carotid rete* consists of a system of intercommunicating passages which occupy much of the ventral part of the proximal half of the organ (Figs. 2, 3, 4). The plexus arises by numerous openings from the main chamber, the