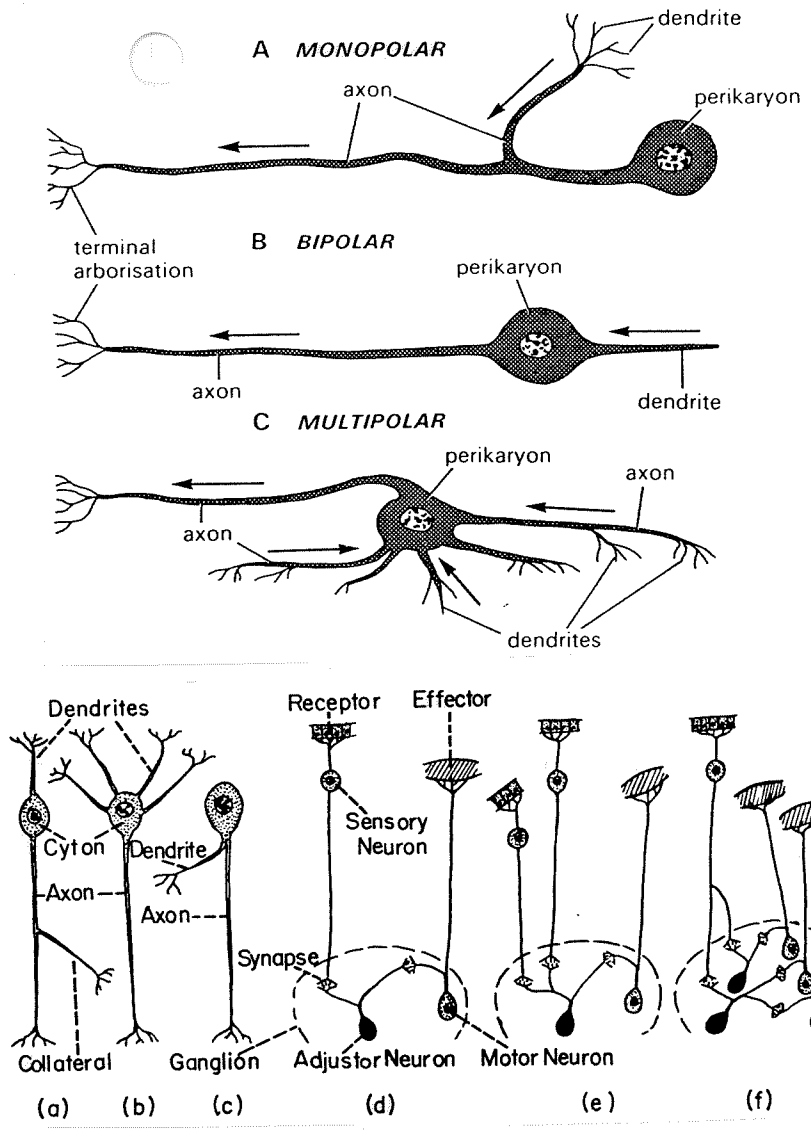


FIGURE 13. Neurons: (a) bipolar, (b) multipolar, (c) unipolar, (d) a simple nerve chain, (e) nerve impulses from different receptors converged on one effector, (f) nerve impulses from one receptor discharged on several effectors.

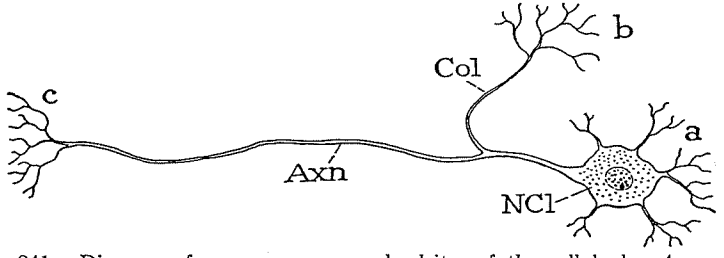


FIG. 241.—Diagram of a neurone. *a*, dendrites of the cell body; *Axn*, axon, or neurite; *b*, *c*, terminal arborizations; *Col*, collateral branch of the axon; *NCl*, the cell body, or neurocyte.

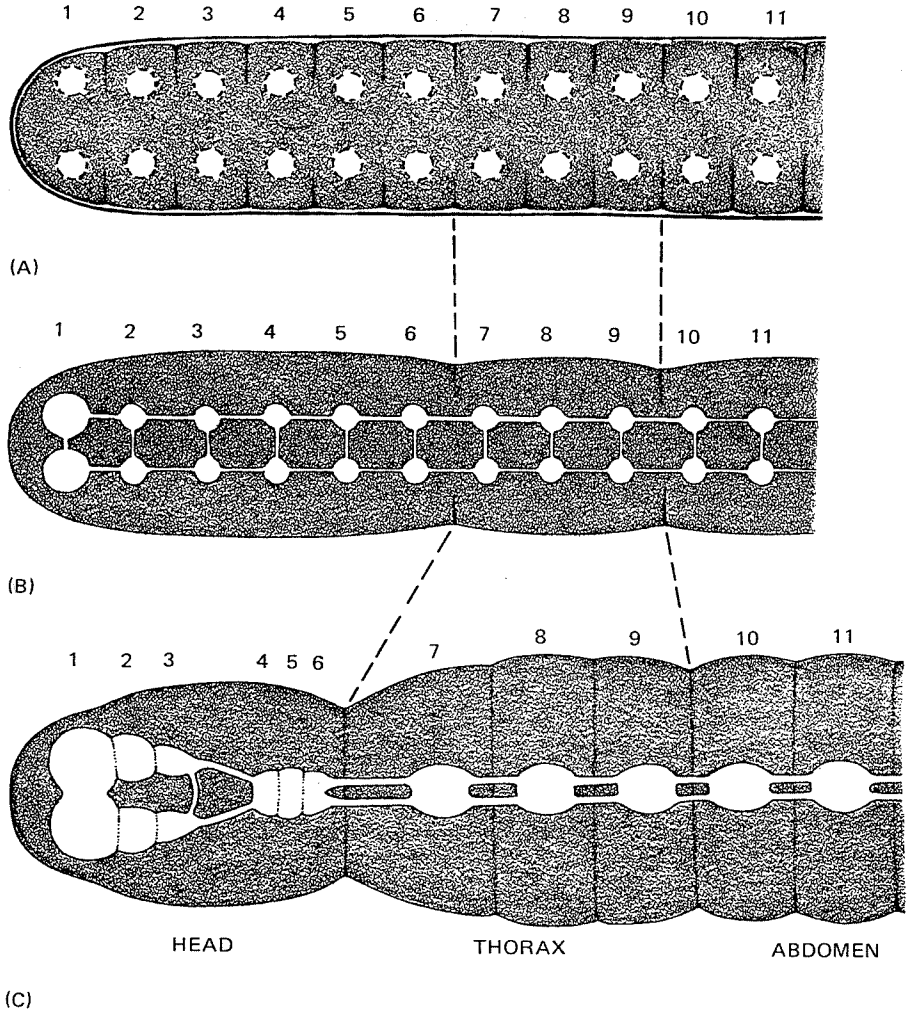


Figure 69. Diagrammatic representation of the development of the central nervous system. Nerves to the periphery have not been included. (A) neuroblast formation during segmentation; (B) interconnection of ganglia; (C) differentiation of ganglia as tagmosis occurs.

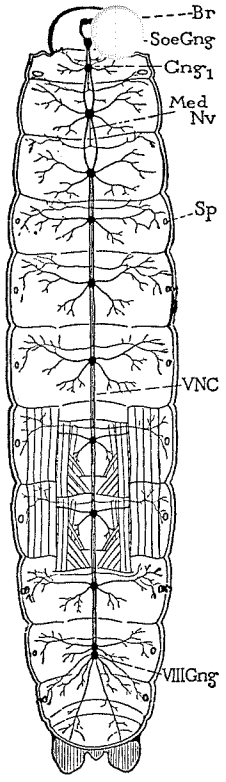


FIG. 246.—Ventral nervous system and brain of a caterpillar, *Malacosoma americana.*

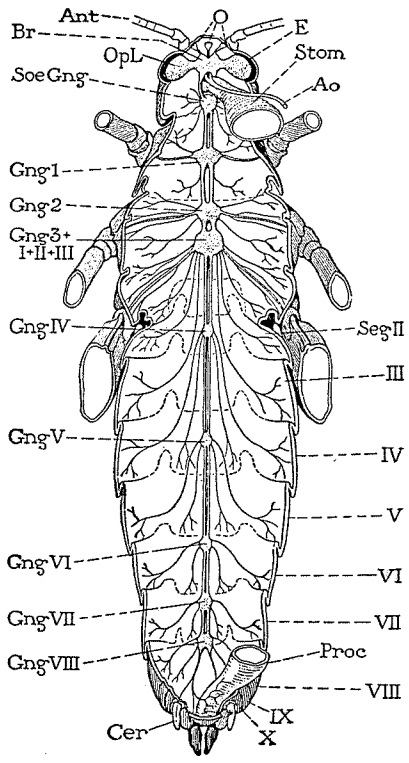


FIG. 247.—Ventral nervous system and brain of a grasshopper, *Dissosteira carolina.*

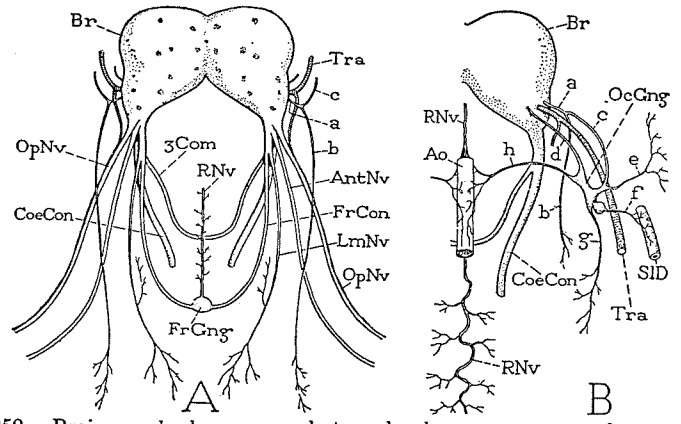


FIG. 250.—Brain, cerebral nerves, and stomodaeal nervous system of a noctuid caterpillar. A, anterior view of brain and frontal ganglion. B, posterior view of right half of brain and postcerebral parts of stomodaeal nervous system.

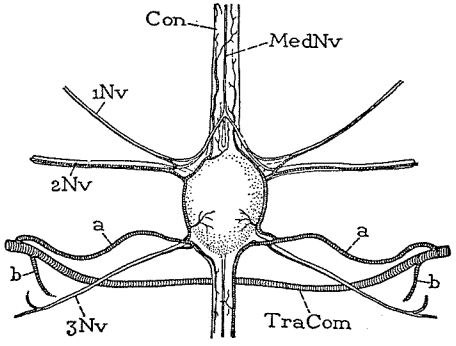


FIG. 261.—Tracheation of an abdominal ganglion of a noctuid caterpillar

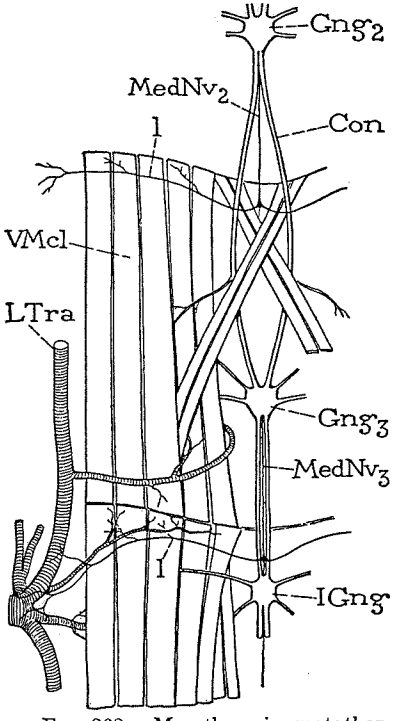


FIG. 262.—Mesothoracic, metathoracic, and first abdominal ganglion of a caterpillar, *Malacosoma americana*, showing median nerves (*MedNv*).

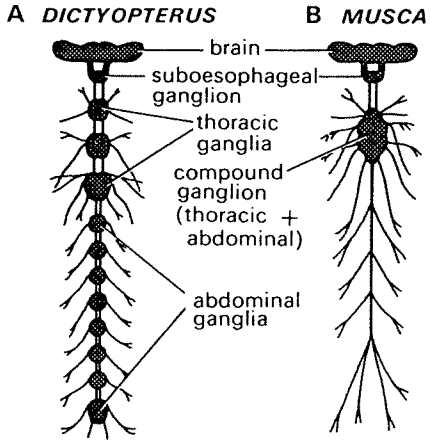


Fig. 348. Two extreme arrangements of the ganglia in the central nervous system showing (A) minimal and (B) maximal degrees of fusion (from Horridge, 1965).

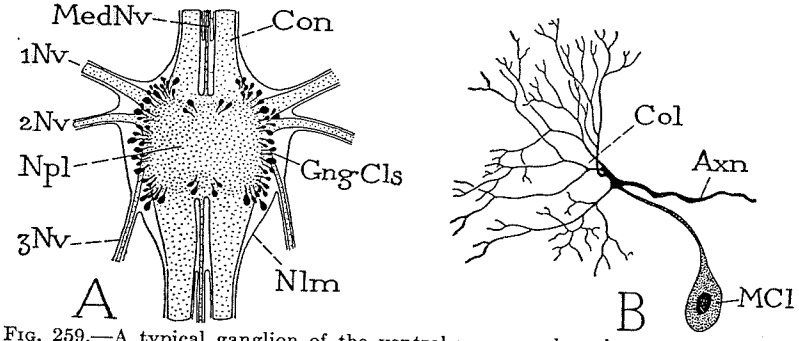
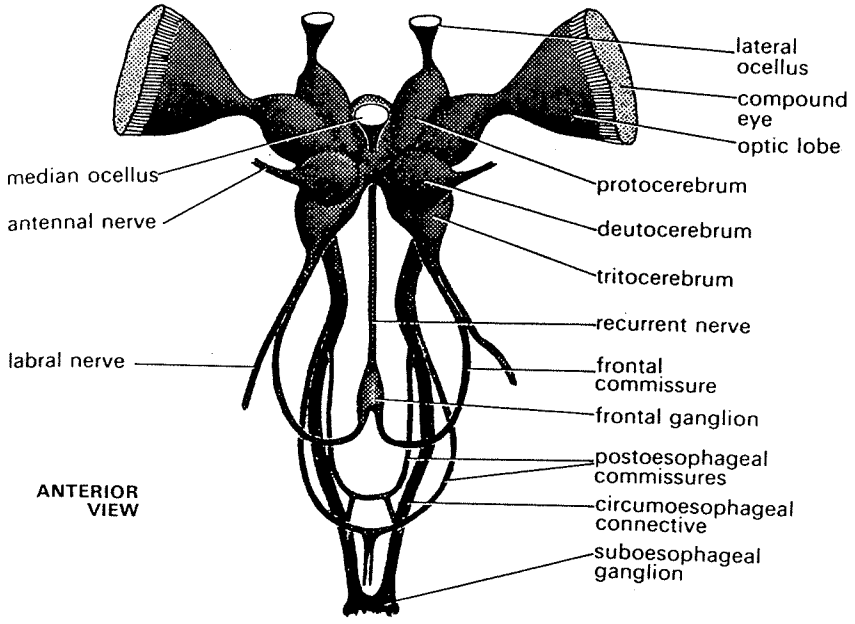


FIG. 259.—A typical ganglion of the ventral nerve cord, and a ganglion motor cell. (*From Zawarzin*, 1924*a*.) A, an abdominal ganglion and its nerve trunks, showing position of the nerve cells in the ganglion. B, a motor neurone of an abdominal ganglion of an *Aeschna* larva.



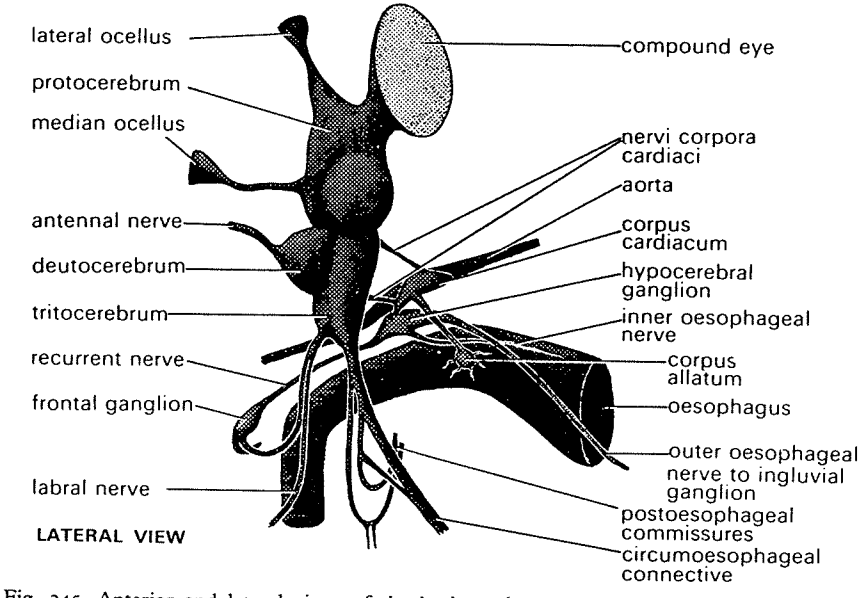


Fig. 345. Anterior and lateral views of the brain and stomatogastric nervous system of *Locusta* (Orthoptera) (after Albrecht, 1953).

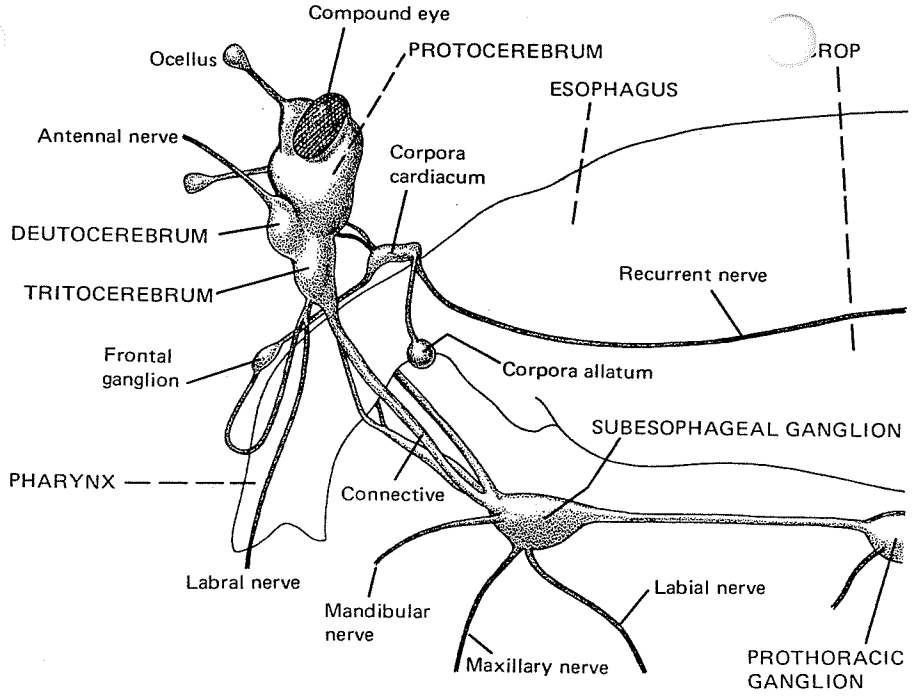


Figure 70. Insect brain and associated structures. (Redrawn with slight modifications from Snodgrass, 1935)

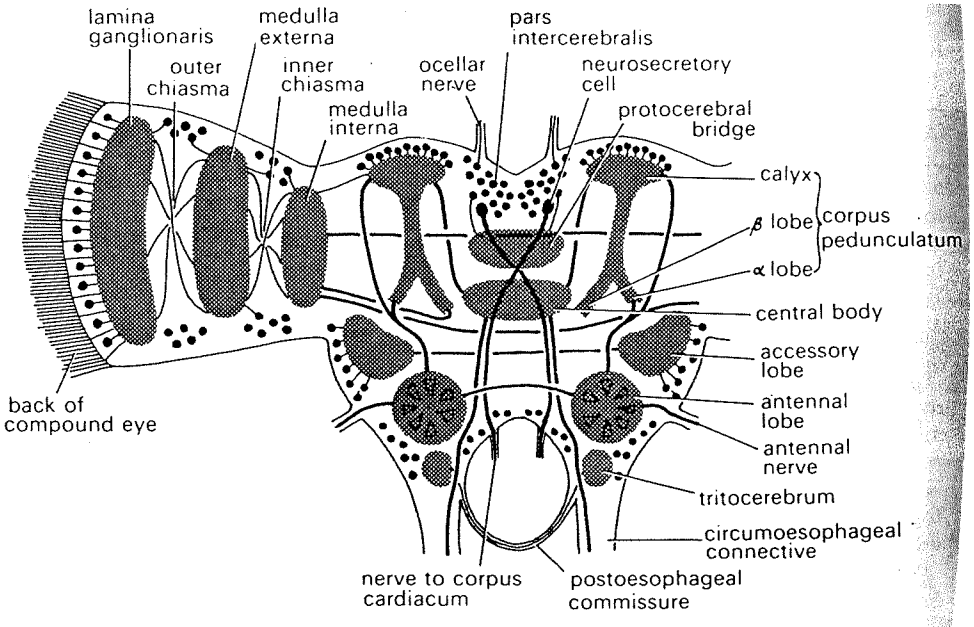


Fig. 346. Diagram of the brain showing the more important areas of neuropile (hatched) and a few of the main connections between these areas. Black dots represent zones containing perikarya.

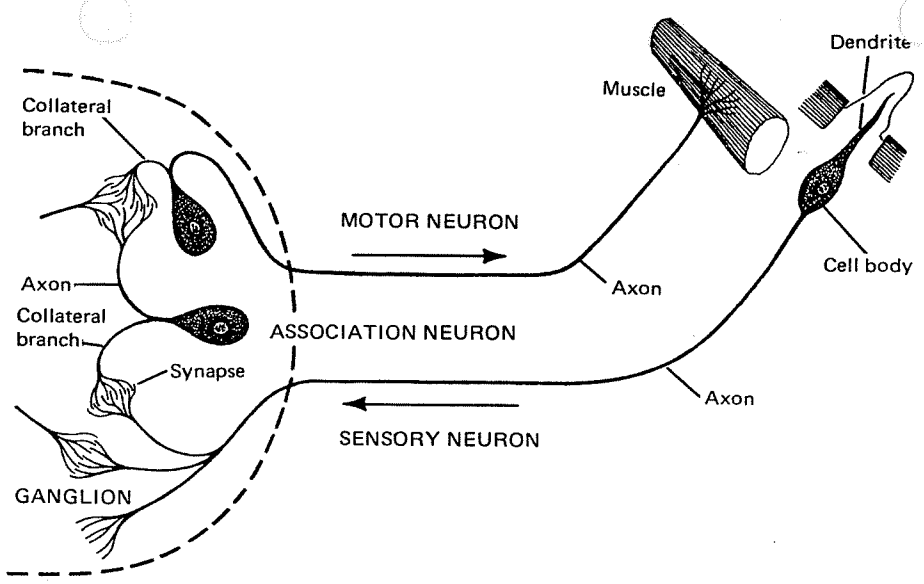


Figure 68. Diagram of the reflex mechanism of the insect nervous system. Note that it is opposite to the chordate type in vertebrates, where the sensory neurons enter the dorsal part of the ganglion and the motor leaves ventrally. (Redrawn with slight modifications from Imms, Richards, & Davies, 1957)

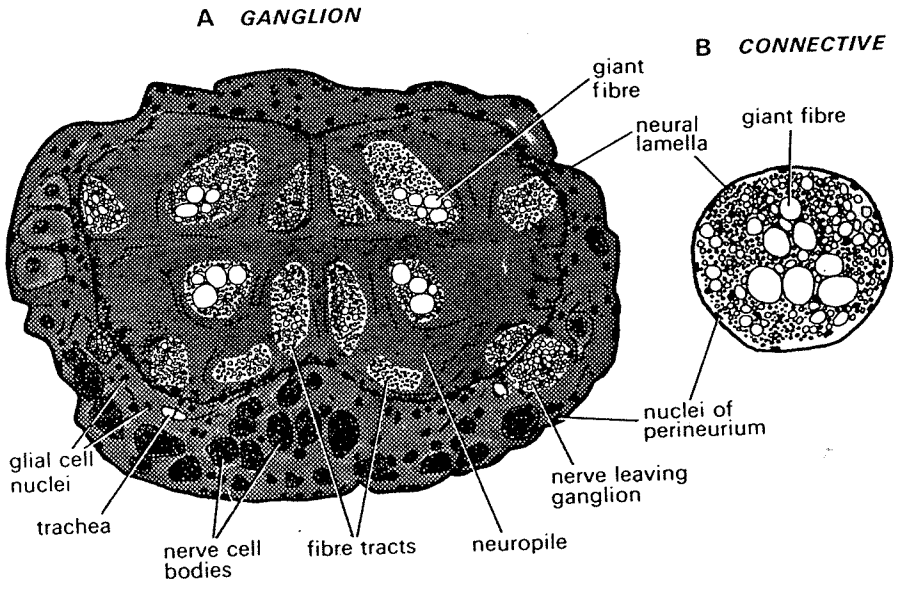


Fig. 344. Transverse sections of (A) an abdominal ganglion and (B) an abdominal interganglionic connective of *Periplaneta*. Not to same scale (after Roeder, 1953, 1963).

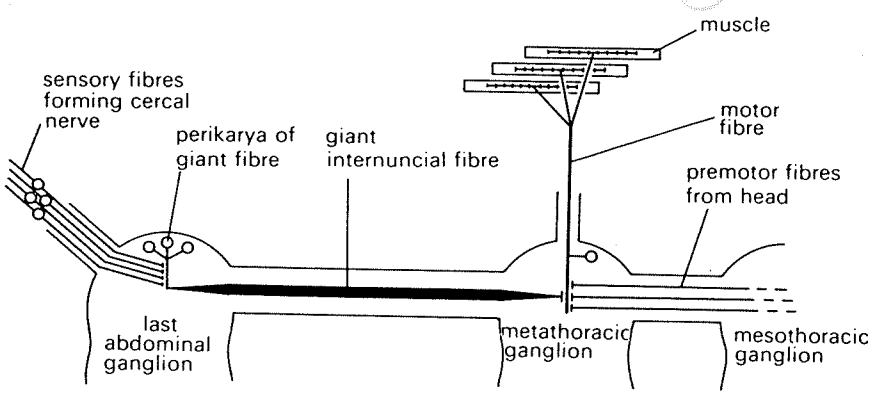


Fig. 349. Diagram of the nerve fibres concerned in the evasion response of the cockroach. Notice that abdominal ganglia 1–5 are omitted (after Roeder, 1953).

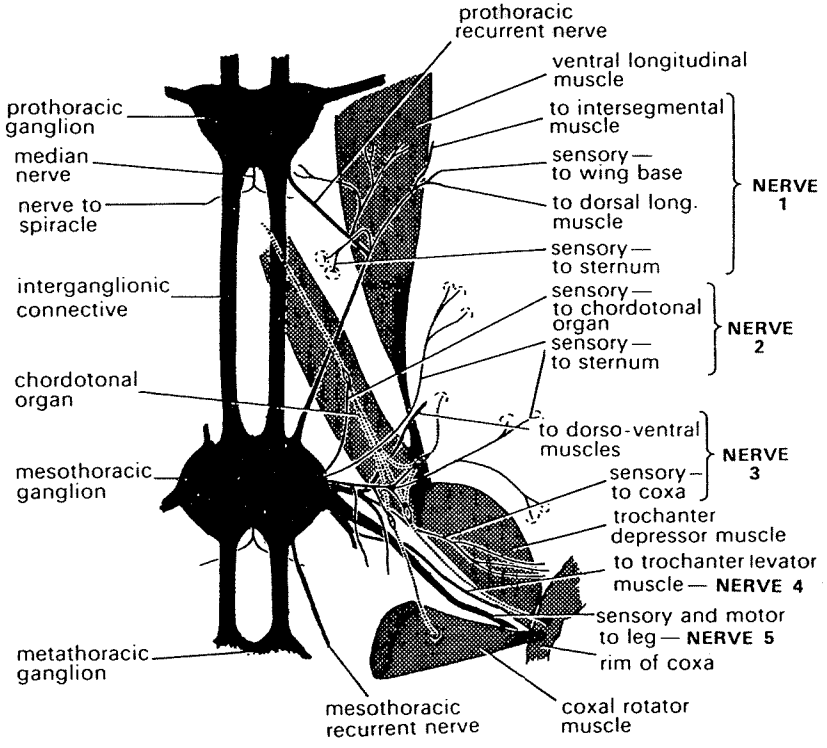


Fig. 347. Ventral view of part of the central nerve cord in the thorax of *Locusta* showing some of the nerves of the mesothoracic segment (after Campbell, 1961).

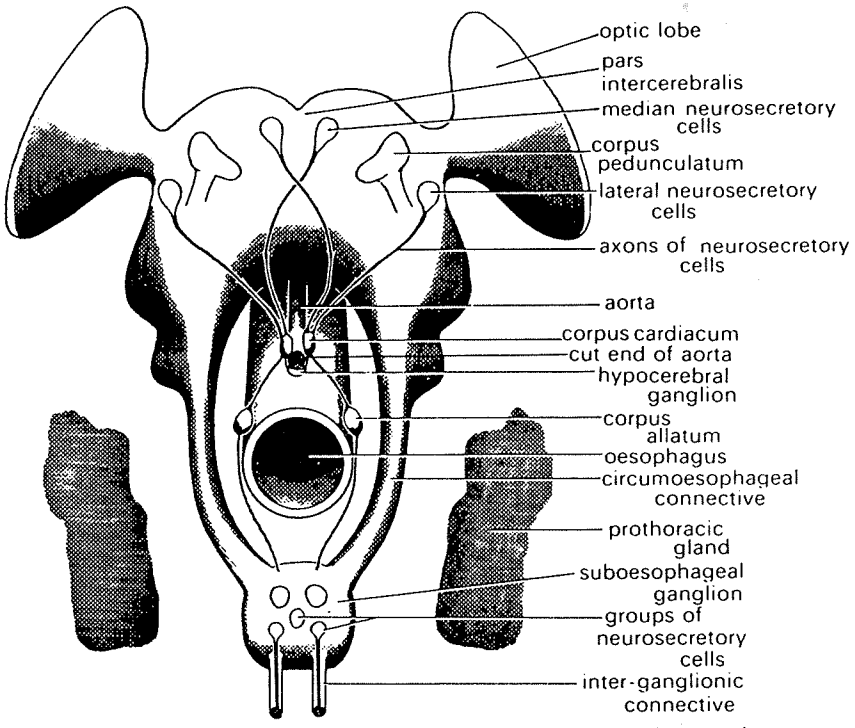


Fig. 474. Diagrammatic representation of the relationships of the main endocrine organs.

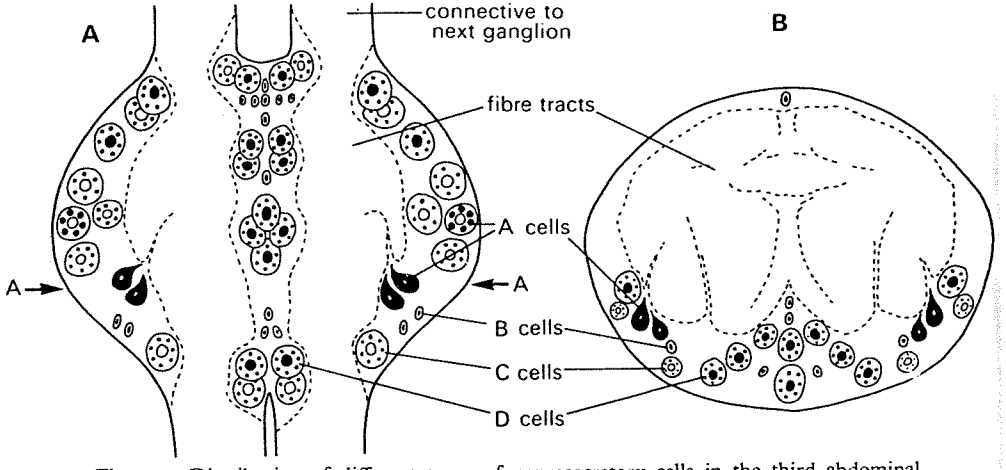


Fig. 475. Distribution of different types of neurosecretory cells in the third abdominal ganglion of *Schistocerca*. A. Dorsal view. B. Transverse section at AA (after Delphin, 1965).

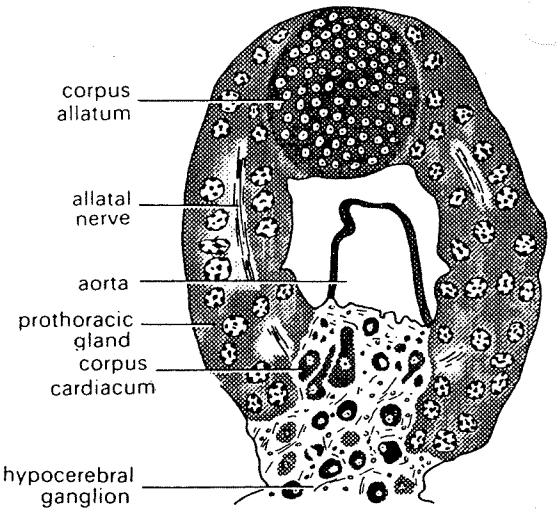


Fig. 477. Ring gland from the early pupa of *Eristalis* (Diptera). Here the ring gland is fused with the hypocerebral ganglion, but this is not always the case (after Cazal, 1948).

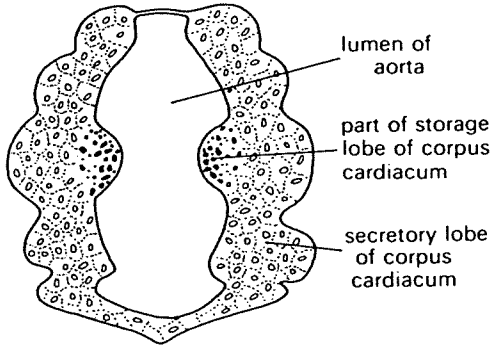


Fig. 476. Transverse section through the posterior parts of the corpora cardiaca of *Schistocerca* (after Highnam, 1961).

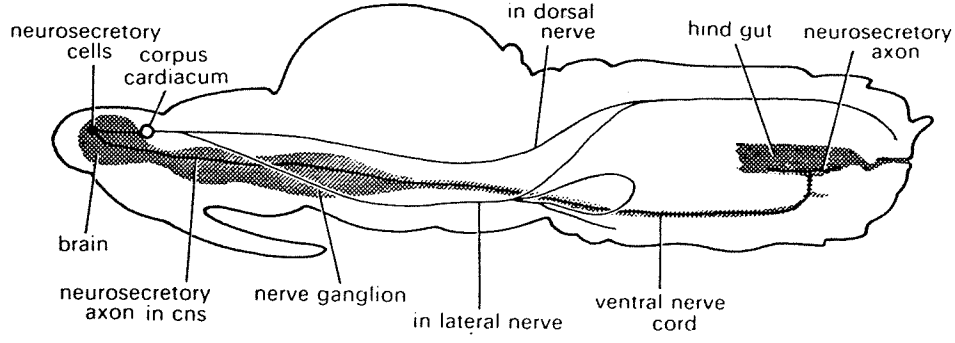


Fig. 478. Pathways of axons which carry neurosecretion from the brain and corpora cardiaca in the aphid *Drepanosiphum* (Homoptera) (after Johnson, 1962).