

Figure 8.2

(a) Correlation between body regions of a larva and an adult. (b) Ultrastructure of hooked chaeta (uncinus) of serpulid polychaete, *Spirorbis spirorbis*. (c) Body wall of the clitellate *Pheretima*, showing invaginated epidermal cells (chaetoblasts) that form the chaetal follicle. (d) Segment of a generalised annelid. (a after Nielsen 1995; b from Bartolomaeus 1995; c after Barnes 1974; d after Fransen 1988.)

Chaetae

Chaetae (also called setae) are bundles of chitinous, thin-walled cylinders held together by sclerotinised protein. They are produced by a microvillar border of certain invaginated epidermal cells and so can be defined as cuticular structures that develop within epidermal follicles (Fig. 8.2b, c). Chaetal ultrastructure is similar in all cases but there is a considerable diversity of form. Chaetae can be long thin filaments or stout multihooked structures with ligaments (Fig. 8.3b). Apart from annelids, chaetae are found in the Echiura (see later in this chapter) and the Brachiopoda (Chapter 15). It is possible that these groups fall within the Annelida and that chaetae have only evolved once. Most authors reject the idea that brachiopods have any annelid affinities, though molecular evidence does support this idea (see Chapter 18 for further discussion).

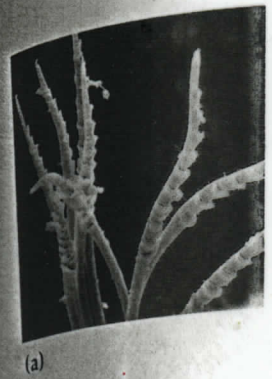


Figure 8.3
(a) Tufted chaetae of polychaete larva. (b) Compound chaetae of chrysopetalid polychaete larva. (c) Neuropodium of sabellid polychaete, *Fabricinuda*, with row of uncini.