



FIGURE 11.18. Phylogenetic distribution of different patterns of segmental specialization and *Ubx* expression among various crustaceans. *Dark blue*, high *Ubx* protein expression; *light blue*, weaker *Ubx* expression; *white*, no *Ubx* expression during early embryonic development; *black*, maxillipeds. For each organism, three mouth segments are followed by the first five thoracic segments. The number of maxillipeds (mxp) is given just to the right of the family names. The early embryonic pattern of *Ubx* expression correlates with the morphology of the appendages. *Ubx* is expressed in segments that will produce locomotory legs of the thorax but not in maxillipeds of the thorax. The phylogenetic distribution suggests that maxillipeds may have evolved more than once, but each change in maxilliped numbers correlated with shifts in the anterior boundary of *Ubx* expression.

11.18, modified from Averof M. et al., *Nature* **388**: 682–686, © 1997 Macmillan, www.nature.com