

**Figure 8.14.** Structures of different chlorophyll pigments found in marine phytoplankton, algae and bacteria (bacteriochlorophylls). The chlorophylls characteristically contain four pyrrole groups (labeled A–D) linked into a tetrapyrrol ring. Most are phorbin-type compounds with one saturated carbon double bond in the D-ring and an isocyclic ring bridging the 6– $\gamma$  carbons. Modifications to ring B delineate the various chlorophyll compounds and are shown (R groups). Another difference between the various chlorophyll compounds is the presence of a 20-carbon phytol ester versus a 15-carbon (farnesyl) as in the bacteriochlorophylls.

