

**Table 8.2** General features of aeolian facies

*Deposition:* wind-blown sand is typical of deserts but also occurs along marine shorelines.

*Lithology:* clean (matrix-free) quartz-rich sandstones, no mica.

*Textures:* well-sorted, well-rounded sand grains ('millet-seed'); possibly with a frosted (dull) appearance; sandstones often stained red through hematite; any pebbles may be wind-faceted.

*Structures:* dominantly large-scale cross-bedding (set heights several to several 10's of metres); cross-bed dips up to 35°.

*Fossils:* rare, occasional vertebrate footprints and bones.

*Facies associations:* water-lain sandstones and conglomerates may be associated; also playa-lake mudrocks and evaporites and arid-zone soils.

**Table 8.3** General features of lacustrine facies

*Deposition:* in lakes which vary in size, shape, salinity and depth. Waves and storm currents important in shallow water, turbidity currents, often river underflows, in deeper water. Biochemical and chemical precipitation common. Strong climatic control on lake sedimentation.

*Lithologies:* diverse including conglomerates through sandstones to mudrocks, limestones, marls, evaporites, cherts, oil shales and coals.

*Structures:* wave-formed ripples, desiccation cracks and stromatolites common in lake shoreline sediments; rhythmic laminations, possibly with syneresis cracks, typical of deeper water lake deposits, together with interbedded graded sandstones of turbidity current origin.

*Fossils:* non-marine invertebrates (especially bivalves and gastropods); vertebrates (footprints and bones); plants, especially algae.

*Facies sequences:* often reflect changes in water level through climatic or tectonic events.

*Facies associations:* fluvial and aeolian sediments often associated; soil horizons may occur within lacustrine sequences.