3
EVOLUTION

Plate tectonics has played a significant role in cockatoo evolution. The northward drift of the Australian continent resulted in changed environmental conditions, while the interaction of tectonic plates north of Australia led to the creation of new landmasses. Changes in the global climate, particularly glacial cycles, have also been important. This combination of geology and climate has served to fragment cockatoo populations and/or create new habitats for cockatoos. This has resulted in the geographical isolation of populations, a prerequisite for the development of new forms. The limited cockatoo fossil record makes it difficult to reconstruct their evolution, though we can infer the history of present species based on their current distributions and the geological and climatic history of Australia and South-East Asia.

Parrot origins

The earliest known and accepted parrot fossils come from early Eocene (about 50 million years ago) deposits in Europe. These fossils are not recognisable as belonging to either of the modern parrot families – the Psittacidae or Cacatuidae. The ancient lineages represented by these fossils died out during the Eocene. The oldest fossils of modern parrot families come from the early Miocene (about 20 million years ago). The earliest Psittacidae fossils come from North America and Europe, while the oldest Cacatuidae fossil comes from Australia. The latter was recorded from the Riversleigh deposits in north-western Queensland and described by Walter Boles of the Australian Museum. The fossil, an incomplete rostrum, cannot be differentiated from those of present species such as the Galah or Little Corella and is thought to have been similar in appearance.

Today, parrots are widely distributed throughout Central and South America, sub-Saharan Africa, South-East Asia and Australasia. The parrot