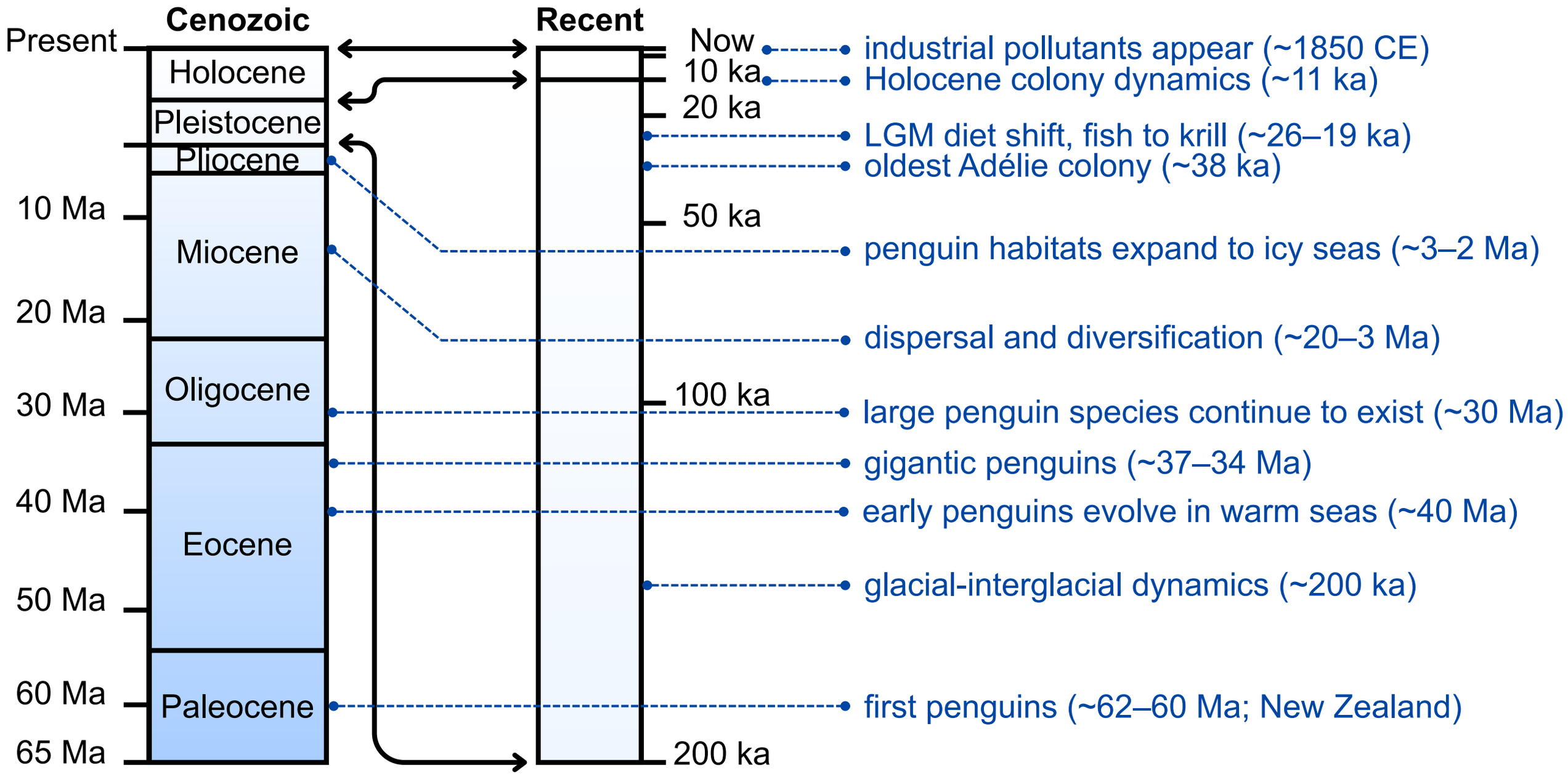
Cenozoic
Recent
Present
Holocene
Pleistocene
Pliocene
10 Ma
Miocene
20 Ma
Oligocene
30 Ma
40 Ma
Eocene
50 Ma
60 Ma
Paleocene
65 Ma
Now
10 ka
20 ka
50 ka
100 ka
200 ka
industrial pollutants appear (~1850 CE)
Holocene colony dynamics (~11 ka)
LGM diet shift, fish to krill (~26–19 ka)
oldest Adélie colony (~38 ka)
penguin habitats expand to icy seas (~3–2 Ma)
dispersal and diversification (~20–3 Ma)
large penguin species continue to exist (~30 Ma)
gigantic penguins (~37–34 Ma)
early penguins evolve in warm seas (~40 Ma)
glacial-interglacial dynamics (~200 ka)
first penguins (~62–60 Ma; New Zealand)