



The 7th International Palaeontological Congress

FIELDTRIP

Trans-Karoo Excursion – From Ice Floes to Desert Dunes

POST002

Trans-Karoo Excursion – From Ice Floes to Desert Dunes
(a geological and palaeontological journey through 100My of evolving terrestrial ecosystems in the Main Karoo Basin)



Fieldtrip leader: Roger Smith (rsmith@iziko.org.za) and Bruce Rubidge

Dates: 4 December to 12 December 2026 (8 nights, 9 days)

Approximate cost: R42 760 per person single, R R39 045,00 per person sharing

Minimum pax: 15

Maximum pax: 15 plus 2 tour leaders and 2 drivers

What to bring: Sunscreen, a hat and comfortable walking shoes. Every effort has been made to get a good walk in each day mainly over uneven terrain.

Climate: The trip is during the early Summer when the days are generally sunny 20-26°C but wind chill can reduce temperatures to 10-15°C. Rain showers are possible

Tour includes: Accommodation, all meals, bottled water, transport, field guidebook, and guided site visits.

Tour excludes: Travel snacks, carbonated drinks, coffees etc.

Brief description and overview of the trip

This post-conference Trans-Karoo excursion offers a geological and palaeontological journey through approximately 100 million years of evolving terrestrial ecosystems preserved within the Main Karoo Basin. The excursion traces long-term environmental change from Carboniferous glacio-marine conditions through Permian floodplains, mass extinction boundaries, and into Jurassic desert dune systems capped by volcanic outpourings.

Participants will examine sedimentary successions shaped by progressive aridification, punctuated by glaciations, tectonic pulses, and volcanism. Emphasis is placed on understanding how these environmental changes influenced terrestrial vertebrate communities through time.

Geological highlights include rippled crevasse-splay palaeosurfaces, vertebrate fossil-rich floodplain deposits with palaeosols, a walk through the end-Permian mass extinction, and two transects through the structurally complex Cape Fold Belt. Fossil prospecting for therapsid mammal-like reptiles and dinosaurs forms an integral part of the programme.

In addition to its scientific focus, the excursion incorporates iconic Karoo landscapes, game reserves, historic towns, and traditional country accommodation, offering a comprehensive Gondwanan field experience.

DAY 1 – 4 December 2026 (Cape Town / Laingsburg / Matjiesfontein)

09:00 Drive to Matjiesfontein for lunch and introductions. Afternoon drive to Laingsburg to examine Dwyka diamictites, Prince Albert shale dropstones, Collingham turbidites, and eurypterid tracks. Return to Matjiesfontein for dinner and overnight.

DAY 2 – 5 December 2026 (Matjiesfontein / Beaufort West)

Walk the Ecca–Beaufort shoreline contact in the Dwyka River section. Picnic lunch at Putfontein palaeosurface. Walk a circular route over multiple ripples, rills and microbial mat structures on an extensive crevasse splay palaeosurface. Dinner and overnight Lemoenfontein Game Lodge, Beaufort West.

DAY 3 – 6 December 2026 (Beaufort West area)

Drive via Molteno Pass to the Leeukloof taphonomic study section. Prospecting along a Diictodon- rich cliff outcrop. Picnic lunch and fossil logging. Return via De Jagers Pass to review the stratigraphy and scenery of the Nuweveld Escarpment. Dinner and overnight at Lemoenfontein Game Lodge.

DAY 4 – 7 December 2026 (Beaufort West / Graaff-Reinet)

Drive via Murraysburg to Doornplaats. Picnic lunch and walk through fossiliferous Cistecephalus. AZ strata . Visit Valley of Desolation overview and sundowners. Overnight at the Drostdy Hotel, Graaff Reinet.

DAY 5 – 8 December 2026 (Graaff-Reinet / Aliwal North)

Visit Karoo Origins Fossil Centre to view the Rubidge fossil collection. Drive to Lootsberg Pass to walk the Permian–Triassic boundary. Picnic lunch. Roadside stop at Burgersdorp vertebrate burrow casts. Overnight in Aliwal North

DAY 6 – 9 December 2026 (Aliwal North / Barkly East)

Drive to Lady Grey with Molteno Formation stops. Picnic lunch near Barkly Pass. Slow walk up Barkly Pass – with spectacular fluvial redbed succession culminating in aeolian dunes and Drakensberg volcanics. Overnight at Mountain Shadows Hotel.

DAY 7 – 10 December 2026 (Barkly East / Addo)

Travel via Katberg Pass and Makhanda. Primarily a touristic day with geological commentary. Overnight at Addo Elephant National Park.

DAY 8 – 11 December 2026 (Addo / Wilderness)

Early morning game viewing in Addo National Park. Drive to Tsitsikamma and coastal sites. Overnight in Wilderness with evening beach walk and fish braai/barbeque.

DAY 9 – 12 December 2026 (Wilderness / Cape Town)

Coastal drive via Kleinmond and Betty's Bay. Final picnic lunch at Gordon's Bay. Arrive at Cape Town Airport late-afternoon or continue on to Cape Town hotel. Book late flight departures to allow time for check in procedures.