

Earth Sciences

Colloquium Series

Dr. Guy Plint

Professor Emeritus, Earth Sciences, Western University

Sauropods, Seismites, and Spiders: an attempt to take a vacation in South Africa



Date: Friday, March 20, 2026

Time: 1:30 pm

Location: BGS 0153



The basal Cretaceous Robberg Formation, South Africa (~140 Ma) is an estuarine unit in which sandstones represent sinuous tidal channels and siltstones fill abandoned channels. Abandoned channels contain irregular-shaped 'blobs' of sandstone up to 1.2 m wide and 60 cm deep. The 'blobs' have a stratified fill but enclosing silt is highly deformed and brecciated. It was eventually realized that the sandstone 'blobs' were random vertical sections through sand-filled **sauropod footprints!** Deformed siltstones record sauropods ploughing through abandoned channels and possibly even taking mud baths! The Robberg tracks are the *first record of Cretaceous dinosaur tracks from South Africa*. Siltstone beds associated with the tracks are brecciated and deformed and record earthquakes of > M6.

Late Pleistocene eolian dune sands fringe the South African coast. Dunes dated at 130-70 ka contain rare, upward radiating burrow systems up to 2.7 m tall and > 1 m wide; individual burrows are cylindrical, unlined, unbranched and 2-4 cm wide. Eolian sandstone laminae curve upward between the burrows, implying preferential sand accumulation. The only comparable burrow systems were described from eolian dune sands on the Bahamas and attributed to the escape of juvenile wasps from a subsurface brood chamber. The South African burrows are clearly of invertebrate origin. They bear no resemblance to burrows made by wasps, bees, beetles, ants, termites, land crabs, or crayfish, nor buried bushes or plants. Only the burrows constructed by wolf and trapdoor spiders can be reconciled with all the features of the South African burrow systems, which constitute a *new ichnotaxon*.

Coffee and Timbits will be served.