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Time Capsules of the African Desert

In an otherwise featureless expanse of the Libyan Desert sit a pair of ring-shaped mountain massifs. These heavily eroded relics of ancient volcanic domes are monuments to the evolution of northern Africa, in more ways than one.

Mount Arkanu (right) lies within the nation of Libya, and is named for the rare acacia tree that survives despite receiving barely 4 inches of rainfall in a typical year. For centuries Bedouin cattle herders have taken advantage of a large natural valley within Arkanu's walls, using it as an enclosed, seasonal pasture by gating off its one narrow outlet with rocks.

Mount Uwaynat (left) straddles three national borders – Egypt, Libya, and Sudan. Petroglyphs from a range of epochs are found on sheltered walls within the complex, depicting giraffe, ostrich, lions, baboons, gazelles, and cows. The succession of species featured in this ancient artwork tells an epic tale of a declining ecosystem. The story begins in a time when trees, the chief food source of the giraffe, were plentiful. Over time, animals associated with drier savannah-like conditions take over the narrative. Grass eaters dominate the next few chapters, setting a withering scene of open plains suitable only for grazing. The epilogue to the story is written when the rains stop falling altogether, some 5,000 years ago. The region has been virtually uninhabitable ever since.

Today, plant variety in the region is limited to only 100 or so drought-tolerant species, with habitat mostly limited to temporary drainage rivers known as "wadis". It is believed that the precession of Earth's axis of rotation played a role in these severe but localized changes in climate



