

# Atlas of Cultural and Environmental Change in Arid Africa

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## Reconnaissance of the Erdi Ma (northeast Chad)

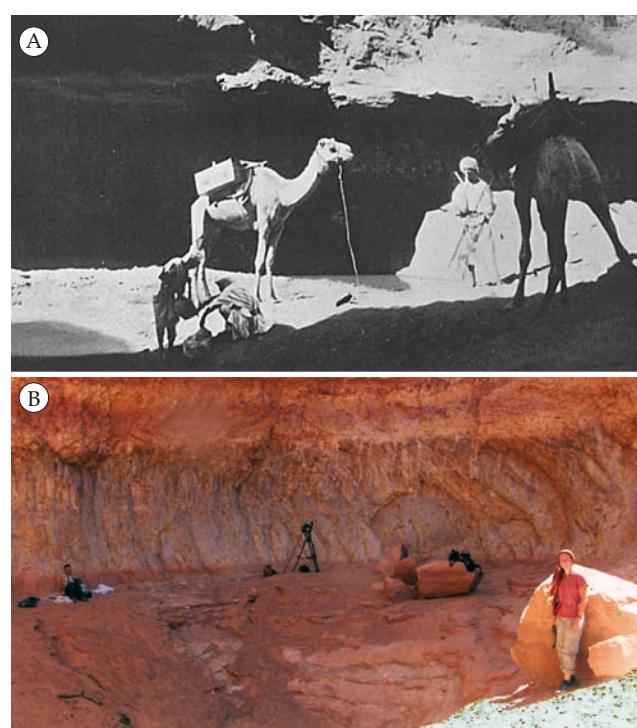


The Erdi Ma (Goran: Erdi = war or hostile land, Ma = east) is an uninhabited plateau in the extreme northeast corner of Chad near the Libyan and Sudanese borders. It lies east of the four other Erdi plateaus called Erdi Dji, Jef Jef, Erdi Korko and Erdi Fochimi. To the present day, the 15,000 km<sup>2</sup> large sandstone tableland which dips to the north from about 1,000 m to about 700 m a.s.l. ranks among the least known areas of the Sahara, if not of the African continent, because of its remoteness, lack of water, hostility to life and notorious insecurity – in spite of its crucial geographical position and potential archaeological significance.

Not covered by the French Institute's 1912-1917 exploratory missions under Colonel Jean Tilho, it was the Egyptian diplomat Ahmed Hassanein Bey who first reported on the Erdi Ma which he crossed in May 1923 on his famed 3,500 km camel journey from Sollum via the previously unlocated Jebel Ouenat to El Obeid. Following his Kufra guides along the western side of the plateau and travelling by night, he could not provide detailed descriptions but a few photographs in his classic book 'The Lost Oases' (Fig. 1). On his 1925 expedition which culminated in the discovery of the Nukheila lake, the Egyptian prince Kemal el-Din only touched on the northeast corner of Erdi Ma with his caterpillar vehicles. The same applies to the British officer Ralph Bagnold, who on the first motorised crossing of the Eastern Sahara from Kharga to El Fasher in 1932 passed along the plateau's Sudanese foreland. In largely unpublished manuscripts on their 'méharées' in the 1930s, the French camel corps officers Barboteau and Garbit were the first to provide useful information on the western Erdis but little on the Erdi Ma. French geological surveys of the Erdi region in the mid-1950s (G. Gerard, P. Vincent, P. Wacrenier) and early 1960s (De Lestang et al.) also neglected the central part of the Erdi Ma. After his camel exploration of the Mourdi depression in winter 1966/67, Théodore Monod presented a detailed proposal for a joint exploration of the Erdi Ma by a camel party arriving from the south and another party arriving from Libya with vehicles; however, he did not receive the requested funding. For this reason, most of the Erdi Ma remained scientifically unsurveyed and without 'ground truth' for the interpretation of the steadily improving remote sensing data since the first Gemini XI space photograph of 1966.

Fig. 1 (A) Rock pool at the head of a canyon in the southeast Erdi Ma as photographed by Hassanein Bey in May 1923. Without this water which had been supplied by exceptional rains in the preceding year, his caravan would have been doomed on its 'daffa', the 520 km long waterless track between the Ouenat wells and the Agah rock pool in the Ennedi that probably corresponds to the still active camel route (MEERPOHL, this vol.).

(B) In December 2005, characteristics of the curled clay flakes at the bottom of the rediscovered guelta suggested that it may not have been water-filled during the past decades even though another guelta found 12 km south in a valley close to the Mourdi depression contained water in January 1999.



It was left to a multidisciplinary ACACIA mission under the auspices of the Chadian Centre National d'Appui à la Recherche (CNAR) to begin to fill this gap in knowledge. Accompanied by a ZDF team filming a documentary entitled 'Departure into the Uncertain', the 12-person expedition team which included geographer and geoarchaeologist S. Kröpelin, botanist F. Darius, remote sensing specialist S. Oehm, ethnographer M. Meerpohl, writer R. Schrott and Chadian colleague Mahamat Hamdo, reached the edge of the Erdi Ma after a two-week journey in late October 2005. The following survey resulted in a variety of geomorphological, geological, archaeological and biological observations in the valleys and on the barren surface of the plateau which is almost void of vegetation (Fig. 2-5). Neither evidence of temporary (playa) or permanent palaeolakes, nor of former springs, wells or near-surface groundwater was found on the nearly level plateau, but only in the wide depression north of it (Fig. 6,7), and in the Mourdi depression.

Compared to other Saharan regions, the interior of the plateau, including more attractive locations such as (minor) elevations, depressions or wadis, is also extremely poor in archaeological remains such as lithic artefacts and pottery or other signs of prehistoric occupation. There is just little evidence of trap stones (formerly called 'Fesselsteine') or hearth sites ('Steinplätze'), the elsewhere almost ubiquitous indicators of transitory land use by prehistoric hunters and pastroforagers. So far, there is also no indication of a possible southwest continuation of the Egyptian Abu Ballas trail (FÖRSTER, this vol.) across the plateau. Prehistoric activities were apparently restricted to the environs of former rock pools and waterfalls in the upper sections of the southward draining valleys, and to the southern plains near the escarpment above the Mourdi depression. Rock art depicts armless elongated human figures with rounded heads that resemble the engravings at Zolat el Hamad (KRÖPELIN & OEHM, this volume, [5]), herds of giraffes, crocodiles, and cattle. Of special interest are rock fences obviously designed for driving wildlife towards sheer drops in the canyons (Fig. 8). Concentrations of stone circles suggest prehistoric villages or temporary hunters' camps (Fig. 9).

In conclusion, Erdi Ma appears to be one of the most deserted regions of the Sahara due to geohydrological and edaphic reasons. Even during the early and mid-Holocene humid period, it seems to have been a barrier zone hostile to life, rather than a place for settlement, hunting or grazing, or even for passage. This implies that inevitable ancient migration routes between the central Eastern Sahara's supraregional foci, i.e. the Ounianga lakes (KRÖPELIN, this vol.) and the Ennedi highland (LENSSEN-ERZ, this vol.), and the Jebel Ouenat – Gilf Kebir region (LINSTÄDTER, this vol.) have sidestepped the Erdi Ma by way of the Mourdi depression and the plateau's sandy eastern foreland which presumably provided abundant wildlife, grazing grounds and water resources.

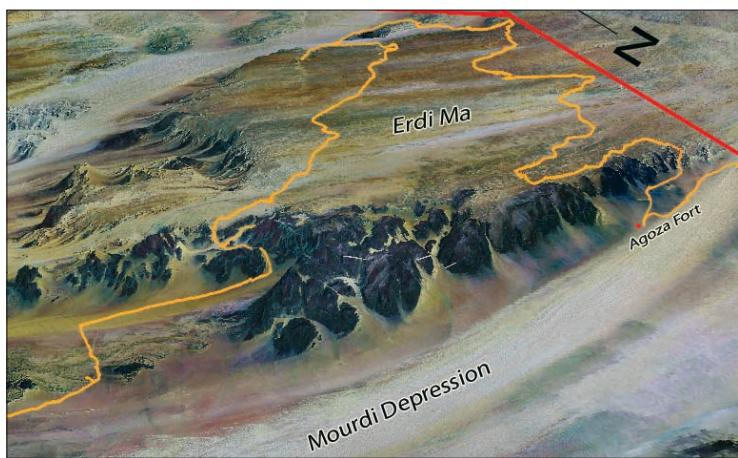


Fig. 2. Oblique view of the Erdi Ma plateau with the itinerary of the 2005 ACACIA survey.



Fig. 3. Approximately 200 m high sandstone escarpment of southwest Erdi Ma.



Fig. 4. Steep-sided narrow valley draining south into the Mourdi depression.



Fig. 5. Barren plateau surface at the junction of the Chadian, Libyan and Sudanese borders (19°30'N-24°E).



Fig. 6. Deposits of Chad's northernmost Holocene palaeolakes in the depression north of the Erdi Ma plateau (19°30'N).



Fig. 7. Ancient lacustrine sediments are a major source of Saharan dust that can be drifted as far as the Amazon basin.



Fig. 8. Prehistoric rock fences apparently designed for hunting wildlife at the head of a southward draining canyon.



Fig. 9. Stone circles with diameters of about 2 m suggest a few prehistoric settlements near the southern rim of the plateau.