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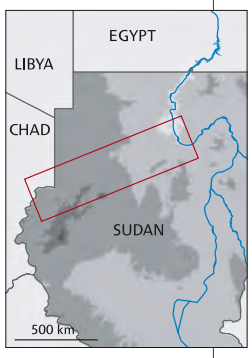
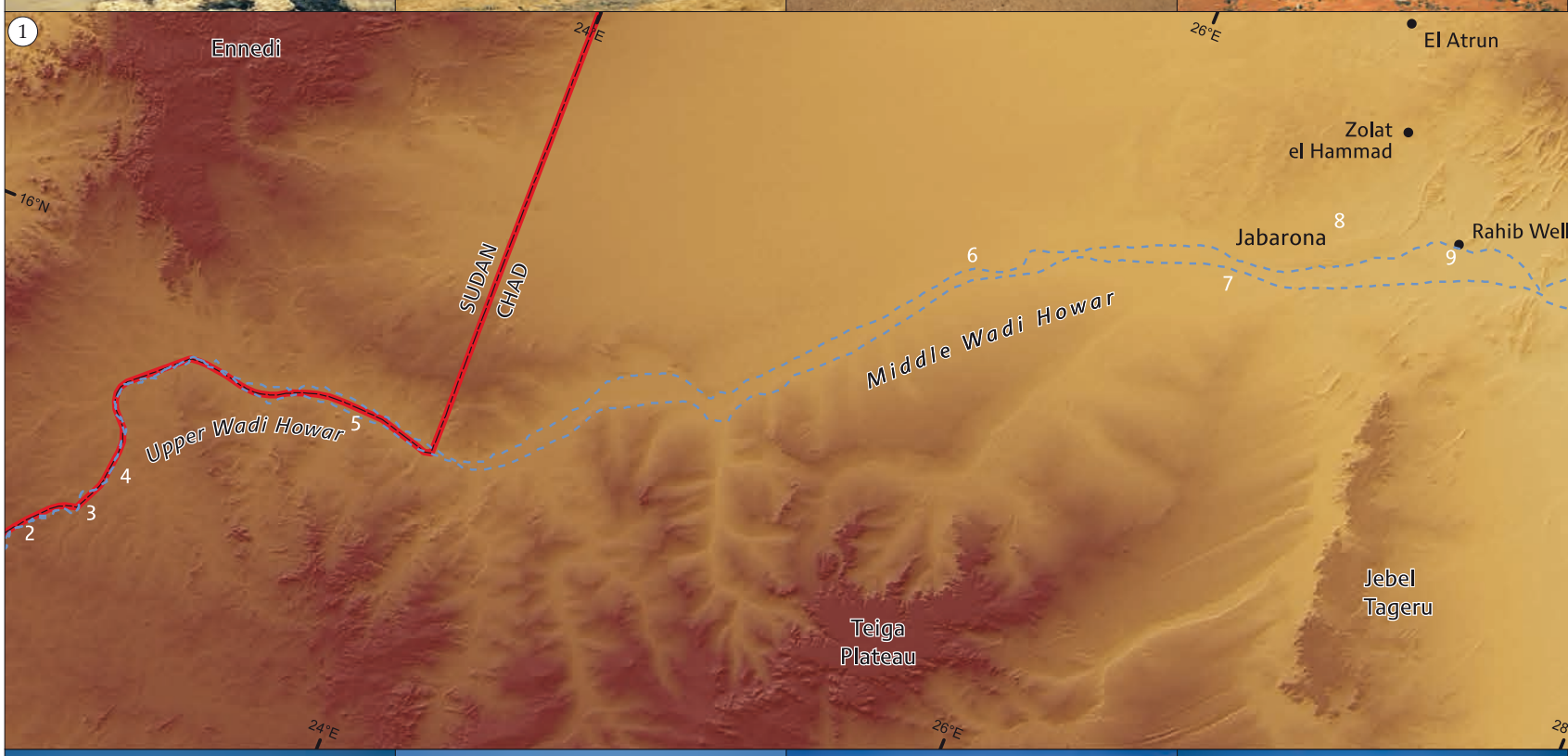
The Wadi Howar

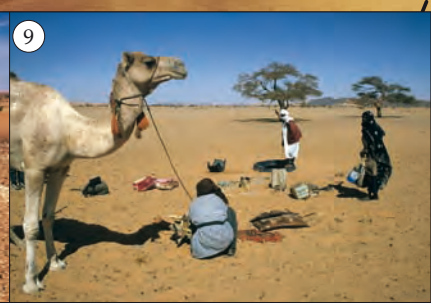


The Wadi Howar – also called the 'Yellow Nile' – is the most remarkable natural feature of the southeast Sahara. During the last humid period 11,000-2,000 years ago, the presently fully defunct dry wadi was the Nile's most important tributary from the Sahara (Fig. 1-1). The almost 1,100 km long and up to 10 km wide water course was the principal natural and cultural link between the Nile region and the inner parts of Africa (Kröpelin 1999). Its middle and lower sections have proved to be a key area for the study of past climates, environments and cultures (Kuper & Kröpelin 2006). They elucidate the history of cultural and economic change better than any other single region of northern Sudan's desert lands.

The illustrations below give some examples of the remarkable spectrum of features along its course. The Wadi Howar rises near Lake Undur, a temporary lake fed by episodic runoff from the hilly Sudanese-Chadian border zone (2). Yet unstudied archaeological sites from the Iron Period indicate local iron production and provide the first evidence for cultural and economic development during more recent time slices which are not represented elsewhere in northwest Sudan (3). On the episodic flood plains of Upper Wadi Howar, Zaghawa women collect wild crops sufficient for living (4). This observation serves as an ethnoarchaeological case that agriculture may not have been necessary for existence during the early Holocene humid phase. The only recently discovered groundwater-supported 'forest in the desert' with its remarkable biodiversity is an impressive relic of Wadi Howar's humid past (5).

Along extended sections of Middle Wadi Howar, fossil shells of Limicolaria land snails are the only surface indicators of the once dominant water course (6). The archaeological site at Jabarona with its abundance of bone remains and potsherds stands for uncounted prehistoric settlements





along the barely defined banks which attest to intense occupation during the middle Holocene (7).

Camel tracks of the Darb el Arba'in at Zolat el Hammad are evocative of the major caravan route between Egypt and Sudan which was active until the late 19th century (8). Bir Rahib is the only well within days of camel travel (9). The ophiolithic rocks of Jebel Rahib indicate aborted rifting of an ocean basin of present-day Red Sea dimensions about 700 million years ago (10).

Wind-eroded remains of ancient lake beds indicate numerous permanent freshwater lakes along the Lower Wadi Howar during the early and middle Holocene (11). More than 200 residual parabolic dunes along the northern banks of Lower Wadi Howar provide geomorphological snap shots of the early Holocene landscape (12). They are open against the direction of the dominating trade winds (arrow) in contrast to the mobile barchan dunes of the present-day Sahara. The square kilometre large dune chains were formed under semi-arid conditions and immobilised by a thick layer of abundant prehistoric remains (13). These Neolithic dune habitats ('Siedeldünen') are without equal worldwide and may be considered as the key prehistoric heritage of Sudan's deserts. Ancient grinding sites in their surroundings at the Abu Tabari bend symbolise the fundamental change in climate and human occupation of northern Sudan during the past millennia (14). Besides the remains of various aquatic and savannah animals embedded in the early and mid-Holocene fluvial deposits of Lower Wadi Howar such as fish, crocodile, hippo, elephant, rhino and giraffe, there are also skeletons of humans which may have died by drowning (15). A monumental trapezoid fortress with 500 m long and 5 m wide walls, and almost 20 protruding bastions remains the only known large construction in the Sudanese Sahara west of the Nile and underlines the strategic importance of Lower Wadi Howar as late as the first millennium BCE (16). The Wadi Howar joined the Nile in the sandy El Baja area opposite Old Dongola, the later site of the capital of the early Christian kingdom of Makouria (17).

Fig. 1 The Wadi Howar – the most remarkable natural feature of the southeast Sahara. Elevation model based on data from the Shuttle Radar Topography Mission (cf. Bolten, this volume).