8. Vertebrates

The fishes of the lake have not been studied, although there is a general account of the fisheries in the Northern Bahr el Ghazal (Stubbs 1949). The following birds were seen at the northern end of the lake in December 1976. Podiceps ruficollis, Phalacrocorax africanus, Anhinga rufa, Ardeola ralloides, Egretta intermedia, Ceryle rudis, Alcedo cristata. The black headed gull Larus ridibundus has spread down to this region during the last decade. Hippopotamus amphibius was seen in the lake.

9. Human activity: Negligible in this area.

5.3. LAKES KEILACK AND KUNDI

by J. GREEN

Climate

Temperature has a diurnal range of about 17°C in July with maxima up to 33°C. In January the diurnal range is 10°C with maxima up to 36°C. Rainfall about 700-800 mm per year, with the wettest months being July and August. January is the driest month, often lacking rain. Winds in January prevail from NNE with an average speed of 14 km/h. In July winds are mainly from the South with average speed about 5 km/h.

5.3.a LAKE KEILACK

1. Geography and Morphology

Location: South Kordofan, Sudan. Lat. 10°50'N, Long. 29°17'E. See Fig. 5.1. Altitude c. 450 m.
Morphometry: In the dry season the area of the lake is about 5 km^2 with a depth of about 2 m, but in the wet season the area increases to over 30 km^2 and the maximum depth is about 4 m.

2. Physico-chemical characteristics of the water

Data based on a single visit in January 1976. Temperature°C: 23.0 (surface); 22.9 (1 m). Conductivity: 550.10^{-6} $S.cm^{-1}$ (20°C). pH: 7.6-8.4. Transparency: Secchi disc 44 cm. Oxygen % saturation: 83 at 10 cm; 86 at 1 m.

3. Macrophytes

The dry season has a rich vegetation with Ceratophyllum demersum, Najas pectinata and Nymphaea lotus as the main species. There are smaller amounts of Nymphaea coerulea and a few small patches of a Polygonum species.

4. **Phytoplankton:** Has not been studied.

5. **Invertebrates**

94 species recorded so far, including 14 species of rhizopoda and 20 species of Crustacea. The zooplankton is dominated by Thermocyclops spp., and Moina micrura is abundant. Tropodiaptomus processifer and Mesocyclops aspericornis are also present. Rotifers (17 species) are dominated by Brachionus caudatus, with Filinia longiseta as an important sub-dominant. Branchiodrilus hortensis (Oligochaeta) and Biomphalaria sudanica are present. Linnavuori (1971) has recorded 19 species of aquatic Hemiptera from the lake. The larva of Culex decens was abundant in the lake in January 1976. Lewis (1945, 1947, 1956a & b) has recorded six other species of mosquitos from the lake.

6. **Fish**

Clarias lazera, Tilapia zilli and Schilbe mystus have been recorded.

7. **Birds**

19 species of waterbirds were seen in January 1976. The numbers were generally much lower than those at Lake Kundi. The same six species of Ardeidae were present, but the Anatidae and Scolopacidae were poorly represented. Fish eagles Haliaetus vocifer were present.

8. **Human activities**

Lake Keilack is an important watering place for the cattle of nomads ranging from as far as away as Nigeria. Some fishing occurs, and some small rafts made from three bundles of Ambatch Aeschynomene elaphroxylon were seen propelled like a punt, using a long pole.

5.3.b LAKE KUNDI

1. **Geography and Morphology**

Location: Southern Darfur, Sudan. Lat 10°26'N, Long 25°10'E. Altitude c. 450 m (Fig.5.1).
Morphometry: The drainage around the lake is not properly mapped, but it is known that it receives some water from Wadi Ibra in the wet season; it may also receive some water from other wadis originating on Jebel Marra. The maximum extent of the lake in the wet season is uncertain, but its area probably reaches about 12 km^2. In the dry season it is much smaller, about 2 or 3 km^2. In January 1976 the maximum depth was about 2 m.

2. Physico-chemical characteristics of water

Data based on a single visit in January 1976. Temperature°C: 19.5 (surface). Conductivity: 110.10^{-6} $S.cm^{-1}$ 20°C. pH: 7.0. Transparency: Secchi disc, 40 cm. Oxygen % saturation: 44 at 10 cm; 22 at 1 m.

3. Macrophytes: In the dry season the reduced lake has a rich vegetation dominated by Ceratophyllum and Nymphaea lotus.

4. Phytoplankton: Has not been studied.

5. Invertebrates

100 species recorded so far, including 18 species of rhizopods and 21 species of crustaceans. The zooplankton has a typical African assemblage, with Moina micrura as a dominant form. Copepods include Tropodiaptomus processifer, Mesocyclops aspericornis, and two species of Thermocyclops. Rotifers (31 spp) include Keratella tropica (dominant), three species of Brachionus, Asplanchna brightwelli and Polyarthra dolichoptera. The oligochaetes include Branchiodrilus hortensis, whilst two gastropods, Biomphalaria sudanica and Bulinus forskali are also present. The Coleoptera include Yola senegalensis and Cybister alluaudi. The larva of Culex decens was abundant in the lake in January 1976.

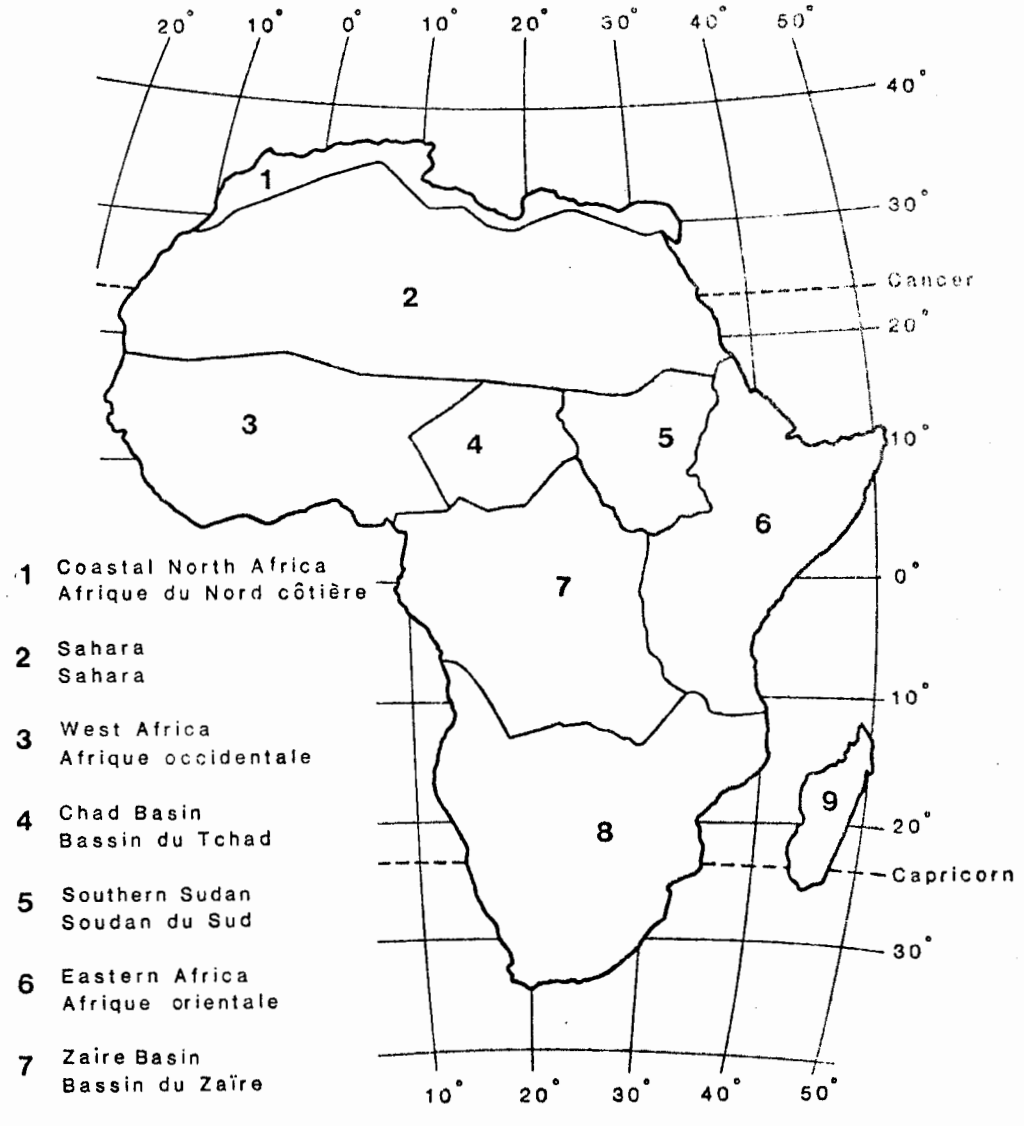
6. Fish: Clarias lazera and Tilapia zilli have been recorded.

7. Birds

Lake Kundi is an important wintering ground for waterbirds (28 species). Anatids were abundant in January 1976, including spur-winged goose Plectopterus gambensis, pygmy goose Nettapus auritus and knob-billed duck Sarkidiornis melanotos. Six species of Ardeidae (herons and egrets) were present, five Scolopacidae (sandpipers etc) and four Ciconiidae (storks, including about 100 yellow billed stork Mycteria ibis. Fish eagles Haliaetus vocifer were present.

8. Human activities

The population is generally sparse, but nomadic cattle herders pass through the area. There is also some shooting of waterbirds by men from nearby villages.



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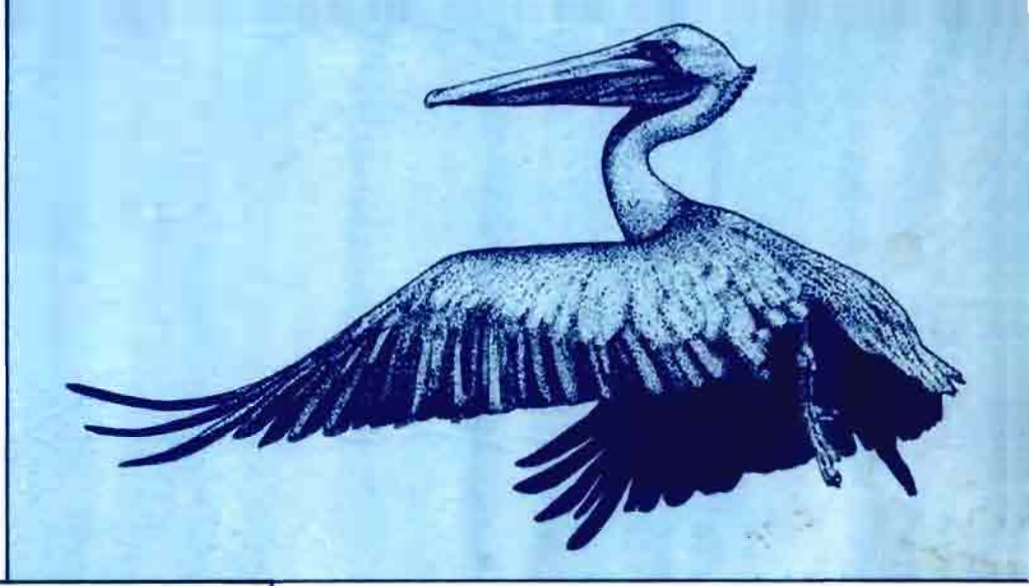

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African wetlands and shallow water bodies

Zones humides et lacs peu profonds d'Afrique

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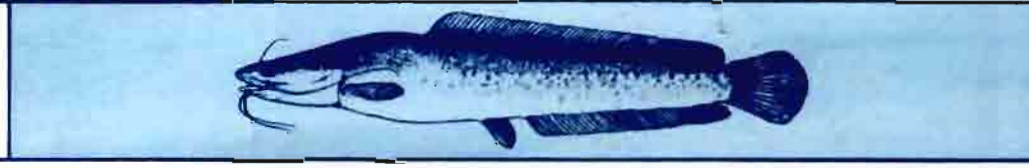

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