

usually attributed to the light-emitting powers of minute organisms. On the other hand, it is stated<sup>1</sup> that the investigations of Ehrenberg and Lortet show the existence of "certain inferior organisms and microbes" in the Dead Sea.

NORTHERN  
AFRICA.

The inland drainage area of Northern Africa (Sahara and Sudan) covers an area of about 3,450,000 square miles (see fig. 65).

The Sahara, the largest continuous desert on the earth's surface, stretches across the continent of Africa eastwards from the Atlantic for a considerable distance on both sides of the Tropic of Cancer, and forms part of the great arid belt extending across the Old World from north-eastern Asia to the borders of the Atlantic Ocean. To the north, in Morocco and Algeria, the limits of the region are defined by the Atlas range, but in other directions the boundaries are vague, and in the south the desert merges gradually and irregularly into the well-watered plains of the Sudan. The Sahara is a region of varied surface and irregular relief, ranging in altitude from 100 feet below sea-level to some 5000 or 6000 feet above it, and containing, besides sand-dunes and oases, rocky plateaus and ranges of hills.

Sahara.

The lakes of the Sahara are termed Shotts or Sebkas; they are shallow, have no outlet, and are very salt, and in summer the heat of the sun often causes the water to evaporate, leaving behind a white sea of salt crystals. The streams flowing southward from the Atlas Mountains are diverted for irrigation purposes, so that the Shotts only receive their waters after the copious rains of winter and the melting of the snow in the mountains. Shott el Melrir, Shott el Gharsa, Shott el Jerid, and Shott el Fejej form a series of marshes or shallow lagoons extending from the south of Biskra (lat. 35° N., long. 5° E.) eastwards to the Gulf of Cabes, and occupy a depression below the level of the sea. At one time it was proposed by the French engineer, Colonel Roudaire, to flood this region. Shott el Melrir occupies the bottom of the depression, and in summer its surface is partly covered with a coating of salt crystals, while its floor is covered by black, viscous mud emitting an odour of garlic, due possibly to the presence of volatile sulphur compounds; veins of more solid ground form natural causeways. Shott el Jerid is the largest, and with its eastern extension, the Shott el Fejej, covers an area of several hundred square miles. It lies about 60 feet below the sea, with which it seems formerly to have communicated through a now nearly dry coast stream.

When on my way to Tuggurt in May 1900, I arrived on the cliff overlooking the Shott el Melrir late in the afternoon. The Shott was then a vast white expanse, which reminded me of the view of the Arctic Ocean from Flemish Cap at the north of Spitzbergen. Early

<sup>1</sup> Gautier, art. "Dead Sea" in *Encycl. Biblica*, vol. i. col. 1044, 1899.