

of the Caspian Sea, according to Knipovitsch,¹ are found nowhere else in the world. In its general character the fauna recalls that of a fresh-water lake rather than that of a true sea. Fresh-water fish, crustacea, and many plankton organisms met with in lakes and rivers are found; but there are also many typical marine organisms, which are not new arrivals but old inhabitants.² G. O. Sars believes that the Caspian may be considered as a centre of creation for plankton crustacea, and thinks that this evolution is still going on.³ Seals and sturgeons are among the vertebrates represented; they are relics of the time when the Caspian Sea was united with the Black Sea, and probably also with the Sea of Aral, to form an immense sea, which had obtained its fauna from the ocean at a still more ancient time. The character of the fauna of the Caspian Sea changed in accordance with the lesser degree of salinity and the almost complete isolation of the basin. It became more and more peculiar, although 24·5 per cent. of the species are still met with in the Black Sea.⁴ What is especially interesting is that the species common to the two seas are just those species which characterise the fauna of the shallow waters of the Black Sea; but as the water of the Caspian is comparatively fresh, and is not exposed to the invasion of foreign species from the Mediterranean, these forms are not limited to the estuaries of rivers, as in the Black Sea, but are found everywhere in the upper waters. The fauna of the Caspian Sea may be regarded as an ancient fauna relatively only slightly modified since remote times, the conditions of existence in the basin remaining nearly uniform since prehistoric epochs. The northern portion of the Caspian, which experiences severe frosts and is too shallow to store up large amounts of heat in the summer, freezes for three or four months along the shores, but in the middle portion ice appears only when it is brought down by northerly winds.

Lake Elton (or Yelton) is situated in the northern part of the Caspian depression, between the Volga and the Ural, a steppe region, studded with salt lakes, and so largely encrusted with salt that the rivers emptying themselves into these lakes are in some cases strongly saline. It is fed by the river Charysacha, which has 5 per cent. of saline constituents in its waters—that is, nearly a half more than the waters of the ocean—and is estimated to contribute nearly 22,000 tons of salt every year to the lake. From Lake Elton and the

¹ See Schokalsky and Schmidt, *Aperçu sur les Explorations scientifiques des Mers et des Eaux douces de l'Empire russe*, Section scientifique, Expos. Maritime Internat., Bordeaux, 1907, p. 34.

² See p. 358.

³ "On the Polyphemidae of the Caspian Sea," *Ann. Mus. Zool. St. Pétersb.*, t. vii. p. 31, 1902.

⁴ See Schokalsky and Schmidt, *op. cit.*, p. 35.