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The Charophytes of Israel: historical and contemporary species richness, distribution, and ecology

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Abstract

The historical and contemporary species richness, distribution, and ecology of Israel charophytes are described. The first charophyte collection in this region was made in the 19th century. Almost all reported localities were found earlier than 1970; some of them were not described. At the end of the 20th century, only two localities of two species were reported. According to the literature, 13 species, including two undetermined species of *Chara*, and nearly 23 exact localities are known from Northern and Central Israel. We found seven species and one variety of charophytes in 23 new localities in eight river drainage basins from six

ecological regions of Israel during the period extending from 2001-2011. One genus *Tolypella*, and two species *Chara intermedia* and *Tolypella glomerata*, were found for the first time in Israel. There are 15 species and four genera of charophytes known from the studied territory based on published and original data. The common habitats of charophytes in Israel are river channels, pools, and, especially, artificial water bodies. The *Chara vulgaris* var. *longibracteata*, *C. gymnophylla* and *C. contraria* are the most frequently encountered species. The species ecology is briefly characterized by selected environmental variables. It may be that charophytes are rather rare plants in Israel and that their distribution in space and time is strongly variable due to the absence of large water bodies in this region, great variability of natural environmental conditions and severe continuous transformations of the environment by human activity for millennia.

Keywords:

[charophytes](#); [Israel](#); [species diversity](#); [distribution](#); [ecology](#)

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