Cymbomonas tetramitiformis is a marine prasinophycean green alga that bears a single chloroplast and lacks a cell wall (1). Within the prasinophytes, a paraphyletic assemblage of green algae that typically display features that are considered plesiomorphic for the Chloroplastida (green algae plus land plants), C. tetramitiformis falls into the order Pyramimonadales (prasinophycean clade 1), which also includes Halosphaera, Pyramimonas, and Pterosperma (2). Unlike most other green algae, C. tetramitiformis retains the capacity to feed on bacteria while harvesting energy via photosynthesis (3).

C. tetramitiformis PLY262, acquired from the Plymouth Culture Collection of Marine Microalgae, was grown in f/2-Si at 18°C with a 12-h light/dark cycle. The total algal DNA was extracted using a Qiagen QIAamp minikit, according to the tissue-DNA protocol, and sent to the New York Genome Center (New York, NY) for whole-genome shotgun library preparation and sequencing using a Qiagen QIAamp minikit, according to the tissue-DNA protocol, and sent to the New York Genome Center (New York, NY) for whole-genome shotgun library preparation and sequencing into a circular-mapping molecule of 84,524 bp in length (1,200-fold coverage), with a G+C content of 37%. The genome was extracted with a total of 105 genes, including 76 protein-coding genes, 26 tRNAs, and 3 rRNAs. The region that contains three rRNAs and two tRNAs appears twice in the genome in the inverted orientation, the structure that is also found in the chloroplast DNA (cpDNA) of other prasinophyte and streptophyte algae (12). No introns were detected. A notable feature of C. tetramitiformis, unlike the closely related Pyramimonas parkeae (13), is the absence of all three genes (chlL, chlB, and chlN) encoding subunits of light-independent protochlorophyllide oxidoreductase (LIPO) either in the chloroplast or nuclear genome (GenBank accession no. LGRX00000000). In fact, the loss of this gene set has been reported from cpDNA of a diverse range of photosynthetic eukaryotes, including the prasinophytes Micromonas pusilla and Ostreococcus tauri, as well as members of chlorarachniophytes, euglenids, rhodophytes, cryptophytes, haptophytes, stramenopiles, dinoflagellates, and chromerids (14). The oxygen sensitivity of LIPO (15) may at least partially explain such multiple independent losses of LIPO genes in response to the increased level of atmospheric oxygen since the origins of eukaryotic algae.

**Nucleotide sequence accession number.** The assembled chloroplast genome sequence of C. tetramitiformis has been archived at GenBank with the accession number KX013545.

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