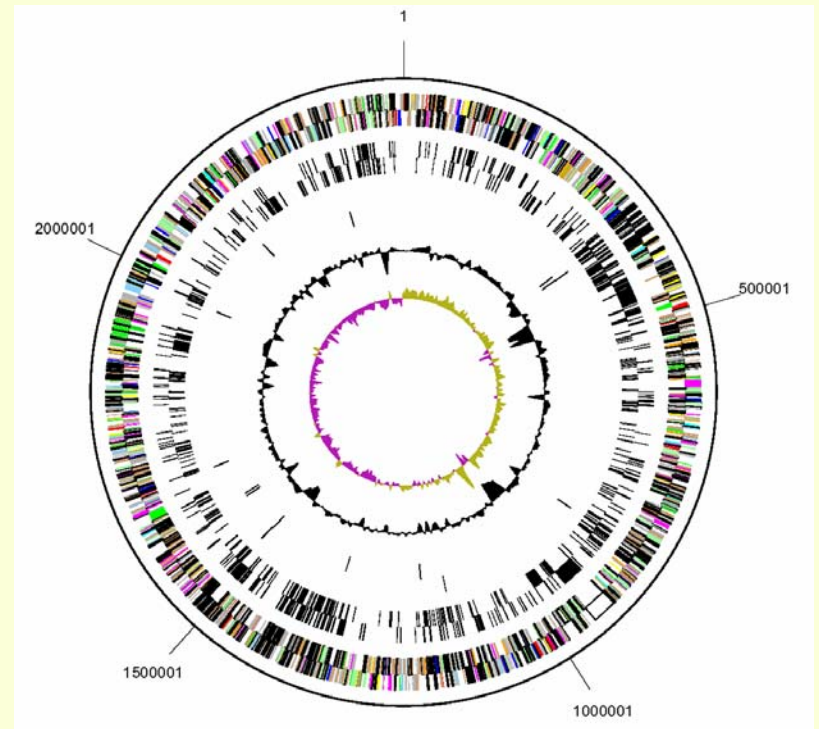


Microbes' "Blueprints" Promise Insights into Oceans, More

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Funding Source: DOE-OBBER

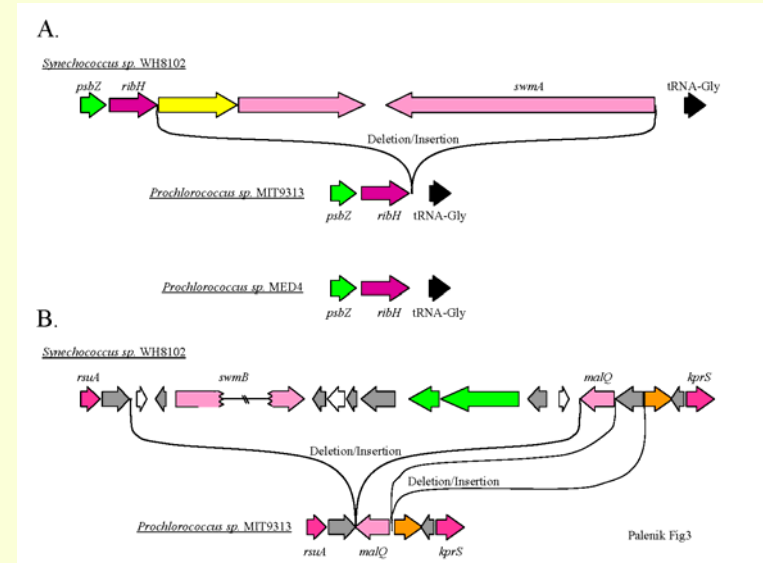
- Cyanobacteria are the smallest, most abundant photosynthetic organisms in world's oceans
- Most species belong to two genera: *Synechococcus* and *Prochlorococcus*
- Analysis of genome sequence of these ecotypes reported in adjoining letters in August 13 online issue of *Nature*



The chromosome of *Synechococcus* sp. Strain WH8102.

Microbes' "Blueprints" Promise Insights into Oceans, More (contd.)

- Letters authored by consortia of researchers at universities and DOE facilities; sequencing by DOE's Joint Genome Institute; annotation of genome sequences – identification of genes and deducing their function – performed by Life Sciences Division's Genome Analysis Group
- Genome sequences reveal basis for the physiological adaptation of each species to their respective niche in the ocean water column
- Challenge remains to understand selective pressures leading to rich diversity of life in oceans



Organization of two chromosomal regions in WH8102 that contain motility genes.