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The abundance and diversity of groundwater microflora in the Tono Uranium Mine area, central Japan.

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Abundance and diversity of the groundwater microbes were studied in the Tono area. Groundwater samples were collected in the sedimentary rocks and the granite rock. Total counts were x 10 6 cells ml-1, and viable counts were found to be 2-58%. Genes encoding the enzyme involved in sulfate reduction were detected from the depths of 132 and 153 m, and bacterial DSR genes were found both in the 132 and 153 m samples, whereas Archaeal DSR genes were found only in the 153 m sample. The depth 132 m was characterized by enrichment of framboidal pyrite which is often associated with microbial activity. On the other hand, the depth 153 m was unique microbial environment, as shown by the occurrence of Archaeal DSR genes and the 16S rRNA genes related to the uncultured bacteria from Yellowstone.