



Corrigendum: Ancient and Modern Geochemical Signatures in the 13,500-Year Sedimentary Record of Lake Cadagno

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A Corrigendum on

Ancient and Modern Geochemical Signatures in the 13,500-Year Sedimentary Record of Lake Cadagno

by Berg, J. S., Lepine, M., Laymand, E., Han, X., Vogel, H., Morlock, M. A., Gajendra, N., Gilli, A., Bernasconi, S. M., Schubert, C. J., Su, G., and Lever, M. A. (2022). *Front. Earth Sci.* 9:754888. doi: 10.3389/feart.2021.754888

In the original article, there was a mistake in **Figure 1** as published. In the age model the x-axis scale was incorrect due to an outdated calibration. The corrected **Figure 1** appears below.

In the original article, there was also a mistake in **Figure 6** as published. The black line delimiting surface and euxinic sections was misplaced and should lie below 44 cm. The corrected **Figure 6** appears below.

In the original article, there was an error in the text. The dates corresponding to sediment depth 760 and 780 cm were incorrectly transcribed throughout the text.

A correction has been made to the section **Results**, sub-section “Lithological description and age model for Lake Cadagno sediment cores”, Paragraph 1:

“The chronology of the 2019 core composite is based on 9 radiocarbon dates which were transferred from the previously studied 2009 Lake Cadagno core succession (Wirth et al., 2013). Transfer of dates is based on aligning the characteristic lithologies from which the dates were obtained between the two composite sediment core successions. Upon age-depth modeling using linear interpolation and the clam R software package (Version 2.4.0; Blaauw, 2010), ¹⁴C ages were converted into calibrated ¹⁴C ages (cal kyr BP) using the IntCal20 calibration curve (Reimer et al., 2020). We removed event deposits (flood layers, slumps) >2 mm prior to age-depth modelling and reinserted these into the chronostratigraphy following age-depth modeling using a constant age for each individual deposit.”

Another correction has been made to the section **Results**, sub-section “Lithological description and age model for Lake Cadagno sediment cores”, Paragraph 1:

“The radiocarbon ages of the lacustrine sediment succession from 780 cm to the sediment-water interface documents continuous sedimentation during the past ~12.5 kyrs (**Figure 1**). Based on this age-model we estimate the duration of the transition period with Mn-oxide layer

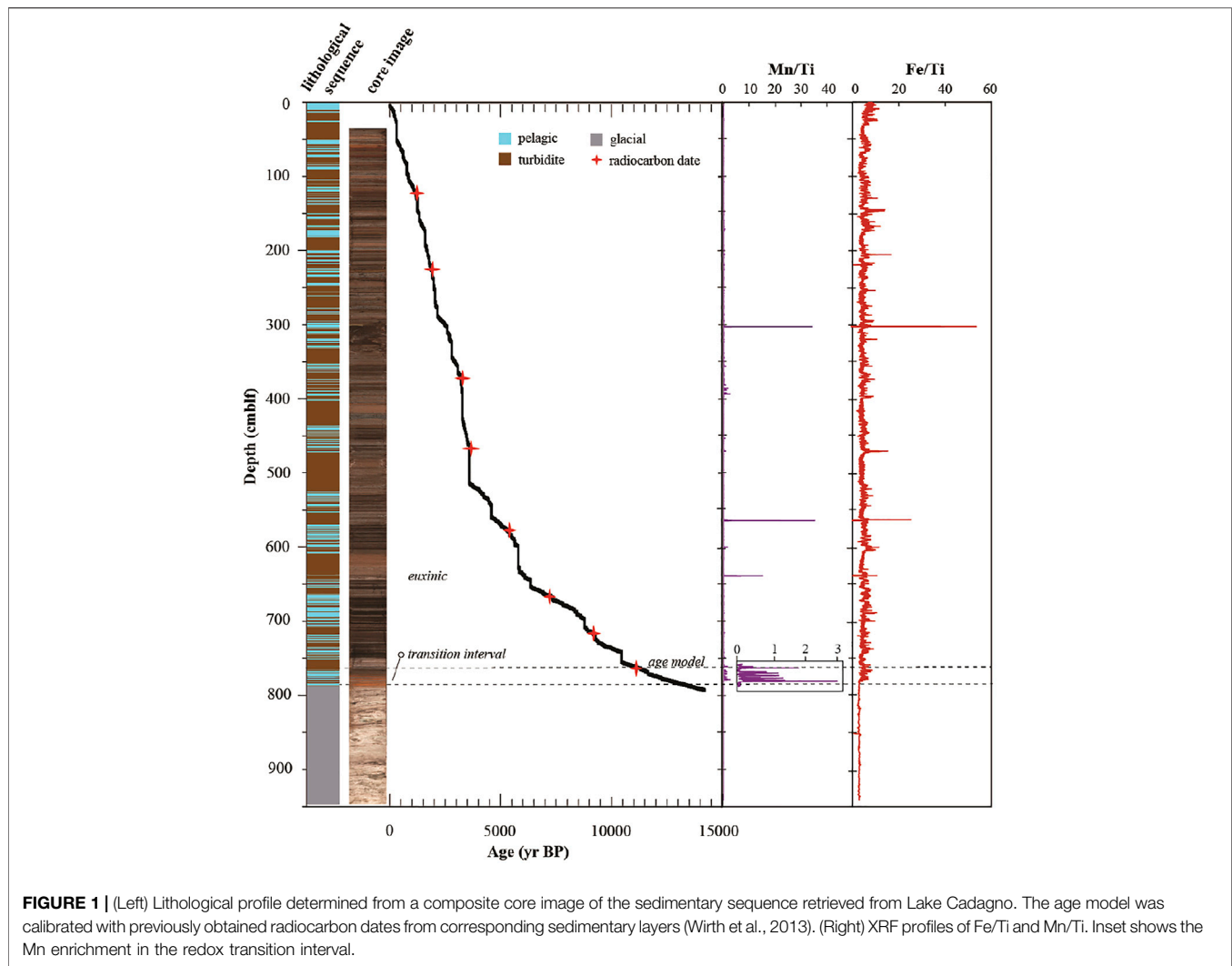


FIGURE 1 | (Left) Lithological profile determined from a composite core image of the sedimentary sequence retrieved from Lake Cadagno. The age model was calibrated with previously obtained radiocarbon dates from corresponding sedimentary layers (Wirth et al., 2013). (Right) XRF profiles of Fe/Ti and Mn/Ti. Inset shows the Mn enrichment in the redox transition interval.

deposition to have lasted between ~12.5 (780 cm) to ~10.9 (760 cm) kyrs BP. Euxinic conditions persisted continuously since 10.9 (760 cm) kyrs BP.”

A correction has been made to the section **Results**, sub-section “Geochemical gradients across the 13.5-kyr subsurface sedimentary record”, Paragraph 3:

“The distinct chemical and isotopic changes between 670 and 790 cm appear to be associated with a lithological transition at 760–780 cm associated with a large Mn excursion (**Figure 1**), which corresponds to the anoxic-oxic transition period at 10.9–12.5 kyrs.”

A correction has been made to the section **Discussion**, Paragraph 2:

“Sediment deposited during the anoxic-oxic transition period 10.9–12.5 kyrs (780–760 cm) is rich in Mn-, carbonate, and

organic matter indicating a change in lake stratification conditions.”

A correction has also been made to the section **Discussion**, sub-section “Euxinic and redox transition sediment geochemistry and microbiology reflect depositional conditions”, Paragraph 2:

“The Mn-rich layers just below (760–780 cm) correspond to the redox transition period from 12.5 to 10.9 kyrs. The sediment region corresponding to the onset of complete anoxia at 10.9 kyrs (760 cm) is characterized by a higher content of TOC (Figure 2A), which was likely preserved due to decreased remineralization during anoxia, enhanced primary productivity due to warming and deglaciation.”

The authors apologize for these errors and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

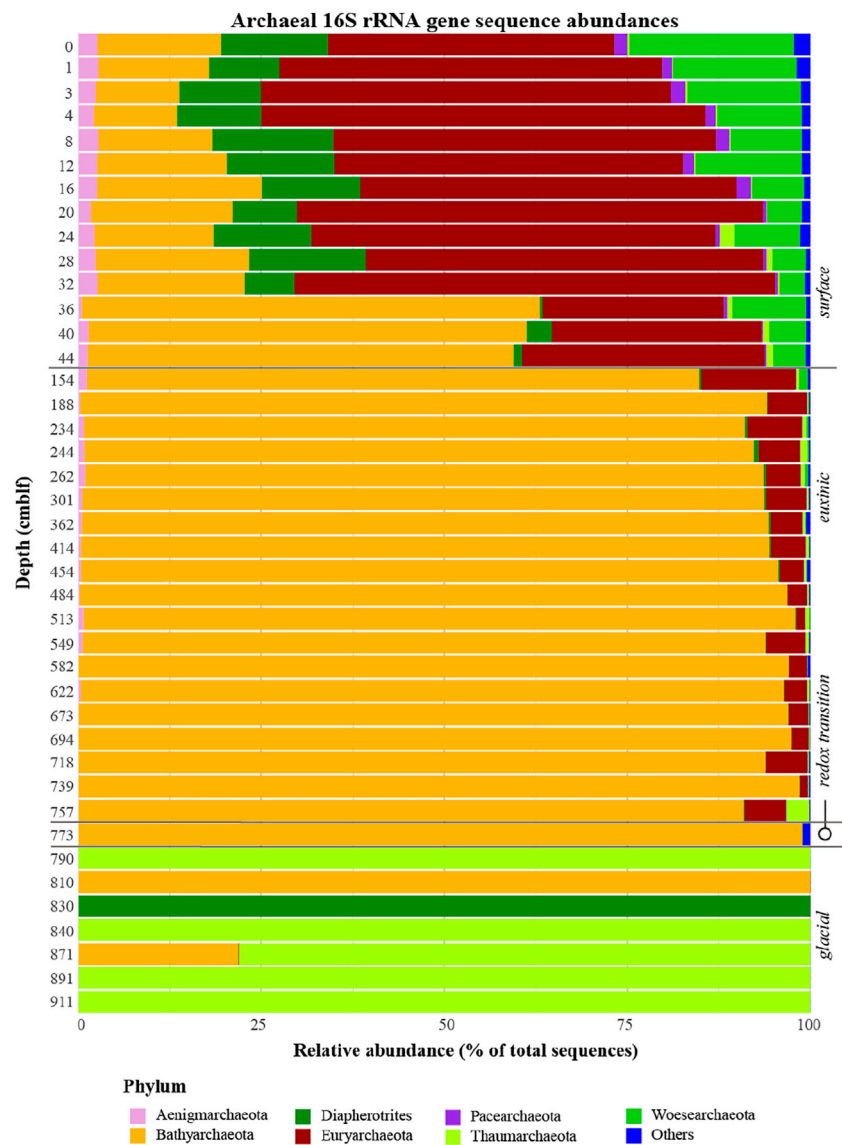


FIGURE 6 | Relative abundances of Archaeal 16S rRNA gene sequences with depth. Sediment geological transitions are indicated on the right.

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