

Profile A  
March 2021

Profile B  
May 2021

Profile C  
July 2021

Profile D  
August 2020

Profile E  
August 2021

(a1)

(b1)

(c1)

(d1)

(e1)

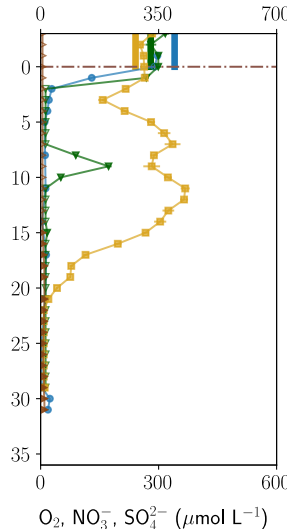
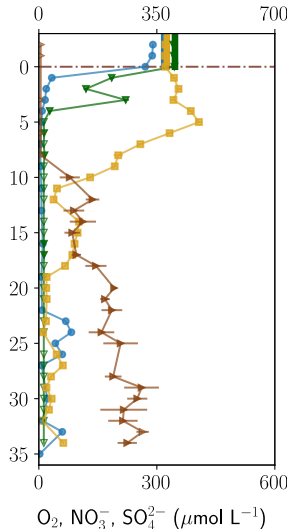
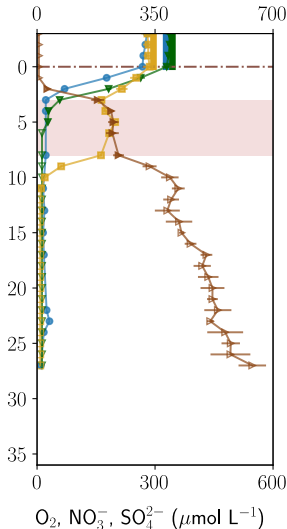
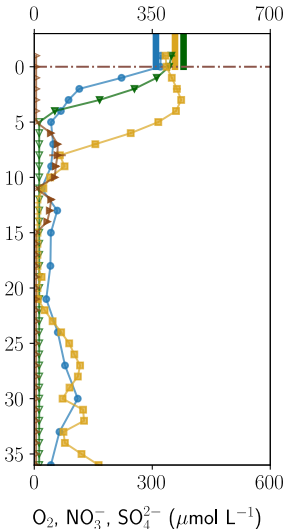
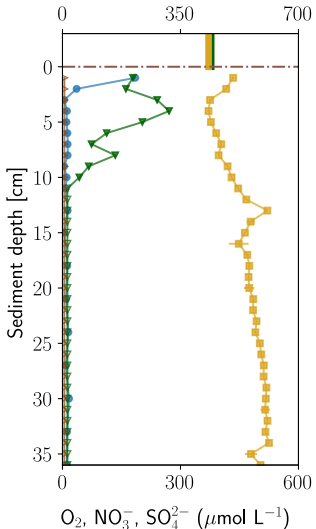
$\text{NH}_4^+$  ( $\mu\text{mol L}^{-1}$ )

$\text{NH}_4^+$  ( $\mu\text{mol L}^{-1}$ )

$\text{NH}_4^+$  ( $\mu\text{mol L}^{-1}$ )

$\text{NH}_4^+$  ( $\mu\text{mol L}^{-1}$ )

$\text{NH}_4^+$  ( $\mu\text{mol L}^{-1}$ )



(a2)

(b2)

(c2)

(d2)

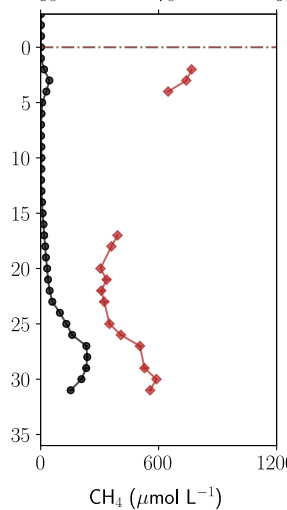
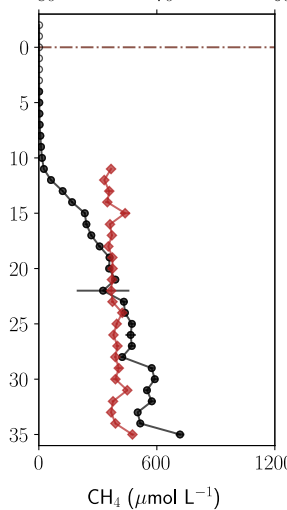
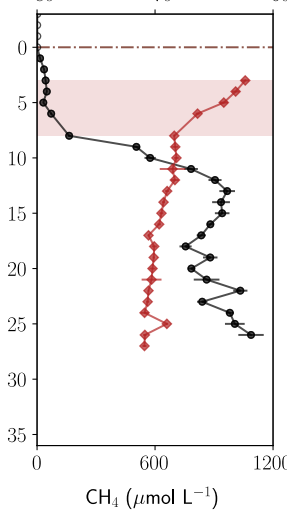
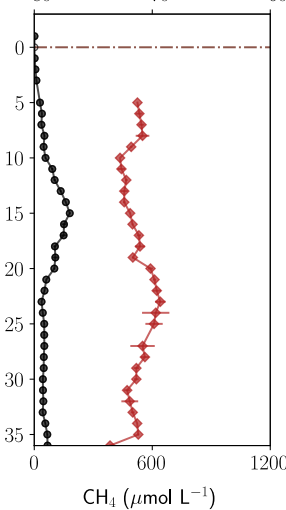
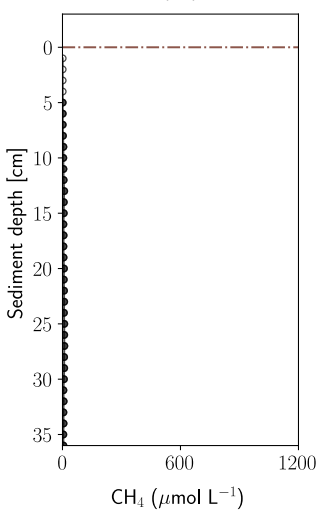
(e2)

$\delta^{13}\text{C-CH}_4$  (‰)

$\delta^{13}\text{C-CH}_4$  (‰)

$\delta^{13}\text{C-CH}_4$  (‰)

$\delta^{13}\text{C-CH}_4$  (‰)



(a3)

(b3)

(c3)

(d3)

(e3)

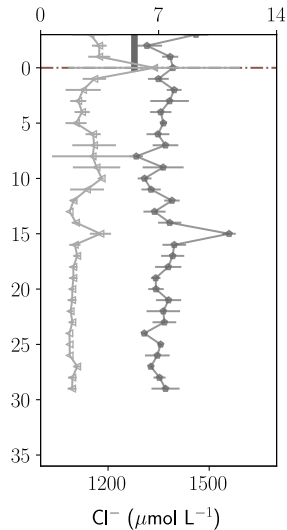
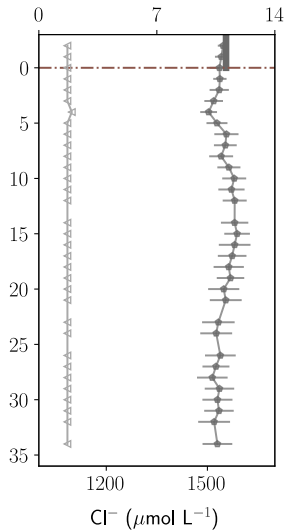
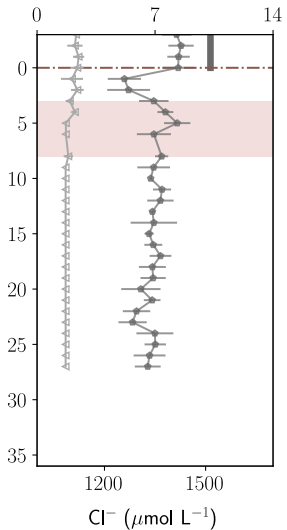
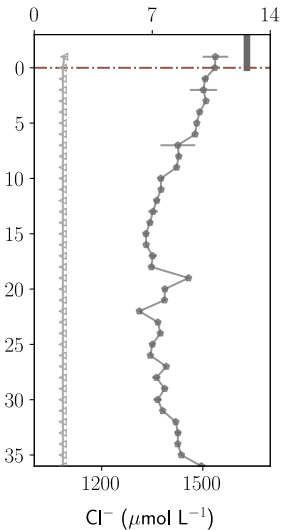
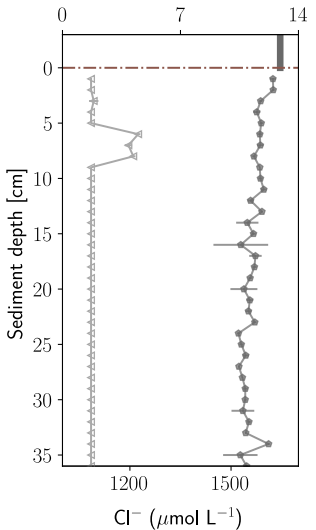
$\text{NO}_2^-$  ( $\mu\text{mol L}^{-1}$ )

$\text{NO}_2^-$  ( $\mu\text{mol L}^{-1}$ )

$\text{NO}_2^-$  ( $\mu\text{mol L}^{-1}$ )

$\text{NO}_2^-$  ( $\mu\text{mol L}^{-1}$ )

$\text{NO}_2^-$  ( $\mu\text{mol L}^{-1}$ )



--- sediment-water interface

○ O<sub>2</sub>    ▽ NO<sub>3</sub><sup>-</sup>    □ SO<sub>4</sub><sup>2-</sup>    ▸ NH<sub>4</sub><sup>+</sup>    ◆ δ<sup>13</sup>C-CH<sub>4</sub>    ● CH<sub>4</sub>    ● Cl<sup>-</sup>    ▹ NO<sub>2</sub><sup>-</sup>