

ERRATA

Limnol. Oceanogr., 46(6), 2001, 1578
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Rate of growth of isolated bubbles in sediments with a diagenetic source of methane

In the course of deriving the equations for the growth of a nonspherical bubble, we have become aware of an error in our model that has propagated into the results of Boudreau et al. (2001). Specifically, a factor of two was placed in a denominator of Eq. (11) rather than the numerator, i.e., the correct form should be

$$\frac{dR}{dt} = \frac{\varphi D}{R c_g} \left[\frac{S R_1^2}{6D} + (c_1 - c_o) \right] \quad (11)$$

Thus, Eq. (12), and the equation in the abstract of the paper, should read as

$$R(t) = \left[\frac{2\varphi D}{c_g} \left\{ \frac{S R_1^2}{6D} + (c_1 - c_o) \right\} t + R_o^2 \right]^{1/2} \quad (12)$$

Likewise, the nonsource limit ($S = 0$) should read as

$$R(t) = \left[\frac{2\varphi D(c_1 - c_o)t}{c_g} + R_o^2 \right]^{1/2} \quad (13)$$

Because we had Scriven (1959) as a source, we should have realized the error earlier, and we apologize for this oversight.

The bubble radii in Figs. 1–3 are too small by a factor of 2 for a given value of time t , under the assumption that $R_o = 0$. Alternatively, the curves in these figures predict the correct bubble radius if the values on the time axis are divided by a factor of 4, again for the condition that $R_o = 0$. Consequently, we now predict that the observed deep bubbles grow monthly rather than seasonally, which significantly improves our predictions with regard to observed sizes

at Cape Lookout Bight. Interestingly, these results are generally more reassuring: we had difficulty understanding how a sufficient supply of bubbles could be produced to match the commonly observed release rate of bubbles in late summer. The greater rates now predicted are better able to explain this observation, while not contradicting the appearance of large bubbles at the end of the summer, i.e., the culmination of the period of the highest rates of methanogenesis.

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Received: 8 May 2001

Limnol. Oceanogr., 46(6), 2001, 1578
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Size structure and the production/respiration balance in a coastal plankton community

The units for rates of production and respiration are incorrect in Smith and Kemp (2001). The units of all rates should be $\text{mmol O}_2 \text{ m}^{-2} \text{ d}^{-1}$, rather than $\mu\text{mol O}_2 \text{ m}^{-2} \text{ d}^{-1}$. This error affects Table 1 and Figs. 2 and 3, plus the associated text. The overall conclusions of the paper remain unchanged.

References

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Received: 4 June 2001