Addendum

To the article. *Polylogarithms in the field of omega (a root of a given cubic): Functional equations and ladders*, by M. Abouzahra, L. Lewin and Xiao Hongnian
Aequationes Math. 33 (1987), 23–45.

Section 11 of the above-titled paper concluded with the conjecture that there probably existed a valid result at the 9th order, but which had not been located by the authors because, it was believed, the needed coefficients were outside their practicable search range.

Using a much more efficient search algorithm, colleagues at the University of New South Wales, Kensington, Australia, have come up with the following result, which completes this sequence of polylogarithmic ladders through the 9th order:

$$7055 A_9 + 3307 B_9 + 50,284,867,249,200 \zeta(9) = 0 \quad (1)$$

(For the definition of A_9 and B_9 , see the referenced paper.)

The calculations were made by David Hunt and by Georges Szekeres,¹ to whom I am most grateful for the information.

It may be noticed that the peculiar and unexplained appearance of the factor 17 in the earlier formulas, and in the prior coefficients of $\zeta(7)$ and $\zeta(8)$, continues here in both the coefficients of $\zeta(9)$ and also of A_9 , though not in 3307, the (prime) coefficient of B_9 .

AMS (1980) subject classification:

Manuscript received December 2, 1987.

¹ Private correspondence, November 9, 1987.