1093-05-17   **Xi Chen** and **Bruce E Sagan*** (`sagan@math.msu.edu`), Department of Mathematics, Michigan State University, East Lansing, MI 48824. *On the fractal nature of the Fibonomial triangle.* Preliminary report.

It is well known that Pascal's triangle exhibits fractal behavior when reduced modulo a prime. We show that the triangle of Fibonomial coefficients has a similar nature modulo two. Specifically, for any $m \geq 0$, the subtriangle consisting of the first $3 \cdot 2^m$ rows is duplicated on the left and right sides of the next $3 \cdot 2^m$ rows, with an inverted triangle of zeros in between. We give three proofs of this fact. The first uses a combinatorial interpretation of the Fibonomials due to Sagan and Savage. The second employs an analogue of Lucas' congruence for the parity of binomial coefficients. The final one is inductive. We also use induction to show that the Fibonomial triangle has a similar structure modulo three. We end with some open questions. (Received June 03, 2013)