Complex trees and the internal structure of M_2

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In 1985, Barnsley and Harrington defined a "Mandelbrot Set" M_2 that can be identified with the closure of the set of roots of polynomials with coefficients in $\{-1, 0, 1\}$. In 2014 Calegari, Koch and Walker introduced the technique of *traps* in order to prove Bandt's conjecture that the interior points are dense away from the real axis. We now conjecture a much simpler condition to certify interior points of M_2 by exploiting a method based on the underlying complex tree structure of the limit set. Our main result is the hierarchical structure of the interior of M_2 defined by the algebraic curves that partially prove our conjecture.