1033-54-242   **John C Mayer*** (`mayer@math.uab.edu`), Dept. of Mathematics, University of Alabama at Birmingham, Birmingham, AL 35294. *Buried points in rational Julia sets.* Preliminary report.

The Julia set of a rational map of a complex variable of degree at least 2 is the set of unstable points in the Riemann sphere under iteration of the map. The Julia set is always non-empty, compact, and perfect. We consider those maps for which it is also connected and not the whole sphere. In the case that the Julia set has a complement with infinitely many components, it may be that the Julia set is not the union of the boundaries of these components. In that case the Julia set is said to have *buried points*. We study the topological structure of buried points. For example, they may be homeomorphic to the irrationals, or to the so-called irrational points of the Sierpinski plane curve. (Received September 11, 2007)