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Jennifer Chubb* (jennifer.chubb@gmail.com), Dept. of Mathematics, Monroe Hall, Room 240, 2115 G St. NW, Washington, DC 20052. *Computable partitions of trees.*

We examine computability theoretic properties of a version of Ramsey's theorem adapted to trees. If linearly ordered n -tuples of nodes in the binary tree are colored with k colors, then there exists a monochromatic subtree isomorphic to the full binary tree. (Here, a subtree is any subset of nodes.) If the coloring in question is computable, we are able to establish a bound on the complexity of the monochromatic subtree. In particular, if n -tuples of nodes are computably colored with k colors, there is a Π_n^0 monochromatic subtree. Furthermore, this bound is sharp in the sense that for any n there is a computable coloring of n -tuples of the binary tree for which there is no Σ_n^0 monochromatic subtree. This is from joint work with Jeff Hirst and Timothy McNicholl. (Received August 18, 2008)