We construct a continuum $X$ which not irreducible, and which admits a monotone map $f$ onto $[0,1]$ such that $f$ is monotonically irreducible in the following sense: For each closed proper subset $D$ of $X$ such that $f(D) = [0,1]$, $f$ restricted to $D$ is not monotone. The example answers a question by L. Mohler and L. E. Ward. (Received August 03, 2009)