Christopher Richardson* (crichardson@ksu.edu), 1404 Yuma St., Manhattan, KS 66502, and Chris Pinner and Todd Cochrane. A Generalization of the Goresky-Klapper Conjecture.

For a fixed integer $n$, we show that a permutation of least positive residues of $f(x) = Ax^k \mod p$ cannot map a residue class mod $n$ to just one residue class mod $n$ for sufficiently large $p$, other than the maps $f(x) = \pm x$ and $f(x) = \pm x^{p+1 \over 2} \mod p$. (Received September 26, 2017)