Aaron M Yeager* (amydm6@mail.missouri.edu), 1036 Southpark Dr. apt 1, columbia, MO 65201, and William Banks (bankswd@missouri.edu) and Ahmet Güloğlu (guloglua@fen.bilkent.edu.tr). Carmichael meets Chebotarev.

We show that for any finite Galois extension K of the rational numbers \mathbb{Q} , there are infinitely many Carmichael numbers composed solely of primes for which the associated class of Frobenius automorphisms coincides with any given conjugacy class of $\operatorname{Gal}(K|\mathbb{Q})$. This result implies that, for every natural number n, there are infinitely many Carmichael numbers of the form $a^2 + nb^2$ with a, b integers. (Received September 24, 2012)