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(however@alumni.caltech.edu) and **Michael E. Zieve**. *Nonisomorphic curves that become isomorphic over extensions of coprime degree.*

Let p be a prime and let $r > 1$ and $s > 1$ be integers that are coprime to one another. We show that there are curves C and D over a finite field K of characteristic p such that C and D become isomorphic to one another over the degree- r extension L of K and over the degree- s extension M of K , but not over any proper subextensions of L/K or M/K .

In particular, in the case where $r = 2$ and $s = 3$, we show that there are examples of such curves over every finite field. (Received September 15, 2007)