1070-11-137 **John Cullinan*** (cullinan@bard.edu), Department of Mathematics, Bard College, Annandale-On-Hudson, NY 12401, and **Allison Pacelli**, **Zev Chonoles**, **Fan Wei**, **Hannah Hausman** and **Sean Pegado**. *Arithmetic of generalized Riunka polynomials.*

For each integer $\ell \geq 3$ Rikuna defined a polynomial $r(\ell, x, t)$ over a function field $K(t)$ (with K satisfying some mild hypotheses) whose Galois group is isomorphic to $\mathbf{Z}/\ell$. Moreover, these polynomials are generic in the sense that every $\mathbf{Z}/\ell$-extension of K arises as a specialization of $r(\ell, x, t)$.

We generalize Rikuna's polynomials in the context iterated rational functions, show that they give rise to finitely-ramified iterated towers, and compute their Galois groups. (Received February 07, 2011)