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Elizabeth L Fitzgibbon* (elizabeth.fitzgibbon@salve.edu), Salve Regina University, 100 Ochre Point Ave, Newport, RI 02840. *Complex rational maps and the structure of Julia sets from accessible Mandelbrot sets.*

We observe many small copies of the well-known Mandelbrot set within the parameter space of the family of complex rational maps $z \mapsto z^n + \frac{\lambda}{z^d}$, where λ is a complex parameter and $n = d \geq 2$. An infinite number of these Mandelbrot sets are located around the boundary of the connectedness locus. It is possible to define parameter rays within the Cantor set locus which land on the cusps of these accessible Mandelbrot sets. Maps taken from the main cardioids of these sets have attracting periodic cycles. I will describe a method for constructing models of Julia sets corresponding to these maps. I will then discuss which models are allowable and how these models vary as λ is varied around the boundary of the connectedness locus. (Received September 16, 2014)