1119-11-40 **Igor Szczyrba*** (igor.szczyrba@unco.edu), School of Mathematical Sciences, University of Northern Colorado, Greeley, CO 80639. *What do the Golden Ratio and a crescent moon have in common?*

We introduce geometric representations of the sequence of the n-anacci constants and generalizations thereof that consist of the ratio limits generated by linear recurrences of an arbitrary order n with equal integer weights. We represent the n-anacci constants and their generalizations geometrically by means of the dilation factors of dilations transforming collections of compact *convex* sets with rising dimensions n. For instance, if we dilate unit n-balls with centers at (1,0,...,0), then the n-anacci constants lead to a collection of *non-convex* sets with centers of mass at (2,0,...,0). In particular, for n=2, the Golden Ratio determines the size of a crescent moon with the center of mass at (2,0). (Received January 31, 2016)