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Unipancyclic Matroids.

Based on the concept of uniquely pancyclic graphs, a unipancyclic (UPC) matroid of rank r consists of exactly one circuit of lengths 3 through $r + 1$. We begin by looking at Markström's results on the existence of UPC graphs before generalizing them to UPC matroids. We then apply the definition of matroid connectivity, given by Tutte, to determine the connectivity for all UPC matroids, regardless of representability. (Received September 19, 2015)