

Unavoidable minors of large 3-connected matroids

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We show that for every integer $n > 2$ there exists an integer $N(n)$ such that every 3-connected matroid with at least $N(n)$ elements has a minor isomorphic to one of the following matroids: an $(n+2)$ -point line or its dual, the cycle or cocycle matroid of $K_{3,n}$, the cycle matroid of the wheel with n spokes, a whirl of rank n , or an n -spike. A matroid is an n -spike if it has rank n and consists of n three-point lines through a common point such that for all k in $\{1, 2, \dots, n-1\}$, the union of every set of k of these lines has rank $k+1$.