1067-05-926   **Peter Nelson*** (`apnelson@uwaterloo.ca`) and **Jim Geelen**. *Growth rates in minor-closed classes of matroids.*

It is a well-known result of Mader that in any proper minor-closed class of graphs, the number of edges of a simple graph in the class is bounded by a linear function in its number of vertices, where the function depends only on the class itself. Analogous questions can be asked about the density of matroids in a minor-closed class.

Work of Geelen, Kabell, Kung and Whittle has yielded the 'Growth Rate Theorem', which gives a elegant description of the possible growth rates of minor-closed classes of matroids not containing arbitrarily long lines, dividing the classes into those that are linearly, quadratically and exponentially dense.

I will discuss the extension of the ideas in this theorem to the more general notion of minor-closed classes not containing arbitrarily large uniform matroids of a fixed rank, focusing on the linear and exponential cases. (Received September 16, 2010)