**Robertson, Neil**; **Seymour, P. D.**

**Graph minors. XIX: Well-quasi-ordering on a surface.** (English) Zbl 1035.05086

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Authors' abstract: In a previous paper [J. Comb. Theory, Ser. B 48, 255–288 (1990; Zbl 0719.05033)] we showed that for any infinite set of (finite) graphs drawn in a fixed surface, one of the graphs is isomorphic to a minor of another. In this paper we extend that result in two ways: (1) We generalize from graphs to hypergraphs drawn in a fixed surface, in which each edge has two or three ends. (2) The edges of our hypergraph are labelled from a well-quasi-order, and the minor relation is required to respect this order. This result is another step in the proof of Wagner's conjecture, that for any infinite set of graphs, one is isomorphic to a minor of another.

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