1060-05-27 **Daniel W. Cranston*** (dcranston@vcu.edu), Department of Math & Applied Math, 1015 Floyd Avenue, Richmond, VA 23284, and **Joan Hutchinson**, **Anja Pruchnewski**, **Michael Stiebitz**, **Zsolt Tuza** and **Margit Voigt**. *List colorings of K_5-minor-free graphs with special list assignments.*

A *list assignment* L of G is a function that assigns to every vertex v of G a set (list) $L(v)$ of colors. The graph G is called *L-list colorable* if there is a coloring φ of the vertices of G such that $\varphi(v) \in L(v)$ for all $v \in V(G)$ and $\varphi(v) \neq \varphi(w)$ for all $vw \in E(G)$.

We consider the following question of Bruce Richter, where $d(v)$ denotes the degree of v in G:

Let G be a planar, 3-connected graph that is not a complete graph. Is G L-list colorable for every list assignment L with $|L(v)| = \min\{d(v), 6\}$ for all $v \in V$?

More generally, we ask for which pairs (r, k) the following question is answered in the affirmative. Let r and k be integers and let G be a K_5-minor-free r-connected graph that is not a Gallai tree. Is G L-list colorable for every list assignment L with $|L(v)| = \min\{d(v), k\}$? Recall that a *Gallai tree* is a graph G such that every block of G is either a complete graph or an odd cycle.

We study this question by considering the components of $G[S_k]$, where $S_k := \{v \in V(G) \mid d(v) < k\}$ is the set of vertices with small degree in G. We are especially interested in the minimum distance $d(S_k)$ in G between the components of $G[S_k]$. (Received February 12, 2010)