1086-05-2841 **Senmei Yao*** (syao93@marianuniversity.edu), 45 South National Avenue, Fond du Lac, WI 54935. *Group Connectivity of Ryjáček's closure of claw-free graphs.*

Tutte introduced the theory of nowhere zero flows and showed that a plane graph G has a face k-coloring if and only if G has a nowhere zero A-flow, for any Abelian group A with $|A| \geq k$. In 1992 Jaeger et al extended nowhere zero flows to group connectivity of graphs: given an orientation D of a graph G, if for any $b\colon V(G) \mapsto A$ with $\sum_{v\in V(G)} b(v) = 0$, there always exists a map $f\colon E(G) \mapsto A - \{0\}$, such that at each $v \in V(G)$,

$$\sum_{e=vw \text{ is directed from } v \text{ to } w} f(e) - \sum_{e=uv \text{ is directed from } u \text{ to } v} f(e) = b(v)$$

in A, then G is A-connected. Let Z_3 denote the cyclic group of order 3. Jaeger et al conjectured that every 5-edge-connected graph is Z_3-connected. We proved that for a claw-free graph G with $\delta(G) \geq 7$, if $cl(G) \in \langle Z_3\rangle$, then $G \in \langle Z_3\rangle$. (Received September 25, 2012)