1117-05-258   **Baogang Xu** (`baogxu@njnu.edu.cn`), 1 Wenyuan Road, Nanjing, Jiangsu 210023, Peoples Rep of China, **Gexin Yu** (`gyu@wm.edu`), Department of Mathematics, The College of William and Mary, Williamsburg, VA 23185, and **Xiaoya Zha*** (`xzha@mtsu.edu`), Department of Mathematical Sciences, Middle Tennessee State University, Murfreesboro, TN 37132. *A note on chromatic number and induced odd cycles.*

An odd hole is an induced odd cycle of length at least 5. Scott and Seymour confirmed a conjecture of Gyárfás and proved that if a graph G has no odd holes then $\chi(G) \leq 2^{2^{\omega(G)+2}}$. Chudnovsky, Robertson, Seymour and Thomas showed that if G has neither K_4 nor odd holes then $\chi(G) \leq 4$. In this note, we show that if a graph G has neither triangles nor quadrilaterals, and has no odd holes of length at least 7, then $\chi(G) \leq 4$ and $\chi(G) \leq 3$ if G has radius at most 3. We also show that, for each vertex u of G, the set of vertices of the same distance to u induces a bipartite subgraph. This answers some questions by Plummer and Zha. (Received January 15, 2016)