The generalized Ramsey number $R(G_1, G_2)$ is the smallest positive integer $N$ such that any red-blue coloring of the edges of the complete graph $K_N$ either contains a red copy of $G_1$ or a blue copy of $G_2$. Let $C_m$ denote a cycle of length $m$ and $W_n$ denote a wheel with $n + 1$ vertices. In 2014, Zhang, Zhang and Chen determined many of the Ramsey numbers $R(C_{2k+1}, W_n)$ of odd cycles versus larger wheels, leaving open the case where $n = 2j$ is even and $k < j < 3k/2$. They conjectured that for these values of $j$ and $k$, $R(C_{2k+1}, W_{2j}) = 4j + 1$. In 2015, Sanhueza-Matamala confirmed this conjecture asymptotically, showing that $R(C_{2k+1}, W_{2j}) \leq 4j + 334$. In this paper, we prove the conjecture of Zhang, Zhang and Chen for almost all of the remaining cases. (Received September 16, 2016)