962-05-949 **Jeffrey S. Powell*** (jeffrey.powell@furman.edu), **Scott P. Martin** (scott.martin@furman.edu) and **Douglas F. Rall** (doug.rall@furman.edu), Dept. of Mathematics, Furman University, Greenville, SC 29613. *On the independence number of the Cartesian product of caterpillars.*

By considering the order of the largest induced bipartite subgraph of G, Hagauer and Klavžar were able to improve the bounds first published by V. G. Vizing in 1966 for the independence number of the Cartesian product $G\Box H$ for any graph H. In this paper, we study maximum independent sets in $G\Box H$ when G is a caterpillar, and derive bounds for the independence number when H is bipartite. The upper bound we produce is less than or equal to that obtained by Hagauer and Klavžar when H is also a caterpillar, and is shown to be strictly smaller when H comes from a restricted class of caterpillars.

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