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The famous Graph Reconstruction Conjecture states that every graph on n vertices can be uniquely determined given its deck of cards, i.e., the collection of induced subgraphs on $n - 1$ vertices. We examine a related problem posed by S. Ramachandran in which only a few cards are given, along with the degrees of the deleted vertices. We show that for caterpillars (connected graphs where deleting all the vertices of degree 1 leaves a path) we can reconstruct the graph given only one or two of these cards, with one exception. (Received September 13, 2008)