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A petal diagram of a knot or link consists of a center point surrounded by n non-nested loops; it represents n strands of the link at various heights which all project onto the same center point. Though every knot has a petal diagram, extremely few links have petal diagrams. The goal of this project is to characterize and enumerate which links do. First, we tabulate all petal links of 2-5 components. We then show all petal links arise as circle graphs – the intersection graph of a set of chords of a circle. This establishes lower bounds on the number of petal links and allows us to conjecture upper bounds. We then discuss using petal diagrams to model certain classes of knots and links. (Received August 29, 2016)