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Andrew Gainer-Dewar* (againerdewar@carleton.edu), Carleton College, Department of Mathematics, 1 North College Street, Northfield, MN 55057. *Γ -species and the enumeration of k -trees.*

We extend Joyal's theory of combinatorial species to incorporate information about 'structural' group actions, yielding an object we term a ' Γ -species' and an associated enumerative theory. We then apply this theory and associated techniques to enumerate unlabeled k -trees, resolving questions left open by Moon, Beineke, and Pippert in 1969. (Received September 24, 2012)