1049-20-91 **Matthew B Day*** (mattday@caltech.edu), Department of Mathematics, Caltech, Pasadena, CA 91125. *Symplectic structures on right-angled Artin groups: between the mapping class group and the symplectic group.*

We define a family of groups that include the mapping class group of a genus $g$ surface with one boundary component and the integral symplectic group $\mathrm{Sp}(2g, \mathbb{Z})$. We then prove that these groups are finitely generated. These groups, which we call mapping class groups over graphs, are indexed over labeled simplicial graphs with $2g$ vertices. The mapping class group over the graph $\Gamma$ is defined to be a subgroup of the automorphism group of the right-angled Artin group $A_\Gamma$ of $\Gamma$. We also prove that the kernel of the map $\mathrm{Aut}\, A_\Gamma$ to $\mathrm{Aut}\, H_1(A_\Gamma)$ is finitely generated, generalizing a theorem of Magnus. (Received February 24, 2009)