Leah R. Childers* (leah.chiliders@gmail.com), Mathematics Department, Pittsburg State University, 1701 S Broadway, Pittsburg, KS 66762. On Automorphisms of the Hyperelliptic Torelli Group.

The mapping class group is the group of orientation preserving homeomorphisms of a surface up to isotopy. A subgroup of the mapping class group of primary importance is the Torelli group, $\mathcal{I}(S_g)$, the kernel of the well-known symplectic representation of the mapping class group. We will discuss the structure of the symmetric (or hyperelliptic) Torelli group. More specifically, we will investigate the group generated by Dehn twists about symmetric separating curves denoted $\mathcal{H}(S_g)$. Elements of $\mathcal{H}(S_g)$ act naturally on the symmetric separating curve complex, $C_{\mathcal{H}}(S)$. We will discuss that when $g \geq 5$, $\text{Aut}(C_{\mathcal{H}}(S_g)) \cong \text{SMod}^{\pm}(S_g)/\langle \iota \rangle$, where SMod$(S_g)$ is the symmetric mapping class group and $\iota$ is a fixed hyperelliptic involution. Lastly we will give an algebraic characterization of Dehn twists about symmetric separating curves which will allow us to conclude that $\text{Aut}(\mathcal{H}(S_g)) \cong \text{SMod}^{\pm}(S_g)/\langle \iota \rangle$. (Received September 22, 2010)