We give an infinite collection of indefinite quaternion algebras $B$ such that $B$ cannot be the geometric endomorphism $\mathbb{Q}$-algebra of any abelian surface $A$ over the rational numbers.

We do so using Shimura curves, their quotients, and their arithmetic properties. More specifically, there is a curve $X^D/w_D$ which we show has no rational points for a certain set of $D$ where $D$ is the discriminant of the quaternion algebra $B$, and so there is no abelian surface of the form above. To show there is no rational point, we show that all quadratic twists of the Shimura curve $X^D$ formed using the involution $w_D$ have no rational points by the descent obstruction. To use the descent obstruction, we use the structure of $X^D$ as a Shimura variety itself to obtain étale covers.

If time remains we will discuss some analytic estimates for the family given here. (Received September 17, 2015)