Alissa S Crans* (acrans@lmu.edu), Marco Bonatto and Glen Whitney. The Structure of Hom Quandles.

If $A$ is an abelian quandle and $Q$ is a quandle, the hom set $\text{Hom}(Q, A)$ of quandle homomorphisms from $Q$ to $A$ has a natural quandle structure. We show that it suffices to consider only medial source quandles, and therefore the structure theorem of Jedlicka et. al. provides a characterization of the Hom quandle. In the particular case when the target is 2-reductive this characterization takes on a simple form that makes it easy to count and determine the structure of the Hom quandle. (Received September 14, 2019)