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Masahico Saito* (saito@usf.edu). *Triangular surfaces with Latin quandle actions.*

For a given (diagonalized) quasigroup, a closed surface consisting of triangles was constructed by Norton and Stein, from its multiplication table (a Latin square). We examine these surfaces, called NS-surfaces, for Latin quandles. They are typically disconnected, and their genera reflect properties of quandles. We show, for example, that the NS-surface for any connected Alexander quandle consists of spheres and tori. On the other hand, it is also shown that arbitrary large genera are realized by NS-surfaces of some connected Latin quandles. Actions of quandles on their NS-surfaces are discussed, and 2-cycles of quandle homology are realized in NS-surfaces. (Received January 14, 2015)