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Vega and Andrés R. Vindas Meléndez*, Department of Mathematics, University of California,
Berkeley, 970 Evans Hall, Berkeley, CA 94720, and Martha Yip. Triangulations, Order Polytopes,
and Generalized Snake Posets.

This work regards the order polytopes arising from the class of generalized snake posets and their posets of meet-irreducible elements. Among generalized snake posets of the same rank, we characterize those whose order polytopes have minimal and maximal volume. We give a combinatorial characterization of the circuits in these order polytopes and then conclude that every triangulation is unimodular. For a generalized snake word, we count the number of flips for the canonical triangulation of these order polytopes. We determine that the flip graph of the order polytope of the poset whose lattice of filters comes from a ladder is the Cayley graph of a symmetric group. Lastly, we introduce an operation on triangulations called twists and prove that twists preserve regular triangulations. (Received August 17, 2021)