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Roland H Lamberson* (rh11@humboldt.edu), Math Dept, Humboldt State University, Arcata, CA 95521. *On the Complexity of Competition.*

Spatial and temporal variation in the environment can have profound effects on both interspecific and intraspecific competition. We have used an individual-based stream fish model to study competition in various settings. We will look at the impact of intraspecific competition between hatchery and wild fish on the spatial distribution of wild fish and their feeding habits. We will look at the ways traditional habitat selection studies can be misled by competitive dynamics. Finally, we will look at cases where the dominance in the competition between two species can switch as a result of rather modest temporal changes in stream flow. (Received August 29, 2011)