1096-05-669 **Jonathan L. Gross** and **Toufik Mansour*** (tmansour@univ.haifa.ac.il), Department of Mathematics, University of Haifa, 3498838 Haifa, Israel, and **Thomas W. Tucker**. *Log-Concavity of Genus Distributions of Ring-Like Families of Graphs.*

We calculate genus distribution formulas for several ring-like families of graphs, and we prove that they are log-concave. Although log-concavity has been proved for many linear families of graphs, the only other ring-like family (of rising maximum genus) known to have log-concave genus distributions is the Ringel ladders. These new log-concavity results are further experimental evidence in support of the long-standing conjecture that the genus distribution of every graph is log-concave. We prove also that each coordinate of the partitioned genus distributions of various iterative bar-amalgamations of copies of a given graph G is log-concave, which is an unprecedented result for partitioned genus distributions. Our results are achieved via introduction of the concept of a vectorized production matrix, which is likely to prove a highly useful operator in the theory of genus distributions. (Received September 09, 2013)