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Craig A. Jensen* (jensen@math.ohio-state.edu), Mathematics Department, Ohio State University, Columbus, OH 43210. *Homology of holomorphs of free groups.*

The holomorph of a free group F_n is the semidirect product $F_n \rtimes \text{Aut}(F_n)$. Using the methods of Hatcher and Vogtmann, we calculate the mod- p homology of these holomorphs for odd primes p in dimensions 1 and 2, and their rational and stable rational homology in dimensions 1 through 6. Calculations of the twisted (where $\text{Aut}(F_n)$ acts by first projecting to $GL_n(\mathbb{Z})$ homology of $H_*(\text{Aut}(F_n); (\mathbb{Z}/p)^n)$ or $H_*(\text{Aut}(F_n); \mathbb{Q}^n)$ in corresponding dimensions follow directly. (Received September 21, 2000)