Figure 1.- Map of western Mexico indicating location of the 12 samples used in the univariate and multivariate analyses of morphological variation. Only the principal Mexican states (Sinaloa and Nayarit) are identified. Locality numbers correspond to those listed in Appendix. Sample 1 is a reference sample of *P. boylii rowleyi.*

the unreduced multivariate character space. Average taxonomic distances of standardized means were calculated and a phenogram depicted to cluster samples based on phenetic affinities using the method of unweighted pair-groups based on arithmetic averages (UPGMA).

RESULTS AND DISCUSSION

Averaging the variance components for the 23 characters, and expressing them as a percentage of the total, revealed that most of the morphological variation among samples of *P. simulus* was attributable to residual effects (65.44%; range, 40.91-86.19%) followed by interactions of locality, sex and age (22.70%; range, 1.52-