

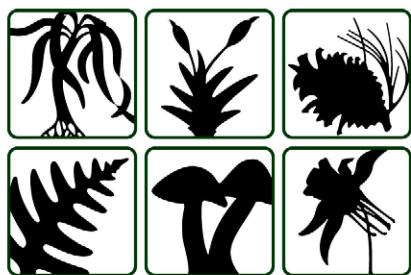


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Cover Illustration: Abaxial leaf surface of *Oreopanax capitatus*. Leaves of this species have a long tradition of use as one of the tastiest, most resistant outer wraps of the indigenous Mexican food *tamalli* (“wrapping” in Nahuatl), or tamales. As a culinary tradition dating from pre-hispanic times and part of family and community events throughout Mexico and other Hispanic countries, tamales vary widely in size, form, taste, color, texture, ingredients, and manner of cooking. Whether sour, sweet or savory, the contents generally consist of a maize dough prepared in various ways, softened with a meat broth or water and lard. The leaves used to wrap the dough are also an important variable; they impart a distinctive flavor and must be flexible and large enough to completely wrap the dough, be resistant to pressure boiling or steaming, and withstand direct fire-roasting before or after they are wrapped around the maize dough. Culinary knowledge of their consistency, strength and taste has been preserved orally and is linked to cultural identity; the species of leaf used for tamales can thus vary greatly with region and local customs. In preliminary ethnobotanic research, Angeles et al. found that some leaves are traditionally precooked to make them more suitable as a wrap—steaming, roasting or roasting then steaming. In this issue, they report the results of their analyses of biomechanical and chemical properties of leaves of four species traditionally used in Mexico as tamale wraps, before and after treatments to simulate traditional cooking methods before wrapping the maize dough (see Anatomical and physical changes leaves during the production of tamales on pages 1509–1521). Image credit: Guillermo Angeles.



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Abbreviations

Miscellaneous: AFLP, amplified fragment length polymorphisms; a.s.l., above sea level; bp, base pair; BP, before present; BSA, bovine serum albumin; cpDNA, chloroplast DNA; CTAB, hexadecyltrimethylammonium bromide; cv., cultivar; ddH₂O, double-distilled water; dNTP, deoxyribonucleotide E.C., Enzyme Commission; EDTA, ethylene diamine tetra-acetic acid; f. sp., forma specialis; indels, insertions and deletions; ITS, internal transcribed spacer; LM, light microscopy; mya, million years ago; PAGE, polyacrylamide gel electrophoresis; PCR, polymerase chain reaction; RAPD, random amplified polymorphic dimorphism; SDS, sodium dodecyl sulfate; SEM, scanning electron microscopy; s.l., sensu lato; s.s., sensu stricto; subsp., subspecies; TEM, transmission electron microscopy

Genetics: *A*, mean number of alleles per locus; *D*, mean genetic distance; CI, consistency index; *F*, fixation index; *F_{IT}*, total deviation from Hardy-Weinberg expectations; *F_{ST}*, genetic diversity among populations; *F_S*, inbreeding within populations; *G_{ST}*, the proportion of genetic diversity among populations; *H_e*, Hardy-Weinberg expected heterozygosity; *H_o*, observed heterozygosity; MP, most parsimonious tree; *n*, individual chromosome number; *N_m*, mean number of migrants per generation; *P_p*, percentage of polymorphic loci; RI, retention index; *x*, base chromosome number

Statistics and math: ANOVA, analysis of variance; CV, coefficient of variation; df, degrees of freedom; *N*, number of individuals; *p*, probability; *P*, level of significance; PCA, principal components analysis; *r*, coefficient of correlation; SE, standard error; SD, standard deviation