Potential effects of SOD on bird species diversity

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Oak woodland birds are expected to suffer severe population declines following SOD-induced losses of oak species diversity and oak areal extent. We investigated how the disappearance of two highly SOD-sensitive tree species, tanoak (*L. densiflorus*) and coast live oak (*Q. agrifolia*), may in turn affect levels of avian species diversity in coastal oak habitats of California. Using bird presence/absence data from Audubon Christmas Bird Counts and Breeding Bird Surveys and oak distributional data from the California Gap Analysis Program, we modeled avian species diversity while assuming complete loss of *L. densiflorus* and *Q. agrifolia* and complete, partial, or no loss of oak habitat within areas predicted as SOD-suitable by bioclimatic models. Results suggest that species diversity of oak-dependent birds will be significantly reduced in areas where SOD impacts either of these tree species, particularly coast live oak woodlands that are low in initial oak species diversity. Although the overall influence of SOD on avian species diversity in California is likely to be small, estimated bird losses will be most severe within central regions already harboring the disease and, following a slight southward range expansion of *P. ramorum*, within neighboring oak habitats likely to suffer infection in the near future.