Public Abstract
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I undertook two projects aimed at improving conservation efforts for Sooty Terns (*Onychoprion fuscata*). First, I investigated patterns of Sooty Tern chick survival to identify when chicks are most vulnerable and to assess the influence of daily maximum temperature, precipitation, rat predation, and vegetation density on survival. Chick survival was positively associated with age and body condition. Survival was negatively associated with daily maximum temperature and vegetation density. Thus Sooty Tern conservation and management plans could be improved by considering the potential impacts of climate change on chick survival and including vegetation management.
Seabird conservation efforts have employed rat eradication programs during the past two decades. However, the danger of non-target poisoning to seabirds has rarely been examined. In a second study, I assessed the risk of rodenticide bait to nesting Sooty Terns using placebo bait. I found no evidence of pellet ingestion based on fecal samples, postmortem inspections, and live chick observations. However, rodenticide bait handling and consumption were observed in camera-based data. Bait consumption suggests the potential for considerable impacts of rat poison on nesting Sooty Terns. Thus risks from rodenticide should be evaluated when eradication programs are planned for locations with seabirds. I also recommend that future studies begin with an evaluation of environmentally-based fluorescence prior to formal biomarker studies as false positive results may be contributing to current eradication failure rates.