Coastal Scrub and Prairie Wildlife Inventory, Golden Gate National Recreation Area, California

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To test the validity of wildlife habitat modeling and classification with satellite imagery, a habitat classification map was produced from LANDSAT thematic mapper data. The initial classification map used an unsupervised method with maximum likelihood estimators. The computer generated map was compared with aerial photographs. Wildlife habitats were classified after the California Wildlife Habitat Relationship System (CWHRS), and wildlife community composition predicted. Two hundred study plots were randomly selected from pixel centers using the classified image, 100 in coastal scrub and 100 in grassland. The predictions from the classified image and the CWHRS models formed the hypotheses that were compared with this study's systematic inventory data.

In the summer of 1990 we began an inventory of terrestrial vertebrates at Golden Gate National Recreation Area (GGNRA). Earthwatch volunteers established trap sites with smoked track plates pitfall traps, Sherman live traps and wooden squares under the supervision of biological technicians. Study plots were established at random points in coastal scrub and prairie habitat types.

In eight weeks we sampled 140 randomly selected study plots for ten consecutive days using the four trapping and tracking methods. We collected over 5,000 trap nights of data. We sampled 100 vegetation plots. Preliminary results for the satellite classification was that plots were correctly identified 84% of the time with approximately 16% error. For our effort we detected 24 species of terrestrial vertebrates, 16 mammals, 7 reptiles and 1 amphibian. The volunteers contributed 3,200 hours of labor.

This project was the beginning of intensive inventories of vertebrate diversity in GGNRA. It sets the stage for long term studies of the effects of climate change and human use on the diversity of vertebrates in central coastal California.