

The Humboldt Marten Conservation Strategy: An Introduction and New Research Supporting Conservation Actions

Keith M. Slauson, Pacific Southwest Research Station, 1700 Bayview Drive, Arcata, CA 95521.
(707) 825-2931, keithmslauson@fs.fed.us

William J. Zielinski, Pacific Southwest Research Station, 1700 Bayview Drive, Arcata, CA 95521

The Humboldt marten (*Martes caurina humboldtensis*) once ranged throughout the redwood and coastal forests of northwestern California and Oregon but now occupies <10% of its range in 3-4 small and disjunct populations. As a proactive response to the need for conservation actions to improve the status of the Humboldt marten, the Humboldt Marten Conservation Group was formed in 2011 in California to develop a conservation strategy for the subspecies. The HMCg is composed of state, federal, tribal, private, and non-governmental organizations with an interest in conservation and management of the Humboldt marten on public, tribal, and private forests within coastal northwestern California and coastal Oregon. The Conservation Assessment is a synthesis of published and unpublished scientific literature on the Humboldt marten ecology and habitat relationships and includes published studies on martens from elsewhere in North America to provide a more complete synthesis of marten ecology. The overall goal of the Conservation Strategy is to establish self-sustaining, interacting populations of Humboldt martens within suitable habitat throughout their historical range. To achieve this goal, the Conservation Strategy uses a three-pronged approach: (1) **protect** existing populations and currently suitable habitat, (2) **re-establish** populations in areas of currently suitable habitat that are inaccessible due to existing dispersal barriers, (3) **restore** or focus management efforts to improve habitat conditions in specific areas that will provide the most strategic benefits for increasing the size and distribution of populations. To identify the most important areas to protect, re-establish, and restore martens, we developed a landscape habitat suitability model using >1100 surveys and used the model to identify Conservation Emphasis Areas, areas of currently suitable habitat and areas where improvement of current habitat conditions can improve connectivity between currently suitable habitat. We are in the process of developing a habitat management guide based on new home range scale analysis to provide managers with a means to evaluate the current or future conditions necessary for supporting female marten home ranges. In addition the guide will identify the characteristics of critical structures that provide daily resting locations and seasonal den sites for females to raise kits. One of the first applications of the habitat guide will be to help design the selection of areas where restoration activities, including thinning young regenerating stands and deploying rest boxes where large aerial cavities are limited, can best promote re-establishment of martens in regenerating landscapes. On-going research on the edge of the largest remnant population has found some martens using areas of largely managed forest, with some survival and reproduction but high rates of predation by bobcats. This study should provide insight into the types of management that may be compatible with martens and also identify areas where martens may be at high risk of predation. We are currently evaluating the

feasibility of assisted dispersal, moving martens occurring in areas with high predation risk to re-establish populations in currently suitable but unoccupied habitat.