

Deciding Where to Recover Mexican Wolves



Deciding where Mexican wolves historically roamed and where we should recover them are issues that all past Mexican wolf recovery teams struggled with. Yet, these questions are fundamental to the successful recovery of the Mexican wolf. The logical foundation for any endangered species recovery plan is to document, using all the best available science, where the animal historically lived because that area represents the ecological and evolutionary conditions that shaped the animal into its present unique form. When planning where to recover the Mexican wolf, experts must determine if enough suitable habitat still exists within historical range and, if so, where are the largest blocks of high-quality habitat to maximize the probability of successful recovery.

WHERE THE MEXICAN WOLF ROAMED

When the Mexican wolf was more common on the landscape and originally described in the literature, its range was defined by those who knew them in their natural habitat as southern Arizona, southwestern New Mexico and the Sierra Madre of Mexico. These descriptions were based on body size, skull shape and size, and through firsthand knowledge and examination of Mexican wolves. In the following decades, additional analysis of skull measurements supported this geographic range, illustrating that a smaller Mexican wolf lived in the Sierra Madre of Mexico and the sky islands of southern Arizona and New Mexico and were different from the larger Plains

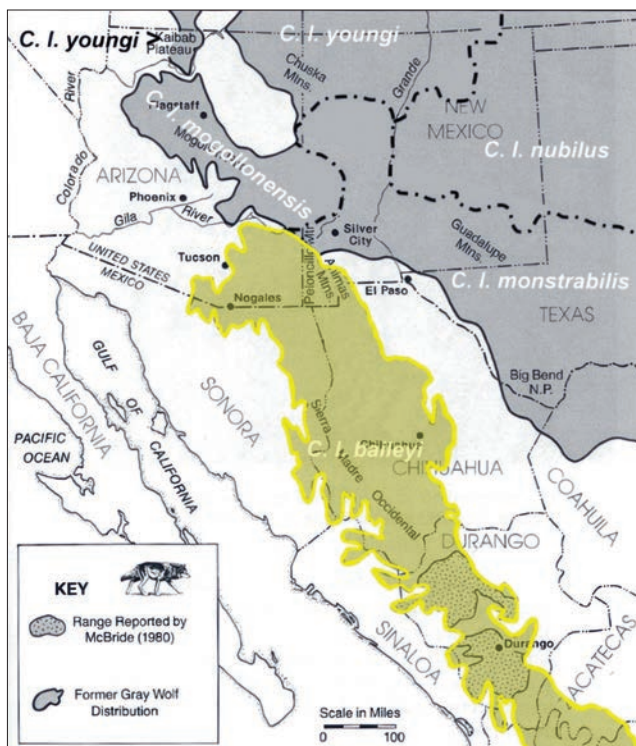
accepted historical range for Mexican wolves is based on a few genetic markers found in a few individuals and we know very little about the historical distribution of these markers. In some cases, genetic variants never found in any Mexican wolf are being promoted as diagnostic markers for this subspecies and then being used to justify a northern extension. The historical range of the Mexican wolf is well documented to be consistent with the original description and stretching it into Utah, Colorado and even Nebraska is not supported by the preponderance of evidence.

EVALUATING MEXICAN WOLF HABITAT

One of the challenges of past rangewide habitat analyses has been the availability of reliable information spanning both countries. Also problematic, some evaluations built models that mathematically penalized all habitat in Mexico and artificially boosted select areas north of historical range resulting in a map that inaccurately portrayed habitat suitability in the southwest and Mexico. However, in recent years, geospatial information and databases have become available to help provide a comprehensive binational evaluation of habitat. A state-of-the-art analysis published in 2020 by a binational team of scientists showed that the Sierra Madre Occidental of Mexico contains abundant suitable habitat including at least 24,710 mi² of high-quality habitat surrounded by a connected matrix of lower quality habitat available to ensure

wolf that occupied the northern portion of those two states.

About 90% of this wolf's historical range is in Mexico, which is consistent with many other southwestern species and subspecies whose historical range is very closely associated with the Madrean pine-oak woodlands. In recent years, genetic analyses have led some to suggest the historical range of the Mexican wolf may have extended as far north as Nebraska and northern Utah, and as far west as California. This dramatic extension of the widely

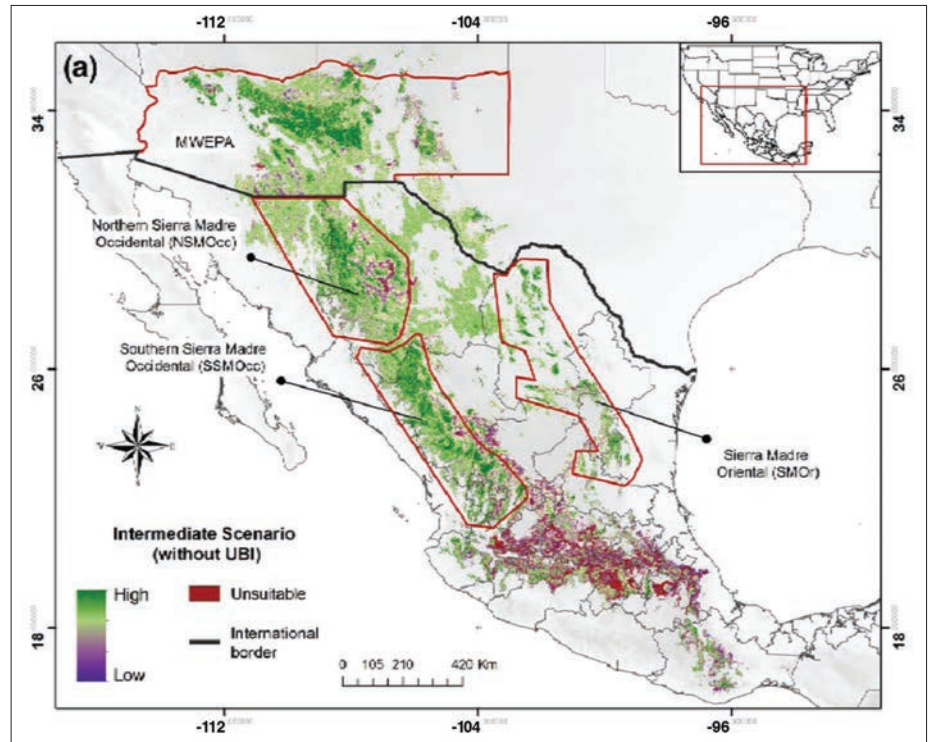


recovery of the Mexican wolf within its historical range. Despite advocacy for recovering wolves north of their historical range in the Grand Canyon area, it is not an ideal recovery area. The truth is, the Grand Canyon area is not a southern version of Yellowstone National Park; in fact, it is fragmented, arid, relatively unproductive, lacks a high density of prey animals, and is mostly juniper with isolated pockets of pine forest.

SCIENCE GUIDES RECOVERY PLANNING

Simply wanting wolves in certain areas is very different from our legal mandate to recover the endangered and iconic “El Lobo” to its historical range. Recovery has to be based on the best science available.

With the abundance of high-quality habitat throughout its binational historical range, the current Mexican Wolf Recovery Plan designated a large recovery area in the U.S. encompassing all of Arizona and New Mexico south of Interstate 40, which includes all historical habitat in the U.S. The plan also calls for at least one recovery area in Mexico. Areas north of the historical range are not needed for Mexican wolf recovery and are ecologically different from the conditions that shaped the Mexican wolf. Also, allowing



Mexican wolves to occupy areas closer to separately listed northern wolves in Colorado jeopardizes the genetic integrity of the Mexican wolf and threatens our ability to recover this unique wolf.

With changing climate conditions, it only makes sense to focus recovery efforts on their core habitat in the high-elevation, well-watered, pine-oak wood-

lands of the Sierra Madre where they evolved, rather than in the fragmented arid Grand Canyon area. The continued success of the Mexican wolf recovery program stands as a testament to the solid scientific foundation that supports the decisions made about where to recover wolves.

Learn more: www.azgfd.gov/wolf



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