

## REVIEW

*The Flora of Guadalupe Island, Mexico.* By REID MORAN. Memoirs of the California Academy of Sciences. No. 19, 1996. 190 pp. Hardcover, 13 color photos, 76 b/w photos, \$40.00 (from publisher). ISBN 0-940228-40-8.

Guadalupe Island is a volcanic oceanic island 260 km west of the Baja California peninsula in Mexico and 400 km south-southwest of San Diego, California. The island is an outlying component of the California Floristic Province that has been ravaged by a plague of feral goats that has devoured much of the island and changed its very image by eradicating native plant species, causing extensive soil erosion, and drying springs by killing trees responsible for increasing the water content on the island by fog drip. With this book, Moran documents the sad and ever too common story of an island ecosystem broken by the introduction of outside species. In this case, the pestilence of goats and weedy non-native (mostly European) plant species and their degrading effects.

This book exhibits Dr. Moran's botanical expertise and the value of his meticulous work, plus it reveals his first-hand knowledge from numerous trips in a 40-year history with Guadalupe Island. It is well-formatted and indexed so that information can be found quickly and easily.

The contents of the book include a physical description of the island; history; discussion of native and foreign plants; vegetation, with special reference to floristic affinities and extinct plants; goat impacts; plant collectors; and a complete catalogue of the vascular flora containing observations, discussions, and distributional ranges for each taxon. It should be noted that the book does not have any dichotomous keys for plant identification.

The floristic analysis provides information on 216 species. Probably 171 species should be considered native, and of these taxa 34 (21.8%) are endemic, including two monotypic genera. It is known that at least 30 species that once grew on the island are now extinct; five of these were endemic. However, this number is most likely an underestimation, since it is not possible to know what plants occurred on the island before the arrival of goats sometime before 1859. This analysis of the native flora confirms its major affinities to the north with the Channel Islands off southern California showing a 73.1% similarity comparison.

The book supplies invaluable and detailed notes on the various plant collectors who visited the island, what they found, collected, contributed to our knowledge of the flora, and where their botanical collections are filed. It also provides an interesting discussion about the problems encountered during the categorization of native and non-native plants on an oceanic island that began as bare volcanic rock.

It is very difficult to find much fault with this book. Only a couple of minor typographical errors were noted. Most of the photos were black and white, and as a result some of the landscape shots are lacking much contrast and would be better in color. However, this secondary detraction has nothing to do with the work itself and is probably a product of the high cost of printing color photos.

Outside of its pure scientific value, I hope that this book impacts public awareness and stimulates changes in Mexican land policies regarding Guadalupe Island. It behooves all interested parties to heed the author's recommendation to remove all goats from the island in an attempt to reverse the degradation processes and foster a renewal of natural vegetation. Although it may be too late for some species, a conservation endeavor may at least serve as a manner of polishing this island jewel, one of Mexico's national treasures.

Dr. Moran's book is an excellent addition to anyone's botanical library. He has

compiled his floristic experience, long-term observations, and detailed literature studies on Guadalupe Island and adjacent areas to synthesize a well-written and informative flora which can serve as a an exemplar for future floristic research.

—JON P. REBMAN, San Diego Natural History Museum, P.O. Box 1390, San Diego, CA 92112.



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