

Current Status of Research on the Shorebirds, Marsh Birds, and Waders of the Peninsula of Baja California¹

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Overall Setting

Regarding the information on its birds, the peninsula of Baja California has a luxury status, compared to other regions of México. In this sense, it is useful to compare it with its nearest states: Sonora and Sinaloa. While the peninsula measures 143,790 km², Sonora is 184,937 km². Sinaloa (58,092 km²), although much smaller, has a wide arrange of habitats going from tropical forests to semiarid thornscrub, from sea-level mangroves to oak and pine forests.

Information-wise, whereas Baja California has three books devoted to its birds, Sonora has only two, and Sinaloa none. Moreover, the books about Baja California birds preceded those for Sonora by a long time: respectively, Grinnell (1928) vs. van Rossem (1945); Wilbur (1987) vs. Russell and Monson (1998); and Howell and Erickson (2001), unmatched yet. Also, whereas nearly 800 bibliographic sources deal with birds of Baja California, less than 550 focus on those of Sonora (*table 1*). Over 60 published sources on the birds of Baja California pertain to shorebirds (s), marsh birds (m) and waders (w) (or s/m/w), but only five such articles exist for Sinaloa (not including Sonora).

Current Research

Although the ornithofauna of Baja California has been surveyed more than that of nearby states, little local research goes on. Only six Mexican academia-based teams have studied s/m/w in the peninsula in the last decade (Lead by Roberto Carmona, Horacio de la Cueva, Osvel Hinojosa, Eduardo Palacios, Gorgonio Ruiz-Campos / Marcelo Rodriguez / Salvador González, and myself). All but one of these groups have one researcher, and except for one, the time devoted to s/m/w is shared with studies on other animals, from fish to mammals, and teaching. From the private arena, only biologists from “Exportadora de Sal,” the salt

mining company at Guerrero Negro, conduct surveys of waterbirds anywhere in the Peninsula.

Three foreign groups have researched waterbirds along the coasts of Baja California in recent times. Brian A. Harrington, of the Manomet Bird Observatory and R. I. G. Morrison, of the Canadian Wildlife Service, independently conducted shorebird aerial surveys in northwestern México, in the early 1990s, the former only the delta of the Río Colorado (in addition to the east coast of the Gulf of California), the later, covering the entire peninsula. Several researchers from Point Reyes Bird Observatory have conducted marsh and shorebird censuses in San Quintín and Punta Banda, in the northwestern peninsula. Although staff from the U.S. Fish and Wildlife Service in Alaska have worked in San Quintín for several years, their main study subjects have been Black Brants (*Branta bernicla*). Unlike what happens in the United States and Canada, Mexican environmental government agencies do not engage in research (except monitoring to establish fishing quotas), and non-governmental organizations (NGOs) are just beginning to enter this field, most often associated with research/education institutions.

In contrast with the low level of Mexican institutional research, independent observers (highly qualified “bird watchers” as well as trained ornithologists, on leisure time) have provided much information on Baja California’s birds (not just s/m/w). Their contributions are found in several formal articles, in Wilbur (1987; in which 34 such independent observers are acknowledged), and in Howell and Erickson 2001. Based on independent observers, Ensenada had its first Christmas Bird Count in January 2001. Contributions to the recently established Baja California section in *North American Birds* will evidence the relevance of this group of people.

Use of Knowledge

The information gathered to date seems to have had little impact on public policy. Aerial surveys of shorebirds in the 1990s provided the data to nominate two Baja California sites for the Western Hemisphere Shorebird Reserve Network (the delta of the Río Colorado and the Guerrero Negro lagoons), but exhaustive

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Table 1-- Approximate number of articles dealing with the ornithofauna of the Peninsula of Baja California and the state of Sonora, México (excluding AOU checklists, additions to them, article reviews and field guides).

	Baja California		Sonora	
	“Old”	“Recent”	“Old”	“Recent”
Articles	422 (pre 1928)	303 (1928-1986) >60 (1987-1997)	448 (pre 1945)	86 (1945-1997)

bird data analysis was not a part of the designation process of any of the natural protected areas in Baja California, although in some cases birds were included in the arguments (the Guadalupe Storm-petrel, *Oceanodroma macrodactyla*, for example, or “seabirds” on Gulf of California islands). Other exercises of determining biologically important areas, organized by both government and NGOs, have relied heavily on opinion, rather than on “hard” data.

There are five taxa of s/m/w from Baja California on the Mexican list of species at risk (not including those species included as of “special protection” because of their game status): *Ardea herodias sanctilucae*, *Charadrius montanus*, *Egretta rufescens*, *Rallus longirostris levipes*, and *Rallus longirostris yumanensis*. These were included not based on solid research, but rather because of opinion or on their legal status in the United States. To my knowledge, no active management action has been taken for any of these species in the peninsula of Baja California, nor any management plans designed for them. (Indeed, active management doesn't exist for almost any species or guild in México, although a few management plans have been written.) The recent appointment of a non-governmental national shorebird conservation plan coordinator might well be the beginning of active management for sensitive species or guilds.

Research Needs

The fact that the knowledge gathered so far has been of little impact in decision-making, does not mean that no further research should be carried out. In fact, knowledge is badly needed if we are to be able to influence policy by argumentation (and I believe the system is ripening for this). Knowledge needs can be divided in what would be neat to know, and what we need to know to help in the conservation of s/m/w in Baja California. At this time, I believe, we should focus on the later. Each one involved with s/m/w birds in Baja California would have a different perspective of what particular research is most needed, depending on personal experience and perspectives, and particular regions and guilds of study. Despite this, I feel that it is valuable to post my own opinion on this matter. My list is (order of appearance is not order of priority):

1. Nesting species and permanent residents
 - 1.1 Taxonomy of selected species of marshbirds and waders.
 - 1.2 Surveys of unstudied regions.
 - 1.3 Conservation status and conservation threats of species that seem to be in trouble. Objective evaluation of those listed officially as at risk.
 - 1.4 Ecology of species that appear to be in trouble.
2. Migratory species using Baja California during the non-breeding season.
 - 2.1 Microhabitat selection by migrating shorebird, including analysis of prey base.
 - 2.2 Age/sex differences in resource (habitat, microhabitat, and food) use by migrating shorebirds.
 - 2.3 Links between sites along migratory corridors.
 - 2.4 Much more on distribution and numbers, especially on long term dynamics at several different sites (+ ENSO effects, etc.).
 - 2.5 Threats to migratory species in the peninsula of Baja California.

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