



## Migratory Shorebird Project: Annual Progress Report May 2015 – June 2016

*Compiled by*

Matthew Reiter (Point Blue Conservation Science), Eduardo Palacios (CICESE, and Grupo de Aves del Noroeste), Diana Eusse (Asociación Calidris), and David Bradley (Bird Studies Canada)

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### **General Developments:**

- Completed fifth year of surveys at some sites (November 2015 – February 2016).
- Reestablished surveys in El Salvador, Honduras, Nicaragua and Costa Rica.
- Four new sites in Peru. These sites were identified in 2014 workshop and surveys implemented by CORBIDI.
- We recorded nearly 15% of the hemispheric population of the Western Sandpipers.
- Enhanced the online map-based data summary application to include data from the Peru and Chilean shorebird atlases (see [www.prbo.org/pfss/datamap](http://www.prbo.org/pfss/datamap)).
- Completed 15<sup>th</sup> year of the BC Coastal Waterbird Survey at sites in British Columbia (September 2015 – April 2016).
- New protocol established to record disturbance events during MSP surveys and to enter through the data entry portal in the California Avian Data Center (CADC; [www.pointblue.org/cadc](http://www.pointblue.org/cadc)).
- Workshops and meeting to present results, conservation plans and strategies and about ideas to reduce threats and manage the habitats.
- Two graduate research project about threats in habitats and two undergraduate evaluating site conditions and distributions patterns.
- Shorebird habitat map developed for coastal United States to Peru and habitat change (Mexico to Peru) in the last 30-40 years identified.
- Outreach and education activities to local stakeholders and trainings for volunteers and researchers.

## **Country / Region Report: US and overall coordination**

Also see [www.pointblue.org/pfss](http://www.pointblue.org/pfss) for more detail on the US contribution and the Pacific Flyway Shorebird Survey.

### ***Personnel involved (organization/institution)***

- Matt Reiter, Catherine Hickey, Dave Shuford, and Blake Barbaree – Point Blue Conservation Science
- Additional support from >20 partner organizations and their staff and >200 volunteers.

### ***Field Surveys***

- Surveys of 24 coastal estuaries and 66 routes of interior wetland habitat throughout California, Oregon and Washington, 15 Nov 2014 – 15 Jan 2015
- Data collected by >35 partners from federal and state agencies, universities and NGOs and >300 volunteers
- Counted >400,000 shorebirds.
- Piloted interior survey design for Fern Ridge Reservoir in the Willamette Valley of Oregon (partnering with Army Corps of Engineers) and at Guadalupe-Nipomo Dunes National Wildlife Refuge in coastal California.
- Helped coordinate surveys across 11 countries.
- Developed new CADC projects for coastal Alaska migrations surveys at Wrangell, Yakutat and Kachemak Bay and for Fern Ridge Reservoir. Pilot surveys completed at Wrangell and Yakutat in spring 2016.
- Entered data into CADC.

### ***Workshops & Presentations***

- Presented talk “Species Distribution Models and Conservation Prioritization for Shorebirds in Western North America” at the Western Hemisphere Shorebird Group meeting in Wallops Island, Virginia.
- Represented project at three workshops to support the development of the Pacific Flyway Shorebird Conservation Strategy.
- Coordinated four meetings of the Migratory Shorebird Project steering committee.
- Coordinated workshop of leaders of seven multi-national waterbird monitoring programs to seek ways to have greater impact with these survey through greater collaboration and synthesis of data.

### ***Science***

- Hosted graduate student from Mexico to analyze data to address the impact of human disturbance on shorebirds. This is one of the targets on the projects hypothesis matrix.
- Applied project data to develop shorebird trend indicator for the 2015 San Francisco Bay State of the Estuary Report - <http://ebooks.sfei.org/soter2015/files/52.html>
- Conducted conservation prioritization analysis for 8 shorebird species using the Pacific Coast of the United States based on project data.

### ***Outreach / Education / Awareness***

- Continued development of project webpage: [www.migratoryshorebirdproject.org](http://www.migratoryshorebirdproject.org)

## Country / Region Report: Panama, Colombia, Ecuador and Peru

### **Personnel involved (organization/institution)**

- Diana Eusse, Carlos Ruiz, Patricia Falk-Fernandez, Jessica Suarez, Jeisson Zamudio, Richard Johnston and Fernando Castillo *Colombia team- Asociación Calidris*
- Parque Natural Nacional Sanquianga Staff- *Colombia*
- Bocana del río Iscuande Community Researchers. *Colombia*
- Rosabel Miro, Karl Kauffman, Yennifer Diaz, *Panama team,-Aububon Panama*
- Ana Agreda, *Ecuador team- Aves y Conservación*
- Cynthia Katerine Panta Ramos and Mariella Scarpi, *Manglares de San Pedro-Peru team- Naturaleza y Cultura International*
- Juan Carlos Heaton, Patricia Saravia. *Paracas Perú team- Paracas Natural Reserve*
- Fernando Angulo (CORBIDI) – *Peru Team*

### **Field Surveys**

- Surveys of 14 sites, between 15 January – 15 February, 2016, in four countries: Panama, Colombia, Ecuador and Peru
- Four new sites in Peru. These sites were identified in 2014 workshop and surveys implemented by CORBIDI.
- Data collected was led by >7 partners from protected areas and NGOs and >49 volunteers (biologist, students, birdwatchers, protected areas staff and local people).
- We included a new protocol to assess human disturbance over shorebirds. This protocol record information about source of disturbance, distance to shorebirds, percent of shorebird that fly by size.
- Point Blue included this protocol in CADC data entry portal..
- All of partners in South America used this protocol in 2016 surveys and included data in CADC.
- Counted >53,000 shorebirds and at least 49,000 more waterbirds. Data from 29 shorebird species and 37 species of other waterbirds.
- We recorded nearly 25% of the hemispheric population of the Western Sandpiper in sites in Mexico and Panama Bay. We also registered 23% of the American Avocet (*Recurvirostra americana*), 10% of the Semipalmated Plover (*Charadrius semipalmatus*), and 7% of the Black-bellied Plover (*Pluvialis squatarola*).
- Trained volunteers through workshops and field trips in shorebird counting and identification, MSP field protocol and data entry into CADC website.

### **Workshops & Presentations**

- Presented talk at the Western Hemisphere Shorebird Group meeting in Wallops Island, Virginia 2015: Patia River Diversion and Abundance of Shorebirds in Sanquianga National Park.
- Most of the partners of South America attended project at two workshops to support the development of the Pacific Flyway Shorebird Conservation Strategy: Virginia September 2015 and Panama February 2016.
- Workshop for Managers of Important Shorebird Sites in Pacific Coast. Salinas Ecuador October 2015.
- Webinar about how use MSP protocol; choose unit sampling, and entry data in CADC for partners in Central America and Peru.
- Workshops in Bocana de Iscuande-Colombia, Piscinas de Ecuasal-Ecuador, RN Paracas-Peru with decision makers to improve to enforce laws and agree on management zones.

- Workshop in Quito-Ecuador about actions and threats to critical sites for shorebirds. Results of this workshop will part of The National Shorebird Conservation Plan of Ecuador.

### **Science**

- Shorebird status, distribution and important sites for The National Shorebird Conservation Plan of Ecuador.
- Shorebird habitat map for Mexico to Chile pacific Coast. Analysis of habitat change in the same region in the past 30-40 years.
- Assessment of the influence of tourism infrastructure on 12 shorebird important sites in Mexico, Ecuador, Peru y Colombia.
- An undergraduate student working on distribution models of shorebird in Colombia and other one working in the spatial influence of tourism on shore bird important sites.
- *In progress*: a doctoral student working on relationship between shorebird size and minimum distance at which birds escape against disturbances
- *In progress*: distributions models of eight shorebirds to identify of hotspots of abundance
- *In progress*: estimate the amount or percent of habitat lost in area distribution of 8 shorebird species.

### **Outreach / Education / Awareness**

- Meeting with hotels and tourists to raise awareness about impacts of human perturbation on shorebird and their habitats.
- Migratory shorebird Festivals in Bocana de Iscuande-Colombia, RN Paracas-Peru and salinas de Ecuasal-Ecuador
- Guide to prepare workshops for kids and teenagers about shorebirds, their habitats, threats and conservation actions.
- In progress: Video about Shorebirds in Pacific Coast, some threats and options to reduce human perturbation. Voice in Spanish, subtitles in English.

## **Country / Region Report: Central America: Costa Rica, Nicaragua, Honduras and El Salvador.**

### **Personnel involved (organization/institution)**

- Luis Sandoval. [uniondeornitologoscr@gmail.com](mailto:uniondeornitologoscr@gmail.com). Unión de Ornitólogos de Costa Rica
- Erika Reyes; Salvadora Morales & Orlando Jarquín G. [quetzallinicaragua@gmail.com/salvadoramorales@gmail.com](mailto:quetzallinicaragua@gmail.com/salvadoramorales@gmail.com) Quetzalli Nicaragua – Investigación & Aviturismo
- John van Dort. [john.vandort@gmail.com](mailto:john.vandort@gmail.com). Asociación Hondureña de Ornitología
- Ana Victoria Galán, Coordinadora de Censo. [victoria.galan@salvanatura.org](mailto:victoria.galan@salvanatura.org). Salvanatura Fundación Ecológica
- Diana Eusse - *Asociación Calidris*

### **Field Surveys**

- Surveys of 32 sites (72 sampling units), between 15 January – 15 February, 2016, in four countries: Costa Rica, Nicaragua, Honduras and El Salvador.
- In 2013 only Nicaragua, Honduras and El Salvador conducted the surveys. In that year surveys were conducted on 14 sites.
- Habitats on these surveys include: mangroves, sand beaches, intertidal mudflats, salt ponds, shrimp ponds, open bays.

- Important sites for shorebirds and birds as Gulf of Fonseca in Honduras and Nicaragua, Gulf of Nicoya in Costa Rica and Barra de Santiago and Bahía de Jiquilisco in El Salvador.
- Data collected was led by >4 partners from NGOs with 16 volunteers. They also had support from salt and shrimp ponds operators, universities and local communities
- Surveys include a protocol to assess human disturbance over shorebirds. In many sites, there are records about disturbance events and shorebirds react.
- Counted >29,000 shorebirds. Gulf of Nicoya in Costa Rica had 15,896 shorebirds, mainly *Calidris mauri* and *C. pusilla*.
- Tourists on bikes, on foot and on horseback and with pets were the most common disturbance events
- In some sites, researchers recorded the growth of tourist infrastructure like small cabins and access roads. This item is not part of protocol, but clearly we need to take into account.
- Raptors were common in some sites, and shorebird response was also recorded during surveys.

## Country / Region Report: Canada

### **Personnel involved (organization/institution)**

- David Bradley, Karen Devitt, and Catherine Jardine – Bird Studies Canada

### **Field Surveys (British Columbia, Canada)**

- 216 sampling units are being surveyed by 270 volunteers around the Fraser River Delta and Salish Sea
- Nine new survey volunteers recruited during the 2015-2016 period, and one new survey site added
- Survey protocols were reviewed and updated versions were posted to the program webpage
- The BC Coastal Waterbird Survey annual newsletter distributed to all survey participants in December 2015
- All BC Coastal Waterbird Survey data have now been reviewed and finalized
- Shared all data with funders (Environment Canada) under a new data-sharing agreement. Also shared data with environmental consultants and NGOs
- Incorporated data entry methods into the Bird Studies Canada online portal NatureCounts to enhance data sharing and management
- Shared BC Coastal Waterbird Survey data with Point Blue to be incorporated into the California Avian Data Center

### **Workshops & Presentations**

- Delivered public presentations and training sessions for the BC Coastal Waterbird Survey in Delta and Victoria
- Presented poster “Biofilm Consumption and Variable Diet Composition of Western Sandpipers (*Calidris mauri*) during Migratory Stopover” at the Western Hemisphere Shorebird Group meeting in Wallops Island, Virginia

## Country / Region Report: México

### **Personnel involved (organization/institution)**

- Eduardo Palacios (CICESE, and GANO); Project Coordinator
- Guillermo Fernández (UNAM, GANO); Sonora and Sinaloa Partner

- Cesar Guerrero Ávila (Terra Peninsular, A.C.); Executive Director
- Lucía Alfaro Rodríguez (Terra Peninsular, A.C.); Data entry technician

### **Field Surveys**

- One winter survey during January 2016 conducted at 18 sites in NW Mexico (8 sites in the Baja California peninsula and 10 in the mainland); 203 sampling units; data compilation, data entry and review ongoing. 40 volunteers engaged.
- Main species observed: Western Sandpiper, Dunlin, Marbled Godwit, Willet, Black-bellied Plover, Sanderling, Greater Yellowlegs, Dowitcher spp, Snowy Plover.
- GANO continued the Snowy Plover monitoring program in three sites of Northwest Mexico; during breeding and winter season. Support from Tracy Aviary (Utah).
- Additional monitoring data from studies on shorebird use of shrimp farms in Sinaloa is being compiled and entered into CAD. Data Provided by Guillermo Fernández.

### **Workshops & Presentations**

- Vargas J., E. Palacios, G. Brabata, G. Fernandez y M. Reiter. 2015. Efectos del disturbio y rapaces en la densidad de aves playeras en época no reproductiva. XIV Congreso para el Estudio y Conservación de las Aves en México. 6-10 October 2015, Reserva de la Biósfera El Cielo, Gomez Farias, Tamaulipas.
- Palacios, E. 2015. Waterbird monitoring in the coastal wetlands of northwest Mexico. Sonoran Joint Venture Technical Committee annual meeting. 27-29, Mayo, 2015. Bahía Kino, Sonora.
- Palacios, E. 2015. The migratory shorebird project. US-Forest Service International Programs y el Copper River Migratory Bird Initiative. 9-11 septiembre, 2015 Washington, D.C.
- Palacios, E. 2015. Management and conservation of key migratory bird habitat in San Quintin, Baja California. US-Forest Service International Programs y el Copper River Migratory Bird Initiative. 9-11 septiembre, 2015 Washington, D.C.
- Palacios, E. 2015. Population and conservation status of the Pacific American Oystercatcher. 39<sup>th</sup> annual meeting of the Waterbird Society. 10-13 agosto, 2015. Bar Harbor, Maine.
- Lerma, M, J.A. Castillo-Guerrero, y E. Palacios. 2015. Non-breeding abundance, distribution and habitat use by American Oystercatcher in Sinaloa, México. 39<sup>th</sup> annual meeting of the Waterbird Society. 10-13 agosto, 2015. Bar Harbor, Maine.
- Interview AgencialD (Investigación y Desarrollo). 2015. DISMINUYE LA TERCERA PARTE DE 30 ESPECIES DE AVES PLAYERAS POR DISTURBIOS HUMANOS. Published in 29 electronic media. 16/11/2015
- Stand displaying shorebird decoys and equipment to monitor shorebirds during the 22ava Semana Nacional de Ciencia y Tecnología. Three days, visited by dozens of school groups. 20-23 october, 2015. La Paz, Baja California Sur.
- Pablo Canevari Memorial Award 2015. Manomet Center for Conservation Sciences. USA. Shorebird conservation award presented to Eduardo Palacios.
- Workshop for identifying recommendations on compensation measures of the impacts of the New International Airport of Mexico City on the WHSRN site ExLago de Texcoco. Organized by Pronatura, A.C. February 4, 2015. Mexico, D.F.
- Member of the steering committee of the Pacific Americas Shorebird Conservation Strategy. Led by National Audubon Society. Meetings in Colombia, the US and conference calls.
- Workshop: Important sites for shorebirds in the Pacific Americas coastal region. Organized by Association Calidris-Colombia. 3-9 October, 2015. Salinas, Ecuador.

- Workshop instructor on Shorebird Identification and Monitoring. Taught to Latino interns in the US. 25-28 March (30 h). Environment for the Americas. San Diego, California, USA.

### Science

- Gómez del Ángel, S., Palacios, E., y A.E. De Sucre-Medrano. 2015. Dimorfismo sexual en tamaño y marca frontal en el chorlo nevado (*Charadrius nivosus*). Huitzil, Rev. Mex. Ornitol. 16:21-27.
- Galindo-Espinosa, D., & Palacios, E. 2015. Estatus del chorlo nevado (*Charadrius nivosus*) en San Quintín y su disminución poblacional en la península de Baja California. *Revista Mexicana de Biodiversidad* (2015), <http://dx.doi.org/10.1016/j.rmb.2015.06.005>
- Fernández, G.J. and E. Palacios. 2015. Monitoreo de aves playeras migratorias en las lagunas costeras de Sonora y Sinaloa. Final Report to CONANP. Hermosillo, Sonora. 48 pp. + attachments.
- Palacios, E., Alfaro, L., Amador-Silva, E.S., Castillo-Guerrero, J.A., Galindo-Espinosa, D., García, E., González-Bernal, M.A., Guevara-Medina, M.A., Soto, E., y Vargas, J.N. 2015. Ecología reproductiva y conservación del ostrero americano del Pacífico (*Haematopus palliatus frazari*) en el noroeste de México. Unpublished report to Ornithological Council. La Paz, Baja California Sur. 52 pp.
- Galindo-Espinosa, D. S. Gómez del Angel, M. Cruz-López, A. DeSucre-Medrano, L. Ortega, F. Puebla-Olivares, E. Palacios y C. Küpper. 2016. Monitoring four populations of Snowy Plover (*Charadrius nivosus*) in México. Annual Report to Tracy Aviary Conservation Committee. La Paz, B.C.S., March 2016. 16 pp. + 8 attachments.
- Cruz-López, M., D. Galindo-Espinosa, A. DeSucre-Medrano, S. Gómez del Angel, E. Palacios Castro, F. Puebla-Olivares, C. Villar-Rodríguez, J. Vargas, L. Ortega y C. Küpper. 2015. Monitoreo de tres poblaciones reproductoras del Chorlo Nevado (*Charadrius nivosus*) en diferentes regiones de México. Reporte anual para el Comité de Conservación de Tracy Aviary. Marzo 2015. 14 pp.
- Graduate Student: Jonathan Natael Vargas Vega. Maestría. Efectos del disturbio en la densidad y comportamiento de aves playeras. Programa: Maestría en Ciencias Marinas y Costeras. UABCS. Director: Eduardo Palacios Castro. In process.
- Graduate Student: Salvador Gómez del Angel. Maestría. El efecto de la variación temporal del nivel del agua sobre la demografía a largo plazo del chorlo nevado (*Charadrius nivosus*) en Bahía de Ceuta, Sinaloa, México. Posgrado en Ciencias del Mar y Limnología. UNAM. Director: Eduardo Palacios Castro. In process.
- Bachelor's degree: Estefanía Isabel Muñoz Salas. Thesis: Patrones de distribución y abundancia de tres especies de Escolopácidos grandes en la península de Baja California, México. UABCS. La Paz, B.C.S. México. In process.