



Migratory Shorebird Project: Annual Progress Report July 2017 – June 2018



Compiled by
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Photos: MSP partners at Western Hemisphere Shorebird Group Meeting in Paracas, Peru (top); MSP partners at sampling units Puerto Eten near Eten, Peru (bottom)

General Developments

- Completed seventh year of surveys at some sites (November 2016 – February 2017) in North America, fourth year in Central America and the fifth year in South America.
- Continued to establish coordination between Migratory Shorebird Project (MSP) and Central American Waterbird Census (CAWC) by mapping MSP and CAWC survey sites and by testing joint surveys in southwest Mexico.
- Implemented and recorded two online training webinars in Spanish. The first webinar reviewed study design and protocol while the second covered data entry and management in the California Avian Data Center. Recordings will be terrific resources for training Spanish speaking partners.
 - Study Design & Protocol:
<https://zoom.us/recording/share/mNbaJYoXjuusObmG8Bk0ZqvJXeNsavB-ZCiKXZrUkVawlumekTziMw>
 - Data Entry & Management:
https://zoom.us/recording/share/E5_QXD1yasojTo54v_ARzytLGpbqMN9jrkF6-P76GIA
- Organized two international symposia to highlight MSP and the progress made on applied conservation and with connecting with other multi-national waterbird monitoring programs during the first 5 years of MSP. One symposium was in conjunction with the joint Meso-American Society for Conservation Biology / Partners-in-Flight Meeting in San Jose, Costa Rica in November 2017 – “Multi-National Monitoring Programs for Waterbirds in Central America – Building a regional baseline for conservation action”. A second symposium occurred at the Western Hemisphere

Distribution of survey locations as part of the Migratory Shorebird Project.



Shorebird Group meeting in Peru in November 2017 and included oral presentations from 8 MSP partners and graduate students. Symposium title: “The Migratory Shorebird Project: Connecting Communities of the Americas through Climate-Smart Conservation Science”.

- MSP team members met with government officials and coastal wetland managers in Ecuador and Northern Peru to identify opportunities to use project data to inform management of wetland habitats for today and the future. The trip helped develop and promote local constituencies around important sites that can help sustain essential applied research, monitoring, and conservation. Read Matt Reiter’s trip log and see photos of the people and places the team visited [here!](#)
- Continued participation on the steering committee for the Pacific Americas Shorebird Conservation Strategy and on the advisory board for the Coastal Solutions Fellows program (<http://www.solucionescosteras.org/>).
- Completed guidelines to support more standardized monitoring and data management for shorebirds across their non-breeding range.
- Contributed data to Environment and Climate Change Canada to update “The birds of the Fraser River delta: populations, ecology and international significance report”.
- Integrated new data into the California Avian Data Center and improved the user interface for online data summary applications (www.migratoryshorebirdproject.org/datamap);

www.migratoryshorebirdproject.org/exploredata) and began strategizing to integrate feedback from partners on how to improve these resources going forward.

Canada

Personnel involved (organization/institution)

- David Bradley (Bird Studies Canada); Program Director
- Graham Sorenson (Bird Studies Canada); Projects Coordinator
- Catherine Jardine (Bird Studies Canada); Data Analyst

Field Surveys

- 211 sites surveyed by 502 volunteers in 2017-2018. Fifteen new volunteers were recruited, and three new sites were added.
- Survey protocols were reviewed and updated versions were posted to the program webpage.
- Assisted with the development of a new Coastal Waterbird Survey club for youth on Haida Gwaii.
- The trend analysis was updated to include all shorebirds counted from 1999-2016 and is being prepared for publication in 2019.
- Contributed data to Environment and Climate Change Canada (ECCC) to update “The birds of the Fraser River delta: populations, ecology and international significance report.”
- The annual newsletter was distributed to volunteers and is available online at <https://www.birdscanada.org/library/bccwsnews.pdf>
- Shared all data with ECCC. Also shared data with environmental consultants and NGOs.
- Incorporated data entry portal into [NatureCounts](#) to enhance data sharing and management. Data were requested and approved for use by students, environmental consultants, ECCC and NGOs.
- A revised hot spot analysis is planned for 2019 to update maps produced in 2012. These maps will highlight areas of importance for guilds of coastal waterbirds weighted by abundance

Workshops & Presentations

- Presented Coastal Waterbird survey trend data at Salish Sea Ecosystem Conference in Seattle, WA, in April 2018.
- Presented British Columbia Coastal Disturbance Project findings at Association of Professional Biologists meeting in Richmond, BC, in April 2018.
- Public presentations and training sessions planned in the Fraser Delta and Victoria in the fall of 2018.

United States

Also see www.pointblue.org/pfss for more detail on the US portion of the project; the Pacific Flyway Shorebird Survey.

Personnel involved (organization/institution)

- Matt Reiter (Point Blue Conservation Science); MSP Steering Committee Chair
- Catherine Hickey (Point Blue Conservation Science); Conservation Director
- Blake Barbaree (Point Blue Conservation Science); Pacific Flyway Shorebird Survey Coordinator
- Dave Shuford (Point Blue Conservation Science); San Francisco Bay/Salton Sea Survey Coordinator
- More key leaders and partners:
<http://data.prbo.org/apps/pfss/index.php?page=volunteer>
<http://data.prbo.org/apps/pfss/index.php?page=partners>

Field Surveys (United States)

- Surveys of 23 coastal estuaries and 66 routes of interior wetland and agricultural habitat throughout California, Oregon and Washington, 15 Nov 2017 – 15 Jan 2018.
- Data collected by >35 partners from federal and state agencies, universities and NGOs and >300 volunteers.
- Counted ~300,000 shorebirds. Numbers were lower than previous years across nearly all sites.
- Due to dropping water levels at the Salton Sea no airboat surveys were conducted in 2017-2018. Strategy being developed to survey the shoreline from ground in future years.
- Helped coordinate surveys across 12 countries.
- Data management and support using CADM for entire MSP.

Workshops & Presentations

- Organized and co-hosted two international symposia to highlight progress made during the first 5 years of MSP.
 - Meso-American Society for Conservation Biology / Partners-in-Flight Meeting in San Jose, Costa Rica in November 2017. Symposium title: “Multi-National Monitoring Programs for Waterbirds in Central America – Building a regional baseline for conservation action”.
 - Western Hemisphere Shorebird Group meeting in Peru in November 2017. Symposium title: “The Migratory Shorebird Project: Connecting Communities of the Americas through Climate-Smart Conservation Science”.
- Coordinated three meetings of the Project steering committee.
- Reiter ME, Hickey CM, Eusse D, Palacios E, Clay R, Bradley D, and Chu J. 2017. Towards a Climate-Smart Conservation Science Network for Wetlands on the Pacific Coast of the Americas. Presentation at the meeting of the Western Hemisphere Shorebird Group in Paracas, Peru.
- Barbaree, BA, Reiter ME, Strum K, and Hickey CM. 2017. Annual Monitoring Reveals Drought Impacts on the Distribution and Abundance of Shorebirds and their Habitat. Presentation at the meeting of the Western Hemisphere Shorebird Group in Paracas, Peru.
- Presentation to the Pacific Flyway Council Non-game Technical Committee – March 2018.

Science

- Developed species distribution models for shorebirds along the Pacific Coast of the Americas from Mexico to Peru.
- Completed draft manuscript of Project framework and first 3 years of MSP (2013-2016).
- Drafted manuscript about impact of recent severe drought in California on shorebirds in the Central Valley and nearby coastal estuaries using MSP data.

Outreach / Education / Awareness

- Developed annual MSP update template for local and flyway-wide engagement with local, regional, and national stakeholders about progress of MSP and available data resources.
- Spanish versions of two online training sessions were recorded. The first video explained study design and the survey protocol, while the second explained entry and management of MSP data.
- Integrated new data into online data summary applications (www.migratoryshorebirdproject.org/datamap; www.migratoryshorebirdproject.org/exploredata) and received feedback on how to improve these resources for partners going forward.

Levered Contributions

- \$225K (2-years) from the David and Lucile Packard Foundation
- \$47K from USFS International Programs
- \$3K from Mennen Environmental Foundation

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

- Nonbreeding Shorebirds Monitoring: During January-February of 2018 we completed the annual non-breeding midwinter shorebird surveys at 23 sites across northwest Mexico (8 sites in the Baja California peninsula and 15 in mainland Mexico). These sites included 243 sampling units that are surveyed by about 50 volunteers in northwest Mexico.
- Database: In March-April 2018 we entered these survey data into the project's online data entry portal hosted by CADC. Data includes the number of shorebirds, waterbirds and waterfowl, measures of human disturbance and raptors, and assessment of habitat condition.
- One winter survey in 21 sampling units of the wetlands of Isthmus of Tehuantepec.
- Additional sampling units in sandy beaches and waterbird surveys. Support from Southern Wings.
- Main species observed: Western Sandpiper, Dunlin, Marbled Godwit, Willet, Black-bellied Plover, Sanderling, Greater Yellowlegs, Dowitcher spp, Snowy Plover.
- Additional monitoring data from studies on shorebird use of shrimp farms in Sinaloa is being compiled and entered into CADC. Data Provided by Guillermo Fernández.

Workshops & Presentations

- Palacios, E. 2017. Conservación y monitoreo del Ostrero Americano en el noroeste de México. 7ma Reunión Anual de Aves Playeras del Hemisferio Occidental. Lima, Perú.
- Vargas, J.N., E. Palacios, G.J. Fernandez, and M. Reiter. 2017. Efectos del disturbio en la densidad y comportamiento de aves playeras. 7ma Reunión Anual de Aves Playeras del Hemisferio Occidental. Lima, Perú.
- Gómez del Ángel, S., G.J. Fernandez, and E. Palacios. 2017. Influencia de las condiciones del hábitat en la condición corporal y éxito reproductivo en el chorlo nevado (*Charadrius nivosus*). 7ma Reunión Anual de Aves Playeras del Hemisferio Occidental. Lima, Perú.
- Muñoz-Salas, E.I., E. Palacios, L.G. Alfaro, B. Guzmán, and M. Reiter. 2017. Patrones de invernación de playeros de la zona templada en la península de Baja California, México. 7ma Reunión Anual de Aves Playeras del Hemisferio Occidental. Lima, Perú.
- Vega, I., J.A. Castillo-Guerrero, E. Palacios, and G.J. Fernandez. 2017. Tamaño poblacional del *Haematopus palliatus frazari* durante la temporada reproductiva en Bahía Santa María, Sinaloa. 7ma Reunión Anual de Aves Playeras del Hemisferio Occidental. Lima, Perú.
- Palacios, E. Setting conservation priorities for shorebirds and waterbirds in Mexico. *XXI Congreso de la Sociedad Mesoamericana para la Biología de la Conservación (SMBC) and VI Partners in Flight (PIF)*. San José, Costa Rica.

Science

- Report on disturbance: We analyzed human disturbance in the sandy beach of Golfo de Santa Clara, a hemispheric WHSRN site, located in the Colorado River Delta. The site is very important for Red Knots Spring migration in March through May, when they feed on grunion eggs at this site and overlap with Eastern vacation and other holidays that provoke a lot of disturbance to migrating shorebirds.
- 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.
- Graduate Student: Abril C. Heredia Morales. Maestría. Efecto del disturbio antropogénico en la densidad y actividad de aves playeras en la Bahía Todos Santos, Baja California, México. Posgrado en Ecología Marina, CICESE. Director: Eduardo Palacios Castro. In process
- Student: Estefanía Isabel Muñoz Salas. Bachelor's Thesis: Patrones de distribución y abundancia de tres especies de Escolopácidos grandes en la península de Baja California, México. Biología Marina, UABCS. Director: Eduardo Palacios Castro. In process.

Outreach / Education / Awareness

- Interview of Eduardo Palacios on migratory shorebirds and human disturbance
<https://www.youtube.com/watch?v=LaF-iA-6FuA>
- Training: On early March 2018 we provided training to a group of interns of Environment for the Americas on identification and monitoring shorebirds. These interns will implement shorebird monitoring surveys at protected areas in the US.
- Outreach Talk: On 2nd February 2018 we celebrated the World Wetlands Day by guiding bird-watching walks at Estero de San José del Cabo, Baja California Sur. And we gave a talk about the importance of Ramsar sites for migratory waterbirds to college students.
- Bird Festival: From 6 through 10 March, 2018 Terra Peninsular conducted several activities to celebrate the 2nd Bird Festival of Bahía Todos Santos in Ensenada, Baja California.
- Outreach Event: We team up with other organizations to celebrate World Environment Day (June 5th) and conducted an event called "The beach belongs to everyone". See more information at: <http://terrapeninsular.org/crean-alianza-para-proteger-a-las-aves-playeras-en-ensenada/>
- Training: In May 2018, our two students Brenda Guzmán and Abril Heredia worked for a week with a team of other biologists from Washington Department of Fish and Wildlife (led by Joe Buchanan) to conduct capture and marking of Red Knots in Grays Harbor, WA.
- Training: On May 12th, 2018 we had a one-day workshop on disturbance, in Ensenada with CONANP staff and volunteers from Golfo de Santa Clara, Sonora. We developed a protocol to monitoring disturbance on waterbirds, and an index of disturbance. This protocol will be used by CONANP to conduct actions to mitigate human disturbance affecting migratory shorebirds in the Colorado River Delta.

Levered Contributions

Cash:

- \$ 30,000 from CCA to Terra Peninsular as part of the AMBI project to nominate important Red Knot sites to WHSRN and implement communication and conservations actions
- \$ 10,000 from Tracy Aviary to GANO to monitor Snowy Plovers on four sites during breeding and winter in Mexico.

In-kind:

- CICESE, UNAM, Terra Peninsular, CIBNOR, UABC, UABCS, UAS shorebird research professors and research associated time (\$83K). NW Mexico Survey (\$20K ann. operating cost, 150 person-days survey time).

South and Central America

Personnel involved (organization/institution)

- Diana Eusse (Asociacion Calidris - Colombia); Central and South America Project Leader
- Victoria Galán y Marta Lilian Quezada (SalvaNatura); El Salvador Coordinator
- John van Dort -Asociación Hondureña de Ornitología; Honduras Coordinator
- Salvadora Morales, Érica Reyes, Orlando Jarquin y Yoleydi Mejia. (Quetzalli); Nicaragua Coordinators
- Luis Sandoval (Unión de Ornólogos de Costa Rica); Costa Rica Coordinator
- Rosabel Miro, Karl Kauffman, Yenifer Díaz (Sociedad Audubon de Panamá); Panama Coordinators
- Ana Agreda y Ana Agreda y Giselle Quezada (Aves y Conservacion); Ecuador Coordinator
- Frank Suárez Pingo y Mónica Alzamora Torres (Naturaleza y Cultura Internacional); Peru partner, Fernando Angulo (Corbidi); Peru Coordinator, Patricia Saravia (RN Paracas); Peru partner.

Field Surveys

- Surveys of 58 coastal estuaries, salt and shrimp ponds in 9 countries, between 15 Jan – 15 Feb 2018.
- Data collected by >11 partners from NGOs, governmental agencies and universities with 78 volunteers.
- Counted 97,500 shorebirds.
- El Salvador, Nicaragua and Peru included 15 new sites.
- Disturbance protocol was implemented for the 3rd year.
- In Central America, MSP surveys and trainings were coordinated with Central America Waterbird Census.
- Surveys are having the support of local and national governmental agencies (SLV, COL), producers (NIC, HON, CRI, ECU, PER), university (CRI) and local communities (COL, ECU, PER)
- All sites in CADC have geometry of sites. Shorebird data entry is in progress.

Workshops & Presentations

- Partners from Honduras, El Salvador, Nicaragua and Colombia talked about their experiences in the Symposia Multi-national monitoring programs for waterbirds in Central America – building a regional baseline for conservation action in Partners in Flight Meeting. Costa Rica, 10/2-11/3/2017.
- Partners from Ecuador, Panama, and Colombia showed results about shorebird surveys in Symposia The Migratory Shorebird Project: Connecting Communities of the Americas through Climate-Smart Conservation Science in WHGSM in Paracas 11/10-13/2017.
- Meetings of MSP partners in Costa Rica (11/4/2017) and Paracas (11/12/2017) to talk about MSP and other waterbirds census, next steps in MSP, funding opportunities and trainings needs.
- Some partners from Central and South America attended meeting to share ideas of Coastal Solution Fellowship (Panama 6/2/2017) and Shorebird Conservation and Shrimp Aquaculture in the Western Hemisphere Workshop (Paracas 11/9/2017).
- Training sessions about CADC uses, tools of explore data in CADC and MSP webpage.

- Workshop about identification and survey protocols and methods of waterbirds to train volunteers of Waterbird Census and MSP surveys: SLV 1/21-22/2018; NIC-Parque Nacional Volcán Masaya for MSP and CAWC volunteers, CRI-National Census, PER-Training of park rangers and volunteers.
- Shorebirds and habitats in Nariño Coast in Colombia: 2000-2017 in Congreso interno de Calidris, Cali 6/22-23/2017.

Science

NICARAGUA

- Undergraduate thesis about Invertebrates as the main food of shorebirds in shrimp farms and mudflats in Delta del Rio Estero Rea -I Universidad Nacional Autónoma de Nicaragua

COLOMBIA

- In progress scientific papers: Non-breeding habitat loss and consequences for shorebird populations along the Pacific Flyway and Shorebird increase and redistribution 40 years after a tropical river diversion
- Monitoring Program Report in Sanquianga National Park: Shorebirds distribution in Sanquianga are relate with mudflats size and landscape around the survey unit, some mudflats areas are increasing and at least two species are showing increases trends in this areas and mudflats surrounded with mangrove have less shorebirds.
- Other shorebirds surveys during fall migration (October) and spring (July).
- In progress: Habitat change map of Golfo de Fonseca in Central America

ECUADOR

- Undergraduate thesis about Shorebird abundance in 2017. Student Danixa del Pezo, Universidad Península de Santa Elena.

PERU

- Technical support of Plan Nacional de conservación de aves playeras del Perú.

Outreach / Education / Awareness

EL SALVADOR

- Poster about the importance of shorebirds and waterbirds and about Migratory Shorebird Project surveys and Central America Waterbird Census.

NICARAGUA

- Wetlands Day meeting. MSP surveys results in Ramsar site Delta del Estero Real were shown for this event
- Planning birdwatching guides trainings in shorebirds identification and survey methods
- Social media campaign about conservation of shorebirds and their habitats

COSTA RICA

- Developed guide and poster about Shorebirds of Costa Rica to deliver between volunteers and workshops attendees
- Working with SINAC (federal conservation area agency in Costa Rica) to implement surveys at Pacific Coast protected areas.

COLOMBIA

- Shorebird Festival in La Bocana de Iscuande, 10/30/2017
- Publication: Citizen science atLa Bocana de Iscuande, including nclude results of surveys for shorebirds, mangrove shell monitoring, and human livelihood

PERU

- Workshops about shorebirds identification with la Escuela de Ciencias Biológicas, Universidad Nacional de Piura during Wetlands International Day. 02/2017

- Awareness talks for two schools in Distrito de La Unión. 05 & 10/2017.