



Migratory Shorebird Project: Annual Progress Report July 2018 – June 2019



Compiled by

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Photos: MSP partners at in Mazatlán, Mexico (left); the birds and mudflats of Ensenada de Pabellones, Mexico (right)

General Developments

- Completed eighth year of surveys at some sites (November 2018 – February 2019) in North America, fifth year in Central America and the sixth 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 existing resources for summarizing MSP data while the second covered approaches for developing questions and hypotheses using MSP data. Recordings will be terrific resources for training Spanish speaking partners.
 - Explore Data:
<https://zoom.us/recording/share/aPaorTLd9pHBdnjgxfag3bj0wef8j6idF8beZi7c2ZWwlu mekTziMw>

- Hypotheses:
<https://zoom.us/recording/share/bWJ0YEW9evPXt9qfYaH2W8HsSiin3OXfDntLuamsD1qwlumekTziMw>
- Conducted a revised hot spot analysis in January 2019 using British Columbia Coastal Waterbird Survey data to update maps produced in 2012. These maps highlight areas of importance for guilds of coastal waterbirds, including shorebirds and are weighted by abundance. These maps are available at <https://www.bsc-eoc.org/volunteer/bccws/bccwsmaps.jsp>.
- Participated in shorebird monitoring kick-off meeting and then visited potential field sites in Guatemala. Worked with Wildlife Conservation Society and FUNDAECO to assess strategy for implementing MSP in Guatemala. Will be using comprehensive surveys conducted by WCS in 2019 to guide design of MSP to hopefully start January 2020.
- Two theses completed by students in Mexico using MSP data to better understand the factors driving the distribution and abundance of shorebirds in Baja, California.
- 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/>).

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

- 191 sites surveyed by 530 volunteers in 2018-2019. Nineteen new volunteers were recruited.
- The trend analysis was updated to include all shorebirds counted from 1999-2018 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 Environment and Climate Change Canada. Also shared data with environmental consultants and NGOs.
- Incorporated data entry portal into Nature Counts to enhance data sharing and management. Data were requested and approved for use by students, environmental consultants, Environment and Climate Change Canada and NGOs.

Workshops & Presentations

- A revised hot spot analysis completed in January 2019 to update maps produced in 2012. These maps highlight areas of importance for guilds of coastal waterbirds, including shorebirds and are weighted by abundance. These maps are available at <https://www.bsc-eoc.org/volunteer/bccws/bccwsmaps.jsp>.
- Public presentations and training sessions performed in Tsawwassen (September 2018), Victoria (October 2018) and Parksville (March 2019).
- Abstracts planned for a conference presentation in at the Salish Sea Ecosystem Conference in Vancouver in April 2020.

Science

- Two new Motus Wildlife Tracking stations set up in British Columbia at Iona Island and Robert's Bank with the Canadian Wildlife Service to track *Pacifica* Dunlin and Western Sandpiper during spring migration.
- Detections of birds made at an existing Motus station at the Pacific Wildlife Research Centre is being analyzed by the Canadian Wildlife Service.

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 2018 – 20 Jan 2019.
- Data collected by >35 partners from federal and state agencies, universities and NGOs, including surveys by >200 biologist and volunteer citizen scientists.
- Counted approx. 250,000 shorebirds. Overall shorebird abundance corrected for area surveyed was lower in 2018 for a 4th consecutive year after a peak in 2014.
- Because airboat surveys are no longer possible at the Salton Sea due to dropping water levels we developed a ground-based approach for 2018 surveys. We partnered with USFWS, Audubon California, California DFW and Oasis Bird Observatory to conduct ground transects around the Sea. We are evaluating these data to identify a permanent strategy moving forward.
- Partnered with Audubon California and Humboldt State University to establish an updated spatially explicit shorebird monitoring effort in Humboldt Bay, California.
- Helped coordinate surveys across 12 countries.
- Data management and support using CADC for entire MSP network.



Mean density (ha) for all shorebirds counted 2011 - 2018 in Washington, Oregon, and California, USA.

Workshops & Presentations

- Presented analysis of habitat use by shorebirds from Mexico to Peru as part of a workshop focused on opportunities for shorebird conservation in shrimp aquaculture. January 2019
- Presentation for departmental seminar at Simon Fraser University highlighting local to flyway level science being conducted by MSP: “Farmers, Flooding, and Flyways: Multi-Scale Conservation Science for Migratory Shorebirds”
- Presentation at Canadian Wildlife Service seminar series and the University in Mazatlán Mexico seminar series: “Migratory Shorebird Project: Towards a Climate-Smart Conservation Science Network for Wetlands on the Pacific Coast of the Americas”
- Participated in shorebird monitoring kick-off meeting Guatemala and then visited potential Guatemala field sites. Worked with Wildlife Conservation Society and FUNDAECO to assess strategy for implementing MSP in Guatemala. Will be using comprehensive surveys conducted by WCS in 2019 to guide design of MSP to hopefully start January 2020.
- Coordinated three meetings of the Project steering committee.
- Presented project data from the San Francisco Bay estuary to the San Francisco Bay Joint Venture to inform design of a monitoring and assessment plan across coastal ecosystem in the region.

Science

- Submitted MSP framework manuscript for publication: “A Hypothesis Driven Monitoring Framework for Non-breeding Shorebirds on the Pacific Coast of the Americas
- Analyzed habitat associations of shorebirds from Mexico to Peru with a specific assessment of the relative importance of shrimp farms.
- Prepared manuscript studying drought effects on shorebird abundance and distribution throughout interior and coastal California.

Outreach / Education / Awareness

- Spanish versions of two online training session were recorded. The first video explained how to use data summary tool to explore MSP data, while the second discussed approaches for developing and testing hypotheses with MSP data. Links to the two training below:
 - Explore Data:
<https://zoom.us/recording/share/aPaorTLd9pHBdnjgxfag3bj0wef8j6idF8beZi7c2ZWwlu mekTziMw>
 - Hypotheses:
<https://zoom.us/recording/share/bWJ0YEW9evPXt9qfYaH2W8HsSiin3OXfDntLuamsD1g wlu mekTziMw>
- Integrated new data into online data summary applications (www.migratoryshorebirdproject.org/datamap; www.migratoryshorebirdproject.org/exploredata).

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 2019 we completed the annual non-breeding midwinter shorebird surveys at 21 sites across northwest Mexico. These sites included 243 sampling units that are surveyed by about 50 volunteers in northwest Mexico. Main species observed: Western Sandpiper, Dunlin, Marbled Godwit, Willet, Black-bellied Plover, Sanderling, Greater Yellowlegs, Dowitcher spp, Snowy Plover.
- **Snowy Plover Nonbreeding Surveys:** During January 2019 we conducted Nonbreeding Snowy Plovers surveys in five sites in northwest Mexico (Estero de Punta Banda, San Quintin, Laguna Atotonilco, Marismas Nacionales and Ceuta) that coincided with the Snowy Plover midwinter window survey along the Pacific coast of United States.
- **Waterbird surveys in southern Mexico.** One winter survey in 21 sampling units of the wetlands of Isthmus of Tehuantepec.
- **Expanding survey efforts on sandy beaches:** During May-June 2019 we conducted Snowy Plover breeding surveys along the coastline between Faro de San José and Santa Rosalillita, BC. Support from Southern Wings.
- **American Oystercatcher Monitoring:** During April through June we conducted monitoring of American Oystercatchers breeding in priority sites of NW Mexico, including Marismas Nacionales, NAY; Bahías Santa María y Navachiste, SIN; El Tóbari, Bahía Kino, and Puerto Peñazco, SON; Laguna Ojo de Liebre, Bahía Magdalena, Bahía de La Paz, Bahía de Loreto, and Isla San Marcos, BCS.
- **Breeding Snowy Plover Monitoring:** From April through June of 2019 breeding Western Snowy Plovers were monitored in six sites (Estero de Punta Banda and Bahía San Quintin, Baja California; Ensenada de La Paz, Baja California Sur; Laguna Atotonilco, Jalisco; Bahía Ceuta, Sinaloa; and Marismas Nacionales, Nayarit). In collaboration with partners during May-June, 2019 we captured and marked Snowy Plovers with colored rings and GPS receivers from Ensenada, BC, to Guerrero Negro, BCS.

Science

- Abril Heredia finished her M.Sc. thesis at CICESE on shorebirds and disturbance by using shorebird data from MSP.
- Estefanía Muñoz also finished her Bachelor's thesis at UABCS on the abundance and distribution patterns of three large shorebirds in the Baja California peninsula, also using the data from MSP.
- Representatives from Mexico will present six talks based on MSP activities at the Western Hemisphere Shorebird Group (WHSG) meeting in Panama in October 2019.

Outreach / Education / Awareness

- **Protection of Habitat:** In order to protect the nests of Snowy Plovers in Bahía San Quintin, in March 2019 we installed a temporary fence on the beach of the Punta Mazo Natural Reserve. The fence of 20,000 square meters will remain installed on the sandy beach of the nature reserve until August. Ver: <https://www.sqnoticias.com/single.php?id=2199>
- **Outreach Talk:** On 12th February 2019 we celebrated the World Wetlands Day by giving a talk about the importance of Bahía San Quintin to wintering Pacific Brant to college students.
- Member of the steering committee for the Pacific Americas Shorebird Conservation Strategy.
- Mentor of Jonathan Vargas, fellow of the Coastal Solutions Fellows program (<http://www.solucionescosteras.org/>).

South America and Central America

Personnel involved (organization/institution)

- Salvadora Morales & Diana Eusse (Asociación Calidris - Colombia) Central and South America Project Leaders
- John van Dort (john.vandort@gmail.com), Roselvy Juárez, Oliver Komar
- Victoria Galán y Marta Lilian Quezada (SalvaNatura); El Salvador
- Érica Reyes (Quetzalli); Nicaragua
- Luis Sandoval (Unión de Ornitólogos de Costa Rica); Costa Rica
- Sociedad Audubon de Panamá. Panamá
- Ana Agreda (Aves y Conservación); Ecuador
- Naturaleza y Cultura Internacional, Fernando Angulo (Corbidi), RN Paracas; Peru
- Ivo Tejada & Sharon Montecinos (ROC)

Field Surveys

- Surveys of 71 unit in coastal estuaries, salt and shrimp ponds across 9 countries, between 15 Jan – 15 Feb 2019.
- Data collected by 12 partners from NGOs, governmental agencies and universities with 81 volunteers.
- Counted 277,569 shorebirds.
- El Salvador included 3 new sites.
- Disturbance protocol was implemented for the 4th year.
- In Central America, MSP surveys and trainings were completed along with Central America Waterbird Census.
- Surveys are receiving the support of local and national governmental agencies (SLV, COL, PER), producers (NIC, HON, CRI, ECU, PER), universities (CRI, ECU) and local communities (COL, ECU, PER).
- Some surveys are the highest abundance records for sites or countries or migration season in the last years.
- Sightings of some bands and rings. All of them were reported.

Science

- HONDURAS: Paper submitted about the first reproduction record of *Vanellus chilensis* in Honduras (Cotinga, in press).
- CENTRAL AMERICA: Joint with Central America Waterbird Census. Training volunteers in protocols, datasheets and guidelines of two surveys.

Workshops & Presentations

- Online training sessions about CADC uses, tools of explore data in CADC and MSP webpage
- COSTA RICA: Workshop with National Conservation Areas System for 24 persons, in MSP and Waterbird Census protocols, shorebird identification and counts. November 2018.
- COSTA RICA. Talk about MSP surveys results and SINAC Training Workshop experience in Marine Conservation Meeting MarCOLAB 2018
- ECUADOR: Ecuadorian Biology days, Peninsula of Santa Elena University; November 2018.
- COLOMBIA: MSP results talk in Asociacion Calidris Congress. June 2019.
- COLOMBIA: Shorebird ID and MSP protocol training workshop for 16 people from Bocana de Iscuande. November 2019.
- HONDURAS: Second Trinational Shorebird Survey in the Gulf of Fonseca Talk for Honduran Association of Ornithology, Institute for Forest Conservation and Development, Protected Areas and Wildlife (ICF) and DiBio MiAmbiente.

Outreach / Education / Awareness

- HONDURAS: Visit to El Jicarito Reserve, in which 16 members of the Honduran Ornithology Association (ASHO). Main objectives: 1) to socialize research and conservation of shorebirds in the Gulf of Fonseca; 2) train future shorebird observers in Honduras. The excursion was organized by ASHO, in collaboration with the Institute of Forest Conservation and Development, Protected Areas and Wildlife (ICF) of the Honduran government, and with funds provided by Manomet. September 2018.
- EL SALVADOR: Two posters to invite people be part of MSP and CAWS Surveys
- COSTA RICA: Social media publications generated by the MSP and PASCs publications (English and Spanish version). We have also given talks to birdwatchers and children in conservation projects on shorebirds.
- ECUADOR: Training a Marine Biology student (William Chalen) of the University Peninsula of Santa Elena.