

NINTH (VIRTUAL) MEETING OF THE WESTERN HEMISPHERE SHOREBIRD GROUP, 6–9 SEPTEMBER 2022, PUERTO MADRYN, ARGENTINA

The Ninth Western Hemisphere Shorebird Group (WHSG) Meeting was delivered virtually for the first time from Puerto Madryn, Chubut, Argentina on 6–9 September 2022. The conference took place in real time using two virtual platforms: Zoom webinar and GatherTown. The meeting included 332 participants from 20 countries in the Western Hemisphere, 2 from Europe and 1 from Asia. There were four plenary speakers (Juliana Bosi de Almeida, Roberto Carmona, Erica Nol, and Stan Senner), 10 symposia (81 oral presentations), six thematic sessions (64 oral presentations), and 25 poster presentations. In addition, there were four pre-conference workshops. Simultaneous translation (English/Spanish) at most conference events was provided by Traducciones Herrera. More details of the program, including the book of abstracts, are available at: <https://whsg2021.org/>.

The next meeting will be at Mount Allison University, Sackville, New Brunswick, Canada in August 2024, and will be co-chaired by Dr. Julie Paquet (Canadian Wildlife Service) and Dr. Diana Hamilton (Mount Allison University).

AWARDS

Two Lifetime Achievement awards were presented to honor Allan Baker and Lewis Oring (<http://westernshorebirdgroup.org/awards/>). Amazing hand-painted plates created by Rocio Landivar were given to each winner, along with 1,000 USD.

The *Allan Baker Lifetime Achievement Award for Shorebird Conservation* was given to Luis Espinosa from Fundación Conservación Marina, Chile. Throughout his 30 years in ornithology and bird conservation, Luis has published a series of scientific works on wetlands and wetland birds that have greatly contributed to the conservation of aquatic birds in Chile. His experience and knowledge have led to the legal recognition of two marine wetlands that are now part of the Western Hemispheric Shorebird Reserve Network (WHSRN) and three new Nature Sanctuaries (protected site in Chile), totalling about 9,000 ha. Luis also is recognized for his promotion of bird conservation: he was one of the



Claudio Delgado (left) presents the *Allan Baker Lifetime Achievement Award for Shorebird Conservation* to Luis Espinosa (right).



Robert E. Gill, Jr. received the *Lewis W. Oring Lifetime Achievement Award for Shorebird Research*.



Luis Benegas received the 2022 *Pablo Canevari Award*.

creators of the Maullín Ornithological Meeting, a citizen space for the dissemination of bird conservation knowledge at a local level, which has inspired many young people to follow the path of ornithology. He also oversaw the design of the Maullín River Ornithological Park in southern Chile, and has worked to protect other private areas in the country.

The *Lewis W. Oring Lifetime Achievement Award for Shorebird Research* was presented to Dr. Robert E. Gill, Jr., Research Wildlife Biologist Emeritus from the U.S. Geological Survey (USGS), Alaska Science Center, USA. In his 55-year research career, Bob produced outstanding science, in part through collaborations with international teams of students, established academics, and colleagues within government agencies. Following several years' working with the State of California on waterbirds, he found his passion working with shorebirds breeding and migrating through Alaska, contributing directly to conservation planning and action. Bob has been a valuable participant in organizational efforts, including being a founding member of the Alaska Shorebird Group and helping shape the development of the Western Hemisphere Shorebird Group and its subsequent series of hemispheric-wide meetings. He was an early chair of the U.S. Shorebird Conservation Plan's Research group, worked on the Canadian Shorebird Plan, and has been an active member of the International Wader Study Group for several decades.

Rob Clay of Manomet, Inc. presented the 2022 *Pablo Canevari Award* to Luis Benegas. Every two years, Manomet and WHSRN present the Pablo Canevari Award to an individual or organization from Latin America or the Caribbean with an outstanding commitment to shorebird conservation. Luis Benegas has more than 30 years of experience working with shorebirds in Tierra del Fuego, and has worked tirelessly to conserve shorebirds in Argentina since the 1980s. He was instrumental in the declaration of the Reserva Costa Atlántica de Tierra del Fuego WHSRN site – an area of hemispheric importance for shorebirds – in 1992. He was also part of WHSRN's Argentine National Council from 2007–2013 and is a founding member of the Birdwatchers Club in Río Grande, Tierra del Fuego (COA Río Grande). Above all, Luis excels in connecting shorebirds to local leaders and the general public, leading to long-term conservation of important sites in Tierra del Fuego.

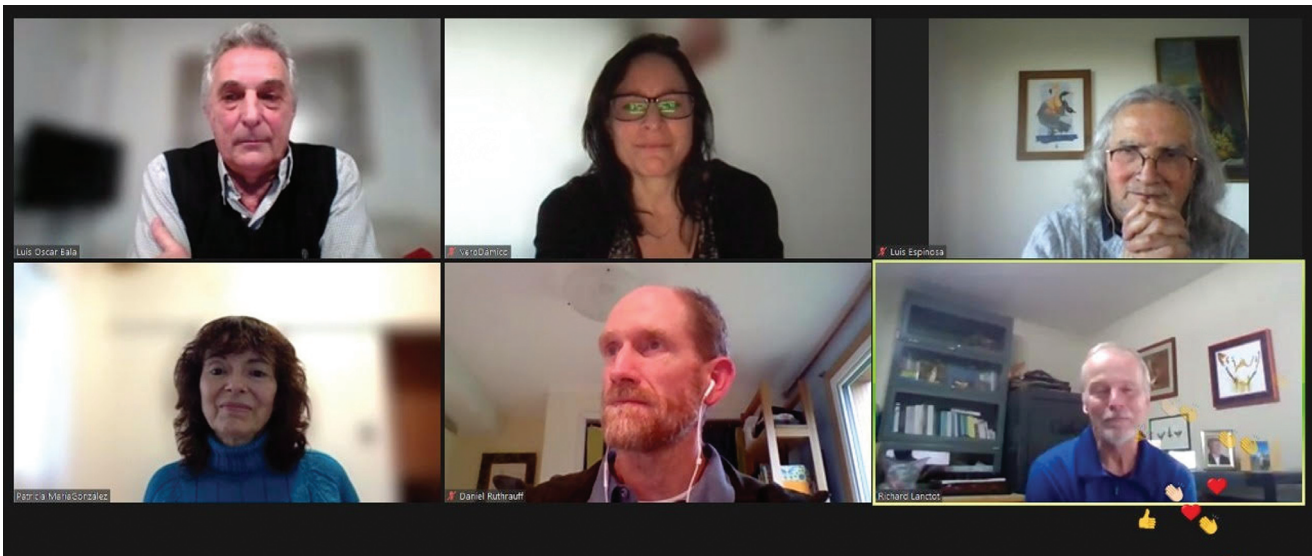
Luis Bala, chair of the Student Awards Committee, presented the *Best Oral Paper Award* to Natalia Vreys from University of Córdoba for her talk 'Habitat factors that explain the occurrence of Upland Sandpiper (*Bartramia longicauda*) in central Argentina', and the *Best Poster Award* to Josefina Fernández from University of Mar del Plata for her poster 'Trophic ecology of *Calidris canutus rufa* over-summering at Faro Querandí, Buenos Aires, Argentina'.

SYMPOSIA

Shorebird conservation and human well-being: What for? How? and Why?

Organized by Isadora Angarita-Martínez

This symposium showcased how aspects of human well-being at important shorebird sites are complementary, alternative, and valid arguments for the conservation and management of those sites and that the sites also benefit human communities. Assessing, valuing, and monitoring a site's ecosystem services (or nature benefits) informs about the state of the site, contributes to planning for both the environment and human communities, and helps to understand the potential impacts of proposed changes. Key theoretical aspects of ecosystem services, how to assess them, and why it is important to involve local stakeholders were presented, followed by the results of five ecosystem services assessments at important shorebird sites in Latin America. The presentations emphasized the importance of the participation of a wide range of key stakeholders at each site and discussed how the assessment benefitted the site, contributing to management plans, nominations as WHSRN sites, and engagement with local communities. Finally, some unintended outcomes were highlighted, such as developing self-confidence and building trust, and empowering and giving voice to marginalized communities. Brainstorming sessions during participatory assessments help to initiate conflict resolution and are the first steps towards negotiations of all kinds.



Some of the leaders and participants of the 9th Western Hemisphere Shorebird Group conference, including (top, left to right) Luis Bala, Vero D'Amico (Chair), Luis Espinosa, (bottom, left to right) Patricia González, Dan Ruthrauff, and Rick Lanctot.

Why are sandpipers licking mud? A symposium on intertidal biofilm and shorebirds

Organized by Mark Drever

Intertidal biofilm is a thin layer of microalgae, bacteria, tiny invertebrates, and other organisms enmeshed in a sticky matrix that sits on the surface of estuarine mudflats. Small-bodied shorebirds feed heavily on intertidal biofilm, and their high mobility allows them to sample a variety of habitats, making them excellent ecological indicators of habitat quality. This symposium brought together mudflat researchers from Canada, USA, and the UK to present their latest findings on shorebird foraging, migration ecology, and measuring habitat quality.

The studies looked both at the nutritional value of biofilm and how birds use it. Mark Drever compared two sites and showed that more shorebirds used the site with higher nutritional quality of intertidal biofilm. Keith Hobson used stable isotopes to look at how Western Sandpipers assimilate macronutrients during spring migration, showing that biofilm provides over 40% of their energy budget. Chris Guglielmo used wind tunnel experiments to show that birds feeding on a polyunsaturated fatty acid-rich diet (from biofilm) increased flight energy efficiency, so birds could fly longer and further on the same calories as other birds. Stable isotope studies by Susan De La Cruz and her team showed that shorebird diet became more specialized during spring migration, relative to the winter and concluded that seasonal resource partitioning could help to reduce competition for food during. James Booty presented a winter exclusion experiment and found that shorebirds affected ecosystem functions in the microalgal layer, including carbon sequestration, directly linking current 'blue carbon' initiatives and shorebird conservation.

The microalgae found in intertidal biofilm, particularly diatoms, form the foundation of estuarine ecosystems. The studies presented here indicate intertidal biofilm fluctuates with the seasons and has dynamic relationships with the shorebirds that depend on it. Mudflats face development pressures throughout the world, precipitating our need to better understand these complex interactions to ensure loss and alteration of mudflats do not contribute to ongoing population declines of shorebirds in the Western Hemisphere.

Advances in shorebird monitoring

Organized by Stephen Brown, Richard Lanctot, Matt Reiter, Point Blue, Rob Clay & Arne Lesterhuis

This symposium was sponsored by the Program for Regional and International Shorebird Monitoring (PRISM), an open and collaborative effort to ensure all Western Hemisphere shorebird species are monitored at some point in their life cycle. Some key findings from the talks are presented here. Joaquin Aldabe showed that the average counts per transect of wintering Buff-breasted Sandpiper and American Golden Plover remained relatively stable during 2008–2015, but were lower during 2016–2019. Marcela Castellino reported that Wilson's Phalaropes were recorded in 51 sites in the Argentinian lowlands with almost 99% of them at Laguna Mar Chiquita and Lago Epecuén, with 507,885 and 120,000 estimated birds respectively. John van Dort presented results from the first regional trend analysis for shorebirds in Central America (2011–2021), which will be instrumental in prioritizing regional shorebird conservation needs. Three *Tringa* species (Lesser and Greater Yellowlegs and Willet), Semipalmated Plover, Least and Spotted Sandpiper, and Short-billed Dowitcher all showed

declines. Trends among non-breeding shorebirds along the Pacific Americas Flyway were presented by Matthew Reiter. There were variable population trends among species overall and within species across sites, with Western Sandpipers potentially experiencing significant declines at several sites. Results from a simultaneous survey in the Altiplano Wetlands of Argentina, Bolivia, Chile and Peru covering 251 sites were presented by Arne Lesterhuis. Up to 50% of the global population of the Wilson's Phalarope may use the Altiplano wetlands and they host virtually the entire global populations of Puna Plover and Andean Avocet. Paul Smith presented results from PRISM surveys across the Canadian Arctic (1994–2018). Population estimates for most species increased and densities of 193 and 133 shorebirds/km² were found in wet and moist plots, but only 10 birds/km² in dry plots. However, these extensive dry plots support 42% of all shorebirds in Arctic Canada. Ryan Carle presented counts of phalaropes staging on saline lakes collected as part co-ordinated monitoring of staging sites in North America. The authors proposed standardizing survey methodology across sites. Nathan Senner talked about community scientist-led simultaneous surveys in southern South America. The surveys, which covered all known wetland sites and a random sample of rocky and sandy beaches along the coasts of southern Brazil, Uruguay, and Argentina, showed that the north of this region is important for sandy beach specialists such as Sanderling and American Oystercatcher, while the southern part is critical for intertidal mudflat feeders, like Hudsonian Godwits, and those using rocky habitats, like Magellanic Oystercatchers. New hierarchical Bayesian models using data from across North America from 1980–2019 were presented by Paul Smith and showed that shorebird declines have accelerated for most species, and that Arctic-breeding species are declining to a greater extent than boreal and temperate breeders. Jim Lyons presented PRISM data from the Yukon-Kuskokwim Delta, Alaska, which recorded 11,112 breeding shorebirds of 22 species, and extrapolated estimates showed that about 6.3 million shorebirds bred annually on the site in 2015 and 2016. Ricardo Matus talked about binational efforts to conserve the Near Threatened, endemic Magellanic Plover in Patagonia. Surveys in December 2021 of 180 sites in the breeding areas in Argentina and Chile found 264 individuals, and during the non-breeding season in May 2022, only 300 individuals were counted, suggesting a revision of its conservation category should be considered.

Impacts and lessons learnt in shorebird conservation along the Pacific Flyway

Organized by Diana Ochoa

In 2017, the Cornell Lab of Ornithology developed the Coastal Solutions Fellows Program, with the goal of improving resiliency along the Pacific Flyway of Latin America to help recover shorebird populations and support the sustainable and regenerative development in the region. The program involves the implementation of effective

conservation projects, based on cross-sectoral and multidisciplinary collaborations, with measurable impacts and governance processes for the long-term success of these initiatives. In this symposium, nine Coastal Solutions Fellows and one collaborator shared their experience of working on the conservation of coastal zones along the Pacific Flyway, and the broad range of skills and tools currently being implemented by our fellows across six Latin American countries. Some of the common elements for conservation success included the creation of leadership, planning, governance, and communication skills, as well as the implementation of science-based innovative projects with cross-sectoral collaboration. Projects work with a diverse group of stakeholders, while considering the needs of the communities to protect priority habitats, mitigate the impacts of climate change and improve the resilience of coastal zones. The hydrological and engineering disciplines have been critical to understand the physical space and generate models for decision-making, while the landscape architecture perspective has helped design public policies and strategies for territorial planning that, along with coastal ecology contributions, can bring forward effective mechanisms for regenerative development. Key lessons identified in the symposium included: (1) collaboration with indigenous and afro communities, integrating scientific and local knowledge, is extremely valuable for conservation strategies; (2) developing strong relationships with aquaculture farmers helps to engage them with shorebird-friendly production strategies; (3) initiatives should include economic alternatives, including the establishment of conservation easements, the promotion of ecotourism, and certification strategies to increase market value of their products; and (4) Key coastal properties can have high market values, attracting the interest of real-estate investors. Collaboration with the private sector, the design of innovative market strategies, and the appropriate governance strategies can be very effective for coastal conservation. A truly enriching conversation, this symposium demonstrated the various challenges and complexities involved in the conservation of the Pacific Flyway and the importance of creating multi-disciplinary and cross-sectoral strategies.

Shrimp farming and shorebirds: Challenges and opportunities for their conservation and sustainable development

Organized by Salvadora Morales & Juanita Fonseca

Shorebirds are very loyal to the sites they occupy during their annual cycles, often relying on a few stopover, breeding, and wintering sites. They may depend on several wetland and coastal habitats for food to replenish them during their migrations. On the Pacific coast, approximately 500,000 hectares have been converted to shrimp farms which, with appropriate management, can provide important habitats for shorebirds with mostly positive impacts. In 2017, the Shrimp and Shorebird Aquaculture Working Group was created to generate information on the importance of shrimp farms for shorebirds. This

symposium shared highlights, relevant studies, and collaborations. As well as providing food and temporary refuge for thousands of shorebirds and waterbirds, they are also breeding sites for some resident shorebird species. Willet and Marbled Godwit had high return rates to the shrimp ponds they use as stopover sites along the coasts of northwestern Mexico, possibly because of the high abundance of available food. Several organizations are monitoring shorebird use and contributing to the identification of best management practices which, by working with producers, are being integrated into conservation action in Guatemala, Nicaragua, Honduras, and Ecuador. The Working Group is assessing opportunities to work with the shrimp industry in several Latin American countries, including promoting practices that benefit shorebirds while improving production, as well as evaluating proposed practices based on the particularities of each region. Scientific evidence demonstrates that the application of these practices on shrimp farms will benefit shorebirds, producers, and consumers.

Civil society in the conservation of shorebirds and coastal wetlands in Latin America

Organized by Patricio Guerrero & Sharon Montecino

In recent decades, environmental institutions in Latin America have grown, adopting new structures for the implementation, evaluation, and control of environmental procedures, as well as incorporating tools for the protection of species and sites. Despite this, the environmental challenges are increasing and so is the need to accelerate the implementation of solutions at scales that would be unapproachable without broad citizen support. There are numerous examples in Latin America of citizen efforts being brought together by civil organizations resulting in the execution of national and international policies. In Chile, the Network for the Protection of Shorebirds (RPAP), started in 2019, brings together individuals, civil society, and NGOs that promote conservation in coastal ecosystems, articulating efforts in shorebird monitoring to inform decision-making and promote their protection across the country. This symposium allowed us to share learning, broaden perspectives and discuss the main challenges and synergies to stimulate conservation solutions. It featured experiences from Colombia, Ecuador, Peru, Chile, and Argentina, as well as discussions by WHSRN-Manomet and the CREHO Ramsar Regional Center for the Americas and showcased the diversity of existing coastal wetlands – mangroves, canals, urban wetlands, estuaries, bays, and mouths are all part of the coastal wetlands of Latin America. All participants confirmed the importance of the community base and its contribution. Presenters noted the weak knowledge about the Ramsar Convention and how it relates to the local policies, regulations, plans and statutes for the protection of coastal wetlands and shorebirds. Emphasis was placed on: (1) the importance of managing alliances with organizations that promote knowledge about migratory birds and their stopover areas;

(2) articulation of efforts with friendly CSOs, local governments; (3) needs of schools, academic and citizen science communication; and (4) the need to project permanence of conservation initiatives in the community and stakeholder's participation in the development of management plans. Ideas for the conservation of shorebirds and coastal wetlands covered local tools, national policies, and international strategies. Promoting spaces for participation in each country, in addition to promoting Wetland Law, are part of the challenges of civil society organizations in Latin America.

10 years of stories connecting communities through research and conservation with the Migratory Shorebird Project

Organized by Diana Eusse, Bianca Bosarreyes & Matthew Reiter

In this session, partners from the Migratory Shorebird Project (MSP), an international research and monitoring network along the Pacific Flyway, presented lessons learned, success stories and results of the MSP during its first 10 years, from regional, country, and local levels, in two main topics: (1) estimation of changes in shorebird populations, and (2) evaluation of threats and conservation actions. Matt Reiter reflected on the first ten years of the MSP, considering strategies for the success of the network. The talk summarized key conditions and strategies, including leveraging existing efforts, while building new partnerships across scales, co-creating a shared vision, standardized data collection and centralized data management, and applying the data.

Estimates of trends in shorebird population distribution and abundance were covered by four talks. The first, by Esther Stephany Carty Vargas, covered 10 years of monitoring in the Bay of Panama and summarized the trend in species abundance in the Bay, different anthropogenic threats (pollution, sand extraction, etc.) and the importance of generating annual information on shorebirds and their habitats. Jonatan Sequeda Zuleta presented the first evidence of Killdeer breeding in Tumaco, Nariño-Colombia, and highlighted the variety of opportunities offered by MSP to increase knowledge of shorebirds in different periods of their annual cycles in different sites. Estefanía Isabel Muñoz Salas used MSP data to show population declines in Willet and Marbled Godwit across northwest Mexico and coastal California but stable populations of Long-billed Curlew, and quantified the influence of ambient temperature and precipitation on their annual population fluctuations. Finally, Bianca Beatriz Bosarreyes Leja used MSP data to understand how shorebird richness and abundance vary by season, habitat, and along the Pacific coast of Guatemala. The results will be used to inform conservation strategies.

Five talks evaluated anthropogenic threats and conservation actions, again using MSP data. Romina Gianella Lavarello Schettini evaluated disturbance on the Peruvian

coast, and Abril Copalli Heredia Morales identified the sites with most human disturbance on the Pacific Flyway. Two talks looked at the impact of disturbance on shorebird abundance: Abril Copalli Heredia Morales found that disturbance may be displacing shorebirds at Bahía de Todos Santos, Baja California, México during both northward and southward migration, while Daniela Michelle Valdez Gámez focused on Wilson's Plover, finding numbers were stable in the population studied. James Casey borrowed a concept from political science – Epistemic Communities – to explain how the ideas, values and technical understanding generated by the MSP have been integrated into a local to global network influencing the conservation of shorebird habitat.

All talks showed how the MSP is providing essential monitoring data across the Pacific Flyway, helping to understand threats to the shorebird populations and measure the success of the Pacific Shorebird Conservation Initiative.

Grassland management for shorebirds and livestock production

Organized by Joaquín Aldabe

Several species of shorebirds depend on grassland habitat to complete their annual cycle. These species have very strict requirements regarding the height of the grass. When it exceeds 6 cm in height, the birds tend to stop using them, and therefore the supply of feeding habitat decreases. This can reduce their likelihood of survival. The height of the grass is controlled by several factors, among them, and perhaps the main one, is grazing by domestic cattle. However, the areas where birds concentrate tend to have grass that is too tall. The four talks in this symposium, spanning Bolivia, Colombia, Brazil, and Uruguay, identified good grazing management practices and possible incentives to integrate livestock production and shorebird conservation to help both to co-exist productively

The future of working lands for shorebirds in the Western Hemisphere

Organized by Khara Strum, Rodd Kelsey & Greg Golet

Across the Western Hemisphere, working lands are an increasingly important component of shorebird conservation. In many regions, this is now a dominant habitat in the landscape and, while natural habitat loss continues to be a primary threat to shorebird populations, some of these working lands can provide valuable surrogate habitat if managed appropriately. The widespread loss of shorebird habitat is making such areas increasingly important, but their future and potential to help meet the needs of migratory shorebirds is uncertain. Issues include changes in land use, water availability, and sea-level rise. Additionally, direct threats to shorebirds, such as aerial predator populations and exposure to contaminants, vary among types of working land. Understanding the relative

importance and safety of these habitats and how to optimally manage them to protect birds along the flyways will be fundamental to providing enough habitat where and when it is needed most. In this session, we examined, through case studies and discussion, what is currently known about the relative importance of working lands for shorebirds in the Western Hemisphere. We also explored what opportunities exist to manage them effectively to meet the full life-cycle needs of shorebirds along their journeys.

Flyway conservation initiatives in the Americas

Organized by Rob Clay

Flyway-scale conservation of shorebirds requires collaboration across diverse sectors, cultures, and languages. Starting in late 2011, shorebird conservationists have developed a new approach, placing local action within a flyway context, and facilitating collaboration at the scales necessary to be effective, through the development of conservation investment strategies. The first such strategy to be developed was for the Atlantic Flyway, with a strategy and then a business plan published in 2015. This was followed in 2016 by a conservation strategy for the Pacific Flyway. Finally, the development of a strategic framework for the Midcontinent was launched at the 8th WHSG meeting in 2019. The shorebird conservation strategic frameworks assemble and synthesize current knowledge to create a comprehensive approach for addressing the most pressing conservation needs of shorebirds in the three flyways of the Americas. Each framework is supported by a voluntary partnership of organizations (brought together as a flyway-specific initiative), which seek to implement a set of key strategies to achieve the goal of maintaining and restoring shorebird populations across the hemisphere. While shorebird conservation is the primary goal, the initiatives supporting the strategies have increasingly sought to implement actions to provide multiple benefits, including improving the well-being of the human communities that interact with shorebirds. The symposium presented an update of progress in the development and implementation of the flyway-scale strategies for the conservation of shorebirds and highlighted new emerging threats and cross-cutting issues that require further research.

WORKSHOPS

Conservation actions for Lesser Yellowlegs (Tringa flavipes) in the Americas

Organized by Jim Johnson, Katie Christie & Kelly Srigley Werner

Lesser Yellowlegs have declined precipitously range-wide over the last forty years, with multiple sources indicating a ~70% reduction in population size since 1970. This decline prompted state and federal agencies and organizations to designate the species as one of high conservation concern.

Numerous factors acting across the species range are influencing population trends, including habitat loss, climate change, private and public land management, impacts from industry and development, and hunting pressures. Our workshop aimed to start collaboration across the range of the species throughout the Western Hemisphere by first forming a range-wide working group to develop and implement a conservation action plan. Our approach is designed to engage multiple stakeholders from both biological and social sciences to help reverse the downward trajectory of the population. Working collaboratively is vital in increasing awareness, communicating, and listening, developing public/private alliances, and diversifying land manager abilities to increase conservation capacity. Presenters in the workshop described species biology, demographics in various parts of the species range, threats to populations, migratory pathways/stopovers, and the integration of social science into conservation efforts. During the workshop, participants became more aware of the issues and began to think about strategies to reduce threats and improve conditions for the species range-wide. To aid in the focus on threat reduction, we used the Conservation Plan for the Lesser Yellowlegs, the Midcontinent Shorebird Conservation Initiative strategic framework (<https://midamericasshorebirds.org/>) and tools from Open Standards for the Practice of Conservation (<https://conservationstandards.org/>) as guides to engage workshop participants. During and after the workshop, we relied on expertise to prioritize threats with a solution-oriented approach for regional scale habitat improvement, increased habitat resiliency, improved management considerations, and identification of the highest priority breeding, migrating, and wintering regions for reliable life cycle needs. The threats to the species are not unlike those faced by other shorebird species in similar habitats, and the approach to conservation could be used as a model for other declining species. Next steps are to form Task Teams to address the prioritized threat-reduction strategies through meetings and possibly additional workshops. The conservation action plan for Lesser Yellowlegs will be for practitioners to implement in any geographic area throughout the species range.

NABC shorebird banding training workshop

Organized by Patricia González

The WHSG is committed to promoting high standards when working hands-on with birds in science and to sharing best practices. It can be challenging to get the training and experience needed to work independently in the field. This workshop focused on core and advanced techniques and presented the North American Banding Council (NABC) standards and certification process. Topics included legal responsibilities, scientific and ethical standards, essentials of shorebird capture (including the appropriate use of audio lures and reducing risk of injury and capture myopathy), capture methods, visual and electronic markers, attachment methods, ageing, measurements, collection of blood and feathers, and data

management and sharing. We also discussed the Pan American Shorebird Program and the importance of coordination, resighting flags, and how to report. Participants were invited to share their expertise, ask questions, and participate in discussions.

Buff-breasted Sandpiper conservation

Organized by Richard Lanctot & Juliana Bosi de Almeida

The Buff-breasted Sandpiper (BBSA) Working Group met for the fifth time at the conference and was attended by ~25 people. There was a series of talks and two breakout group discussions. Presentations included reports on: (1) full-cycle migration (Lee Tibbitts); (2) the Midcontinent Shorebird Conservation Initiative's link with grassland shorebirds (Isadora Angarita-Martínez); (3) migration stopover ecology in Texas (Tara Rodkey), Venezuela (Alexis Araujo Quintero), and Bolivia (Tjalle Boorsma); (4) developing new WHSRN sites in Texas (Shiloh Schulte); (5) building good governance at WHSRN sites in Colombia (Carlos Ruiz-Guerra); (6) best cattle management practices in Uruguay (Joaquin Aldabe); (7) population estimates in Texas (Jim Lyons); and (8) estimating population size/trend and conducting management in Brazil (Juliana Almeida).

The first breakout group focused on equipping birds with tracking devices to help understand temporal and spatial movement patterns. Participants indicated the importance of tracking to identify new sites that are important to the species, such as the Amazon River and its tributaries, or more specific sites within the vast Llanos regions of Colombia and Venezuela, the Llanos de Moxos of Bolivia, and the Rio Grande do Sul in southeastern South America. There was also a discussion of using tracking data to document turnover rates and site fidelity and how this knowledge was useful for estimating population size and trends. Finally, the group discussed the large disparities in population size estimates generated by biologists from different parts of the flyway. While reconciling these differences is not straightforward, it was agreed that long-term, standardized surveys should be continued/begun on migration and wintering areas so that we can at least determine a population trend for many sites.

The second breakout group focused on best management practices (BMP) for creating suitable habitat conditions at migration stopovers and on the wintering range. Participants discussed the different tasks and approaches needed to promote the creation of appropriate habitat conditions across sites. It was agreed that any BMP approach should promote a flexible framework that would consider the different economic, financial, and cultural values of the landowners in an area. The group also indicated approaches must prioritize the landowner's point of view and goals, with BBSA conservation as a secondary goal. Importantly, to have a long-lasting effect, BMP practices must be incorporated into the local culture, so the practices are shared and passed along through generations of

landowners. Management practices focused on maintaining short grass heights, through cattle management, burning, or use of natural flooding. Some participants indicated the need for more science to understand grassland production and more outreach to promote grass-fed beef. Others stressed that discussions with policy makers are needed to raise awareness that short grass areas were not an artifact of poor management. Additional BBSA habitats in need of conservation included turf farms, rice fields, and other agricultural areas – all of which might have contaminant issues. It was agreed that the group should meet more frequently to share progress on development of BMPs, perhaps via the Midcontinent Shorebird Conservation Initiative's Working Landscapes working group. During the past 16 years, the 'Buffy' Working Group has made great strides in understanding many aspects of the species biology, especially in the migration routes and wintering areas of the species. Conservation efforts have been especially strong in Latin America, but much remains to be done in the Midcontinent of North America to identify potential factors limiting the population. Additional focus is also needed to connect our work to country national plans, ecosystem management plans, and flyway conservation initiatives, so that we align our priorities and share our results.

Challenges for environmental impact assessment in critical sites for shorebirds

Organized by Diego Luna Quevedo & Pablo Petracci

The shorebird component has been one of the least visible and weighted in the environmental impact assessment systems and processes in Latin America and the Caribbean. This is true especially in terms of compliance with current environmental legislation and the potentially significant environmental and shorebird population impacts. With declining trends amongst various species and populations, it is a priority to integrate and mitigate

impacts to shorebirds in environmental assessments to prevent damage to critical habitats, and when potential significant adverse impacts are generated, to apply the impact mitigation hierarchy properly. To improve this process, it is necessary to create guidelines for environmental impact assessment of development projects. Specifically, we need to establish basic criteria for adverse effects, as well as for management, mitigation, and monitoring measures. During this workshop, Diego Luna Quevedo launched Manomet's document '*Seven Basic Guidelines for Assessing Impacts on Shorebirds and their Habitats*', which provides recommendations to guide environmental impact assessments of development projects that affect habitats and/or sites important to shorebirds. It includes basic criteria for potential impacts, as well as recommendations for management, mitigation, and monitoring measures. It will be a living document which will evolve and be updated with new information. The document is also a reference for the formal procedures and mechanisms that different countries use for environmental impact assessment. As it is targeted at government agencies, private environmental consultants, non-governmental organizations, technicians and specialists, it has put the different concepts and denominations used in the systems and mechanisms of environmental impact assessment throughout Latin America and the Caribbean into a common language. It is for those who prepare studies, evaluate impacts, make decisions in the public and private spheres, and oversee and/or monitor compliance. In addition, it provides communities with access to information allowing informed participation in the environmental impact assessment process and the ability to share their opinions. Users of this document will need to adapt the contents to the different local regions and countries.

Verónica D'Amico, Marcelo Bertellotti, Luis Bala, Richard Lanctot & River Gates

Organizing committee: Verónica D'Amico (chair), Luis Bala, Marcelo Bertellotti, River Gates, Richard Lanctot, Stephen Brown, and Eveling Tavera.

Local committee: staff from CESIMAR-IDEAUS, Universidad Nacional de la Patagonia San Juan Bosco, Silvina Ceriani & Co., and Asociación Ambiente Sur.

Scientific committee: Guillermo Fernández (chair), Stephen Brown, Abril Heredia, Gianco E. Angelozzi, Megan Boldenow, Richard Johnston, Luis Sandoval, Khara Strum, Nils Warnock, and David B. Lank.

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