AFS Estuaries Section News:

Guide to 149th American Fisheries Society Annual Meeting and Joint Conference with the Wildlife Society

September 29-October 3, 2019
Reno, NV

Guide to the Annual Meeting 2019

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Estuaries Section and Marine Fisheries Section Annual Business Meetings

Sunday, September 29th, 4:00 PM - 6:00 PM
Atlantic Hotel, Grand Ballroom 6

The agenda can be viewed here. Come mix and mingle with fellow Estuaries Section members and our friends in the Marine Fisheries Section. We will give an update of accomplishments, discuss symposium ideas for 2020 in Columbus, and honor our Student Travel Award winners, Emily Chen from Humboldt State University and Andrew Shamaskin from Mississippi State University.

Social Hour – Estuaries and Marine Fisheries Sections

Monday September 30th, 8:00 PM after the Trade Show
at the
Lucky Beaver
3655 S Virginia St Reno, NV 89502

No food or drink provided by the section but many available for purchase.

Sponsored Symposium
Management Applications of Estuarine Datasets

Date and Time: Monday, September 30th 8:00 AM – 5:00 PM
Room: RSCC, A13

Fisheries and wildlife datasets collected in estuaries serve many functions. These datasets can support decision making by managers, providing a critical function to enable decision makers to choose the best steps forward for the resource. The purpose of this symposium is to explore the many ways that estuarine datasets contribute critical information for resource management. Examples of the synergy between datasets and management abound – in fact it is likely more difficult to find an example of a dataset that would not be valuable to management decisions in some way. For example, there may be management processes in place that rely on real-time data collection on an endangered species to inform management actions. Or, an important new discovery by a long-term monitoring program may spur a new plan of action (e.g., the discovery of a newly introduced species or source of contamination). Drawing the link between a dataset and the critical management decisions that it supports can be fundamental to the continued collection of such important data. For this symposium on management applications of estuarine datasets, we invite talks by anyone who works in estuaries – fisheries and wildlife professionals alike!

Organizers: Catherine Johnston

Student Talks

Estuaries Section MS Student Travel Award Winner: Emily Chen, Humboldt State University

Barred from the Ocean: Consequences of a Unique Estuary Phenomenon on Recruitment of Chinook Salmon

Authors: Emily Chen, Mark Henderson
Session: CA Salmon Ecology and Management (Hosted by AFS)
Time and Location: Wednesday, October 2rd 10:10 AM – 10:30 AM; Room: RSCC, A9

Estuaries are commonly touted as nurseries for outmigrating salmonids, yet the diversity of estuaries greatly complicates the effect they have on recruitment. In bar-built estuaries, sandbars form at the mouth of rivers during periods of low flow, closing access to the ocean and disrupting outmigration. We evaluated how this phenomenon affects the growth, survival, and ultimately recruitment of Chinook salmon (Oncorhynchus tshawytscha) in Redwood Creek, California. We conducted a mark-recapture experiment on outmigrating juveniles to determine estuary abundance, growth, and survival. We used scales and otoliths collected from adult carcasses to quantify the contribution of juvenile life histories to the spawning population. We integrated life cycle monitoring data collected from spawning ground surveys, screw traps, and estuary seines to create a matrix model. Juveniles that remained in the estuary after the mouth closed grew less and ultimately were smaller than ocean rearing juveniles prior to winter. Despite having a larger ocean entry size, estuary rearing juveniles had lower survival than ocean rearing juveniles and contributed less to the spawning population. Lack of marine influence and low river flow are attributes of bar-built estuaries that may lower food availability and deteriorate estuary conditions, ultimately reducing their efficacy as juvenile rearing habitat.

Student Talks

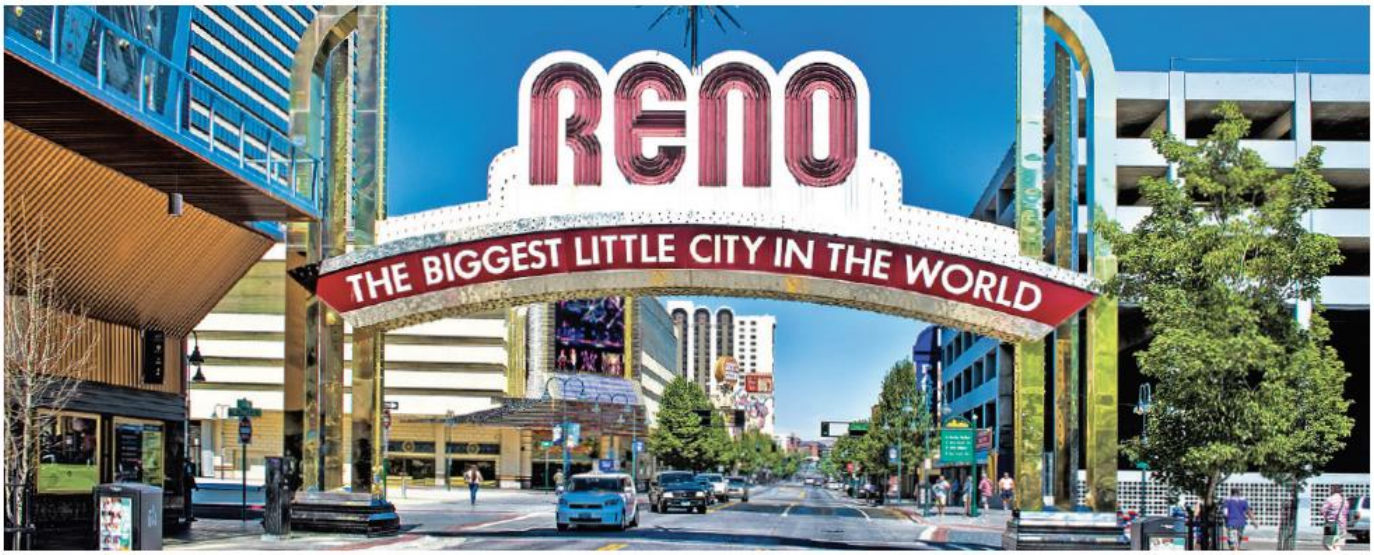
Estuaries Section PhD Student Travel Award Winner: Andrew Shamaskin, Mississippi State University

Valuing Land Conservation to Support Estuarine Biotic Health in the Gulf of Mexico – a Hierarchical Approach

Authors: Andrew Shamaskin, Kristine Evans, Garrett Street, Sandra Correa, Anna Linhoss, Sathishkumar Samiappan, Jiangdong Liu
Symposium: Management Applications of Estuarine Datasets (Hosted by AFS, sponsored by Estuaries Section)
Time and Location: Monday, September 30th 2:10 PM – 2:30 PM; Room: RSCC, A13

Despite the known relationships between terrestrial inputs and estuarine health, there have been few attempts to apply this knowledge toward informing the ecological value of land conservation. Often, such research focuses on evaluating how land-use may stress coastal ecosystems. Here, we examine how variability in land-use/landcover and its interaction with physiographic and hydrologic features have a collective impact on the biotic health of estuaries. We investigated these ecological processes with Bayesian hierarchical modeling using multiple geospatial datasets from 39 estuaries and their associated watersheds along the Gulf Coast Region of the United States. Our model characterized the hierarchical nature of the ecological processes that relate landscape characteristics to estuarine health. We used species counts from fishery-independent trawl samples as an indicator for the biotic health of an estuary and modeled count associations to environmental conditions measured at the time of each sample (individual covariates). We also incorporated estuary/watershed-specific traits (group covariates) to understand how characteristics of an estuary's watershed may modify the influence of sample-specific environmental conditions on an estuary's biotic health. This model informed an index of land conservation value as it pertains to the integrity of estuarine resources.

We look Forward to seeing you all in Reno!



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