within predicted visible area vs. total detections ($r = 0.936$), thus proving Viewshed’s accuracy. Correlations were higher in open areas of sand than areas of variable reef structure, where the probability of interference is greater. Technology limitations include environmental parameters, such as current flow and turbidity, properties of sound vs. vision, and behavioral, ecological and social characteristics of tagged species. The combination of these technologies ultimately proved beneficial and may further be investigated at varying temporal and spatial scales for more effective habitat and fisheries management.

A Framework for Good Governance: Increasing the Economic Gains of Small-Scale Fishers Through Participation in Fish Marketing

KEY WORDS: Marketing, small-scale fishers, governance, market orientation, competitive advantage

Un Marco de Referencia para un buen Gobierno: Aumentando las Ganancias Económicas de los Pescadores de Pequeña Escala Atraves de la Participación en la Comercialización de los Pescado

PALABRAS CLAVE: Comercialización, pescadores de pequeña escala, gobierno, ganancias económicas

Un Cadre de Bonne Gouvernance: Accroître les Gains Économiques des Petits Pêcheurs par la Participation à la Commercialisation du Poisson

MOTS CLÉS: Commercialisation, petits pêcheurs, gouvernance, gains économiques

SARITA WILLIAMS-PETER1* and ANTHONY T. CHARLES 2

1Marine Affairs Program, Kenneth C. Rowe Management Building, 6100 University Avenue, Suite 2127, Halifax, Nova Scotia B3H 3J5 Canada. *sarita_williams@hotmail.com.

2Saint Mary’s University, Management Science/ Environmental Studies Halifax Nova Scotia B3H 3C3 Canada.

ABSTRACT

Small-scale fisheries are essential to maintaining the socio-economic security of fishers and fishery-dependent communities, but they are the most vulnerable to the changing dynamics of the market due to their low competitive advantage, low bargaining power and limited political power to influence decisions. Many countries have a mandate to assist fishers to compete in fisheries, but often this does not extend to marketing aspects, and does not include fishers in decision making. This paper will introduce and apply a framework for assessing and evaluating the administrations of the State in providing assistance to small-scale fishers in marketing, as a measure of good governance. In particular, this requires evolving from a production-oriented approach in fisheries towards contemporary marketing approaches – market-oriented and relationship marketing.

Spatial Distribution and Abundance of Young Kingfish (Menticirrhus spp.)

Species in Coastal Waters of the Northern Gulf of Mexico

KEY WORDS: Menticirrhus, spatial distribution, abundance, northern Gulf of Mexico

Distribución Espacial y Abundancia de Juveniles de Lambe (Menticirrhus spp.) en las Aguas Costeras del Norte del Golfo de Mejico

PALABRAS CLAVE: Menticirrhus, distribución especial, abundancia, norte del Golfo de Mejico

Répartition Géographique et Abondance des Juveniles de Bourrugue (Menticirrhus spp.) dans les Eaux Côtières du Nord du Golfe du Mexique

MOTS CLÉS: Menticirrhus, répartition géographique, abundance, nord du Golfe du Mexique

JOHN ANDERSON*, BRUCE COMYNS, and HARRIET PERRY

Gulf Coast Research Laboratory, 703 East Beach Drive, Ocean Springs, Mississippi 39564 USA.

*evan.anderson@usm.edu.

ABSTRACT

The southern kingfish (Menticirrhus americanus), the northern kingfish (M. saxatilis) and the gulf kingfish (M. littoralis) are members of the drum family (Scianidae) and are found in the northern Gulf of Mexico (GOM). Studies of
distribution and abundance have been conducted for the early life-stages of many sciaenids, but little is known about the early life history of young *Menticirrhus* species. The purpose of this study is to determine the spatial distribution and abundance of young *Menticirrhus* species in coastal Mississippi. Specific habitats included barrier island surf zones and grass beds, and mainland marsh-edges and sandy shorelines. Five hundred sixty-seven *Menticirrhus* were collected during this study, with over 85% of the specimens collected in 2006. Densities of both *M. americanus* and *M. litoralis* peaked during summer, while densities of *M. saxatilis* peaked in spring. All three kingfish species co-occurred within surf zone and sandy shoreline habitats, but *M. americanus* were the dominant kingfish along protected sandy shorelines, and *M. litoralis* were the dominant kingfish along open surf zones. Only *M. americanus* was collected from marsh-edges, and all three species were absent from grass beds. Length-frequency distributions of all three kingfish indicated accelerated growth with increasing size and warmer water temperatures.

**The Effect of Seascape Structure on the Spatial Distribution of Juvenile Fish within Benner Bay Mangrove Lagoon, St. Thomas, United States Virgin Islands (USVI)**

KEY WORDS: Seascape structure, mangroves, seagrass, spatial scale, Caribbean

**El Efecto de la Estructura de Marina Sobre la Distribución Espacial de Juveniles dentro de Benner Laguna Mangrove Bay, St. Thomas, Islas Vírgenes De Los Estados Unidos (Islas Vírgenes)**

PALABRAS CLAVE: Estructura de marina, mangrove, distribución espacial, Caribe

**L'Effet de la Structure Seascape sur la Répartition Spatiale des Juvéniles à Intérieur de la Lagune de la Baie Benner Mangrove, St. Thomas, Iles Vierges Américaines (Îles Vierges Américaines)**

MOTS CLÉS: Structure seascape, mangliers, répartition spatiale, Caraïbe

CHRISTINA COLLETTI1*, SIMON PITTMAN2, NASSEER IDRISI1, AND RICHARD NEMETH1

1University of the Virgin Islands, 2 John Brewers Bay, MB 313, St Thomas, US Virgin Islands 00802 USA.

*cmc819@aol.com. 2National Oceanographic Atmospheric Association.

**ABSTRACT**

Coastal mangroves in the Caribbean are typically connected to adjacent habitat types through the movements of fish. Understanding the distribution of fish in mangroves therefore requires consideration of the surrounding seascape. This research adopts a multiscale seascape approach to examine the spatial distribution of juvenile fish in a mangrove lined bay in the U.S. Virgin Islands. We sampled fish from the mangrove fringe using fish traps at 12 random locations. The seascape was mapped for the entire bay from high resolution aerial photography and field validation. Seascape composition was quantified from the habitat map at a range of scales surrounding each sample location using geographical information system tools. Within the bay, the site-to-site differences in the amount of mangrove were insignificant. Instead, structurally heterogeneous seascapes containing mangroves with adjacent dense seagrass and macroalgae in close proximity to coral reefs had significantly higher fish species richness and abundance of juvenile fish. Lowest richness and abundance were characteristic of mangroves with low seagrass cover in adjacent areas and high cyanobacterial cover associated with the inner bay. Similarly, juvenile *Haemulon flavolineatum* (French grunt), *Ocyurus chrysurus* (yellowtail snapper) and *Lutjanus apodus* (schoolmaster snapper) were most abundant at mangrove fringe with a high percent cover of macroalgae (~40%) and seagrass (~10%) proximal to coral reefs than in seascapes dominated by cyanobacteria. In contrast, *Eucinostomus melanopterus* (flagfin mojarra) and *Spheroides testudineus* (checkered puffer) were more abundant in seascapes with high cyanobacteria cover and low macroagal and seagrass cover, farthest from coral reef.