daily home ranges and to support developmental shifts ("ontogenetic stepping stones"). Considerable spatial variability is found in the patterns of abundance from one area to another. This study applies a landscape ecology approach to explore the influence of seascape composition on the abundance of fish using mangroves in southwestern Puerto Rico. We quantified within-patch structure (1 m^2 quadrat) and seascape structure (50, 100, 300, 500 m) using landscape metrics applied to NOAA's benthic habitat map. Results indicate that the amount of seagrass surrounding mangroves explains more of the variability in fish abundance than fine-scale mangrove structure. Fish community composition is significantly different in mangroves with high adjacent seagrass cover than mangroves with little or no seagrass cover. This has important implications for resource protection, restoration efforts, and water quality management.—*National Oceanic and Atmospheric Administration, NOS, CCMA Biogeography Team, Silver Spring, Maryland, U.S.A.*

INTEGRATION OF AQUACULTURE AND MANGROVES *by J. H. Primavera*.—Southeast Asia has the highest concentration of mangroves and brackish water aquaculture ponds. This paper describes studies that integrate mangroves as biofilters, and as pen culture sites for mud crab farming. In one study, passing shrimp pond effluents through a natural mangrove stand reduced levels of TSS, sulfide, NH_3-N and NO_3-N by 18.7%–64.2%. Estimates show that 1.4–6.5 ha of mangroves are needed to assimilate nitrogen wastes from one hectare of shrimp pond. Mangrove biomass increase was 2.5 times greater with effluents compared to a control mangrove, although plant numbers remained similar. Present mud crab *Scylla* spp. farming still depends on raw ("trash") fish and wild seed. To lessen such dependence, another study compared the stocking of hatchery vs wild juveniles, and feeding of pellet + raw fish ("trash fish") vs fish alone. Preliminary results show that low-cost pellets can reduce raw fish requirement, and that hatchery crab juveniles need immediate feeding whereas wild crabs can subsist on natural mangrove productivity for one month. Mud crab pen culture is commercially viable but technological refinements and land tenure issues remain.—*Aquaculture Department, Southeast Asian Fisheries Development Center, Tigbauan, Iloilo, Philippines.*

THE MANGROVE ACTION PROJECT: ITS GENESIS, MISSION AND CHALLENGES *by Alfredo Quarto*.—Founded in 1992, the Mangrove Action Project (MAP) is an environmental, non-governmental organization dedicated to reversing the degradation and destruction of mangrove forest ecosystems worldwide. Early work focusing on mangrove conservation and restoration in Latin America and Asia has expanded to include science, education and outreach projects around the globe. Its mission is to promote the rights of local coastal peoples, including fishers and farmers, in the sustainable management of their coastal environment. MAP provides five essential functions for grassroots associations and other proponents of mangrove conservation: (1) serving as an information clearinghouse on the status of, and future threats to, mangrove systems around the world; (2) coordinating an international network of over 450 NGOs on issues relevant to mangrove protection; (3) promoting public education and awareness of mangrove forest issues; (4) developing of technical and financial support for relevant NGO projects; and (5) communicating, both within and outside impoverished coastal fishing and farming communities, how consumer demand affects coastal livelihoods and environments. MAP is addressing the challenges of conserving diverse and productive mangrove systems in the face of poverty, shrimp aquaculture and development for tourism through participatory resource management, promoting responsible consumer choices and implementing sound environmental and socio-economic impact studies.— *Mangrove Action Project,Port Angeles, Washington,. U.S.A.*

MANGROVE COVER, FISHERIES, AND ENVIRONMENTAL PERTURBATIONS IN THE CIÉNAGA GRANDE DE SANTA MARTA (CGSM), COLOMBIAN CARIBBEAN *by Jorge Restrepo, Jacobo Blanco, Carlos Villamil , Efraín Viloria, Juan Carlos Narváez, and Mario Rueda*.—Hydrological manipulations in the Ciénaga Grande de Santa Marta (CGSM)