especies previamente reportadas para la región evaluadas con otras técnicas como los censos visuales y la aplicación de venenos, las líneas evaluadas favorecieron la captación de estados prejuveniles y juveniles, de hábitos bentónicos y crípticos e incluso de especies de interés comercial.

PALABRAS CLAVES: Dispositivo agregador de peces (DAP), asentamiento, Colombia, Caribe

The Effect of Traps on Essential Fishery Habitat in the Florida Keys

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The development of ecologically sustainable fishing practices is a vital component of successful fisheries management. Trap-based fisheries, like the spiny lobster (*P. argus*) fishery in Florida, have the potential to maintain catch efficiency and reduce the impact on essential fisheries habitat, particularly coral reefs. Surveys of the distribution of traps indicate that few traps were placed on coral and that the placement and retrieval of traps on coral caused only a few relatively small injuries. However, injury to coral more commonly occurred when traps were moved during prolonged wind events greater than 17.5 knots. Several of these wind events generally occur each fishing season and in the winter of 2004 these events were observed to move traps an average of 4.5 meters (n=63 traps). Injuries to coral resulting from trap movement were generally larger and more frequent than injuries caused by trap placement and retrieval. By improving our understanding of the interaction between traps and coral reefs, fishery managers and fishermen may be able to reach an amenable solution to reduce the impact of traps on coral and promote more ecologically sustainable fishing practices.

KEY WORDS: Lobster traps, essential fish habitat, coral reefs

El Efecto de Trampas sobre Habitat Esencial en los Cayos de la Florida

El desarrollo de prácticas de pesca ecológicamente sostenible es un componente esencial en el manejo de pesquerías. Pesquerías que usan trampas, como la pesquería de langosta espinsosa (*P. argus*) en la Florida, tienen el potencial de mantener la eficiencia de capturas y reducir el impacto sobre el habitat esencial de pesquerías, especialmente arrecifes. Estudios sobre la distribución de trampas indican que pocas trampas se colocaron en coral y que

la colocación y la recuperación de estas trampas causó pocas heridas e heridas relativamente pequeñas en el coral. Sin embargo, heridas en coral ocurrió más comúnmente cuándo trampas se movieron debido a acontecimientos prolongados de viento más de 17.5 nudos. Varios de éstos acontecimientos de viento ocurren cada temporada de pesca y en el invierno de 2004, estos acontecimientos movieron las trampas un promedio de 4.5 metros (n=63). Las heridas en coral que resultaron del movimiento de las trampas fueron generalmente más grande y más frecuenta que las heridas causadas por la colocación y recuperación de trampas. Si mejoramos nuestra comprensión de la interacción entre trampas y arrecifes, los administradores del manejo de la pesquería y pescadores seran capaz de alcanzar una solución para reducir el impacto de trampas en el coral y promover la pesca ecológicamente sostenible.

PALABRAS CLAVES: Trampas de langosta, habitat esenciales de peces, arrecife coralino

Effects of Two Open-water Submerged Cages Stocked with Cobia *Rachycentron canadum* and Red Snapper *Lutjanus analis* on the Benthic Macroinvertebrate Population at Culebra, Puerto Rico

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Two sediment core samples were taken bimonthly from (october 2002 at october 2003) southwest of Culebra Island, Puerto Rico. At each sample site (cage center and 40 m north, south, east and west) near two open-cages stocked with cobia (*Rachycentron canadum*) or red snapper (*Lutjanus analis*), and at a control site. Macroinvertebrate were separed with a 0.5 mm mesh sieve. Mean abundance of total soft-bottom invertebrates from all stations varied from a minimum of 694 ind/m^2 during october to 3.336 ind/m^2 during april 2003. A total of 72 families were identified from collections in project site, Culebra, Puerto Rico. Polychaetes (29), Mollusks (21) and Crustaceans (22). No general pattern of distribution between stations at both cages and control station has been observed in the soft-bottom macrobenthic communities in relation to he organic inputs. Only, central stations at both cages showed significant differences with respect to the other stations.

KEY WORDS: Cobia, *Rachycentron canadum,* red snapper*, Lutjanus analis*

Los Efectos de Dos Jaulas Oceanicas Llenados con *Rachycen-*