densities and size of lionfish appear to be increasing in deeper reef habitats where large aggregations of mature individuals are regularly observed. Collections in 2011 at deep sites along South Caicos revealed 25% of the fish were ripe females compared to 0.03% in 2010 which suggests a potential increase in the breeding population. In addition, specimens caught by fishermen in 2010 and 2011 from more distant cays, only 0.04% were ripe females, which may reflect a difference in the characteristics of the reefs from which they were collected. Concurrently, native species that may be the only predators and competitors of lionfish are showing signs of exploitation. Data from finfish landings since 2008 reveal significant reductions in standard length and size class distributions of grouper and snapper species. The establishment of a lionfish fishery in South Caicos could be an essential management effort needed to control the expanding population and alleviate pressure from the native species.

KEY WORDS: Lionfish, South Caicos, density, maturity, size

Variability in Prevalence of the PaV1 Disease in Caribbean Spiny Lobsters Occupying Commercial “Casitas” over a Large Bay in Mexico

Variabilidad en la Prevalencia de la Enfermedad PaV1 en Langostas Espinosas del Caribe que Ocupan “Casitas” Comerciales en una Bahía extensa en México

Variabilité dans Prévalence de la Maladie PAV1 chez les Langoustes des Caraïbes qui Occupent des “Casitas” Commerciales dans une Grande Baie du Mexique

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ABSTRACT

In Bahía de la Ascensión (Mexico), the fishery for spiny lobsters (Panulirus argus) relies on the extensive use of casitas, artificial shelters 1.5 – 2 m² in surface area and 10 – 15 cm in height that can harbor the full size range of these highly gregarious lobsters. The emergence in 2000 of the disease caused by Panulirus argus Virus 1 (PaV1), which mostly affects juvenile lobsters and can be transmitted by contact, has raised concern about the potential effect of casitas on local prevalence levels of the PaV1 disease. To address this issue, we sampled thousands of lobsters from the commercial catch from Bahía de la Ascensión during three years, and from 530 casitas distributed over three different zones within the bay during two fishing and two closed seasons. In the commercial catch, disease prevalence (% lobsters patently infected with PaV1) was low (0.74 – 1.6%) but differed significantly with year. Among lobsters occupying casitas, disease prevalence was generally higher in juveniles than in subadults/adults, but varied with zone and season. In particular, levels of disease prevalence were consistently lower in one zone (0 – 2.9%) relative to the other two zones (5.3 – 9.6%). Regardless, the average prevalence (4.7%) was statistically similar to the average prevalence reported in Cuba (4.8%), where casitas are also used, and in Florida Bay (5%), where casitas are not used. These findings suggest that the dynamics of the PaV1 disease in lobster populations is driven more by local intrinsic and extrinsic factors than by the use of casitas.

KEY WORDS: Panulirus argus, Virus 1, artificial shelters, casitas, prevalence, Bahía de la Ascensión