

A lionfish trap for use in Bermuda, with potential applications elsewhere.

Una nasa para pez león para su uso en las Bermudas, con aplicaciones potenciales en otros lugares.

Un piège à poisson-lion pour une utilisation dans les Bermudes, avec des applications potentielles ailleurs.

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In Bermuda, invasive lionfish are concentrated in deeper waters (30–60m) inaccessible to most cullers, but are regularly caught as bycatch in commercial lobster traps at these depths. Bermuda does not allow ‘fish pots’, so the Department of Environmental Protection has been working to modify the standard lobster traps to increase lionfish catch and reduce the catch of spiny lobster, while maintaining low levels of finfish bycatch. Over several iterations, eight funnel types, various baiting strategies, and the effects of shading the traps were tested. Shading the traps increased lobster catch while decreasing lionfish catch. Use of dead bait increased bycatch of all types significantly but, for a given trap design, lionfish catch was similar across baiting strategies. In the low-relief habitat at 60m, the structure of the trap alone appears sufficient to attract lionfish. The presence of escape gaps reduced finfish bycatch significantly, while lionfish were retained. Optimal set time was 7-14 days. Lionfish ‘hot spots’ influenced catch rates, emphasizing the importance of understanding lionfish distribution. Traps with wire funnels terminating in a black 7” ring and traps with two top-loading plastic funnels produced the best trade-off between lionfish catch and bycatch, and are being tested by commercial fishers. With lobster bycatch reduced, a lionfish trap fishery could operate during the summer closed season, targeting ‘hot spots’ to be cost-effective. The low rates of bycatch mean that these traps may be useful elsewhere for controlling lionfish in areas where fishing is not permitted, such as MPAs and contaminated areas.

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