

SMALL OIL AND GAS PLATFORMS OF THE NEARSHORE COASTAL ZONE OFF LOUISIANA: HABITAT FOR FISHES AND OTHER BIOTA

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From 2013-2016 we surveyed hundreds of small platforms in the nearshore zone off Louisiana to determine their habitat value for juvenile snapper and other fishes. A total of 54 species of fishes were associated with small platforms in the nearshore zone. The assemblage(s) included juveniles of 29 species, indicating the importance of nearshore platforms as nursery habitat. Young of the year (YOY) red snapper were observed at many platforms (~42% in 2013 and 57% in 2014), often in large numbers during late summer. Other economically important YOY reef fish were also observed. The nearshore zone was subdivided into three regions based on hydrography. Each coastal region showed significantly different fish assemblages residing around small platforms. Bottom DO tended to be higher on sandy shoals than adjacent areas. Low oxygen bottom waters had significant impacts on the distribution of platform associated fishes, which were also influenced by variable freshwater input from the Mississippi-Atchafalaya River system and the interactions among other hydrographic variables. In 2015-2016 we focused on cross-shelf patterns of fouling on small platforms and grazing by fishes. *Amphibalanus* spp. comprised 93.2% of newly settled barnacles. There were significant differences in settlement and growth rates of barnacles with higher rates at shoreward platforms and at shallower depths on those platforms. Fish grazing was dominated by sheepshead, although a variety of other fishes were also observed grazing on platform biota. The high secondary production on the upper parts of small nearshore platforms is a unique aspect of their ecological role as artificial reefs.