

Editorial

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The Reef Corridor of the Southwestern Gulf of Mexico

Jose de Jesus Salas Perez*

Veracruzana University, Mexico

*Corresponding author: Jose de Jesus Salas Perez, Veracruzana University, Mexico.

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The reef corridor of the southwestern Gulf of Mexico, is a coastal area of the state of Veracruz structured by reef ecosystems, are about of 60 known emergent, submerged and marginal reefs from a biological corridor more than 450 km long, that extend along of that western boundary. The most important reef systems are: The Lobos-Tuxpan Reef System (TLRS) in the northern coastal area, the National Park Veracruz Reef System (NPVRS) in the central coastal area and the Los Turtles Reef System (TRS) in the southern coastal area. These reefs are important due to several oceanographic processes occurred in a broad spectrum of spatial and temporal scales, which arrange from meters to several hundred kilometers and from periods of seconds to years. Moreover those oceanographic processes that take place in the reef corridor of the southwestern Gulf of Mexico, have interactions with several rivers located along the coastal zone, which promotes changes in physicochemical and biological interactions with coral reef ecosystems, which still are not investigated since an multidisciplinary approach, combining studies of physical-biological, physical-geological and physicochemical oceanography of that coastal zone of the western Gulf of Mexico. The NPVRS has been more studied since the point of view of the biological and physical oceanography sciences, because Veracruz port is in the central area of the reef corridor, since several centuries ago, but also because this area was declared a protected natural area in 1992. In contrast, the biology and oceanography of the reef systems of the Northern and Southern areas of the reef corridor, have received little attention. At present results of the physical oceanography, showed that the water mass that irrigate the reef corridor is the Gulf Common Water (GCW) [1,2,3] which sometimes is modified in salinity and temperature by the passage of cold surges during fall to spring. But also, the mixing of the water mass is modified by the diurnal tide which is predominant along the reef corridor, with $F=3.3$ [4,5]. In lesser extent is unknown how the river plumes modify the GCW [6]. The GCW is mainly advected for the wind stress forcing [7], but also could be trapped by sub mesoscale vortex developed by the current with the reefs [8].

The coral connectivity biologically is constricted in two open ocean pathways, the first connecting the Campeche Reef System (CRS) with the Veracruz (VRS) and Tuxpan-Lobos Reef Systems

(TLRS), and the second pathway connecting the Tuxpan-Lobos Reef System with the Flower Garden Reef System (FGRS) [9].

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Conflict of Interest

No conflict of interest.

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