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ReefBase Publication Database

1. Pyramidellid parasites of tridacnid clamst

- Certain pyramidellids are extremely well adapted parasites of tridacnid clams and one single individual may be capable of generating large populations in a few months. These snails are reported from most institutions which culture or hold tridacnids. Heavy infestations of pyramidellids reduce growth of tridacnids and may cause mass mortalities. The taxonomy of the pyramidellids that parasitize tridacnids is very confused and at this stage it is only possible to say that the pyramidellids concerned may belong to one or two genera; Tathrella and/or Turbonilla. Control of pyramidellids is relatively easy, consisting of good husbandry techniques such as periodic checks and tank or cage cleaning. The prospects for biological control are also good and these techniques may range from the introduction of crustaceans or fish that feed on pyramidellids or the manipulation of cage meshes and locations to enable the access of naturally occurring pyramidellid predators.

Govan, H. 1992. Pyramidellid parasites of tridacnid clams. ICLARM/AIDAB International Collaborative Study of the Predators of Cultured Tridacnid Clams Report # 6, 8p.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=27345&linksource=nl

2. Length-Based Assessment of Sustainability Benchmarks for Coral Reef Fishes in Puerto Rico

- The sustainability of multispecies coral reef fisheries is a key conservation concern given their economic and ecological importance. Empirical estimation and numerical model analyses were conducted to evaluate exploitation status via resource reference points (or sustainability benchmarks) for coral reef fishes of the snapper-grouper complex in Puerto Rico. Mean size (L, in length) of animals in the exploited part of the population was estimated from fishery-dependent and fishery-independent size composition data and used as an indicator variable of exploitation rates. In application, fishing mortality rates estimated from L of various data sources were comparable. Of the 25 reef fish species assessed, 16 were below 30% spawning potential ratio (SPR), six were above 30% SPR, and three could not be reliably determined owing to low sample sizes. These findings indicate that a majority of snapper-grouper species in Puerto Rico are currently fished at unsustainable levels.

Ault, J.S., S.G. Smith, J. Luo, M.E. Monaco, and R.S. Appeldoorn. 2008. Length-Based Assessment of Sustainability Benchmarks for Coral Reef Fishes in Puerto Rico. Environmental Conservation, Cambridge University Press. 35 : 221-231pp
http://www.reefbase.org/resource_center/publication/main.aspx?refid=27319&linksource=nl

3. Marine reserves: size and age do matter

- Marine reserves are widely used throughout the world to prevent overfishing and conserve biodiversity, but uncertainties remain about their optimal design. The effects of marine reserves are heterogeneous. Despite theoretical findings, empirical studies have previously found no effect of size on the effectiveness of marine reserves in protecting commercial fish stocks. Using 58 datasets from 19 European marine reserves, we show that reserve size and age do matter. Increasing the size of the no-take zone increases the density of commercial fishes within the reserve compared with outside; whereas the size of the buffer zone has the opposite effect. Moreover, positive effects of marine reserve on commercial fish species and species richness are linked to the time elapsed since the establishment of the protection scheme. The reserve size-dependency of the response to protection has strong implications for the spatial management of coastal areas because marine reserves are used for spatial zoning.

Claudet, J., C.W. Osenberg, L. Benedetti-Cecchi, P. Domenici, J.A. Garcia-Charton, A. Perez-Ruzafa, F. Badalamenti, J. Bayle-Sempere, A. Brito, F. Bulleri, J.M. Culioli, M. Dimech, J.M. Falcon, I. Guala, M. Milazzo, J. Sanchez-Meca, P.J. Somerfield, B. Stobart, F. Vandeperre, C. Valle and S. Planes. 2008. Marine reserves: size and age do matter. Ecology Letters Volume 11 Issue 5, 481 - 489pp
http://www.reefbase.org/resource_center/publication/main.aspx?refid=26691&linksource=nl

4. What role for reef restoration in the face of climate change?

- Reef restoration tends to be inextricably linked in people's minds with coral transplantation and artificial reefs. Transplantation is often an attempt to relieve symptoms (loss of live coral) without treating the causes (e.g. pollution and human activities); whereas artificial reefs can seem like a displacement behaviour – with so much damaged reef substrate available, there appears to be little value in introducing new substrate in the form of concrete, ceramic or other materials. However, given the dire state of the world's coral reefs, perhaps we should look more carefully at the role restoration might play in their future survival.

Edwards, A.J. 2008. What role for reef restoration in the face of climate change? Reef Encounter 36:12-14pp
http://www.reefbase.org/resource_center/publication/main.aspx?refid=27063&linksource=nl

5. Preliminary Assessment of the Impacts of Reef Uplift on the Aquatic Environment in the Rarumana Lagoon

- In April, 2007, a major earthquake resulted in uplifting of the southern shore of Parara Island in the Western Province of Solomon Islands. One of the areas most affected was the lagoon to the south of the island, upon which villagers from Rarumana depend. The uplift of the fringing reef meant that channels were no longer navigable and water exchange, between the lagoon and the open sea, reduced. In a May 2007 rapid assessment of the impact of the earthquake and tsunami on fisheries-related livelihoods, conducted by the WorldFish Center, the Rarumana community identified that "not only had their shallow reef habitat been lost but that water exchange between the lagoon and open sea was now reduced with the potential to create water quality problems".

Hawes, I. A. Schwarz, R. Posala, S. Sibiti. 2008. Preliminary Assessment of the Impacts of Reef Uplift on the Aquatic Environment in the Rarumana Lagoon WorldFish Center, WWF Solomon. Honiara, Solomon Islands. 20pp.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=A0000004525&linksource=nl

6. Vulnerability of national economies to the impacts of climate change on fisheries

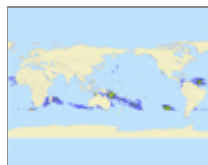
- Anthropogenic global warming has significantly influenced physical and biological processes at global and regional scales. The observed and anticipated changes in global climate present significant opportunities and challenges for societies and economies. We compare the vulnerability of 132 national economies to potential climate change impacts on their capture fisheries using an indicator-based approach. Countries in Central and Western Africa (e.g. Malawi, Guinea, Senegal, and Uganda), Peru and Colombia in north-western South America, and four tropical Asian countries (Bangladesh, Cambodia, Pakistan, and Yemen) were identified as most vulnerable.

Allison, E.H., A.L. Perry, M.C. Badjeck, W.N. Adger, K. Brown, D. Conway, A.S. Halls, G.M. Pilling, J.D. Reynolds, N.L. Andrew & N.K. Dulvy. 2008. Vulnerability of national economies to the impacts of climate change on fisheries. Fish and Fisheries. Blackwell Publishing Ltd.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=27352&linksource=nl

Online GIS

1. January 2009 NOAA Coral Reef Watch's Satellite Monitoring Products



This map shows the global observations of coral bleaching occurrences combined with NOAA Coral Reef Watch's satellite monitoring products including Sea Surface Temperature, Sea Surface Temperature Anomaly, Bleaching HotSpot and Degree Heating Weeks. These datasets are added into ReefBase Online GIS each month.

To view the latest January 2009 maps, click here.

<http://reefgis.reefbase.org/redirect.aspx?urlid=24471&linksource=nl>

ReefBase::A Global Information System For Coral Reefs

Website: <http://www.reefbase.org>

Email: reefbase@cgiar.org