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A REAL DRAG Part II

During research for the article on dragging anchors in the last issue (*TCR34*), we discovered that there was an issue not only with the safety of the yacht and crew but also the seabed that the anchor and chain rest on. This month Juliet Benning spoke to a range of captains as well as marine environmentalists to find out more about the delicate nature of reefs and what damage anchoring can do to them.

Reefs are of huge importance to the ocean ecosystem. They provide a livelihood to millions of people as well as supporting the life of numerous underwater species. They offer valuable protection to shorelines from storms and erosion, supply seafood, provide sources for medicinal products and draw in much needed tourism revenue for local communities.

However, marine biologists have calculated that around two-thirds of the ocean's coral reefs are damaged with ten per cent degraded beyond recovery. The National Oceanic and Atmospheric Administration (NOAA) says that 58 per cent of this damage has been caused by human activities – no surprises there, then. Among the most common causes of damage are: destructive fishing methods (overfishing, trawling, dynamite, poison), pollution, global warming, coral mining, ornamental fish and shell collectors, changing climates, storms and other natural events. Another form of damage more relevant to superyacht crew is the damage caused by dropping anchor.

In March a high-profile 92-metre yacht reportedly dropped anchor in the protected waters of the Roatan Marine Park. The park was established to preserve and protect the delicate ecosystem of the barrier reef thereby enhancing the diving and tourist activities that are so important to the economy of Honduras. The marine park prohibits anchoring of any kind within its protected waters and, although it has a small fleet of patrol boats, as an NGO it does not have the funds to police the region and prosecute trespassers.

The actions of the yacht caused uproar in the local community, especially among the divers. A couple of weeks after the superyacht had left the site, the marine park dispatched divers to make a detailed survey of the damage. The report states: "An anchor of approximately 1.5 metres width has destroyed these corals leaving a trail of loose rubble. [The] anchor has dragged live coral debris off the reef, strewing it across this sand patch ... when corals are destroyed in this way, the rugosity (bumpiness) of the reef surface is reduced. This results in loss of habitat for reef fish species and loss of protection from wave energy for coastlines. Serious damage takes centuries to regenerate, or may never recover."

Gerick Bergsma, a marine ecologist at the University of California, describes the damage superyacht anchors can do to reefs: "Anchors typically crush fragile corals as they are lowered onto the bottom but the most damage actually arises from the anchor chain as the ship rotates around the anchor. The chains



Aerial photograph showing severely injured shallow water bed



Bleached coral in Tobago



An anchor chain lying too close to vulnerable coral



Anthias seek refuge amongst the fire corals

scrape along the bottom, causing damage on a much wider area than the anchors; they can dislodge, break or crush branching corals and small mounding corals as well as scrape and abrade larger massive corals. Anchors and chains can also churn up sediments that smother corals or cover areas where corals could potentially grow."

In order to combat anchor damage some countries have installed permanent moorings at popular dive spots. For example, French Polynesia has established defined anchorages, usually in sandy areas where coral damage would be limited, and permanent moorings where divers are most likely to want to swim.

In Hawaii, coral reefs are protected with the threat of large fines. The *USA Today* recently reported on the \$400,000 fine levelled at a tour company that damaged more than 1,200 coral colonies in 2006 when one of its boats sank at Molokini, a pristine reef and popular diving spot. Hawaii-based biologists estimated that it would take 80 years for the area to recover. The US Navy was also hit with massive fines when the USS *Port Royal* ran aground, causing \$40m-worth of damage to the ship and resulting in a \$7m reef restoration fee.

Florida has followed Hawaii's lead by passing new legislature under the Coral Reef Protection Act, giving the state the power to issue fines of up to \$250,000 to those that damage reefs. "The Coral Reef Protection Act will allow us to work with local and state governments to increase public awareness about coral reef protection and the likelihood that responsible parties who damage reefs are held accountable for their actions," says Lee Edmiston, Director of the Office of Coastal and Aquatic Managed Areas for the Florida Department of Environmental Protection.

Fortunately, the majority of superyacht captains and crew are aware of the need to protect precious reefs. Captain David A McDonald (Mac) from the 45.7-metre MY *Magic* shows respect for corals: "My present yacht doesn't anchor out that much but when we do ... I'm always very aware of where I'm putting my anchor(s). The boating community is quickly destroying reefs around the world ... Frankly, there are several locations

that aren't going to last as long as a generation. That's a sad comment on humanity."

Working for a yacht owner who possesses a healthy amount of respect for the ocean's ecosystems ensures coral-free anchorages will be chosen. As Nick Coombes, Captain of 38.4-metre MY *Sinbad* comments: "The vessel's owner is an avid diver, as am I, and we are always very cautious of our anchoring position to ensure we do not damage any coral growth. To this effect, we carry 800 feet of anchor chain on each side to allow us to anchor in deeper water, thereby avoiding the problems experienced by smaller vessels that must anchor closer to the reef systems."

Anchoring above a reef will not only damage it but a yacht's anchor equipment too, as Mike Hein, the Captain of 39.62-metre MY *Mea Culpa* describes: "The best anchoring is in soft clay. Sand is much more common and we typically pick sand as the bottom of choice in which to anchor. [In] many places we've travelled, anchoring in [anything] other than sand is illegal ... If one anchors in coral, it's not only hard on the gear, it's incredibly noisy to have the chain hit a coral head and transfer the clunking noise through the windlass to the boat. No guest or owner would appreciate that."

On a more positive note, most of the reef conservationists who were interviewed for the article said that more commonly reef damage is caused by the anchors of smaller yachts, especially dive boats. Brian Reckenbeil of Moravian College in the US observes: "While I was diving in Belize this past December, I was shocked at how the diving boats anchored at each dive site. They just dropped anchor at each location, destroying the reefs below."

Greg McIntosh of McIntosh Marine, Inc. – which builds artificial reefs and conducts research into reef system damage – notes: "Most yacht owners and crew are sensitive to impacts their vessels may have upon the marine environment (eg overboard discharge, fuels leaks, etc) and consequently ensure that they find good holding ground that does not support extensive coral growth. This makes good sense as an anchor, fouled as a result of poor placement, may cause unintended injury or result in loss of gear."

Coral conservationists agree that comparatively speaking anchors are not a big threat to reefs, which are much more vulnerable to pollution, trawling, fishing with explosives and climate change. Nevertheless, incidents like the one in the Roatan Marine Park need to be taken seriously and awareness needs to be raised so that crewmembers can live and work alongside coral, preserving it for future generations to enjoy. ■

Do you agree that crew are aware of the damage that can be done to reefs by superyachts? Add to the debate at TheCrewReport.com/ARealDragII

Images courtesy of Coral Cay Conservation Ltd