



BLAST FISHING AND POISONING

Threaten the Philippines' Last Undersea Wilderness Area

The highlight of every diver's calendar in the Philippines and that of many divers overseas, is the month or two in spring when the Sulu Sea turns to glass. Then big diving boats go out from Puerto Princesa in Palawan and glide some 100 nautical miles southeastward to the almost legendary Tubbataha Reefs. In fact, divers come from all over the world to these coral atolls that rise up sharply from surrounding depths of over 2,000 meters.

Tubbataha and some smaller reefs nearby constitute one of the world's last and best undersea wilderness areas. They abound with a great diversity of corals and fish. On any dive huge manta rays may pass by within a meter; resting turtles and sharks may be disturbed from coral ledges while endless processions of reef fish pass by below and above.

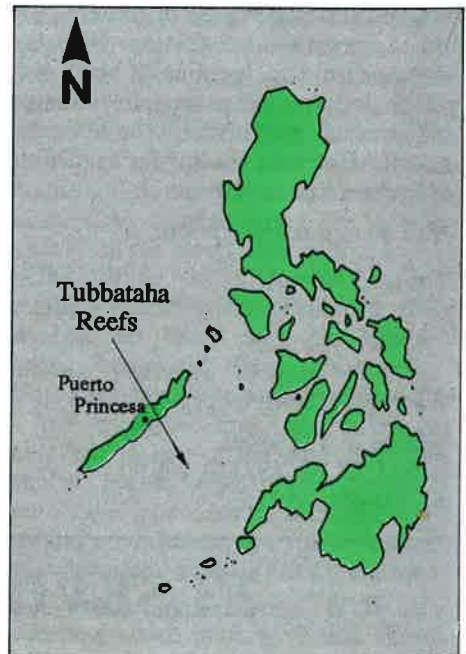
Blasting

Our boat dropped anchor near south Tubbataha Reef in late April 1988. The

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sea was indeed like glass and revealed fields of dense staghorn thickets some 20 meters below. Even from the surface, as we recovered from our ungainly "boat entry", we could see below us holes gauged out of the coral thickets every 10 meters or so, surrounded by dead branches of displaced corals. Fish were not plentiful that dive. We recognized the damage as being caused by blasting - a highly illegal fishing method.

Above: A crater caused by blast fishing at south reef Tubbataha; depth about 12 m; the crater is 0.5 m wide, about 0.4 m deep. Another can be seen in the background. Photo by R.S.V. Pullin.



Map of the Philippines. Tubbataha is located approximately 100 nautical miles southeast of Puerto Princesa, Palawan.

Back on the boat many stories surfaced about the experiences of divers on earlier boats this season -- of seeing dynamite blasts and of diving amongst the dead fish: most of the fish killed by blast fishermen drop out of their reach or are trapped in inaccessible coral graves. I saw none of this on my last diving visit here in 1984.

It was hard for us to imagine why these fishermen harvest their fruit by destroying the trees. It is very much like the *kaingeros* of Palawan and other Philippine islands who are nomadic loggers, gradually felling the forests, leaving cogon grass to grow in their wake.

Our second dive was again over undulating fields of blast-pocketed staghorn thickets. I suppose we traversed 1-1.5 kilometers altogether; the holes represented a significant investment in (illegal) blasting powder. There are persistent stories that the coastguard supplies the powder to the fishermen.

Cyanide Fishing

The second day's dives were on north Tubbataha. We were exploring just over the edge of a sheer wall that for all we knew was over a thousand meters deep. The vertical wall was more or less immune to blasting. We saw a lot of fish.

Back on the dive boat, a video made by the crew was being shown. While we were diving, they apprehended nearby a large *banca* (outrigger boat) loaded with aquarium fish in oxygenated plastic bags; the fish had been captured illegally, using cyanide. The remaining stock of cyanide was confiscated along with a floating tub for holding the stunned fish. The boat and its shipment were released...its crew had families to feed; we were advised that the coastguard in Palawan might take several days to arrive or would complain of no fuel or money to come to Tubbataha.

We learned that the cyanide came from a regular drugstore and that the *banca* had come all the way from its home port in Pagbilao, Quezon Province, more than 300 nautical miles distant.

Cyanide-captured fish tend to die quickly in aquaria and have given the Philippines a very bad name as an aquarium-fish exporter. Many fish, especially fry, in the vicinity are killed as are corals during cyanide operations. All this was explained to the captured fishermen...but they had families to feed.

One of our divers from Guam reported that chlorine is being used in a similar

way there. One fisherman caught twice using chlorine was actually shot dead by other fishermen for refusing to stop the practice. Coastal communities, it seems, are beginning to look after their own. Within the Philippines, marine reserves policed by coastal communities may hold hope for some coral reefs (see Naga, January 1986, p. 13). Ironically, there is no nearby community to take responsibility for the welfare of Tubbataha.

Epilogue

Tubbataha is one of the few remaining reef areas in good condition in the Philippines. Members of our diving group have already written off various "popular" Philippine reefs one after another as not worth visiting anymore because of dam-

age by blast fishing or lack of fish due to cyanide operations. Apo Reef, west of Mindoro Island, is one such area. Its slopes were described in the early 1980s by a visiting marine scientist as amongst the most beautiful in the world for the color and richness of their corals. Now the slopes are brown and barren. We wonder how long it will be before we say goodbye to Tubbataha, the last great wilderness area.

The Department of Tourism is concerned about the Tubbataha area but has no teeth. Diving groups, like the Philippine Sub-Aqua Club, are considering how they can help. A "Tubbataha Foundation" has since been formed by the Haribon Foundation, Manila, and representatives of diving boats, diving clubs and others. A long, determined education process will be needed. Meanwhile, fishermen have families to feed. ●



Cyanide used for fish collecting in Tubbataha. Photos by Louis Mencias.



Loaded with cyanide-captured aquarium fish, this boat was apprehended at Tubbataha.