

Crab trapped
in purse seine
ghost net

Ghost Fishing *Can we prevent it?*

Text by Heather Hamza
Photos by Tom Boyd, Shingo Ishida

There are certain images of marine life that consistently conjure up a predicted response from the general public, whether they are scuba divers or not. Consider the bloody waters resulting from the dolphin slaughter at Taiji, Japan. Picture a massive whale, having just breached, with a high-powered harpoon impaled in his or her body. Imagine hundreds of dead sharks lined up with their dorsal fins sliced off. These stories and images typically elicit anger, rage, devastation, sadness, and/or feelings of powerlessness. Now, what if I told you that there are additional human-induced atrocities against these creatures, happening all over the world, every single day? These everyday events not only affect marine mammals and elasmobranchs (sharks, rays), but also turtles, sea birds, fish, crustaceans, and benthic (bottom-dwelling) marine life.

These common, daily occurrences are a direct result of the commercial fishing industry and actually pose a greater threat to our oceans than the aforemen-

tioned "sensationalized" activities.

As a side note, many people justify their seafood consumption by saying that they catch it themselves. Interestingly, the combined efforts of "anglers" are just as devastating as commercial fishermen

warranting an entire chapter on recreational fishing in *The Empty Ocean* by Richard Ellis.

Commercial fishing—whether it is gill netting, trawling, purse seining, or long-lining—inevitably results in varying

degrees of "non-target" catches, or "by-catch" amounting to anywhere from 60 to 90 percent of the total catch. Every year there are easily billions of these unintended catches, considered to be of no commercial value, causing incalculable

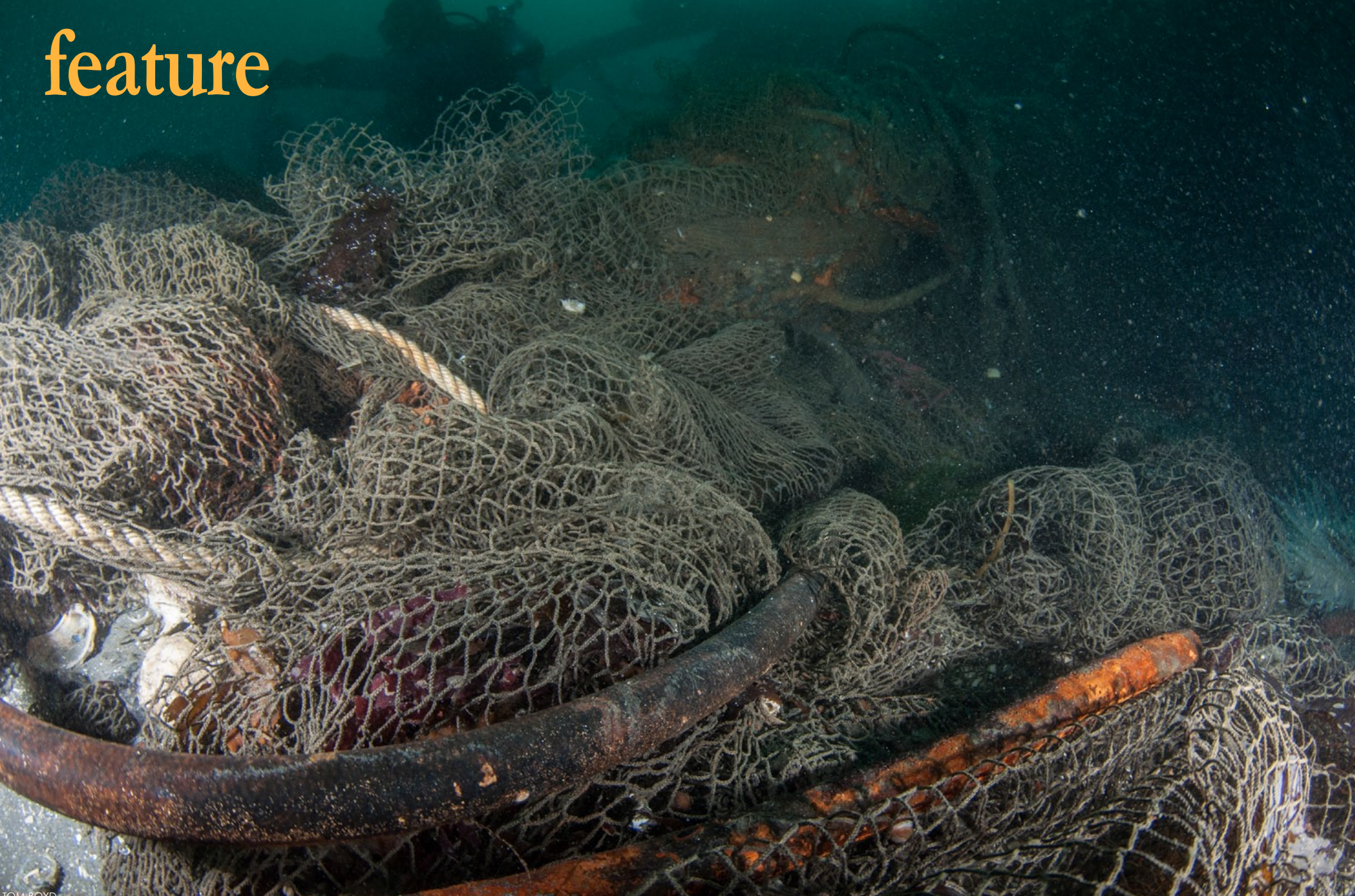
and very likely irreparable damage to fragile aquatic ecosystems.

The other devastating secondary effect of commercial fishing is the issue of ghost nets, which will be the focus of this article.



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Newly lost nets on the *African Queen* wreck near Long Beach, California (left); Rescuing a trapped crab (below)

Ghost Fishing

that the world will ever cease to consume seafood; therefore it is reasonable to assume that there will always be some degree of ghost gear.

Ghost Fishing, the organization,

was founded in the Netherlands by Pascal van Erp and Cas Renooij, two Global Underwater Explorers (GUE) technical divers. They dive mostly in the North Sea, spending a lot of time cleaning up



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The problem

Ghost fishing is a term used to describe what occurs with abandoned or lost commercial fishing gear that inevitably continues to fish.

Ghost fishing first gained global recognition in 1985 at the 16th session of the Food and Agriculture Organization (FAO) Committee on fisheries. Across the scientific literature, ghost fishing is universally recognized as detrimental to the environment and the fish stocks. When commercial fishing gear

is lost or abandoned, it will continue to fish for months, years, perhaps even indefinitely. This is due to the sturdy, non-biodegradable materials that fishing nets and pots are typically made of.

The true extent of the ghost fishing problem cannot ever be quantified, due to lost gear that is never retrieved, therefore becoming lost data. There are also ghost nets well beyond scuba diving depths.

Despite lost data, there are still plenty of numbers to work

with. The effects of ghost fishing stem from two resources: reports from deliberate clean-up efforts and from controlled studies. In both instances, numbers and species of animals killed or trapped are recorded. With deliberate cleanups, tonnage and type of gear are tracked. On a somewhat happier note, an Australian publication lists the numbers of sea turtles rescued from recovered ghost nets.

Over the last few years, our dedicated volunteers in

Southern California have been responsible for cleaning up thousands of pounds of ghost nets, and saving innumerable lives. While this may seem impressive, it would actually be far more impressive if we did not have to conduct such activities in the first place.

The solution

The origin of abandoned or lost commercial fishing gear stems from the incessant demand for seafood. It is highly unrealistic to believe



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Karim Hamza and Nir Maimon on *Infidel* wreck—an ongoing project off Catalina Island, California



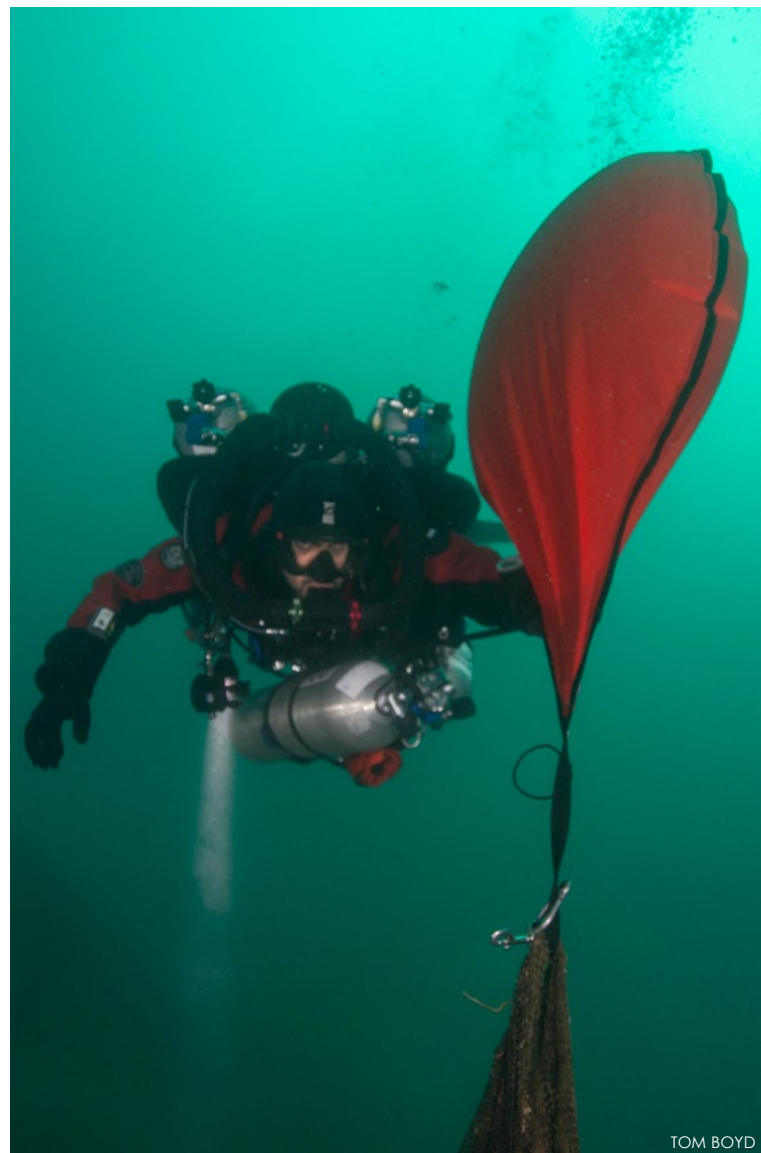


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ghost nets. Ghost Fishing now has projects in 14 countries, all using GUE trained divers.

There are many groups that interact to make the work possible. For starters, we have Star Sock and Aquafil; together they founded Healthy Seas (www.healthyseas.org). Healthy Seas' main objective is to turn ocean waste, namely ghost nets, into sustainable products such as socks, bathing suits, carpets. Partners of Healthy Seas include Ghost Fishing and Los Angeles Underwater Explorers (LAUE).

Ghost Fishing gets worldwide support from GUE divers working in their respective areas. In Southern California, that includes LAUE and San Diego Underwater Explorers (SDUE). We are fortunate to have such an impressive pool of volunteers. Each and every one has played an integral role in the work that we do, whether it is their diving qualifications, seamanship, journalism, or photography and videography skills. It is critical to mention that ghost



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Karim Hamza working on Radio Tower, San Pedro, California



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net removal is incredibly hazardous work, and we do not endorse such projects without having had proper training.

Unfortunately there is no shortage of work for us to do. We have several dive sites (usually shipwrecks or other sunken structures) in recreational and technical depths that have ghost nets. Since we are a very active group of divers, we are intimately familiar with numerous sites and are privy to updates on a regular basis (such as, a newly discarded net) through word of mouth in

the diving community.

A ghost net removal project begins with a reconnaissance dive. We must ascertain depth, type of net, condition of the net, and draw a basic sketch of the structure along with video and/or photos. All of this information will be used in the dive briefing for the actual cleanup.

In Southern California, we usually organize a cleanup dive once a month. We are now recycling our recovered ghost nets through Aquafil/Healthy Seas.

Can we prevent this?

Since it is highly unlikely that the world will stop consuming seafood, we must work harm reduction into the equation. This would require

Karim Hamza working on the *Infidel* (far left) off Catalina Island, California; Author Heather Hamza working on *African Queen* near Long Beach, California (left)

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a collaborative relationship with commercial fishermen so that we can understand where the nets are coming from and why they are being lost. Furthermore, initiating a connection with policy makers is critical so that the mandatory early reporting of lost gear

can be established, which has already been implemented in Washington State and has been largely successful.

Our own personal experience has shown us that the sooner we can get to these ghost nets, the easier they are to clean up. Additionally, the



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Decomposing sea lion who died in this net. Based on the shape of the skull, it can be identified as a female



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Topside volunteers working hard to pull the nets on board (above); followed by a thorough search for trapped sea creatures (right)

sooner we can get to these nets, the less time they have to keep trapping and killing marine life.

While "top down" tactics are more likely to be effective at generating change, a "bottom up" approach should not be overlooked. This includes education and promoting awareness in school-age children. We have already had children come on the boat with us, and they love the work that we are doing. They genuinely enjoy participating, such as helping to manage the nets and rescuing trapped creatures. Our presentations at schools and Boy Scout meetings have also been well received. The children are enamored with our scuba gear and the other "show and tell" items that we provide (lift bags, scraps of nets, etc).

At the time of this writing, there has been a government grant submitted in order to obtain desperately needed funding for the work we are doing. In California there are currently no laws to protect the ocean from ghost fishing, nor do we have mandatory reporting of lost fishing gear.

As mentioned earlier, the problem of ghost fishing stems from the demand for seafood. One way to counter this is to eat a plant-based diet. There are actually no nutrients in seafood that one cannot obtain from plant-based foods. As a vegan for over five



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years, I practice what I preach!

For more information, please visit: www.ghostfishing.org or www.facebook.com/ghostfishing. ■

Heather Hamza is a technical wreck and cave diver based in Los Angeles, California, USA. She began cleaning up ghost nets in 2010 and soon after started recruiting teams and organizing cleanup trips.

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