night rubbing your hand vigorously on your wetsuit – and that is at full power for the first 20 hours. It gets dimmer after that! It was good for little more than reading your gauges, the second-dimmest lamp compared here.

**Tilos S-Sun Headlamp.** (Burn time: 12 to 24 hours; Brightness factor: 1.5; Batteries: 2xAA; Light source: 5 LED; Depth-rated: 165 feet; $40, including batteries; www.tilos.com) A head-mounted light that can also be used on the wrist or shoulder too, the S-Sun has three operating modes that are selected sequentially by a single push-button. It didn't look too well protected against flooding and it has one very skinny O-ring. Light output was poor because the clustered LEDs were not well focused. It was more "dim sum" than S-Sun.

**Mares Twin Beam.** (Burn time: not available; Brightness factor: 2; Batteries: 1xCR123A; Light source: Single LED; Depth-rated: 165 feet; $70, including batteries; www.mares.com) I unscrewed the light-saber beacon section from this 2-in-1 device to convert it to a little backup light. It's made of heavy-duty anodized aluminum and has loads of counter-display appeal but its light output was just good enough to read a gauge as a last resort. Quite frankly, it's not up to the task of a backup light.

*John Bantin is the Technical Editor for* DIVER *magazine in the United Kingdom, a professional underwater photographer and a regular contributor to* Undercurrent..

# Please Don't Feed the Fish

## *why would anyone think Cheez Whiz is good for them?*

Last month, we talked about dive operations that encourage petting, even manhandling, of marine life. Feeding fish can be another problem. Doing it improperly can have a long-term effect on their health and behavior. Furthermore, it turns the natural ocean into a zoo orchestrated by divers. We received scores of comments from our readers, serious divers, about the results of fish feeding, and most of them were negative.

When fish are used to being fed, they may start getting aggressive, nipping at divers at the very least. Grand Cayman's Stingray City, where critters are fed regularly, is a notorious center for bites, including serious injuries and severed fingers. Two years ago, an 11-year-old boy from Wisconsin snorkeling there was bitten by an eel on the hand. Doctors spent six hours restoring blood flow to his hand by using a vein from his leg.

And getting caught in a shark feed is not some divers' idea of fun. Subscriber Mary Wicksten (Bryan, TX) was diving with Stuart's Cove in Nassau last year when divers on her boat were warned not to dive on the boat's right-hand side because that's where a shark-feeding boat was anchoring. But then that boat moved to a buoy on the left, almost on top of her as she was diving. "I was not a happy camper when they dropped a chum ball directly on top of me. What fun–seeing a feeding frenzy from below. It's a good thing that I am an experienced diver and crawled along the bottom back to my boat, which was flying a diver's flag. A beginner diver would have freaked out."

### "Divers Aren't Content to See Just One of a Species"

What is it about feeding fish that fascinates us? Why are we willing to feed fish in marine sanctuaries but bird watchers, our recreational cousins on land, would never consider doing such a thing? They are content to see one bird in its natural setting – a single unique hummingbird can make a birder's day. But few divers are content with seeing just one of a species. We have to be surrounded by them. Dive operations, knowing this, heavily advertise shark-feeding tours and regularly throw chum to fish. Some marine parks, like Hol Chan in Belize's Ambergris Caye, either have no rules about it or are willing to let them slide.

Some dive operators argue that fish feeding can be done without causing harm. One of them is Dee Scarr, owner of Touch the Sea in Bonaire (we described her methods of touching marine life in the last issue). In her opinion, feeding can be done in ways that show respect to the animals and teach divers about their behavior. She takes small morsels of food, like Indonesian freshwater shrimp for scorpionfish, which is less environmentally hazardous than farm-raised shrimp and lacks the strong fishy scents that attract sharks. "This fish doesn't move very fast but if food is within four inches of his mouth, he gobbles it up a nanosecond. It gives people a better idea of this fish's behavior and how it is an amazing predator."

### "The Sharks, Being Fed, Naturally Wanted More"

If only other dive operators could feed fish as delicately. Unfortunately, the terms "food fight" and "feeding frenzy" typically apply, sometimes to the hazard of the fish – and divers. While diving in Tahiti, subscriber Joe Murray (Boise, ID) saw a green moray swallow the complete mesh bag of bread, plus the weight belt it was attached to. "Fortunately it was able to spit everything out, including the belt." An enormous and very famous potato cod on the Great Barrier Reef did something similar, regurgitating back the hard-boiled eggs divers fed it.

## Divers Want Marine Parks - - But Don't Want to Pay for Them

The primary purpose of marine parks is to preserve underwater life, but most people consider them first and foremost as a great place for diving and snorkeling. The problem is those activities can pose a threat to the coral reefs intended for protection. Besides breaking and abrading coral, divers can kick up sediment that can impact the entire ecosystem. The negative effects from scuba diving on reefs may seem trivial compared with overfishing, pollution and global warming, but they can't be ignored.

Researchers have investigated approaches to minimize divers' impact. For example, one study found that divers dabbling in underwater photography with quick-snap cameras weren't any more likely to harm reefs than divers without cameras, but "specialized" underwater photographers were the most damaging of all. Researchers have found that a one-sentence reference to touching the reef did not reduce divers' contact, but an in-depth briefing by the divemaster did.

In a study published last year in *Journal of the Human Environment*, researchers from Clemson University and Texas A&M University created questionnaires to measure six diving factors: number of divers at a site; amount of marine park open to diving; level of underwater supervision; park fee; time spent on reef education; and amount of marine life expected to be seen on a dive trip. They recruited 646 divers to fill out the questionnaires. Divers were certified for an average of 13.5 years, and 80 percent of them had a level higher than basic open water.

In the questionnaires, divers had to indicate their preferences for a range of five hypothetical dive trips, ranging from the status quo to a very restrictive trip. For example, one could choose a trip with 15 percent fewer divers at a site but would have to have 30 minutes of coral reef conservation education and pay a $30 fee. The second trip would have no education component or fee but all dives are completely guided. Respondents could pick either trip or decline both.

Researchers expected divers to prefer the least-restrictive options but divers preferred some tighter restrictions. They preferred a decreased number of divers allowed at a site at any one time, even though fewer of them would be allowed to dive. They also favored increased levels of conservation education, up to 60 minutes of classroom time.

However, divers weren't pure conservationists. They didn't like the idea of completely guided dive trips and preferred no supervision. They don't want to pay to maintain a marine park, even with the stipulation that all park fees are invested into park management. They also favored access to the entire park instead of dive restrictions in some areas.

The researchers concluded that, "Park managers must use strategies that are most effective for achieving their ecological goals. Often, they stop at this plan and implement a management plan without understanding its effect on users. Our model, however, further informs them by predicting how divers will respond to various conservation strategies. They'll either visit or go elsewhere."

*Michael Sorice, Chi-Oh Ok and Robert Ditton, "Managing Scuba Divers to Meet Ecological Goals for Coral Reef Conservation,"* Journal of the Human Environment*, vol. 36, issue 4, pgs. 316-322.*

While diving on the *Nekton Pilot* in the Bahamas, John S. Wilson (Denver, CO) says a group of daytripping divers on a shark-feeding trip were brought to the liveaboard's dive location. The divers were seated in a circle on the ocean floor, then the divemaster would bring his bag o' treats to feed the sharks. "The divemaster was wearing something resembling chain mail," says Wilson. "The group went back to the boat, leaving us alone with the sharks, who, having just been fed naturally wanted more. Several divers were butted by sharks, so we aborted the rest of our dive."

Even more docile fish have gotten aggressive. There have been increased reports of snorkelers being bitten on their arms in the Hawaiian islands, but the biters are habitually non-aggressive grazers like damselfish and chubs. That's because they've become habituated to commercial fish food sold by dive shops, and even human food like frozen peas and Cheez Whiz people bring to feed fish. Besides causing aggressiveness, the food also reduces grazers' desire to eat off the reefs' algae and seaweed, affecting the ecosystem.

Last year, the Coral Reef Alliance started its "Take a Bite Out of Fish Feeding" campaign by asking Hawaii dive shops and charter boats not to sell fish food and educating beachgoers about letting fish feed themselves. Rick MacPherson, the Alliance's program director for the campaign, says 30 businesses have signed on although there are still some holdouts. "Some were early adopters once we showed what we wanted to do. Others said, 'Well, it's done in Great Barrier Reef so why can't we do it here,' or that data is inconclusive about impact on the reef. I suspect they're most worried about the effect it has on the bottom line." To lessen the impact, the campaign persuades snorkelers with fish food to dump it in exchange for coupons to buy items at a discount from cooperating dive shops. "We substitute the food for other items like fish ID cards that still create revenue," says MacPherson.

**"For One Diver Who Complains, There Are Another 100 Who Don't"**

In marine parks with strict rules, fish are thriving. Lynn Costenaro, co-owner of Sea Saba, says the rules also make fish friendlier to divers. "Our customers are so surprised when fish come to them, that they're not afraid. That's because of the no-touch policy. They feed fish elsewhere because that's the only way to get to see fish. But because there's no overfishing or riding of turtles and sharks here, there's no need for using food to get close to marine life." She does admit that success is due to the fact that Saba is a small island. Our marine park is five square miles instead of 500 miles, so we can do self-policing and park rangers aren't overextended. We're not dealing with mass tourism like Cayman or Cozumel."

But it would be disgraceful if those popular dive sites just became known as petting zoos where fish must be baited with chum. During training, PADI cites environmental issues, advocating that divers not upset marine life. But besides the Coral Reef Alliance, there's no other dive organization evaluating the effects of human interaction on marine life behavior. And no agency prohibits it.

At dive agency SDI/TDI, marketing director Steve Lewis says it has no plan in place because the different countries it operates in have different regulations about marine interaction. "There are dive operations that teach our programs and also have shark-feeding dives, and others that use divers almost as bait, like shark cage dives in South Africa. So for us to turn around as a pompous American dive agency and dictate what countries should do or not do is a stance we refuse to take.

"Most, if not all, of our instructors don't spearfish or dive to collect specimens. We tend to follow guidelines to only take photos and leave no footprints. But we respect the right of an individual to conform to the local rules and regulations, and enjoy their diving."

*Undercurrent* called the other dive agencies PADI and NAUI, as well as the dive industry's lobbying group, Dive Equipment Manufacturers Association, to get their opinion but they did not return calls. While everyone professes to be keenly interested in the fate of the oceans, they are curiously silent when it comes to regulating the effect divers may have.

Wayne Hasson, president of the Aggressor liveaboard fleet, sees no reason to change, even though crew on his boats are instructed to tell divers look but not touch. "I don't see the big deal about things like feeding nurse sharks because you don't know if these fish have a brain. Obviously they don't mind, or else why would they go back to the same place? For the few people who bitch and moan about someone touching the animals, there are 100 more who go diving to see, feel and interact with the fish."

That's disheartening for an industry relying on a living ocean to make money. Feeding fish in the short-term may make them come running for food, but in the long run, those actions will change their behavior, make them less likely to follow their natural predator ways, and ultimately affect the balance of their ecosystem. When fish eat peas and Cheez Whiz instead of reef-destroying algae like they're supposed to, that's bad for the environment – and bad for divers wanting to get a close-up view of marine life in its most glorious natural state.

"By nature, diving should be an observational sport," says Leda Cunningham, executive director of the nonprofit Reef Environmental Education Foundation. "The fact that no diving organization has a policy is significant because it shows there's a real lack of understanding about how much divers' interaction with marine life affects the animals."

*-- Vanessa Richardson*

## Shooting Saltwater Up Your Nose

Is your nose stuffed up enough that diving isn't appealing, or even to the point where congestion may dangerously interfere with equalization of the ears?

It may sound a bit zany and gross, but the evidence, both published and anecdotal, largely supports the salubrious effects of saline irrigation on both nasal membrane drying and congestion (e.g., from long airplane flights, breathing hyper-dry scuba gasses and allergens). Such irrigation shrinks the mucus blanket and flushes out the excess, reducing nasal irritation and swelling.

There are scores of salt-based OTC nasal washes on the market such as Sinucleanse, BreathEase and an array of NeilMed products. Many come with a soft syringe. Or you can purchase special tips that attach to oral hygiene devices (e.g., the WaterPik NA-2 Gentle Sinus Rinse).

Many divers choose a simple home remedy that is cheaper and works just as well. Boil two cups of tap water for 10 minutes, stir in one teaspoon of salt (refined sea salt is recommended to avoid additives) and one-quarter teaspoon of baking soda (sodium bicarbonate). Adding more salt than recommended can do more harm than good, so don't overdo it.

After the brew has cooled to lukewarm, draw it into a clean nasal or ear syringe until full, then lean over the sink, squeeze gently and allow the solution to run through the nasal passages. Sniff it in, spit it out, then gently blow your nose. Repeat with the second nostril. Again, don't overdo it -- one or two treatments a day should be sufficient. And go make your next dive.

*-- Doc Vikingo*

# Flotsam & Jetsam

**Best Remedy for Jellyfish Stings.** A study in *Emergency Medicine Australasia* says people still don't know how to treat jellyfish stings. Researchers found people are unsure whether to apply ice or hot water, while others use over-the-counter creams. More doctors are convinced that heat is most effective. An *Undercurrent* article from March 2007 mentioned another Australian study that found sting patients treated with hot water at 115 degrees had significant pain relief in 4 to 10 minutes, and heat also stopped inflammation.

**Diving for Dentures.** Some divers at Scapa Flow, off the northeast coast of Scotland, had a laugh when their boat skipper requested over the loudspeaker that everyone diving the German battkeship *Kronprinz Wilhelm* look out for a missing set of dentures. One of the group had lost his top set of teeth while changing regulators halfway through his dive. When he made hand signals and pointed to his teeth, his buddy thought he was smiling because he enjoyed the dive so much. Another diver found the dentures on the ship's hull, in a dead man's fingers. After giving his dentures a quick clean, the man soon had the smile back on his face.

**Spearfishing Ban Successful in Saipan.** Napoleon wrasses are fast disappearing worldwide but they're flourishing in Saipan. That's because the Northern Marianas is the only jurisdiction in the Pacific to ban scuba-spear fishing, considered the cause of the wrasse's rapid decline in Indonesia and the Phillippines. In Hong Kong, a Napoleon wrasse can fetch up to $9 a pound, and a set of its lips go for $400. The fish is not considered that tasty but eating it is seen as a status symbol in Asia.

**The sQuba Makes a Splash.** The world's first diving car makes its debut this month at the Geneva Motor Show. The maker is Swiss firm Rinspeed, whose CEO Frank Rinderknecht was inspired by the James Bond film *The Spy Who Loved Me* to make a car that can really fly underwater. The sQuba can go down to 30 feet, comes with a futuristic cockpit supplied with oxygen, and travels via an electric motor for the rear wheels, two propellers and dual jet drives. No doubt the price tag is astronomical but for more info, visit www.rinspeed.com and click on "Latest News."

undercurrent

**The Private, Exclusive Guide for Serious Divers**
3020 Bridgeway, Suite 102
Sausalito, CA 94965

Periodicals
Postage PAID
Sausalito, CA
and Additional
Mailing Offices

***Undercurrent*** is the consumer newsletter for sport divers that reviews scuba destinations and equipment. We accept no advertising. Subscriptions in the U.S. and Canada are $99 a year (addresses in Mexico, add $20; all other foreign addresses, add $35).

***Undercurrent*** (ISSN 1095-1555, USPS 001-198) is published monthly by Undercurrent, 3020 Bridgeway, Suite 102, Sausalito, CA 94965, with the November/December issue being the annual book-sized *Travelin' Diver's Chapbook*. Periodicals rates paid at Sausalito, CA, and additional mailing offices.
POSTMASTER:
Send address changes to
3020 Bridgeway, Suite 102
Sausalito, CA 94965

**Letters to the Editor/ Submissions**

**Undercurrent**
3020 Bridgeway, Suite 102
Sausalito, CA 94965
Fax 415-289-0137
undercurrenteditor@undercurrent.org

**Subscriptions/Address Changes**

To subscribe, renew, change address, or order back issues, call 800-326-1896
or 415-289-0501,
Mon.–Fri., 9–5 Pacific Time
E-mail: pete@undercurrent.org
or write:
**Undercurrent**
3020 Bridgeway, Suite 102
Sausalito, CA 94965

***Editorial Office***
Ben Davison, Publisher and Editor

E-mail:
BenDavison@undercurrent.org

**www.undercurrent.org**

***Printed on recycled paper***

undercurrent

**March 2008 Vol. 23, No. 3**