

Fish & Chips

A Monthly Marine Newsletter

April 1999 Issue

From Us

By Elizabeth M. Lukan 4/20/99

It's with great gusto that I announce the debut of the Fish & Chips Website. I did all the work on it myself, so I'm very proud. Before my head swells, here's the address: <http://www.marinefiends.com/>.
~~The site address is case sensitive so be warned. (updated 8/24/04)~~

Two for the price of one on **Hobbyist Skimmer Reviews** this month. Ian McDonald received two reviews for this month's skimmer, so I'm doing a double feature. And, speaking of skimmer reviews, go out and do one for Ian okay? You'll be helping your fellow hobbyists and getting your name in Fish & Chips - now there's an honor! Ian's survey Page can be found at <http://www.geocities.com/heartland/prairie/2196/Survey.html> (**information updated 4/19/00: survey closed**).

Guest author Mark T. Taber is once again honoring Fish & Chips by allowing me to republish his work. This time it's an article on **Unsuitable Marine Fish For Captivity**. This article was written by Mark as a result of a survey he did a while back. The article is a long one but more than worth the read as it raises some good points about the keeping of certain fishes in our hobby.

Fish & Chips uses ONElist to maintain it's subscription list. It allows me to keep your email addresses private and automates the actual subscription process a bit which make it easier for me to manage this little hobby of mine. Well, ONElist has announced a new program called **ONEreach** which is basically just something they are doing to encourage us list moderators to work on growing our subscription lists. But, they are kicking off the program with something called the "**Grow to Give**" Program which I believe is something worthy of telling you about. ONElist will be donating \$5,000 each to two charities chosen by the two communities that grow their memberships the most within the next two months. The "contest" will run from 4/19/99 to 6/19/99. You can find out more information on the "**Grow to Give**" Program on the ONElist website at <http://www.onelist.com/info/onereachsplash.html> (*url dead 8/24/04*). I will be doing my part in trying to get more subscribers, I hope you will tell your friends to subscribe and do whatever else you can. If I win, I'll pick a charity appropriate for our hobby, this I promise! Thanks all.

You probably won't even notice this, but I am now doing the newsletter in html and then putting it into an email message. Reason you ask? I used to write the entire newsletter inside of Microsoft's Outlook Express and then save it as html for use on the Fish & Chips site (eventually, I thought at the time). Well, what a mess that made out of the html - yuck big time! That method adds so many unnecessary html commands that you can hardly find the actual newsletter. Since I now know html, I'm doing it in

that. Most of you won't care, but those that visit the Fish & Chips site and those fellows I've been working with who plan to also offer Fish & Chips on their site will care. The newsletters will load faster, the text will all be the same, and some other odd quirks will end with the April issue. Well, it's good news for us geeks anyway!

Red Sea Berlin Classic Skimmer

- A Hobbyist Skimmer Review Double Feature -

General Information:

All ratings are 1 through 10 (10 being the best or yes, 1 being the worst or no). The items in parentheses are only given as a more detailed explanation and to give you an idea of what was meant by the category. Permission to publish these reviews was obtained through a clause in the survey. See the end of this article for review, survey, and article credits.

Construction Quality (Acrylic thickness, polish, glue job, etc.):

Score: 10

Aesthetic Quality (Does it look good, etc.):

Score: 10

Performance (Does it keep your water clean, must you adjust it all the time, etc.):

Score: 8

Foaming (Does it do it consistently, is it nice and thick, is it dark, etc.):

Score: 10

Ease Of Installation:

Score: 5

Would you buy it again?:

Comments: 8

Electrical Efficiency (Does the pump it uses work well, etc.):

Score: 3

Plankton Level (Do you have a lot, etc.):

Score: 6



Overall Value (Did you get what you paid for, etc.):

Score: 7

Overall Satisfaction (Do you like it, etc.):

Score: 8

Comments:

Four years running. This skimmer really needs a good, dedicated, pressure pump. Little Giant 2 or Iwaki30 have worked well for me. I understand some have had good results with the Mag12. I am using this on about a three hundred gallon system.

Review, Survey, and Article Credits:

Review by Anonymous.

- Review Number 2 -

Construction Quality (Acrylic thickness, polish, glue job, etc.):

Score: 10

Aesthetic Quality (Does it look good, etc.):

Score: 10

Performance (Does it keep your water clean, must you adjust it all the time, etc.):

Score: 10

Foaming (Does it do it consistently, is it nice and thick, is it dark, etc.):

Score: 10

Ease Of Installation:

Score: 10

Would you buy it again?:

Comments: Yes

Electrical Efficiency (Does the pump it uses work well, etc.):

Score: 8

Plankton Level (Do you have a lot, etc.):

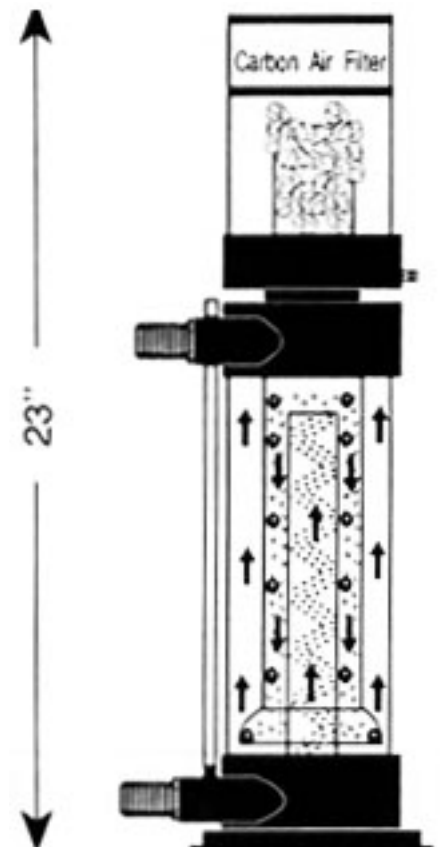
Score: ?

Overall Value (Did you get what you paid for, etc.):

Score: 9

Overall Satisfaction (Do you like it, etc.):

Score: 10



Comments:

I have a Red Sea Berlin 25-250 Gallon Triple Pass Skimmer. It is powered by a Little Giant PESQ-700 (700 gallons per hour at zero feet). With venturi skimmers, I have found that the pump can be the critical component when considering skimmer performance. Lesser pumps will not do the job, and really, this pump may be a bit underrated for this skimmer. It meets the per square inch specifications, but doesn't meet the gallons per hour.

Cleaning wise, which is an important feature, the Red Sea Berlin is a snap. The collection cup removes easily and can be wiped out. It has a skimmate drain, so there are worries about overflowing the cup. Any skimmer without the drain is useless. Once a month, I disassemble, clean the venturi and columns and put it all back together.

Once I got the setting right, I have not had to adjust the skimmer. It didn't take a lot of effort to adjust initially either.

Frankly, I don't understand why so many people knock this skimmer. There must have been problems with earlier models. All in all, it does a very good job.

Editor's note: Keith also did a review on a counter current no name brand and had the following additional comments: Comparing the skimmate of these two skimmers is interesting. The venturi pulls out the nastiest, foul smelling crud I have ever seen.

Review, Survey, and Article Credits:

Review by Keith.

Survey created and hosted by Ian McDonald (IANsSnakes@aol.com)

Home Page: <http://members.aol.com/IANsSnakes/index.html> (information updated 4/19/00: survey closed)

Survey Page: <http://www.geocities.com/heartland/prairie/2196/Survey.html> (information updated 4/19/00: survey closed)

Ian would like to extend his thanks to Chris Paris (aka Cap) and Steve Wolfe (aka NerveGas) for all their assistance in getting the survey going.

Article edited by Elizabeth M. Lukan, 4/20/99.

Editing was limited to spelling corrections and some grammar (capitalizing the beginning of a sentence, adding a period at the end, etc.). No other editing was done, what you read was exactly what was sent to Ian by the reviewer.

Editor's Comments:

Further information on the Red Sea Berlin Classic skimmer can be found at the Red sea fish pHarm Ltd. website (<http://www.redseafish.com>). I was able to find pricing ranging from \$144 to \$159 (US) at the

following sites: Premium Aquatics (<http://www.premiumaquatics.com>), Marine Depot (<http://www.marinedepot.com>), and Reefers (<http://www.acropora.com> (*url dead 10/03/05*)). I also found a price of \$299 (Canadian) on the Invert-ual Realities Canada (<http://www.interlog.com/~invertea/ire.htm> (*url dead 8/24/04*)) site. My local (Queens, NY, USA) pet store was still awaiting their shipment, but did tell me that they would cost in the neighborhood of \$200 (US). Remember, the inclusion of the above sites is not a recommendation on my part, just for your information and to assist you in finding out more about, or purchasing, the product if you are so inclined.

Photo Credits:

The first picture, filename rsbrs.jpg, was obtained at the Red sea fish pHarm Ltd. website (<http://www.redseafish.com>). Permission for its use here was obtained from Brian via a phone call to 888-REDSEA9 on 4/19/99.

The second picture, filename rsbpa.gif, was obtained at the Premium Aquatics website (<http://www.premiumaquatics.com>). Permission for its use here was granted via email by Jason (jason@premiumaquatics.com). Thanks Jason!

Unsuitable Marine Fish For Captivity

By Mark T. Taber

Introduction

Several months ago I started exchanging emails over the Internet with Frank M. Greco about how the average marine aquarium owner can ensure that they do not buy a fish that is unsuitable for captivity. Frank M. Greco is an Aquarium System Operator on a marine fish Microsoft forum and is very knowledgeable in this area. A fish in his opinion (and I stress his opinion) would be unsuitable for a variety of reasons, specialized dietary requirements being one. Others most notably the Queen Triggerfish and some Caribbean Groupers are becoming threatened in parts due to sports diving and the collection of food. I asked Frank if he would be kind enough to supply a list of these animals so that I could send out a questionnaire over the Internet to see what others thought. I was also interested to see how many fish on this list could be found in my local fish store.

I compiled a list of questions and sent it out to two marine/reef aquarium email lists. If you want to subscribe to these lists then visit <http://www.athiel.com> and <http://www.aquarium.net> (*url dead 8/24/04*) with your web browser. Frank had spent a considerable amount of time pulling this information together so I wanted as much feedback via email and I felt that these were the busiest email groups. All I wished to do with the questionnaire was to find out what the marine aquarium owner's opinion was on fish conservation with reference to the list that Frank had supplied. I also wanted to know how many people had kept tank-bred fish or would consider keeping tank-bred fish. If you want to contact me on any part of this questionnaire then please email at mttaber@email.msn.com or write to me at 5 Durham Way,

Rayleigh, Essex, SS6 9RY. You can also phone me on 0973 310603.

Here are the results of each question I sent. I have also included Frank's replies to some of the comments that were raised, which you will find at the end of the questions.

QUESTION 1 - How long have you been in the hobby?

The total amount of experience out of the 36 people who replied was just over 270 years. The least amount of time spent in the hobby was 10 months and the most was 30 years, not including the reply from one person who said "*A Very Long Time*".

NOTE. Not all these years are just keeping Marine aquariums as some included keeping fresh water aquariums.

QUESTION 2 - How many tanks do you have?

The total amount of tanks came to 91 covering a total 4935 US gallons. The smallest tank was 2 gallons and the largest was 150 gallons. Someone actually ran a total of 10 tanks by themselves.

NOTE. These tanks also included fresh water tanks, quarantine tanks, breeding tanks etc.

QUESTION 3 - Do you currently own any of the fish on the list (please see the end of this document)?

Out of 36 people, 9 people owned fish that were listed as unsuitable for captivity. The fish kept were -

Callionymidae Pterosynchiropus splendidus - Mandarin Fish

Labridae Labroides bicolor - Bicolor Cleaner Wrasse

Ostraciidae Lactophrys quadricornis - Four-horned Cowfish

Syngnathidae Hippocampus erectus - Northern Seahorse

Syngnathidae Hippocampus ingens - Giant Pacific Seahorse

Syngnathidae Hippocampus reidi - Long-snout Seahorse (breeding pair)

Syngnathidae Hippocampus kuda - Oceanic Seahorse

Syngnathidae Hippocampus erectus - Northern Seahorse

NOTE. One of the people did not list their fish

Frank's Comment To Question 3-

I would like to add here that these fish appear to do very well in reef type systems, while in fish only systems they tend to wither and die within a few months. I will probably end up moving these fish to the moderately difficult listing, with an explanation to this effect.

QUESTION 4 - Now that you know the species is difficult to maintain or provide for, would this stop you purchasing another?

Out of the 9 people that kept fish that were listed as unsuitable for captivity, 8 said that they would not stop buying the fish and the other 1 person was undecided.

QUESTION 5 - Did you know or have it explained to you that this species was difficult to maintain or provide for when you purchased it?

Out of the 9 people that kept fish that were listed as unsuitable for captivity, 5 people knew they were difficult to keep before they brought them.

QUESTION 6 - Do you ask for tank bred fish when buying your live stock?

Out of 36 people, currently only 8 said they ask for tank bred fish when buying live stock.

QUESTION 7 - What fish do you have that are tank bred?

The captive bred fish kept by people were -

Percula Clowns

Dotty Back

Sebae Clownfish

Yellow Tail Damsels

Amphiprion clarkii

Maroon Clownfish

NOTE. Percula clowns were the most common tank bred fish.

QUESTION 8 - Is there any reason why you would not purchase tank-bred fish?

Out of the 36 people who replied, 31 people said that there was no real reason why they would not buy tank-raised fish. Two said they would but the fish were not readily available, 1 was undecided and 2 said yes there was a reason for not buying them. Out of those 2 people who said that there was a reason they would not buy tank bred fish, one said that they might if they looked as healthy as other wild caught fish and the other said that they did not have the same color as wild caught fish.

QUESTION 9 - Now knowing that these species are unsuitable for captivity, if you noticed them in your local fish store would it stop you buying from that store?

Out of the 36 people who replied, 11 people would stop buying from that store, 20 said that they would not and 5 were undecided.

QUESTION 10 - Now knowing that these species are unsuitable for captivity, if you noticed them in your LFS would you mention this fact to the owner/manager of the store?

Out of the 36 people who replied, 26 people would mention it to the owner/manager, 7 would not and 3 were undecided.

Comments from Frank M. Greco -

I have listed a few of the comments that people made when answering the questionnaire along with Frank's reply to these comments -

"I think some of the fish in the list could be kept successfully if they provided the right conditions."

This may well be true. However, the reason some of these fishes are listed is because they appear to be obligate coral feeders. From where the hobby stands today, they are not practical to maintain in captivity even though the means to feed them is there. Note though that I have not stated that these fishes should be banned from the trade. There may well come a time when these species will be as easy to maintain as any other. This hobby is quite dynamic, and we should not effect a ban based on today's technology. Others just get way too large for the average home hobbyists tank. This is perhaps easier to rectify but in my opinion a majority of the hobbyists will either try and pawn the oversized animal off on their shop or a public aquarium, or (illegally) release it into local waters where in some cases it will die. Other listed species just for whatever reason refuse to eat in captivity no matter what.

"No, just because I see them on your list is not enough information. If I were sure that any particular species was endangered I still wouldn't necessarily stop doing business but rather talk to them about it."

The first sentence makes a good point, and goes along with what I said in the original posting. However, this listing should act as a guide alerting you to the fact that all is not as easy as it seems and that some research into the requirements of said species is needed. As to the endangered portion of the comment, there are no species currently within the trade that are endangered. The queen Triggerfish and a few Caribbean groupers are listed as threatened though and that should be enough to keep them from the tanks of any concerned dealer or hobbyist.

"My local LFS occasionally carries sharks. The owner believes that they should not be held captive but people request them. It's a business, he has to assume they are prepared to care for such an animal."

But what if there is no way to maintain these species, the way our hobby is now? Unsuitability is not always a personal preference, but rather a biological or environmental consideration. An environment may be suitable from the viewpoint of several parameters but if let's say the diet or tank size or filtration is inadequate, the fish will still not survive long. What follows below is a portion of a reply I posted to MSN FISH forum to the question of keeping sharks:

For whatever reason, marine sharks are considered by some to be ideal aquarium inhabitants. Maybe it's the idea of having a "man-eater" in your home or perhaps it's a way of "getting back" at a so called dangerous species. No sharks are "man-eaters" in the sense that they will intentionally attack a human, most, if not all attacks are due to the shark confusing a human with its natural prey. Sharks are not dangerous, they are simply sharks and will do what sharks will do. Perhaps keeping a shark makes its owner feel more "macho" (or the female equivalent). While the idea of keeping sharks may be exciting to some, it is my opinion that any responsible, ethical hobbyist will pass these animals by. Most, if not all, of the more commonly available sharks get far too large for all but the largest of aquariums. Nurse (Ginglymostoma cirratum), black tip reef (Carcharhinus melanopterus), epaulet (Hemiscyllium trispeculare), wobblygong (Orectolobus spp.), leopard (Triakis semifasciatus), and horn (Heterodontus spp.) sharks can vary in length from 100 cm (3.25 FEET) to over 400 cm (13 FEET). One wholesaler in my area even considered bringing in bull sharks (Carcharhinus leucas), which reach a size of at least 10 FEET. Thankfully, this insane exercise never came to pass. In any case, these sharks would require a tank ranging in size between 6' x 4' to one the size of a good sized swimming pool in order to house them properly. Even the smaller catsharks (Chiliscyllium spp.) range from 100 cm (3.25 FEET) to 240 cm (about 8 FEET) and would require a tank size ranging between 6' x 4' to 12' x 6' in order to give them adequate room to move around (I am basing these sizes on first hand observations of several shark species in captivity). Please note that I have NOT mentioned tank size in gallons. This is, in actuality, a deceptive measurement. For sharks, and other overly large fish, one must consider SURFACE AREA or CUBIC FEET of unobstructed swimming area over gallonage. In the case of nonbenthic species, such as the black tip reef, it is highly important to provide as much cubic space of swimming room as possible, preferable in a round or oblong tank so the animal doesn't bash itself into corners. Of course, you are probably thinking one of four things (or perhaps all):

- 1) It's a small shark and/or
- 2) It will grow only to the size of the tank and/or
- 3) My local public aquarium will take it when it gets too large and/or
- 4) When it gets too big, I'll release it into local waters

Well, yes, it would be a small shark at first, but as with all living things, they do grow and no, it will NOT grow to the size of the tank. While it is true that some fishes, notably salmonids, can be stunted for a period of time, sharks just don't fit into that category. They will continue to grow until the captive environmental conditions become so bad that it dies. As to public aquaria taking sharks, it depends on the aquarium. If the one in your area is like mine, they no longer have room to take sharks, especially nurse and don't even THINK about releasing a long term captive specimen. Unless you live in an area where these animals are normally found, releasing ANY animal into the environment is both unethical (for the animal will surely die) and illegal (releasing non-indigenous species). Another reason to pass these animals by is due to the status of sharks world-wide. In many

areas, shark populations have declined tremendously (up to 80%) due to fishing pressures, both commercial and "recreational" (the "jaws" syndrome, as I call it). While there is no direct proof that tropical sharks such as the smaller species we normally see within the hobby are indeed endangered, it behooves us to err on the side of caution ESPECIALLY in light that these animals are not really suited for the home hobbyist. Also, sharks grow and reproduce at a slower rate than other species. This in and of itself renders them susceptible to population decline due to collection. And since we are speaking of cartilaginous fishes, other groups that should not be found in hobbyists tanks are the rays and guitarfish. As with sharks, most get far too large to be housed properly by the average aquarist. Even the smaller species, such as the yellow stingray (*Urolophus jamaicensis*) would require a minimum surface area of 4' by 2'. Some, such as the electric rays (*Torpedo* spp., *Narcine* spp., *Narke* sp., *Hypnos* spp. and *Trygonorhina* sp.), blue spotted rays (*Taeniura* spp.), and guitarfish (*Rhinobates* spp.) hardly ever eats in captivity, and slowly starves to death.

With over 900 species of fishes imported for the ornamental trade, would we really miss sharks if suddenly they were no longer imported? For the vast majority of us, the answer is no. Yes, there would still be those who just HAVE to have a shark, but luckily they are few. As with sea horses and pipefish, these animals are just not suitable for the average aquarist and, as I said earlier, no responsible, ethical hobbyist would even consider them.

"...he discourages but sells the fish people want, if he doesn't have what they want they go somewhere else."

No. Supply and demand speaks louder than any comment I could make. This mind set unfortunately is all too common within the hobby. I can't tell you how many debates I've had with local dealers on this very topic. It seems that ethical considerations just don't pay the bills. When the animal eventually dies, one particular shop owner I used to deal with told me he can tell them they are not maintaining their tank properly and sell them some more "stuff" to correct the (nonexistent) problem. I see no way around this from the standpoint of the dealer, so it is up to the hobbyist to make the more educated decision. We must get away from the "I have money and I'll get whatever I want to and the consequences be damned" mind set.

"I agree that we must conserve wild fish stocks. Unfortunately many marine fish can not be captive bred."

I like the use of the word "conserve". This to me is the mark of a thinking person. Many people would use the word "preserve". The difference? Preserve means you put a velvet rope around it and say "Hands Off! bad human!" while conserve realizes that the resource, while it can be used, must also be managed for the benefit of the population, the ecosystem and human want (I'd say need, but no one really NEEDS an aquarium). As to captive bred, that is all well and good but please remember that there are a number of folks out there in Third World nations who make a living out of collecting ornamental fishes. In some cases it is their ONLY source of income. One must balance the idea of purchasing captive animals with the fact that the wild caught industry does provide

livelihood for a good number of folks.

"...no, for some people who have been doing this awhile, trying to keep more delicate species is part of the challenge, part of the fun of the hobby."

Hmmm...I'm not sure how to reply to this. The comment is quite true, out of the 950+ species imported for the hobby, would it really hurt to stay away from the 100 or so on the listing? Generally, I think it is a good idea for shops to avoid stocking fish that are difficult to keep, but not to avoid supplying them altogether unless they are endangered. I think the difficult ones should be available to fish-keepers but only via a special order. I also think the fish shops have a responsibility to inform customers of the difficulties of keeping these fish, if someone should order them. Words to live by, in my opinion.

"...no, one of my local fish stores has a nurse shark and has maintained him for 5 years now. I would do the same if I had no children to get eaten!"

In five years that nurse shark should be about 7 feet long or so. I wonder if it is. Also, the fact that it will eventually get 12 feet long should be more than enough info to keep it out of the dealer's tank. Yes fishes will stunt to a degree, but its' not the best way to keep them. I realize that there are individuals that will HAVE to have these animals' regardless of their relative difficulty to breed or maintain.

"Hopefully, having access to such animals will eventually allow the discovery of some keeping requirement that we have all overlooked until someone discovers this need. Remember 10 years ago, no one could keep elegance alive for more than a few months."

The point here is that the AVERAGE home hobbyist is probably not going to make this discovery (although it could happen..just look at coral husbandry). My thought on this is that the AVERAGE person should really think long and hard before making such a purchase. The use of coral as a yardstick though, may not be the best comparison. With corals, it was really a matter of lighting and water quality, two parameters easily manipulated. However, dietary and size considerations are another matter.

"No, unless I personally looked up the fish and found the reasons why it is unsuitable to relay it to them. If I had some hard facts to throw at them then I would say something, otherwise it seems to be more of an opinion."

Some of my list is opinion. However, much of the list is based upon published information including maximum adult size and dietary requirements (via stomach content analysis). Another part of the list is based upon mortality as seen in my local wholesaler/dealer tanks. One person was surprised to see the Cow and Trunkfishes listed. Yes, they can be easily fed and don't get too large. An ideal fish one would think. However, in my area I noted (and this was confirmed by several wholesalers) that the in tank mortality was quite high. In some cases 100% mortality! I think the lowest was about 30% or thereabouts, but in most cases it was much higher. Necropsy on a few of these animals showed severe cases of Amyloodinium (which this group of fishes seem to get in the blink of an eye) and gill degeneration. Hence my listing them.

"I am afraid that the importation & sale of reef fish, live rock, and corals is contributing to the decline of these animals world-wide. I read a recent article in AFM about this, which basically stated that there are other more significant factors contributing to the decline of reefs. But I still think that every little bit helps (or hurts) and I wish that more stores would explain the option of tank-raised fish and their heightened cost and aquacultured live rock and corals. I don't want to tell my child, there once was a thing called a reef, here's a picture of what it looked like before we chipped them all away."

A valid consideration. Let's take a look at it. First and foremost the trade in fishes, inverts, and live rock is not destroying the reefs (cyanide use notwithstanding). Let's start with corals, and do some math. If one was to take one square mile of reef, and from each square yard of that square mile one piece of coral was to be removed, you would end up with over 3,000,000 pieces of coral. Considering that the United States alone imported less than 1,000,000 pieces in 1995, what we are removing appears to be insignificant and with the trading of fragments, the number will decrease even more. Yes I know this is an ideal way to harvest corals, and does not reflect the reality. But I use it to illustrate that corals can be harvested without a major impact to the reef ecosystem. Live rock? Providing it is not chipped from the reef proper (corals grow quickly, but the reef proper may take hundreds of years), I have no problem with its harvest. Rubble zones are an ideal place to remove live rock from. As to fishes, Micronesia, a while back, had a management plan in place for the harvest of ornamental reef fishes. They had strict rules about when and what could be harvested. After a few years, they dropped the plan. Why? They found that there was no difference at all in the population sizes. What was being removed for the trade was not significant to the total population. Of course they also did not use cyanide or dynamite. Only non-destructive methods were utilized. So the lesson here is that providing we do not destroy the reef proper, we can harvest animals within reasonable numbers. Of course, this can be considered a simplistic view. A real management plan must be in place for each area since the populations of fishes can vary from area to area. It may well be that Country X can ship a certain species while Country Y can not, since it's rare within it's water for whatever reason. This kind of plan I can agree with and support. In fact, I will be working with other fisheries people in helping a Caribbean island nation in developing such a plan for their ornamental fish trade. I hope it can be used as a model for other nations when dealing with their ornamental trade.

There was one other comment made that I wanted to address, and I can not find the original posting. Someone mentioned that fishes of the genus *Centropyge* should have been on the list because in the wild, they have large territories and so become neurotic in captivity. I can not find any data to back this statement up. *Centropyge* tend to do quite well in aquaria it seems. Heck, they will even spawn if the conditions are proper. Having a large territory in nature does not mean that a fish will not do well in captivity. One must look at WHY they covet such a large area. Is it to assure a good amount of food is available to them? Is it to assure an ideal breeding area? I've even kept so-called pelagic species (jacks of various species) in my tanks with no difficulties. I do not believe this to

be too much of a consideration in all cases, although it may well be for some species.

LIST OF MARINE FISH UNSUITABLE FOR CAPTIVITY

Scientific Name	Common Name
Balistidae <i>Balistes Vetula</i>	Queen Triggerfish
Balistidae <i>Oxymonacanthus longirostris</i>	Long-nose Filefish
Blenniidae <i>Exallias brevis</i>	Leopard Rockskipper
Callionymidae <i>Pterosynchiropus splendidus</i>	Mandarin Fish
Caesionidae <i>Caseio xanthonotus</i>	Redfin Fusilier
Carcharhinidae <i>Carcharhinus melanopterus</i>	Blacktip Reef Shark
Carcharhinidae <i>Triaenodon apicalis</i>	White-tip Shark
Centriscidae <i>Aeoliscus punctulatus</i>	Spotted Shrimpfish
Centriscidae <i>Aeoliscus strigatus</i>	Shrimpfish
Centriscidae <i>Centriscus scutatus</i>	Grooved Shrimpfish
Chaetodontidae <i>Chaetodon aureofasciatus</i>	Golden-striped Butterflyfish
Chaetodontidae <i>Chaetodon austriacus</i>	Exquisite Butterflyfish
Chaetodontidae <i>Chaetodon baronessa</i>	Triangular Butterflyfish
Chaetodontidae <i>Chaetodon bennetti</i>	Bennett's Butterflyfish
Chaetodontidae <i>Chaetodon ephippium</i>	Saddled Butterflyfish
Chaetodontidae <i>Chaetodon larvatus</i>	Orange-faced Butterflyfish
Chaetodontidae <i>Chaetodon madagascariensis</i>	Madagascar Butterflyfish
Chaetodontidae <i>Chaetodon melapterus</i>	Arabian Butterflyfish
Chaetodontidae <i>Chaetodon mesoleucos</i>	White-faced Butterflyfish
Chaetodontidae <i>Chaetodon meyeri</i>	Meyer's Butterflyfish
Chaetodontidae <i>Chaetodon octofasciatus</i>	Eight-banded Butterflyfish
Chaetodontidae <i>Chaetodon ornatissimus</i>	Ornate Butterflyfish
Chaetodontidae <i>Chaetodon rainfordi</i>	Rainford's Butterflyfish
Chaetodontidae <i>Chaetodon reticulatus</i>	Reticulated Butterflyfish
Chaetodontidae <i>Chaetodon semilarvatus</i>	Golden Butterflyfish
Chaetodontidae <i>Chaetodon triangulum</i>	Triangular Butterflyfish
Chaetodontidae <i>Chaetodon trifascialis</i>	Chevron Butterflyfish
Chaetodontidae <i>Chaetodon zanzibariensis</i>	Zanzibar Butterflyfish

Congridae <i>Taenioconger digueti</i>	Garden Eel
Dasyatidae <i>Amphotistius kuhlii</i>	Blue-spotted Stingray
Ephippididae <i>Platax pinnatus</i>	Red-lined Batfish
Heterodontidae <i>Hemiscyllium ocellatum</i>	Epaulette Shark
Heterodontidae <i>Heterodontus galeatus</i>	Crested Port Jackson Shark
Heterodontidae <i>Heterodontus portjacksoni</i>	Port Jackson Shark
Heterodontidae <i>Heterodontus zebra</i>	Zebra Shark
Labridae <i>Labroides bicolor</i>	Bicolor Cleaner Wrasse
Labridae <i>Labroides pectoralis</i>	False Bluestreak Wrasse
Labridae <i>Labroides phthirophagus</i>	Hawaiian Cleaner Wrasse
Muraenidae <i>Rhinomuraena quaesita</i>	Ribbon Eel
Ogococephalidae <i>Halieutichthys aculeatus</i>	Walking Batfish
Ogococephalidae <i>Ogococephalus nasutus</i>	Walking Batfish
Ophichthidae <i>Myrichthys aciminatus</i>	Spotted Snake-eel
Ophichthidae <i>Myrichthys acuminatus</i>	Sharptail Snake Eel
Ophichthidae <i>Myrichthys colubrinus</i>	Banded Snake-eel
Orectolobidae <i>Eucrossorhinus dasypogon</i>	Wobbegong Shark
Orectolobidae <i>Ginglymostoma cirratum</i>	Nurse Shark
Orectolobidae <i>Orectolobus ogilbyi</i>	Tassled Wobbegong Shark
Orectolobidae <i>Orectolobus ornatus</i>	Banded Wobbegong Shark
Ostraciidae <i>Lactophrys bicaudalis</i>	Spotted Trunkfish
Ostraciidae <i>Lactophrys quadricornis</i>	Four-horned Cowfish
Ostraciidae <i>Lactoria cornuta</i>	Longhorn Cowfish
Ostraciidae <i>Ostracion cubicus</i>	Spotted Cube
Ostraciidae <i>Ostracion meleagris</i>	Camurum Spotted Boxfish
Ostraciidae <i>Ostracion meleagris</i>	Meleagris Spotted Boxfish
Ophichthidae <i>Myrichthys oculatus</i>	Gold-spotted Snake-eel
Ostraciidae <i>Ostracion trachys</i>	Imposter Boxfish
Ostraciidae <i>Ostracion whitleyi</i>	Whitley's Boxfish
Ostraciidae <i>Tetrasomus gibbosus</i>	Thornback Boxfish
Pomacanthidae <i>Apolemichthys arcuatus</i>	Bandit Angelfish
Pomacanthidae <i>Apolemichthys trimaculatus</i>	Flag-fin Angelfish

Pomacanthidae <i>Centropyge multifasciatus</i>	Many-banded Angelfish
Pomacanthidae <i>Chaetodontoplus mesoleucus</i>	Mesoleucus Angelfish
Pomacanthidae <i>Genicanthus personatus</i>	Masked Angelfish
Pomacanthidae <i>Holacanthus tricolor</i>	Rock Beauty
Pomacanthidae <i>Pygoplites diacanthus</i>	Regal Angelfish
Rhinobatidae <i>Rhinobatos armatus</i>	Clearnose Guitarfish
Rhinobatidae <i>Rhinobatos formosensis</i>	Taiwan Guitarfish
Rhinobatidae <i>Rhinobatos hynnicephalus</i>	Decorated Guitarfish
Rhinobatidae <i>Rhinobatos schlegeli</i>	Schlegel's Guitarfish
Scaridae <i>Cetoscarus bicolor</i>	Bicolor Parrotfish
Scaridae <i>Scarus bleekeri</i>	Pacific Whitecheek Parrotfish
Scaridae <i>Scarus brevifillis</i>	Tattooed Parrotfish
Scaridae <i>Scarus coelestinus</i>	Midnight Parrotfish
Scaridae <i>Scarus coeruleus</i>	Blue Parrotfish
Scaridae <i>Scarus croicensis</i>	Striped Parrotfish
Scaridae <i>Scarus dimidiatus</i>	Fivesaddle Parrotfish
Scaridae <i>Scarus dubius</i>	Green Parrotfish
Scaridae <i>Scarus flavipectoralis</i>	Yellowfin Parrotfish
Scaridae <i>Scarus frenatus</i>	Fall Parrotfish
Scaridae <i>Scarus frontalis</i>	Blue Parrotfish
Scaridae <i>Scarus ghobban</i>	Blue-barred Orange Parrotfish
Scaridae <i>Scarus gibbus</i>	Bumphead Parrotfish
Scaridae <i>Scarus guacamaia</i>	Rainbow Parrotfish
Scaridae <i>Scarus niger</i>	Dusky Parrotfish
Scaridae <i>Scarus perrico</i>	Mexican Parrotfish
Scaridae <i>Scarus prasiognathos</i>	Greenbeak Parrotfish
Scaridae <i>Scarus psittacus</i>	Yellow-sided Parrotfish
Scaridae <i>Scarus rubroviolaceus</i>	Ember Parrotfish
Scaridae <i>Scarus schlegeli</i>	Schlegl's Parrotfish
Scaridae <i>Scarus sordidus</i>	Garnet Red Parrotfish
Scaridae <i>Scarus taeniopterus</i>	Princess Parrotfish
Scaridae <i>Scarus tricolor</i>	Blackstripe Parrotfish

Scaridae <i>Scarus venosus</i>	Five-banded Parrotfish
Scaridae <i>Scarus vetula</i>	Queen Parrotfish
Scaridae <i>Sparisoma atomarium</i>	Greenblotch Parrotfish
Scaridae <i>Sparisoma aurofrenatum</i>	Redband Parrotfish
Scaridae <i>Sparisoma chrysopterygum</i>	Redtail Parrotfish
Scaridae <i>Sparisoma radians</i>	Bucktooth Parrotfish
Scaridae <i>Sparisoma viride</i>	Stoplight Parrotfish
Serranidae <i>Epinephelus striatus</i>	Nassau grouper
Serranidae <i>Epinephelus morio</i>	Red grouper
Syngnathidae <i>Corythoichthys amplexus</i>	Redspotted Pipefish
Syngnathidae <i>Doryrhamphus dactyliophorus</i>	Banded Pipefish
Syngnathidae <i>Doryrhamphus japonicus</i>	Japanese Blue-line Pipefish
Syngnathidae <i>Hippocampus erectus</i>	Northern Seahorse
Syngnathidae <i>Hippocampus japonicus</i>	Japanese Seahorse
Syngnathidae <i>Hippocampus kuda</i>	Oceanic Seahorse
Syngnathidae <i>Hippocampus reidi</i>	Long snout Seahorse
Serranidae <i>Mycteroperca venerosa</i>	Yellowfin grouper
Serranidae <i>Mycteroperca bonaci</i>	Black grouper
Serranidae <i>Mycteroperca tigris</i>	Tiger grouper
Serranidae <i>Mycteroperca microlepis</i>	Gag grouper
Syngnathidae <i>Hippocampus ingens</i>	Giant Pacific Seahorse
Syngnathidae <i>Phycodurus eques</i>	Leafy Sea Dragon
Syngnathidae <i>Syngnathus scovii</i>	Gulf Pipefish
Torpedinidae <i>Narcine brasiliensis</i>	Lesser Electric Ray
Torpedinidae <i>Torpedo nobiliana</i>	Atlantic Torpedo Ray

Article edited by Elizabeth M. Lukan, 4/20/99.

Editing was limited to spelling corrections and some grammar. Most of my work was in just reformatting Mark's article into html. No other editing was done, what you read was exactly what was sent to me by Mark.

Caught In The Net

By Elizabeth M. Lukan 4/19/99

The following list contains websites that sell Books and CDs.

Books & CDs

- Harbor Aquatics - <http://www.harboraquatics.com> (1/12/99) *Books only. (*url dead, 10/02/05*)
- Invert-ual Realities Canada - <http://www.interlog.com/~invertca/irc.htm> (*url dead 8/24/04*) (1/29/99) *Prices in Canadian. Books only.
- [J&L Aquatics](http://www.jlaquatics.com) - <http://www.jlaquatics.com> (2/1/99) *Prices in Canadian. Books only.
- [Jeff's Exotic Fish](http://www.exoticfish.com) - <http://www.exoticfish.com> (1/12/99) *Books only.
- [Jen's Saltwater Haven](http://www.jensalt.com) - <http://www.jensalt.com> (3/11/99) *Phone orders only. Books only.
- [Marine Depot](http://www.marinedepot.com) - <http://www.marinedepot.com> (1/12/99)
- [Premium Aquatics](http://www.premiuaquatics.com) - <http://www.premiuaquatics.com> (1/12/99) *Books only.
- Reefers - <http://www.acropora.com> (1/12/99) (*url dead 10/03/05*) *Books only.
- Simplified ReefKeeping - ~~<http://www.connix.com/~reefkeep/>~~ (*url dead 8/24/04*) (3/11/99) *Simplified ReefKeeping by Robert M. Metelsky only. Cannot be ordered online, but gives instruction on how to order.
- [Thiel Infobase](http://www.athiel.com) - <http://www.athiel.com> (1/12/99)

Each site was checked by me personally so any errors are entirely mine. This includes any omission of sites - I checked those I knew or those I could find links to. The date that follows in parenthesis is the date I checked the site and added it to the list.

Site Submission and Updating: To submit your site for inclusion in the Fish & Chips newsletter and website based Site List, please go to the Fish & Chips Website at <http://www.marinefiends.com/> (*updated 8/24/04*) and complete the Site Submission Form. Please do **NOT** send any site submission or update requests via email - *I will not process them.*

Chips...er...Tips

Water Storage - Tip By Elizabeth M. Lukan 11/30/98

If you're in a situation like me, whenever you need to make DI (Deionized) water, you've got to hook up your unit. Now this isn't so bad when you're doing a water change since you also have to setup some empty tanks/containers, water pumps or powerheads, hydrometer, etc. But, it's a real pain when you only need a gallon to make up for evaporation. Now, I don't have room to keep a tank setup just for top off or kalkwasser water, so I use cleaned plastic milk gallon jugs. I fill them up, cap them, and store them in my hall. Nothing gets at them (bugs, dust, etc.) and they are aged and at room temperature when I need them. Clean the containers with plain water as hot as is humanly possible to work with - no soap or

detergents as the chemicals are deadly to your animals and tank. I've got about 8 to 10 gallons of treated water in my hall and only need to setup my DI unit about once a month (probably more often in the summer though) which works out well since that's my water change schedule. I setup everything for my water change, fill the empty tanks and while I'm adding salt and verifying specific gravity levels, I'm filling up my gallon jugs and moving them into storage.

To Submit Your Tip: Send your tip via email to fishnchips@mail.com (address updated 4/26/00) with a subject of *Tip Submission* (information updated 4/26/00: coding replaces need for subject notation) and I'll publish it in an upcoming issue of Fish & Chips. I'll write it up for you or you can do it yourself if you are so inclined. Make sure you let me know if I can include your name and email address or if you'd rather go anonymous.

Prove It!

By Elizabeth M. Lukan 4/20/99

Invert-ual Realities Canada, <http://www.interlog.com/~invertea/irc.htm> (*url dead 8/24/04*)

Marine Depot, <http://www.marinedepot.com>

Paradise Aquarium, 66-16 Fresh Pond Road, Ridgewood, New York, USA (718) 366-6921

Premium Aquatics, <http://www.premiumaquatics.com>

Red sea fish pHarm Ltd., <http://www.redseafish.com>

Reefers, <http://www.acropora.com> (*url dead 10/03/05*)

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Any and all comments, suggestions, etc., should be directed to FishNChips@mail.com (address updated 4/15/00).

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