

# Fish 'N' Chips

A Monthly Marine Newsletter  
July 2001 Issue

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## From Liz

By Elizabeth M. Lukan 7/28/01

***Tank Showcase Award Announced!*** For those subscribers whose tanks are chosen as Tank Showcases there is now an award graphic for their site.

To submit your own tank photos, please email [fishnchips@mail.com](mailto:fishnchips@mail.com).



***Visit This Month's Subscriber's Tank Showcase***

Timur Turker's Reef Tank is this month's Showcase and can be seen at <http://www.marinefiends.com/showcases.html> (updated 8/24/04).

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# The Cowry

## Add a Little Lustre to Your Tank

By Dale Bennett 6/16/01

Edited By Elizabeth M. Lukan 7/298/01

### *General Information / History*

The Cowry, or Cowrie, is one of, if not the, most sought after and prized of all shells. Their highly lustrous and colourful shells naturally attract most people to them. It is a lustre that makes the cowry's shell appear as if it has been lacquered and ready for display on someone's shelf. With such an eye-catching aspect the unfortunate effect has been the over exploitation of these beautiful animals in some areas. The most notable specimen this has happened to is the Tiger cowry (*Cypraea tigris*). These wonderful creatures are becoming rare in several regions of their known indigenous habitat. Such places are, of course, high in tourist traffic where the local people collect the cowries and set up shop selling shells by the thousands. Compared to this, the small quantity of animals gathered for the aquarium trade is negligible, and has little, if no effect, on wild populations.

The cowry, or porcelain shell, has actually given porcelain its name, not the other way around. In Italy, the cowry is called the "porcellana" meaning small pig. When porcelain was first brought to Italy from China it was so named porcelain because it's sheen, colour, and delicacy were like that of the cowry. Cowry comes from the Sanskrit kaparada from which is derived the Hindu kauri meaning a small shell. The word itself arrived to the English language sometime during the mid 17th century.

The cowry is also accredited with being the first coinage to be used in the world dating back to the Chinese Xia Dynasty (2000-1500 BCE) where the unit of cowry coinage was called the "peng." Five shells strung together were a "ji," and two "ji" made up a "peng." The Hindu Kauri was used as coin in the lower provinces of India, in Africa during the 1400 - 1600's it too was used as currency and there is even one reference stating its utilization until the mid 1900's.

These Mollusks have had a rather storied career in several cultures. They are considered the Queen of all Magical shells, the Eyes of the Gods and the Womb of the Goddess. As the symbol of the Goddess they are believed to have the power of granting fertility and sexual potency. In Japan the cowry is called "Koyasu-gai," translated as "the easy delivery shell" and is held by women giving birth to ensure a successful and healthy delivery. In ancient Rome, women in Pompeii wore the cowry shell as a means to prevent sterility. Even to this day many

Ocean going peoples string together cowry shells to hang on their boats for protection on voyages. Whatever the reason the cowry has been used for or whatever it has represented, it's beauty is still captivating people.

### *Scientific, Common names and Information*

Cowries are of the Family Cypraeidae, Order Mesogastropoda, Subclass Prosobranchia, Class Gastropoda, Subphylum Conchifera, and Phylum Mollusca.

Now in layman's terms that would be Family Cowries, Order Intermediate gastropods, Subclass Prosobranchs, Class Gastropoda, Subphylum Conch's, and Phylum Mollusc's.

There are literally hundreds of different cowries, many whose life cycle remains unknown with even something as basic as diet. Most seem to live on a diet of algae or encrusting invertebrates, like sponges and bryozoans. Nutritional regimens of course vary from species to species with the smaller forms commonly being feeding specialists on soft corals and sponges, or have the role of algivores. Some larger species tend to be predatory. The most common cowry to find it's way to the aquarium is the algae eating Tiger Cowry (*Cypraea tigris*). This species grows to it's largest around the Hawaiian Islands where it can reach a length of 4-6 inches (10-15 cm).

The cowry has a mantle that extends outside to totally envelope its shell. The mantle produces the shell from the outside, unlike other snails, which accounts for their famous smooth glossy exterior. Although pretty to look at it serves the important function of keeping away algae, encrusting, and boring organisms. The covering of papillae can be anything from short, single projections, to ones that are long with many irregular branches. The cowry with its mantle fully extended has led to the confusion among some divers in thinking that they were looking at a nudibranch.



The cowry shell goes through four distinct phases while growing. The first of which doesn't look much like a cowry at all for it has the look of a twisted, thin walled shell that is lacking in the cowries columellar folds.



The second stage shows the development of the "teeth," on the outer lip, and the body twist becomes more rounded to start looking the part of a cowry.



The third stage shows us the adult colouring and lustre. The other side of the body opening grows a row of "teeth" during this phase as well.



The final adult stage shows the cowry shells' base becoming thickened and flat, with a lip developing around the outer edge of the shell.

## ***Diseases***

The cowry does not fall victim to disease, but does require clean, well-oxygenated water. About the only sign you may see that a cowry is not doing well is the shrinking of the mantle so that it will no longer cover the shell.

## ***Foods and Feeding***

Cowries' diets consist of algae and detritus, with some species being specialty feeders on soft corals and encrusting invertebrates. The common aquarium species have no need to be specially fed, but most will not refuse a small piece of mussel, squid or other foods. The Arabian cowry in my tank does not get specifically fed, and has done a wonderful job cleaning my tank of nuisance algae.

## ***Reproduction***

In the wild the sexes are separate with fertilization being internal. The female will lay a cluster of white, parchment-like eggs, and then stands guard over them by covering the eggs with her foot. Once the embryos develop into the swimming veliger larvae, they enter into the plankton to drift to develop further. This planktonic larval stage is relatively long, and could be the reason that captive breeding was nowhere to be found in my research.

### ***Cost***

At my local fish store they have been selling Arabian cowries for \$20 Canadian. On the net Tiger cowries were the most common, ranging in price from \$6-18 US depending on size. There were a few sites that had Knobby Black cowries for \$11 US, and one site did have Fancy cowries at \$10 US for medium sized and \$50 US for extra-large.

### ***My Thoughts***

In my opinion the cowry makes a beautiful and efficient algae vacuum for your tank, but watch what species you get. One concern with these animals is that their size can cause rockslides in your tank and other un-looked for disturbances. Since they are nocturnal, it is advisable to keep an eye on them, and if one perishes in your tank without noticing, the resulting pollution could mean the end of your tank. I've had a Tiger in the past, and currently own of the harder to find Arabian cowries. I prefer the Arabian due to its smaller size to that of the Tiger, and it seems to do a better job on the algae overall. Given the choice among the algae cleaning snails for my tank, I would definitely choose the cowry over the Turbo, Astrea, Cerith, etc. because of their striking visual appeal alone.

### ***Resources***

Waikiki Aquarium education department

Rothauschers Growth Stages of the Cowry Shell

Baensch Marine Atlas Volume 2

The Order of Obsidian

### ***Photos***

Hans Rothauscher

## ***Definitions***

***Mollusk:*** invertebrate animals having soft un-segmented bodies covered with a mantle used to produce a hard shell in most cases

***Algivores:*** type specific feeders on algae alone

***Papillae:*** protuberances from the mantle, possibly to help with oxygen exchange or for camouflage

***Columellar folds:*** rounded inward folding of the shell at the shell opening

## ***Editor Comments***

The article above along with photos was provided by Dale Bennett. Editing was limited to spelling, grammar, and reformatting into html and the Fish 'N' Chips style.

Thanks very much to Dale for coming through with an article and helping out an overworked publisher!

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**What's Up @ ReefsUK**  
- <http://www.reefsuk.org> -

By Elizabeth M. Lukan 7/29/01

**7/2/01** - Updates from Reefs UK's sister site AquaticSearch (<http://www.aquaticsearch.co.uk/> (*url dead 10/06/05*)):

- A free new service called Aquatic Price Search has just been launched that does all the work of searching the net for the best prices for aquatic products.
- £10 Incentives are still being offered to anyone who persuades their local UK aquatic store to be listed in the AquaticSearch search engine as an AquaticSearch Associate.
- New competitions are running. Visit the site for details.
- Free online forums are now available for all areas of fishkeeping.
- Visit the new Classified section and advertise your unwanted aquatic equipment free of charge.

To join the ReefsUK Mailing List, send an email to [post@reefsuk.org](mailto:post@reefsuk.org).

To join ReefsUK Chat (Email Discussion Group), visit the ReefsUK Website for instructions.

### ***Editor's Comments:***

Information in this section covers the latest happenings at Mark T. Taber's ReefsUK Web Site. Mark has given me permission to publish any information from his mailing list that I feel would be of interest to Fish 'N' Chips subscribers. So, the above, although reworded by me, should be credited to Mark or to Derek Scales who works closely with Mark on the running of ReefsUK. The dates in bold coincide with Mark or Derek's mailings and are provided as a reference.

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## **Caught In The Net**

By Elizabeth M. Lukan 7/28/01

### **New Stuff Found**

On Reefs.org (<http://www.reefs.org/>):

- Library/Articles: "Little White Starfish" by Various Authors
- Library/Articles: "Bristleworm Spawning and Sandbed Questions" by Various Authors

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## **Marine News**

By Elizabeth M. Lukan 7/28/01

7/6/01 - USA. More than 150 square nautical miles of deepwater corals and critical fish spawning sites have become part of the United States' largest permanent marine reserve. The Tortugas Ecological Reserve is part of the Florida Keys National Marine Sanctuary and is located more than 70 miles west of Key West. The entire news release can be found at <http://ens.lycos.com/ens/jul2001/2001L-07-06-06.html> (*url dead 8/24/04*).

7/11/01 - Ecuador. Ecuador's Minister of the Environment, Lourdes Luque de Jaramillo, is preparing the country for the likely declaration of the Galapagos Marine Reserve as a UNESCO World Heritage Site. This wider ocean area surrounds the 19 Galapagos Islands which were listed as a World Heritage Site in 1978. The entire news release can be found at <http://ens-news.com/ens/jul2001/2001L-07-11-02.html> (*url dead 8/24/04*).

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## **Chips...er...Tips Feeding Tangs**

By Mauro Bergamaschi 7/16/01

Edited By Elizabeth M. Lukan 7/29/01

Hi there! This is a tip for those who keep tangs.

You're probably offering your pets lettuce/nori/algae as base food. In order to avoid it floating around the tank I suggest you to go to IKEA (yes the home furniture depot) and buy for less than \$5 a bag of plastic bag sealers (each bags contains ten of them). These things are alimentary grade plastic clips and they are designed to seal food in plastic bags before put them in the freezer, so they lock very tight on leafy materials.

You just open one of them, slip in an old pump o-ring (or a rubber band) and attach the o-ring to a piece of rock, then take some lettuce, etc., put them in the sealer and close it, and place it in the tank. It will retain the leaves firmly.

They come in two different sizes and different colors (white, blue, orange, green and yellow). I personally like the white ones but yellow is a must for *Zebrasoma flavescens*. The different colors are also useful if you have more than one tank. By using different colors for different tanks you'll avoid the spread of disease and parasites from one tank to the other.

If you want, they look less "artificial" and you've patience and a bit of artist talent, try the following: Using the epoxy paste used for fixing corals to rocks, cover with a thick layer the two halves of the clip and texture it like a real coral (puncturing the still soft epoxy with a small diameter tube), let it dry and you'll have a "natural" looking lettuce clip. Soon coralline algae will cover it giving an even more natural look.

**To Submit Your Tip:** Send your tip via email to [fishnchips@mail.com](mailto:fishnchips@mail.com) and I'll publish it in an

upcoming issue of Fish 'N' 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.

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## Upcoming Events

By Elizabeth M. Lukan 7/28/01

Event	Start Date/ Time	End Date/ Time	Location	Event Details, Notes, and For More Info
Aquarist Profile Survey	Aug. 2000	Open Ended		<i>Info:</i> What is the profile of a marine aquarist? Visit the #Reefs website at <a href="http://www.reefs.org/">http://www.reefs.org/</a> .
Mandarin Survey	Jan 2001	Open Ended		If you have ever kept a mandarin, please fill out this survey, even if it has died. Visit the #Reefs website at <a href="http://www.reefs.org/">http://www.reefs.org/</a> .
MACNA XIII: "The Living Seas"	8/17/01 <i>New Dates</i>	8/19/01 <i>New Dates</i>	Baltimore, Maryland, USA	<i>Info:</i> For more information, visit <a href="http://www.cmas-md.org/">http://www.cmas-md.org/</a>
Australian Society for Fish Biology Inc. 2001 Workshop/Conference	9/22/01	9/27/01	The Lord Forrest Hotel, Bunbury, Western Australia	<i>Info:</i> For more information, visit <a href="http://www.fisheries-esd.com/asfb2001/">http://www.fisheries-esd.com/asfb2001/</a>

"Seahorses At Sea" Seahorse Conference and Cruise	11/26/01	12/1/01	Cruise leaves Tampa, Florida, USA	<b>Info:</b> For more information, visit <a href="http://seahorsesatsea.homestead.com/Seahorsesatsea.html">http://seahorsesatsea. homestead.com/ Seahorsesatsea.html</a>
2nd International Conference on Marine Ornamentals	11/26/01	12/1/01	Walt Disney World Resort, Lake Buena Vista, Florida, USA	<b>Info:</b> For more information, visit <a href="http://www.ifas.ufl.edu/~conferweb/mo">http://www.ifas.ufl. edu/~conferweb/mo</a> (url dead 10/05/05)
International Coral Reefs Conference of Paris	March 2002		Paris, France	<b>Info:</b> <a href="http://www.circop.com/">http://www. circop.com/</a> .

**To Submit Your Event:** Send your event and all the specifics (date, time, location, pricing, contact info, etc.) via email to [fishnchips@mail.com](mailto:fishnchips@mail.com) and I'll publish it in all issues of Fish 'N' Chips prior to the event.

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## Prove It!, a Bibliography

By Elizabeth M. Lukan ??/01

**Article:** Caught In The Net, Marine Related News Section

- Environment News Service, <http://ens-news.com/>

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## Newsletter Disclaimer

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*(updated 8/24/04).*

To unsubscribe, send an email to FishNChips-unsubscribe@yahoogroups.com visit <http://www.marinefiends.com/> *(updated 8/24/04).*

Any and all comments, suggestions, etc., should be directed to [fishnchips@mail.com](mailto:fishnchips@mail.com).

The Fish 'N' Chips Website can be found at <http://www.marinefiends.com/> *(updated 8/24/04).*

To view the current issue of Fish 'N' Chips, visit <http://www.marinefiends.com/current.html> *(updated 8/24/04).*

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