

The Census of Marine Zooplankton website was begun in 2005 and has grown to include 100's of pages covering a broad range of information on the project and resources relating to zooplankton that you may find useful. I'll show you some of the highlights , and I hope that you'll take a few moments later on your own to explore the site more thoroughly.

- Who we are
- How to get in touch
- Galleries
- How to...
- Research
- Resources: keys, links, papers



[www.cmarz.org](http://www.cmarz.org)

- [cmarz.org](http://cmarz.org)
- [cmarz.net](http://cmarz.net)
- [www.cmarz.net](http://www.cmarz.net)
- [cmarz.who.edu](http://cmarz.who.edu)

Several variations on the url work.



Home page

Highlights section is updated periodically with links to news or information for your attention.

Background on the project, goals, organization, quick links to some slide shows.



Contact information for the steering group members

CMarZ Network Members

**Census of Marine Zooplankton**

home gallery species data research resources genetics search

updates

news

**CMarZ Network**

The CMarZ Network is an association of zooplankton taxonomists, ecologists, oceanographers, and others who are committed to the goal of completing a global biodiversity of holozooplankton by 2010. Researchers, students, technical staff, and others are welcome to join!

**join!**

**steering group**

**contact us**

**New!** [View a world map of the CMarZ members locations](#)

Note: Asterisk (\*) indicates student member of Network

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

**Jawed Abbasi**, Research Fellow  
Center of Excellence in Marine Biology, University of Karachi  
Pakistan  
Email: [abbasi.mj-at-gmail.com](mailto:abbasi.mj-at-gmail.com)  
Area of expertise: ecology and taxonomy of zooplankton, NE Arabian Sea, coast of Karachi, Pakistan  
Can provide samples for analysis to CMarZ Network members.

Twainofanda **Akawa**, Laboratory Assistant  
University of Namibia  
340 Namdume Ndembulaya RD, Honeerapark  
Windhoek, Namibia

Anyone interested in zooplankton may join the CMarZ Network.

Members are listed here with their contact information and areas of expertise. And if they have samples available to other Network members.

There are currently ~170 members from ~40 countries.

The link takes you to a world map of the distribution of the Members.



File Edit View History Bookmarks Tools Help

http://www.cmarz.org/maps/Network\_members\_map.html

Most Visited Getting Started Latest Headlines Mail: Welcome to W... Google Maps MDBG - HSK 1 words

CMarZ Network Members Map



**Census of Marine Zooplankton** CENSUS OF MARINE LIFE

home gallery species data research resources genetics search

### CMarZ Network Members Map



Map Satellite Hybrid

**Institute of Oceanology, Chinese Academy of Sciences**

Participant(s)	Chaolun Li, Song Sun
Institution	Institute of Oceanology
Country	China
Location (long, lat)	120.388184, 36.056797

Country

- Algeria
- Argentina
- Australia
- Brazil
- Bulgaria
- Chile
- China
  - Institute of Oceanology, Chinese Academy of Sciences
  - Yellow Sea Fisheries Institute
- Estonia
- Faroe Islands
- France
- Germany
- Greece
- India
- Iran
- Italy
- Japan
- Jordan
- Malta
- Mexico
- Namibia
- New Zealand
- Norway
- Oman
- Pakistan

map courtesy 'SeaM Mapping & Visualization Team' [http://com/maps.org], © Fujioka  
 This map works best with - Firefox 3.5, MS Internet Explorer 9, Safari 3.1.2 (PC), Safari 4 (Mac) - or higher. Javascript must be enabled.



The screenshot shows a web browser displaying the CMarZ Networks website. The page features a navigation menu with links for home, gallery, species, data, research, resources, genetics, and search. Below the navigation, there is a section titled "Join the CMarZ Networks" with a "join" button. The text describes the CMarZ Network as a global biodiversity of zooplankton by taxonomists, ecologists, oceanographers, and others. It lists benefits for members, such as access to zooplankton samples and participation in cruises. There are also two small images of zooplankton, one labeled "Photo: M. Alwan" and another labeled "Photo: J. Rabin".

This links to an on-line form for joining the networks:

there are 2 additional groups, the taxonomic experts and species page contributors.

You can join either of these if you fit the description of those groups.

Taxonomic experts may be asked to identify specimens in their area of expertise for other Network members.

Species page contributors help create the species pages, which I'll show you soon.



The most popular pages on the website are certainly the photo galleries. Most of the photographs were taken by Russ Hopcroft and Cheryl Clarke-Hopcroft and Larry Madin. These have been the focus of many hundreds of popular articles in print and on the web.

New species gallery – images and links to references of new species

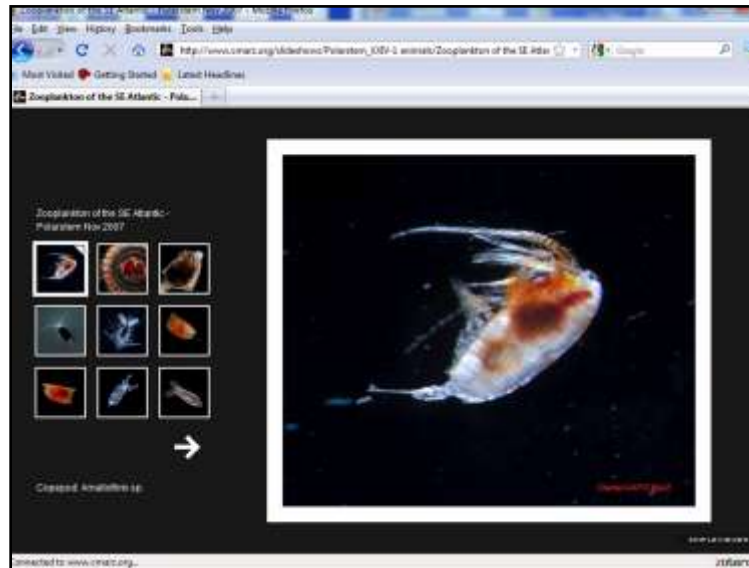
3 sets of live animal imagery from cruises: Atlantic (Sargasso Sea and eastern Atlantic) and off NW Australia

1 set of Life at Sea (Sargasso)

Press room is a subset of the 3 cruise galleries (, organized mostly by taxon)



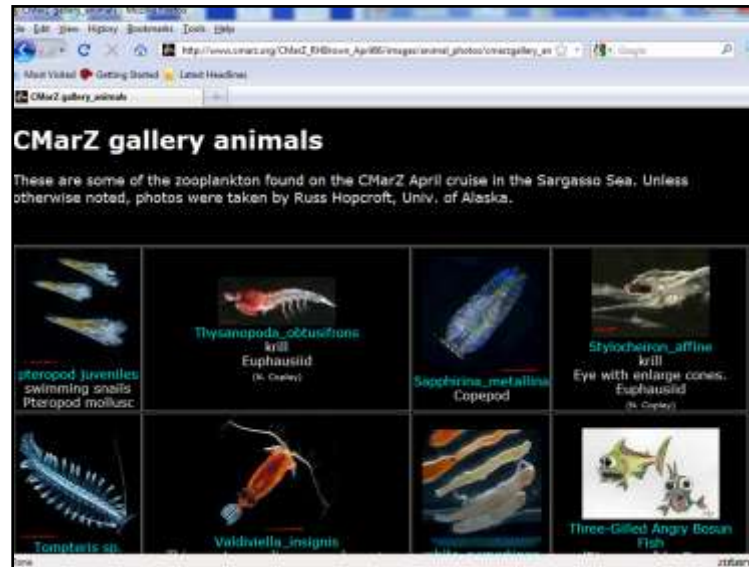
Here's the New Species Gallery. It's organized taxonomically and may have links to pdf's of the original paper.



This gallery from the Polarstern cruise in 2007 – the caption for the large images appears below the thumbnails.



This gallery from the NW Australian Galathea cruise is like the Polarstern one, with captions below the thumbnails.



The Sargasso Sea gallery, has a different layout, has many great photos.



Press Room:

Organized for media outlets, with some popular groupings such as deep-sea and new species and then by type of animal (rather than by cruise). They all have some caption and credit information.



Click on the species tab to go to the species clearinghouse.

The first grouping contains sites with many species such as WoRMs, EOL.

Next are regional pages – Arctic and SE Australia

Third, are sites devoted to particular taxonomic groups

...

Below that are links to other pertinent areas within the CMarZ pages –

tax. tools, references, links to other zoop sites.

and a link to the form to join the Network or become a contributor to species pages.





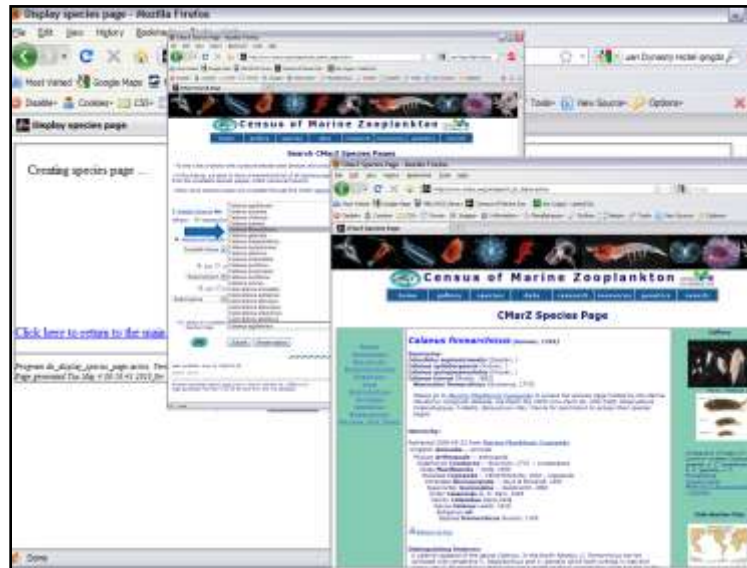
There is more than one way to get to some of the pages, such as the new species gallery. I've built redundancy into the menus for ease of use.

The search species tab allows you to locate species pages within the CMarZ database.

There are several ways to search –

Enter all or part of a name and the Simple search looks in the species name and synonymies.

Advanced search can be by scientific name alone or in combination with the phylum or genus names for species that exist in the db



Or you can select from a dropdown list of all species in the db.  
 All the copepod pages are also linked to the “Marine Planktonic Copepod” site by  
 Claude Razouls and Juliana Kouwenberg  
 Observatoire Océanologique de Banyuls  
 Université Pierre et Marie Curie (Paris VI) - CNRS/INSU UMR 7621

Cfin is the most complete page, with images, lots of description, size, distribution, genetics (links to GenBank).



The data tab links to the data served by CMarZ. Dicky will be talking about that next.

The CMarZ-Asia database link, goes to the ORI site.

The maps server offers another way to visualize the data. Dicky will also be talking about this.



This is a google map of locations for many of the CMarZ collections. They're color-coded by scientist.

30,000 points total;

Includes 3 large datasets:

- historical data from the Indian Ocean Expedition
- Dimitry Boltovskoy's radiolarian collections that cover broad regions over the globe.
- a 3-year subset of the large Continuous Plankton Recorder collection.

Zoomable, can turn on/off collections in order to see them more clearly.

The image shows a screenshot of the Census of Marine Zooplankton (CMarZ) website. At the top, there is a banner with various marine organisms. Below it, the CMarZ logo is displayed, followed by a navigation menu with tabs for 'home', 'gallery', 'species', 'data', 'research', 'resources', 'genetics', and 'search'. The main content area is divided into several sections. On the left, there are links for 'Publications', 'Species', 'Data', 'Research', 'Resources', 'Genetics', and 'Search'. In the center, there is a section titled 'CMarZ Publications' with a sub-section 'Popular Articles' that lists several recent articles. On the right, there is a list of scientific references with authors and titles. The website is designed with a clean, professional layout and uses a color scheme of blues and greens.

Activities include meetings, presentation, workshops, outreach work.

There are links to powerpoint presentations and reports that you may find helpful.

Publications include popular articles as well as research papers, and meeting presentations. Mainly a listing of references.

Index of ftp://www.cmarz.org/pub/cmarz/pdf/cmarz\_refs/

Up to higher level directory

Name	Size	Last Modified
Ates_Lindsey_Sakiguchi_ophan_FeritBentler_2007.pdf	224 KB	05/12/2008 12:00:00 PM
Baltovskis_etal_Scientifica_2005.pdf	422 KB	05/12/2008 12:00:00 PM
Baillien-Science_Myriamencik_Zistava2008.pdf	404 KB	05/12/2008 12:00:00 PM
Baillien-Science_Santanauskas2007.pdf	314 KB	05/12/2008 12:00:00 PM
Beronec_Habibovic_Metabolite_2007.pdf	786 KB	05/12/2008 12:00:00 PM
Bucklin_etal_DNA_barcode-siphonaidis_Pflanzl2007.pdf	388 KB	05/12/2008 12:00:00 PM
Bucklin_Alex_2004.pdf	366 KB	05/12/2008 12:00:00 PM
Bucklin_Vasil_Kovalev_2008.pdf	410 KB	05/12/2008 12:00:00 PM
Chikri_Alex_Svanidze_Avanesjan_Aug2006.pdf	489 KB	05/12/2008 12:00:00 PM
Combs_etal_Clausen_Agosta_IPR_2007.pdf	368 KB	05/12/2008 12:00:00 PM
Combs_etal_Macy_2007.pdf	489 KB	05/12/2008 12:00:00 PM
Combs_etal_Mueller_2007.pdf	368 KB	05/12/2008 12:00:00 PM
Crosser-Vashechka_Akhatjan_Sabekhaevov_may_2008.pdf	368 KB	05/12/2008 12:00:00 PM
Dellet_etal_Avants_2006.pdf	388 KB	05/12/2008 12:00:00 PM
Franko_etal_Meremovic_MDFI_2006.pdf	124 KB	05/12/2008 12:00:00 PM
Fuentes_Pages_Jubaryella_IPR_2006.pdf	124 KB	05/12/2008 12:00:00 PM
Gomez_Castrogago_LimosaOzuna_2006.pdf	368 KB	05/12/2008 12:00:00 PM
Grygor_Ohridka_may_povolnikova_ZA_2008.pdf	310 KB	05/12/2008 12:00:00 PM
Haskin_Chenyuan_Feeding_of_Copepods_2007.pdf	368 KB	05/12/2008 12:00:00 PM
Hou_etal_Cofenas_prices_feeding_egg_production_IPR_2006	368 KB	05/12/2008 12:00:00 PM
Boh-Nilsen_2007.pdf	368 KB	05/12/2008 12:00:00 PM
Santanauskas-Olafson_Mormonillo_2006.pdf	368 KB	05/12/2008 12:00:00 PM
Santanauskas-Mormonillo-Cabrera_2007.pdf	368 KB	05/12/2008 12:00:00 PM

Over 800 other copepod papers



Here are Protocols for sample collection, shipping, genetics procedures.

Also policy and guidelines.



The Resources tab contains  
Links to other zooplankton sites and references.



The screenshot shows a web browser window displaying the 'Census of Marine Zooplankton' website. The page features a navigation menu with links for 'home', 'gallery', 'species', 'data', 'research', 'resources', 'newsletter', and 'search'. A 'Taxonomic Tool' section is highlighted, containing a vertical list of links: 'zoopl links', 'taxonomic tools', 'tax. references', 'CMAZ keys', and 'CMAZ keys'. Below this, a section titled 'Keys, all taxa:' lists several online keys with brief descriptions:

- Marine Species Identification Portal:** Information on 9900 species in the world's ocean world authorities for siphonophores and related ctenophores, ostracods near Great Britain. Species pages are linked via images of the organisms. Developed by ESI Bioinformatics.
- Arctic Ocean Diversity:** by R. Hopcroft, University of Alaska Fairbanks. Image based guide to zooplankton groups of the Arctic waters with lots of great photographs of live specimens.
- Crustacees.net:** Crustacees.net is the Australian Museum. Includes amphipoda, isopoda, anomura, copepod (copepods) Families, by J Bradford-Grieve), sepioda, mactroca, gressinoe (Yamada), subfamiles, tribes by K. Maland), remipoda, amphirognathosa, stomatopoda, canadocara. A few families have interactive keys which require Java to be installed on your computer (free download).
- ZIMNES:** by SANFOS, Plymouth, UK. The goal of these pages is to provide a tool which can help both experienced zooplankton taxonomist and students just starting to learn identification of zooplankton. Currently, these pages are under construction but will eventually include a visual key. The taxonomic tree gives information about phyla, some images and references.
- An Image-based Key To The Zooplankton Of The North-east US&A:** by Jim Haney and students at University of New Hampshire, USA. Covers common rotifers, cladocera, copepoda, and some other arthropoda found in New Hampshire fresh and coastal waters.
- Guide to the Marine Zooplankton of south eastern Australia:** Both an image based key and a diagnostic tool to distinguish local groups. Eventually each links through to separate species/taxon pages. Diagnostic key requires free download of Luod software and java-enabled web browser.

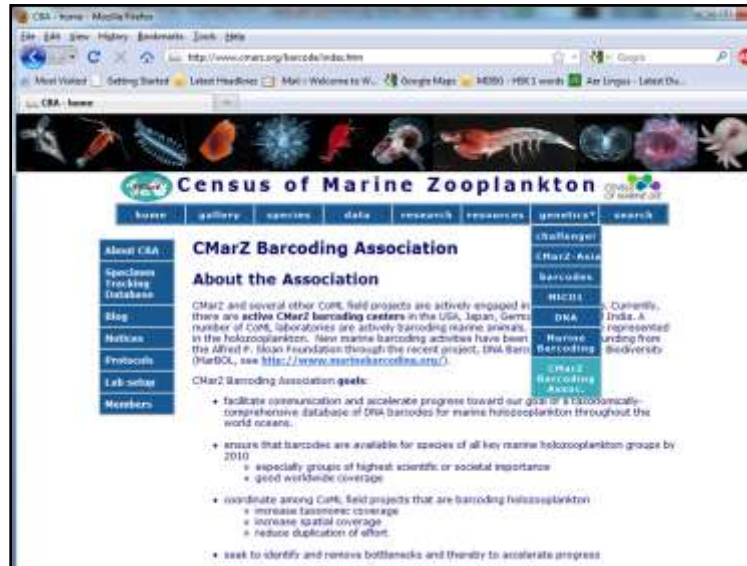
Taxonomic tools provides a clearinghouse of on-line keys.



This list of taxonomic references is a selection, not complete. (the 800 copepod references aren't listed here, but there's a link to it.)



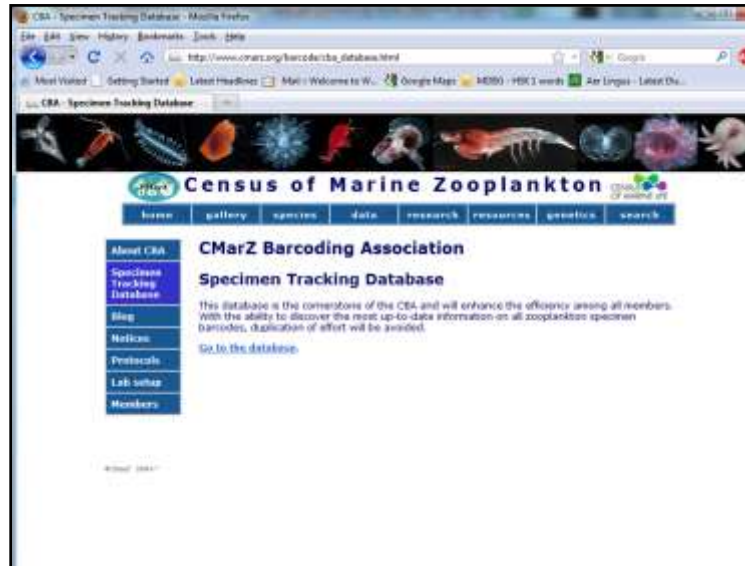
The Under the genetics tab, we link again to CMarZ-Asia, which focuses on genetics of zooplankton  
Other sub-tabs include barcodes – links to useful sites  
MtCO1 – protocol  
DNA – policy on how to submit data  
Marine Barcoding – external link to the Marine Barcode of Life site (MarBOL)  
CMarZ Barcoding Association....



Here, you'll find another set of tabs on the left side.

They include a blog, notices, protocols, instructions for lab setup, current members of the CBA

And perhaps the most useful part is the Specimen Tracking Database.



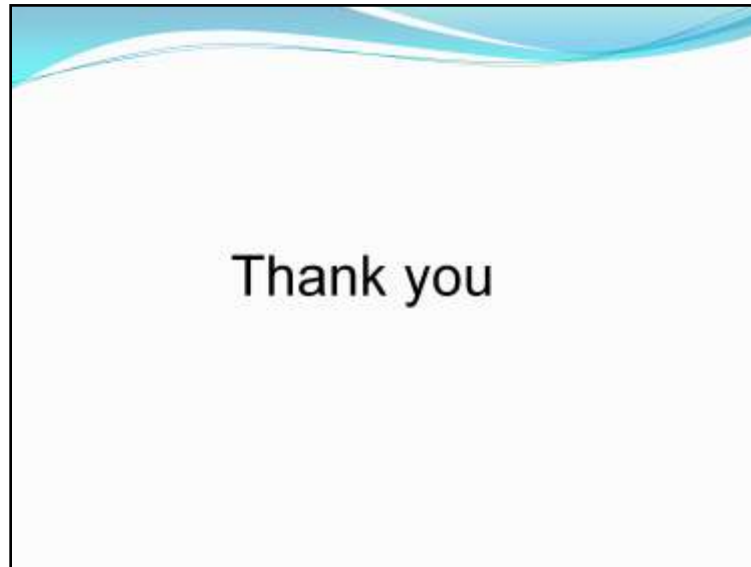
This is the most important part of the CBA. Its purpose is to allow researchers to discover what species have already been barcoded. In order to reduce duplication of effort and improve efficiency.





I hope this has given you a better idea of the information and resources available on the website.

The program is coming to an end later this year but we plan to keep the site online indefinitely although it will be updated occasionally or rarely.



thank the Steering Group - helping to keep the information up-to-date and as complete as possible.  
Bob Groman – writing scripts for the species pages and barcode database (and keeping the website up)