## THE DREW LAB AT COLUMBIA UNIVERSITY ECOLOGY, EVOLUTION AND CONSERVATION OF CORAL REEFS

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# #ICCB2013 Nautiluses, Endemic Fishes and Twitter – a wrap up

#### Thoughts on the 2013 International Congress for Conservation Biology

I am sitting in the Baltimore Amtrak station, trying to wrap my head around the diversity of events, talks and conversations that occurred during the past week at the Society for Conservation Biology meetings.

The ICCB is the biggest meeting for Conservation Biologists and I honestly love going to them. More than any other meeting I attend, I find the ConBio meetings feel like family reunions. They're a great opportunity to catch up with old friends and to make new acquaintances and contacts. The meeting also provides an opportunity to see new research and get a sense for emerging trends in conservation.



MD USA

Rather than give an overview of all the talks (complete program here), I thought I'd talk about a few that really struck me as being fascinating.

The first was by Greg Barord, a grad student at the City University of New York (who, regrettably doesn't have a personal website, c'mon people!). Barord works on nautiluses (*Nautilus pompilius*). His work, which is apparently is not yet published, compared nautilus populations across varying levels of fisheries pressure, from high in the Philippines, intermediate in Fiji and American Samoa to low in Australia. What was unique about this was his use of baited underwater video systems. Essentially by placing a HD camera and LCD lights in front of a bag of chicken and then sinking it to 600m he was able to get some amazing footage like this\*. Aside from having some amazing video footage, this talk presented some of the first range-wide conservation assessments. I'm really anxious for him to publish this work, and hopefully will be able to get him up to talk to my marine conservation class in the spring.

Staying with deep water reefs, Randy Kosaki and colleagues at NOAA and the Bishop Museum presented some amazing information on patterns of endemism in twilight (mesophotic) reefs. These are fascinating ecosystems, bounded on the top by safe diving limits and below by light availability. This range, say 100' to 300' deep, has been increadibly difficult to study and only a handful of researchers have the technical ability to 'safely' explore these deepths. Their surveys of these deep reefs showed two interesting patterns. Not surprisingly in these twilight reefs, herbivorous fishes were nearly absent at depth. Low light makes it hard to be a plant, and by extension hard to be a plant eater. However these reefs were stocked with planktivores, particularly butterflyfish. So. Many. Butterflyfish. These planktivores are sustained by a periodic nutrient front that moves down from the north and washes the NWHI with nutrient (and therefore zooplankton) rich waters during the winter. A major concern is how this season chlorophyll front may shift with warming waters. A slight shift north would leave many of these islands outside of the front, limiting nutrient availability and potentially spelling bad news for these amazing communities.

The other interesting pattern was the degree of endemism. In some reefs it was upwards of 80%. Hawaii is world renowned for its endemics, and within the NWHI there is a trend of increasing endemism as one moves northwest (makes sense, older and more remote islands). However, based on this work, it appears as if the deep reef fauna appears to harbor even more endemics than the shallow reasons. This, of course, may be due to sampling bias (i.e. we have explored so little of this habitat the 'endemic' species could be awaiting us to dive deep in the Caroline Islands), but even if that is the case, it's clear that these deep reefs are a unique and an amazing environment.

I also was able to give a talk on our functional endemism paper which was well attend, even though it was the last session of the last day. To those of you who rallied to attend, and especially to those of you who helped tweet people about it, THANK YOU!!!

There were so many other fantastic talks and symposia; it would have been impossible to report on them all. Thankfully there were a lot of people t Follow

(using #ICCB2013) and the twitter feed was a great way to keep track of other talks, as well as a good way to meet new people. Our paper on twitter came out (here) and as three of the four authors were at the meeting we spent a lot of time helping people set up accounts, which was very gratifying.

Ok, well my train is about to leave. Next week we start unpacking the fish from Fiji, it should be a blast and expect a very fishy blog

\*N.B The role of the Nautilus tonight will be played by a cat

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