AntWeb 5.0

## A Case Study in User Experience & Information Design

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IN
January of 2013, I met with Brian Fisher, the curator of entomology at the California Academy of Sciences, whose AntWeb project I'd worked on here and there since it first launched in 2002. With the advancements in data storage and imaging that had come to be since the site first launched (and even the past five years), the number of ant species and specimens that he and his team had imaged had increased dramatically. But the site itself didn't reflect that rich imagery; at its roots it was still primarily a listed hierarchy that only really revealed imagery at the specimen level. And he wanted to do something about that.

Rather than just trying to figure out a way to inject images into the then current design, I began thinking about how to showcase the rich depth of images, and how to overhaul the navigation, information design, and user experience so that users could toggle their view on the site, so as to be able to drill through a taxonomy visually, but have the option to swap over to a list view, at the same level in the taxonomy, at any point. I met with Brian again to discuss what I was thinking to do, suggesting my next steps be to put together some mockups. He agreed, with the caveat being that there wasn't engineering available to help develop new functionality or to tie in what I would be proposing. Fortunately, I had experience with some of the inner workings of the site, and had a 500-foot view of what could and couldn't be done.

What follows shows the process and methodologies resulting in a major redesign to AntWeb.
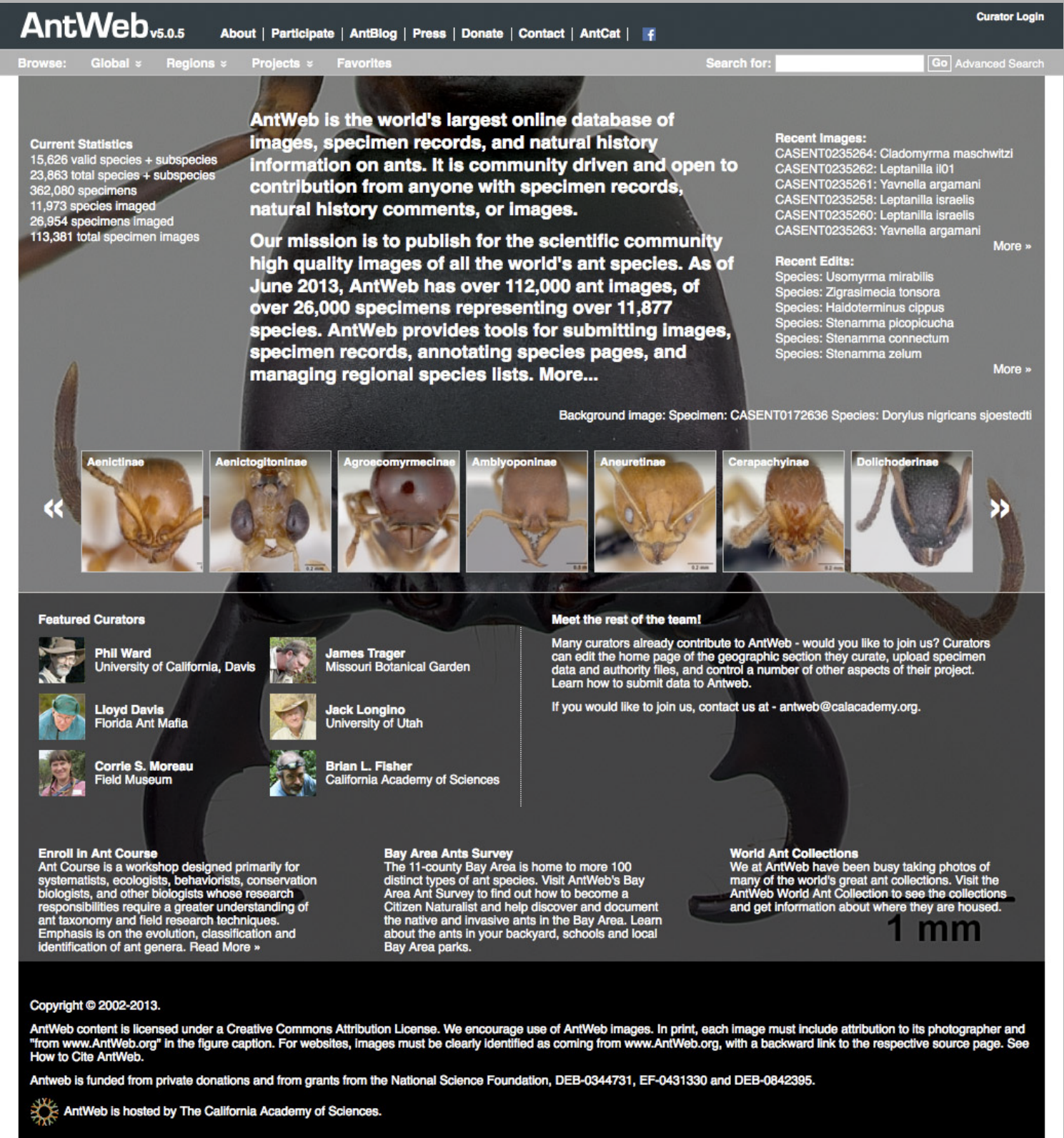
THE site had gone through one redesign since its initial incarnation, which had been primarily focused on improvements to the site navigation to support the growing number of regions (which made the original left-hand navigation unwieldy) and putting a new coat of paint on the site.

Over time, as new pieces of functionality were worked into the site without an eye for information design and consistency, navigating through the site became increasingly confusing, with words sometimes linking to one place, sometimes linking to another, with no apparent rhyme or reason.
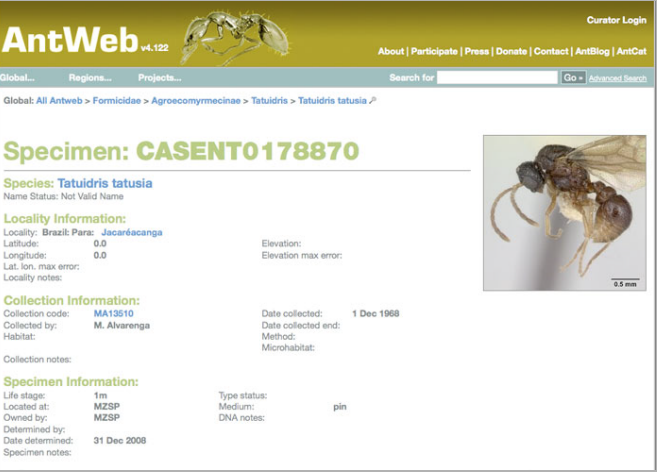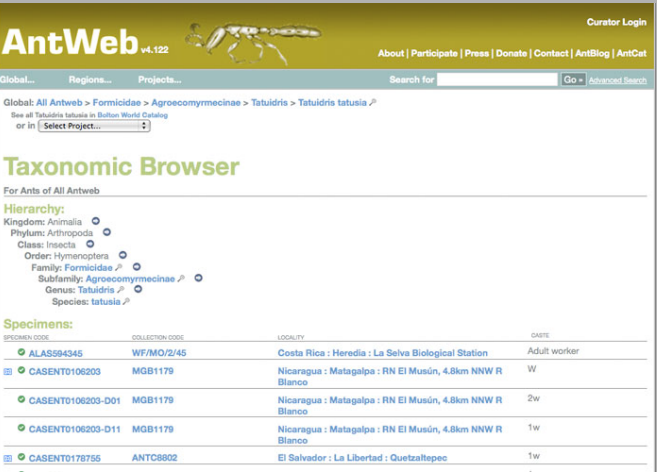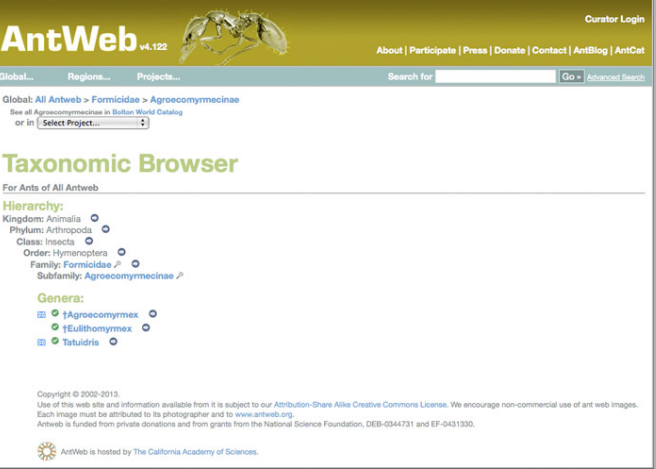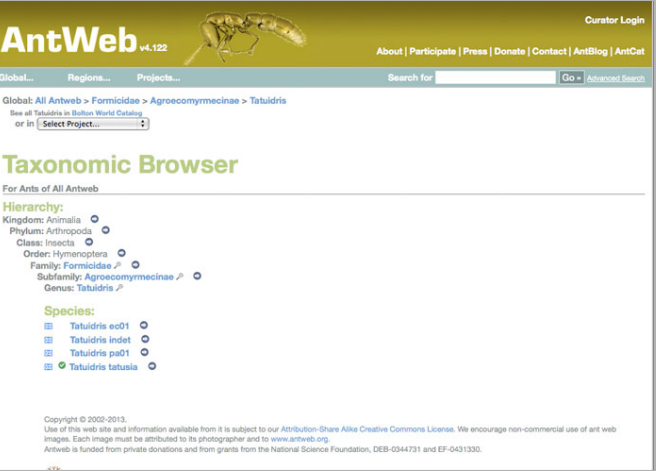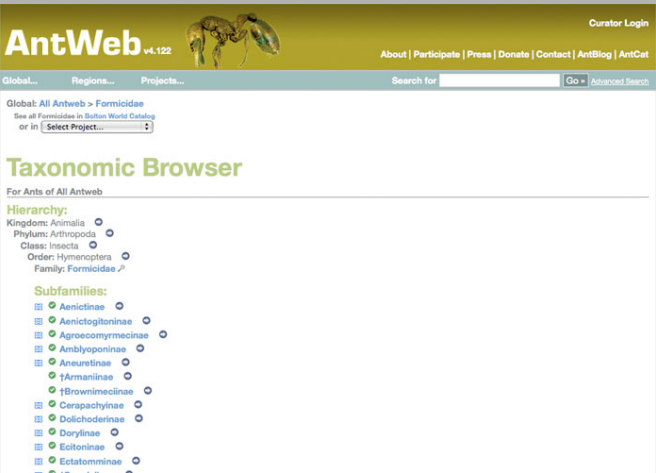
I had several design goals in mind as I began work on some initial wireframe work:

• Showcasing imagery
• Bigger images
• Clean up of information design
• Consistency in navigation
• Bubbling up more data
• Showcasing and dramatically improving tools
• Browsing by mode
• Modern design
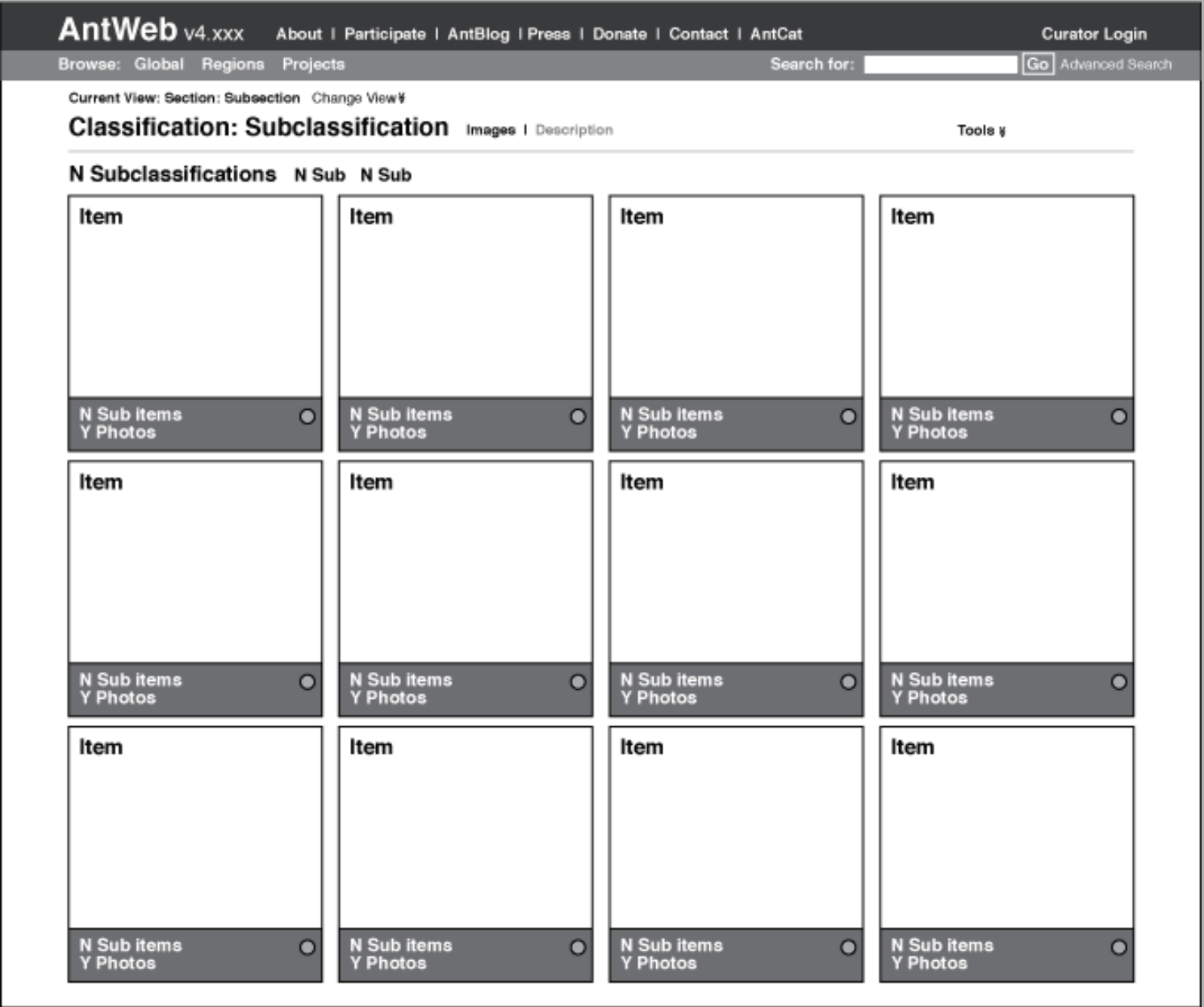
WITH the basic concept in mind, I set about looking at all the existing links, tools, functionality, and features present on all the various page types, and began deconstructing them so as to improve and normalize the information design, and apply a hierarchy of information to the basic page structure.
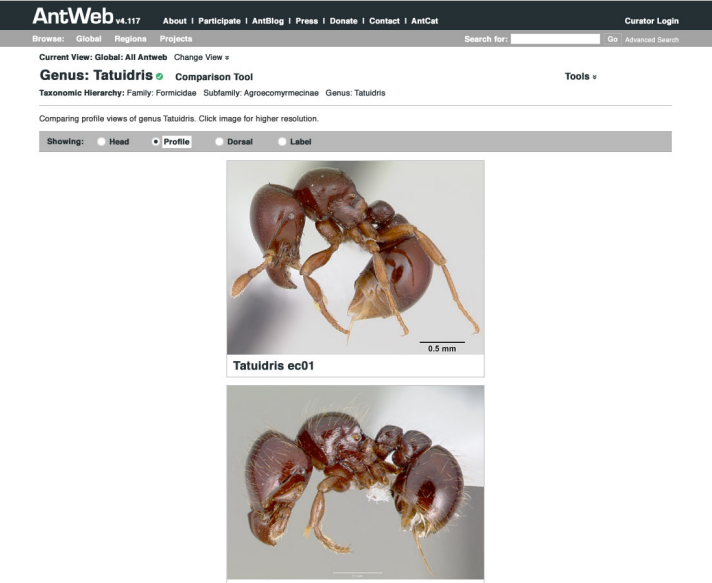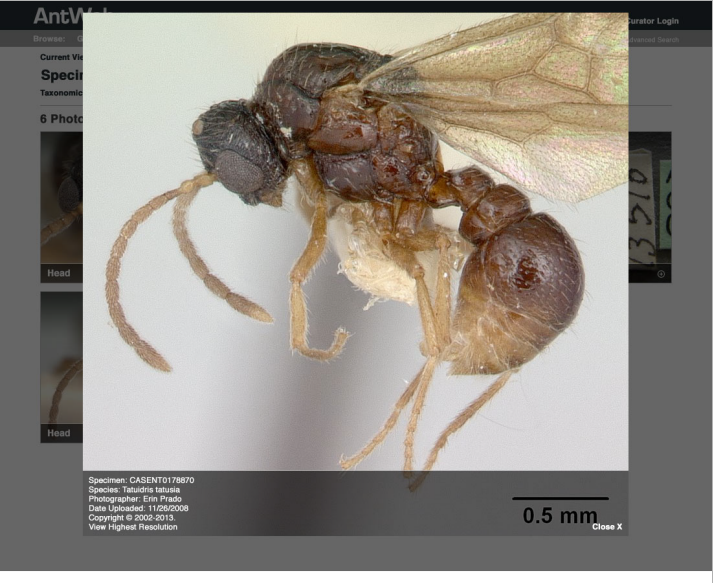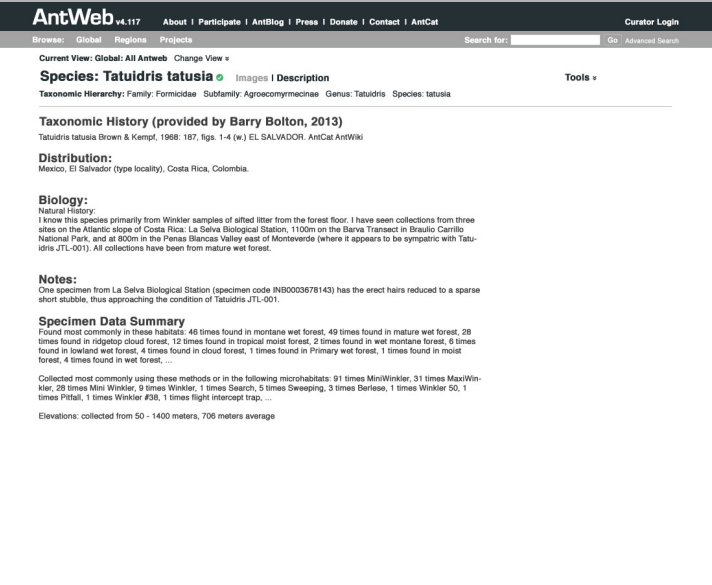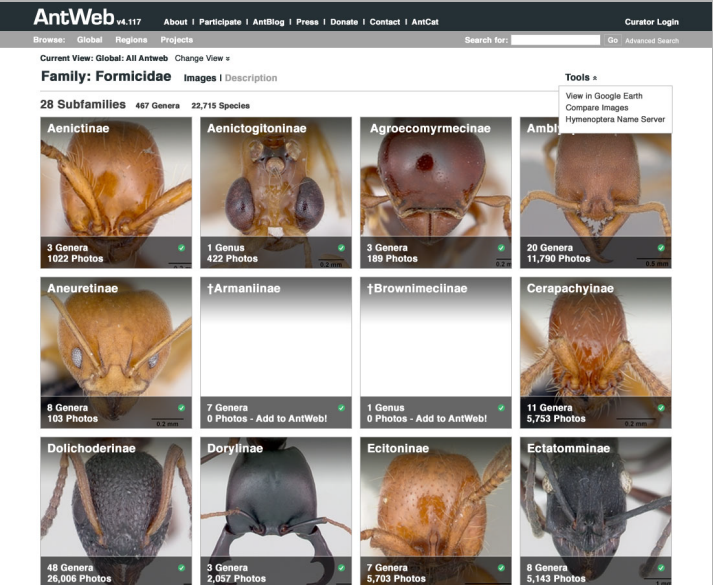
ONCE the early ideas had been fleshed out, I wanted to test them thoroughly before beginning any prototype work. Working with Brian, I solicited feedback from the entomology community, to see if my new ideas made sense for them, and would improve how they would interact with the site.

On the whole, they liked the designs, and had a few valuable pieces of feedback (wanting to be able to see all of the images, not just the head, having the ability to view the taxonomy as a list), which both bettered my design and made for some great opportunities to empower what the users could see on the site (browsing options, slide shows, ratio view of images).
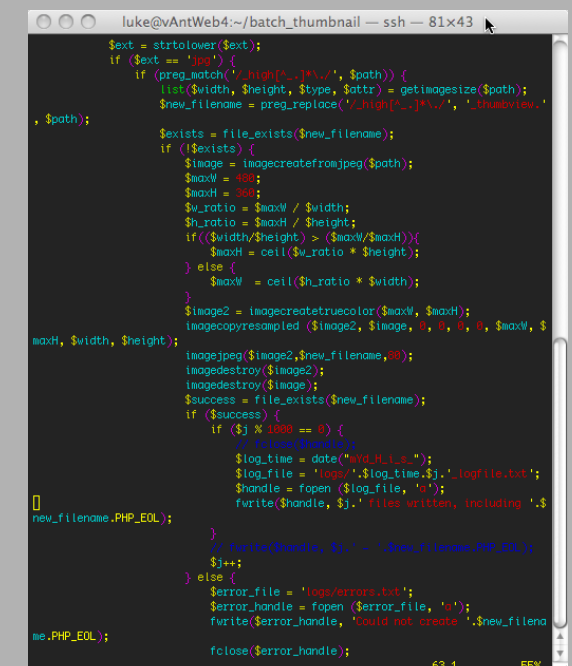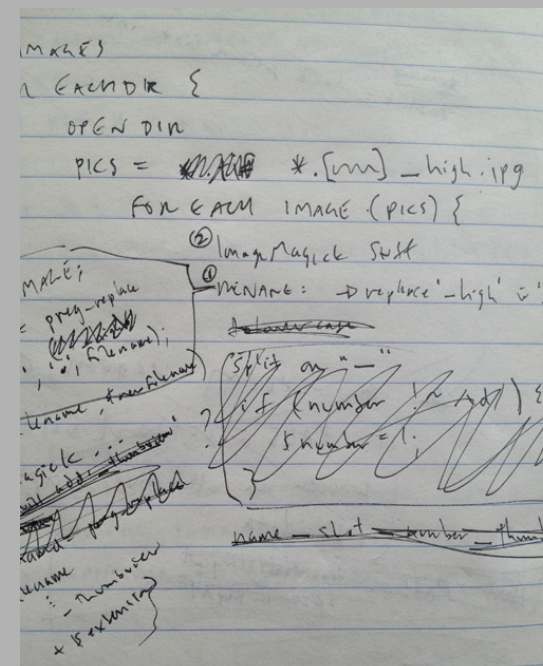
After a final round of back and forth on the user research, I began translating the new design into an interactive prototype, to better illustrate some of the interaction design patterns implied in the mockups. Further user research was done to insure that these interactions made sense, ranging from page context to tools to slideshows.
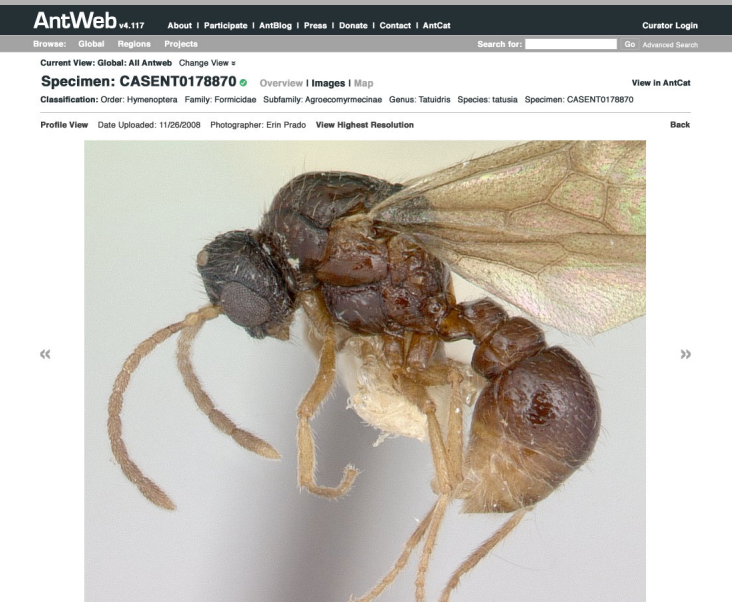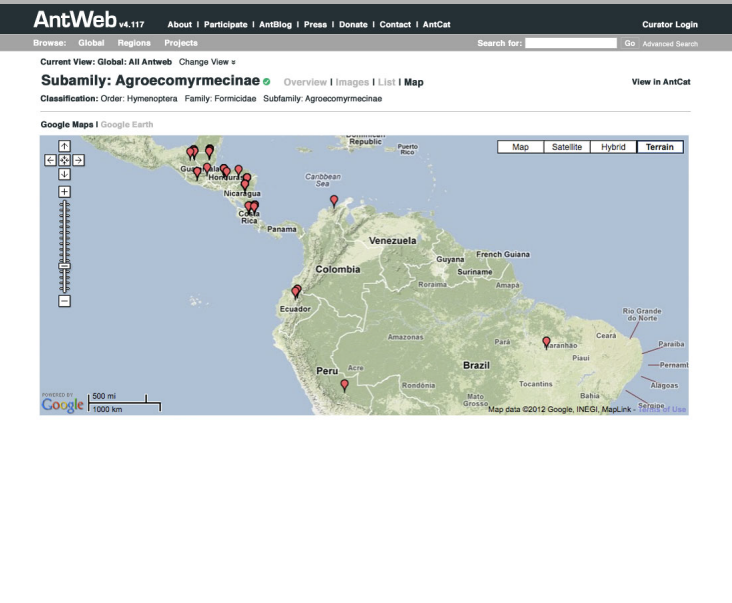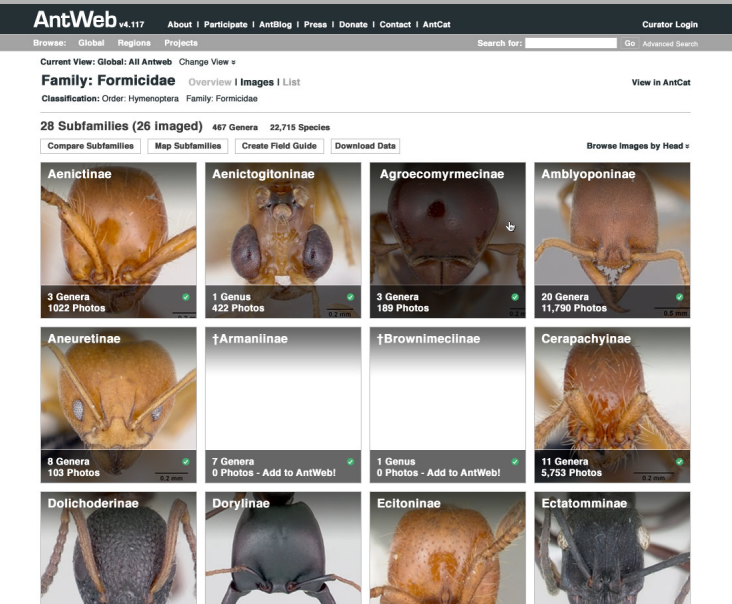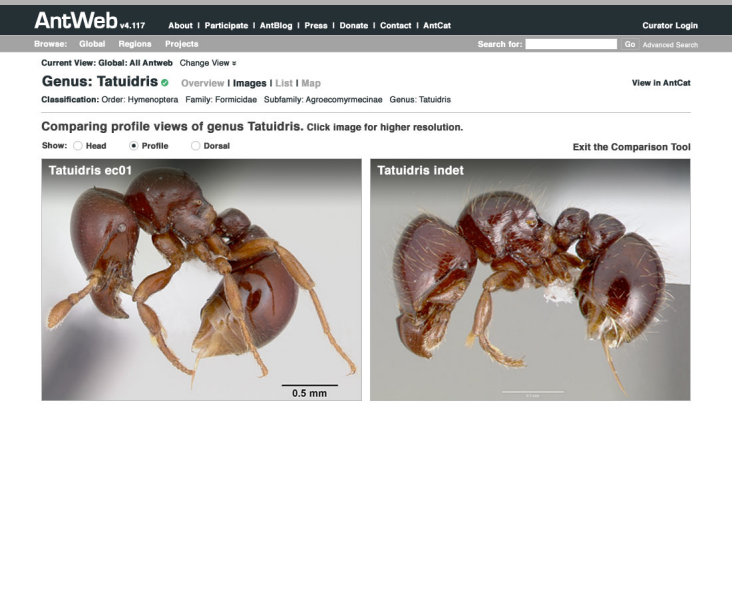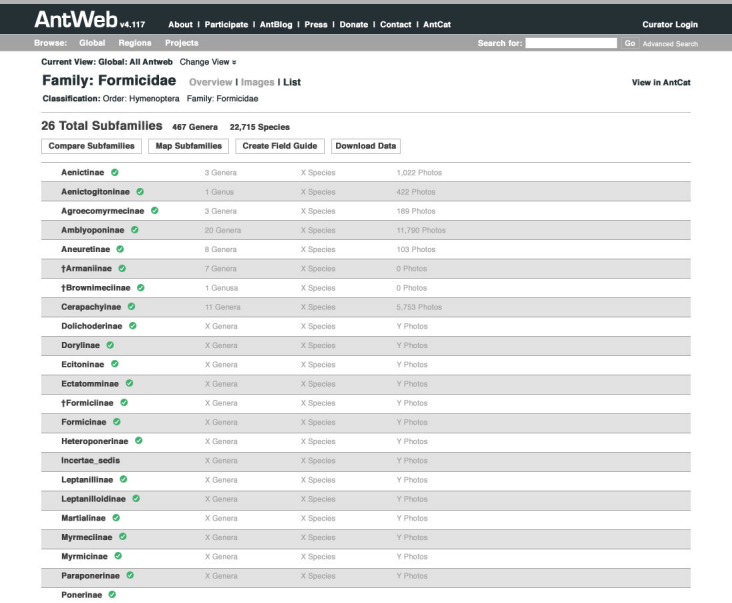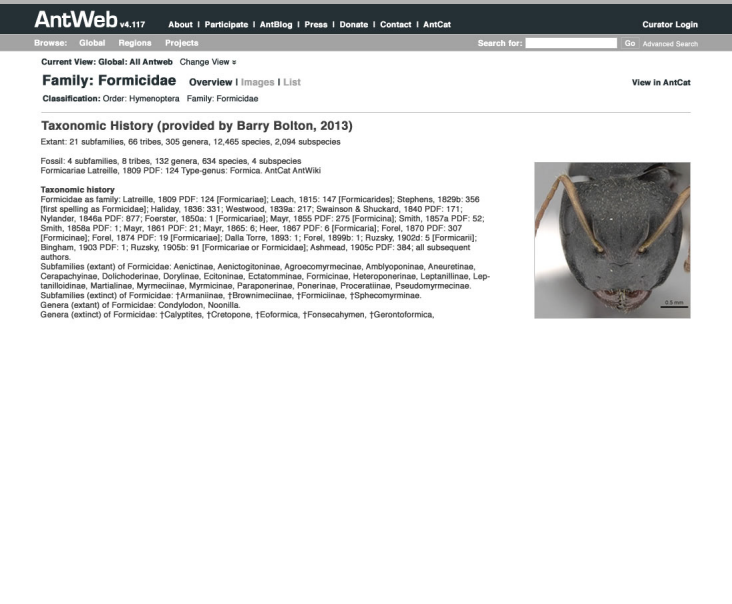
USER research and prototyping out of the way, it was time to migrate the prototype code into production. With no engineering resources to call upon, I jumped into the code to see what I could crib from, what needed massaging, and what would need to be either jury rigged or written from scratch, either in Java, or with jQuery manipulating various in-page elements. With some heavy lifting, within a few days the site started to resemble what had been presented in the mockups and the prototype, minus a lot of the new features. I set to work on translating the new features detailed in the mockups into functioning code, altering the way the underlying code worked in some instances, writing new code to support the design in others, and manipulating the way difficult legacy code displayed with jQuery.

As the site began to come together, it was clear that the existing image sizes were not going to work with the new design – they were too small dimensionally (and when stretched to fill the new size, became pixelated very quickly), and too large in terms of file size (as the original image processing code wasn't doing any compression on the images as they were uploaded). I set about writing a script that would go through all the image directories for all the specimens to batch create a new size based on the original full size image. The end result was 113,028 new images with a larger height and width, and a file size coming in at roughly half of the previous one. With that done, the new image size was tied into image uploading and processing (along with the compression), so that all future images being uploaded would create this new image size.

As the deadline for re-launch approached, I began creating a detailed list of all things that needed functional and visual QA, testing to insure cross platform compatibility based on our browser statistics, and keeping a list of the "nice to haves" – features such as improving meta description tags, using geocoding to generate region maps dynamically, having a mechanism for a more dynamic background image on the homepage, dynamic page citing, tool tips, and a first time user experience to introduce people to the new site and its new layout and functionality. With a few long nights and weekends, we were on track to launch on time, complete with all of the "nice to haves".

WE launched the new version of the site on June 25, 2013, and within days saw a significant increase in engagement with the core audience: a **50% increase** in the number of page views per visitor, a **35% increase** in length of time per visit, and a **10% decrease** in bounce rate.

The feedback from the entomology community was positive all around – being able to browse visually, easier access to the improved tools, improved user experience, a visually and informationally engaging homepage, and an easier ability to cite.

Visit the site at http://www.antweb.org/

Welcome to the new AntWeb!

We here at AntWeb have been busy working on our newest (and most ambitious) version of the site - and there are lots of great new things! Which means there are lots of changes (don't worry, they're all for the best).

And we've put together a handy little guide to show you all the new features and enhancements - why don't you have a quick look to check out all the new features and enhancements?

Show me!   No thanks

Download Specimen Data   x

To download specimen data, Right-click and save to your desktop.

· KML
· Tab-delimited data

Browse Images by: Profile ⌄

Head
Profile
Dorsal
All

Browse: Global ⌄   Regions ⌄   Projects ⌄   Favorites

Click "Global", "Regions", or "Projects" to browse AntWeb's catalogs.   x

Subfamily: Myrmicinae

Current View: Global: **All Antweb**   Change View ⌄   ✎ Cite this page

Genus: Acanthomyrmex ✓   Overview | Images | List | Map   View in AntCat

Classification: Order: Hymenoptera   Family: Formicidae   Subfamily: Myrmicinae   Genus: Acanthomyrmex

11 Species Imaged (21 total)   45 Specimens   Browse Images by: Profile ⌄

Compare Images   Map Species   Create Field Guide   Download Data

4 Images   12 Images   4 Images   15 Images

✓ **Acanthomyrmex**   ✓ **Acanthomyrmex**   ✓ **Acanthomyrmex ferox**   ✓ **Acanthomyrmex**

Citing AntWeb   x

To cite this page, please use the following:

· For print: Brian L. Fisher, (2013). AntWeb: Ants of Madagascar. Available from: http://www.antweb.org/madagascar.jsp. Accessed 5 July 2013

· For web: URL: http://www.antweb.org/madagascar.jsp

✓ **Acanthomyrmex dusun**

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Current View: Global: All Antweb   Change View ⌄   ✎ Cite this page

Specimen: CASENT0901377 ✓   Overview | Images

Classification: Order: Hymenoptera   Family: Formicidae   Subfamily: Myrmicinae   Genus: Acanthomyrmex   Species: notabilis   Specimen: CASENT0901377

5 Images