

AntWeb 5.0

A Case Study in User Experience &
Information Design

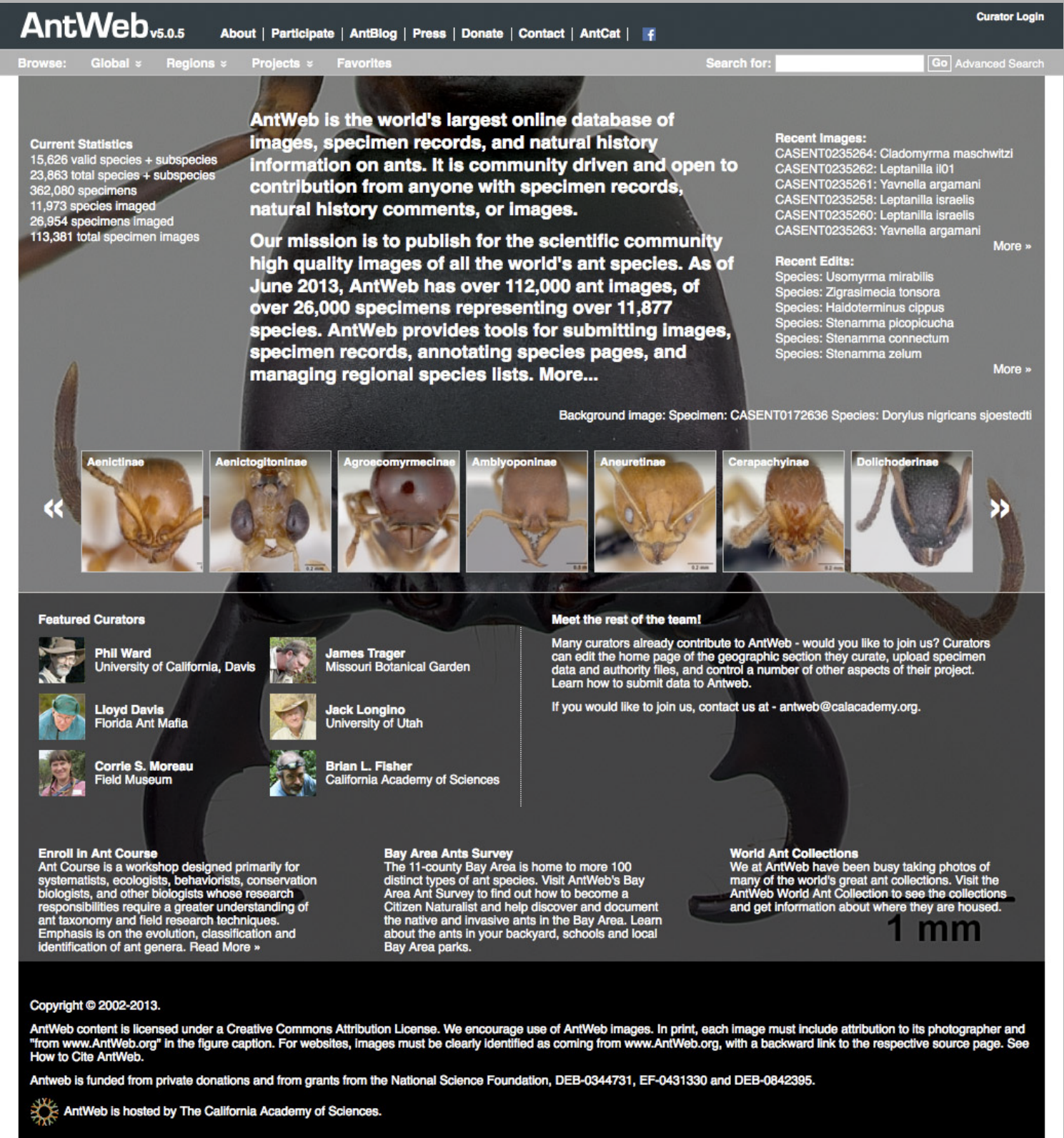
Luke G. Knowland, July 6, 2013
luke@lgkproductions.com



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.

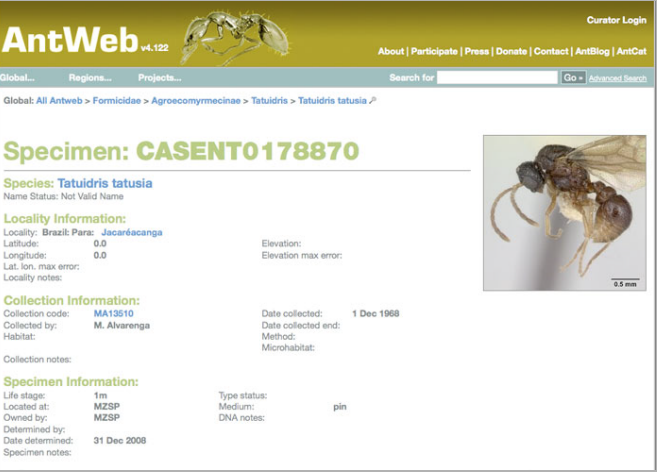
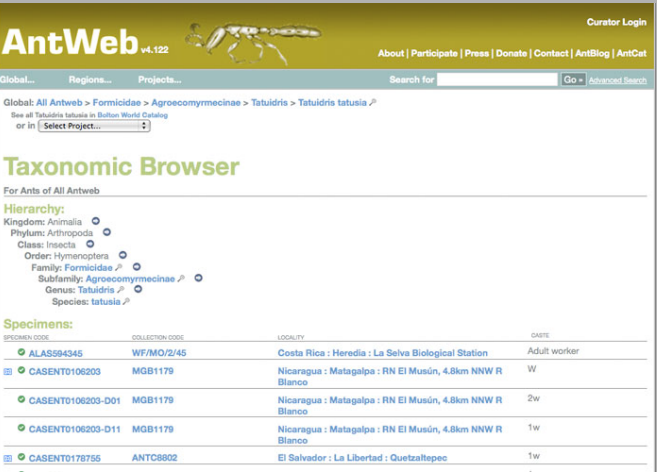
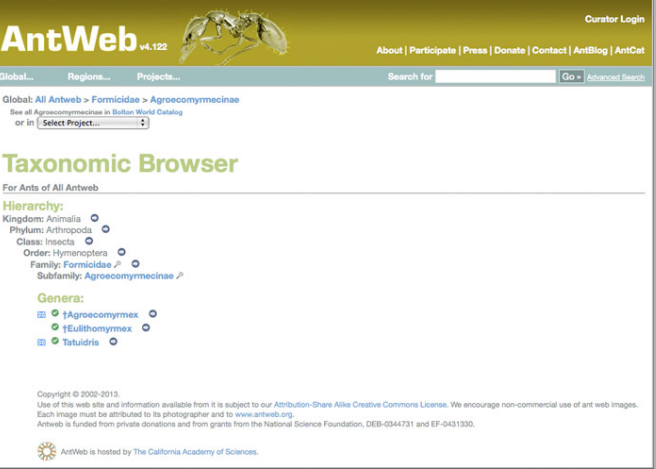
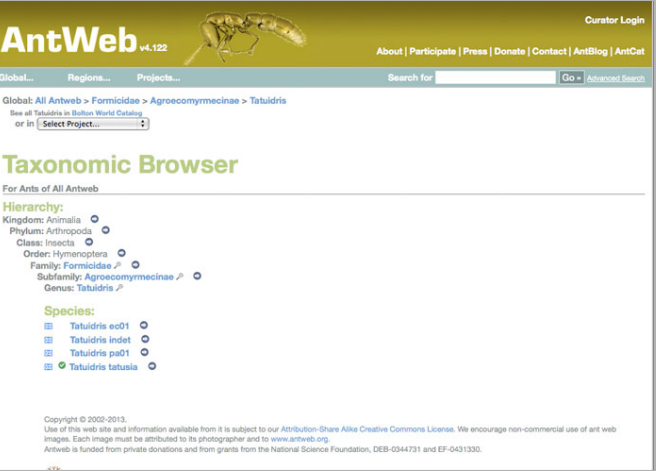
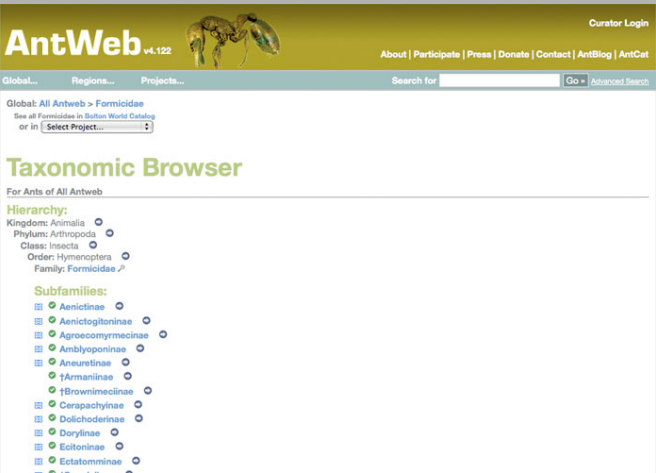
Rather than just trying to figure out a way to inject images into the then current design, I began thinking about how to showcase the rich depth of images, and how to overhaul the navigation, information design, and user experience so that users could toggle their view on the site, so as to be able to 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.

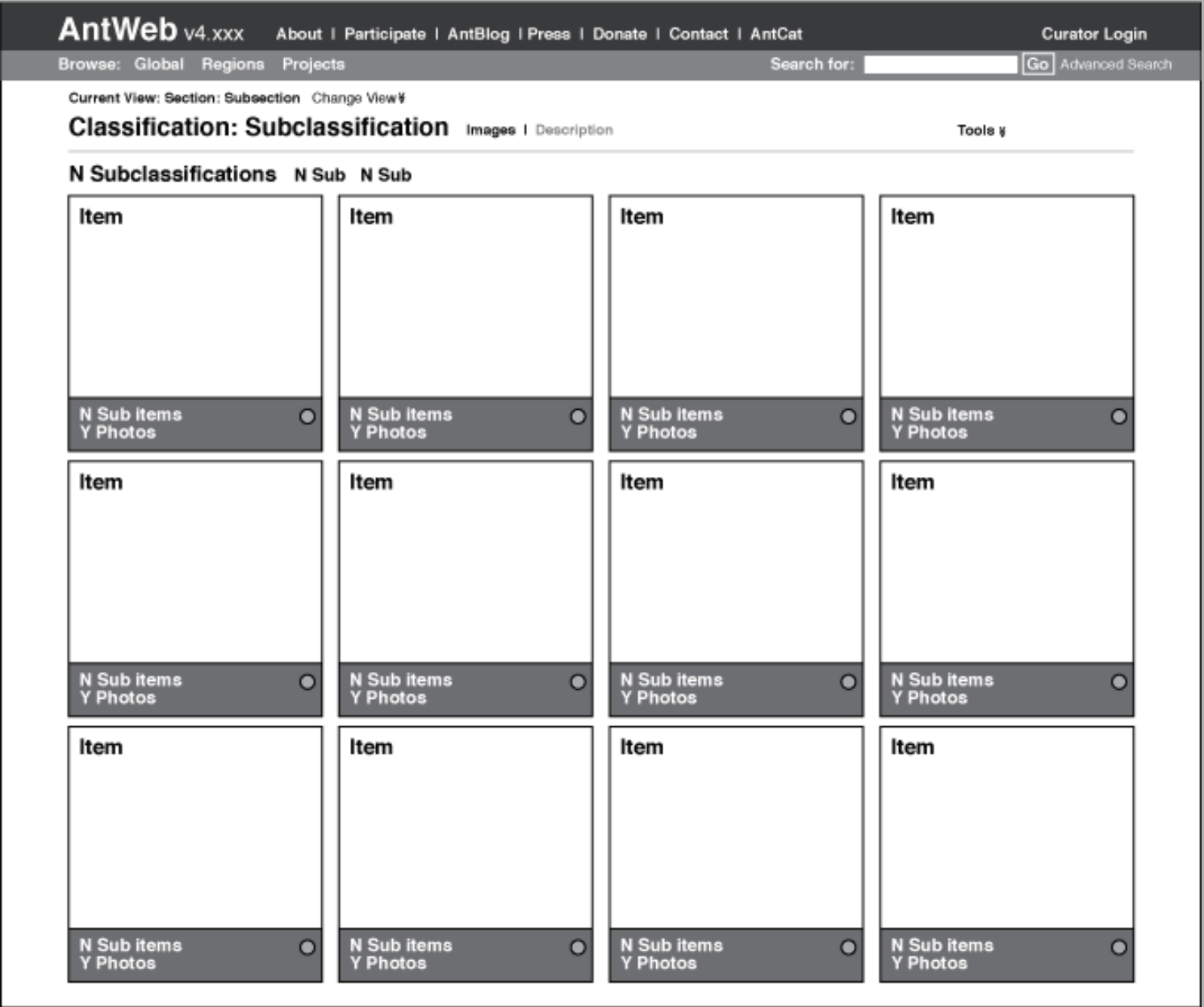
Over time, as new pieces of functionality were worked into the site without an eye for information design and consistency, navigating through the site became increasingly confusing, with words sometimes linking to one place, sometimes linking to another, with no apparent rhyme or reason.



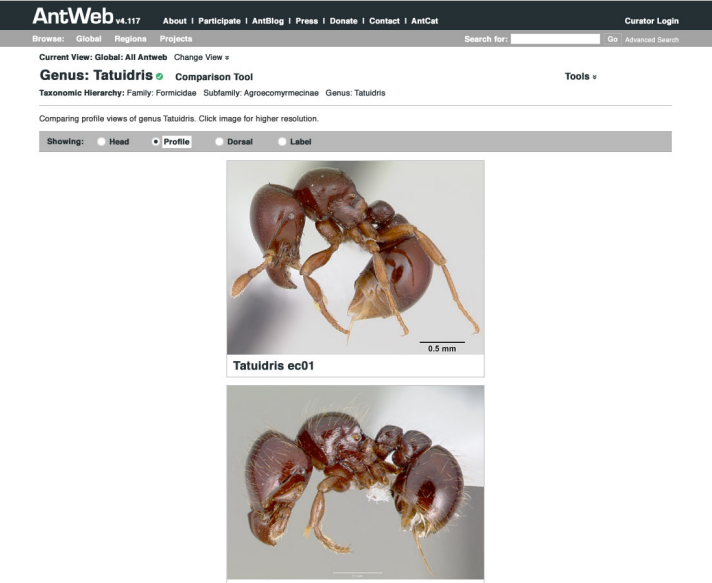
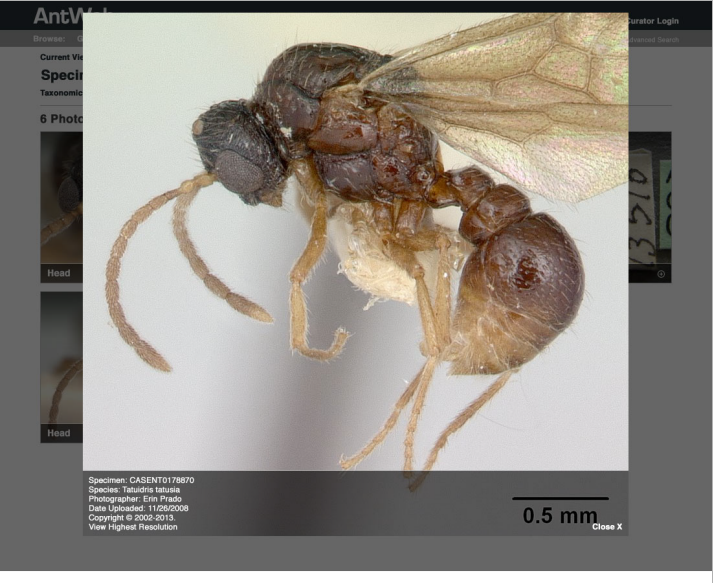
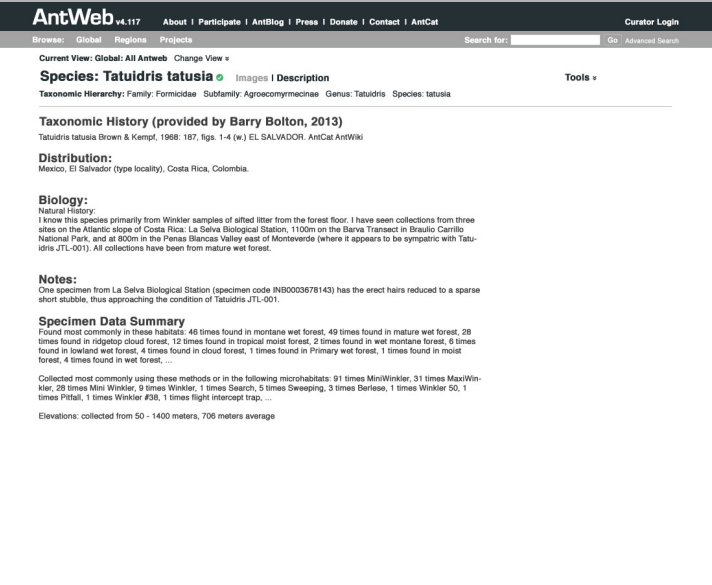
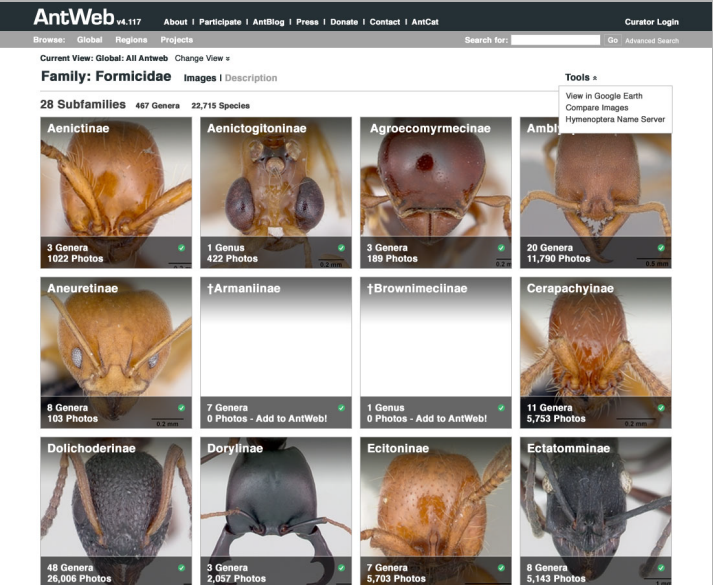
THE DESIGN GOALS

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



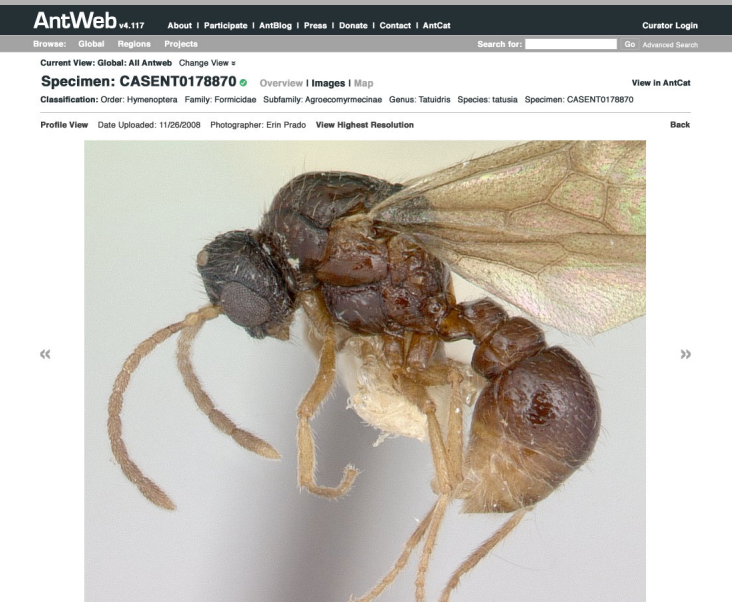
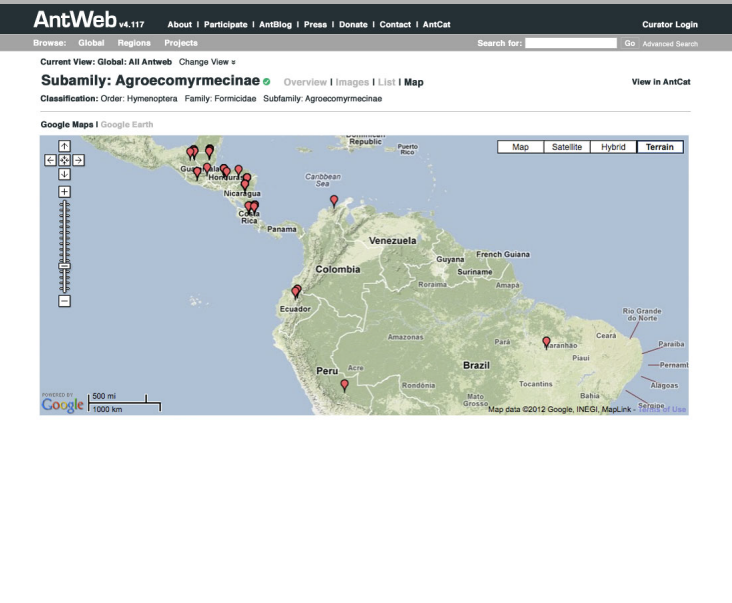
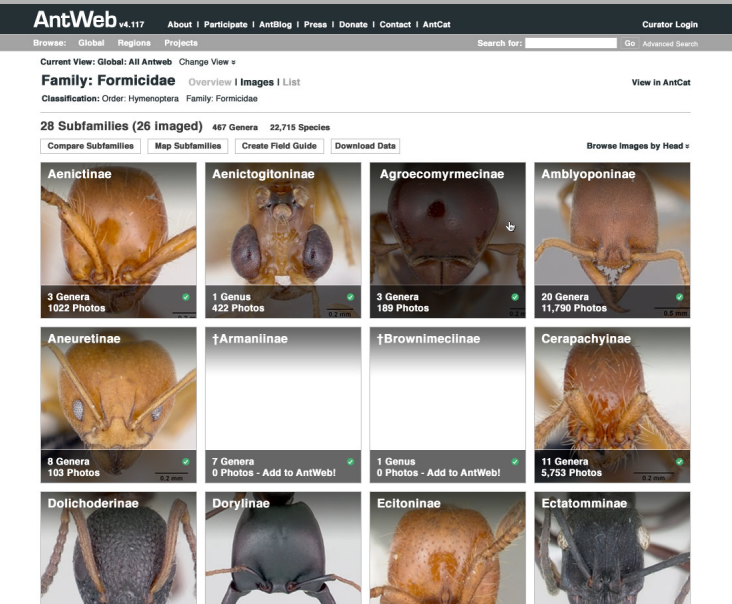
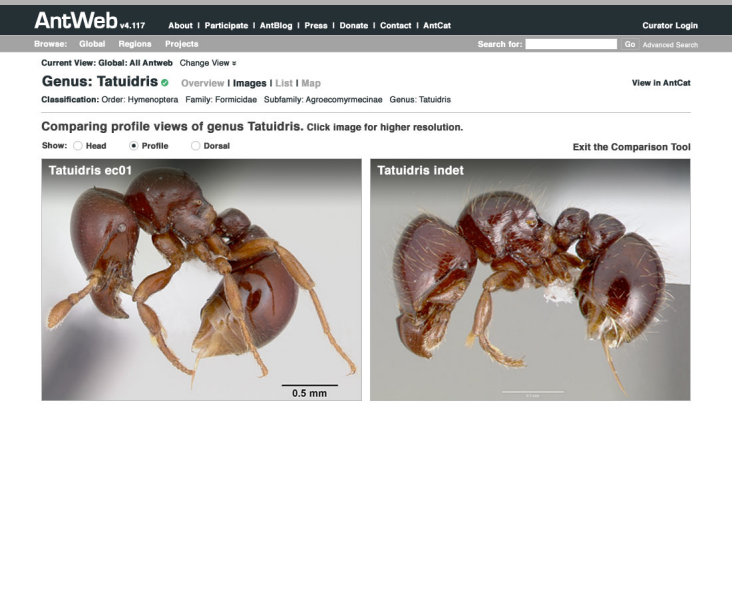
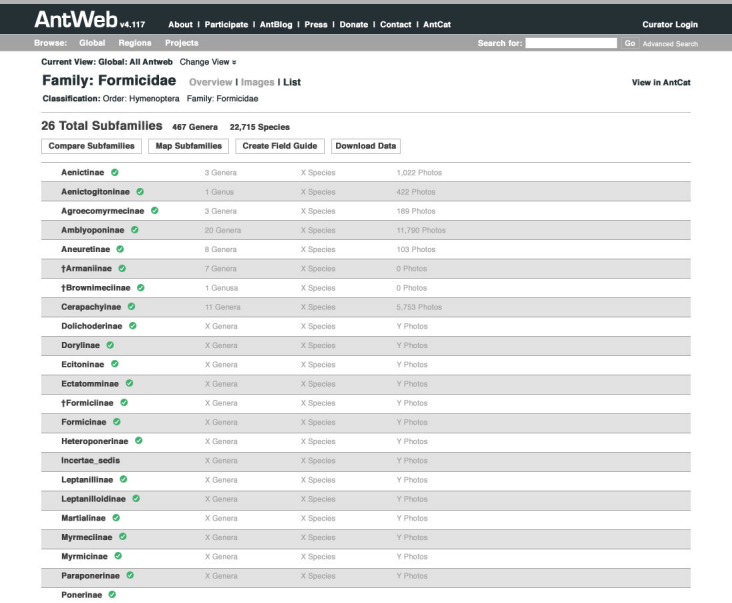
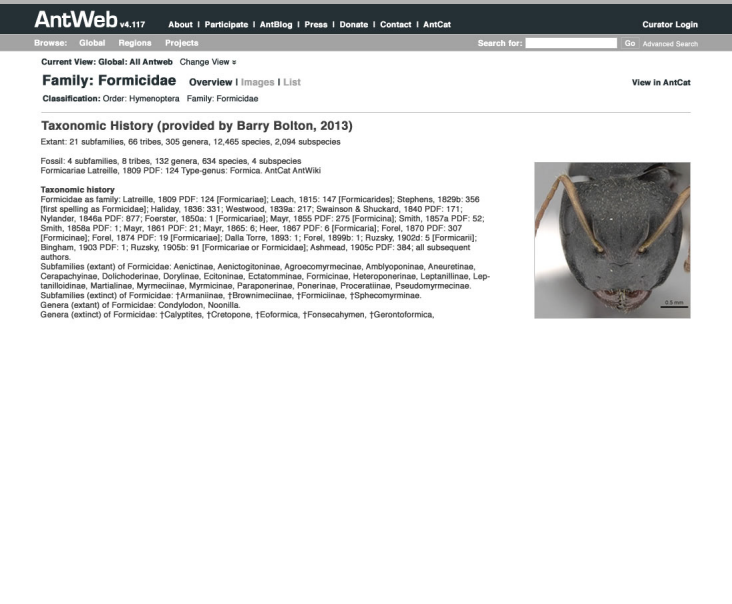
WITH the basic concept in mind, I set about looking at all the existing links, tools, functionality, and features present on all the various page types, and began deconstructing them so as to improve and normalize the information design, and apply a hierarchy of information to the basic page structure.



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).

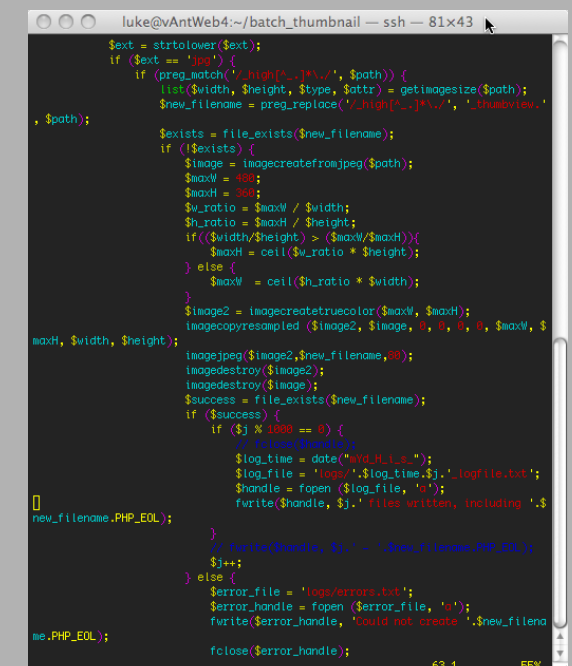
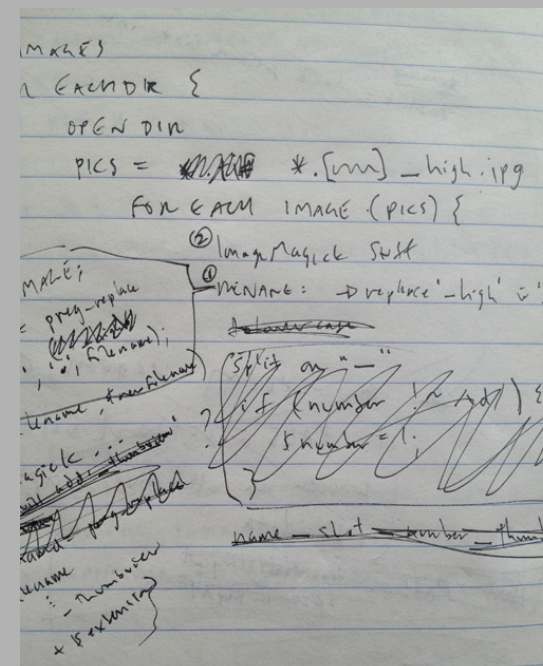
After a final round of back and forth on the user research, I began translating the new design into an interactive prototype, to better illustrate some of the interaction design patterns implied in the mockups. Further user research was done to insure that these interactions made sense, ranging from 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”.



THE FINAL PRODUCT

AntWebv5.0.5

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Cite this page

Specimen: CASENT0901377 Overview | Images

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

Profile View Date Uploaded: 11/05/2012 Photographer: Will Ericson View Highest Resolution

Back

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/>

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Subfamily: Myrmicinae Overview | Images | List | Map

Classification: Order: Hymenoptera Family: Formicidae Subfamily: Myrmicinae

Compare Images Map Genera Create Field Guide

Taxonomic History (provided by Barry Bolton, 2013)

Extant: 25 tribes, 142 genera, 6,296 species, 869 subspecies
Fossil: 33 genera, 145 species
Myrmicites Lepelletier de Saint-Fargeau, 1835 PDF: 169 Type-genus: Myrmica AntCat AntWiki
Taxonomic history
Myrmicinae as group name: Lepelletier de Saint-Fargeau, 1835 PDF: 169 [Myrmicites]; Nylander, 1846a PDF: 877 [Myrmicae].
Myrmicinae as family: Smith, 1851 PDF: 4 [Myrmicidae]; Smith, 1861b PDF: 45 [Myrmicidae]; Smith, 1871b PDF: 324 [Myrmicidae]; Andr , 1882a: 125 [Myrmicidae]; Cresson, 1887: 93 [Myrmicidae]; Emery, 1894h: 383 [Myrmicidae]; Saunders, 1896 PDF: 18 [Myrmicidae]; Ashmead, 1905c PDF: 383 [Myrmicidae]; Nov juk & Sadi, 1941 PDF: 71 [Myrmicidae]; Bernard, 1951c: 1058 [Myrmicidae]; Bernard, 1953b PDF: 222 [Myrmicidae].
Myrmicinae as subfamily of Poneridae: Smith, 1858a PDF: 114 [Myrmicidae].
Myrmicinae as tribe of Formicidae: Andr , 1874: 167 [Myrmicidae].
Myrmicinae as subfamily of Myrmicidae: Ashmead, 1905c PDF: 383.
Myrmicinae as subfamily of Formicidae: Mayr, 1865 PDF: 290, 299 [Myrmicidae]; Smith, 1857a PDF: 70 [Myrmicidae]; Mayr, 1861 PDF: 21 [Myrmicidae]; Smith, 1862b PDF: 93 [Myrmicidae]; Mayr, 1862 PDF: 738 [Myrmicidae]; Mayr, 1965: 17 [Myrmicidae]; Mayr, 1866c PDF: 24 [Myrmicidae]; Forel, 1870 PDF: 307 [Myrmicidae]; Forel, 1874 PDF: 22 [Myrmicidae]; Emery, 1877b PDF: 70 [Myrmicidae]; Forel, 1878c PDF: 367 [Myrmicidae]; Emery & Forel, 1879a: 456 [Myrmicidae]; Andr , 1881c PDF: 64 [Myrmicidae]; Nasonov, 1889: 28 [Myrmicidae]; Forel, 1891c PDF: 11 [Myrmicidae]; Forel, 1893a PDF: 220 [Myrmicidae]; Forel, 1893b PDF: 163, Dalla Torre, 1893: 53; Emery, 1895 PDF: 768 [subfamily spelled Myrmicin]; Emery, 1896a PDF: 179; Forel, 1899b: 30; Forel, 1902g PDF: 520; Bingham, 1903 PDF: 105; Wheeler, 1910a PDF: 138; Emery, 1914a: 29; Wheeler, 1915b PDF: 806 [Myrmicidae]; Wheeler, 1915f PDF: 40; Donisthorpe, 1915f: 74; Arnold, 1916 PDF: 166; Esch rich, 1917: 2 [Myrmicin]; Forel, 1917 PDF: 240 [subfamily spelled Myrmicin]; Boncholt, 1918 PDF: 14 [Myrmicidae]; Wheeler, 1920 PDF: 53; Wheeler, 1922: 124; Emery, 1921c: 3; Karaviev, 1934: 59; Clark, 1951 PDF: 16; Brown, 1954a: 28; Wheeler & Wheeler, 1972a PDF: 40; Brown, 1973b: 166;

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Genus: Acanthomyrmex Overview | Images | List | Map

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

21 Species (11 imaged) 45 Specimens

Compare Images Map Species Create Field Guide Download Data

Acanthomyrmex (indet)	Overview	4 Images	1 Specimens	Map
Acanthomyrmex basispinosus	Overview	12 Images	3 Specimens	Map
Acanthomyrmex careoscorbis	Overview	4 Images	3 Specimens	Map
Acanthomyrmex concavus	Overview	15 Images	3 Specimens	Map
Acanthomyrmex crassispinus	Overview	4 Images	1 Specimens	Map
Acanthomyrmex dusun	Overview	8 Images	2 Specimens	Map
Acanthomyrmex ferox	Overview	44 Images	21 Specimens	Map
Acanthomyrmex foveolatus	Overview	No Images	No Specimens	Map
Acanthomyrmex glabrefemorals	Overview	No Images	No Specimens	Map
Acanthomyrmex humilis	Overview	No Images	No Specimens	Map
Acanthomyrmex indet	Overview	No Images	No Specimens	Map
Acanthomyrmex laevis	Overview	4 Images	1 Specimens	Map
Acanthomyrmex luciolae	Overview	12 Images	3 Specimens	Map
Acanthomyrmex mindanao	Overview	4 Images	1 Specimens	Map
Acanthomyrmex minus	Overview	No Images	No Specimens	Map
Acanthomyrmex my01	Overview	No Images	1 Specimens	Map
Acanthomyrmex my02	Overview	No Images	3 Specimens	Map
Acanthomyrmex notabilis	Overview	18 Images	4 Specimens	Map

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Cite this page

Species: Acanthomyrmex ferox Overview | Images | List | Map

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

Comparing Profile Views of Species Acanthomyrmex ferox. Click image for higher resolution. Back to Species Acanthomyrmex ferox

Show: ☐ Head ☒ Profile ☐ Dorsal ☐ Label

CASENT0178573

CASENT0179619

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Cite this page

Genus: Acanthomyrmex Overview | Images | List | Map

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

11 Species Imaged (21 total) 45 Specimens

Compare Images Map Species Create Field Guide Download Data

Acanthomyrmex (indet)

Acanthomyrmex basispinosus

Acanthomyrmex careoscorbis

Acanthomyrmex concavus

Acanthomyrmex crassispinus

Acanthomyrmex dusun

Acanthomyrmex ferox

Acanthomyrmex laevis

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

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Cite this page

Species: Acanthomyrmex ferox Overview | Images | List | Map

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

10 Specimens Imaged (21 total)

Compare Images Download Data

CASENT0106243

CASENT0178570

7

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

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

- KML
- Tab-delimited data

Browse Images by: Profile

Head

Profile

Dorsal

All

Browse: GlobalRegionsProjectsFavorites

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

Subfamily: Myrmicinae

Current View: Global: All AntwebChange View

Genus: Acanthomyrmex Overview | Images | List | Map

Classification: Order: HymenopteraFamily: FormicidaeSubfamily: MyrmicinaeGenus: Acanthomyrmex

11 Species Imaged (21 total)45 Specimens

Compare ImagesMap SpeciesCreate Field GuideDownload Data

4 Images12 Images4 Images15 Images

AcanthomyrmexAcanthomyrmexAcanthomyrmex feroxAcanthomyrmex

Browse Images by: Profile

Citing AntWeb

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>

AntWeb 5.0.5

Current View: Global: All AntwebChange View

Specimen: CASENT0901377 Overview | Images

Classification: Order: HymenopteraFamily: FormicidaeSubfamily: MyrmicinaeGenus: AcanthomyrmexSpecies: notabilisSpecimen: CASENT0901377

5 Images

Acanthomyrmex dusun