

# Curriculum Vitae - Ben Donnelly

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## Professional Experience

I create connections and solutions for conservation research, data science, public outreach and policy development.

### Associate in Research

#### ***Marine Geospatial Ecology Lab, Duke University (2007 – Present)***

- Application development and designer, infrastructure planner, stakeholder engagement for geospatial-focused environmental science. Recently working for NASA, US Navy and the International Climate Initiative (IKI).
- Lead DevOps integration of Geographic Information Systems and the web
- Group leader, technical facilitator and cartographer/data analyst at international scientific workshops
- Server virtualization, cloud computing and development of scaling strategies for high-visibility scientific web applications and data repositories
- Infrastructure development for habitat modeling of IUCN Red List species

#### **Mapping and Visualization for the Census of Marine Life, a global scientific effort to assess the state of ocean life (2007-2010)**

- Information graphics, cartography and writing in collaboration with National Geographic Society Maps
- Worked with Google to develop "Google Oceans" layer within the Google Earth product
- Cloud infrastructure and interface development for iOBIS, the international data repository of marine animal data
- Organized visualization workshops for Census of Marine Life scientists

### Senior Systems Administrator

#### ***Nicholas School of the Environment, Duke University (2001 – 2007)***

- Lead system administrator in a team building an IT department from scratch
- Consolidated Local Area Network resources from several small workgroups (NT4, Active Directory, NIS+, Novell) to a unified Samba 3.0/NIS domain with offsite SSH/SFTP access.
- Administration of high-traffic website, [www.nicholas.duke.edu](http://www.nicholas.duke.edu). Advised Communications department on issues of accessibility and conversion from tables to CSS layout.

### Computer Consultant / System Administrator

#### ***University of North Carolina at Chapel Hill (1998 – 2001)***

- 2000-2001. LAN Admin for School of Medicine NT domain, overseeing application, Exchange and file servers, ArcServ backup, ColdFusion/IIS web servers.
- 1998-1999 Tech support for Office of Information Systems, troubleshooting desktop, NIS+, NT 4, and IMAP mail systems in mixed Windows/Mac/Unix environment

### Software Consultant

#### ***Catapult Software (1997 – 1998)***

- Consulting and in-house training for Pittsburgh Post-Gazette. Worked Closely with C-text Inc, developing training course for the Post-Gazette's migration from a mainframe system to a client-server network integrating MS Word, QuarkXpress and the news wires
- Software instruction for both general users (MS Office, Windows, Lotus Notes) and for desktop publishing and design (Quark, Freehand, Photoshop)

## Technical

Data sharing initiatives: MiCO.eco (marine connectivity in the ocean), seamap.env.duke.edu (data visualization of protected species) PBGJAM.org (modeling of North American terrestrial species community movement under climate change).

Programming: Javascript, Python, CSS, HTML, PHP, KML, Bash, Postgresql, Mysql, Git

Web Frameworks and CMS: ArcGIS Javascript API, Dojo, ExtJS, Open Layers/Geoserver, MapServer, Drupal, Wordpress, Node.js

Software expertise: ArcGIS, Quantum GIS/QGIS, Adobe Photoshop, Adobe Illustrator, Apple Final Cut, Apple Logic, R statistical, Google Earth

Operating Systems: RHEL/CentOS/Scientific Linux, Ubuntu/Debian, Windows Server, MacOS

## Education

B.A. English, Carnegie Mellon University 1995

Non-degree studies in Computer Science at University of North Carolina Chapel Hill; Geographic Information Systems at Nicholas School of the Environment, Duke University

## Selected Publications and Presentations

Dunn, D. C., Harrison, A.-L., Curtice, C., DeLand, S., Donnelly, B., Fujioka, E., et al. (2019). The importance of migratory connectivity for global ocean policy. *Proceedings of the Royal Society B: Biological Sciences*, 286(1911), 20191472. <https://doi.org/10.1098/rspb.2019.1472>

Halpin, Patrick, Boezio, D., & Donnelly, B. (2018). "Development of a Spatial Decision-Support Framework: Translating Science into Practice" Defense Coastal/Estuarine Research Program (DCERP).

Cleary, J., DeLand, S., Donnelly, B., & Halpin, P. (2018). Data to Inform the CBD Regional Workshop to Facilitate the Description of Ecologically or Biologically Significant Marine Areas (EBSA) in the Baltic Sea (p. 101).

Bax, N. J., Cleary, J., Donnelly, B., Dunn, D. C., Dunstan, P. K., Fuller, M., & Halpin, P. N. (2016). Results of efforts by the Convention on Biological Diversity to describe ecologically or biologically significant marine areas: EBSAs in the High Seas. *Conservation Biology*, 30(3), 571–581. <https://doi.org/10.1111/cobi.12649>

Dunn, D. C., Ardron, J., Bax, N., Bernal, P., Cleary, J., Cresswell, I., Donnelly, B. ... Halpin, P. N. (2014). The Convention on Biological Diversity's Ecologically or Biologically Significant Areas: Origins, development, and current status. *Marine Policy*, 49, 137–145. <https://doi.org/10.1016/j.marpol.2013.12.002>

Fujioka, E., Berghe, E. V., Donnelly, B., Castillo, J., Cleary, J., Holmes, C., ... Halpin, P. (2012). Advancing Global Marine Biogeography Research with Open-source GIS Software and Cloud Computing. *Transactions in GIS*, 16(2), 143–160.

Fujioka, E., Kot, C. Y., Wallace, B. P., Best, B. D., Moxley, J., Cleary, J., Donnelly, B., ... Halpin, P. N. (2014). Data integration for conservation: Leveraging multiple data types to advance ecological assessments and habitat modeling for marine megavertebrates using OBIS-SEAMAP. *Ecological Informatics*, 20, 13–26.

Cleary, J., Donnelly, B., & Fujioka, E. (2011). Advancing global marine biogeography research with open-source GIS software and cloud computing. Presented at the FOSS4G (Free and Open Source Geography meeting), Denver.

Halpin, P. N., Cleary, J., Donnelly, B., Biasi, F., Carroll, A., & Bullington, R. (2010). "A New Map of Ocean Life" Wall poster for National Geographic Maps. Retrieved from <http://comlmaps.org/oceanlifemap/>

McIntyre, A. D. (Ed.). (2010). *Life in the world's oceans: diversity, distribution, and abundance*. Chichester; Ames, Iowa: Wiley-Blackwell Pub. (Oversaw and produced figures for book)

Cressey, D. (2010). Marine biology: Out of the blue. *Nature*, 467(7315), 514–515. <https://doi.org/10.1038/467514a> (Cartographic illustration for Nature)

Snelgrove, P. V. R. (2010). *Discoveries of the Census of marine life: making ocean life count*. Cambridge; New York: Cambridge University Press. (Cartography and figures)

Halpin, P., Read, A., Fujioka, E., Best, B., Donnelly, B., Hazen, L., ... Hyrenbach, K. D. (2009). OBIS-SEAMAP: The World Data Center for Marine Mammal, Sea Bird, and Sea Turtle Distributions (Vol. 22).

Tamarkin, M., & Donnelly, B. (2006). Social Software in Research Computing and IT Administration: Successes and Failures. Presented at the Educause Midwestern Regional Conference, Chicago.