



National Center for Ecological Analysis and Synthesis

www.nceas.ucsb.edu

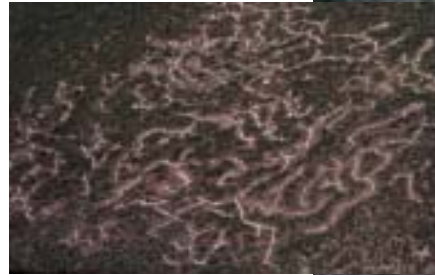
$$P_i \equiv P_{i-1} - dx \frac{\partial P_i}{\partial x}$$

(i') - Hamiltonian





Day Job...





Why a Synthesis Center?

- Ecologists need for place to “analyze and synthesize”
- Use of existing data
- Cross-disciplinary collaboration





The Mission of NCEAS is to:

- Advance the state of ecological knowledge through the search for general patterns and principles
- Organize and synthesize ecological information in a manner useful to researchers, resource managers, and policy makers addressing important environmental issues
- Influence the way ecological research is conducted and promote a culture of synthesis and collaboration



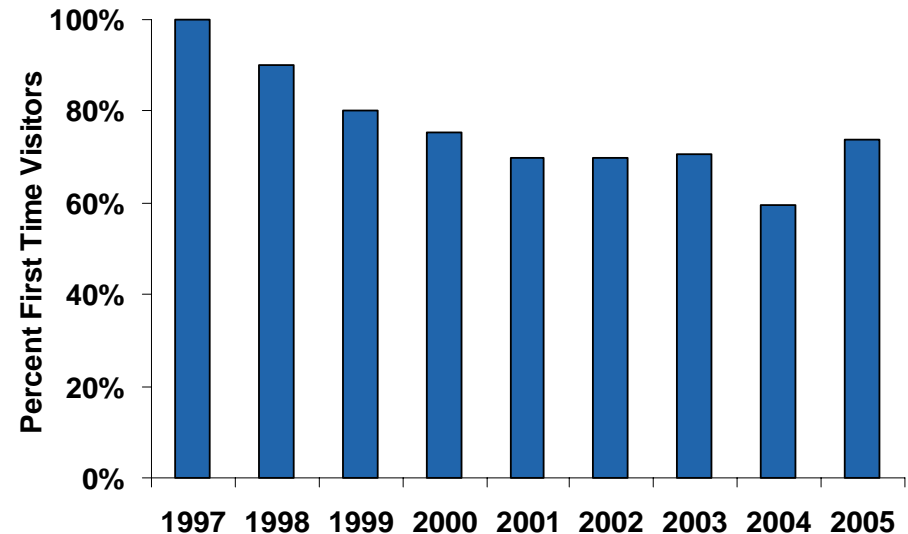
Research Approaches

- *Working Groups* - 2-20 members; 75-110 meetings/yr, on-site
- *Center Fellows* - Sabbaticals (6/yr; 4-12 months each)
- *Postdoctoral Associates* – (16-20/yr) successful even without “mentors”
- *Distributed Graduate Seminars*
- *Training* – Informatics, Kids Do Ecology
- *Graduate And Undergraduate Research Interns* (some off-site)



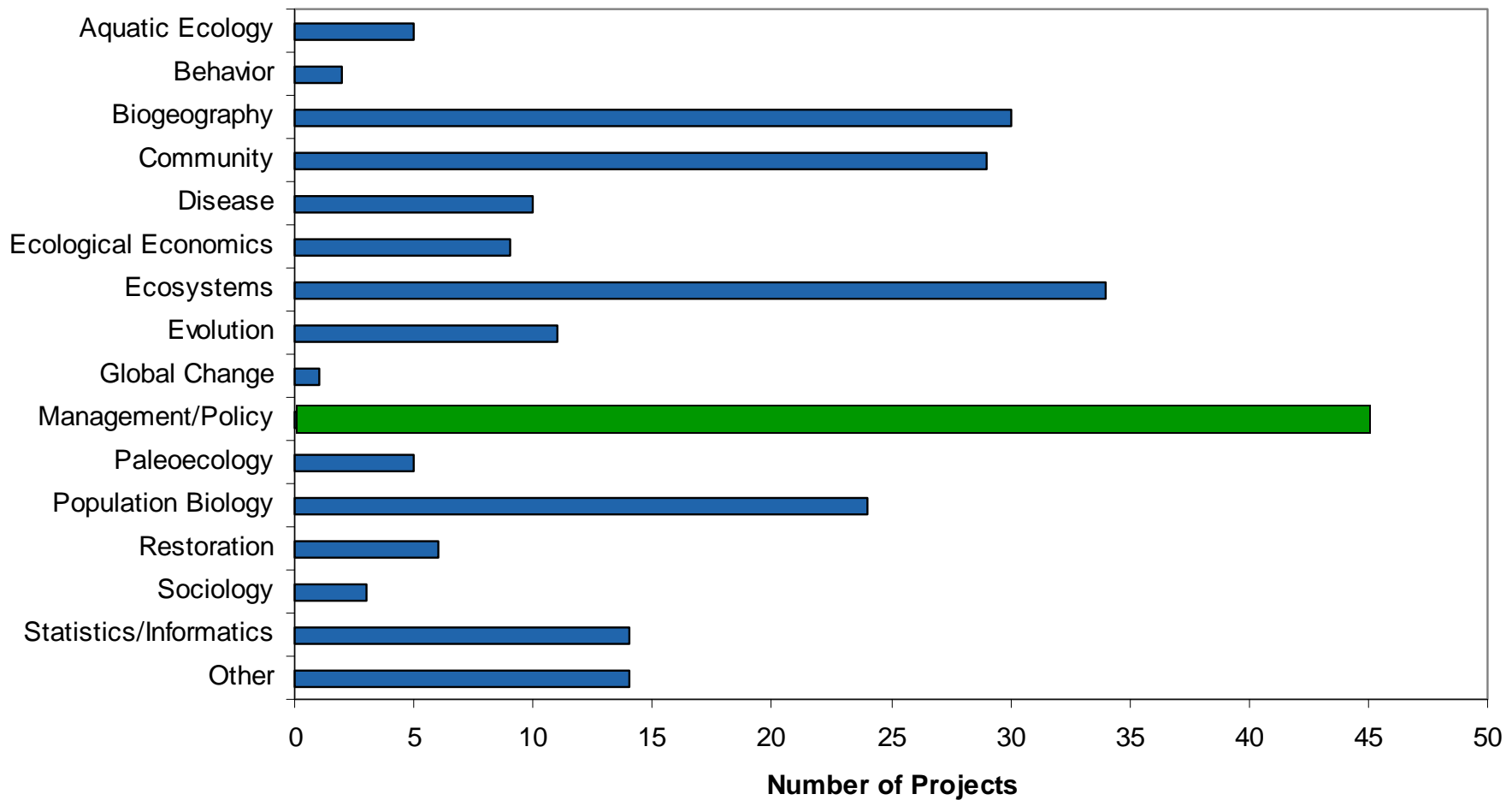
Broad Participation Geographically, Institutionally

- **3,500 visitors**
- **49 states, 49 countries**
(22% international)
- **829 institutions**
- **432 academic institutions,**
397 non-academic entities
(NGOs, agencies, companies)
- **Participants belong to 235 scientific societies**



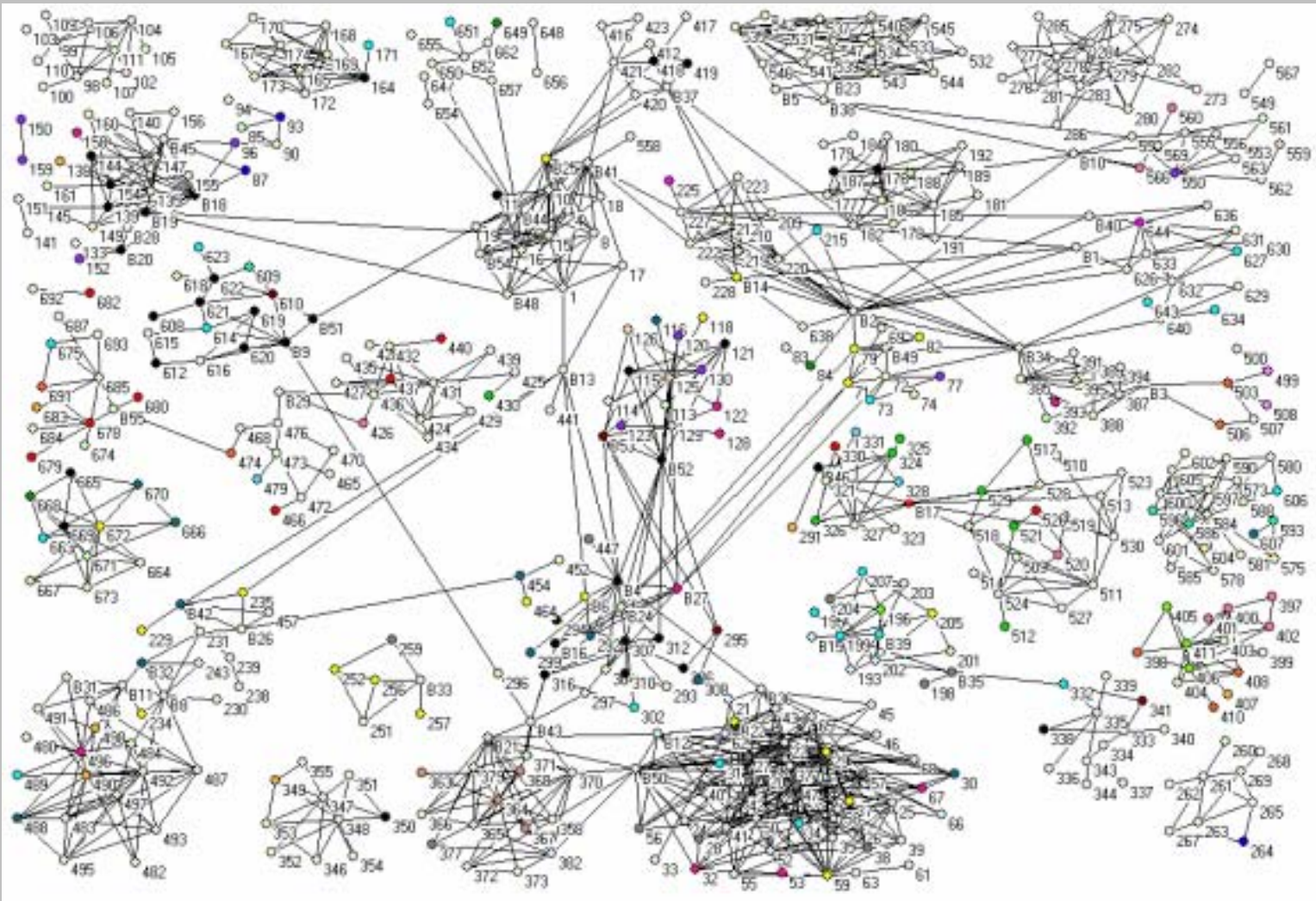


Many Subdisciplines Represented at NCEAS





All "Close and Collegial" Connections



- Engineering
- Physical Sciences
- Life Sciences
- Social Sciences
- Comp & Math Sciences
- Environmental Sciences
- Environmental Social Sciences
- Information Sciences



Dr. Diana Rhoten



Ecoinformatics Mission Element

- Engage NCEAS scientists
 - Strong computing capacities, broad capabilities
 - Analysis support at NCEAS
 - Expand data access
- Engage Community
 - Establish extensive collaborations
 - Develop, deploy tools
 - EML
 - KNB
 - SEEK
 - Support registries





NCEAS Plan



I. Enhance Existing Activities

- Working Groups, Center Fellows, Postdoctoral Associates, Distributed Graduate Seminars
- Increase awareness of NCEAS and its opportunities
- Extend involvement underrepresented groups and graduate students

II. Extend NCEAS activities

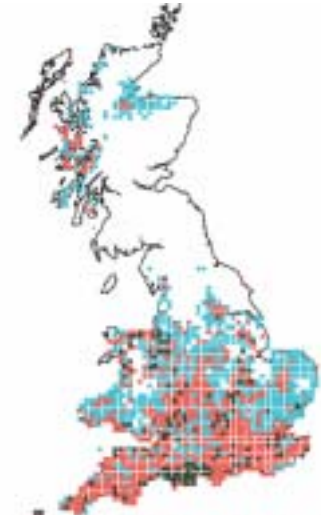
- Ecoinformatics - Implementation, deployment, training

III. Expand into new areas

- Research in support of conservation and resource management
- Social science relevant to ecology
- Promote synthesis in large programmatic areas



Why does it work ?



- Provides opportunity scientists wanted/needed
- Actually encourage synthesis, analysis – “here to do this”
- Give opportunity for work, not money
- Proximity of scientists – especially from many disciplines
- Intellectual ambience stimulates creativity
- Neutral, distant location
- Good people, free time
- Lowers activation energy - Logistic support
- Serendipity





University of California – Santa Barbara

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Productivity, Significance



- 1,000 + publications, many in *Science*, *Nature*, *PNAS*, and *TREE*, 26 Books
- Articles in 200 + journals
- In the top 1% (338th of >38,000 scientific institutions) in total citations in ecology and the environment
- Ranked *22nd* in citations/article

