



# **Scientific and Technology Excellence**

A strategy session

2009 Conservation Conference

# Those were the days...

- 1970s and 1980s: gathering field data was a priority
- State of knowledge grew rapidly
- Resources were available to set priorities at a macro level
- IT systems were relatively simple to design and deploy



Jimmy Kagan, 1971

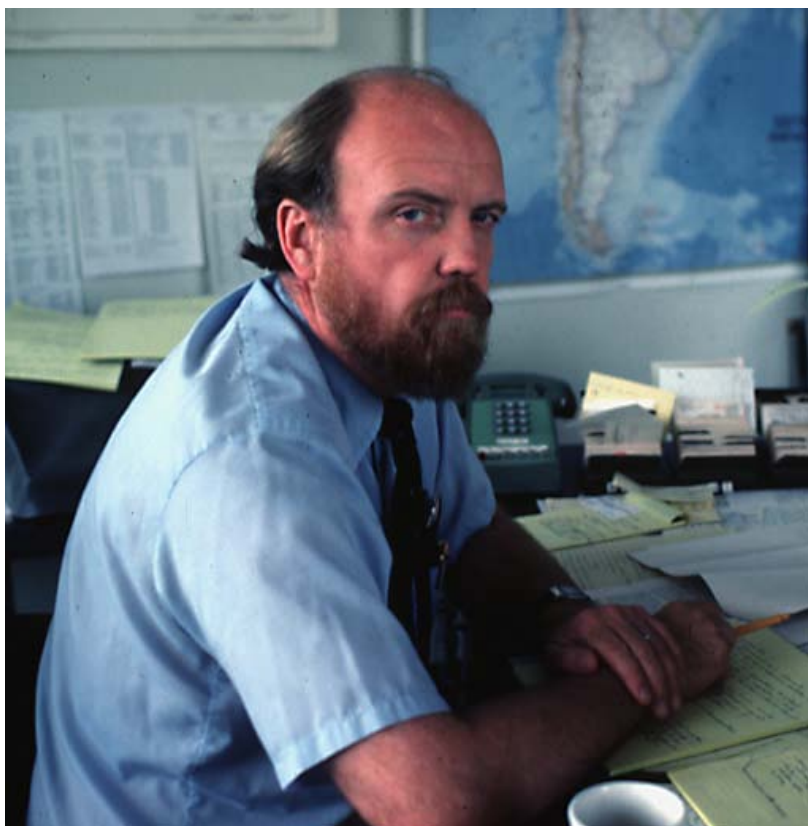
# 1990s: Addressed an image problem



- Pressure to do more about sharing data
- Broad shift towards “putting data to use”
- Still investing in data development, but at a lower level
- Spread of GIS



# 2000s: It's about the deliverables




Bob would not be amused

- Extreme emphasis on using “existing data”
- Analyses are expected to gloss over data gaps
- Minimal investment in new data/systems
- Steady erosion of knowledge base



# 2004: NatureServe initiates the Data Excellence Initiative



**Data Excellence Program:  
Summary of Products and Deliverables**

NatureServe maintains a unique and critical national resource – the most comprehensive, high-quality data on the location and status of at risk species and natural ecosystems. This dataset and accompanying expertise represents a 30-year investment in collection, compilation, application of standard methodology and quality assurance.

Ensuring the continued integrity and value of this national resource requires many activities that cannot be directly allocated to projects. NatureServe funds these activities, collectively described as our Data Excellence Program, through a combination of private sector funding, endowment income, approved overhead costs, building direct costs into projects whenever possible, and a proposed U.S. federal government investment. These activities result in a number of specific products that are updated continuously and delivered to federal agencies each year.

**MAJOR PRODUCTS OF THE DATA EXCELLENCE PROGRAM**

1. Comprehensive, nationally consistent, high-quality data set on species and ecosystems, including more than half a million documented population locations for those of greatest conservation concern.
2. Conservation status assessments for nearly 50,000 native and exotic plant and animal species and sub-species.
3. Taxonomic and geographic updates to ensure accuracy of all data sets.
4. Development of new data on trends and threats to those species and habitats of greatest concern to federal agencies.
5. Regular data exchange with all U.S. member programs to ensure national data integration and quality assurance.
6. Public provision of all non-sensitive data via NatureServe Explorer Website.
7. Annual Benchmark Data Standards Report from NatureServe with metrics on the quality and quantity of our key data sets.
8. Extensive user support and training programs.
9. Development and support of Biotics software, the customized biodiversity data management system used across the national network of natural heritage programs.
10. Coordinating our network of natural heritage programs, consisting of data providers in all 50 states.
11. Advancing scientific standards and methods in cooperation with federal and state data users to ensure data meet quality standards required for public scrutiny and legal challenges.

**NATURESERVE DATA: A CRITICAL NATIONAL RESOURCE**

U.S. federal government agencies rely on these data for many mission-critical purposes:

- Informs land and natural resource management decisions.
- Guides investments in conservation and incentive programs.
- Provides basis for regulatory actions.
- Assists in compliance with key legislation, including Endangered Species Act, Clean Water Act, and NEPA.
- Contributes to performance evaluation under the Government Performance and Results Act (GPRA) and other monitoring of results.
- Supports meeting obligations under international treaties such as CITES.

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- Objective: Invest in the quality and consistency of the national data sets
- Includes both species and ecosystems
- Estimated cost \$4M annually
- Network members mobilized

# Major Products

1. Nationally consistent data
2. Status assessments, threats and trends for 50,000+ species
3. Rollup of state spatial data for national applications
4. Delivery via NatureServe Explorer
5. Quality assurance based on benchmark data standards, with annual report
6. User support and training programs
7. Continuous improvement in Biotics
8. Coordination of states to fill critical data gaps



# Key Messages

- Eight federal agencies depend on NatureServe network data
- Federal government can leverage state and private investments
- Better data will lead to:
  - Improved management decisions
  - Higher impact investments in conservation and incentive programs
  - More confidence in data for regulatory actions
  - Better compliance with key legislation



# Congress and OMB agreed

## Department of Interior Budget Overview

- "...the budget includes an increase of ... **\$1.0 million to support the activities of the NatureServe system.**"

## U.S. Geological Survey, Budget Highlights

- "The budget includes an increase of \$1 million to support the activities of the NatureServe system and to contribute to the broader strategy of improving delivery and access to information needed to support Interior bureaus in the management of natural resources."

## Section on USGS Biological Research and Monitoring

- "An increase (+\$1,000) for NatureServe will support the continued collection of information about rare and endangered species and threatened ecosystems."
- "Funding is provided for NatureServe as part of a broader strategy to improve delivery and access of information needed to support the Department of the Interior bureaus in the fulfillment of their missions. The funding will support maintenance of the Natural Heritage database, an available database of nationally consistent species and ecosystem information needed for many forms of decision making."



# Things did not work out as planned



# Need Still Exists



- Recent work with federal agencies helped clarify uses of data
- Climate change increases need
- New emphasis on developing knowledge to inform decisions



NatureServe

# Carpe Diem

- How can we seize this moment to reinvest?
- What is the business case today?
  - Definition of need / key stakeholders
  - Benefits of investment
  - Why NatureServe? – unique strengths
  - Required resources
  - Risk of doing nothing

