

# BORIIS

(Biota of Rhode Island Information System)

## Needs:

- diverse data streams from agencies, organizations, and researchers
- public desire to contribute in additional ways
- numerous ad hoc data management systems
- numerous and diverse potential data users
- regulatory, planning, and other requirements for biodiversity data
- existing capability needs relatively modest support



## Vision:

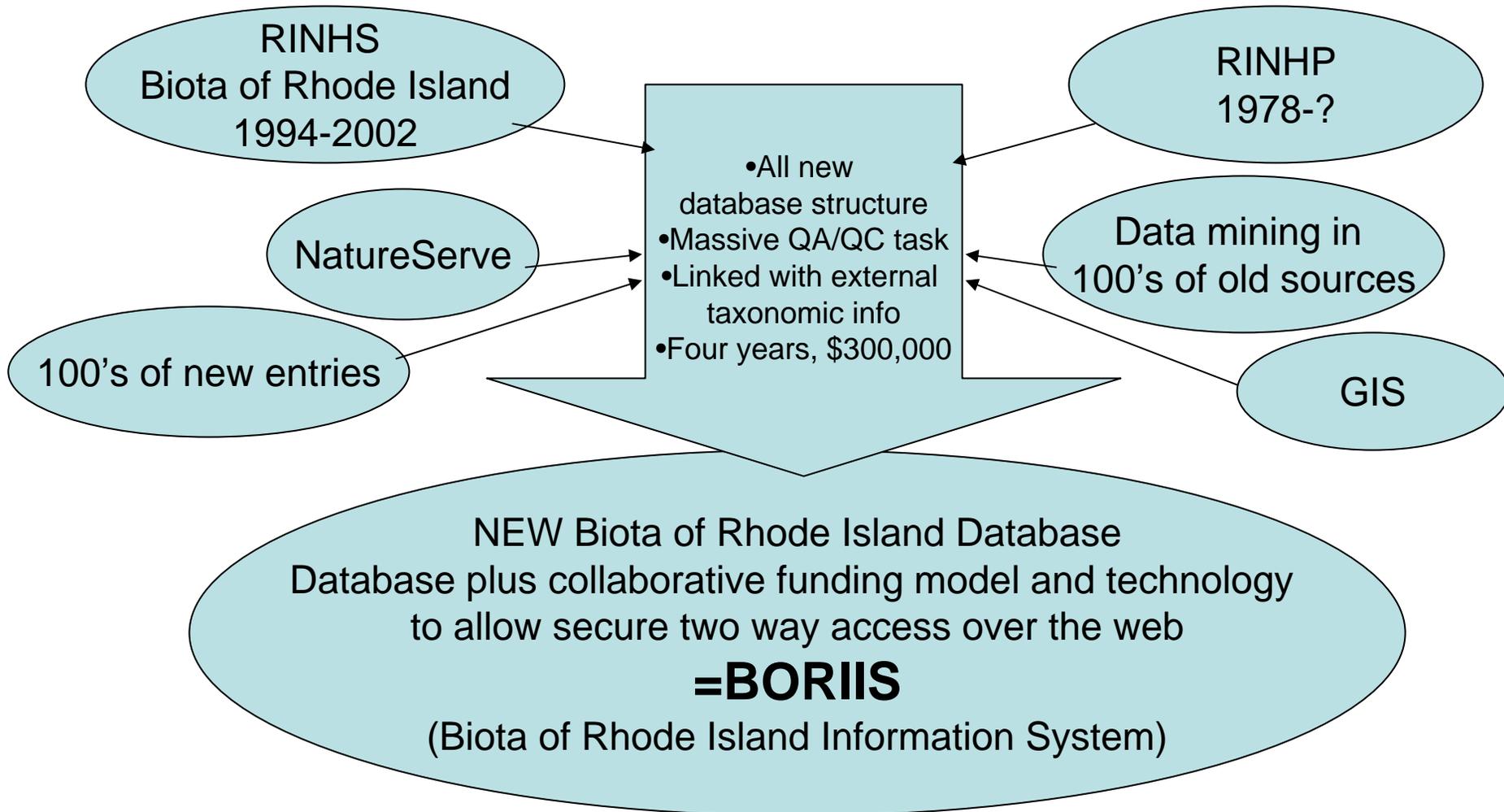
- acknowledgement of mutual interest in comprehensive, stable biodiversity data management
- mutual commitment to participate in a biodiversity data collaborative
- rich existing data source gets used
- partners contribute new data and grow the resource
- statewide biodiversity data collaborative provides Rhode Island with the best biodiversity data management system in the nation





# BORIIS

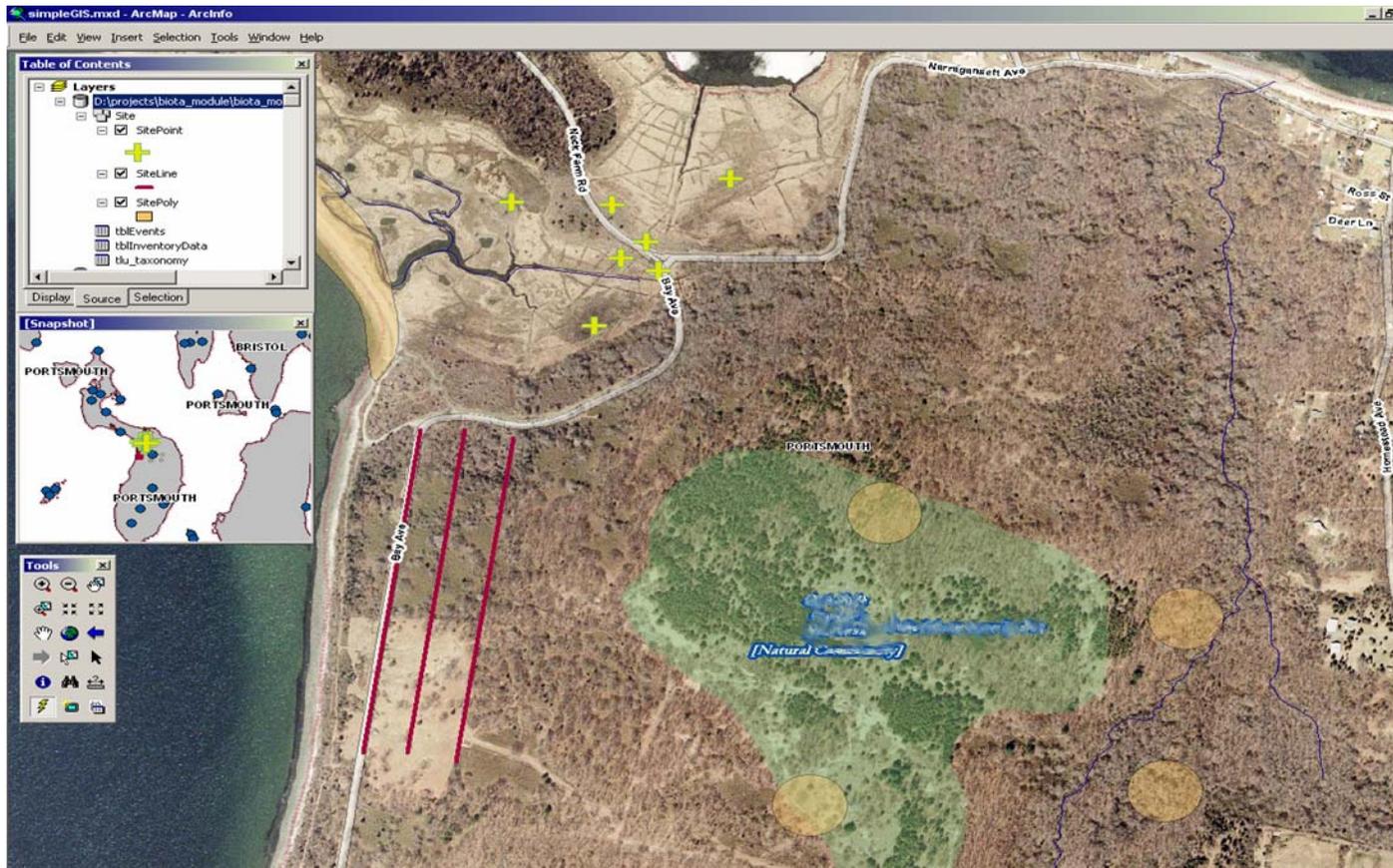
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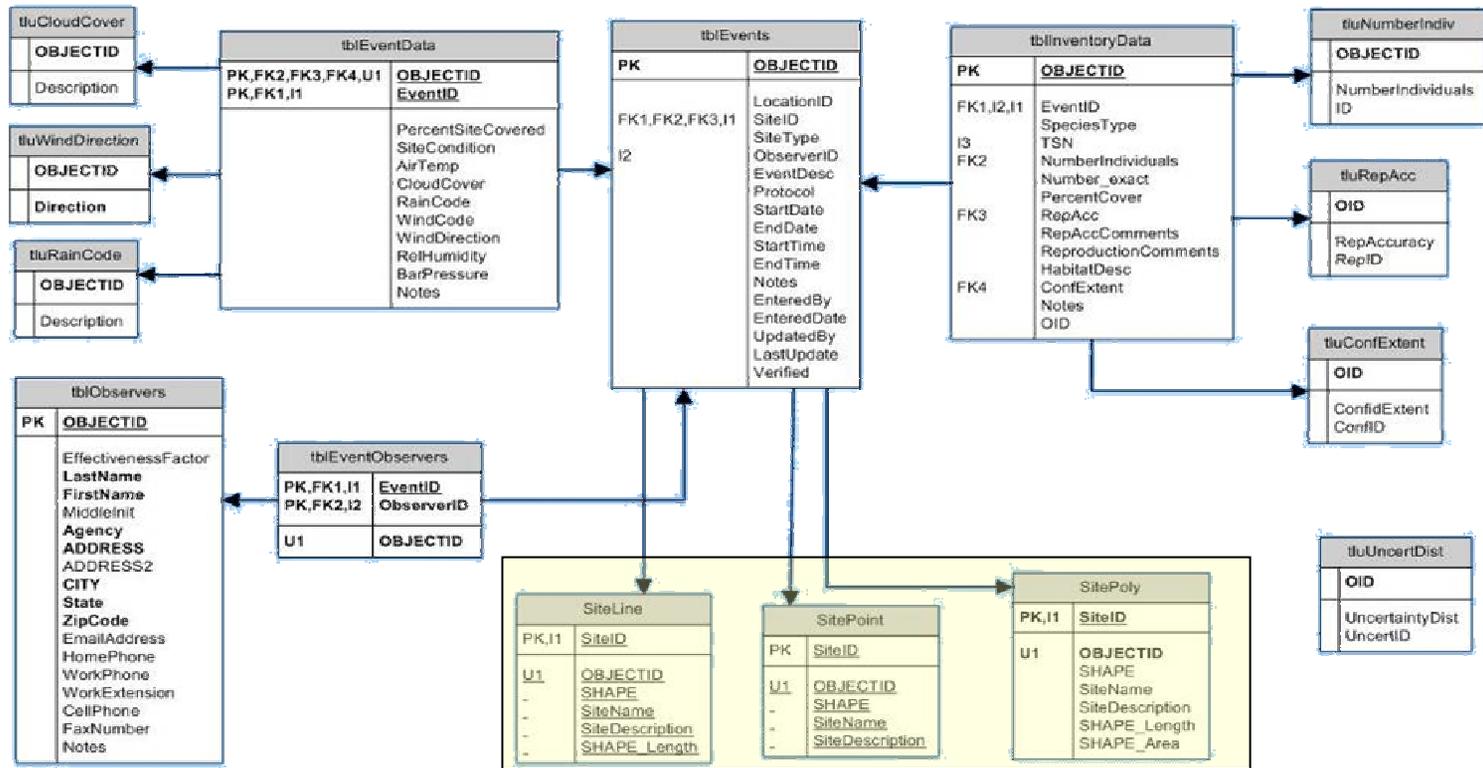
**Track Any Species, Community, or Management Activity that can be Associated with a Point, Line, or Polygon**



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## Conceptual Data Model

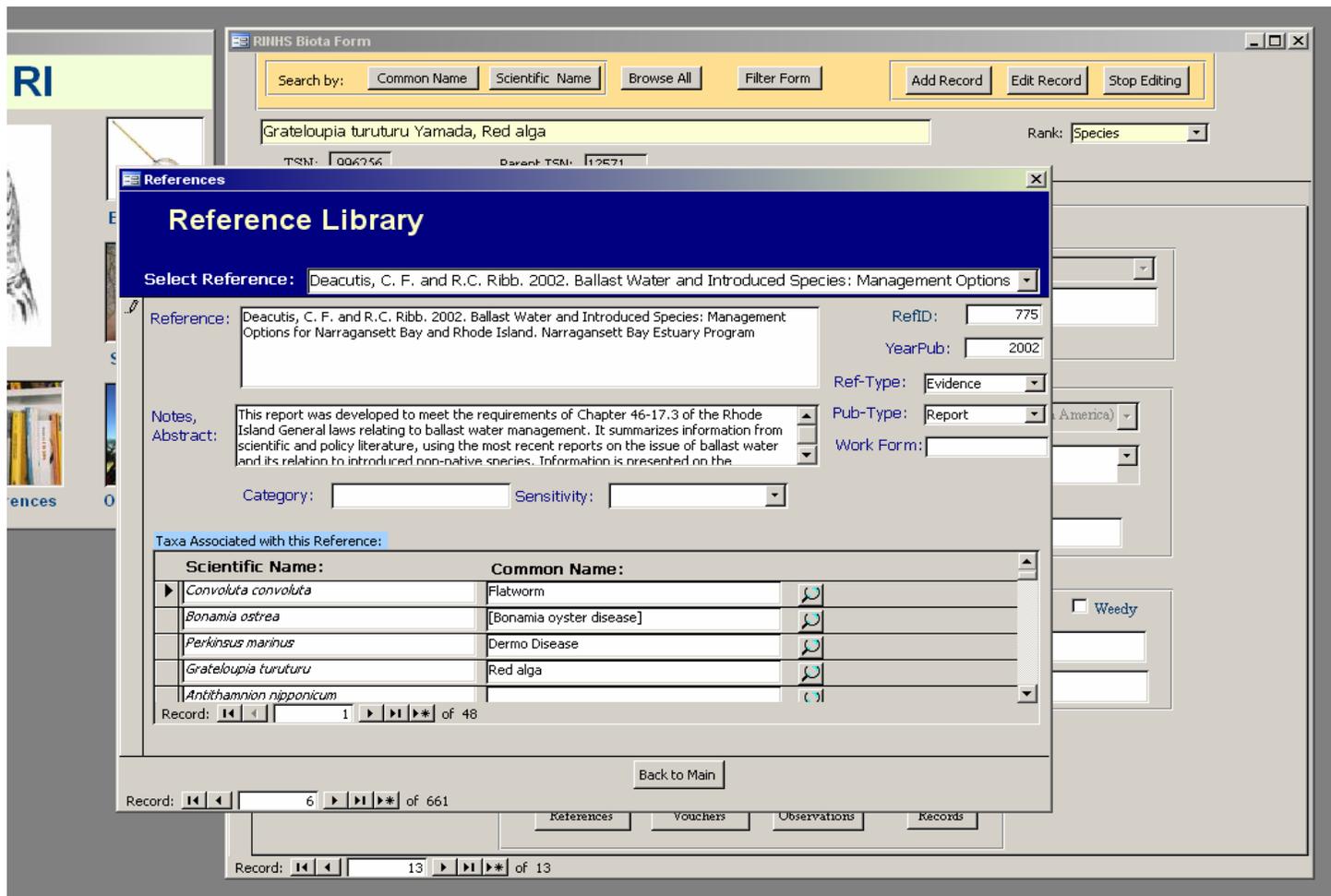


Spatial Representations



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The screenshot displays the BORIS web interface. At the top, there is a search bar with options for 'Common Name' and 'Scientific Name', along with 'Browse All' and 'Filter Form' buttons. A record for 'Grateloupia turuturu Yamada, Red alga' is selected, with a 'Rank' of 'Species'. A 'References' window is open, showing a 'Reference Library' for the selected record. The library contains one reference: 'Deacutis, C. F. and R.C. Ribb. 2002. Ballast Water and Introduced Species: Management Options for Narragansett Bay and Rhode Island. Narragansett Bay Estuary Program'. The reference details include RefID: 775, YearPub: 2002, Ref-Type: Evidence, Pub-Type: Report, and Work Form: [blank]. The 'Notes, Abstract' section contains a summary of the report's purpose. Below the reference, a table lists 'Taxa Associated with this Reference':

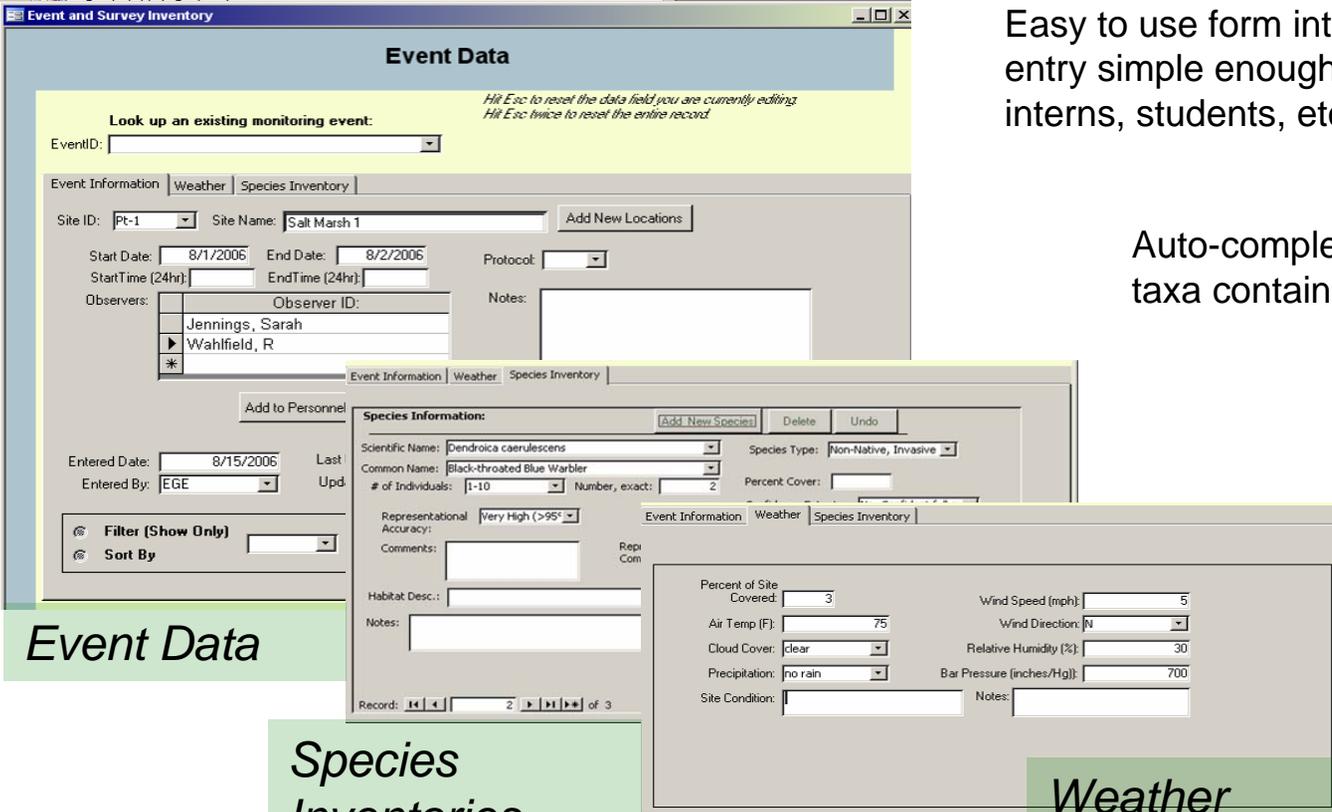
Scientific Name:	Common Name:
<i>Convoluta convoluta</i>	Flatworm
<i>Bonamia ostrea</i>	[Bonamia oyster disease]
<i>Perkinsus marinus</i>	Dermo Disease
<i>Grateloupia turuturu</i>	Red alga
<i>Anthamion nipponicum</i>	

The interface also shows navigation controls for the current record (6 of 661) and the reference list (1 of 48). A 'Back to Main' button is visible at the bottom of the reference window.

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## Saves Time, Improves Accuracy



The screenshot displays the BORIIS software interface with three overlapping windows:

- Event Data Window:** Contains fields for Event ID, Site ID (PT-1), Site Name (Salt Marsh 1), Start Date (8/1/2006), End Date (8/2/2006), Start Time, End Time, Protocol, Observers (Jennings, Sarah; Wahfield, R), and Notes. It includes a "Look up an existing monitoring event:" dropdown and a "Hit Esc" instruction.
- Species Information Window:** Shows Scientific Name (Dendroica caerulescens), Species Type (Non-Native, Invasive), Common Name (Black-throated Blue Warbler), # of Individuals (1-10), Number, exact (2), Percent Cover, Representational Accuracy (Very High (>95%)), and Habitat Desc. It has buttons for "Add New Species", "Delete", and "Undo".
- Weather Data Window:** Includes Percent of Site Covered (3), Air Temp (F) (75), Cloud Cover (clear), Precipitation (no rain), Wind Speed (mph) (5), Wind Direction (N), Relative Humidity (%) (30), Bar Pressure (inches/Hg) (700), and Site Condition.

Green callout boxes at the bottom of the screenshot identify the sections: "Event Data", "Species Inventories", and "Weather Data".

Easy to use form interface makes data entry simple enough for entry-level staff, interns, students, etc.

Auto-complete pull downs, including taxa containing species known in RI

Record transects, plots, censuses as events with spatial extent and species lists

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## Built on a Foundation of Historical Information

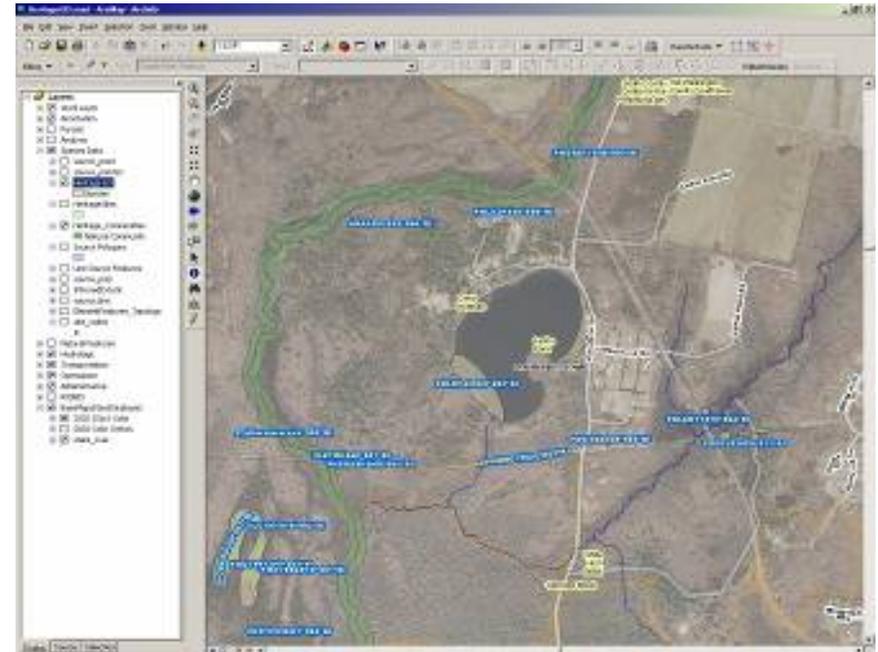
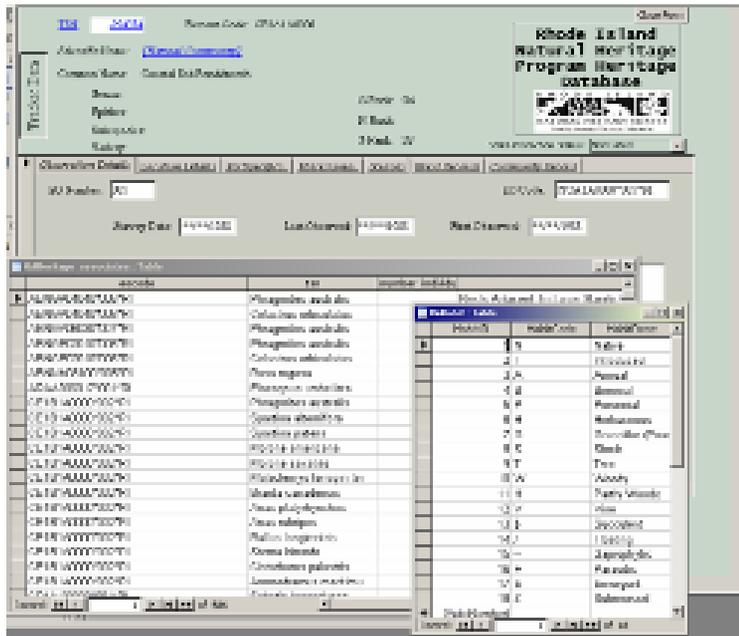
The screenshot shows the BORIS Biota Form interface for the species *Dendroica caerulescens* (Black-throated Blue Warbler). The form is titled "RINHS Biota Form" and includes a search bar with options for "Common Name" and "Scientific Name", along with "Browse All", "Filter Form", "Add Record", "Edit Record", and "Stop Editing" buttons. The "Name" field contains "Dendroica caerulescens (Gmelin) , Black-throated Blue Warbler" and the "Rank" is set to "Species". The "TSN" is 178888 and the "Parent TSN" is 178677. The form is divided into several sections: "Status" (G-rank: 55, RI Status: Native to Rhode Island, State Rank: State Threatened, RINHP Status: Not Listed, GCN Species? checked), "Abundance" (Abundance: IV, Abundance Details: Common in Mg, former breeder. "SH", Data Source:), "Ecology" (Trophic Level: Not Assigned, Host Species: Not Assigned, Primary Habitat: Not Assigned, Habit: Not Assigned, Habitat: , Range: ), and "Evidence Profile" (References: 4, Vouchers: 3, Observations: 2, Town Records: ). The bottom of the form shows "Record: 1 of 17".

Quickly find species and natural community status, trends, and life history information...

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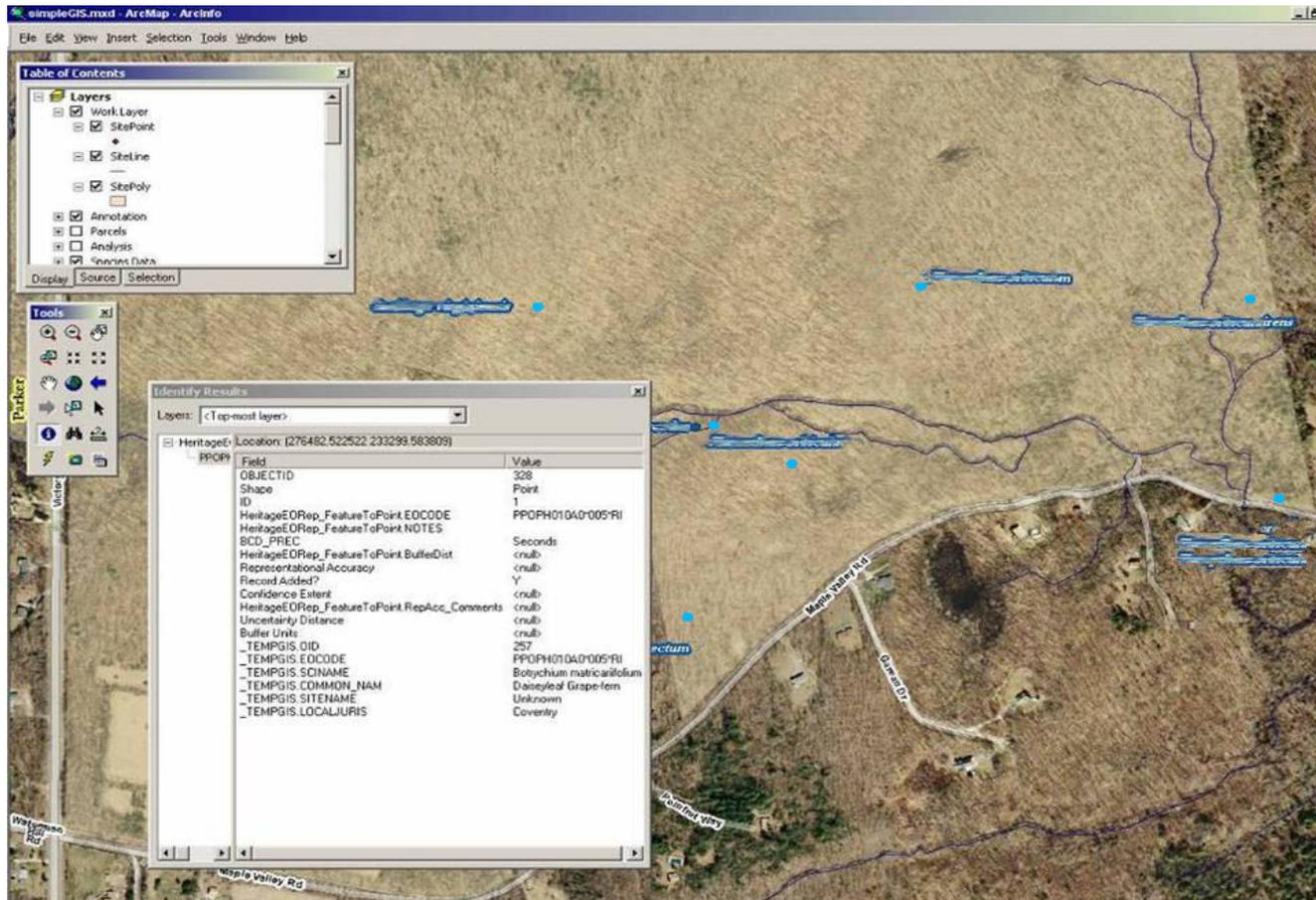
Works with existing GIS tools and RIGIS data



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## Works with GIS Applications for Heads-up Decision-making



# BORIIS

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- ❖ Documents the distribution and viability of species and natural communities in space and time including rare and endangered species and communities and invasive species
- ❖ Built on existing database of 100,000 records documenting 10,000 species & 101 natural communities in RI
- ❖ Simple screens and forms save time and money on data input
- ❖ Active management provides QA/QC protocols, data exchanges with regional/national projects (NatureServe, IPANE, etc.)
- ❖ Works with existing GIS data for heads-up planning
- ❖ Promotes standardized data collection, storage, and access
- ❖ Promotes use of an standardized, up-to-date taxonomy
- ❖ Built-in bibliographical resource
- ❖ Non-governmental, non-profit, non-regulatory, and non-advocacy management can work across boundaries, has a good fundamental cost structure, and can attract new, outside funding
- ❖ Facilitates public participation to increase available resources and build political constituency
- ❖ Educational and outreach opportunities
- ❖ National model
- ❖ Available today at low cost
- ❖ "BO knows biodiversity!"