Rhode Island
Conservation Stewardship Collaborative (RICSC)

Founded 2007

The Nature Conservancy
Protecting nature. Preserving life.™

Audubon Society of Rhode Island

THE UNIVERSITY OF RHODE ISLAND
DEPARTMENT OF NATURAL RESOURCES SCIENCE

RHODE ISLAND NATURAL HISTORY SURVEY
Providing Ecosystem Science and Information

U.S. FISH & WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR

Rhode Island Land Trust Council

D·E·M

CSC Mission:

To advance long-term protection and stewardship of terrestrial, aquatic, coastal, estuarine, and marine areas in Rhode Island that have been conserved by fee, easement, or other means.

Self-study
after 6 years

Cause & Effect

Jonathan Howard

Cause & Effect

Jonathan Howard

Written Surveys at
2015 Land & Water Summit

9 Statewide NGOs
45 Sub-state regional or local NGOs
4 Federal Gov
4 State Gov
11Local Gov
3 Business/Consulting
2 Unaffiliated
11 Non-responsive
67 TOTAL

Cause & Effect

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in-depth interviews with individuals:

2 Federal personnel
2 State personnel
2 Statewide NGOs
2 Local land trusts with stewardship staff
8 All-volunteer land trusts
16 TOTAL

Cause & Effect

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Map the portfolio of CSC projects since 2009 to the list of concerns/topics raised by respondants/interviewees:

Protocols, Procedures, Best Practices
Creating Knowledge to Support Stewardship
Invasive Species Management
Policy and Legislation
Education and Information Dissemination

Baseline Documentation
Land Management Plans
Annual Projects, Monitoring
Public Access and Trails
Invasive Species Control
Habitat Management
Public Engagement
Capacity Building
Policy and Legislative Affairs

Cause & Effect

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Critical Challenges:

Doing More with Less
Workforce and Volunteer Force
Funding
Qualified Contractors
Information Management

Cause & Effect

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Key recommendations

More Efficient Use of Scarce Resources
Peer to Peer Information Sharing
Reach Out to Underserved Communities
Improve Usability of Online Resources
Assess DEM's Stewardship Capacity and Outcomes
Regional and Statewide Resource Sharing
Increase Capacity for Collaborative Synthesis

Discussion:

Next Steps for the Next 6 Years

CSC Member Roles:

- URI (Remarks by Pete August)
- RILTC (David Gregg reads written remarks by Rupert Friday
- TNC (David Gregg reads notes dictated by Scott Comings)
- ASRI (Remarks by Larry Taft)
- RIDEM (Remarks by David Gregg on SWAP)
- USFWS (David Gregg reads notes dictated by Susanne Paton)
- RINHS (David Gregg references remarks by Pete August on Heritage and Larry Taft on YCL

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State Wildlife Action Plan (SWAP)

1. Indicates sources of information on wildlife abundance and distribution
2. Includes information on distribution and abundance of wildlife species (referred to as SGCNs) indicative of diversity and health of wildlife in the state
3. Identifies location and relative condition of key habitats supporting SGCNs
4. Lists problems affecting SGCNs and their habitats
5. Prioritizes information needs for successful management/restoration of SGCNs and their habitats
6. Lists actions necessary to conserve SGCN and their habitats
7. Describes needed monitoring of SGCNs, habitats, and conservation actions
8. Provides for review of the SWAP in 10 years
9. Describes purpose and means for public participation in conservation actions, monitoring, and plan revision.

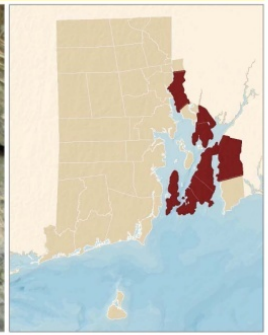
SWAP Species of Greatest Conservation Need (SGCN) Profiles

Northern Leopard Frog

HERPETOFAUNA
Amphibians

Lithobates pipiens

Photo: J. Christopher Powell



*See map disclaimer in profiles introduction

Distribution & Abundance

This species is one of Rhode Island's most threatened amphibians because populations are extremely localized geographically and occur within rapidly developing landscapes. Road mortality has been an issue at many sites and the success of wildlife tunnels at one locality has not been determined. Breeding sites are ephemeral or semi-permanent ponds. Alternate habitats include wet meadows and marshes

Habitat Community: Shrub Swamp/Wet Meadow, Type: Shrub Swamp/Wet Meadow

Status

IUCN Rank: LC. STSTAT: C. SRANK: S2. GRANK: G5. RSGCN: L-H. PARC: 1. CODES: RES. Res/B: 1. GRP: 8. PRIOR: 1. NEPARC: HC Northeast comprises <50% of US distribution: > 50% of states listed in WAP.
Climate Change Vulnerability: 2030 (Precipitation change)

Threats and Actions

Threat 1 - Agriculture and aquaculture; Upland habitat highly developed for agriculture

Actions:
- *Site/area protection; Large landscape species; also wherever possible, 'soft' approaches (such as beach nourishment, vegetative plantings, and placement of large woody debris) to shoreline modifications should be used. Rank: 3*
- *Resource and habitat protection; Breeding sites not protected. Rank: 3*
- *Alliance and partnership development; Development of conservation partnerships will be necessary to protect wetlands and associated upland habitats. Rank: 3*
- *Policies and regulations; Need policies and regulations to protect wetlands and associated uplands. Rank: 3*
- *Awareness and communications; Need to educate the public about habitat loss and species' life history, publish the Amphibians of Rhode Island. Rank: 3*
- *Data collection and analysis; Research abundance and distribution of species for which status and habitat can be determined, by including additional data collection in present studies. Rank: 3*

Threat 2 - Agricultural and forestry effluents; Pollution in breeding habitats from agriculture

Actions:
- *Site/area management; Requires hayfields or grazing or mowing regimes, work with farmers. Rank: 3*

Threat 3 - Dams and water management/use; Water withdrawal and water restrictions due to culverts

Actions:
- *Resource and habitat protection; Protect natural hydrology. Rank: 3*

- *Habitat and natural process restoration; Restore natural hydrology where possible, look for opportunities to modify culverts, work with RI DOT. Rank: 3*

Threat 4 - Invasive non-native/alien species; Disease

Actions:
- *Species management; Monitoring and management. Rank: 3*

Threat 5 - Droughts; Drying of breeding sites

Actions:
- *Policies and regulations; Needed to address climate change. Rank: 3*

Threat 6 - Natural system modifications; Loss of habitat from plant succession

Actions:
- *Data collection and analysis; Identify priority parcels needing serial-stage management, especially for Lepidoptera habitat. Rank: 3*
- *Species management; Manage important habitats as required. Rank: 3*
- *Habitat and natural process restoration; Construct and maintain new amphibian habitat, and breeding habitat (seasonal pond project). Rank: 3*

Threat 7 - Lack of information; Lack of information from research to address habitat and taxonomic issues

Actions:
- *Data collection and analysis; Assess taxonomy/population relationships. Rank: 2*

Refer to the Community: Shrub Swamp/Wet Meadow, Type: Shrub Swamp/Wet Meadow - Habitat Profile for additional threats to this species.

SWAP Key Habitat Profiles

Pitch Pine Woodland/Barren

GCN HABITATS

Description

Pitch pine woodlands and barrens are dry, fire-adapted communities with a varial
canopy dominated by pitch pine and an understory of tall shrubs, especially scrub
oak, and a low shrub layer of blueberry and other heaths. A variable amount of
mixed oaks may be present in the overstory depending on frequency of fire. A m
frequent fire rotation of 10 or fewer years may foster the growth of stunted pines
dense scrub oak, and scattered open patches of bare sand. Scrub oak stands may
occur without pine cover, particularly in low-lying areas where cold-air drainage
inhibits pine growth. The NETHCS classification identifies coastal and interior
subtypes of pitch pine communities that are similar in structure and composition,
but each type has species not shared by the other. Pitch pine barrens support a
unique assemblage of priority moth and butterfly species that generally depend o
a single larval food plant unique to these communities. Examples include the
barrens buck moth, which utilizes scrub oak, and frosted elfin and persius
duskywing that depend on wild lupine. Tiger beetles are a characteristic group of
insects that require open, sandy patches for hunting and burrowing. Embedded
within some pitch pine areas are vernal pools and other shallow wetlands that
support a unique herptile fauna, including the Eastern spadefoot. Young, fire-
maintained pitch pine woodlands provide nesting habitat for several priority birds

Condition

Pitch pine communities were historically widespread predominantly in Kent and W
sandy soils of outwash and glaciofluvial origin. One estimate of the original cover
Island is 30,000 acres (Bromley 1935). Following settlement, pitch pine communit
agriculture and later residential development, and today they cover only about or
their original extent. Most of this habitat occurs in two linear bands across the st
Charlestown recessional moraine, and the second further north in the Arcadia Ma
east to West Greenwich, Warwick and Prudence Island.

Species

Birds

Eastern Whip-poor-will	*(Antrostomus vociferous)*
Black-billed Cuckoo	*(Coccyzus erythropthalmus)*
Nashville Warbler	*(Oreothlypis ruficapilla)*

Herpetofauna

Fowler's Toad	*(Anaxyrus fowleri)*
Eastern Hog-nosed Snake	*(Heterodon platirhinos)*
Eastern Spadefoot	*(Scaphiopus holbrookii)*

Invertebrates

False Mealworm Beetle	*(Alobates maria)*
Seed-eating Ground Beetle	*(Amara chalcea)*

Upland (Open Uplands (Grassland & Shrubland))

Pitch Pine Woodland/Barrens - Pitch Pine Woodland

Condition: fair; invasives. Importance to Biodiversity: 3. Degree of Threat: 2; ATVs, invasives.

Threat 1 - ATV use, trampling of habitat.

Actions:
- *Site/area protection; Identify and acquire key parcels for fee purchase and easement Rank: 2*
- *Resource and habitat protection; Control public access. Rank: 1.5*
- *Site/area management; Control public access. Rank: 1.5*

community.

s for restoring this habitat. Rank: 2.5

ds identified in 2.3 Rank: 2.5

ere needed Rank: 1.5

Lagriid Beetle	*(Anaedus brunneus)*
Short-lined Chocolate	*(Argyrostrotis anilis)*
Frosted Elfin	*(Callophrys (Decid.) irus (Baptisia type) AND Callophrys (Decid.) irus (Lupine type))*
Hoary Elfin	*(Callophrys polios)*
Underwing Moth	*(Catocala n. sp.)*
Barrens Chaetaglaea	*(Chaetaglaea tremula)*
Big Sand Tiger Beetle	*(Cicindela formosa generosa)*
Cow Path Tiger Beetle	*(Cicindela purpurea purpurea)*
Oblique-lined Tiger Beetle	*(Cicindela tranquebarica tranquebarica)*
Festive Tiger Beetle	*(Cicindela scutellaris rugifrons)*
Contracted Datana	*(Datana contracta)*
Sleepy Duskywing	*(Erynnis brizo)*
Persius Duskywing	*(Erynnis persius)*
Ground Beetle	*(Geopinus incrassatus)*
Eastern Buck Moth	*(Hemileuca maia)*
Noctuid Moth	*(Hyperstrotia flaviguttata)*
Bee-like Robber Fly	*(Laphria champlainii)*
Robber Fly	*(Pogonosoma dorsatum)*
Edward's Hairstreak	*(Satyrium edwardsii)*
German Cousin	*(Sideridis congermana)*
Marooning Moth	*(Sideridis maryx)*
Blueberry Sallow	*(Sympistis dentata)*
Joyful Holomelina Moth	*(Virbia laeta)*
Barrens Xylotype	*(Xylotype capax)*
Black-eyed Zale	*(Zale curema)*
Pine Barrens Zale	*(Zale lunifera)*
Gray Spring Zale	*(Zale submediana)*
Pine Barrens Zanclognatha	*(Zanclognatha martha)*

Mammals

Eastern Mole	*(Scalopus aquaticus)*

Threats and Actions by Community Type

Upland (Coniferous Woodlands & Forests)

Pitch Pine Woodland/Barren - Barren

Condition: fair. Importance to Biodiversity: 3. Degree of Threat: 2; residential development, lack of natural disturbance (fire).

Threat 1 - Highly developable habitat type; large portions already fragmented by housing (e.g., Kingston Pine Barrens)

Actions:
- *Site/area protection; Identify and acquire key parcels for fee purchase and easement. Rank: 3*
- *Resource and habitat protection; Identify and acquire key parcels for fee purchase and easement. Rank: 3*
- *Policies and regulations; identify and influence mechanisms for incentivizing land owners for conservation and watershed protection (farm, forest and OS; local planning policies that make it possible for land owners to economically benefit) Rank: 2.5*

Threat 2 - Fire-dependent community, there-fore fire suppression is threat.

Actions:
- *Site/area management; Controlled burns, selective harvesting. Rank: 3*
- *Habitat and natural process restoration; high, restore plants (e.g., lupine) for pollinators (frosted elfin, etc.) Rank: 2*

Threat 3 - This community has not been prone to the spread of invasives

Actions:
- *Invasive/problematic species control; Early detection; Provide control where needed Rank: 2*

Threat 4 - Demographic changes from excessive deer browsing

Actions:
- *Invasive/problematic species control; Provide additional hunting opportunities in problem areas; Provide deer control where needed Rank: 2*

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State Wildlife Action Plan
(SWAP)

USERS' GUIDE

Community Wildlife Conservation Guide:
Implementing Rhode Island's Wildlife Action Plan in Your Community

A Guide for Rhode Island Communities, Conservation Groups, and Citizens Working to Protect Wildlife for the Health of Our Communities and Future Generations

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"Nature is not a place to visit. It is home."
~ Gary Snyder

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State of Rhode Island
Department of Environmental Management

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Marsh wren (*Cistothorus palustris*) photo by P. Paton

- RI DEM's *What's the Scoop on Wetlands? Frequently Asked Questions about DEM's Freshwater Wetlands Program* explains the values of wetlands and can help you learn to recognize them on your property and in your neighborhood. It also explains what activities are regulated in or around wetlands and the procedures for applying for permits for regulated activities. The Northern Rhode Island Conservation District's (NRIDC) brochure *Are Wetlands in YOUR Backyard?* provides a condensed look at the value of wetlands and how to recognize them on the landscape.

  RI DEM has also published two guides aimed at helping Rhode Islanders better protect our wetlands. These are the Rhode Island Low Impact Development Site Planning and Design Guidance Manual (March 2011) and the Wetland BMP Manual: Techniques for Avoidance and Minimization (April 2010).

- Vernal pools are small, usually discrete water bodies that develop in seasonally flooded basins too shallow to maintain permanent water. They generally dry up by the end of the growing season, a characteristic that excludes fish and other predators. As such, vernal pools support particularly unique assemblages of plants and animals, including rare amphibians. They have disproportionately large wildlife value for their size and produce thousands of insects as well as frogs and salamanders that leave the pools and spread out into the surrounding forest to become both predators and prey to many other organisms. Vernal pools are the engines that drive forest ecosystems.

  Protecting pool-breeding amphibians requires attention to their complete lifecycle. This includes protecting surrounding uplands and retaining natural forest cover; managing adjacent land uses to prevent pollution and invasive species impacts; and avoiding or removing migration barriers, including use of design and construction Best Development Practices (Calhoun and Klemens 2002).

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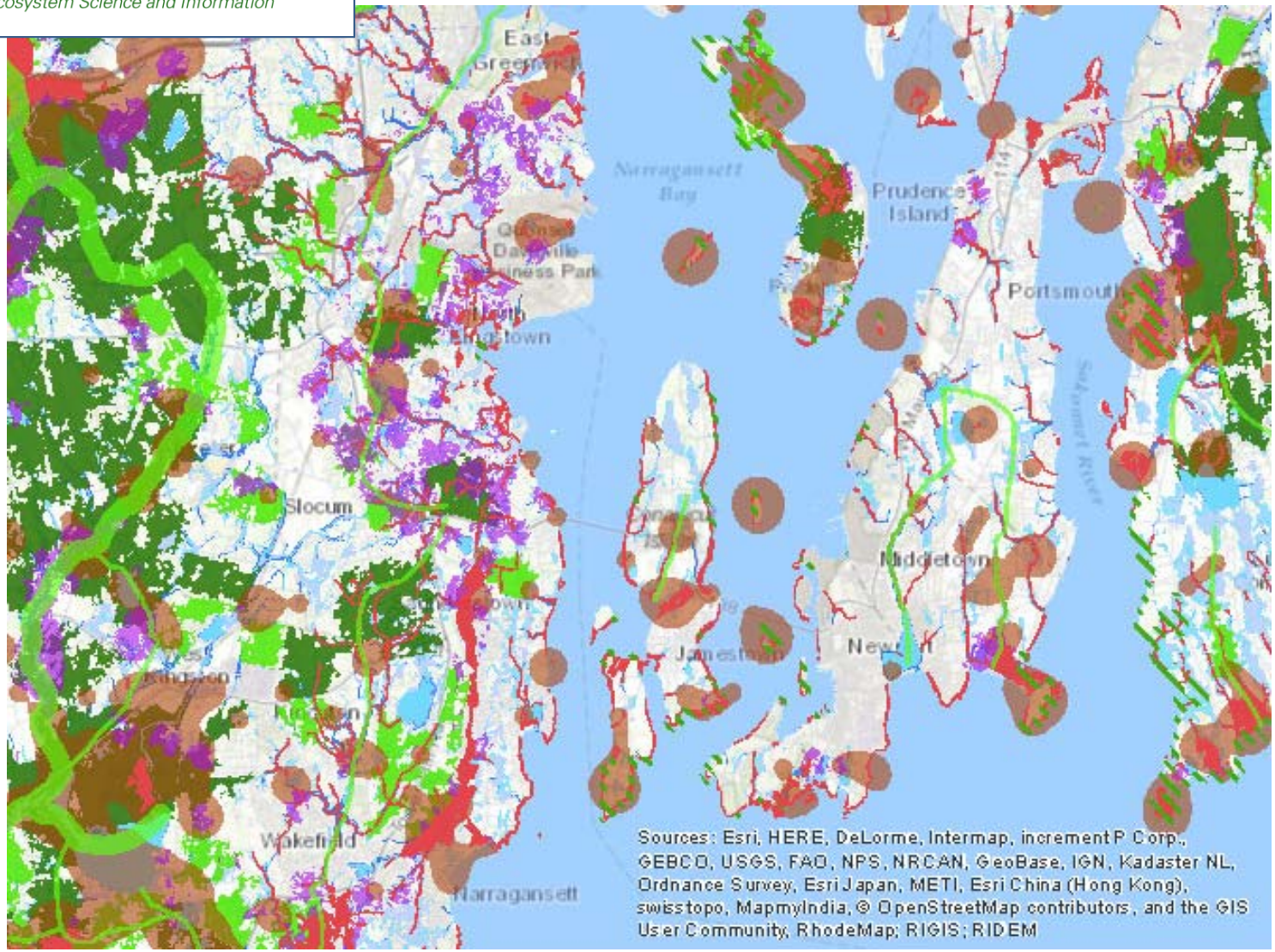
State Wildlife Action Plan (SWAP) USERS' GUIDE

Conservation Opportunity Areas



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