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How information gathered from NETN monitoring programs is used to help guide park management decisions

The I&M Northeast Temperate Network (NETN) collects, stores, and analyzes a wide breadth of natural resource information each and every field season including water quality, forest health dynamics, breeding bird populations, invasive species, and several other monitoring protocols. But does this ever growing mountain of data have any affect on the management decisions that parks need to make year to year? The short answer is “yes.” This series of briefs explores some specific examples.

Protecting Acadia’s Rare Woodlands

The globally rare Coastal Pitch Pine / Broom Crowberry Woodland community only occurs at 20 to 30 places on the entire planet, primarily on coastal acidic rock outcrops in southern Maine. Other smaller populations are found on sandy outwash deposits in Massachusetts and a single known occurrence is in the Shawangunk Mountains of New York. A single 14 acre patch along Acadia National Park’s Wonderland Trail was first documented in the early 2000’s during a vegetation inventory. The sparse canopy is dominated by stunted pitch pine up to about 15 feet in height, and broom crowberry (a rare member of a genus with only two species) is a characteristic dwarf-shrub. The community is influenced both by its coastal position and poor soil conditions, and is typically fire-dependent for regeneration of both the pitch pine and broom crowberry.

At Acadia, the open conditions required by these species may be maintained in part due to harsh coastal conditions and trying to grow on bedrock rather than by fire alone.

Potential Threats

The altered temperature, precipitation and disturbance regimes associated with climate change have the potential to greatly impact the park’s Coastal Pitch Pine / Broom Crowberry Woodland community. As it stands already, pitch pine is at its northern limit and broom crowberry is near its southern range limit. NETN monitoring data will help park officials keep track of the ways long-term climate changes are impacting this rare community.

Visitor impacts, particularly off-trail foot traffic or “social trails,” are another important threat to the only occurrence of this community in the park. The thin, fragile soils and slow-growing plants characteristic of the ground layer make this community particularly sensitive to trampling and slow to recover. Impacts of trampling are visible and widespread throughout this woodland community in Acadia.

NETN Monitoring Information Leads to Protection

In the early days of the NETN forest health monitoring program in 2006, network staff noted several areas in the park's Coastal Pitch Pine / Broom Crowberry Woodland community where social trails had impacted the community. A protocol was developed to specifically monitor the woodland's condition, and NETN began doing so in 2010. Visitor impacts continued to be noted for several years during monitoring, and park resource managers visited the community with NETN staff to document the impacts firsthand. A plan was devised to put up ropes along the trail to discourage hikers from going off trail, and were installed in May of 2013.



Above: One of the several social trails found along the Wonderland Trail that was causing negative impacts to the Coastal Pitch Pine / Broom Crowberry Woodland community. NPS photo.



Right: With NETN monitoring information clearly and consistently showing visitor impacts, the park installed ropes along sections of the Wonderland Trail to discourage off-trail wandering through these sensitive areas. NPS photo.

More Information

NETN Rare Woodland and Forest Communities Monitoring web page:

<http://go.nps.gov/rare>

NETN Rare Woodland and Forest Communities Monitoring **Program Brief:**
Keeping Broom Crowberry From Being Swept Away - Rare Woodland and Forest Community Monitoring

<http://go.nps.gov/broom>

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