

CONNECTICUT BOTANICAL SOCIETY newsletter



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Coming to a Powerline Right-of-Way near You ...

BY THE CBS RIGHTS-OF-WAY SUBCOMMITTEE

THEY CALL IT MAINTENANCE, but it's really a land-cover change unlike anything we've seen before. Throughout Connecticut (CT), the electrical utility company Eversource is clearing large areas in

powerline corridors and rights-of-way (ROWs) of vegetation, covering them with coarse gravel. Dirt access lanes are being transformed into thick gravel-pack roads. Due to new safety and maintenance standards, structures will, from now on, be maintained and/or replaced using heavy equipment, which requires a strong platform

- usually a thick gravel work pad, 10,000 feet square or larger. Eversource still uses temporary wooden mats for maintenance platforms in sensitive areas like wetlands, farmlands, and residential yards. And the company has also used wood matting in other upland habitat, but it generally does not do so unless there is a documented population of a rare species. Critical habitat and rare and uncommon natural communities that are not in wetlands are not offered this protection.

Utility ROWs are known for

their biodiversity. Because they are maintained in an early-successional state, they host a suite of species, many rare, that cannot survive in mature forest or regularly mown fields and



The new packed gravel access roads and pads on a right-of-way. Photo: CBS.

lawn. Among the most important and abundant upland critical habitat types that occur in ROWs are subacidic rocky summit/outcrops (on traprock, amphibolite, gabbro, and some other bedrock types), circumneutral rocky summit/outcrops (on marble bedrock), acidic rocky summit/outcrop (on granitic, pegmatitic, and siliceous bedrock among others), sand barren and sand-barren-like habitat, warm-season grassland, shrubland, and pitch pine woodland. Several types of critical wetland habitat also occur in ROWs, but the threats to them are

mitigated because of the temporary matting normally used in wetlands.

In 2015, the DEEP Natural Diversity Data Base conducted an analysis of the known state-endangered/threatened/special concern ("state-listed") species occurrences in and immediately adjacent to ROWs and counted approximately 350 occurrences of 167 species (80 listed plant species, 44 listed invertebrates, and 38 listed vertebrates). Adding recent rare plant discoveries of which the Committee is aware, there are now approximately 130 occurrences of at least 86 state-listed plants (26% of all state-listed plants) known to be in power line ROWs.

The CT Endangered Species Act (CT ESA) offers some protection for endangered and threatened species for "actions authorized, funded or performed by" a state agency (CGS Section 26-310). For example, if there is an occurrence of an endangered species on state property or where a permit is required from the Department of Energy and Environmental Protection (DEEP),

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the CT ESA applies. Otherwise, there is little or no legal protection for state-listed species. Moreover, many areas along ROWs have not been surveyed, so there is no record of what is there, and regulations protecting critical habitat for rare species have not been established in CT.

The rare plant occurrences currently documented probably represent only the tip-of-the-iceberg of the real numbers that exist in the ROWs. The Connecticut Siting Council, a quasi-judicial body charged with “balancing the need for adequate and reliable public utility services at the lowest reasonable cost with the need to protect the environment and ecology of the state,” oversees infrastructural changes like Eversource’s. However, DEEP’s policy of recommending surveys only for listed species whose presence is already documented in an area, combined with the CT Siting Council’s apparent indifference to the significant biodiversity of ROW upland habitats, and the fact that Eversource currently does not consider rare habitats and natural communities as resources worth protecting in their own right, is resulting in an imperfect storm of destruction of much critical habitat and many rare species populations.

The problem with the current approach to rare plant protection in transmission ROWs is well illustrated by one that passes through a state forest in coastal CT, where there is an exemplary meta-occurrence (population cluster) of sand blackberry (*Rubus cuneifolius*), special concern

in CT. Eversource replaced the old powerline structures there in 2015, but was able to preserve much of the sand blackberry occurrence by using the temporary wooden matting. Recently, however, Eversource determined that all wooden poles need to be replaced with metal poles and submitted a plan to the Connecticut Siting Council and DEEP that called for extensive



A large gravel-paved maintenance pad. Photo: CBS

cut-and-fill and gravelling over of this ROW habitat. Unknowing destruction of rare plant populations would have ensued but for a timely coincidence: a comprehensive rare plant survey was commissioned by land managers at the site just prior to the receipt of the plan for replacing all poles. The survey revealed landmark (very large) occurrences of two additional state special concern plants: Virginia copperleaf (*Acalypha virginica*) and Dillenius’ tick-trefoil (*Desmodium glabellum*). These populations were unknown to Eversource because their biologists had focused only on previously documented species in their surveys.

Eversource’s contractors have recently indicated their willingness to work with the land managers to take measures to preserve all of the

rare plant occurrences in the ROW at this site, and we hope they will follow through. The example of the earlier 2015 work among the forest’s sand blackberry populations illustrates that Eversource is capable of using temporary matting in upland habitat and leaving very little evidence of long-term disturbance to rare plants and critical habitats — *if* they elect to do it.

Rare plants may disappear for various reasons from suitable habitat and then reappear many years later as long as the suitable habitat has not been irreversibly altered (e.g., by replacing rocky outcrops with graveled-over roads and parking-lot-like landscape). If the native landscape and soil features of critical habitat are not destroyed, native rare plants that are not evidently present may reappear from the seed bank following some disturbance or by

dispersal from another population (as may rare animals that require that habitat). This appears to have happened in a section of the above-mentioned state forest ROW that was not disturbed significantly by Eversource in 2015, where a state-endangered orchid reappeared after having not been observed for 22 years.

Common plants that occur in ROWs are also important. Composites, including abundant goldenrods (*Solidago* spp.) make up a significant component of ROW plant communities. They offer late-season nectar and pollen for wild bees, wasps, butterflies, moths, and beetles, which in turn are preyed upon by other invertebrates and vertebrates. Wild indigo (*Baptisia tinctoria*), *Lysimachia* species, and heaths that thrive in

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1. Comprehensive surveys, also called “de novo” surveys, are surveys for all rare species that might reasonably be expected to occur in a ROW section, based on habitat present, the known habitat affinities and phylogeography of the rare species known from a given region, as opposed to surveys focused only on the rare species previously documented from the ROW section or within a small geographic radius of it. The few de novo surveys of transmission ROWs of which we are aware that have been performed by qualified surveyors in the last 40 years have resulted in a disproportionately large number of new discoveries of rare plant and animal species occurrences, which strongly suggests that 1) large portions of transmission ROWs have not been extensively surveyed by qualified persons for rare species in the past, and 2) transmission ROWs are highly likely to host rare plant and animal species occurrences that have not been documented and reported.



Packed gravel deters most vegetation, but the invasive plant mugwort (*Artemisia vulgaris*) thrives — and spreads. Photo: B Sullivan.

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ROWs provide critical nutrition to many rare insects (Wagner et al. 2014). Some of this rich diversity is now being covered with gravel that grows little but mugwort (*Artemisia vulgaris*), an invasive species.

We estimate, based on a GIS analysis of aerial photography from September 2017, that, as of that month, Eversource had cut and filled and graveled over nearly 1,000 acres of ROW habitat in the last 2-3 years, while having replaced only about 25% of their structures. This suggests that by the time they finish replacing structures they will have destroyed or profoundly degraded roughly 4,000 acres of ROW habitat, along with untold numbers of populations of rare species.

In addition to the impacts on plants, habitat fragmentation caused by the new packed gravel roads and pads poses a real threat to birds, the New England cottontail, and other wildlife. The shrubby component of powerline ROWs offers an oasis for declining shrubland birds, such as field sparrow, brown thrasher, eastern towhee, and blue-winged, chestnut-

sided, and prairie warblers (Askins and Field 2016). The dense thickets that often develop in these corridors have been a refuge for New England cottontails both as permanent habitat and as dispersal routes between habitat patches (Fenderson et al. 2014). These corridors offer habitat and connectivity among populations for eastern box turtles as well.

The CT Botanical Society (CBS) has been concerned about the threats to plants, plant communities, and associated wildlife in powerline ROWs for some time. In March of 2017, CBS President David Yih commented on Eversource's Petition 1293 to the CT Siting Council, which requested that no Certificate of Compatibility and Public Need (CCPN) be required for all transmission line maintenance being planned to comply with new National Electric Safety Code standards. Yih expressed that Eversource should be required to demonstrate the specific public need for each project in light of the damage to be done to "unique and valuable habitats." He further requested that ecological surveys be conducted before work commenced in areas that were known to have rare species, and that comprehensive surveys be done for

undocumented sections of ROW. He recommended that the temporary wooden matting Eversource uses in wetlands also be used in uplands rather than permanent gravel pads.

The Siting Council ruled on Petition 1293 that no CCPN was necessary, with some conditions. Eversource was required to file with the Council a sub-petition for each site-specific maintenance activity — including an impact statement and mitigation plan for wetlands, flood zones, natural diversity areas and vegetation management — and provide evidence that they had given a 30-day advance notice to affected towns and abutting landowners.

CBS's Conservation and Ecology Committee has designated a subcommittee to specifically address concerns in ROWs. The new ROW subcommittee provided extensive comments on a DEEP wetland permit application for work in the ROW corridor through Robbins Swamp, pointing out that Eversource had overlooked at least one rare plant population that would be impacted by the project. Again, this omission was evidently due to their focusing their surveys only on previously documented populations known to DEEP, instead of conducting a comprehensive survey for all rare species that would reasonably be expected to occur in this unique area. Because it was a DEEP-issued permit, the CT ESA applied, and there was a public comment period. The subcommittee plans to collaborate with other ecology-minded associations (e.g., birding, entomology, conservation organizations) and meet with Eversource to express our concerns.

What can you do?

1. Stay informed. Visit the CT Siting Council Website regularly. The Siting Council "is responsible for balancing the need for adequate and reliable public utility services ... with the need to protect the environment and

ecology of the state.” You can even receive email alerts about Council meetings and hearings.

2. Even if Eversource has a right-of-way through your land or through land you manage, you can still negotiate with them to minimize impacts. A number of landowners/managers have been granted some modifications and/or remediation of gravel areas. Eversource is required to provide 30-days advance notice to towns and abutting property owners.

3. Be sure to submit your documentation of threatened, endangered and special concern plants to the CT DEEP Natural Diversity Database. See: http://www.ct.gov/deep/cwp/view.asp?a=2702&q=323460&depNav_GID=1641. If no one knows about a rare plant or animal, it cannot be protected.

4. Talk to your legislators. Is the loss of valuable habitat being adequately considered along with the need for reliable utility services and lowest rates?

5. Demand that Eversource conduct comprehensive surveys for all potential Endangered/Threatened/Special Concern species and critical habitats and that they use methodologies that preserve both.

Works Cited

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The Connecticut Botanical Society's Rights-of-way Subcommittee is a part of its Conservation & Ecology Committee.

A New Bluet Species for Connecticut

This spring we heard from Stan Malcolm, former president of the Connecticut Entomological Society and an avid nature photographer. He attached a photo of an unusual species of *Houstonia* he'd seen at Rocky Neck State Park. His wife Julie had spotted it, and their daughter Elizabeth subsequently identified it as tiny bluet (*Houstonia pusilla*), not previously known in Connecticut. We circulated the photo to CBS experts for verification, and CBS Herbarium Committee Chair Sam Saulys quickly confirmed the identification in the field and took a specimen for the Herbarium. The New York Botan-

ical Garden and Arthur Haines of the New England Wild Flower Society concurred in the identification but pointed out that some authorities consider Delaware to be the northern limit of tiny bluet's range in the eastern states. Thus, though it occurs in New Jersey, New York, and now in Connecticut, tiny bluet is deemed "adventive" (recently arrived) in these states.



Chaffseed (*Schwalbea americana*) Reappears in New England

Plant conservation circles were abuzz this summer over the discovery on Cape Cod of a large population (2,600 stems) of chaffseed (*Schwalbea americana*), a federally listed endangered species not seen in New England for over 40 years. In July, Doug McGrady, a CBS member and 15-year Plant Conservation Volunteer with the New England Wild Flower Society, returned to a spot where he'd seen a thistle late last year, to see if it might be the rare *Cirsium horridulum* (yellow thistle). "It was not, but I noticed this other oddball," he wrote. Oddball indeed — chaffseed was last observed in Massachu-

setts in 1965, over a half-century ago. It belongs to the largely parasitic

Orobanchaceae family and is a hemiparasitic plant. A report on Doug's find noted that "there are historic records of American chaffseed along coastal plains from Massachusetts to Louisiana, but populations declined over time due to habitat loss and fire suppression. Since chaffseed depends on partly-open habitat, it requires disturbance on the

landscape." Doug's response when we tried to make a fuss: "I don't know that congratulations are in order. I was simply in the right place at the right time."



Federally endangered chaffseed (*Schwalbea americana*), rediscovered in New England this year. Photo: D. McGrady

1. McGrady's comments are from an email of 8/16/18.

2. Rare Plant Found on Cape Cod. 2018. Massachusetts Division of Fisheries and Wildlife and MassWildlife's Natural Heritage & Endangered Species Program. <https://www.mass.gov/news/rare-plant-found-on-cape-cod>. Accessed 9/20/18.