

Centre County Senior Environmental Corps June 2020

MAY 12 – 13



Make a contribution to the ClearWater Conservancy and to the **Centre County Senior Environmental Corps** (CCPaSEC). Please include an email to ClearWater contactus@clearwaterconservancy.org in order to direct a contribution to us.

Microplastics may threaten caddisflies by destabilizing cases.



*“A study concludes that with an increasing proportion of PVC and PET microplastics (MPs) in *L. basale* caddisfly cases, case stability is reduced. Thus, MPs in caddisfly cases may threaten caddisfly larvae because on the one hand, the larvae are more vulnerable to predators, and MPs may leach toxic additives”.*

Download the study @ <https://rdcu.be/b3205>

Microplastics (MPs) are regularly deposited in aquatic sediments and are incorporated into caddisfly may threaten caddisflies by

destabilizing cases. When case stability is reduced, the protective function of the cases is limited and the larvae may be more prone to predation*. Additionally, larvae may be washed away by the current as plastic is lighter than sand. Both effects could limit the caddisfly's survival, which could have far-reaching consequences as caddisfly larvae are important primary consumers in aquatic ecosystems. *Trout.

Microplastic particles can accumulate in aquatic sediments and, thus, come into contact with epibenthic caddisfly larvae. Once available to the caddisfly larvae, MPs can be ingested (Windsor et al.2019) or incorporated into caddisfly cases (Ehlers et al.2019). Our results show that PET and PVC MPs are actively collected by caddisfly larvae for building emergency and portable cases. A higher proportion of PVC and PET particles in caddisfly cases led to reduced case stability in our experiments. In the field, such a reduction in case stability could limit the caddisfly larva's protection from predators, such as juvenile dragonflies and brown trout that penetrate and crush caddisfly cases to feed on the caddisfly larvae (Boyero et al.2006; Johansson1991), and ultimately reduce the larvae's survival.

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CCPaSEC volunteers do their part



Centre County Senior Environmental Corps

June 2020

Because of COVID-19 concerns, smaller cleanup efforts were conducted during the week of May 3-9. This 24-year-old tradition of keeping our streams and waterways clean while still maintaining our social distance.



Dave Truesdale, Dan DeLotto, Kathi Ferigno and Genie Robine did a cleanup on Filmore

and Purdue Mt. Roads. On Monday, May 4th, they worked about four hours and picked up about 20 bags of trash. Fortunately, for us, Genie didn't need to cart it all home for home garbage pickup, which was the plan for this year, since the usual procedures for cleanups were cancelled. The Benner Township personal came by and trucked our bags away for them. It definitely was not our usual Pa SEC effort but very good, under the circumstances.



Lou Meyer reports that several persons representing "CCPaSEC" (Susan and Lou) and rep-

resenting the Liberty Hill community in Boalsburg, Pa. (Sandy and Keith Ellman) participated in the Clearwater Conservancy Watershed Cleanup Week today. Picked up trash along Route 45 -- Earlysville Road between Business rt. 322 and the Mt. Nittany Expressway!

Study finds creatures can consume Styrofoam

Researchers have found that mealworms can consume potentially toxic plastic additives without ill effects may help solve the world of its massive plastic problem.

The team observed the mealworms eat their way through a block of Styrofoam and excrete 90 percent of a flame retardant used in the plastic

Stanford Woods Institute for the Environment
<https://woods.stanford.edu/>

Centre County will benefit from several wildlife grants that are part of \$1.5 million in [National Fish and Wildlife Foundation](#) funding for conservation of forest and aquatic habitats across the central Appalachia region.

Pennsylvania Wilds, including parts of Centre County, the American Bird Conservatory received a \$175,000 toward a \$375,000 project to improve forest management planning and habitat management for birds, including the golden-winged warbler, cerulean warbler and wood thrush.

Those dynamic conditions, said Dave Gustafson, chief forester with the Pennsylvania Game Commission, will come as a result of actively managing forests through timber harvesting and prescribed fire to create young forest habitats and preserve mature forests. Hunters, bird-watchers and hikers might find the forest management helps them better interact with wildlife, he said, and several eyewitness accounts have already confirmed that.

The mix of young and older forests, said Larkin, are crucial to supporting the life cycle of the golden-winged warbler, cerulean warbler and wood thrush, all of which need different types of forests at different stages in their reproductive cycles.

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<https://www.clearwaterconservancy.org/>

Reminds us to

Sign up to jump into Centred Outdoors
2020!



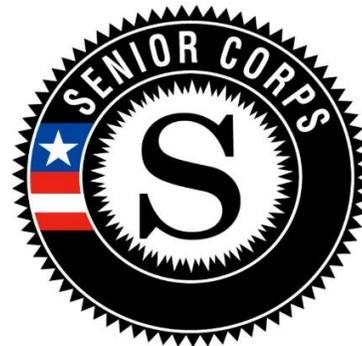
Centred Outdoors 2020 is coming soon with new summer offerings! In the meantime, ClearWater has been delivering weekly Adventure Guides to inboxes all over Central PA with articles, activities, and tips for enjoying the outdoors while staying close to home.

If you aren't receiving the Adventure Guide already and want to be the first to hear about plans for Centred Outdoors this year, sign up today to join our Centred Outdoor Adventure Guide.

<https://www.centredoutdoors.org/>

Pennsylvania Senior Corps

Senior Corps taps the skills, talents, and experience of Americans age 55 and over to meet a wide range of community challenges. Last year, 2019 more than 10,400 Pennsylvania seniors met critical community needs while contributing to longer, healthier lives through one of three Senior Corps programs.



To join us: Please call the Centre County RSVP

(Retired and Senior Volunteer Program)

Monday – Friday 8:30 am - 5:00 pm

Phone (814) 355-6816

The CCPaSEC newsletter is published quarterly except for special events. To contribute news articles, or corrections please Contact Ken Johnson via our CCPaSEC website.

“Unless someone like you cares a whole awful lot, nothing is going to get better. It's not.” — Dr. Seuss

Nature Abounds™ was the primary sponsor and provider of equipment and supplies for CCPaSEC. The ClearWater Conservancy and Centre County RSVP are major supporters. The following provided additional support funding in 2019 for special equipment for one field kit: Financial support for this grant is provided by the Dominion Energy Charitable Foundation which is dedicated to the economic, physical, and social health of the communities served by Dominion Energy companies. Western Pennsylvania Conservancy: This grant program was administered by the Western Pennsylvania Conservancy in commitment to its core mission of conserving Pennsylvania's diverse ecosystems through science-based strategy, leadership, and collaboration,

Patagonia for the protection of water resources in Centre County, PIG Difference, a charitable initiative to salute our customers'