

November 2024**USDA Support for Integrated Pest Management for Blueberry**

Plum curculio adult on blueberry fruit. Photo: C. Rodriguez-Saona.

Cesar Rodriguez-Saona, extension specialist in entomology, Department of Entomology, is the [principal investigator of a two-year, \\$199,783 grant from the USDA Crop Protection and Pest Management program](#) for the project, “Improving Management of a Key Insect Pest of Blueberries Through Optimization of Pollination Services.” Under the two-year grant, which runs from September 1, 2024, to August 31, 2026, Rodriguez-Saona and Rutgers post-doc **Beth Ferguson**, who is co-principal investigator on the project, are investigating an integrated pest and pollinator management strategy for plum curculio, a persistent pest of blueberries in the mid-Atlantic. This pest damages the blueberry fruit through a scar left by feeding damage and from

laying eggs, resulting in premature fruit drop from larvae. The grant is part of a \$20 million investment by the Crop Protection and Pest Management program to address high priority issues related to pests, including insects, nematodes, pathogens, and weeds, and their management using IMP approaches at the state, regional and national levels.

Rutgers-designed Oyster Reef Structure to Help Protect U.S. Military Base from Storms

Part of the Rutgers Reefense Team: (from left) Lead scientist David Bushek, director of Haskin Shellfish Research Laboratory; Professor of Civil Engineering Hani Nassif; Professor of Materials Science and Engineering Richard Riman; field researcher Jenny Shinn, Haskin Lab; Reid Holland, doctoral student, Nassif Lab; Michael Ruzsala, master’s degree student, Nassif Lab. Photo: David Bushek.

On October 30, U.S. Air Force officials installed [the first section of a Rutgers University-designed “self-healing” reef made of custom-designed concrete modules and living oysters](#) in the waters of St. Andrew Bay on the shore of the Tyndall U.S. Air Force Base in northwest Florida. The project, led by **David Bushek** (SEBS/NJAES), **Richard Riman** and **Hani Nassif** (School of Engineering), includes a 160-foot-wide reef structure, composed of about 800 interconnected concrete cubes. This unique reef system is designed to protect the base and its people from hurricanes and tidal surges. The concrete provides a hard substrate that oysters need for attachment and is designed specifically so that more oysters will naturally gravitate to the structures over time, ultimately forming resilient hybrid “living” reefs. Air Force officials are testing the experimental reef, funded through the Reefense program of the

Defense Advanced Research Projects Agency (DARPA), to assess whether it provides adequate coastal defenses against oncoming storms.

Scientists Investigate Ways to Transform Seaweed into Energy and Food

A trio of scientists from Rutgers University-New Brunswick is [studying the potential of turning a species of seaweed into a source of energy and food](#). The researchers from Rutgers Climate and Energy Institute, working with other institutions, are looking to transform naturally abundant, renewable materials into products such as biofuels, animal feed and biochemicals. The Rutgers team is one of five centers in the United States selected for a multi-institution research effort funded at \$47.3 million by Schmidt Sciences, a philanthropic organization fostering the advancement of science and technology. The team will establish a virtual institute-sponsored research center to be called Sargassum BioRefinery (SaBRe). **Debashish Bhattacharya**, Distinguished Professor in the School of Environmental and Biological Sciences, Department of Biochemistry and Microbiology, and his lab are investigating the microorganisms (microbiome) that grow on the salty seaweed, including during its decay. This research has the potential of turning Sargassum – a genus of large brown seaweed abundant in the ocean – from a nuisance, causing environmental and economic devastation in coastal communities into a renewable feedstock of the future.

Of Interest

The following updated bulletin and fact sheets are available on [NJAES Publications](#):

[E234: Turkey Talk: Answers to your Thanksgiving Food Safety Questions](#)

Hughes, L. and Grant, M.

[FS512: Botrytis Blossom Blight in Highbush Blueberry](#)

Sousa, R. and **Oudemans, P.**

[FS886: Ostrich, Emu, and Rhea Production](#)

Stahl, T. and **Westendorf, M.**

[FS1081: To Blanket or Not to Blanket?](#)

Williams, C. and Liburt, N.

[FS1142: Winter Care for Horses](#)

Williams, C. and Ralston, S.

[FS1143: Winter Feeding for Horses](#)

Williams, C. and Ralston, S.

Volunteers Needed for Master Gardener Training

Rutgers Cooperative Extension (RCE) is [seeking volunteers to train as Master Gardeners](#) to help deliver horticulture programs and information to the public. Enrollees can expect to complete training and start service by the second week of January. Anyone interested in gardening and volunteer service can enroll in a free information session in Atlantic, Cape May, Cumberland, Hunterdon, Mercer, Middlesex, Passaic, Sussex and Union counties. Three sessions remain: November 27 at 9 a.m., December 4 at 9 a.m., and December 5 at 6 p.m. For more information, contact Ruth Carll, RCE Consumer Horticulture and Master Gardener Programs, at 848-932-4211 or via email at ruth.carll@rutgers.edu.

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