



United States Department of Agriculture



# Cape May Plant Materials Center 60<sup>th</sup> Anniversary Field Day Brochure and Brief Summary of the Center's History

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<https://www.nrcs.usda.gov/wps/portal/nrcs/main/plantmaterials/pmc/northeast/njpmc/>



The Cape May Plant Materials Center provides plant solutions for natural resource conservation concerns pertaining to coastal shorelines, sand dunes, critical areas, and coastal grassland habitat serving the Mid-Atlantic region.



## 60<sup>th</sup> Anniversary Field Day September 25, 2025 Celebrating 60 Years of Developing Vegetative Plant Solutions 1965-2025



## Agenda

- 9:00 – 9:30 - Arrival & Check In (continental breakfast and refreshments provided)
- 9:30 – 9:45 - Welcome Remarks & Housekeeping
- 9:45 – 11:45 - Guest Speakers (see below) & PMC Presentation (Chris Miller)
- 11:45 – 12:00 - Hamer Germplasm Sea Oats Release Document Signing Ceremony & Don Hamer Comments
- 12:00 – 1:00 - Lunch (provided)/Networking/Former PMC Staff Comments
- 1:00 – 4:00 - Greenhouse, Seed Cleaning Facility, & Field Tours

## Guest Speakers

Julie Hawkins - USDA-NRCS, NJ State Conservationist

Kasey Taylor - USDA-NRCS, Regional Conservationist for the Northeast Region

Frank Minch - NJ Dept. of Agriculture, Division of Agricultural and Natural Resources, Director

Bob Andrzejczak - USDA Farm Service Agency, State Executive Director

Allen Carter - NJ Farm Bureau, President

Joseph Lomax - DelAtlantic Conservation District Board of Supervisors, Vice-Chairman

John Englert - USDA-NRCS, National Plant Materials Program Leader

# Welcome to the Cape May Plant Materials Center 60th Anniversary Field Day

The USDA Natural Resources Conservation Service (NRCS) and Cape May Plant Materials Center (PMC) staff take great pride in welcoming you to this special field day recognizing 60 years of operation of the Cape May PMC and 90 years since the creation of the Soil Conservation Service as a permanent agency which would later be renamed the NRCS in 1994. This long-term effort of plant evaluation and technology development has been strengthened by partnerships. The Cape May PMC has formed and nurtured internal partnerships with other PMCs, as well as external partnerships with other federal and state agencies, nonprofit organizations, academic institutions, and commercial nurseries working towards common goals. The cooperative efforts of these partnerships have been a critical element leading to the development of 15 conservation plant releases, numerous technical publications, and regular training activities. We acknowledge and appreciate the group contribution that has led to the accomplishments of the Cape May PMC and wish for your continued support of the Plant Materials Program.



We encourage you to enjoy your time today at the Cape May PMC and take time to look around and explore all our PMC has to offer. We hope you enjoy the presentations, demonstrations, and tours we have scheduled today. We recommend active participation and encourage you to interact with PMC staff. We look forward to sharing bonus material on PMC studies, demonstrations, and production operations



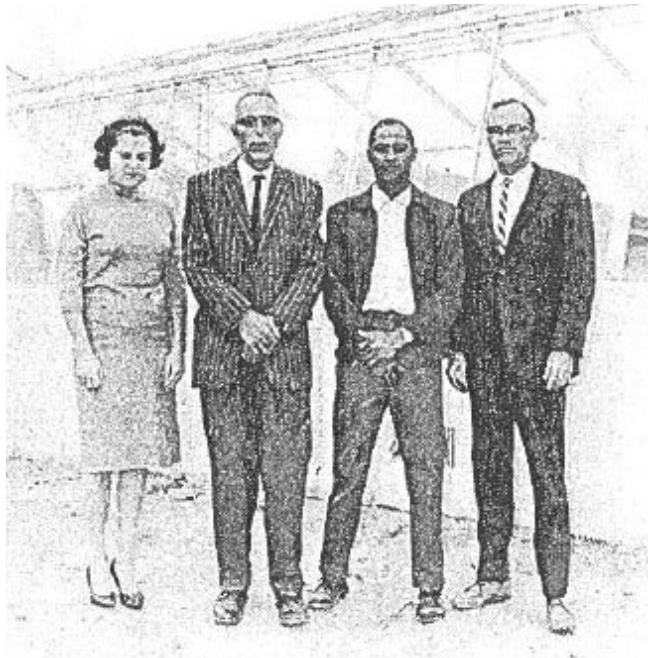
If you take any great photos or videos during your visit and would like to share, we invite you to upload them [here](#) or scan the QR code to the right (for security purposes, a USDA sign-in is required to upload).

## Cape May Plant Materials Center Background

The Cape May Plant Materials Center is one of 25 PMCs within the USDA NRCS Plant Materials Program (PMP) that forms a nationwide network of PMCs strategically located based on soil and climatic conditions. The Cape May PMC primarily serves customers in the Mid-Atlantic region. The PMCs that form the PMP share a common mission and vision. The mission, to develop plant solutions to solve conservation concerns, is achieved under the PMP's overarching vision to develop and deliver vegetative solutions and conservation technology for NRCS customers. The PMP conducts its plant evaluation activities under the guiding philosophy of Dr. Franklin J. Crider, first head of the PMP, who held the belief that nature has evolved a plant for almost every growing condition.

The Cape May PMC operates through an agreement with the Cape Atlantic Soil Conservation District (SCD). The Cape Atlantic SCD provides PMC support and assistance with plant materials distribution, laboratory seed viability tests, and outreach/promotion of PMC products and events.

## How it started...



*Photo from the spring 1966 Cape-Atlantic Soil Conservation District Newsletter.*

*Original photo caption: "Dr. Virgil Hawk (second from left) is the newly appointed manager of the Plant Materials Center located in Swainton, Cape May County, New Jersey. Assisting Dr. Hawk at the Center are (left to right) Mrs. Gail Norton, Secretary; Donald Hamer, Aide; and Curtis Sharp, Plant Materials Specialist. Picture was taken near Center's new greenhouse."*



"From its beginning, the Plant Materials Program has sought superior plants and methods for using them in the war against past and evolving, natural resources degradation. It has changed over the years, always adjusting to meet evolving needs."

Curtis Sharp (former National Program Leader)



## How it's going...

"I feel blessed and honored to have been a past Cape May PMC Manager, the best position I had in my career. It was truly a very exciting period of my career; learning new plants, meeting and working with many very talented and knowledgeable people; working with other organizations... An example of teamwork of staff that is critical to efficient operations."

Fred Gaffney (PMC Manager, 1970-1973)



*From left to right: Don Hamer, Curtis Sharp, and Chris Miller meet at the Cape May PMC (2022) to reminisce and discuss future Plant Materials Program efforts.*



# History of the Plant Materials Program and the Cape May Plant Materials Center

In the early 1930s, Congress responded to the “Dust Bowl” by creating the Soil Conservation Service (SCS) Division of Nurseries under the USDA in 1935. Over time, the agency’s responsibilities increased, as did the types of resource concerns addressed. The program was later renamed the SCS Plant Materials Program, and in 1994, when the SCS was renamed NRCS to more accurately describe the increased scope of resource concerns addressed by the agency, it became the NRCS Plant Materials Program. The reorganization and renaming also acted as a sign of the continued commitment of the Federal Government to address a wide array of conservation challenges using science-based tools and standards.

Since its inception, the PMP had performed the function of a nursery program, producing hundreds of millions of plants annually while conducting observational trials for the purpose of plant selection and development. The 1954 USDA appropriations act designated PMCs as “observational nurseries,” distinguishing them from “production nurseries,” and thereby relieving PMCs of the responsibility for mass production of plants and allowing them to concentrate their efforts on the development of plant technology in the form of varietal plant releases and other products.

The Cape May PMC was established in 1965, making it one of the more recent additions to the PMP (most PMCs were operating before 1960 with only six PMCs forming after the Cape May PMC). The Cape May PMC was mandated by Congress to test and develop plants for shoreline restoration and make them available to the public through the commercial nursery industry. A catalyst that motivated Congress to appropriate funding for the creation of the Cape May PMC was the devastation caused by a 1962 nor’easter storm, the Ash Wednesday Storm. Considered by the U.S. Geological Survey to be one of the most destructive storms ever to impact the Mid-Atlantic States, the Ash Wednesday Storm lasted 3 days (5 tide cycles) and caused hundreds of millions of dollars of property damage in six states, over 1,000 injuries, and 40 deaths on the Northeast Coast. The majority of property damage occurred where healthy dune systems were not established to protect structures from storm surges. To this day, minimizing the impacts of coastal storms via plant solutions on the dune systems is a task that falls within the realm of the Cape May PMC’s responsibility to focus primarily on highly erodible critical areas of the Mid-Atlantic coastal plains.

The establishment of the Cape May PMC required the concerted effort of many individuals, but several deserve special recognition for the roles they played to advance the cause. NJ State Conservationist Selden Tinsley, Regional Plant Materials Specialist Wilmer W. Steiner, and Senator Clifford Chase of NJ all filled instrumental roles in the founding and establishment of the Cape May Plant Materials Center.



*Aerial photo of Cape May PMC (May 21, 1965) land prior to establishment of fields and construction of buildings.*



*Aerial photo of Cape May PMC (April 26, 1967) showing newly established field plantings and recently constructed buildings.*

# Important Changes Within the Plant Materials Program



Photo from the 1963 USDA SCS publication "Study of Need for a Plant Materials Center in Coastal Plain Area."

Original photo caption: "Autumn olive is an outstanding fall fruiting shrub used as food and cover by more than 20 Northeast songbirds and game animals. Its development was the result of SCS plant materials work. Further selection is needed to extend its range of adaptation and season of food production."

Views on the nativity of species and the importance of a plant's origin have shifted over the course of the PMP's operation and the broader history of conservation practices. The focus of PMP plant selection strongly shifted in the 1970's and 1980's to native species for conservation applications. This was an intentional forward thinking and proactive emphasis shift on the part of the PMP to prevent the spread of invasive species at a time when a miniscule amount of research (Figure 2) existed on the widespread ramifications of nonnative invasive species used for conservation purposes.

With a primary focus on the development of native species for conservation plant releases and through the process of discontinuing releases of nonnative species, the PMP increased the percentage of native species conservation plant releases from 75% to 83% (Figure 1). The Cape May PMC most recently discontinued releases of 'Sandy' rugosa rose, VA-70 shrub lespedeza, and 'Emerald Sea' shore juniper for concerns of potential invasiveness.

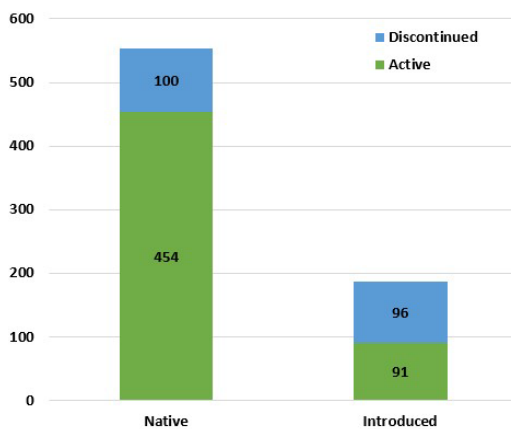


Figure 1. Distribution of native/introduced and active/discontinued PMP conservation plant releases.

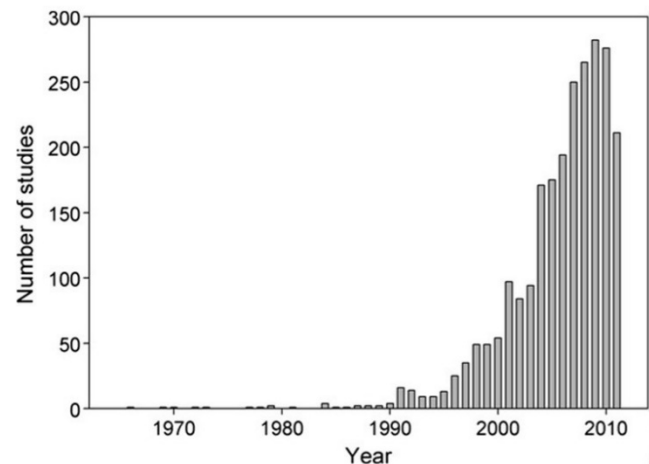


Figure 2. Published findings from an extensive, systematic literature review of biological invasion studies (Lowry et al., 2013).

**Table 1. Discontinued Cape May PMC Conservation Plant Releases.**

Release Name	Common Name	Release Type	Release Year	Year Discontinued
VA-70	Thunberg's lespedeza	informal	1952	2020
'Rem Red'	amur honeysuckle	cultivar	1970	prior to 2008
'Emerald Sea'	shore juniper	cultivar	1971	prior to 2008
'Sea Isle'	Japanese sedge	cultivar	1984	2020
'Sandy'	rugosa rose	cultivar	1993	2020

## Recent and Current Studies

The Cape May PMC published two Final Study Reports in FY24: [Greenhouse Evaluation of Seedling Vigor of Bushy Bluestem \(\*Andropogon glomeratus\*\) Wild Collections](#) and [Evaluation of Saltmeadow Cordgrass \(\*Spartina patens\*\) Varieties for Biomass Production in the Mid-Atlantic Coastal Region](#).

The bushy bluestem study report details a one-year initial screening trial to complement advanced field trials planned to develop a bushy bluestem conservation plant release. Although bushy bluestem seed is often unavailable from commercial sources, it is recommended for use in 15 NRCS conservation practice standards, 14 of which are listed in the Field Office Technical Guides of Mid-Atlantic and Northeast states. A commercially available seed source of bushy bluestem with superior seedling vigor that could be reliably established via direct seeding will make its use in NRCS conservation practice standards more feasible.

The saltmeadow cordgrass study report discusses a 4-year comparative field trial of three NRCS PMP conservation plant releases: ‘[Flageo](#)’, ‘[Avalon](#)’, and ‘[Sharp](#)’. The primary objective of the trial was to compare biomass production of the releases. Information gained provides guidance on variety selection for landowners considering saltmeadow cordgrass production as a mitigation option on marginal farmland affected by saltwater intrusion.

In FY25, study plans have been developed and approved for two new studies: a field comparison trial of bushy bluestem wild collections and a comparison trial of Mid-Atlantic Virginia saltmarsh mallow (*Kosteletzkya virginica*) wild collections for wildlife beneficial attributes. Both studies have been initiated, and study plots have been established.

The FY25 bushy bluestem study builds upon the FY24 seedling vigor study. The objective of the field trial is to determine if any wild bushy bluestem collections display superior attributes (stem diameter, stem density, plant height, or dry matter yield) for NRCS conservation practice standards for which bushy bluestem is recommended.

The lengthy bloom period and nutritionally valuable seed make Virginia saltmarsh mallow a valuable species for conservation practice standards concerning wildlife habitat. However, commercial sources of seed are rare and often unavailable. The objective of the Virginia saltmarsh mallow study is to examine wildlife beneficial attributes (inflorescence abundance, flowering period duration, and seed yield) of regionally distinct Mid-Atlantic Virginia saltmarsh mallow wild collections to determine if any display superior performance for conservation practice standard applications. Results from this study may contribute to the development of a conservation plant release selected for superior wildlife value attributes.

Lastly, a formal study plan (currently in review process) was developed this year collaboratively with the Maryland PMC to conduct greenhouse hydroponic plant salinity tolerance trials. The Cape May PMC has been conducting [preliminary trials](#) to develop standardized protocols since 2021. The primary objective of these trials is to guide plant recommendations for use on marginal farmland to mitigate the impacts of saltwater intrusion, but findings could be applicable for living shoreline restoration projects as well.



Mike Yacovelli (left) and Dan Mull (right) conduct seedling height measurements.



The Cape May PMC Virginia saltmarsh mallow production field is a popular stop for invertebrates during the flowering period.



Prairie cordgrass plants growing in hydroponic systems used to conduct salinity tolerance trials at the Cape May PMC.

# Newest Conservation Plant Release Nearly Finalized

Hamer Germplasm sea oats (*Uniola paniculata*) will be a selected class commercial release. Named after Donald Hamer, former Cape May PMC Manager, this germplasm was selected for long term survival in the northern Mid-Atlantic region. It will be a valuable option to expand the plant diversity of dune vegetation in restoration projects on primary dune systems. Planting trials were conducted by Cape May PMC staff with Don's assistance and leadership. This effort began in 1981 with seed collections from natural stands in Virginia and North Carolina. Field trials were conducted until 1995 when the project was shelved indefinitely. The project was reinitiated in 2009 and continued with more recent studies beginning in 2013 and 2017. Seed and vegetative production of Hamer Germplasm sea oats will be maintained by the USDA-NRCS Cape May PMC. Seed and plants will be provided to commercial nurseries and seed producers for increase and to other interested parties, as available.



*Don Hamer inspecting a sea oats trial planting.*



*Closeup of sea oats seedheads.*

**Table 2. Cape May PMC Conservation Plant Releases.**

Release Name	Common Name	Release Year	Release Type
<a href="#">‘Cape’</a>	American beachgrass	1972	cultivar
<a href="#">‘Atlantic’</a>	coastal panicgrass	1981	cultivar
<a href="#">‘Avalon’</a>	saltmeadow cordgrass	1986	cultivar
<a href="#">‘Flageo’</a>	saltmeadow cordgrass	1990	cultivar
<a href="#">‘Wildwood’</a>	bayberry	1994	cultivar
<a href="#">‘Ocean View’</a>	beach plum	1994	cultivar
<a href="#">Suther Germplasm</a>	big bluestem	2002	source identified
<a href="#">Suther Germplasm</a>	little bluestem	2002	source identified
<a href="#">Suther Germplasm</a>	Indiangrass	2002	source identified
<a href="#">‘Carthage’</a>	switchgrass	2006	cultivar
<a href="#">Dune Crest Germplasm</a>	coastal little bluestem	2007	source identified
<a href="#">Coastal Germplasm</a>	Indiangrass	2007	source identified
<a href="#">High Tide Germplasm</a>	switchgrass	2009	selected
<a href="#">Timber Germplasm</a>	switchgrass	2009	selected
<a href="#">Monarch Germplasm</a>	seaside goldenrod	2010	source identified
<a href="#">Southampton Germplasm</a>	prairie cordgrass	2013	selected
<a href="#">Hamer Germplasm</a>	sea oats	2025	selected

## Cape May PMC Major Activities Timeline

- **1972** - Commercial Release of 'Cape' variety American beachgrass selected from an evaluation of 50 accessions collected from MA to NC by Curtis Sharp, Plant Materials Specialist. Collections began immediately at the inception of the Plant Center in 1965.
- **Mid to late 1970s** - Developed Vegetative Non-Structural Tidal Shoreline Planting Guidelines in cooperation with Army Corps of Engineers and refined and tested with Virginia Institute of Marine Science.
- **Late 1970s to early 1990s** - Additional dune/shoreline collections/evaluations made for coastal panicgrass, saltmeadow cordgrass, bayberry, beach plum, and sea oats.
- **Early 1990s** - Refined seeding techniques for establishing 'Atlantic' coastal panicgrass on sand dunes.
- **Early to mid-1990s** - Conducted water quality (vegetative filter strip) and freshwater wetland planting studies.
- **Late 1990s to early 2000's** - Initiated native warm season grass plant establishment, carbon sequestration and riparian buffer studies in partnership with the USDA-ARS Pasture Systems Lab at University Park, PA.
- **2002 to 2010** - Accelerated collections of source-identified native grass ecotypes for North Carolina and Southern New England.
- **2005 to 2020** - Facilitated in the establishment and continued a partnership with the Cape May County Beach Plum Growers Association. The purpose of this network was to cooperate in developing and marketing a sustainable beach plum industry in southern NJ.
- **2005 to 2009** - Established field studies to determine the effectiveness of native warm season grasses for riparian zones (in cooperation with USDA-ARS, Pasture Systems Lab).
- **2009 to 2012** - Conducted switchgrass evaluations and genetic analysis for biomass production (in cooperation with Rutgers University).
- **2009 to present** - Advanced knowledge of pollinator plant species' attributes, uses and establishment (in coordination with the Xerces Society and Rutgers University).
- **2009 to 2012** - Developed seeding specifications for smooth cordgrass (*Spartina alterniflora*) through seeding trials in cooperation with ACOE-Jamaica Bay, NY Project. Genetic analysis was also done on smooth cordgrass populations in the NYC metropolitan, southern NJ and southern New England area in cooperation with Rutgers University.
- **2013 to After Superstorm Sandy**; NJ Spotlight News Video: "*Sandy Causes a Demand for Dune grass as a Defense Against Storms*" (NJN News). **Press Article**: "*Better Dunes Get Their Start on the Mainland*" (Press of Atlantic City).
- **2012 to 2016** - PMC evaluations of alternative warm season cover crops for mid-summer agricultural applications.
- **2017 to 2018** - Project on culturally significant coastal plant propagation and training (Mashpee-Wampanoag Tribe, Cape Cod, MA).
- **2019 to present** - SALT (Salt Affected Lands in Transition) has been our priority research and study focus to help address saltwater intrusion on agricultural land.

## Cape May Plant Materials Center Awards

- 1988 National PM Program-Plant Materials Center of the Year
  - 2004 Coastal America Partnership Award (Roanoke Island-Festival Park, NC Shoreline Restoration)
- 2008 National Park Service, Special Recognition Award (Gateway and Acadia Parks)
  - 2009 Coastal America Spirit Award (Jamaica Bay, NY Marsh Islands Restoration)

**Table 3. Number and Type of Cape May PMC Publications Available on the PM Website.**

Publication Type	Number of Publications
Annual Progress Reports of Activities	8
Annual Technical Reports	8
Field Office Technical Guides	4
Final Study Reports	8
Information Brochures and Flyers	2
Interviews	6
Major Publications	3
Newsletters	3
Plant Fact Sheets	4
Plant Guides	30
Posters	8
Published Abstracts	6
Published Symposium Proceedings	2
Refereed Journal Articles	6
Release Brochures	16
Release Notices	1
Technical Notes	10

# Cape May Plant Materials Center Staffing History

## Manager

Christopher Miller 2008-present  
William Skaradek 1997-2008  
Michael R. Fournier 1994-1997  
Donald Hamer 1985-1994  
Cluster R. Belcher 1973-1985  
Fred Gaffney 1970-1973  
Dr. Virgil B. Hawk 1965-1970

## Study Leader/Agronomist

Scott Snell 2011-present  
Sandra Primard 1989-1993  
Randy Mandel 1989-1991  
James Kube 1989

## Soil Conservationist

Chris Sheahan 2012-2016  
Michael Fournier 1990-1994  
Harold Yohn 1986-1989  
Phil Koch 1981  
Ruben Keesee 1975-1977

## Farm Foreman

Mike Yacovelli 2015-present  
James Futrell 1990-2015  
Wilson Merrick 1965-1990

## Biological Science Technician

Scott Snell 2008-2011  
Elizabeth Marshall 2004-2015  
Noel Murray 1985-2008

## Administrative Assistant

Barbara Turnier 1977-2007  
Gail Norton 1965-1967

## Plant Materials Specialist

Christopher Miller 1991-2008  
Cluster Belcher 1983-1991  
Frank Webb 1974-1983  
Charles Mowry 1970-1974  
Curtis Sharp 1965-1970

# Current Cape May Plant Materials Center Staff



Left to right: Scott Snell, Chris Miller, Mike Yacovelli.

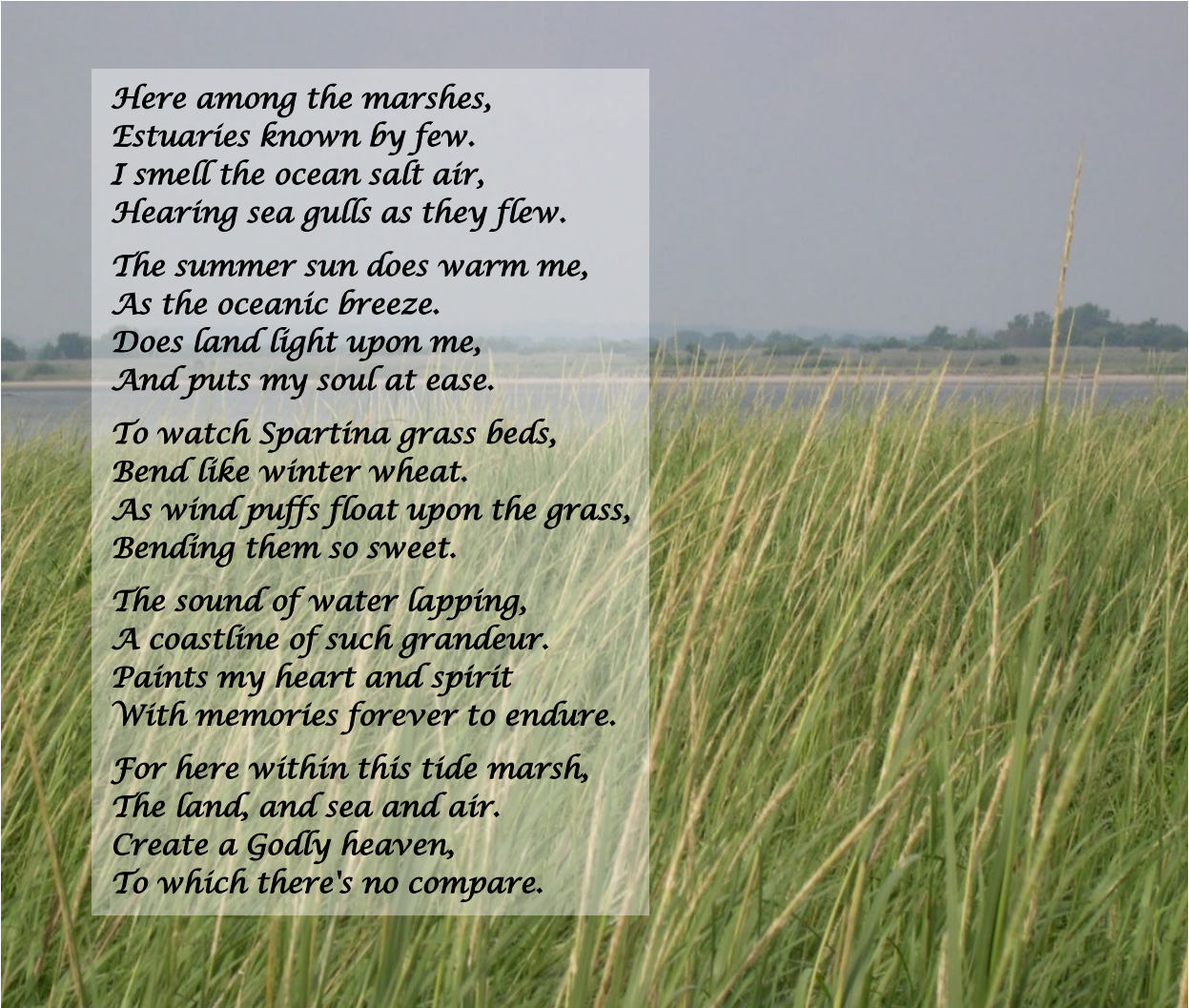


Dan Mull-Retired NRCS, PMC Intermittent Employee

## Literature Cited

Lowry, E., E.J. Rollinson, A.J. Laybourne, T.E. Scott, M.E. Aiello-Lammens, S.M. Gray, J. Mickley, and J. Gurevitch. 2013. Biological invasions: a field synopsis, systematic review, and database of the literature. *Ecol. Evol.* 3(1): 182-196.

## *TIDE MARSH*



*Here among the marshes,  
Estuaries known by few.  
I smell the ocean salt air,  
Hearing sea gulls as they flew.*

*The summer sun does warm me,  
As the oceanic breeze.  
Does land light upon me,  
And puts my soul at ease.*

*To watch Spartina grass beds,  
Bend like winter wheat.  
As wind puffs float upon the grass,  
Bending them so sweet.*

*The sound of water lapping,  
A coastline of such grandeur.  
Paints my heart and spirit  
With memories forever to endure.*

*For here within this tide marsh,  
The land, and sea and air.  
Create a Godly heaven,  
To which there's no compare.*

*By Billy Skaradek - Cape May Plant Materials Center Manager (1997 - 2008)*

## *STEADFAST*



*By Scott Snell - Cape May Plant Materials Center Study Leader (current)*

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