

Waxing Poetic

... about the overlapping ranges of northern bayberry and southern wax myrtle, benefitting a variety of wintering bird species.



Bayberry generally loses most of its leaves during winter in southern New Jersey. In addition to its use in folk and Native American remedies, the waxy bayberries were collected by colonists to make candles. ALL PHOTOS BY THE AUTHOR

By Tony Klock, CU Maurice River

If there are woody shrubs that exemplify winter botany in Southern New Jersey, the Northern Bayberry (*Morella pensylvanica*) and Southern Wax Myrtle (*Morella cerifera*) are among them to be sure. These members of the hemispheric-spanning myrtle family are found throughout

our region, yet may provide identification challenges for those of us who are interested in observing and studying some of our native species during the winter months. Both species are classified in the genus *Morella*, though there is some disagreement among experts as to whether they are actually distinct species. Regardless, both shrubs serve important roles in their respective ecosystems, providing benefits for wildlife as well as for companion plant species that are commonly associated with them.

Both northern bayberry and southern wax myrtle are known for their distinctively pleasant and spicy aroma. It is hard to walk among them without brushing against the small wedge-shaped leaves to release the evocative bayberry fragrance. Both species' leaves are dotted with resin spots that release the scent when bruised or crushed. Southern wax myrtle, though more reliably evergreen than its northern counterpart, has resin dots on both upper and lower leaf surfaces, whereas the mostly deciduous northern bayberry has them only on the leaf underside.



Southern wax myrtle is loaded with berries that provide forage to a number of wintering bird species. Wax myrtle keeps its leaves during winter and offers good cover from winter's chill.

During the growing season, distinctions between the leaf shapes of both shrubs may also prove diagnostic. Both leaves are slightly toothed towards the tips: northern bayberry leaves are wider at the tip as opposed to the more tapered leaf of the southern wax myrtle. The bark of both types is gray and relatively smooth.

The growth habit of each species is likely determined by their respective habitats, though both flourish in relatively poor soils and tolerate low water conditions. Northern bayberry is a typical dune and maritime forest shrub due to its ability to withstand excessive winds and salt spray from the

Atlantic, and it ranges from Newfoundland to the barrier islands of North Carolina.

Southern wax myrtles tend to reach their northern concentrations in southern New Jersey and appear along the coastal plain into Texas. They are often located in a wider range of inland environments such as interdune swales and maritime swamps and forests, as well as more inland hardwood forests and swamps.

Both species are symbiotically associated with nitrogen-fixing bacteria in the ground, helping to enrich the soil and providing nutrients to other plant species such as goldenrod and dune grasses. These in turn encourage insects such as our migrating monarch butterflies, and resident and migrating songbirds like sparrows and warblers.

Both northern bayberry and southern wax myrtle are known to spread via rhizomes and may often form dense, sometimes impenetrable colonies, stabilizing the earth around them and providing protection and habitat for many songbirds and small mammals. In addition, both species are mostly dioecious, meaning that, like our hollies, there are both male and female plants with the small gray, waxy berries occurring on the females. They are most

often wind-pollinated throughout the spring and early summer. The male flowers are small catkins, long densely-compacted male structures; the inconspicuous female flowers give way to small green sessile fruits covered in dense hairs which, upon maturation, are masked by a gray waxy coating: the easily identifiable "bayberry".

The species name, "*Cerifera*," refers to this "wax-bearing" trait.

Making use of the wax gathered from bayberry fruits dates back to colonial days. The wax, laboriously gathered and rendered (fifteen pounds of berries might be required to produce one pound of bayberry wax), was considered preferable to the ubiquitous tallow (animal fat) candles of the day due to its clean burn and pleasant scent. The practice of lighting bayberry candles around the winter holidays prompted this traditional poem:

*"This bayberry candle is a gift from a friend.
On Christmas Eve, burn it down to the end.
A bayberry candle burned down to the
socket, brings health to the home and wealth
to the pocket!"*



Yellow-rumped warblers have adapted to digest the waxy seeds of a bayberry. Thorny multiflora roses intertwined in the shrub offer added protection from predators.

Northern bayberry and Southern wax myrtle provide more than good fortune; they are keystone species and play an integral role in their respective habitats. In addition to providing cover, soil nutrients, and soil stabilization, their fruits sustain many avian species throughout long and lean months. The yellow-rumped warbler (*Setophaga coronata*) is one particular species that is closely associated with the bayberries. An earlier common name, *Myrtle Warbler*, reflected this relationship. Like most warblers, indeed like most passerines, yellow rumps are insectivorous especially when feeding their nestlings. However, unlike most of its warbler cousins, yellow rumps are also capable of gleaning enough

energy from the waxy but energy-rich bayberries to survive our traditionally frozen northern winters. Studies indicate that yellow rumps are able to devote more time and enzymes to processing what to others is a medicinal, but toxic and possibly carcinogenic, compound—*myricitrin*. Therefore yellow-rumped warblers can use them to withstand New Jersey winters.

The berries also play a crucial role in the southern migration of tree swallows which, like yellow-rumped warblers, are capable of processing the waxy bayberries during their fall migrations.

When walking the beaches or among our South Jersey woodlands, I am always uplifted and gratified by my interactions with the genus *Morella*. Northern bayberry stirs the northern spirit and grounds me in this place, and the same could be said for southern wax myrtle, as both represent what is vital in defining our “Down Jersey” as a crossroads of north and south, as a place where ranges overlap, as a small place that packs a big ecological punch—which is a place undergoing intense and rapid change. It is a place worth preserving.

Take the time to smell the bayberries.