

## *Battus philenor*

By Kim Smith

What was that dazzling butterfly seen in our garden? All season we had been delighted with pollinators of nearly every description. In early spring the cadmium orange Baltimore Orioles arrived nectaring and distributing pollen for the fruiting pear, plum, apple, and cherry trees. They were followed by a long season of twice-daily visits from a nesting hummingbird nectaring at the red and orange tubular-shaped flowers planted throughout the garden in which to lure her. And we have been graced with nearly every kind of butterfly, skipper and moth imagined for a New England garden. While speaking with a friend on the phone I walked to the kitchen window and glanced into the garden. Electric blue flashes caught my eye. An enormous shadowy black and blue butterfly with rapid, shallow wingbeats was darting from verbena to verbena, pausing ever so briefly to nectar, and then tentatively alighting on the next bobbing purple top. I apologized to my dear friend and told her I would ring back later. Racing out to the garden with camera in hand, thankfully, it was still there. With the daylight rapidly disappearing on this late September afternoon I found my mystery butterfly nearly impossible to photograph. To photograph a skittish subject, an Eastern Tiger Swallowtail, for example, I would usually adjust the shutter speed to a higher setting, but that only works well in strong daylight. Oh well, I had to take my chances and hope for the best. Elusive and intriguing, the moment I drew near, he was gone. When photographing a reluctant butterfly, I have learned to go away and then return as deftly as possible to take a few more snapshots. This went on for about an hour, with me moving in closer and closer with the camera, he disappearing over the garden wall, my nonchalantly walking away from the verbenas pretending not to care, and he returning for more sweet nectar. Our fancy dinner I had in mind, which would take at least an hour an hour to prepare, was fast becoming one of those twenty-minute specials. By six o'clock the light had faded entirely and I hurriedly started cooking. Downloading the photos while making dinner, I was dying to see if there was anything other than a mere blur. Better not look, because then I would hardly tear myself away.

The Pipevine Swallowtail (*Battus philenor*) is a large butterfly with a wingspan of 3.5 inches. The dorsal (upper surface) forewings are black and the hindwings of the males are a shimmering iridescent metallic-blue; the females are similar, but with less pronounced iridescence. The ventral, or undersides, are black with a margin bordering the hindwings, of *seven vivid orange polka dots* set in a field of iridescent blue and their bodies are also fringed with iridescent blue fur-like scales.

The Pipevine Swallowtail is a perfect example of an “aposematic” creature, a term used to describe the open flaunting of bright colors and/or rich patterning. Although bedazzling to people, it is an adaptation that has evolved as a cautionary warning to would-be predators. Pipevine caterpillars store toxic alkaloids, which are found in the foliage of their host plants, members of the *Aristolochia* genus. These chemicals persist in the bodies and wings of the adults, eggs, caterpillar exoskeleton, and pupae. Just as the toxic alkaloids of milkweed plants are sequestered in the Monarchs, species of the *Aristolochiaceae* make the Pipevine Swallowtail one of the most distasteful butterflies of the U.S. East Coast. The unsuspecting bird attempts a bite and is immediately assailed by an acrid oozing liquid, usually a sufficient deterrent to future attacks. Aposematism is such a successful adaptation that palatable butterflies, such as the Spicebush Swallowtail, have evolved to mimic Pipevine Swallowtails, a pattern known as

Batesian mimicry.

What attracted this gorgeous creature to our garden? It is not at all unusual to find the Pipevine Swallowtail in a southern garden and the butterfly is quite common in central Appalachia. We planted a Dutchman's pipevine (*Aristolochia macrophylla*) several years ago. They take some time to become established. Although the flowers are inconspicuous, small upward-curving brown pipes (hence the common name Dutchman's pipevine) they were at one time widely planted alongside porches to provide shade. When well-established and pruned hard to ground level, Dutchman's pipevine has the ability to cover a structure in one growing season, an admirable feat, particularly appreciated during an era when porches were used for social gatherings. The enormous and bold emerald green heart-shaped, or cordate, leaves provided screening for privacy and cooling respite from the hot summer sun. But our vine is only two feet tall and completely lost in the gaggle of other vines growing along the fence wall. Perhaps he was drawn to our garden by the similarly shaped foliage of the moonvines, which is planted adjacent to the pipevine, and grows in a great profusion of leaves and blossoms. Have I mentioned the moonvine before? No garden planted for fragrance is complete without the moonvine (*Ipomoea alba*), which begins to come into its full glory during the dog days of August. As the sun sets, the sheer papery white blossoms begin to unfurl from spiral-shaped buds, emitting an intoxicating fragrance that permeates the night garden.

The slender legs of the Pipevine Swallowtail are the longest on any butterfly I have observed in our garden, possibly giving a clue to their preference for the tubular-shaped florets of honeysuckle, *Verbena bonariensis*, butterfly bush, milkweed, and the yellow disk flowers of zinnias. Butterflies taste with their feet, or tarsi. If upon landing they determine a blossom tastes good, they will unfurl their proboscis and probe for nectar. Blooming that late September day were the verbenas, butterfly bushes, zinnias and purple-leaf honeysuckle. Just as no garden planted for scent is complete without moonflowers—honeysuckle, butterfly bushes and *Verbena bonariensis* are welcome fuel for late season travelers and mainstays of the well-designed Lepidoptera garden.

*End Notes:* *Verbena bonariensis* is available from Goose Cove Gardens in mid-spring. We ordered our Dutchman's pipevine from a mail order source; it was a scraggly specimen and half-dead upon arrival, so I don't have a tried-and-true reliable source to recommend. In the past, I have seen two- and three-year old plants growing in pots at King's Tree Farm, which is located in Byfield.

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