



## An Introduction to Introduced Species

### Non-Natives May Play an Important Role in Your Garden

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When constructing a built landscape, such as a pollinator garden, floral composition may consist of plants categorized as native (have always been present on the landscape), non-native (have been introduced, either deliberately or accidentally, by humans), or invasive (non-native and likely to cause harm to human health, the economy, or the environment). Because of the habit invasives have of crowding and outcompeting native species, they can affect all species that rely on those natives and simultaneously destroy biodiversity; they should be avoided whenever possible in your garden. In fact, the International Union for Conservation of Nature considers the introduction of invasive species one of the most significant threats to global biodiversity<sup>1</sup>.

When designing your Bee Friendly Garden, however, as long as you are careful to avoid invasive plants, interweaving some of your favorite pollinator-friendly non-native plants can have a positive effect. Novel ecosystems are being created due to such pressures as climate change, urbanization and micro-climate variation, environmental contaminants, and stormwater management issues. As climate change renders certain areas uninhabitable for the very natives which have co-evolved there for eons, integrating non-natives that may be more suited for the changed environment may be a solution. Natives may be more susceptible to warming global temperatures, as it seems some non-native species are more adept at shifting their flowering time<sup>2</sup>. Ability to flower is crucial for the survival of the plant species; timing the flowering to coincide with pollinator needs is crucial for the survival of our pollinators. Gardens often present unnatural micro-climactic conditions as a result of deeply disturbed, compacted soil, possibly due to tilling practices, heat island effects from impervious surfaces, and competition with turf grass lawns. Often non-natives thrive in human created garden landscapes<sup>3</sup>.



*Native New-England Aster  
(foreground) with Non-Native  
Sedum Behind*

Other studies have found that some assemblages of non-natives attract a greater number of pollinators than some natives<sup>4,5</sup>, and propose habitat gardening can support greater bee diversity by incorporating both native and non-native plants<sup>6</sup>. Often non-natives fill in a niche created by a disturbed environment that a native would not have colonized, thus

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*Asclepias tuberosa* – One of the milkweed host plants for the monarch butterfly

increasing floral biodiversity in the garden. It is important to consider that some pollinators are specialists, requiring a certain genus or family of plants upon which to feed or to serve as host plants for their larvae. This is a reason to include a large variety of natives in your space. The more host plants offered, the more pollinators you can cater to.

Ornamentals bred for extended bloom times can provide critical forage resources when native plants aren't in bloom<sup>7</sup>. Many natives have a brief, discreet flowering period; in my garden there are gaps in the bloom time of my natives. Pollinators need something to eat every day, something to bridge the gap between the buffet of my *Coreopsis lanceolata* and *Asclepias tuberosa*. The addition of non-native flowering plants can ensure early emerging pollinators have something to eat right away, late blooming plants feed insects still active well into late fall, and everything is covered in between.

The Plants for Bugs project<sup>8</sup> (conducted in the UK) set out to determine whether invertebrates preferred native or non-native plants, and discovered little difference in abundance between the two plant types. Sticking to plants from the northern hemisphere was preferable, although they found utility in including plants from the southern hemisphere to provide late flowering floral resources. They concluded that regardless of native status, the more flowering plants included in a landscape, the greater number of pollinators it can support.

Bee Friendly Gardening promotes the use of natives when practical. In my garden, I aim for a majority of native plants, and then fill in with some favorite non-invasive non-native flowering plants. Important considerations are including the greatest possible diversity of species, offering something that is blooming continually spring through fall, considering the addition of host plants, and minimizing or eliminating chemical inputs into your garden. Admire your colorful patch of zinnias, lantana and salvias – the butterflies are! Growing food plants, such as apples and squash, provide valuable resources for pollinators and clear benefits to us in the form of nutrition and food security. One of my favorite parts of summer are the sweet cherry tomatoes and aromatic dill that I grow (watch for an upcoming article on growing food to support yourself and your neighbors!) Enjoy your herb garden of non-natives such as lavender, thyme, sage and dill – I plant dill every year just for the black swallowtails. If you need



*Mix of Natives and Non-Natives in the Garden*

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guides to help you decide what to plant, check out our [ecoregional planting guides](#) and our regional [garden recipe cards](#). Happy planting!

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