

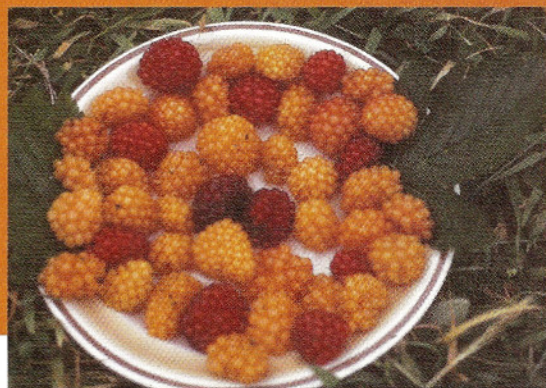
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# NATIVE PLANTS AND URBAN SUSTAINABILITY

| Heiko Koester



## ABSTRACT

Native plants have a potential role to play in making our cities sustainable and in reducing carbon emissions. I present, based on my experience as a landscape designer, 15 possible applications of native plants in sustainable urban systems. These range from passive solar retrofits to greywater systems and are loosely arranged into the general headings of the urban forest, water conservation, and “grow your own.” Within each entry, I delineate existing unsustainable practices, offer sustainable alternatives, discuss the role of native plants, and make a few design and species suggestions.

Koester H. 2008. Native plants and urban sustainability. *Native Plants Journal* 9(3):323–333.

## KEY WORDS

heat island effect, urban forests, urban lumber, living roof, bioswale, greywater, roundwood, perennial food plant, native medicinal plant, cover crops

## NOMENCLATURE

USDA NRCS (2008)

As an ecological landscape designer, I have had the chance to experiment with numerous sustainable systems involving plants. Residing in Eugene, Oregon, a city that prides itself on its “green” awareness, I have observed implementation of similar projects in my community. My love and concern for native habitats has spurred me to investigate the application of native plants in urban sustainable design.

In recent years, I have observed that the conservation and academic communities have started to learn about the many facets of native plants in restoration ecology while home gardeners and landscapers have begun to integrate native plants into traditional landscapes. Unfortunately, despite current enthusiasm about sustainability and green living, less attention, in my opinion, has been given to the potential role of native plants in green urban systems.

To be truly green, our cities will need to incorporate new sustainable systems, many of which will be partial or full “living systems” requiring plants. Examples include passive solar energy retrofits (that include trees), greywater purification systems (that include wetland plants), and fertility patches (that include biomass-producing plants).

My experiences lead me to believe that native plants could be given a larger role in making our cities sustainable. Native plants can bring many benefits to any landscape, including excellent climatic adaptation, urban ecosystem restoration impacts, and an identification with a cultural sense of place. This is not a wholesale endorsement of every native plant for every context—good design requires careful evaluation and assessment of all relevant elements. I believe, however, that native plant advocates and ecological designers may be excited about these new potential applications of native plants.

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Salmonberries like these, growing in an urban garden, help promote sustainable living.

Photo by Heiko Koester