

# Rice University's Sustainable Campus

The Rice University campus is located in an area designated a Tree Campus USA, and further is located in the Lynn R. Lowrey Arboretum. To keep the recognition and the natural area, the university uses sustainable practices and manages its natural areas carefully. I was unable to discover which pesticides are used to maintain the landscaped areas, but the grounds maintenance team goes to great lengths to avoid them.

I tried to reach the Rice Director of Custodial and Grounds Services, Eusebio Franco, but I have not yet received a reply. He has created programs to green the campus, including green cleaning solutions. Instead, I read the extensive online resources which outline Rice's sustainability initiative as it pertains to grounds maintenance. Most information regarding the practices on campus are from the website [arboretum.rice.edu](http://arboretum.rice.edu), unless otherwise noted.

## NATIVE PLANTS

There is a published inventory of the woody plants on the Lynn R. Lowrey Arboretum, which shares its boundaries with the Rice University campus, and both native and nonnative plants are present. Some examples by common name from that source (<http://arboretum.rice.edu/files/2014/06/List-of-Woody-Species-on-Campus.pdf>):

### Native

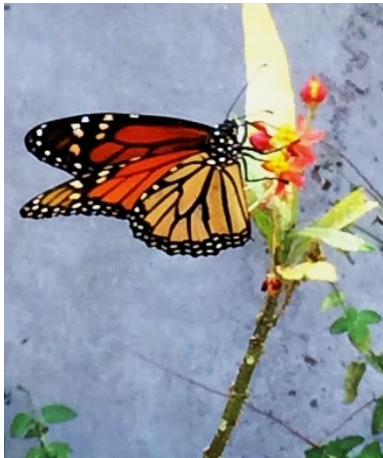
Live Oak – 2270 individual trees  
Loblolly Pine – 131  
Shumard Oak – 180  
Water Oak – 125  
  
(less prevalent)  
American Beautyberry – 2 plants  
Mexican Buckeye – 2  
Red Maple – 5  
River Birch – 10  
Yaupon Holly – 68  
Pawpaw – 3

### Nonnative

Crape Myrtle – 275 trees  
Chinese Elm – 81  
  
(less prevalent)  
Chinese Pistache – 16  
Goldenrain Tree – 13  
Japanese Cheesewood – 8  
Japanese and Chinese Privet (*Ligustrum*) – 8  
Sacred Bamboo (*Nandina*) – 1

There are many native plants on the Rice campus, including these and annual plants such as butterfly weed and turk's cap and thus in the Lynn R. Lowrey Arboretum, though nonnative and even commonly invasive plants (e.g. Privet) are present as well. In the past there have been initiatives to remove invasive plants specifically from the one natural area remaining on campus that resembles the original ecosystem of the campus. However, invasive and/or nonnative species remain in various locations on campus. Some of the less concerning instances are in the vegetable and research gardens, where the plants are somewhat confined. The vegetable species also are not as well adapted to the local climate, as they were bred for different traits. Invasive plants elsewhere on campus are well established, and it would require more than a reasonable effort to remove these. The native area mentioned previously is also seeded with native wildflowers and planted with native trees as appropriate to approximate the original habitat. Most of the plants sourced outside of campus are grown within 100-150 miles, according to the [www.sustainability.rice.edu/grounds](http://www.sustainability.rice.edu/grounds) website.

Some native plants are planted in a butterfly garden at the Baker residential college (dorm), and recently were caught attracting butterflies:



This plant, commonly called Butterfly Weed, is an example of the many similar species planted in the butterfly gardens on campus for the purpose of attracting such pollinators. Though not the most advertised patrons, bees can also be found in these gardens, attracted by the same nectar. The pollinator-friendly plants may not be evenly distributed around campus, but they are present.

## PESTICIDE USAGE

<https://stars.aashe.org/media/secure/14/6/500/3772/Rice%20University%20Integrated%20Pest%20Management%20Mission%20and%20Plan.pdf>

Rice University has a precise plan for integrated pest management. The plan includes a list of the most common pests encountered and a series of steps for each. Treatment with chemicals is always a last resort. Initial preventative approaches include maintaining plants well by ensuring they have adequate water and other needs and reducing leaf litter, as this serves as shelter for herbivorous bugs. There are monitoring systems in place, such as a black light to attract June bugs for measurement, which allow the maintenance team to observe when pests are present. It is clearly stated in the document, however, that only damage will be treated and not simply the presence of potential pests.

## IMPROVEMENTS

Rice University already does a prime job of limiting pesticide usage on campus. Chemicals are a last resort. Aside from the strategies already outlined, Rice also fertilizes with Hou-Actinite, a recycled sewage sludge product, which releases nutrients gradually which reduces runoff and increase effectiveness. Four buildings on campus have green roofs planted with drought tolerant plants and grasses, which also conserves energy for the building. If anything, the campus could evaluate the pesticides and quantities that they use (unknown), but overall the campus is quite friendly to pollinator species as it is.

I was surprised that the Rice University sustainability and management plans are incredibly specific. I did not know that the campus was conscious about the impact of chemical treatments campus-wide, as opposed to only in natural areas and cultivated gardens.