



Bristol University student catching insects

BIODIVERSITY AND URBAN MEADOWS

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The preference for installing native floral meadows over urban (horticultural) meadows often stimulates firm convictions amongst environmentalists, many of whom fall back to a default position that imported species are bad for ecosystems. Given the large number of plant introductions to the UK from around the world since Roman times, evidence is weak that alien species do harm to ecosystems; Japanese Knotweed and Himalayan Balsam being the widely quoted examples of two 'nuisance' plants that are used to back up the environmentalists' argument.

Most alien species are very localised and none figure in the top 200 species present in our countryside; they also tend to be out competed after a few seasons by native plants which, are much more of a problem to human activities than imported species as any gardener or farmer knows.

Recent research now recognises the valuable contribution that urban meadows make to biodiversity, for the conservation of bees and other pollinating insects. In 2011 Euroflor urban meadows were used in a government funded research project to compare the value of native and horticultural species as part of the urban pollinator's project; led by Bristol University in collaboration with Leeds, Reading and Edinburgh universities.

Thousands of insects that visited both native and urban meadows were collected and identified. Nectar in the flowers was measured as was its sugar content. The long flowering period of annual urban meadows outstripped the value of many native flowers particularly later in the year when the natives had finished flowering. Sown at Paignton Zoo in 2014, beekeepers observed that the Euroflor Honey mix gave very positive results in helping with the conservation of the rare native black honey bee.

In defence of native species, specific plant/insect associations may require certain species to be present in specific biotopes, but this is not the realm of urban planting. Emphasis here would be to manage the habitat rather than focus attention on a particular flower species and its aesthetic qualities, in order to conserve a functional plant community. The recommended use of local genotypes in flower meadows also appears to be an emotive subject with little scientific basis. Pollen, be it carried by the wind or by insects, has the ability of crossing counties, countries and continents, ensuring increased genetic biodiversity.

Since 2010, Euroflor urban meadows distributed in the UK by Rigby Taylor have become leaders in the field, drawing on over 20 years' experience from continental Europe. The mixes include annuals, biennials, perennials, native and

horticultural species, spring sowing, autumn sowing, low, medium and tall growing mixes. Euroflor has received many positive testimonials from local authorities across the UK looking at ways to maintain floral displays with a reduced budget. Typically, urban meadows with a flowering period of 4-6 months will incur an expenditure of just 15% of the cost of one display of bedding plants. Success is also due to rigorous germination testing of all the species, which is neither a UK nor European legislative requirement but explains the failure of many native meadows that rely on locally sourced seed.

Whilst annual urban meadows give the best flowering performance, perennial mixes will ensure a consistent if reduced flower performance for a few years. The management of perennial urban meadows is more complex, they are susceptible to inter-specific competition especially from native 'weed' species and grasses. It is for this reason that the Euroflor range is supplied as 100% flowers with no added grasses. If you want flowers, sow flowers, not flowers with grasses.

Further information on the Pollinator's project can be obtained by visiting:
<http://www.bristol.ac.uk/biology/research/ecological/community/pollinators/>



EuroFlor Urban flower display at Paignton Zoo