

# Nature notes

From The Natural Resources Group

Volume 1, Issue 1 Spring 2006

Nature Notes is a publication of field observations from the Natural Resources Group, a division of the Department of Parks and Recreation of the City of New York.

NRG's mission is to protect and preserve New York City's natural parklands through active management, restoration, acquisition and outreach using scientifically supported and sustainable approaches.



City of New York  
Parks & Recreation

Michael R. Bloomberg, Mayor  
Adrian Benepe, Commissioner  
Bill Tai, Director, NRG  
Mike Feller, Chief Naturalist

## Did you know?

In 2005 NRG's Plant Ecologists recorded 303 new plant populations of 257 species at 29 different sites. Four of the species were new listings of wild plants for the Big Apple.

## Spotting Spring Signs

Herpetologists mark the beginning of spring with their first sighting of spotted salamanders (*Ambystoma maculatum*) egg masses. These chubby amphibians, black with bright yellow spots, are rarely seen in their adult stage. They spend most of their lives under ground,



in burrows made by rodents and other forest tunnelers. Adult spotted salamanders wait below the frost line throughout the winter, only emerging when the soil surface becomes warmer than their underground retreats. Then, often before ice is fully melted from ponds, they travel en masse to vernal ponds, to court and lay eggs for a brief period before disappearing once again into their nether world. The females attach the rounded egg masses, containing up to 150 eggs, to sticks and stems slightly below the water surface. Tiny larvae hatch in a few weeks and feed on zooplankton and other aquatic animals until July, when they emerge and develop the yellow spots that give them their common name.

Spotted salamanders are common throughout the northeastern United States, but scientists have recently noticed a decline in numbers. This species depends on fish-free vernal ponds to avoid predation and find the tiny organisms that feed their young. Juveniles and adults need unspoiled tracts of woodland with healthy soil communities to survive to breed another year.

Vernal ponds have no legal protection in most jurisdictions, and many are destroyed by development each year. Even when ponds are protected, surrounding forest buffers may not be large or pristine enough for spotted salamanders. In New York City *Ambystoma maculatum* is found in only two parks in Queens. Former populations in Staten Island have been eliminated, and reintroductions have not met with long-term success. Every spring, NRG's wildlife ecologists start their spotted salamander egg-mass survey with trepidation. Are the salamanders still there? And each year, with the sighting of the first eggs, our spirits are renewed. Although biological conservation can often seem futile in the big city, the persistence of the spotted salamanders gives us hope.

- Dr. Ellen Pehek

### Now you see them...

April is the onset of our flowering season, and some of the earliest bloomers are called "spring ephemerals." The term is appropriate, since their flowers are fleeting and the plants disappear in the heat of the summer. These species are found in undisturbed forests and have a short time to store up nutrients for next year's flowers. Canopy tree leaf-out curtails photosynthesis, so they enjoy full sun early in the growing season, and are resigned to shade the rest of year. One member of our vernal flora is ramps (*Allium tricoccum*). The plant has broad leaves for a few weeks in early spring. After the foliage withers, a single flowering stem bearing a cluster of small white bloom emerges. By fall, these produce shiny black seeds. As with other spring ephemerals, its seeds are slowly dispersed. Over a 1000-year period, such seeds may only travel 100 yards from the parent plant. This means the likelihood of these plants recolonizing a forest once they are gone is slim to none. Other New York City spring ephemerals include: wood anemone (*Anemone quinquefolia*), broad-leaved toothwort (*Cardamine diphylla*), spring beauty (*Claytonia virginica*), Dutchman's breeches (*Dicentra cucullaria*), trout lily (*Erythronium americanum*), and bloodroot (*Sanguinaria canadensis*).



The strappy leaves of ramps (*Allium tricoccum*).

With regard to land management issues, spring ephemerals are indicators of healthy forest ecosystems. Although they are transient components of our woodland flora, measures should be taken to protect all populations. If you think your park has spring ephemerals, contact Natural Resources Group.

- Marielle Anzelone