

Horticultural News and Research Important to American Gardeners

SPUD SLEUTHS REWRITE HISTORY

Next time you're noshing on a French fry, consider this: Although the tasty tuber you're consuming is commonly known as a "European" potato, it is actually native to South America. However, scientists have long debated about where exactly in South America the potato originated and what role different regional strains may have played in the European potato blight.



Agricultural Research Service botanist David Spooner, right, and a colleague collect wild potatoes in Peru in an effort to determine the origins of the modern potato.

All modern potato cultivars contain genes mainly from Chilean potatoes, so one explanation is that, ergo, the European potato came from Chile. An alternative hypothesis, which has been the generally accepted one for the last several decades, is that European potatoes originated in the Andes from Venezuela to Argentina before arriving in Europe in the late 1500s. Then when late blight—a fungal disease—devastated potato crops in Europe beginning in 1845, it killed all the Andean cultivars so Chilean potatoes were brought in to replace them.

To settle the question, scientists from the U.S. Department of Agriculture's Agricultural Research Service compared DNA from herbarium samples dating back to the early 1700s. The study, published in the February 2008 issue of the *American Journal of Botany*, confirms that the European potato did originate in the Andes. It also reveals that Chilean potatoes had arrived in Europe by 1811, thereby refuting

the "idea that the late blight epidemics beginning in Europe in 1845 stimulated introductions of Chilean germplasm as breeding stock to combat this disease or eliminated the Andean potato, which persisted up until 1892."

SCREENING SYSTEM FOR INVASIVES URGED

Currently the United States doesn't have a screening system for plants with unknown invasive potential. To remedy this, the Nature Conservancy is encouraging the USDA's Animal and Plant Health Inspection Service (APHIS), the agency responsible for regulating and

monitoring the importation of exotic plants and animals into the United States, to adopt the Weed Risk Assessment (WRA) system, which has proven effective in screening potential weeds in Australia and New Zealand.

To determine the WRA's efficacy in other locations, the Nature Conservancy and University of Florida collaborated on a study that focused on imports to Hawaii, Florida, and several other areas. In the study, published in the March 2008 issue of the journal *Diversity and Distributions*, the researchers reported that WRA had an 80 percent accuracy rate for correctly accepting or rejecting a plant of unknown invasive potential, and that it is effective in both temperate and tropical climates across islands and continents.

"Under the current U.S. law, few species are tested and the process can take up to eight weeks," says Doria Gordon, associate director of science for the Nature Conservancy's Florida chapter and one of the study's authors. "The WRA system can be used to test all new plants proposed for import and determine whether or not a plant should be allowed entry into a country in under 24 hours."

APHIS is currently "examining all the screening tools used around the world with regard to their relative strengths and weaknesses," says Senior Import Specialist Polly Lehtonen, "as well as their usefulness and applicability in a North American context."

DANDY DAISIES FOR NORTHERN GARDENS

In an evaluation of Shasta daisy (*Leucanthemum xsuperbum*) cultivars at the Chicago Botanic Garden (CBG), 'Amelia' and 'Becky' emerged as the top rated selections of this popular perennial, introduced by California plant breeder Luther Burbank in 1901. In all, 36 daisy cultivars, including a few oxeye daisy (*L. vulgare*) selections, were evaluated over seven years for traits such as



'Amelie' Shasta daisy excelled in a trial conducted at the Chicago Botanic Garden.

hardiness, disease and pest resistance, and ornamental qualities.

Shasta daisy and oxeye daisy both produce white ray flowers with yellow discs over a long season of bloom. However, the flowers of oxeye daisies are typically smaller and appear about four weeks sooner than Shasta daisies. Oxeye daisies also tend to spread aggressively and have naturalized in some regions of North America. Two cultivars of oxeye daisy, 'Filigran' and 'Maikonigin', also received the top rating, but Richard Hawke, CBG's plant evaluation manager, notes that the oxeye daisy cultivars "are cautiously recommended because of rhizomatous habits and prolific seed production."

Other highly rated Shasta daisy cultivars include 'T.E. Killin' and 'Wirral Pride', both with crested flowers, 'Switzerland' with a "reliably full habit," and 'Snowdrift', with flowers that vary from single to double with short, curly rays.

To obtain a copy of the trial report (Plant Evaluation Notes, Issue 30), call the Chicago Botanic Garden at (847) 835-5440 or visit www.chicagobotanic.org.

NEW ONLINE GARDENING RESOURCE

Got a gardening question that has you stumped? You might want to check out www.extension.org, a recently created online resource that taps into the expertise of Cooperative Extension professionals at more than 70 land grant universities across the country. The website currently provides information on 16 "resource areas," one of which is "gardens, lawns,

and landscapes." In this section, you will find helpful articles on topics such as flowers, vegetables, lawns, pests, and soil. If your question is still unanswered, there's also an "Ask an Expert" option and a searchable bank of already answered questions.

ALL-AMERICA ROSE SELECTIONS FOR 2008

As All-America Rose Selections™ celebrates its 70th anniversary this year, the organization has chosen two 2008 AARS Winners with a festive flare: Dream Come True™ ('WEKdocpot') and Mardi Gras ('JACfrain').

Dream Come True is a grandiflora rose that produces yellow flowers with a reddish blush that starts at the tips of the petals, then completely turns ruby red. According to the AARS, "the big, bushy, vigorous plant yields long-stemmed, long-lived blooms with mild tea fragrance, making it lovely in the landscape and a great choice for bou-



Dream Come True, top, and Mardi Gras, above, are the two All-America Rose Selections for 2008.

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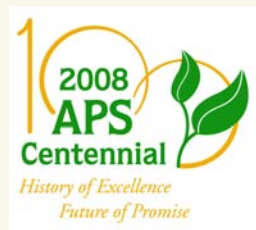
PEOPLE and PLACES in the NEWS

American Phytopathological Society Centennial

Founded in December 1908, the American Phytopathological Society (APS) is a non-profit, professional scientific organization that is devoted to the study and control of plant diseases. The APS plans to celebrate its 100-year “history of excellence and a future of promise,” in a number of ways, including its Centennial Meeting from July 26-30 in Minneapolis, Minnesota.

“We’ve seen the growth and maturity of the land-grant university system, the USDA Cooperative State Research, Education, and Extension Service system, and the National Science Foundation,” notes APS President Ray Martyn as he looks back at the things that have influenced plant pathology since the society came into existence. “We’ve gone from small family-owned farms to large cooperatives. We’ve gone from identifying bacteria and viruses as plant pathogens to exploiting their biology for recombinant DNA technology. And through it all APS has remained strong, viable, and relevant.”

For more information about the Centennial Meeting and APS, visit www.apsnet.org or call (651) 454-7250.



New Center for Public Horticulture

Four years of planning and feedback from more than 100 horticultural professionals have gone into the creation of the



Center for Public Horticulture at the University of Delaware, which officially opens this June. “The Center was created as a hub of education, information, and research in the

field of public horticulture,” explains Associate Director Edward Moydell, whose thesis project for the Longwood Graduate Program formed the basis for the Center. Its leadership also includes Executive Director Robert Lyons, who currently is the director of the Longwood Graduate Program.

“The first phase is making the existing body of research easily accessible to professionals and students, mostly through our new website,” says Moydell. “This research and information is from several universities and allied institutions, not just the University of Delaware.” The Center also will focus on promoting careers in public horticulture through several initiatives. “The Center has great potential to initiate, foster, and encourage professional partnerships among educators and researchers,” says Lyons. Learn more at www.publichorticulture.udel.edu or call (718) 499-2860.

quets.” It was bred by John Pottschmidt from Cincinnati, Ohio—who is only the third amateur hybridizer to achieve this distinction in 67 years—and introduced by Weeks Roses in Rancho Cucamonga, California.

Mardi Gras is a floribunda developed by Keith Zary with Jackson & Perkins from the 1995 AARS winner, Singin’ in the Rain. It earned top honors for its vigorous growth up to four feet and flamboyant yellow-orange blooms that become increasingly pink with a light, peppery fragrance.

Both of these roses are disease resistant and hardy to USDA Zone 5. For more information, visit www.aars.org.

SURVEYS REVEAL EDIBLE GARDENING REVIVAL

Vegetable gardening appears to be experiencing an increase in popularity. A recent Mailorder Gardening Association survey revealed a 10 percent or more increase in vegetable seed sales from last year for their member companies. Organic seeds and seeds that were not genetically modified, along with tomato

varieties and salad greens, were reported to be particularly popular.

Correspondingly, in a nationwide survey conducted by the Garden Writers Association Foundation in February, 39 percent of 1001 households planned to spend money on vegetable or fruit plants this spring, up from 32 percent last year. This percent was higher than spending on annuals, trees and shrubs, and perennials; only spending on lawn and grass appeared to be a bigger priority at 54 percent. The report also found that approximately one third of the households surveyed were “most inclined” to buy products labeled as organic or natural.

DIAL BEFORE YOU DIG

Before you wield a shovel for a spring gardening project, make sure you pick up the phone and dial 811, a national hotline maintained by the Common Ground Alliance (CGA). According to the CGA, an association of utility companies dedicated to public safety, environmental protection, and damage prevention practices, “this step will ensure that all underground utility lines in the work area are marked, prevent

personal and property damage, and protect homeowners from legal ramifications.” In an effort to raise awareness about this resource and to celebrate the hotline’s first anniversary, the CGA has designated this May to be “Safe Digging Month.” For more information, visit www.call811.com.

HORTICULTURAL RESEARCH INSTITUTE AWARDS GRANTS FOR 2008

Since its establishment in 1962 as the research division of the American Nursery & Landscape Association, the Horticulture Research Institute (HRI) has distributed \$4.9 million to more than 600 research projects “covering the full range of production, environmental, and business issues important to the trade.” For 2008, HRI has awarded \$425,000 in grants and scholarships to fund more than 20 research projects around the country. The projects range from investigating management strategies for invasive species and pests to developing biodegradable containers and new plants. For more information, visit www.anla.org/research.

Written by Associate Editor Viveka Neveln.