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OUR WEB SITE AT [www.uidaho.edu/arboretum](http://www.uidaho.edu/arboretum)

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## Wildlife in the UI Arboretum

From the beginnings as a nursery in 1910 through its expansion in the Shattuck Arboretum and the addition of the Fleiger farm in the 1960s, the University of Idaho Arboretum and Botanical Garden has been an attraction for UI students and the residents of Moscow. Many people are familiar with the botanical riches of the arboreta and respond to the regular alerts about the rewards of the changing seasons that Paul Warnick, the Arboretum Horticulturist, sends out via the website.

Shortly after alerting us to the display of fall colors in October, Paul also alerted us to the appearance of otters in the ponds and an elk in the farm fields across from the south entrance to the Arboretum. The combination of colorful leaves and otters brought many people to the arboretum on a sunny fall weekend. Parents were taking pictures of children playing in the leaves. Other folks were watching and photographing the otters playing in the water and enjoying a meal of fish from the ponds. Still others were attracted to the birds that are always present in the Arboretum.



Golden-crowned Kinglet, Mary Ann Judge photo January 2007

Over one hundred different bird species visit the Arboretum. In addition, there have been a few reports of rare or unique appearances. The regular visitors include a large number of small to medium-sized song birds like the juncos, towhees, warblers, swallows, thrushes, hummingbirds, sparrows, and the Western Blue Bird, Idaho's state bird. In the spring of 2002, the Arboretum was visited by two uncommon species. The Nashville Warbler reported at that time was the first time it had been seen in the Arboretum, although it is reported occasionally at the Phillips County Farm north of Moscow during the spring and fall. Another uncommon visitor to the Arboretum was the Yellow-breasted Chat which might have been migrating north when it was spotted. The Yellow-breasted Chat is usually found in the deeper, warmer canyons of the Snake and Clearwater Rivers. On April 27, 2002, at approximately the same time as the Nashville Warbler was reported, a Great Egret joined the Great Blue Heron dining on the fish, voles, and frogs in the ponds. While the herons are seen regularly, the appearance of the egret was a record for Latah County. The egret remained in the Arboretum until May 6<sup>th</sup>. Another rare visitor is the Eastern Blue Jay which usually winters east of

*continued*

COME GROW WITH US

## ARBORNOTES

A Newsletter of  
the Arboretum Associates  
University of Idaho  
Arboretum and Botanical Garden

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**MARCH 2007**

the Rocky Mountains. Only five or six are seen in Idaho in any year, but two years ago approximately 150 were reported across the state. Neighbors of the Arboretum report seeing several in their backyards.

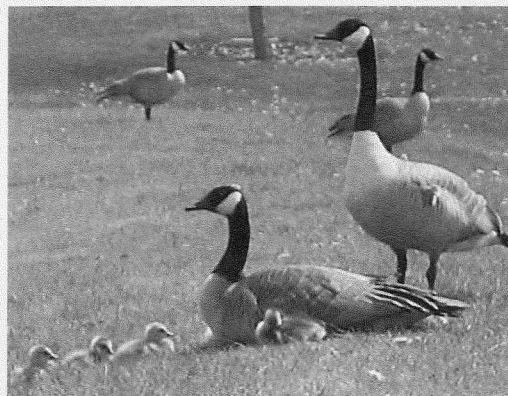
Terry Gray, member of both the Arboretum Associates and the Palouse Audubon Society, walked in the Arboretum regularly before he retired last year. He has compiled a list of the birds that he has seen during his lunchtime walks or on the bird watching walks that he and other members of the Palouse Audubon Society have led through the Arboretum. You can see his list on page 10 in this issue ArborNotes. The Palouse Audubon Society website ([www.palouseaudubon.org](http://www.palouseaudubon.org)) includes a composite list of birds found on the Palouse as well as lists for Latah County, Whitman County and Idaho.

The herons and the song of the Red-winged Black-bird may entice you to take a closer look at the ponds when you visit the Arboretum. As you walk around, look around you and look down. You should see turtles, frogs, salamanders, garter snakes, and maybe a raccoon or two, although



River otters visit the arboretum, Terry Gray photo February 28, 2007

they are usually nocturnal. Not as easy to spot are the dragonflies that are frequent summer visitors. The herons, otters and raccoons that frequent the ponds are most likely dining on the goldfish, bass, blue gill and grass carp that inhabit the ponds. The goldfish were probably introduced to the ponds by well-meaning folks who found that they could no longer care for them, couldn't give them away, and didn't want to flush them down the drains. They probably assumed that it was kinder to put them in the ponds however their presence is very detrimental to the arboretum. In the ponds the goldfish multiplied quickly. There are several species of bass in the pond, intentionally introduced in an attempt to reduce the number of goldfish. The grass carp were deliberately planted in the upper pond hoping that they would control the number of aquatic weeds that occur there.



A new family of geese in the arboretum, Paul Warnick photo

At almost any time during the months of April to September, as you walk the paths of the Arboretum enjoying the flowers that are in bloom, watch for the butterflies flitting about from blossom to blossom and the dragonflies darting hither and yon. The colors are entrancing. The Palouse Audubon

Society web page has a list of butterflies encountered on the Palouse from April to July 2004. This list was compiled by Amy Pocewicz and Chris Looney. The list, while not specific to the UI Arboretum, indicates which butterflies are found on the Palouse Prairie, on disturbed grasslands, in agricultural fields, in forests and forest meadows, or on clearcuts. The list also gives a correlation between the butterflies found and the associated host plants. This could be an aid in identifying those that you see or serve as a guide to places you might want to visit if you want to see some of the smaller, more fragile residents of the Arboretum. The lupines are frequent hosts to the Silver Blue and Arrowhead Blue gossamer wings in April, May and June. Look for skippers among the native and decorative grasses, swallowtails near the Ceanothus and poplars, fritillaries near the violas,

and checkerspots near the asters and penstemons. You could encounter the larvae and the pupae as well as the adults.

One of my favorite experiences is encountering the quail that inhabit the area around the display gardens at the south end. The combination of the color and scents of the plants and the sounds of the adults as they warn of the interloper remind me of why I support the UI Arboretum and Botanical Garden. I encourage you to visit the arboreta on a regular basis and take pleasure in both the plants and the animals. The rewards are equal to the effort. You might be lucky enough to spot a visiting bird that isn't often seen in the area. If you do, be sure to report it to the Palouse Audubon Society.

Donna Hanson

## Plant Sale Preparations

I have now been involved with six Arboretum Associates plant sales, starting in the spring of 2001. The plant sale has grown dramatically in that time. The first years it was held in the small display building at the county fairgrounds. Most of the plants were donated by members from their own gardens with a few plants dug from the Arboretum. Later the sale outgrew that space and moved out to the skating rink. That has proved to be a great site with lots of room and lots of natural light. As the sale grew it has expanded to include some plants that are purchased for the sale and many more that are grown especially for the sale. Two of the goals of the plant sale have been to introduce new and unusual plants to the area and to take advantage of being able to grow our own plants to sell nice sized plants for reasonable prices. There are now some plants growing in the Arboretum hoop house year round for the sale. We are hoping that the trend of bigger and better plant sales every year continues, and with that in mind we have all ready started preparing some new additions for next year.



A sampling of the plants for the annual plant sale June 2, 2007,  
Paul Warnick photo March 2007

The biggest development for next year is another supplier for new and unusual perennials. The supplier is Darwin Plants, a perennial exporter in the Netherlands. Darwin Plants was started in 1865 and they now sell more than 1,000 different cultivars of perennials. They have assembled a package of new perennials called PlantSpotters, that are all new hybrids and cultivars of hardy perennials. The package includes 26 new perennials, including

new Hostas, Coral Bells, and Coneflowers. Their website is <http://www.darwinplants.com>.

Another trend has been to expand the selection of annual plants for the sale. We are already growing an assortment of fancy leafed geraniums, some of the new vigorous hybrid coleus, African daisies, purple fountain grass and some assorted annual accent plants that will make stunning combinations in patio pots or your favorite annual bed. Also, watch for Tall Verbena, a plant I tried for the first time this year in the Arboretum annual bed and also in the xeriscape

*continued*

## Plant Sale (continued)

garden. It grows 2-3' tall with clusters of small purple flowers that blend nicely with lots of other colors.

We have taken advantage of plants that needed dividing in the Arboretum to propagate some choice plants, especially daylilies, bearded iris and various perennials from the Xeriscape Garden. We now have more than 150 daylilies and as many iris potted, all of which will be named cultivars with color pictures and descriptions available. Some of the daylilies are still very new to the trade and can be quite expensive (\$75 or more) when available commercially.

There will also be a selection of woody shrubs and trees available. Perhaps the most unusual tree will be the contorted Hybrid Poplar, which was discovered and patented



Paul Warnick photo, February 2007

by a UI professor as *Populus* x 'Gnarly Poplar'. It is a fast growing hybrid poplar which will rapidly grow into a large tree with unique twisting branches. There will also be a selection of various colors of lilacs, including the smaller growing, extremely fragrant Korean lilac, and the late blooming Japanese tree lilac. Other popular woody shrubs have been butterfly bushes and Idaho's State Flower, Lewis' Mockorange or 'Syringa'.

The selection of plants will be better than ever next year—so, mark your calendars now for the first Saturday in June (June 2<sup>nd</sup>, 2007) for the annual Arboretum Associates Plant Sale at the Ice Rink at the Latah County Fairgrounds.

Paul Warnick

## Making a gift to support the Arboretum

There are many ways to support the growth and development of the University of Idaho Arboretum and Botanical Garden.

A gift to Arboretum Associates provides support for current projects and equipment requests within the Arboretum and programs of Arboretum Associates including the annual speaker, outdoor concerts, maps, brochures, and website maintenance.

A gift to one of several endowments that sustain the Arboretum provides support in perpetuity since the principal remains invested and only income is spent each year. Current named endowments that support the arboretum are:

- Arboretum Associates Centennial Endowment
- Norma and Gene Slade Arboretum Endowment
- Elisabeth Zinser and Don Mackin Arboretum Endowment
- Presidential Oak Grove Endowment
- R. J. Naskali Arboretum Endowment
- Bob Steele Family Arboretum Endowment

Named endowments generate income to be used according to the donor's wishes and provide long term funding for projects. Gifts can be added to any of the established endowments or a named endowment can be established for a minimum donation of \$25,000.

Gifts that support specific projects that fill an identified need in the Arboretum. All of the plantings of the arboretum have been paid for with private funds. Many of those projects were paid for with donations to specific funds. Currently we are waiting for a master plan to be finalized, so that specific new projects can be solicited. General funds for identified projects like the Asian Vine Pergola and the Red Barn Restoration fund are being accepted. One goal of the master planning project is the identification of future projects which will be announced in Arbornotes and on the website.

## *Arboretum Advisory Board tackles issues.*

A new slate of officers for the University of Idaho Arboretum Advisory Board (ZAAB) was approved by Provost Doug Baker. In October, the AAB met to set the agenda for the 2006-2007 school year.

Top priority will be to finish the Master planning process, so we can move forward with other Arboretum decisions. In November the AAB met to discuss the pending revisions to the Master Plan. Doug Macy of Walker-Macy, the company hired to write the Master Plan, will visit the campus sometime this spring to help us finish the Master Plan.

Our next item will be to revisit the AAB Charter, which was written in 1995, to better reflect the current administrative structure. A Gifting Policy and list of Arboretum projects will be on the agenda too.

For many of us, including myself, the governance of the Arboretum is somewhat unclear. Let me try to explain where we are striving to go. Currently the Arboretum is supported by three groups, The Arboretum Advisory Board, Arboretum Associates, and University of Idaho Facilities Management.

The Academic link to the Arboretum is the Arboretum Advisory Board, comprised of faculty members (in a wide array of University departments), representation of Arboretum Associates, University Facilities and the City of Moscow. The AAB provides support and advice to ensure the preservation, exhibition, and introduction of plant materials for the maximum educational and service benefit to the University community. The Executive Committee of the AAB (Chair, Arboretum Associates, and Facilities), reports to the University Provost.

The third party crucial to the Arboretum, of course, is Arboretum Associates, a volunteer organization whose charge is fund raising, outreach, and awareness building.

The day-to-day operation and maintenance of the Arboretum is performed by University Facilities Management. Our

Arboretum Superintendent/Horticulturist Paul Warnick is housed there.

It is my goal as the new AAB chair to make 2006-2007 a productive year, where we make great strides towards resolving some issues that have confused many of us, and set a clear future direction for our beautiful Arboretum.

Feel free to contact me or any of my fellow AAB Committee members with any Arboretum comments or concerns you have.

Sincerely

Hans Kok, Associate Professor, Plant, Soil and Entomological Sciences.

Z208) 885-5971

[hanskok@uidaho.edu](mailto:hanskok@uidaho.edu)

### *2006-2007 Arboretum Advisory Board members:*

Gary Austin, Landscape Architecture  
 Roger Blanchard, City of Moscow  
 James Fazio, Wildlife Recreation Management  
 Joy Fisher, Arboretum Associates  
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 Paul Warnick, ex-officio, Superintendent  
 Charles Zillinger, ex-officio, Facilities  
 Hans Kok, Chair, Soil Sciences



Richard Naskali, UI Emeritus Arboretum Director, received a Distinguished Alumnus Award from the Ohio State University's College of Food, Agricultural, and Environmental Sciences at a program in Columbus, OH, Saturday, March 3, 2007. He earned his three collegiate degrees from Ohio State in 1957, 1961, and 1969.

## Report from the Horticulturist

The winter has been fairly typical (if there is such a thing) so far in Moscow, cold and snow came early, in late November; then December was quite mild and dry. January came in snowy and it was cold enough that the snow remained on the ground for most of the month. There has not been any extremely cold weather and precipitation has been above average, so most of the plants in the Arboretum should come out well in the spring. Of course, winter damage is always unpredictable and no doubt there will be some losses that will be hard to explain. Also, frequently in our climate, damage is caused by late winter/early spring temperature fluctuations where it warms up enough to start growth, then the temperatures drop far enough to cause damage. This can be even more severe in the "frost pocket" formed by the steep narrow valley in the Arboretum. Cold air drains to the bottom of the arboretum resulting in a dramatic difference between the top and the bottom. Last fall there was nearly six weeks difference between a killing frost at the annual bed by the barn and the same plants by the top gate on Nez Perce Drive.

It has been another successful year in the Arboretum. Probably the most visible project has been repainting the Arboretum barn. The barn was built as a dairy barn in 1908 and



Steve Nittolo, campus arborist working with the bucket truck to prune trees in Shattuck Arboretum 8-24-06 Paul Warnick photo

we continue to use it today for the arboretum maintenance building. The other new project is the Hosta/Asiatic Lily walk in the north west corner of the Arboretum. This project is located between two bench sites near the top of the Arboretum. So far we have planted 35 cultivars of Hosta and 32 different Asiatic Lilies. The goal of the planting is to get a minimum of 100 cultivars of Hosta and to be recognized as a display garden by the American Hosta Society. We also spent some time working in the Shattuck Arboretum. We have now cleared and chipped walking trails throughout the Shattuck Arboretum with two new entrances, one at the west end coming off the sidewalk on Nez Perce Drive and one at the east end above the historic Administration building steps.

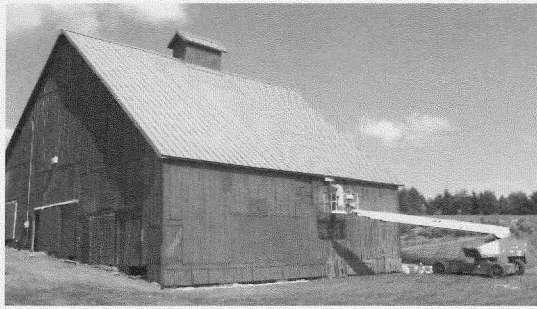
We also installed signs identifying some of the historic trees that we have been able to identify. These are some of the original trees planted by C.H. Shattuck between 1909 and 1917. Perhaps the most important thing we did in the Shattuck Arboretum was planting 3 new trees. These are the first documented new plantings in the Shattuck in at least 50 years. The three new trees are three year old seedlings from the Giant Sequoia that was planted by Shattuck in 1916. The other major project above and beyond our

*continued*

### Email Newsletter

I am writing an update to our website every month. I write about a specific plant that looks especially striking at that time of the year, an update on current projects going on in the Arboretum and a listing of any upcoming events. If anyone is interested, I could email that page to you every month when I am posting it to the web. If you would like to be on a mailing list to receive that update once a month, please send an email to [pwarnick@uidaho.edu](mailto:pwarnick@uidaho.edu) and I will add it to the list. I will keep any addresses confidential and I will not share the list with anyone else.

routine maintenance duties has been installing more automatic underground sprinklers in the Arboretum. We have installed twelve phases now and have then entire north end of the Arboretum down to the upper pond covered with automatic irrigation. The Arboretum Associates Board has designated funds this year to help pay for the irrigation which



A new coat of paint for the Arboretum Barn thanks to proceeds from the 2006 plant sale, Paul Warnick photo 9-15-06

has allowed us to complete more of the project than originally planned. The irrigation and painting the barn are both projects that were made possible by your membership and donations to Arboretum Associates. That support is very important as we continue to try to improve and develop the Arboretum.

Paul Warnick

## *Arboretum Associates Celebrate 30 year Anniversary at Annual Meeting, April 19, 2007*

**M**ark your calendars for 30th Annual Meeting of the UI Arboretum Associates, 7:30pm, Thursday, April 19, 2007 in the UI Courtroom of the College of Law.

After a short business meeting Lauren Springer Ogden will present a program entitled *DESIGN INSPIRATION FOR WATERWISE GARDENS*.

Waterwise gardening, also known as xeriscaping, has come a long way in the past two decades. With an ever-expanding

palette of beautiful native and adapted exotic plants from which to choose, now the question is how to design inspired water-conserving gardens? How does one combine home, personal style, and site into a resonant, unique expression? We will engage in an in-depth exploration of design possibilities, from traditional and cottage to naturalistic and eclectic. Each garden style's unique design characteristics and a number of well-suited plants round out the discussion, offering practical ways to make such design a reality.

Please join us for an informative and celebratory evening.

### *Lauren Springer Ogden*

**L**auren Springer Ogden worked in public gardens on both sides of the Atlantic before receiving her master's degree in horticulture from Penn State. At Denver Botanic Gardens, she designed the Watersmart and Romantic Gardens. An award-winning writer and photographer, she is a contributing editor for *Horticulture* magazine and author of *The Undaunted Garden*, named one of the 75 best American gardening books of the last century by the American Horticultural Society, and coauthor of *Passionate Gardening: Good Advice for Challenging Climates*, which received the 2001 AHS Book Award. Lauren's gardens have been featured on television and in many publications, including *The New York Times*, *Sunset Western Landscaping Book*, and *The Collector's Garden*. She is a popular speaker in the United States and Canada. Lauren and her husband Scott Ogden have written a new book together, on garden design, due out spring 2008 from Timber Press. Visit their website at [www.plantdrivendesign.com](http://www.plantdrivendesign.com)

## Arboretum Associates Donor Roll

Thank you to the many generous donors who supported the University of Idaho Arboretum and Botanical Garden from July 1, 2005 to June 30, 2006. A total of \$23,462 was received from membership gifts, gifts for arboretum endowments, and gifts to support specific arboretum projects. Your support makes a difference.

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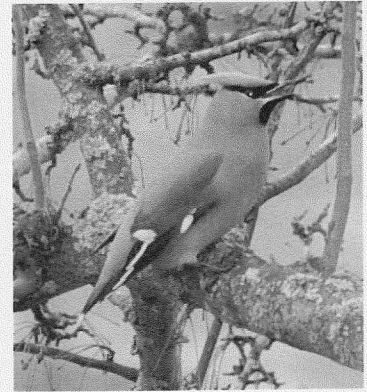
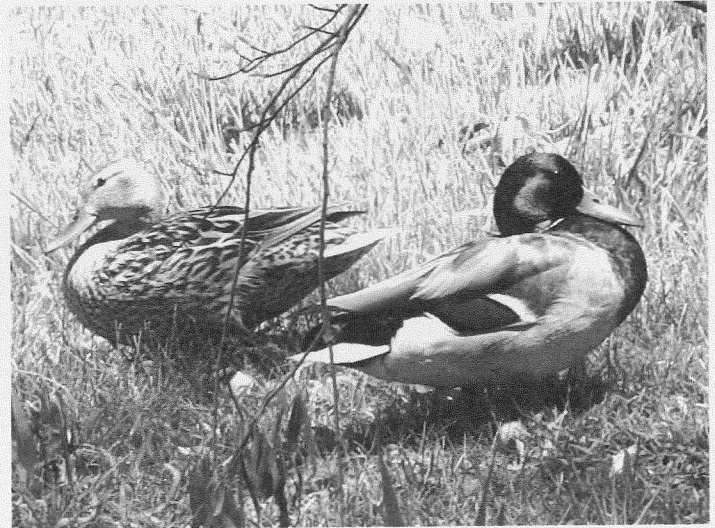
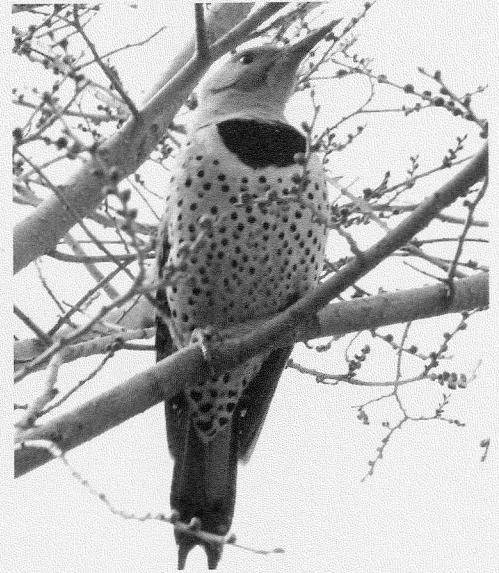
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## University of Idaho Arboreta Bird List

Compiled by Terry Gray

\* = uncommon or rare in the area

- Canada Goose (*Branta canadensis*)  
 Mallard (*Anas platyrhynchos*)  
 Green-winged Teal (*Anas crecca*)  
 Northern Shoveler (*Anas clypeata*)  
 Common Goldeneye (*Bucephala clangula*)  
 Barrow's Goldeneye (*Bucephala islandica*)  
 Bufflehead (*Bucephala albeola*)  
 Gray Partridge (*Perdix perdix*)  
 Ring-necked Pheasant (*Phasianus colchicus*)  
 Wild Turkey (*Meleagris gallopavo*)  
 California Quail (*Callipepla californica*)  
 Great Blue Heron (*Ardea herodias*)  
 \*Great Egret (*Ardea alba*)  
 Turkey Vulture (*Cathartes aura*)  
 Osprey (*Pandion haliaetus*)  
 Bald Eagle (*Haliaeetus leucocephalus*)  
 Northern Harrier (*Circus cyaneus*)  
 Sharp-shinned Hawk (*Accipiter striatus*)  
 Cooper's Hawk (*Accipiter cooperii*)  
 \*Northern Goshawk (*Accipiter gentilis*)  
 Swainson's Hawk (*Buteo swainsoni*)  
 Red-tailed Hawk (*Buteo jamaicensis*)  
 Rough-legged Hawk (*Buteo lagopus*)  
 American Kestrel (*Falco sparverius*)  
 Merlin (*Falco columbarius*)  
 Prairie Falcon (*Falco mexicanus*)  
 American Coot (*Fulica americana*)  
 Killdeer (*Charadrius vociferus*)  
 Spotted Sandpiper (*Actitis macularius*)  
 Rock Pigeon (*Columba livia*)  
 [Also called Rock Dove –  
 the common pigeon of the urban areas]  
 Mourning Dove (*Zenaida macroura*)  
 Barn Owl (*Tyto alba*)  
 Great Horned Owl (*Bubo virginianus*)  
 Barred Owl (*Strix varia*)  
 Long-eared Owl (*Asio otus*)  
 Northern Saw-whet Owl (*Aegolius acadicus*)  
 Common Nighthawk (*Chordeiles minor*)  
 Vaux's Swift (*Chaetura vauxi*)  
 Black-chinned Hummingbird (*Archilochus alexandri*)  
 Calliope Hummingbird (*Stellula calliope*)



Photos courtesy of Terry Gray

continued

- Rufous Hummingbird (*Selasphorus rufus*)  
 Belted Kingfisher (*Ceryle alcyon*)  
 Red-naped Sapsucker (*Sphyrapicus nuchalis*)  
 Downy Woodpecker (*Picoides pubescens*)  
 Hairy Woodpecker (*Picoides villosus*)  
 Northern Flicker (*Colaptes auratus*)  
 Olive-sided Flycatcher (*Contopus cooperi*)  
 Western Wood-Pewee (*Contopus sordidulus*)  
 Willow Flycatcher (*Empidonax trailii*)  
 Hammond's Flycatcher (*Empidonax hammondii*)  
 Dusky Flycatcher (*Empidonax oberholseri*)  
 Cordilleran Flycatcher (*Empidonax occidentalis*)  
 Say's Phoebe (*Sayornis saya*)  
 Eastern Kingbird (*Tyrannus tyrannus*)  
 Cassin's Vireo (*Vireo cassinii*) [also called Solitary Vireo "western form"]  
 Warbling Vireo (*Vireo gilvus*)  
 Red-eyed Vireo (*Vireo olivaceus*)  
 Steller's Jay (*Cyanocitta stelleri*)  
 \*Blue Jay (*Cyanocitta cristata*)  
 Black-billed Magpie (*Pica hudsonia*)  
 American Crow (*Corvus brachyrhynchos*)  
 Common Raven (*Corvus corax*)  
 Horned Lark (*Eremophila alpestris*)  
 Tree Swallow (*Tachycineta bicolor*)  
 Violet-green Swallow (*Tachycineta thalassina*)  
 Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)  
 Bank Swallow (*Riparia riparia*)  
 Cliff Swallow (*Petrochelidon pyrrhonata*)  
 Barn Swallow (*Hirundo rustica*)  
 Black-capped Chickadee (*Poecile atricapilla*)  
 Mountain Chickadee (*Poecile gambeli*)  
 Red-breasted Nuthatch (*Sitta canadensis*)  
 White-breasted Nuthatch (*Sitta carolinensis*)  
 Brown Creeper (*Certhia americana*)  
 Bewick's Wren (*Thryomanes bewickii*)  
 House Wren (*Troglodytes aedon*)  
 Winter Wren (*Troglodytes troglodytes*)  
 Golden-crowned Kinglet (*Regulus satrapa*)  
 Ruby-crowned Kinglet (*Regulus calendula*)  
 Western Bluebird (*Sialia mexicana*)  
 Townsend's Solitaire (*Myadestes townsendi*)  
 Swainson's Thrush (*Catharus ustulatus*)  
 Hermit Thrush (*Catharus guttatus*)  
 American Robin (*Turdus migratorius*)  
 Varied Thrush (*Ixoreus naevius*)  
 Gray Catbird (*Dumetella carolinensis*)  
 European Starling (*Sturnus vulgaris*)  
 American Pipit (*Anthus rubescens*)  
 Bohemian Waxwing (*Bombycilla garrulous*)  
 Cedar Waxwing (*Bombycilla cedrorum*)  
 Orange-crowned Warbler (*Vermivora celata*)  
 \*Nashville Warbler (*Vermivora ruficapilla*)  
 Yellow Warbler (*Dendroica petechia*)  
 Yellow-rumped Warbler (*Dendroica coronata*) [also called Myrtle Warbler, Audubon's Warbler]  
 Townsend's Warbler (*Dendroica townsendi*)  
 MacGillivray's Warbler (*Oporomis tolmiei*)  
 Common Yellowthroat (*Geothlypis trichas*)  
 Wilson's Warbler (*Wilsonia pusilla*)  
 \*Yellow-breasted Chat (*Icteria virens*)  
 Western Tanager (*Piranga ludoviciana*)  
 Spotted Towhee (*Pipilo maculatus*)  
 Chipping Sparrow (*Spizella passerina*)  
 Savannah Sparrow (*Passerculus sandwichensis*)  
 Song Sparrow (*Melospiza melodia*)  
 Lincoln's Sparrow (*Melospiza lincolni*)  
 White-crowned Sparrow (*Zonotrichia leucophrys*)  
 \*Golden-crowned Sparrow (*Zonotrichia atricapilla*)  
 Dark-eyed Junco (*Junco hyemalis*)  
 Black-headed Grosbeak (*Pheucticus melanocephalus*)  
 Lazuli Bunting (*Passerina amoena*)  
 Red-winged Blackbird (*Agelaius phoeniceus*)  
 Western Meadowlark (*Sturnella neglecta*)  
 Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)  
 Brewer's Blackbird (*Euphagus cyanocephalus*)  
 Brown-headed Cowbird (*Molothrus ater*)  
 Bullock's Oriole (*Icterus bullockii*)  
 House Finch (*Carpodacus mexicanus*)  
 Red Crossbill (*Loxia curvirostra*)  
 Pine Siskin (*Carduelis pinus*)  
 American Goldfinch (*Carduelis tristis*)  
 Evening Grosbeak (*Coccothraustes vespertinus*)  
 House Sparrow (*Passer domesticus*)
- List in taxonomic order.
- Common names provided by Terry Gray, October 2006  
 Scientific names added by Donna Hanson from the American Ornithological Union website, November 26, 2006

## Survival of the Wollemi Pine

Imagine walking through a national park and coming upon something straight out of the Jurassic period. Sound impossible? Not really. That is exactly what happened to park officer/ranger, David Noble, at the Wollemi National Park in the Blue Mountain World Heritage Site, New South Wales, Australia.

Wollemi National Park, an easy 2-hour drive from Sydney, is a popular weekend getaway destination for many of that city's almost four million people. The park is a million acre, tree-covered plateau riddled with innumerable deep canyons, cliffs and gorges. The canyon walls are steep vertical sandstone faces, many with spectacular waterfalls which flow into countless streams. These provide canyoning enthusiasts with hundreds of sheer walls to descend. Some of the canyons are about as deep as the Empire State building is tall, over a thousand feet. Abseiling, the Australian word for rappelling, is a popular sport at the park, as are bushwalking, hiking, camping and kayaking.

It was in September of 1994 in one of the more remote canyons that David Noble and two friends were pursuing their interest in canyoning and bushwalking, making their way through impenetrable brush, scrambling down slopes, abseiling when faced with sheer drops. David, after some very difficult abseils including one drop over a frigid waterfall into an icy pool, found himself on the canyon floor in a prehistoric rainforest-like microclimate. There he discovered a small grove of large, conifer-like trees that he couldn't identify, the largest estimated to be 120 feet tall. The new growth had soft, apple-green leaves similar to a fern which changed to a blue green on somewhat older branches. Fully mature foliage was a much darker green but with double ranks of leaves on each side of the branch instead of just a single row. The strange bark was surreal and unlike any he was familiar with, resembling chocolate bubbling in a cauldron or chocolate-covered raisins stuck to the trunk. Anxious to determine what this tree was, he collected a small sample of the fern-like foliage for identifi-



Marlene Johnson poses with a Wollemi Pine February 2006, D Johnson photo

After being unable to identify it on his own, he showed his sample to some experts at the New South Wales National Parks and Wildlife Service. At first glance, one botanist thought it looked like a fern. "No, it's a bloody big tree," Noble told him.

David led a small cadre of intrigued scientists back to the site where all agreed that the trees looked like nothing they'd ever seen before. Samples and seeds were taken for further study. Only by comparing the collected specimens to prehistoric fossils deposited during the time of dinosaurs, was the thought-to-be extinct tree eventually identified as a new genus of the 200 million year old Araucariaceae family.

Others in that family include the Monkey Puzzle Tree and Norfolk

Island Pine. "Wollemi Pine", the working name given to the tree, was later scientifically named *Wollemia nobilis*, to honor both the park where it was found and David Noble, the man who discovered it. After further intensive searching, several other small groups of trees have been found, bringing the total of discovered adult trees to fewer than 100.

Being an endemic species in the highest risk category, a strategy to conserve the pines in their natural, very fragile habitat was developed. Wildfires always pose a danger but weeds and plant diseases brought in by humans are an equally great threat to the Wollemi Pines. Their location remains a carefully guarded secret and researchers wishing to visit the location may do so only with authorization. They must have all gear and boots disinfected and are cautioned about movement around the site. The trees have the ability to coppice, (send up new shoots from roots when upper portions are damaged), so extreme care must be taken when at the site to limit soil compaction and trampling of tender new growth. Unauthorized visitors who come within a third of a mile of them can be fined and those who damage or "pick" samples can be penalized from Au\$110,000 to Au\$220,000 (roughly \$85,000 to \$170,000 US dollars) with possible jail time of one to two years as well.

*continued*

To assure that the Wollemi Pine survives a second extinction, the Royal Botanic Garden in Sydney began a propagation program with the intent to disseminate the trees worldwide. Extreme precautions to protect the future generations of the pines are taken at the nursery currently propagating the plants. These include disinfecting foot baths for workers and the hosing down of all tools and heavy equipment and then spraying them with a disinfectant before they are brought into the nursery.

Beginning the program with only about 1000 cuttings, the nursery now has over a half million plants. Some of the larger propagated specimens were initially planted in numerous Australian parks and botanic gardens in pipe enclosures where visitors could observe the trees but not touch them. Later specimens were sent abroad for hardiness trials in more extreme climatic conditions.

With worldwide interest and excitement over the Wollemi Pines, collectors from all over the world attended Sotheby's October 23, 2005 Collector's Edition Wollemi Pine auction of 292 first generation trees at Sydney's Royal Botanic Garden. Trees offered were up to six years old with the largest being about 10 feet tall. The "Sir Joseph Banks Collection", a group of 15 trees propagated from cuttings of the 15 original trees, generated the most interest and sold for Au\$150,000. All trees were sold and over Au\$1,000,000 was raised with the average tree costing about Au\$3,600. In April of 2006 small trees were made available for purchase to Australian gardeners and just recently the National Geographic Society, the designated American supplier, began shipping small trees to US buyers.

No wonder many want the plant that was thought to be extinct for 65 million years, but instead has survived numer-



*Wollemia nobilis* terminal shoot, Royal Botanic Gardens, Kew, London. R.J. Naskali photo, October 2006.

ous Ice Ages, continental breakup and drifting to survive in its own little niche in a remote canyon in Australia. Wollemi Pines would certainly make a great conversation piece. They'd also be useful to create plant envy among gardening friends. They adapt well to low light conditions, such as those found in a home, as well as high light areas, including full sun. They readily grow in containers as house or patio plants without frequent repotting. Their growth can be regulated by selective pruning and shaping at any time of year or by growing in lower light situations. The trees can survive temperatures from 23°F to 113°F so in USDA zones 7 and higher they may be planted outdoors as landscape plants. At the onset of cold weather, the growing tips of Wollemi Pines go dormant and the buds form an interesting and unusual protective pink and white waxy coating which may explain how the plant survived ice

ages. When warm weather approaches, the coating disappears and the new growth spurts through. At roughly seven years of age, the bark begins to show its unique bubbling habit and after 12 to 15 years the tree may set cones and produce seeds though some may do so sooner.

The Wollemi Pine may be ordered through the National Geographic Society's online store or by calling 888-225-5647. Currently the cost is about \$100 plus shipping for a 10" – 14" tree. The sale of every Wollemi Pine returns a royalty to fund the conservation of the wild Wollemi Pines and other rare and threatened species. They make unique,

lasting gifts for plant lovers or the person who has everything.

Read more about the Wollemi Pine at <http://www.wollemipine.com/>

-Marlene Johnston



*Wollemia nobilis* tree planted outdoors by Sir David Attenborough at the Royal Botanic Gardens, Kew, London in May, 2005. The mandatory steel 'cage' was installed to discourage theft of cuttings and branch specimens. R.J. Naskali photo, October 2006.

## Invasive Plants and Animals

Many plants and animals, introduced into new habitats in new geographical regions, can become troublesome weeds and pests. Unwittingly, or by deliberate introduction, these organisms can thrive in their 'new' environments under 'new' optimum conditions—especially without the natural control agents of their native haunts.

In the vast expanses of the U.S.A., and even in Idaho, habitats exist in which hundreds of introduced organisms can thrive and become serious, destructive pests that are costly to control or eradicate. A plant or animal species which is highly invasive in one part of the U.S.A. often is not invasive or weedy in other parts of the U.S.A. Even in Idaho, a given plant can be invasive in one part of the state but not in other parts of the state. Tropical plants which are troublesome weeds in Florida, Georgia, and Louisiana may sometimes be controlled by low temperatures in Idaho or other northern habitats. In other cases, however, tropical plant propagules (e.g., seeds or underground perennial vegetative structures) may survive coldest Idaho winter temperatures.

As a precautionary guideline, gardeners should not introduce new, untested plants into gardens without heeding the guidelines of botanical gardens, various Agricultural Extension agents' counsel, or published data of the U.S. Department of Agriculture. Reputable nurseries, garden stores, and mail-order companies honor state invasive species codes; they will not sell and distribute invasive species to areas which ban them.

Alternatively, some gardeners culture and distribute plants and animals without researching the legalities of such practices. Just because you have a beautiful plant which thrives in your garden does not mean that you should propagate and disseminate it to friends without investigating the legalities and ramifications of your zealous 'plant sharing.'

In some cases, highly invasive and destructive plants have been introduced into new habitats through the long-distance distribution of hay, straw, nursery stock, or movement of animals which have fed or grazed in areas with invasive species. In other cases, commercial sales of dried flower and fruit arrangements, imported from foreign areas without inspection and sterilization by wholesale and retail distributors, has resulted in introduction of highly invasive plant species. Careless and unwitting movement of fishing and boating equipment, without careful cleaning, has introduced

living organisms into pristine water bodies with serious and costly consequences (e.g., introduction of the Eurasian Water Milfoil, *Myriophyllum spicatum* var. *spicatum*) for Idaho and the Pacific Northwest.

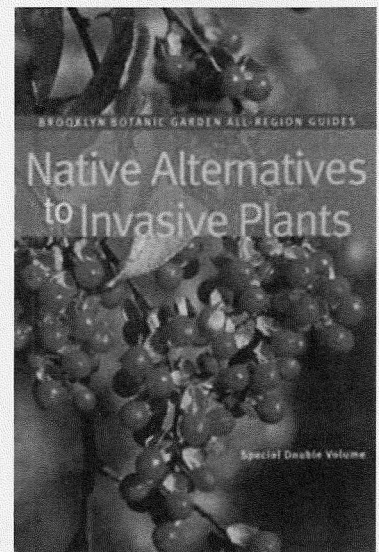
Discarding your indoor aquarium organisms into outdoor habitats is as unconscionable or unethical as it may be illegal. As a case in point, 'Parrot Feather' (*Myriophyllum brasiliense*), a Brazilian native aquatic plant, has outdoor colonies established in northern Idaho many decades ago.

Just because a plant is banned in one part of the U.S.A. does not mean that it is illegal and invasive all over the country. In eastern U.S.A., the 'Burning Bush' (*Euonymus alatus*) is invasive, weedy, and banned in several states—while it is a coveted and nurtured landscape shrub in Idaho. Among the honeysuckles (*Lonicera* species and cultivars) there are numerous delightful garden ornamentals—but the Tatarian honeysuckle (*L. tatarica*), native in Asia, should not be planted because it is highly invasive, weedy, and readily spread by birds which feed on its prolific red berries.

Dalmatian Toadflax (*Linaria genistifolia* ssp. *dalmatica*), native to southeastern Europe, is a very beautiful, yellow-flowered relative of snapdragons; it is nurtured by some gardeners—even though it is a banned invasive species. Its prolific production of fine seeds, waxy leaves, and deep perennial roots make it very difficult to control or eradicate. Purple loosestrife (*Lythrum salicaria*), native to Europe, has become naturalized and choked waterways across North America; it is banned in most of the northern tier of U.S. states.

Some solutions to these problems for avid gardeners:

- (1) Seek information and literature from your local County Extension agents;
- (2) Use the Internet for information about invasive species;
- (3) Do not culture and distribute unknown plants without



Cover of the 'Native Alternatives to Invasive Plants'

learning their proper names and characteristics;

- (4) Heed web site information and published literature from the U.S. Department of Agriculture about invasive plants;
- (5) Ask pertinent questions of professional horticulturists and botanists;
- (6) Read current, professionally written literature about garden plants;
- (7) Purchase plants from reliable and reputable sources; and
- (8) Do not discard plants and their propagules into public property, arboreta, botanical gardens, and water bodies.

Current literature, written by professional botanists and horticulturists, addresses these issues admirably in many



Snowdrop (*Galanthus nivalis*) flowers, R.J. Naskali's Moscow garden, Feb. 20, 2007.

cases. On notable new and inexpensive guide for all gardeners, nurseries, and landscapers is '*Native Alternatives to Invasive Plants*' published by the Brooklyn Botanical Garden, 2006, 238 pages, ISBN 13-978-1 9538-74-7, edited by C. Colston Burrell, Janet Marinelli, and Bonnie Harper-Lore. This paperback book has an encyclopedia of desirable plants described with color photographs and

descriptions of invasive plants. It includes 19 pages, "List of Invasive Garden Plants." The handbook is available for ca. \$10 (U.S.) from the Brooklyn Botanic Garden, 1000 Washington Avenue, Brooklyn, N.Y. 11225 or its web site ([www.bbg.org](http://www.bbg.org)).

Additional invasive plant data can be found at an exhaustive web site: <http://www.nps.gov/plants/alien/list/WeedUS.xls>

--Richard J. Naskali

## Calendar of Events

**April 19, 2007 30<sup>th</sup> Annual Meeting of Arboretum Associates**  
7:30 pm UI College of Law Courtroom

**June 2, 2007 Arboretum Associates Plant Sale**  
8:00 am Latah County Fairgrounds Ice Rink

**July 9, 2007 Annual Summer Concert in conjunction with**  
**the University of Idaho Lionel Hampton School of Music**  
7:00 pm University of Idaho Arboretum

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