

Lake Steward

The newsletter of the WLR Lake Stewardship program Vol. 5, No. 1 Winter 1998



Bird watchers are wide-eyed in winter

Winter is the best time of year to observe waterfowl on your lake. There are a lot of species around and spotting them is easier because the trees are bare of leaves. Here are some of the species you might find on your lake this quiet time of year.



bufflehead

Familiar friends

Canada geese and mallard ducks are common to most County lakes, and readily recognizable. Resident populations can easily number from fifty to a hundred birds. Both species tend to fly out each morning at first light to feed and return each evening

before or just after dark.

Annual visitors

Bufflehead and ring-necked ducks frequently winter in this area.

Both are diving ducks that appear in late September or early October

each year and are often seen until March or April

The black and white male bufflehead is easily identified. The dusky bufflehead female is also easily identified by her white head patch. The male and

female are extremely small.

Male ring-necked ducks are distinguished by the white crescent in front of the wings. The female is grayish brown. Both male and female have a light white ring around the bill, but contrary to their name, neither has a ring around its neck.

Northern shoveller and green-winged teal are other winter visitors to local lakes com-

monly seen just passing through on their fall migration. The shoveller male has a green iridescent head and chestnut sides; the fe-

male is light brown. Although
(continued on page 3.)



ring-necked duck

Resolve to get involved

King County is looking for lake enthusiasts to join the Lake Stewardship program. If you have access to one of the County's small lakes, own a boat, and enjoy going out on the water, you can help us study the health of your lake!

New and backup volunteers are needed to record lake level and rainfall daily, and make weekly trips onto the lake to measure temperature and water clarity. May through October bi-weekly water samples are also collected. All equipment and

training is provided! These lakes need your help:

Bitter, Boren, Burien, Echo, Fenwick, Fivemile, Geneva, Joy, Kathleen, Killarney, Meridian, North, Panther, Ravensdale, Shadow, Star and Twelve.

So, whether you're fulfilling New Year's resolutions or just looking for a fun opportunity, contact the Lake Stewardship program by calling **Wendy Cooke** at (206) 296-1949 or **Jessica Anderson** at (206) 296-8008. 🐾

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Lake monitors report

Fall rainfall totals finish lower in 1997

Figure 1 illustrates 1997 fall quarter precipitation totals collected by 34 lake monitors. Fall rainfall totals this year were significantly lower than last fall's (1996) regional average (567mm). Rainfall totals at about half the lakes were at or above the historic average (380 mm), while the remaining lakes were near the regional average (350 mm) or lower.

Could lower rainfall totals be related to the El Nino weather phenomenon? Possibly. El Nino winters are usually warmer than average but only sometimes drier. Based on King County data, flooding generally occurs less frequently during El Nino years. If you're interested in learning more about El Nino or local weather check out the following web sites: <http://www.atmos.washington.edu/data/weather.cgi> and <http://www.cdc.noaa.gov/enso/>

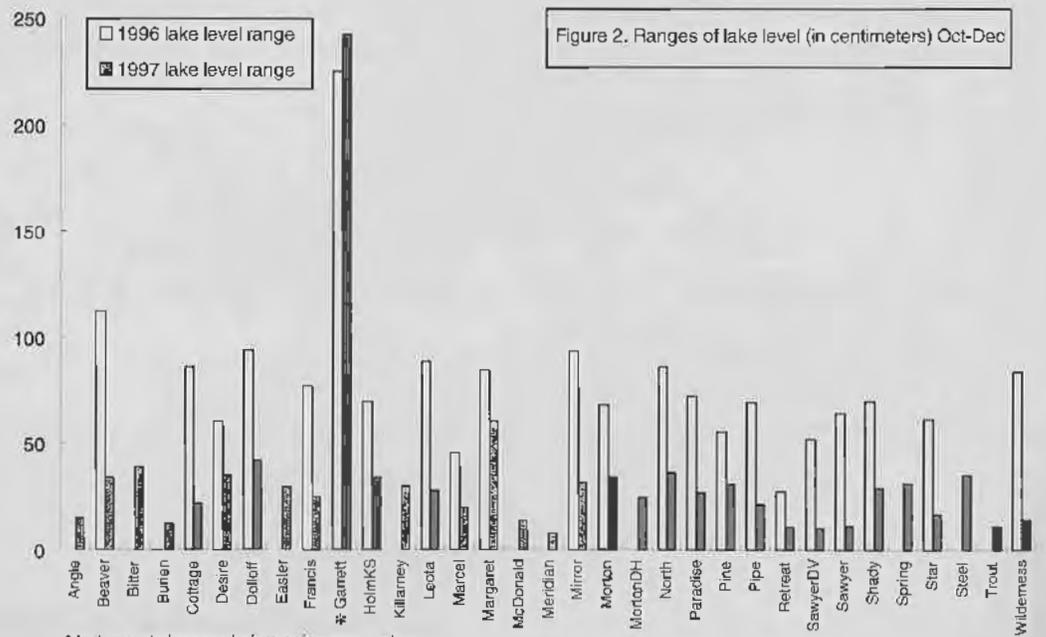
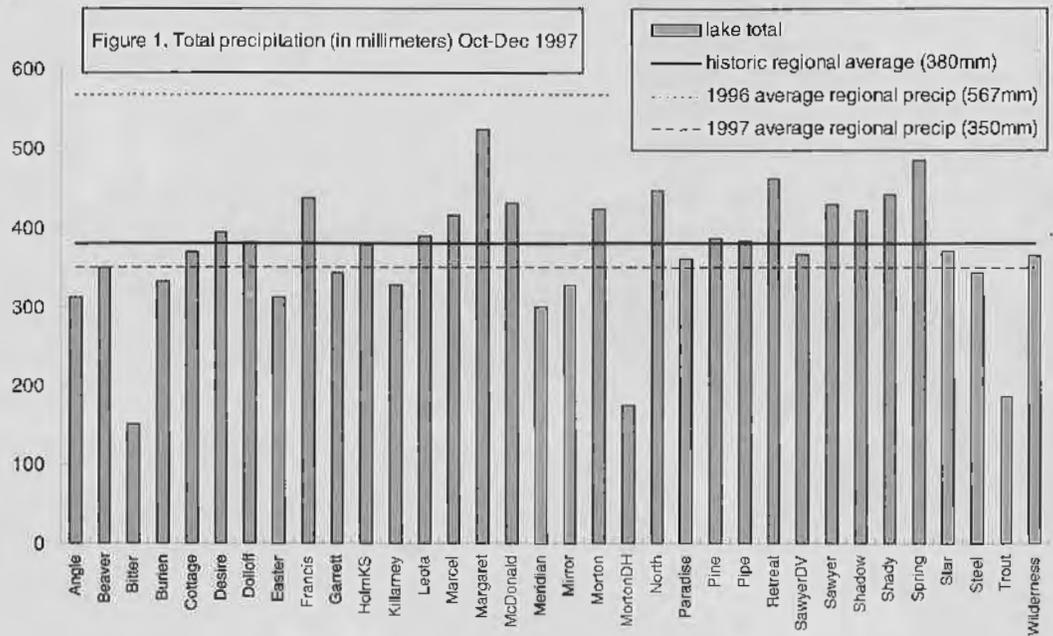
High but dry?

Twenty-two lakes had complete lake level records for the fall of both 1996 and 1997. The range between the highest and lowest lake levels were smaller in 1997 (Figure 2). Lower rainfall totals this past fall were reflected by less dramatic rises in lake level. It seems that the extremely high precipitation levels in the 1996-97 water year kept

lake levels high through September 1997. Most lakes may not be noticeably lower through this winter even though total precipitation has been lower.

Comparing the last two fall seasons demonstrates how dramati-

cally rainfall and subsequent lake level patterns can vary from year to year. Ongoing monitoring helps us better explain the differing seasonal and annual patterns in lake level and quality since no two years are exactly alike. 🌧️



* last recorded ranges before going over scale

Watching for birds . . .

(continued from page 1.)

they look like mallards, their large spoonbill gives them away – it is used to strain vegetation from the water surface.

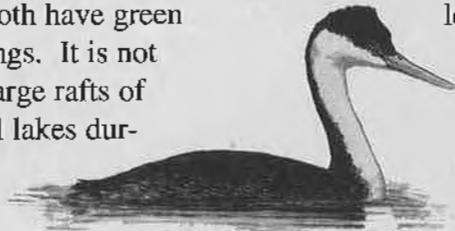
Green-winged teal are also surface feeders. They have brown plumage; the male more gray-brown with a green patch on the side of the head. Both have green patches on their wings. It is not uncommon to see large rafts of these birds on small lakes during migration, but seldom for more than a day or two.

Feasting on lake bounty

The American coot is slate-gray with a conspicuous white bill. It feeds on the surface but also dives, eating mostly submerged

vegetation or grazing on the shore. You'll see the coot on open water in the winter, but it prefers the seclusion of a wetland in the spring and summer for breeding and nesting.

Western grebe also winter in the area. They may take up residence in early October and not leave until mid-April. The Western grebe has a swan-like neck, a long yellow bill, and in winter is grey and white. They are a diving species and are expert fishers.



western grebe

You will probably see hooded mergansers during winter. Both male and female hooded mergansers have a head-crest that can be raised or lowered. The male's crest is white trimmed in black. His back is black and his breast reddish-brown. The female's crest is grayish-brown as is most of her coloration. Both are mainly fisheaters. They leave this area in April, headed for more northern and interior latitudes to breed and nest.

The great blue heron is commonly seen in the Northwest.

Many lakes are home to these large



hooded merganser

birds that stand 4 feet tall with a wingspread of 6 feet. They are blue-gray, and whitish about the head. This majestic bird is a solitary feeder, catching fish in lakes or feeding on small rodents in the wetlands.

Where to look

While most water birds are wary and hard to approach for observation, many small lakes provide excellent vantage points for water bird viewing. Binoculars or a spotting scope allow great viewing from most lake shores. With a canoe or kayak, you can silently enjoy and explore the shorelines of your lake all winter long.

Contributed by bird enthusiasts, John Strand and Cullen Doyle. 🐾

Illustrations from *Birds of Seattle and Puget Sound*, by Chris Fisher (@ Lone Pine Publishing, 1997). Used by permission.

Talking lakes

If you want to learn more about lakes and lake management, be sure to attend the annual meeting of WALPA (Washington State Lake Protection Association) on April 3rd and 4th in Issaquah. Lake managers and enthusiasts from all walks of life will gather for two days of sessions.

Experts will discuss and present the latest information about toxic algae, aquatic plants, lake habitat and restoration. Friday sessions will be more technical in nature, with Saturday sessions focusing on general lake management issues. For more information, please call **Jonathan Frodge** at 1-800-607-5498. 🐾

Lakeside tips on tape

Copies of the brand new video *Lakeside Living* are now available. The program, produced this winter by the Water and Land Resources Division, gives lakeside dwellers information about lake-friendly landscaping practices and other ways to be a good neighbor to your

lake.

Packed with great information, this is a great resource to share with your neighbors or with the whole community club at your next meeting! To borrow a copy or buy one for cost, call **Sharon Walton** at (206) 296-8382. 🐾

Pondering the place called Paradise

I sit on the dock at Paradise Lake and forget about daily headaches and hurries and pressures. If I am patient, I may see a bald eagle spiral down into the pine tree on the southern shore, or the moon rise and turn to gold as dusk fades. Some token, some gift from nature makes me glad I came, glad to have the excuse of weekly monitoring duties to escape more mundane chores at home in Edmonds.

One hundred acres of family-owned land surrounds the 17-acre lake near Woodinville. Swampy forest lines the shore to the south and east. On the north lie open wetlands. A boathouse sits at the west end and beyond it, grassy fields. From a boat, only three houses are visible. Only the sounds of commuter traffic on the county road remind me that the lake and neighboring properties are becoming an island of nature, an increasingly important home for

many species, from freshwater clams and salmon, to cormorants and coots, otter and the occasional bear and bobcat — and abundant beaver (does your lake need any beavers?).

Paradise Lake is biologically very old, judging by its naturally eutrophic state and high productivity. In historical terms, disruption of nature in favor of human progress goes back to the 1890's, when Great-great-great-grandpa Davis, a Welsh preacher and coal miner, turned his hand to farming and cleared land at his homestead overlooking the inlet to Paradise Lake. During the first decade of the 20th century, all the timber in the area was logged. The coal-fired trains that serviced the nearby sawmill ran across the outlet of the lake (Bear Creek) on a trestle where they dumped ashes, eventually raising the lake level.

In the 1930s, family members

raised trout for Seattle restaurants, following the lead of a neighbor raising bull frogs for their tasty legs. Both operations went bust, but the frogs left behind happily adjusted to life in Paradise. Generations of kids have enjoyed chasing the huge pollywogs that fill the summer shallows.

A major source of family lore is the resort that operated here from the 1920's to the 50's. The resort featured a sandy beach (a minor engineering marvel for a mud-bottom lake), a rustic lodge with a restaurant and dance floor, cabins, boat rentals, horseback riding, duck shooting, and in later years, a go-cart track.

Nowadays, the property is closed to the public. Many people in the area do not know where the lake is, much less realize the importance of its relatively large watershed or the value of the habitat provided by this privately owned and maintained land. The lake, largely in its natural state, has become a family retreat — a place to nourish our roots in the golden water along with the hemlocks and willows. My sister, Kay Doolittle, takes daily lake level and precipitation readings, and my sister-in-law, Nancy Doolittle, and I monitor the lake weekly. Volunteering this way is a labor of love. We view it as one component in taking care, not only of a natural heritage, but of a family treasure as well.



The author's son, Erik, shows how the family's seventh generation spends summers at Paradise Lake -- clearly an exercise in diligent relaxation.

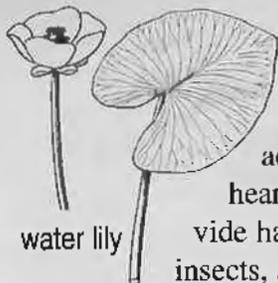
Many thanks to Shirley Doolittle Egerdahl for this article.

Getting to know your lake plants

All animals, including the two-legged variety, depend on plants for food, shelter, and oxygen. It's easy to think of plants we use everyday -- from vegetables on our plate to the trees used to build our homes. Similarly, lake plants provide habitat and food for animals. Many of these plants were also used by local Native American tribes for food, medicine, and many other purposes.

Yellow water-lily

Nuphar lutea is a water-lily typically found growing in shallow lake areas.



water lily

The large leaves (10-40 cm long), characteristically heart-shaped, provide habitat for algae, insects, and other aquatic organisms.

These floating leafed plant bears big (10 cm) yellow blooms can be found from June to mid-August on this floating leafed plant. Waterfowl eat the seeds while deer, muskrats, and beavers consume other plant parts. The plant's large, starchy roots served as a food and medicine source for Native Americans.

Hardhack

Spiraea douglasii, commonly called hardhack, is a shoreline shrub that can reach heights between 1-2 meters. The



spiraea

leaves are oval, 3-10 cm long, with distinct sawtooth leaf edges. The flowers resemble a pink bottle brush at the end of each branch. The plant is sometimes confused with purple loosestrife or fireweed because of similar flower shape and color but can be distinguished with a closer look. Hardhack tolerates flooding and will invade disturbed areas. The Lummi used hardhack stems to spread and cook salmon. The plant's seeds were also used medicinally to brew a tea for diarrhea.

Hard stem bulrush

Scirpus acutus is a relatively leafless plant found along the lake shoreline from June to September. Commonly known as bulrush, it is characterized by tall (1-3 meters) green stems that are distinctly cylindrical in shape, tapering at the tip. The flowers emerge at the stem tip as clusters of individual spikelets. Bulrushes provide food and shelter for a variety of animals including fish, otters, deer, beaver, muskrat, waterfowl, and shore birds. Native Americans traditionally used bulrushes to make mat and baskets. These items and others made from bulrushes served as important trade items.



bulrush

Cattails

Typha latifolia have long, flat tapering leaves along with a dense brown spike of a flower at the top of a tall stalk. Total height can reach 1-3 meters. Cattails are typically found together with bulrushes along the lake shoreline. Many species of waterfowl and mammals depend on both plants for food and shelter. The underground stems provide food for geese, beaver, muskrat and other animals while marsh wrens and redwing blackbirds nest among the upper stems. Indigenous people used both cattail leaves and bulrush stems to make mats that were hung as screens, used as shelter, or served as mattresses and kneeling pads. Baskets and string can also be made from cattail leaves or bulrush stems.



cattails

For more local information on plant use and identification, consult any of the following: Plants of the Pacific Northwest (Pojar and Mackinnon), Wetland Plants of Oregon and Washington (Guard), Wetland Plants of Western Washington and Northwest Oregon (Looke) and Ethnobotany of Western Washington (Gunther).

Illustrations from Vascular Plants of the Pacific Northwest, by Hitchcock et al, reprinted by permission of the University of Washington Press.

Dogs will not 'doo' Beaver Lake

Beaver Lake Community Club (BLCC) is on a mission to get folks to recognize the link between water quality and "picking up" after their pets.

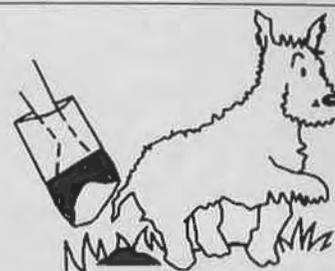
They are asking pet walkers to always be prepared for cleanup by taking along a plastic bag.

Program Coordinator Eileen Parkin says, "Once people make the connection between water quality degradation and 'doggie doo' they will realize that cleanup is just part of responsible pet care. Pet waste is high in nitrogen and phosphorus. Just as with chemical lawn fertilizers, these nutrients leach into waterways and promote algal growth. Algae, in turn, uses oxygen which fish need to survive"

Pet walkers in the area can al-

ready be seen smartly displaying plastic bags attached to their dogs' leashes.

On March 29, BLCC will be kicking off their program near the picnic shelter at Beaver Lake Park. Interpretive signs and a 'Mutt Mitt' dispenser will be unveiled. Free health clinics for pooches will be offered: at 12:15 Dr. Chuck Watson will discuss "Reading you



dog's signals of pain or disease", and at 1:00 Dr. Lisa Bennett will relay important health considerations in raising a new puppy. The public and well-behaved canines are welcome. 🐾

How tall is your lake?

Have you recently had your property surveyed? Do you know of a survey monument close to your lake?

Many faithful volunteers in King County record daily fluctuations in their lake level. We would

like to link this data to established vertical elevations. If you know of a survey in your lake neighborhood that might document vertical elevation above sea-level, call **Wendy Cooke** at (206) 296-1949.



KING COUNTY

Department of Natural Resources

Water and Land Resources Division

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