

Vol. 33 No. 12

ST. LOUIS ARMY ENGINEER DISTRICT

# ESPRIT

Center of Innovation

December 1996

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## Rivers Project Eagles along the Mississippi

Each year during the winter months visitors to the Mississippi River are treated to a special sight... Hundreds of American Bald Eagles. The annual migration of our national symbol along the Mississippi River begins around mid-November.

Hundreds of bald eagles flock to the Rivers Project Area and can be seen flying over the bluffs that surround the river, sitting in trees along an open waterway, or swooping down to catch a fish below the massive locks and dams.

Visitors also flock to the Rivers Project areas just to see the eagles as they spend the winter months along the Mississippi River.

Eagles migrate down the Mississippi Watershed from Canada and the Great Lakes during the winter months looking for open water areas to feed. Eagles usually stay in the Rivers Project Area until mid-March when Spring warm weather begins moving in. The eagles once again begin their migration back north until next year.

### Where to see eagles

Eagles can be viewed all along the Upper Mississippi Watershed during the winter months. Within the Rivers Project Area, several sites have become known as good gathering areas for eagles and visitors.

**Lock & Dam 24, Clarksville, Missouri**, has some of the largest eagle populations from mid-November until mid-March. The eagles roost in the trees along the Illinois shoreline and the bluffs along the Missouri shoreline. Visitors can view the large numbers of birds from the comfort of the Clarksville Visitor Center and also attend an eagle program on Saturday and Sunday throughout January and February. The Lock and Dam overlook also offers visitors the opportunity to view eagles as they fly over the dam looking for fish to feed on.

**Lock & Dam 25, Winfield, Missouri**, also offers visitors the chance to get up close and personal with the eagles. An eagle viewing platform, constructed by volunteers with the Nature Conservancy, allows visitors to view the eagles which feed around the lock and dam structure. A new bridge leading into the



**This and other articles about Rivers Project continue on page 5.**



# Commander's Perspective



**COL Thomas J. Hodgini**

**I give the District high marks in both business practice measurements and our identity as on of the Corps' premier districts.**

As we enter this holiday season, let's pause and reflect on the year just past and think about the coming new year.

I've been a member of the St. Louis District team for nearly five months now. I'd like to offer a few personal thoughts and observations. I give the District high marks in both business practice measurements and our identity as one of the Corps' premier districts. Both Command Management Review (CMR) and program management indicators reflect a very healthy past year.

You have also reenforced your identity as progressive, innovative and caring. We are emerging from a period of downsizing, FTE & budget cuts, with an aggressive, forward looking view toward future growth. This says much about the District's character and our reputation. One example of innovation, which is gaining recognition inside and outside the Corps, is our new micro modeling techniques in river sedimentation control. There are many others. Our emphasis on environmental stewardship is paying dividends as evidenced by the District's award of the Conservationists of the Year award by the Migratory Waterfowl Hunters, Inc., recognizing our innovative efforts to operate the locks and dams on the Mississippi River in an environmentally sensitive manner. Our folks made the Combined Federal Campaign another success this year with generous donations of \$58,583, an increase of 5.4 percent over last year. This is the sixth year in a row that the average gift per person has gone up. Even though our workforce has diminished, our contribution to worthy charities has increased. That shows that you really do care for those less fortunate in your community.

In 1997, we will continue to build on our reputation, both corporate and personal, throughout the Corps and the nation. We must strive for excellence in all we do. All of USACE will be developing implementation plans for the Corps-wide VISION to be published soon. All of us will be touched by the Corps of Engineers Financial Management System (CEFMS). We in the St. Louis District will begin our actual changeover to CEFMS in May. It promises to be a great tool for managing our financial affairs.

For the coming year we must all establish near term objectives. We must set, understand and meet personal and corporate goals. I know you will join me in continuing to strive to keep the St. Louis District a leader and vital team player in the Corps of Engineers and Army.

I wish you all a joyous and safe holiday season. From my family to yours, all the best in the coming new year.



**US Army Corps of Engineers**  
St. Louis District

ESPRIT is an unofficial publication authorized under the provisions of AR 360-81. It is published monthly, by contract, in 1450 copies, by the Public Affairs Office, U.S. Army Engineer District, St. Louis. Views and opinions expressed in this publication are not necessarily those of the Department of the Army.

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# News Briefs

## Carlyle Lake:

### **Duck hunt**

Carlyle Lake announces the sixth annual duck hunt for physically challenged sportsmen. The 1996 duck season opened November 9 and runs through Saturday, December 28, for the Southern Zone. Two blinds equipped for special access will be available for the 1996 duck season. Use of each blind is by reservation only and limited to permanently non-ambulatory or semi-ambulatory hunters. Each hunter is required to bring with him/her at least one assistant, who also is allowed to hunt.

For more information, or to make reservations, contact the Carlyle Lake Project Office at (618) 594-2484.

### **Marina award**

Carlyle Lake's West Access Marina received a Clean Marina/Clear Value award. The award was given to the operator, Ric Golding. It was one of 25 nationally recognized environmental achievement awards presented in Chicago at IMTEC, the nation's largest boating industry trade show. Golding was commended for his leadership in the fight to have cleaner recreational waters. The award was predicated on heating the boat repair building at the marina with used oil in a high temperature oil burner.

### **Improvements**

After nearly three years of planning and recent efforts by Senator Frank Watson, the Illinois General Assembly appropriated \$150,000 for improvements to parking lot #2 and the Cox Bridge area. The Illinois Department of Natural Resources will spend

about \$30,000 on enlarging Parking Lot #2 and the remaining \$120,000 on providing a high water access at the existing boat ramp at the Cox Bridge area and a new high water access on the downstream side of the bridge.

### **Smothers baby**

Park Ranger Joe Smothers and his wife, Darla, are proud to announce the arrival of their daughter, Caitlin Noel Smothers. She was born August 31 and weighed 8 lbs. 6 oz. She is welcomed home by two brothers, Nicholas and Cody.

## Mark Twain Lake:

### **Design a Turbine**

Park Rangers Chris Coe and Brenda Henry have begun the testing for Mark Twain Lake's annual Design a Turbine Contest. Each year students from area schools are challenged to build a model turbine that will energize a generator when powered by falling water. The group that produces the most voltage, through a computer analysis, will have their turbine displayed at the Clarence Cannon Dam Powerhouse for one year. They have evaluated 13 turbines and other participating schools are being scheduled for testing.

### **Group programs**

Park rangers presented programs to scouting groups on wetlands, plant identification and mammals of Missouri this past month. Other group presentation topics included career opportunities with the Corps, hydroelectric power, eagles, life cycle of a forest and handicapped deer hunt.

## Rend Lake:

### **Usage records**

Several new usage records were set at Rend Lake this recreation season. Project visitation increased by 16 percent to a record 1.66 million visits which resulted in 22.68 million visitor hours of recreational usage. The campgrounds alone saw a 15 percent increase in the number of reservations, going up to 5,430. The increased visitation resulted in a 10 percent increase in user fees by the project reaching a new record of \$311,694. There was a significant increase in first time visitors.

### **Elderhostel**

Rend Lake hosted a group of 55 senior citizens attending an "Elderhostel at Rend Lake" program sponsored by the Rend Lake College in November. Park Rangers provided a program about the Corps, a tour of the Visitor Center, as well as a guided nature hike.

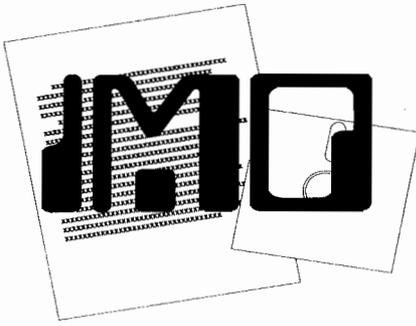
### **Stilling basin**

Rend Lake staff and a local contractor worked with District Office engineers to de-water, clean and inspect the stilling basin of the dam in November. The basin is still in good condition despite being tested by unusually high lake levels in 1995 and 1996.

### **Awards presented**

During his recent orientation trip to Rend Lake, Colonel Hodgini presented Assistant Project Manager Andrea Pickard the Commander's Award for "her outstanding performance of duties during a professional development assignment in the Programs Man-

(Continued on page 4)



## Employee action items

Recently IMO has been following up on a couple of employee action items in our area of responsibility. I wanted to take a few lines and let everyone know the status of these actions.

ITEM: Eliminate submitting of number of microcomputers and laptops for IM; get from LM.

This required some coordination with the Logistics Management Office. An extract from the property database was obtained and a program developed to

condense and reformat the data. It was finally determined that this method could be used in place of future data calls.

ITEM: Create an open calendar of meetings that list organization meetings that are being held so employees may attend when they desire, work related items.

IMO investigated the possibility of merging the individual division level calendar into a District calendar. Procedures could be developed to merge this data, however the volume of data being merged and the number of conflicting events would make the resulting product voluminous and impossible to use.

The information that is desired does exist in the schedules currently being maintained by many offices. IMO created schedules for those offices that did not have them. Therefore the desired information is available to all employees on the different schedules. This information may be viewed in the following manner.

All USERS HAVE THE ABILITY TO VIEW ALL THE DIVISION OFFICE CALENDARS/SCHEDULES

DOS

To view the Division Office calendar/schedule,

Choose File/Proxy.

At Become User: type Sched XX (XX is your office symbol)

Choose OK

To return to your original screen,

Choose File/Proxy

At Become User: type your User ID

Choose OK

WINDOWS

Open a Calendar View (double-click on My Calendar)

Choose File/Proxy

At User ID: type Sched XX (XX is your office symbol)

Click on OK

To return to your original screen,

Choose File/Proxy

At User ID: type your User ID

Click on OK

## News Briefs (cont.)

agement Division..." The assignment was in HQUSACE and Andrea was responsible for program management of the Southwestern Division.

Park Ranger Mark Meador received a plaque of appreciation from the Mobile District for volunteering to provide support during the 1996 Olympic Games. Mark worked at Alatoona Lake near Atlanta.

## Quote of the month

The supreme happiness of life is the conviction that we are loved; loved for ourselves, or rather, loved in spite of ourselves.

Victor Hugo

## Jenkins addresses economic summit

Rend Lake Project Manager Phil Jenkins addressed more than 250 attendees of the first Southern Illinois Economic Development Summit held at Southern Illinois University at Carbondale in November. The summit was attended by representatives from business, industry, utilities, government and education who met to share successes and learn more about innovative approaches to economic development.

One of the initiatives explored at the summit was the approach to sustainable development, in terms of recreation and tourism, that is taking place at Rend Lake. Jenkins emphasized the value of public lands and natural resource man-

agement to the sustainable development of local areas. While there is a place for adjacent infrastructure development in terms of resorts, lodging, restaurants and tourism attractions, public lands serve as a nucleus to protect water resources and provide outdoor recreation opportunities. Without these public lands and water resources, other types of development would not be possible. Jenkins emphasized the usually under-rated monetary value of wildlife-associated recreation, hunting, fishing and wildlife watching. In 1990, this value was \$2.3 billion dollars in Illinois, making it the 7th highest state in terms of expenditures for this type of recreation.



## Eagles (cont.)

lock and dam area is open to the public this year. Visitors are welcome. Lock and Dam 25 is located off of highway 79.

**Melvin Price Locks & Dam, East Alton, Illinois,** also has large populations of eagles flying and feeding around the massive structure. Eagles can be viewed from the Illinois Overlook offering visitors the opportunity to view birds as they feed below the dam. The overlook also allows visitors to view the large population of birds roosting on Maple Island, on the Missouri shore of the river.

**The Riverlands Environmental Demonstration Area, West Alton, Missouri,** is one of the best viewing areas for eagles for visitors within the St. Louis metro area. You don't have to go far from home to see these magnificent birds. Eagles roost in the trees on Ellis Island and feed around Ellis Bay. Visitors may also drive below the dam on the Missouri shore to view large numbers roosting in the trees on Maple Island. Ranger programs are offered every Saturday and Sunday at 10 a.m. throughout eagle season. Visitors can meet with the ranger at the Rivers Project Administration Building located just off Highway 367 North just before crossing the Clark Bridge.



## Special events

The Rivers Project Office in cooperation with its partners host several special event activities during the eagle season to allow visitors to view and learn more about our national symbol.

**Masters of the Sky,** a cooperative event with the Riverlands Association and the World Bird Sanctuary, offers visitors the opportunity to learn about the American Bald Eagle and several other birds of prey from Illinois and Missouri. Naturalists from the World Bird Sanctuary discuss the natural history of the bald eagle, its characteristics and tips on where visitors can view the eagles. The World Bird Sanctuary brings along several other birds of prey and even demonstrates in-flight programs.

Programs will be held in Clarksville, Missouri, January 18-19, 1997, and in Alton, Illinois, February 1-2, 1997. Program fees are \$2 for adults, \$1 for children. Children under the age of three are free.

**Eagle Days,** hosted by the Missouri Department of Conservation, in cooperation with the Rivers Project Office and Riverlands Association, is held each January in Clarksville, Missouri. This year the dates will be January 25-26, 1997. Programs are held at the Apple Shed, Hwy. 79 at the south end of Clarksville. Viewing opportunities are at the Lock and Dam Overlook, the Clarksville Visitor Center and within Riverfront Park.

## Eagle education programs

Rangers from the Rivers Project Office host eagle education programs at the West Alton office and the Clarksville Office. Teachers may arrange to bring their students to view eagles around the locks and dams and at the viewing platforms.

**Ranger Programs** are offered every Saturday and Sunday throughout eagle season at the Riverlands Environmental Demonstration Area, West Alton, Missouri, and at Clarksville and Winfield. Programs begin at 10 a.m. at the Rivers Project Administration Building.

## Eagle trivia

\*The Bald Eagle was formally adopted as our national emblem in 1782.

\*Eagles are full feathered and nearly full grown at 10 to 12 weeks.

\*Next to the California Condor, the eagle is the largest bird of prey in North America.

\*An eagle's eyesight is four to eight times sharper than a human's.

\*An eagle can break speeds in excess of 100 miles per hour during a dive.

\*An adult eagle's wingspan is 6 to 7.5 feet wide.

## —Earth Notes—

### Snowflake sanitation

Delta Engineering of Ontario in Canada has come up with a new way to deal with sewage: It turns sewage into snowflakes by pressure spraying waste water at freezing temperatures, converting it into "snowfluent." The crystallization process kills the bacteria and leaves only nitrogen, which escapes into the atmosphere when the snowflakes melt. The equipment is also used in Carrabasset Valley, Maine.

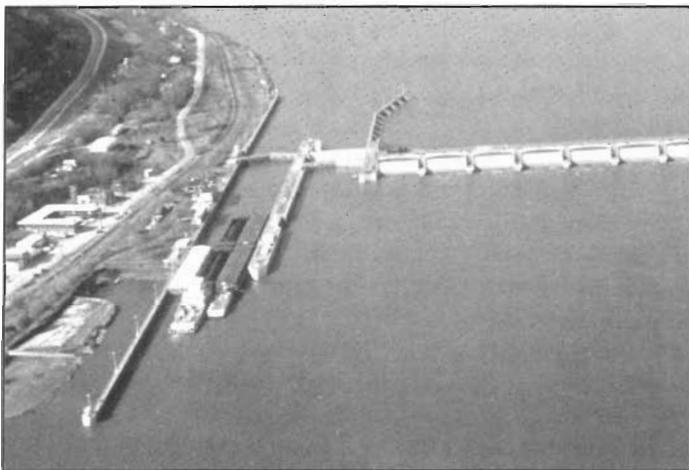


## Locks and Dams 24 and 25

# Major rehabilitation needed

A nearly century-long quest for reliable navigation on the Upper Mississippi culminated in 1930 with congressional approval of a 9-foot channel between Minneapolis and the mouth of the Illinois River. A system of 29 locks and dams were subsequently built, most of them during the 1930s. The structures created a stairstep series of slackwater pools that river tows and

ies, this river corridor opens the nation's interior to worldwide commerce. Accordingly, the Mississippi River corridor is extremely important to the national economy. Congress enacted the 1986 Water Resources Development Act which proclaimed the Upper Mississippi River a "nationally significant transportation corridor". Nearly 80% of the nation's commercial inland vessel fleet is associated with the Mississippi River system.



Lock and Dam 24 at Clarksville, Missouri.

other boats could climb or descend as they traveled the river.

River traffic and economic growth in the Upper Mississippi Valley increased rapidly after completion of the 9-foot project. Total commerce between Minneapolis and the mouth of the Missouri River rose from 2.4 million tons in 1939 to over 85 million tons in 1990. Today, the principal commodities transported are petroleum products, coal, and grain. Harbors, terminal facilities, and riverside industries have developed at many river cities and towns as a result of improved navigation.

The Mississippi River provides a navigable water highway from Head of Passes, Louisiana, to Minneapolis, Minnesota. Coupled with the navigable parts of its connecting tributar-

ies, this river corridor opens the nation's interior to worldwide commerce. Accordingly, the Mississippi River corridor is extremely important to the national economy. Congress enacted the 1986 Water Resources Development Act which proclaimed the Upper Mississippi River a "nationally significant transportation corridor". Nearly 80% of the nation's commercial inland vessel fleet is associated with the Mississippi River system. More than 1,200 towing companies use the navigation system. The total inland waterways workforce has been estimated at approximately 225,000 people.

Two vital links of this

Inland Waterway Navigation System, Lock and Dam 24 and Lock and Dam 25, built and operated by the St. Louis District of the U.S. Army Corps of Engineers, are in need of major rehabilitation if we are to sustain the Mississippi as a primary transportation corridor. Lock and Dam 24 is located on the Upper Mississippi River at river mile 273.4, adjacent to Clarksville, Missouri. Construction of the lock and dam began in 1936 and the structure became operational in 1940. The structure consists of a 600 foot by 110 foot lock chamber, a dam consisting of 15, 80 foot by 25 foot tainter gates and 2,720 foot submersible dike. In 1995, 38 million tons of commodities passed through Lock and Dam 24.

Lock and Dam 25 is located on the Upper Mississippi at river mile

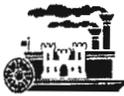
241.4, near Winfield, Missouri, just 32 river miles downstream of Lock and Dam 24. Construction of the lock and dam began in 1935 and the structure became operational in 1939. The structure consists of a dam, 1,140 feet long with 14 60 foot tainter gates and 3 100 foot roller gates. The overflow dike is 2,566 feet long. The lock consists of one main chamber, 110 feet wide by 600 feet long. In 1995, 38 million tons of commodities passed through Lock and Dam 25.

Shipping bulk commodities along the Upper Mississippi River produces net transportation savings in excess of \$1 billion a year in the United States. More than 120 million tons of grain, fertilizer and chemicals, building materials, coal, metal and petroleum products shipping up and down the Upper Mississippi Waterway fuel economic growth in the region. And nearly 60 percent of all exported U.S. grain is shipped down the Mississippi to world markets, providing food for a growing world population. Commerce passing through Lock and Dam 24 and Lock and Dam 25 has grown 42% from 1940 to 1995.

Locks and Dams 24 and 25 are the nearest two structures to the recently completed and modern Melvin Price Locks and Dam. Their deteriorated condition is due to age, weather extremes, year-round operation and high usage. In addition, the uniquely poor quality of concrete mix available for the original construction of these facilities results in concrete with very low durability when compared with other locks and dams.

At Lock and Dam 24, extreme deterioration of concrete exists on the guidewalls, the lock walls and the dam piers. This deterioration is due to age of the structure and the fact that concrete standards are

(Continued on next page)



## Locks & Dams (cont.)

more advanced today than what existed when the structure was built. Technology of today would be a solution to the problem with the concrete. Guidewalls, as the name suggests, help guide a tow into the lock. They provide a buffer, usually concrete and steel, against which tows can bump to align themselves as they enter the lock.

At Lock and Dam 24, cracks have developed in the guidewalls and lock walls due to the poor quality of concrete and they have enlarged since there is no reinforcement steel used in their construction. Failure of the guidewall will result in the closure of the river to navigation, a loss of millions of dollars to the navigation industry. The situation is serious enough to have caused the Corps Officials to dictate that temporary means be constructed to stop the decayed concrete from falling off the lock. Permanent repairs will restore the expected performance of the lock.

Tainter gates are steel dam gates which hold back the forces of the river. At Lock and Dam 24 severe dents, caused by ice and debris in the river, have caused the failure of the dam gates to seal properly. The result is that extraordinary measures must be performed to maintain the navigation pool during periods of low flow in the river. In order to seal the dam gates, lock personnel must drop sandbags in front of the gates until the flow of the river is stopped.

Of severe concern beyond the dents on the dam gates, the tainter gates are reaching fatigue limits due to the vibrations caused by river flows. At the fatigue limit, the gate would crack and fail. The loss of a dam gate means the loss of the navigation pool. Navigation on the Mississippi would be closed. Under certain conditions a loss of a gate could lead to complete dam failure. It is interesting to note that the dam

gates at Lock and Dam 24 are different than others on the river. They were experimental. The experiment is possibly reaching its limit in success.

Lock and Dam 25, also in need of major rehabilitation, has developed severe movement of the guidewall. The foundation is delicate when compared to the forces of the high powered towboats now using the river and lock. The guidewall at Lock and Dam 25 needs to be repaired or replaced. The lower guidewall has had temporary repairs to stabilize the wall against additional movement. A protection cell to reduce the occurrences of tows impacting the wall was added. Significant investment is needed to maintain the stability of the wall and maintain navigation.

Additional problems at Lock and Dam 25 include the need to replace deteriorated machinery. The Tainter gates, or dam gates, like Lock and Dam 24 are beyond their lifespan and are in need of total rehab or replacement to maintain efficient navigation on the river. Both Lock and Dam 24 and Lock and Dam 25 have service cranes for the dam that are essentially needed to place temporary bulkheads on the dam gates and perform routine operational and maintenance needs.

The St. Louis District is currently executing a Congressionally approved rehab plan for both Lock and Dam 24 and Lock and Dam 25. The District currently is programmed to devote approximately \$4,000,000 per year to this approved program. But additional repair items are necessary to continue commerce on the river.

Congress and the Corps needs to take a prudent but urgent approach to meet the additional repair needs of these structures to preserve the integrity of the Inland Waterway Navigation Channel. This rehab plan would begin work as early as 1999 and continue through the year 2005. Over \$100 million of additional repair over 8 to 10 years is urgently needed at Lock and Dam 24 and Lock and Dam 25.

The Corps will work closely with the river industries, including navigation, recreation and environmental management to reduce the stresses of river closures while these repairs are occurring to further river commerce.

The lake-river-ocean transportation system from the Great Lakes through the U.S. Inland Waterway to the Caribbean and beyond focuses attention on the immense importance of the Mississippi River. As trade expands among Canada, the United States, and Mexico because of the North American Free Trade Agreement, the existence of this naturally cost-effective all-water route through the heartland will be



Lock and Dam 25 near Winfield, Missouri.

more appreciated.

The Mississippi River, ideally located with respect to industrial and agricultural areas and markets, permits small- to medium-sized firms in the Midwest to participate

**(Continued on next page)**



## Locks & Dams (cont.)

in international trade. Coupled with exceptional intermodal land connections by truck and rail, this waterway provides a strong link between the central United States and the growing economies of Mexico and the Caribbean, Central America, and South America. From Ontario to the Yucatan Peninsula and even farther south, low-cost freight service on the Mississippi River will be a benefit. Continuing advances in intermodal trends in the central grain belts and industrial complexes will improve connections to the world from the port of New Orleans.

Lock and Dam 24 and Lock and Dam 25 are a vital link in a strategic, intermodal transportation network. This proposed rehab plan provides a blueprint for our future response to environmental concerns, navigation and recreational needs and the growing diversity of users placing demands on the river.

The Mississippi River is unquestionably of great significance to the nation and our heritage. The Locks and Dams on the Inland Waterway Navigation System are vital to the nation's economy. The loss of these structures is too costly to the importance of the river and the people that are a part of this resource. Consequences of doing nothing at Lock and Dam 24 and Lock and Dam 25 are continued deterioration of the structures which become more costly in time. We risk lengthy shutdowns of the river navigation system due to failure of the structures.

This work is needed now to preclude the possible loss of the navigation pool, which not only affects river commerce, but also fish and wildlife, water supply, and recreation on and along the river.

The Mississippi river not only moves goods, it moves ideas. It unites north and south, east and west; disparate, yet linked together through the moving water.

## Ducks flock to Clarksville

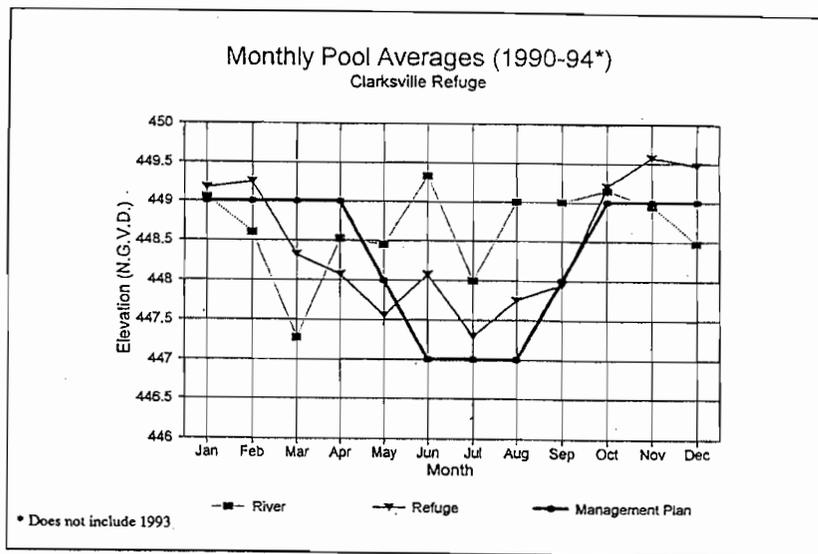
The St. Louis District, Corps of Engineers, recently released a performance evaluation report for the Clarksville Refuge Habitat Rehabilitation and Enhancement Project. Completed in 1990, the project was constructed as part of the Environmental Management Program (EMP). The evaluation report summarizes the performance of project components, examines current management protocols for possible improvement, describes operation and management to date, and reviews engineering performance criteria to aid in the design of future projects.

Project observations and evaluation were jointly conducted by the

fall migration counts. The project addressed habitat enhancement through four specific goals:

- \* Decrease sedimentation into refuge wetlands
- \* Provide a means to control water levels on the refuge, independent of river stage
- \* Increase reliable food production for waterfowl
- \* Increase total wetland food valued for waterfowl

The project includes a levee constructed to the 20-year level of protection between the refuge backwater areas and the main channel of the Mississippi, wetland areas created by removal of materials used in levee construction,



Missouri Department of Conservation (DOC) and the St. Louis District between 1990 and 1994. Located in Pike County, Missouri, between Mississippi River miles 275 and 276, the 325-acre parcel is federally-owned and is managed by the Missouri DOC.

The primary project objective was to restore the area's historically significant waterfowl habitat. Due to the impacts of sedimentation overtime, autumn use of the area had dropped to 500 ducks per day in 1983, compared to 50,000 ducks per day documented in past

two gravity drains with sluice gates, and two portable pump and motor systems. The drains and pumps enable Missouri DOC personnel to actively manage water levels in the project area.

Site management involves maintaining normal water levels through late winter to provide stop over areas for waterfowl, followed by a gradual dewatering in late spring. Grain crops and moist soil plantings are allowed to mature by keeping the area dry through late summer, thereby providing a food



## Ducks (continued)

source for migrating waterfowl in the fall. The area is back flooded to normal water levels in early fall.

The report evaluates Clarksville's four wetland habitat objectives:

**\*Reduce sedimentation rates-** Based on analysis of sediment measurements in four transects within the refuge, the levee reduced sedimentation amounts by an estimated 67 percent for the period 1990 to 1994. All sedimentation within the project bounds is attributed to the Great Flood of 1993, the only post-construction period when river stages exceeded flood weir height. During that time, the project area was inundated for 84 days, with an average sediment deposition of 5.6 inches. Based upon flood projections, the levee is expected to reduce future sedimentation by 83 percent.

**\*Provide water level control-** Water stage data recorded with permanent gauges placed on either side of the main water control structure documented effective water level maintenance within the refuge, with the notable exception of the Great Flood of 1993. The following figure demonstrates the average difference in monthly pool elevations within the refuge (medium line with triangles) and outside the control gate (dotted line with squares) between 1990 and 1994, with ideal monthly levels under the management plan (heavy line). As indicated on the graph, the desired dry summer conditions in the refuge were generally well-maintained.

**\*Increase reliable food production-** From the Missouri DOC's bi-weekly counts of wetland birds using the refuge, as well as their bi-weekly field checks on agricultural and moist soil plantings, the report concludes that this objective is being met. Four out of the five years since project completion, the

Clarksville Refuge EMP Project provided ample food sources for migrating waterfowl. Averaged over the four to six week migration



Clarksville refuge in Pool 24.

periods from 1990 to 1992 and in 1994, approximately 1,510 birds used the project area on a daily basis. In 1994, the management plan was modified to emphasize moist soil plants. No agricultural crops were planted. Moist soil plant production in 1994 exceeded all previous years on record.

**\*Increase wetland values for waterfowl-** Missouri DOC staff conducted pre- and post-construction analyses of habitat suitability for several species, including mallard, Canada goose, and wood duck. Using species-based ratings of habitat suitability in conjunction with aerial measurements, staff determined the Average Annual Habitat Units (AAHU) values. DOC staff found post-project AAHU increased in nonforested habitat of 192 percent for mallard and 376 percent for Canada goose, target species for the project. Other non-target species, including least bittern, muskrat, green-backed heron, and prothonotary warbler, have benefited as well.

The report generally concludes that project objectives have been fully met, and evaluates the levee and gate water control system as an effective habitat restoration tool. No changes to the current management or operations are recommended.

## Programs continue at Kaskaskia L&D

by Robert Lockhart

The Kaskaskia Lock and Dam may be small in terms of locks and dams but rates high in terms of happy visitors. The staff at the Kaskaskia facility regularly devote time to answering questions and providing tours to interested groups. Ms. Nelda Kaerberl's first and second grade students from Trinity Lutheran School of Altenburg, Missouri were the latest group to enjoy a tour of the lock and dam.

The students were shown a brief video of the 1993 flood and given a walking tour of the lock area. The trip through the galleries was especially exciting to the students and seemed to be the high point of their program. They were full of questions about the various equipment and machinery and the lock and dam staff were happy to provide answers.

Ms. Kaerberl was so pleased with the program and positive student response that she will be bringing her next new group of students back during the 1998 school year and will be telling other educators about the learning opportunities provided by the Corps of Engineers.

## Old newsletters wanted

In 1988, the name of the employee newsletter was changed to "ESPRIT." Before that, it was simply "Information Bulletin," published initially by the Personnel Office (as it was known then). The earliest edition in the historical files is February 24, 1969, although a notice about the publication was released August 9, 1967.

The history function invites retirees and other longtime employees to donate any old copies of the early newsletter to the history files for a complete file. Contact Cecily Jones at 331-8647.



## Well known botanist conducts course



Dr. Bob Mohlenbrock sharing his knowledge of plants with St. Louis District team members.

by Brian Markert

Can you imagine being so completely absorbed by the unique and complex characteristics of plants that your entire life was dedicated to the study, research and appreciation of plants? Dr. Mohlenbrock or "Bob" to his students, is one of those special individuals. Founder and senior consultant for Biotic Consultants, Inc., Dr. Mohlenbrock has devoted more than 50 years of his life to working with plants and gained national recognition in doing so. The St. Louis District was fortunate enough to have Dr. Mohlenbrock educate employees through a Wetlands Plant Identification course.

Dr. Mohlenbrock pursues the study of plants with boyish enthusiasm. It's the type of excitement that compels others to be interested and excited. When you find someone like that you know you have found an educator with the "gift." For anyone with some knowledge can relay facts, but few can inspire.

It was that same type of teacher who reached out to Bob when he was a high school student. His junior biology teacher volunteered her time and personal auto to take a small biology club on Saturday visits to forests, swamps, hilltops and other places of scientific exploration. "Before that biology class, I could

barely tell the difference between a dandelion and bluegrass, and if I could I didn't care," says Bob.

Of the seven boys in the biology club, including Bob, all

went on to get their Ph.D. and teach at a major university. Dr.

Mohlenbrock taught Botany at Southern Illinois University in Carbondale from 1957 to 1990. During that time, 90 graduate students finished under him. He has authored 37 books on various botanical topics and his work have been published in over 450 articles. Since 1984, he has written a monthly article for *Natural History Magazine* in which he visits a particular area and expounds on its unique botanical features. While working as a private consultant he has conducted 77 workshops in 24 states.

"My whole life is plants. It's my hobby, too," he says.

Approximately 25 park rangers, natural resource specialists and regulatory staff attended the Wetland Plant Identification training. The course consisted of two four-day sessions, one in the spring and one in the fall. Because of the vast diversity of plants and their particular growing seasons, two time periods are needed to see the most plants. Class participants collect samples, go over unique plant features, growth characteristics, benefits and U.S. Fish and Wildlife Service wetlands classification, as well as scientific and common names of about 200 plants during each session.

The first day of the course the group meets in the Rivers Project temporary classroom facility and is provided course materials. The handouts include basic plant definitions and illustrations, which serve as a spring board to get the group ready for their field experiences. A plant list consisting of more than 1,000 native and exotic plants that grow in this region is also provided.

The course provides valuable and much needed training to the participants. In the wetland permitting process, regulatory specialists must delineate wetland areas. Wetlands are not always wet, so these professionals must rely on the plant clues. By identifying the plants growing in those particular areas and knowing that only specific plants can tolerate specific growing conditions, they can delineate the wetland location.

The natural resource specialists and park rangers use the training in restoring, maintaining and managing moist soil areas. To develop a healthy wetland, desirable plants must be established. Specific plants are needed to provide food and shelter for wildlife as well as plants that help to prevent wind and water erosion of the fertile soils. Restoring wetlands on Corps of Engineers managed public lands provides for ground water recharge, flood control, nurseries for aquatic creatures, resting grounds for migrating waterfowl as well as many diverse recreation and education opportunities.

Dr. Mohlenbrock's years of research, education and experience have established him as a leading expert in the field of botany. His enthusiasm makes learning from him easy. Providing our personnel with valuable training helps to ensure that these professionals have the training they need to accomplish our organizational missions.



# Bring back Boltonia

by Erin S. Connett

Decurrent False Aster, otherwise known as *Boltonia decurrens*, is a rare species of plant found in the Mississippi River Valley. A total of only 20 populations are known to exist, making the plant a threatened species in Missouri and an endangered species in Illinois.

This perennial plant is partial to wetland habitats and is a member of the Astercae family. *Boltonia* reaches a height of 1.5 meters and produces aster-like heads with white to pale violet petals and yellow centers. These flowers appear on the tall bushy plants from August to October. *Boltonia* populations congregate around the banks



Decurrent False Aster growing in the Environmental Demonstration Area.

and shores of lakes and rivers and are most common in lowland areas where it is dependent on disturbance for survival.

The reason for the decline of this species seems to be related to habitat destruction and modification. Wet prairies and natural marshes have been eliminated within the species' range. Many natural lakes have been drained and converted to cropland as well. Shore habitats have been modified by heavy siltation and altered flooding regimes. *Boltonia decurrens* reproduces both by seed and vegetatively, requiring abundant light. The seeds are pre-

sumed to have been spread originally by rising flood waters throughout the floodplains.

Five populations are under jurisdiction of the St. Louis District. The Rivers Project has some of these populations in their Environmental Demonstration Area in West Alton, Missouri. The populations are being protected from herbicides, and until the plant goes to seed, the area will not be mowed or cultivated.

Dr. Marian Smith, a professor at Southern Illinois University at Edwardsville, has been researching and studying these colonizations with her botany classes since they were first discovered in the Environmental Demonstration Area. Along with SIUE's help, the Missouri Department of Natural Resources and Illinois Department of Natural Resources, the United States Fish and Wildlife Service and the Corps of Engineers are working on a cooperative recovery program for this species.

To maintain the biodiversity of the ecosystem, it is important to establish a healthy population of *Boltonia decurrens*. The Rivers Project hopes that through the cooperative recovery program we will learn more about this plant and methods will be developed to help stabilize and increase the endangered *Boltonia*, ensuring its vitality for future generations.

## Deutsch presentation places 2nd

Park Ranger Charlie Deutsch, of the Rivers Project Office, recently placed second at the Illinois State Academy of Sciences Meeting in the Botany Division research presentations. Charlie is a senior at Southern Illinois University at Edwardsville majoring in biology. For his undergraduate research he is studying tree mortality and

## Observation platform opens

Observation Platform Opens by Brian Markert

High above the Mississippi River with a birds eye view of the surrounding area, visitors to the Rivers Project, Lincoln Shields Recreation Area can now enjoy a new observation platform.

The structure was actually part of old lock and dam 26, specifically pier 36 and 37. These two piers were saved from the demolition of the old lock and dam and rehabilitated for public use. They are all that remain on the Missouri shore of the structure that once crossed the mighty Mississippi River. To create the viewing platform a new concrete deck was poured, safety handrail erected, and new steps added. In addition the area around the structure was cleaned up and now reveals the intricate hand laid cobblestones that protect the shoreline from erosion.

Visitors can now enjoy this new facility to view migrating waterfowl, American bald eagles, and passing barges as well as a comfort station, picnic area, multi-purpose trail, paved parking lot, and two boat ramps that are also part of the Lincoln Shields Recreation Area.

seedling recruitment in canopy gaps created by the Flood of 1993 along the Mississippi River in Madison County.

The Academy held its annual meeting on October 18 and 19 in Bloomington, Illinois, at Wesleyan University. The meeting is a forum to discuss new discoveries in

(Continued on page 12)



# What is a Hammer Award?



Has your team made significant contributions in support of reinventing government principles? If so, you are probably eligible for a Hammer Award.

The Hammer Award is the Vice President's answer to yesterday's government and its \$400 hammer. Fittingly, it consists of a \$6 hammer, a ribbon and a note from Vice President Gore, all in an aluminum frame. About 600 Hammer Awards have been presented so far to teams comprised of federal employees, state and local employees and citizens who are working to build a better government based on four reinvention principles: Cutting Red Tape, Putting Customers First, Empowering Employees to Get Results and Cutting Back to Basics.

The Vice President is always looking to celebrate the accomplishments of teams demonstrating extraordinary effort towards implementing the goals of the National Performance Review. Accordingly, there is no limited, annual window of opportunity for nominations imposed by the NPR. NPR encourages nominations throughout the year.

The Office of Performance Improvements and Management Reengineering (PI&MR) is the central repository for nominations for all Hammer Awards in DoD. Corps organizations are encouraged to submit their nominations through HQ USACE to Lois Douglas at PI&MR by phone: (703) 697-9708.

The final approval for all Hammer Awards is made by the NPR

staff, taking into account any comments and recommendations from the agency.

If your team is selected for a Hammer Award, your agency will sponsor an award ceremony. Presentations are made by Vice President Gore or people who represent him. At these ceremonies the team receives the Hammer Award plaque. Individual team members receive a certificate signed by the Vice President and a Hammer lapel pin.

A copy of the information required for a Hammer Award submittal is available on NPR's web site at <http://www.npr.gov>. Click on "Awards," then "Hammer Awards."

And good luck.

## Mississippi River trivia

The Mississippi River is 2,348 miles long from Lake Itasca, Minnesota, to the mouth of the Southwest Pass near New Orleans, Louisiana.

The average current speed of the river is about 3.5 miles per hour. During the peak of the 1993 flood, the average current speed of the river was 12 miles per hour.

A normal tow on the Upper Mississippi consists of 15 barges. Each barge is 195 x 35 feet and holds up to 1,500 tons of cargo. River towboats range in power from 3,000 to 10,500 horsepower.

The bulk of river cargo is comprised of grain, coal, petroleum products, iron, steel, sand, stone and gravel, in that order.

About 80 million tons of cargo transited through the new Melvin

Price Locks and Dam in 1990, its first year of operation.

There is enough concrete in the Melvin Price Locks and Dam to build 30,000 new homes and enough steel to do 17,000 new cars. There is enough concrete to build a roof on Busch Stadium, wall to wall, 26 feet thick.

### Deutsch (continued)

the science world and allows individuals a chance to discuss their latest research. Many students give presentations at these annual meetings, discussing their undergraduate and graduate research in different divisions such as botany, zoology, environmental sciences, etc.

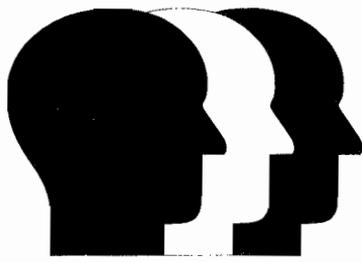
Charlie's second place finish earned him a small grant to help offset school fees. Congratulations, Charlie.

## The grass isn't always greener...

Through all the recent changes in government, the downsizing and restructuring, the "doing more with less" processes imposed upon us, many have taken on an attitude of self pity. We think, "The powers that be don't care about us. They're only interested in the bottom line." Maybe it's time to take a look at the situation and think about just how well off we are compared to so many in today's workforce.

Many of the recent personnel additions to the District came from other agencies and many have worked in private industry before becoming a "civil servant." They have tales to tell. Maybe we should listen to some of them. If you know someone who has worked elsewhere, ask them how they compare conditions at their old job to the conditions here. You might be surprised.

In the St. Louis District no effort is spared to keep those who's  
**(Continued on next page)**



# EEO matters

## Minorities and the glass ceiling

by Angela Sanders, BEP Manager

During the Blacks in Government (BIG) conference in Atlanta, there was a workshop presented by Charles Friedman, Thomas Gomez, Julius Crouch and Dorothy Nelms, each of whom are all leaders from different minority groups. This workshop focused on the Merit System Protection Board's (MSPB) Study of the Glass Ceiling and Minorities.

The MSPB has responsibility to report periodically to the President and the Congress on whether the Federal civil service is operating in accord with statutory merit system principles. Among those principles is a requirement that employees and applicants for employment receive fair and equitable treatment without regard to race, color, national origin and other non-merit factors. As one of the largest employers in the Nation, with responsibility for serving all segments of society, it is clearly in the public interest for the Federal Government to treat its own em-

ployees in a fair and unbiased manner. In that context, MSPB sought to determine whether minorities and nonminorities have equal access to Federal jobs and, once employed, whether they are treated equitably. This report presented the findings from that study.

Throughout much of this century, instances of discriminatory employment practices had a clearly negative impact on the representation and careers of minorities in the Federal workforce. Over the time, a number of major efforts were made to respond to that situation. A review of current Federal employment statistics reveals that since 1978 the status of minorities has improved markedly. Current overall minority employment in the Federal Government exceeds minority participation in the civilian labor force. Moreover, in administrative occupations and at the higher grade levels in professional occupations, minorities and nonminorities are now promoted at generally equivalent rates.

While recognizing the significant progress that has been made regarding minority employment, the Board's review also finds that there are still measurable differences in the employment-related experiences of minority and nonminority Federal employees. For example, although the differences are much smaller than in previous years, minorities have not advanced as far in their careers as nonminority males and not all of the differences can be explained by differences in education, experience and other measurable merit-based factors. This report concludes that these differences in treatment are due, in some measure at least to the influence of subtle subjective judgments on employment-related matters.

Finally, although the study found no evidence of widespread, intentional discrimination, survey responses from over 13,000 randomly selected Federal employees identified wide differences in perceptions between minorities and nonminorities with regard to how minority employees are treated in the Government. In part, this has led to an environment in which significant numbers of both minority and nonminority employees believe they are the victims of discrimination. These differences in perception are so large that they suggest that many minority and nonminority employees have great difficulty in understanding or accepting the other's perspective.

jobs are abolished employed within the District. If that is not possible, an array of job placement services are provided. In most instances in private industry you are simply handed your termination papers, sometimes with little or no warning.

We have an annual and sick leave system that can't be topped. We have the freedom to take that

leave a day at a time or a few hours at a time. Most places of employment do not allow that freedom.

In the St. Louis District we have flexible work hours. Most of private industry and many federal agencies still don't offer flex time and alternate work schedules.

We have a fitness center in the building. We have day care facilities in the building. We have a caf-

eteria, a snack shop, a credit union and an ATM in the building. We have access to two shopping malls via Metro Link. These are all physical niceties that make working here more pleasant. But the most important part of working for the St. Louis District is the people who work here. They care about you. If you're lucky you won't have to find out how much.



## To your health

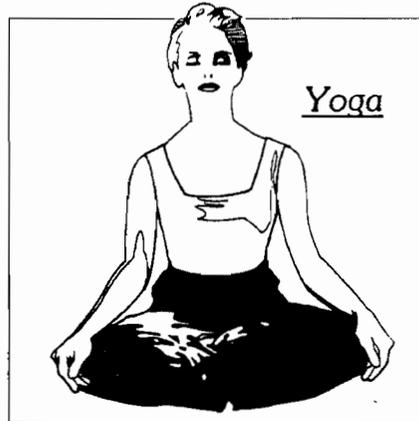
# The no-run, no-sweat workout

People who are tired of the fast pace of aerobics, or who have been injured doing other kinds of exercise, are looking for other ways to stay fit.

Enter yoga. No longer the realm of Eastern mystics, yoga is going mainstream, according to Yoga Journal magazine. Centers are cropping up all over the country, and membership is rapidly increasing.

In most yoga classes, the leader takes people through 20 gentle stretches called poses. Each stretch is held for about six breaths. After these, you wind down with a short meditation. What are the health benefits?

\* Muscles are strengthened and toned. You exercise against your own weight and work against gravity. Deep-breathing tech-



niques also tone and strengthen the abdominals, eliminating the need for stomach crunches, according to the International Association of Yoga Therapists.

\* Flexibility is increased. The poses elongate muscles and increase range of motion in joints. Because tight muscles are prone to

tear, the likelihood of injury from other types of activities is also decreased.

\* It reduces stress and relaxes. The poses and deep breathing bring on a state of relaxation. According to Harvard Medical School, the deep relaxation brings chemical changes that make the body less susceptible to the damaging effects of stress. And circulation is increased.

\* Endurance is improved. The dynamic breathing techniques increase the efficiency of the lungs.

If you are interested in yoga, check with local health clubs and gyms in order to find a class. Or look for yoga programs on video tape.

Always check with your doctor before beginning a new type of exercise program.

## Treat heartburn instead of masking it

It's nice that a fellow on TV can eat his wife's pasta... if he just takes a little pill first. Why is it that he needs the pill at all?

When corrosive stomach acids back up into the esophagus, you have heartburn. Antacids can neutralize stomach acids, but prevention is more important.

Blocking the secretion of excess stomach acid is now promised by over-the-counter agents such as Axid, Pepcid AC, Tagamet HB and Zantac 75. Which is best? Studies by Johns Hopkins Medical Institutions say there isn't much difference in terms of both benefits and side effects.

Acid-blocking therapy

Recurrent heartburn can wear away the esophageal lining. Ant-

acids provide symptom relief, but the goal of acid-blocking therapy should be to prevent acid backup long enough for the esophagus to heal.

Dr. H. Franklin Herlong of Johns Hopkins recommends regular doses of acid-blockers twice a day for four to six weeks. Taking them sporadically for symptoms will not promote healing, he says.

The American College of Gastroenterology has criticized the advertisements for not taking heartburn seriously enough. Persistent heartburn symptoms may be because of more serious conditions such as ulcers. And long-term acid problems in the esophagus may lead to esophageal or stomach cancer.

These new medications are not substitutes for lifestyle measures, such as avoiding foods and drinks that aggravate the condition. Taking acid-blockers will not prevent possible gastrointestinal problems associated with aspirin and similar products.

Anyone with rectal bleeding, persistent pain despite the medication, nausea, vomiting, weight loss or a family history of esophageal or stomach cancer should consult a physician immediately.

In any case, remember that all drugs have side effects and must be taken as directed.

It is estimated that heartburn affects up to one-fifth of the population at one time or another, so it is not a problem of small consequence.



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## Retiree Review

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by The Retiree Correspondent

The retirees had their monthly luncheon on November 19 at the Salad Bowl. Although the weather was somewhat gloomy, 18 "faithful" attended.

The Bockhorsts state that they have recently moved to 6428 Alabama Avenue 63111. Their phone number stayed the same.

The Kalafatichs were back. John is doing very well since his surgery - no more cane.

Charlie Denzel stated that the Cullens have completed their move to Florida, in the Tampa area. They are actually in Sun City. Mike has apparently issued an open invitation to anyone who visits the Tampa area to drop in. They are located on a future golf course, so there should be a good chance to get in a round or two.

Bob Maxwell was departing in the next day or so to visit family in the New York City area. He will visit with family and, knowing Bob, will probably partake of the nite-life in the "Big Apple." He will also journey to Florida for "their annual get together."

Bob Lutz indicated that they were leaving the next day for a Caribbean cruise. They should be back for the Christmas party.

Laurel Nelson stated that she met Pat Taft recently and she sends her best to everyone.

Lou Chiodini shared some of his experiences in running for the State Legislature. He indicated that although he lost the election, he feels that he won in the long run. He met a lot of great people and made many new friends.

Kate Stiles is still on the mend. Katie, everyone is asking about you. Get well soon.

Maryhelen Larkin Wilson, wife of George F. Wilson, former District Counsel, died on November 5th. The retirees send their condolences.

Lou Scheuermann called Pete Puricelli and said that he was under the weather and would not be at the Luncheon. He was having chest pains and was going to the doctor. Hope it isn't serious.

Bob Maxwell, John Jansen and Charile Denzel were the winners of the "pot-of-gold."

Charlie was also the "Senior Retiree" retiring in the 90s. Congratulations.

Indications are that there is enough interest for a Christmas party. It will be on December 19 at the Salad Bowl. Price will be \$12 per person. Anyone interested in attending should call Jim Petersen at 725-9548 or Pete Puricelli at 638-6597 as soon as possible, but not later than December 14.

Let's all mark our calendars for December 19 for the Christmas party at the Salad Bowl. And bring a friend.

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## Food of the Month - Chocolate

It's as much a part of the holidays as trees and wreaths. You get it for gifts, you give it to guests, and whether or not you call yourself a chocoholic, you will indulge yourself with chocolate this year.

But can anything that's loaded with fat, sugar and calories be good for you? Dietitian Debra Waterhouse says every food is good as long as you don't overdo it.

Waterhouse, author of *Why Women Need Chocolate* (Hyperion), says a craving for sweets is normal and natural, and there are benefits. Some are psychological. The foods we crave, including chocolate, lift our spirits, calm our nerves and stabilize our moods, something health foods don't do as well. No study has ever found we have these cravings for tofu or cottage cheese.

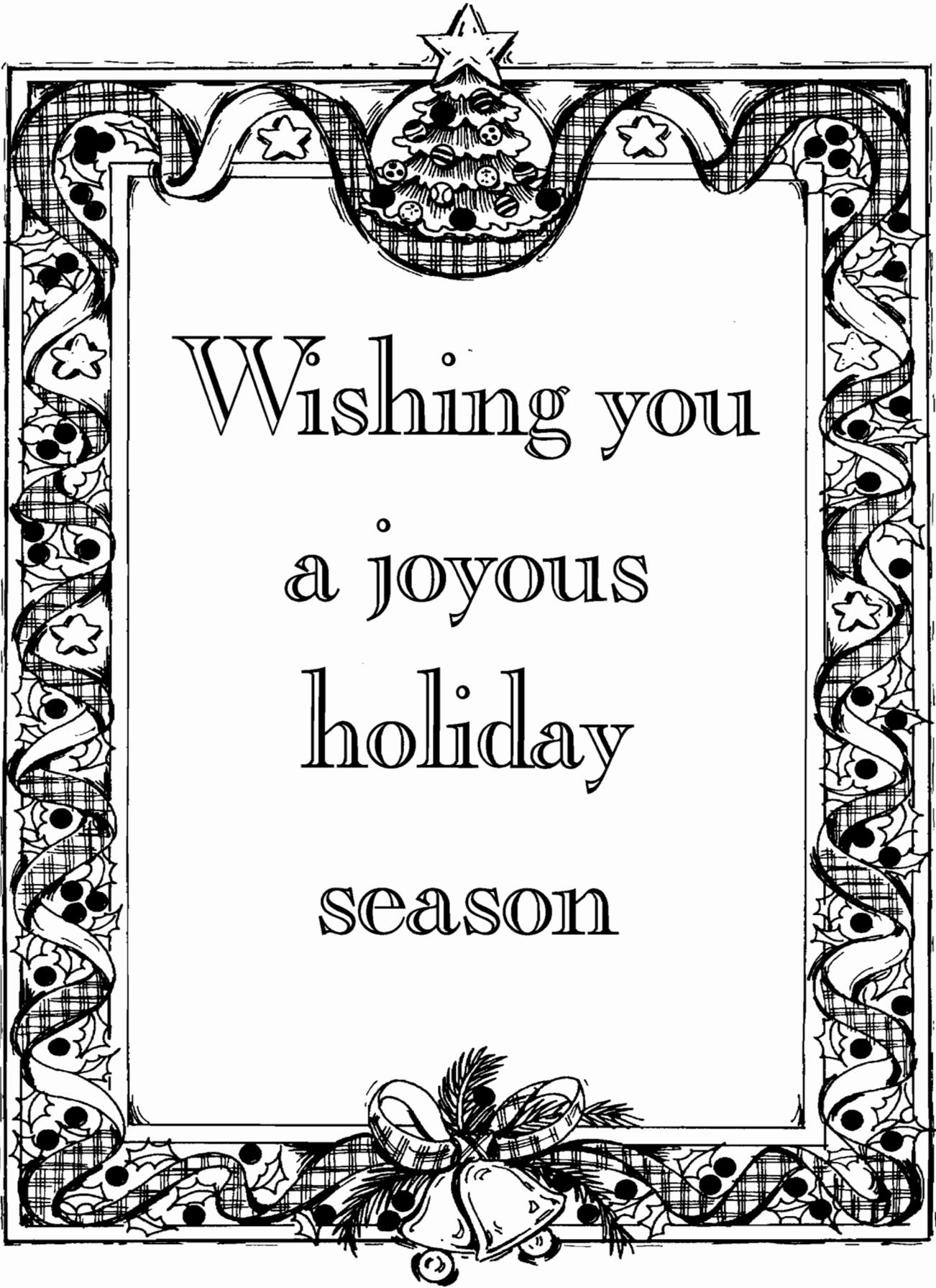
Serious dieters can indulge in a few pieces of chocolate without much guilt. It's not the single treat that causes problems, it's overindulging on a regular basis.

If reducing dietary fat is important to you, get treats from the grocery store instead of the candy box. Low-fat chocolate yogurts and frozen yogurts satisfy with only about two grams of fat per serving.

## Undercooked egg caution

The U.S. Department of Agriculture reminds consumers that pasta and soft cheese dishes like lasagna and stuffed shells were implicated in about 39 percent of egg-related salmonella outbreaks over the past three years. After undercooked soft cheese, home-made ice cream and puddings were identified as the next most frequent source of contamination.

When using raw eggs as a food ingredient, stay safe by cooking the food thoroughly to reduce the risk of foodborne illness.



Wishing you  
a joyous  
holiday  
season