

“Golden Autumn at the American River” is the subject of a limited edition of high quality, digital prints of two river scenes painted by noted Carmichael artist Jian Wang and offered exclusively as a fundraiser for ARNHA programs. See Story page 7. Paintings can be viewed at www.arnha.org and at the Effie Yeaw Nature Center.

The American River Natural History Association

ACORN



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Hats Off to the American River Beaver

articles and drawings by William E. Avery, Ph.D.

If it weren't for Europe's and New England's love for beaver-felt hats, the American River would certainly not have been "discovered" by the famous beaver trapper and guide, Jedediah Smith, in 1827. In fact, it probably would have received an entirely different name! The first official appellation, *Rios do los Americanos*, was given to the river by Mexican Governor Alvarado and later "Americanized" to "American River" by John Sutter because it was frequented by American and Canadian beaver trappers referred to as "*Americanos*" by the Spanish-speaking locals. Our early passion for beavers allowed the owners of fur companies to amass huge fortunes, funded nearly all westward expeditions including the famous Lewis and Clark Expedition and could be said to have opened the west to everyone else.

Jed Smith was employed by the American Fur Company owned by John Jacob Astor

who became the richest man in the world. This was the period (1820s) of the Hudson Bay Company's "scorched earth policy" in which this largest Canadian fur company attempted to discourage American colonization of its holdings by lowering land values by completely trapping to extinction all beavers in all rivers within its vast territories. The American Fur Company had to compete with the Hudson Bay Company during this time. To say that beaver-trapping pressure on the American River was intense would be an understatement. It may be that the discovery of gold in California was the best thing that happened to the American River beaver population. It took the focus off beaver and put it on gold. With our early economy virtually built on the backs of beavers, we owe a tremendous debt of gratitude to

these wonderful native animals, survivors of their own near-extinction.

Even more important than beavers' early economic value to the country may be their contribution to the ecosystem. In some habitats, beavers are considered to be "keystone species" because they are as important to the ecosystem as the top keystone is to an old fashioned stone archway. The keystone is the single stone that holds the rest of the archway together. Beavers' daily activities and "housing projects" create important habitat for other species. All across the country and throughout millennia, in mountainous regions and habitats with small seasonal streams, beavers have produced dams and ponds that trap sediments and establish and maintain willowy wetlands that provide habitat for many other plants and animals.

In all the larger rivers throughout North America, beavers have created

see Beavers, page 3

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Parkway Natural Values Under Attack

By Bill Dillinger

ARNHA's representative on a citizens' advisory committee to update the American River Parkway Plan warns that the natural qualities of the Parkway are under siege by special interests wanting to introduce intrusive activities. Past President Lou Heinrich urged ARNHA members to raise their voices in protest.

Only a few members of the committee are environmentally oriented, Heinrich said, and, as a result, when a proposal comes to a vote, the promoters of intrusive recreational activities tend to prevail.

"This approach," he says, "ignores the long-established principle that the primary purpose of the Parkway is to preserve and protect it as a natural area, with other uses permitted only when compatible with this primary purpose."

He and his fellow environmentalists badly need support from ARNHA members and other like-minded people who will insist that this principle be the guiding policy for updating the plan, Heinrich said.

There is still time for e-mails, letters, and phone calls, he says, as the final action by the committee is not scheduled until the June meetings, which he urges as many ARNHA members as possible to attend.

One worrisome proposal already tentatively approved, he notes, is a recommendation to allow mountain-bikers to use the network of unpaved maintenance and emergency roads in a four-mile stretch of the Parkway, from Northgate Blvd. upstream to the eastern boundary of Cal Expo.

This extensive area is critical habitat for deer and other animals. Hawks, owls and many smaller birds nest and forage there, and its ponds and sloughs are home to herons, egrets, wood ducks, and other aquatic birds, as well as for river otters, beavers, and muskrats.

Other inappropriate proposals before the committee include establishment of a Native American Cultural Center in the Parkway, and allowing dogs to run off-leash.

There are also conflicting proposals for restoring a 35-acre gravel pit as either a natural area or a recreational lake, when the property is eventually acquired.

Heinrich urged ARNHA members to express their views to project leader Sunny Williams, Sacramento County Planning Department, williamssu@saccounty.net or (916) 874-6141, or 827 7th St., Sacramento, CA 95814. Also to the Sacramento County Board of Supervisors, 700 H St., Sacramento, CA 958124, Tel. (916) 874-5411, and the Sacramento City Council, 615 "I" St., Tel. (916) 808-5407

Committee meetings are scheduled for 5:30-9 p.m., April 4 and 17, May 30 and June 5 or 6, at the Sacramento Public Library Galleria, 828 I St. Further information is available at www.saccounty.net/planning.

After the committee completes its work, an identical plan must be adopted by the Sacramento City Council, City of Rancho Cordova, Sacramento County Board of Supervisors, and State Legislature.

Bill Dillinger, retired State Parks Public Information chief, is a former editor of The Acorn. ■

Celebrate ARNHA's 25th Anniversary at the Annual Meeting on June 14 at 6:30 p.m.
Music, Art, Refreshments, Honors to our Founding Members. (More information coming soon)

Beavers, from page 1

burrows and elaborate lodges at the rivers' edges. These lodges extend down underwater concealing openings to burrows into the banks. The underwater logs and sticks provide important in-stream habitat and cover for a variety of invertebrates and fishes including crayfish, juvenile salmon and trout. Wading birds such as herons and egrets, diving birds such as cormorants and common mergansers, and even otters can frequently be observed hanging around beaver lodges, recognizing them as great fishing spots.

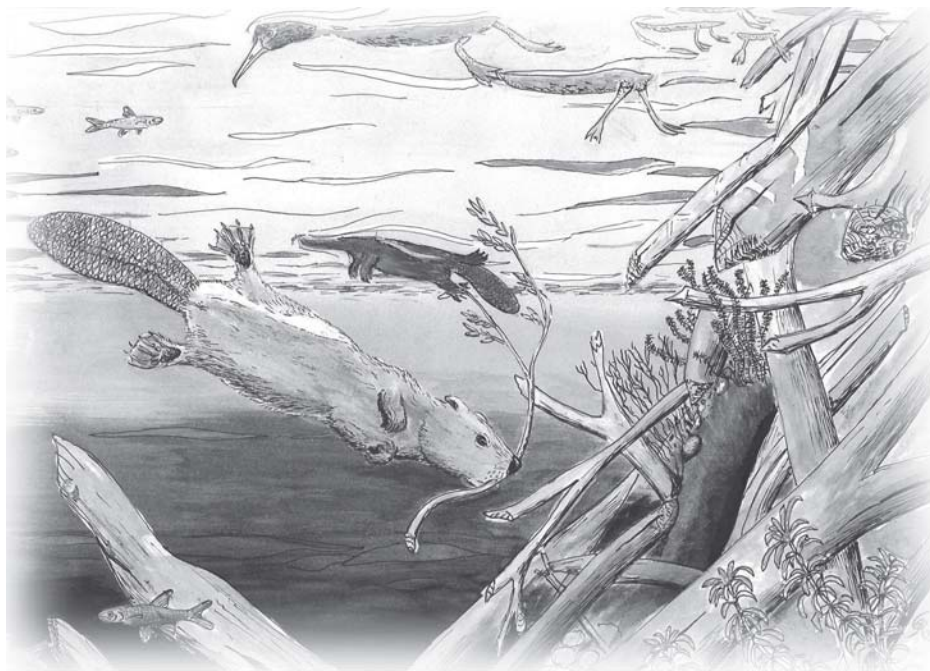
Beavers are rodents (from Latin *rodare* - to gnaw) and thus have big, chisel-like incisors adapted for gnawing. The orange, front incisors are self-sharpening because they are extremely hard at the outer enamel surface and progressively less hard toward the inner surface. The teeth wear to a sharp edge as the beaver

gnaws down trees and shrubs and then strips away the sweet, living bark from the smaller branches and stems. Because beavers' teeth grow continuously, it is not a myth that they need to keep gnawing wood to keep their teeth from growing dangerously long.

Beavers are attractive animals with rounded ears, wide-set eyes under a bit of a brow line and a large nose resembling that of a teddy bear or Koala. Their lush, soft fur ranges in color from golden to very dark brown. Their front paws have robust claws, useful for digging, which are surprisingly nimble as they deftly handle branches, leaves and strips of bark. The second claw, or nail, on their webbed hind feet is actually

split to form a comb used for grooming and keeping their thick fur fluffed up.

Adaptations for swimming include luxuriant, thermal-insulating fur and a healthy fat layer, webbed hind feet and a special inner eyelid called a nictitating membrane that protects and helps focus their eyes while submerged. Beavers can see underwater but not nearly as well as underwater hunters such as otters and mergansers. Beavers possess a flat, scaly tail used as a prop while cutting down timber, a seat while groom-



Mother beaver brings edible willow ranch to lodge entrance while father beaver patrols on surface.

ing and a propelling rudder while swimming. The ever-territorial beavers also use their tails to make loud “slaps” and splashes to ward off intruders and warn relatives of possible danger.

In Native American lore, the beaver represents the doer, the dream builder, the family and the home. Beavers mate for life and are very protective of their home. The only beavers allowed within the mated pair's home territory are the twin newborns and two yearlings from the previous year. Beavers older than two are driven away, violently if need be. So a beaver family unit or “colony” usually consists of six, or fewer, individuals. A beaver's territory extends from 1/8 to 1/2 mile along the river's edge and

is centered around the lodge. Today the lower American River supports between 400 and 1,200 beavers. In an hour-long evening paddle, in areas of high beaver activity, it is possible to see 15 beavers patrolling or splashing out a warning.

To find a beaver territory, look along the river's edge for a pile of weathered beaver logs and sticks stripped of bark with characteristic gnaw marks at their ends. Also, keep an eye out for small scent mounds next to the water—sweet-smelling piles of mud and aquatic plant material, like *Elodea*. The sweet odor comes from castor fluid secretions from the beaver's castoreum glands — once highly prized as a base for perfumes and for medicinal value.

Beavers mate underwater in February, and, about 15 weeks later, in May or June, two kits will be born within the lodge. If one listens quietly outside a lodge, soft mewling sounds of the beaver family can be heard during the day, especially from June through September. Both parents will continue to forage for, cut down and eat the bark, leaves and delicate branches of their favored willows, cottonwoods, white alders and other trees. They may supplement this woody diet with rushes, reeds, cat-tails and aquatic vegetation.

The mother beaver provides the kits with rich milk but after a week or so, the parents bring small branches and various other edible plants into the lodge through the underwater entrances. The kits will sample leaves and other soft plant material, but will not be com-

continued page 6

Beavers, from page 3

pletely weaned until about eight weeks old. At weaning, the kits begin making morning and evening territory patrols and foraging missions with their parents and yearling siblings. Newly-weaned kits weigh about eight pounds and will eventually grow to about 60 pounds and, with luck, may live to be about 20 years old.

Young beavers get to live at home for about two years but in April of their second year, when they reach 23-months of age, they must leave the home territory and let the yearling kits begin to assist with the next batch of newborns. The challenge faced by the two-year-old beavers will be to find an unoccupied site to build a bank burrow and lodge, find a life partner and begin establishing a new territory of their own.

Beavers are California native riparian inhabitants (with the exception of some introductions in the Sierra Nevada) but sometimes people become concerned that these natives might deforest a region of its beautiful trees. The good news is that the beavers typically choose to cut down trees and shrubs that are fast-growing and readily re-sprout from the cut stumps. Beavers especially prefer members of the willow family, *Salicaceae*, which includes fast growing aspens, cottonwoods and willows. Also, being fiercely territorial, beavers rarely experience extreme population densities.

The natural state of the Lower American riparian habitat is a shifting dynamic balance of ignored trees, cut trees and regrowing trees and shrubs. In severe cases of private property flooding or tree destruction, a California Department of Fish and Game (CDFG) permit can be obtained to trap a nuisance beaver. Hunting of beaver is permitted in most of California during "Fur-bearing season" (Nov 16 to the second-to-last day in February) but a CDFG hunting license is required. Within the boundaries of the American River Parkway it is always strictly illegal to trap or hunt animals of any kind or even to discharge firearms, and therefore, any form of animal control is strictly the responsibility of the Parkway Managers and CDFG.

Unfortunately, today's children seem to have fewer opportunities to enjoy nature but beavers can offer wonderful lessons in American history and natural history spanning from the small scale to the large, geographic scale. Seeking out beavers in their natural habitats, either on foot at the river's edge, or in a canoe, may provide the child in everyone with an exciting entryway back to the wonder of nature. Looking for beaver lodges, webbed foot prints, sweet-smelling territorial scent mounds, piles of fresh wood chips among their timber-felling operations or simply seeing a beaver swimming on the surface of the river and hearing the astonishing warn-

ing slap of its tail and the big splash as it dives, are among the many adventures offered by our wonderful, American River beavers. ■

William E. Avery, Ph.D., is an Associate Professor in the Department of Biological Sciences, California State University, Sacramento. He is the author and illustrator of "The Pond Turtle: Hoping For a Better Season" in the Spring 2005 Acorn.

Beaver Evolution and Biogeography

Though considered to be native to California and the rest of North America, beavers have a complex evolutionary history similar to that of the modern day horse. The rodent family that contains beavers, *Castoridae*, apparently originated in North America (33 million years ago - mya), evidenced by the fossil genus *Palaeocastor*. At some point these ancient beaver ancestors migrated to Eurasia where the more-familiar genus *Castor* evolved. Near the end of the Pliocene (1.9 mya), *Castor* migrated back to North America from Eurasia. Giant beavers such as *Castoroides* (five times the size of today's beaver) and *Castor californiensis* evolved in North America alongside the beaver we now know as *Castor canadensis*. Between 9,000 and 24,000 years ago all the giant beavers were driven to extinction and genetic separation was established between the Eurasian beaver, *Castor fiber*, and *Castor*. ■

Welcome New Members

The Brandenburg Family

Elissa Callman

The Chacon Family

The Eggen Family

Emily Ferguson

The Fong Family

Charles and Joyce Gallagher

Patrick Haugen

The Johns Family

Patricia Larsen

Dennis Matthews

Beryl Michaels

Ponnsetti-Hargreaves

The Wade/White Family

Jian Wang/Xiutao Zhu

The Wolfe Family

ARNHA's Gift Wrappers. During the December holidays, ARNHA volunteers took two shifts staffing the gift wrap table at the Borders on Fair Oaks Boulevard, providing community outreach and visibility and bringing in over \$300 in donations. Special thanks to coordinator Cindy Dunning, Bill and Laurie Davis, Bruce and Peggy Kennedy, Linda Thomas, Jamie Washington, Betsy Weiland and Lynn White for their support of this project. ■

Golden Autumn by Jian Wang

The American River Natural History Association has entered into an exclusive arrangement with popular, Chinese-born painter Jian Wang of Carmichael to sell signed, limited edition art prints of two American River scenes as a fundraiser for ARNHA. To view paintings, visit www.arnha.org or the Effie Yeaw Nature Center in Ancil Hoffman Park.



Jian Wang

ARNHA will receive 35 percent of the proceeds from sales of the digital reproductions, called giclees (zheeklays), a French term describing ink jet printing of art work on 100 per-

cent cotton watercolor paper to provide truer color accuracy than other reproduction methods. "The ink should last for 200 years," says the artist.

The paintings are entitled "Golden Autumn at the American River" and "Golden Autumn at the American River, Dredge Tailings." Each of the scenes is offered in two sizes: large (limited to 45), — 19 x 30 inches, and small (limited to 95), 13 x 20 inches. The large size will sell for \$500 each, unframed, or \$900 for the pair; the smaller size, \$300 each, unframed, or \$500 for the pair. Purchasers can have the giclees framed by Wang for \$150 each.

At the same time, the artist has donated a pair of the smaller giclees to the Effie Yeaw Nature Center and/or ARNHA's Discovery Shop there, according to the agreement signed by Jian Wang and ARNHA President Noah Baygell. The agreement is for six months, through July 15, subject to renewal for

an additional six months.

A *Sacramento Bee* feature story about Jian in 2004 said he has had 42 one-man shows and that his paintings sell for \$1,800 to \$16,000. Three of his works are owned by the Crocker Art Gallery. Last year, in a \$48,000 com-

mission for art in public places, he painted and installed four 6-by-6-foot landscape panels in the new addition to the Sacramento City Hall.

"He can paint," said Phil Hitchcock, director of the School of the Arts at California State University, Sacramento.

continued next page

Holiday Giving

ARNHA members responded to the 2005 annual Holiday Appeal with an outpouring of more than \$7,000 — a record. President Noah Baygell thanked corresponding secretary Paula Baldi, who again coordinated the fundraiser, Associate Board member Molly Keller, whose drawing of a Cedar Waxwing graced the appeal card, and secretary Claudia Hulbe and the ARNHA mail crew, which included Gayle Chedister, Ida Curtice, Chris Hulbe, Claudia Hulbe, Ed Schlesinger, and Sally Weinland.

- | | |
|--|---|
| G.B. Abbott Jr. | Phyllis & Harry Lauritzen |
| Robert and Jan Ahders | Ed & Marsha Littrell |
| Dick & Dodie Backus | Martha MacBride |
| Katie Bagley | Matt McCarthy |
| Ellen & Paul Baygell | Dr. & Robert S. Miller |
| Fred & Paula Baldi | Ardell Nagel |
| Ted & Melza Barr | Sara Osborne/Terry Eggleston |
| Margaret Blankenship | <i>(in memory of Ben Osborne)</i> |
| Walton & Jane Brainerid | E.A. Neal |
| M. Bredberg | Gerald Pauly <i>(in memory of Arvid Pauly)</i> |
| Bill Bryant | J.C. Pressor |
| Lora Cammack | Richard Price/Nancy Reid |
| Gayle Chedister | Inaride E. Puglia <i>(in honor of Bob Fox)</i> |
| Richard Connors | Marge Reid |
| Jane Crowden | Nancy Reid & Richard Price |
| <i>(in memory of Hal Crowden)</i> | Janet Rezos & Stephen Woodward |
| Pamela Duke | <i>(in memory of Carol Dillinger)</i> |
| Harvey Edber | David Rogers <i>(in memory of my wife</i> |
| Marilyn Evans <i>(in honor of Jo Smith)</i> | <i>Edythe, a P.E. teacher at El Camino High</i> |
| Marilee Flannery <i>(in memory of my dear,</i> | <i>School For 25 years)</i> |
| <i>beloved brother, Brian Beckwith)</i> | Jack Rozance |
| Maurice H. Getty | Page Robbin & David Seidenwurm |
| Roy & Nancy Gillespie | Kathleen & Steven Sewell |
| Ted, Debbie & Robert Hauptert | Kip Skidmore |
| <i>(in memory of Peggy McCarthy)</i> | Jo Smith <i>(in honor of EYNC staff)</i> |
| Pete Hayes | Jan Stevens |
| <i>(in memory of Carol Lou Hayes)</i> | <i>(in memory of Carl & Ruth Pedersen)</i> |
| Claudia & Christoph Hulbe | Georgia & Ron Stone |
| <i>(Endowment Fund)</i> | <i>(in memory of Sally Rose)</i> |
| George Horton | Linda F. Thomas |
| <i>(in memory of Helen Hansen)</i> | Diana Wallace |
| Timothy J. Howe | Sally Weinland |
| Bruce & Peggy Kennedy | Tim Weinland |
| Joan Komatin | <i>(in honor of Sally Weinland)</i> |
| Peggy Kraus Kennedy | Mary Wilkinson |
| <i>(in memory of Ferris Weber)</i> | |

American River Natural History Association

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Plan for Summer Fun Days Now!

Sign-ups for the Effie Yeaw Nature Center's Summer Fun Days camps will open soon. Don't miss out on these fun and educational programs for Junior Rangers (grades 3-5), Nature Detectives (grades 1-2) and Nature Rovers (kindergarten). If your ARNHA membership is current, you'll have advance registration privileges for these popular programs, and an information form will come directly to you in the mail. *Is it time to renew?* Come in to the Nature Center or go to www.arnha.org and renew today. Be sure your friends and neighbors are members, too! For more information about Summer Fun Days, call the Nature Center at (916) 489-4918. ■

Jian Wang, continued

"He's a really good painter. And good painters are like good baseball pitchers. There just aren't very many of them."

Asked why he was entering into this exclusive arrangement with ARNHA, Wang said:

"I admire the people working to protect the natural beauty of the American River because it has inspired me to create a great number of paintings which have been shown throughout the country. This is the first time I have made giclees so that I can share my artwork with you and show my own appreciation of the American River Natural History Association's efforts."

For further information on viewing/purchasing the giclees, call Noah Baygell, (916) 489-7724. ■

ARNHA 2006 Calendar of Events

- **Nature Bowl Semi-final** - Nimbus Hatchery, April 6 - Saturday
- **Spring Fun Days** - April 10-14 - Monday through Friday
- **Earth Day** - April 22 - Saturday
- **Nature Bowl final** - May 20 (at CSUS) - Saturday
- **Memorial Day Community Outreach** - May 29 - Monday (ARPF)
- **Rex Cycles S. T. P.** - June 10 - Saturday (ARPF)
- **Annual Meeting and 25th Anniversary Party** - June 14 - Wednesday
- **Summer Fun Days** - June 12 to August 18
- **Fourth of July Community Outreach** - Tuesday (ARPF)
- **Labor Day Community Outreach** - September 3 - Monday (ARPF)
- **Great American River Clean-Up** - September 16 - Saturday (ARPF)
- **Maidu Indian Day** - October 7 - Saturday
- **Salmon Festival Schools Day** - October 13 at the EYNC - Friday
- **Salmon Festival** - October 14-15 - Saturday and Sunday
- **Annual Fund Appeal** - November 16 - December 31
- **Discovery Shop Holiday Sale** - December 2 - Saturday
- **Wild Animal Count** - December 2 - Saturday
- **Winter Fun Days** - December 19, 20, 21 & 26, 27, 28

Celebrate ARNHA's 25th Anniversary • Attend the Annual Meeting on June 14 at 6:30 p.m.
Music, Art, Refreshments, Honors to our Founding Members. (More information coming soon)