



UPWIND

from the Arcata Marsh
Interpretive Center
Vol 22, Issue 4, Fall 2015

Our Mission: To stimulate understanding of the Arcata Marsh & Wildlife Sanctuary, its relationship with Arcata's integrated wastewater treatment system, the surrounding watersheds and bay, and their link with the Earth's water cycle

In This Issue: Capital Campaign Results... Annual Meeting & Volunteer Appreciation Lunch... Bird of the Year Awards... Holiday Sojourns... New FOAM Website... New at AMIC... Recruiting HSU Students... Community Outreach Events... Marsh Clean-up... Camp Odyssey... Duck Parasites... Annual Report... Forest Carbon Credits... Greywater... Pastels on the Plaza... Artist Statements... Visitor Log... Calendar... Members/Donors

A Bursting Marsh Wren Tail (& Tale!)

By Sue Leskiw

In just 3 months, FOAM was able to raise over \$10,000 for two projects slated for the Arcata Marsh. As reported in the July issue of UPWIND, the City of Arcata had requested that FOAM raise \$4500, enough to complete Phase I of a 40-person outdoor amphitheater along Butcher's Slough and to upgrade the AV system in the Interpretive Center. (Phase I includes design, permitting, grading, laying gravel, and installing bench seating.)

FOAM announced the capital campaign in its newsletter and via emails to members and volunteers, plus sent a fundraising letter to its Life Members (those who have given at least \$750 to FOAM over the years). Board member Alex Stillman enlisted the *Mad River Union* to run a weekly update of the progress of our fundraising, which Kevin Hoover and I named the "Wren-o-meter." Initially appearing in the July 15 issue of the *Union*, the wren from the old FOAM logo would be filled when \$10,500 was raised.

Some weeks, the wren eked out \$20 in food, while other weeks, it gorged on \$2850 and \$3100. FOAM Life Members were extremely generous, with 16 giving \$8050. Four regular FOAM members contributed \$1650 (two of them becoming Life Members in the process), a nonmember volunteer chipped in \$100, and five new donors gave \$745. [See p. 9 for donor list.] Those contributing at least \$500 to the amphitheater will be recognized on a plaque at the site.

When FOAM-generated donations were added to donations and grants obtained by the City, the Wren became sated the week of August 20. The *Union* ran an article about the fundraising effort and a gag photo where a Marsh Wren with an exaggeratedly long tail attacks me, two frightened Marsh visitors, and their dogs.

FOAM decided to keep the money ball rolling, raising funds to go on to Phase II of the amphitheater. (Phase II will encompass building a campfire ring and storage area, purchasing a projector system, placing a removable outdoor screen, and installing electricity.) Donations stopped after the week of September 17, so that when the dust settled, approximately \$4000 remains to be raised to complete the project.

The capital campaign provided the first test of the "Donate" button on FOAM's new website. Some \$800 came through the link to the PayPal Giving Site. Anyone wishing to donate to FOAM in general or the capital campaign in particular should visit www.arcatamarshfriends.org and click on the Donate button.

Spurred by an article in the *Union*, Mark Loughmiller of the Arcata Community Recycling Center called me about donating a high-end AV system to the Interpretive Center. How appropriate that the ACRC could recycle its equipment! The components are awaiting installation, to upgrade presentations sponsored by FOAM and the City.

The City still needs to obtain permits before ground is broken. Future issues of UPWIND will keep you apprised of the progress.

2015-6 Board of Directors & Officers

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President: Elliott Dabill

Vice-President: David Couch

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Mary Burke

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Janet Zich

George Ziminsky

FOAM website: www.arcatamarshfriends.org
Facebook: www.facebook.com/Friends.of.the.Arcata.Marsh



Volunteer appreciation cake served at Annual Meeting lunch. Photo by Sue Leskiw.

Annual Meeting & Volunteer Appreciation

By Sue Leskiw

On Sunday, October 4, FOAM held its 22nd annual meeting and volunteer appreciation lunch at the Interpretive Center. All 40 seats were filled for the albacore barbeque lunch by David Couch, with FOAM Board members providing side dishes.

City co-naturalist Gretchen O'Brien presented a Volunteer of the Year award to Milt Boyd for his tour leading, front desk staffing, and helping at community outreach events. The other recipient, Ivan Soto, was unable to attend but was recognized for his front desk staffing and helping at community outreach events. Each received a certificate and \$25 credit in the Interpretive Center bookstore.

The second annual Arcata Marsh Bird of the Year award was given out.

President Mary Burke reviewed highlights of the 2014/15 Annual Report (see pages 5&6). Secretary Katy Allen reported that 42 ballots had been received and Katy Allen, Elliott Dabill, Betsy Elkinton, Ivan Soto, Alex Stillman, Jane Wilson, Richard Wilson, and Janet Zich were elected to fill all open slots on the Board. [NOTE: At the October 8 Board meeting, the following officers were appointed: President, Elliott Dabill; Vice President, David Couch; Secretary, Katy Allen; Treasurer, Sue Leskiw.]



*Gretchen presents award to Milt.
Photo by Sue Leskiw.*

Second Annual Arcata Marsh Bird of the Year Awards

By Sue Leskiw

As part of the FOAM annual meeting, winners and honorable mentions for this award were recognized by emcee Tom Leskiw. The goal of the Arcata Marsh Bird of the Year Award is to recognize rare birds (and their finders) spotted within the borders of the Marsh that are subsequently enjoyed by other observers. So that



New FOAM Board members Jane & Richard Wilson.

FOAM could present the award at its annual meeting, the window for birds to be considered was set as September 1, 2014 through August 31, 2015.

Because the scores for the top two nominees were extremely close, the judges decided to award a tie for first place. One winner was the Sage Thrasher, first seen by George Ziminsky on April 19, 2015 during FOAM's Godwit Days tour of the wastewater treatment plant and last reported on April 22. This was the third Sage Thrasher confirmed within the Marsh boundaries and the first since 1998. It's always nice—and a boost for ecotourism—to have a noteworthy bird found during Godwit Days. That someone who works so tirelessly to make the Marsh attractive to avian and human visitors alike found the bird is icing on the cake.

The other first-place winner was the Yellow-billed Cuckoo, first seen by Alex Lamb on July 27, 2015 and last reported on August 5. This was the second Yellow-billed Cuckoo confirmed within the Marsh boundaries and may be the most successfully chased cuckoo in Humboldt County history.

Three honorable mentions were also recognized. The first was Northern Saw-whet Owl, first spotted by Phil Johnston on February 13, 2015. This was the second record for the Marsh and was seen by many visitors. The second was Chestnut-sided Warbler, found by Elias Elias on June 16, 2015. This was the third record for the Marsh. The third was Northern Parula, first seen by Alex Lamb on August 25, 2015. This was the third or fourth record for the Marsh and was seen by many visitors.



(From left) Tom Leskiw and George Ziminsky. George's Sage Thrasher. Alexandra Lamb. Alex's Yellow-billed Cuckoo. George photo by Sue Leskiw. Thrasher photo by Lizzie Feucht. Alex photo by Gretchen O'Brien. Cuckoo photo by Ian Gledhill.

Holiday Sojourns Coming

Join Jenny Hanson on FOAM's 16th annual Thanksgiving Day tour of the Marsh. If you'd like to set out on a 90-minute leg-stretcher before your big dinner, meet Jenny at the Interpretive Center front deck (center will be closed for the holiday) at 10 am on Thursday, November 26.

FOAM is sponsoring its 8th New Year's Day Ramble at the Marsh on Friday, January 1. Call 826-2359 for meeting time and location.

FOAM's New Website

By Sue Leskiw

In case you haven't heard, FOAM has a wonderful, colorful, useful new website at www.arcatamarshfriends.org. Here you will find resources to learn more about FOAM and the Arcata Marsh, plus a frequently updated calendar of FOAM events.

The website launched this summer after months of work by two FOAM board members, Janet Zich and me. We collaborated on the basic layout, determining what pages, menus, and links to include, then I spent time in last winter preparing the content (text and some photos). Janet tracked down additional pictures, edited and added copy, then worked with the web designer, Darin Breen of Accelerant, to arrive at the final design and learn how to update pictures and text. I took a last pass through, testing all the links and setting up Amazon Smile and PayPal Giving Fund accounts.

Please visit the site and let us know what you think. We feel it was time well spent to get FOAM's message out in a much more readable and attractive manner than our previous website.

What's New at AMIC

By Gretchen O'Brien

Over 175 children's nature and science books have been donated to AMIC for use in a soon-to-be-constructed reading area. We thank the *North Coast Journal* for advertising this need.

A new temporary display, "Why Are Pollinators Important?", sits in one of the slanted display cases in the exhibit hall. A Water Conservation Measures poster, Mad River Watershed poster, and other water conservation outreach materials also have been incorporated into the exhibit hall.

World Shorebirds Day was September 6 and the Arcata Marsh & Wildlife Sanctuary was listed as an official counting site. According to the World Shorebird Day website, the Red Knot is the shorebird of the year for 2015, so a small poster has been put up about the species. According to eBird, Red Knots have been reported at the Marsh several times throughout the years.

The California Native Plant Society's North Coast Chapter has donated dozens of 1-gallon pots of native plants to incorporate into the garden in front of the Interpretive Center. As soon as seasonal rains can loosen the soil a bit, we will start planting!

The outdoor amphitheater plan is in the City Design Review process and, once approved, the City can move forward with the Coastal Development Permit amendment. Upgraded audio-visual equipment (see p. 1) has arrived and is awaiting installation. Thanks to FOAM and community members for financial support of these two projects!

Recruiting HSU Students

By Katy Allen

The sun came out early on the morning of September 2, providing the perfect weather for HSU's Fall Volunteer Fair held on the University Quad. This event, sponsored by HSU's Center for Service Learning, provided an opportunity for new and returning students to inform themselves of the numerous volunteer and internship opportunities available in Humboldt County. Many thanks to Stuart Moskowitz, Barbara Reisman, Katy Allen, Milt Boyd, Pam Brown, and George Ziminsky for setting up, staffing, and taking down FOAM's table at this event.

More than 100 students, many of them new to the area, stopped by our display and learned about our city's unique wastewater treatment system and wildlife sanctuary. Many had not yet made the trip down South G Street to see it for themselves. Over 30 signed up to receive more information about volunteer opportunities at the Marsh. Let's hope their curiosity will lead to a visit, followed by staffing the desk, leading a tour, or pulling out some invasive plants!



Katy & Barbara at HSU.
Photo by Ivan Soto.



Braden O'Brien participates in FOAM's water conservation activity. Photo by Gretchen O'Brien.

Community Outreach Events

On September 12, for the second year, FOAM tabled at Paddlefest, an event held on the Eureka Waterfront sponsored by HSU Center Activities. Milt Boyd, Sharon Levy, Bob Rasmussen, and George Ziminsky shared table staffing duties on a slow day for visitors.

On September 27, Sue Leskiw and Gretchen O'Brien hosted a free children's activity about water conservation as part of Explore the Coast. Nearly 30 kids stopped by the FOAM table to contemplate which pictures showed water wasting and which portrayed water conserving. The event, organized by Redwood Community Action Agency, was held along Eureka's Hikshari' Trail.



George Ziminsky and his prize Bull Thistle. Photo by Ned Forsyth.

Caring for the Marsh

There was good turnout for the September 19 work day at the Marsh. The main focus was *Spartina* (invasive cordgrass) abatement on the South G Street levees as a part of a Coastal Conservancy grant effort, using about 25 volunteers from HSU (representing the Natural Resources Club and the United Way Day of Caring project). Six others, including FOAM members, worked to remove invasives from the Butcher's Slough area. Ten volunteers from the statewide Coastal Clean-up event canvassed the area, removing a flatbed truck's worth (550 pounds) of trash, including nearly 700 cigarette butts. [NOTE: City ordinances prohibit smoking at the Marsh.]

Camp Odyssey Marsh Tour

By Betsy Elkinton

On June 18, Katy Allen and I spent an exhilarating morning with a group of campers from Camp Odyssey, a scholarship-based camp for income-qualifying socioeconomically disadvantaged and underprivileged students from Pacific Union School. The campers ranged in age from 9 to 12 years of age and were a bright and enthusiastic bunch!

The kids had been spending their camp week focusing on the theme of "Adaptations and Innovations," so our Marsh tour focused on ways that wildlife are adapted to the many different habitats found here. For 90 minutes, the campers and tour leaders explored the Marsh's nooks and crannies, finding owl pellets under the pine trees, discovering the crafty ways invasive plants find their way into the Marsh's ecosystems, and identifying mallards camouflaged for the breeding season to look like the brown and green grasses of the treatment ponds. One group heard, and then got an up-close and personal view of, a Marsh Wren singing several of its over 200 songs!

The campers were chock full of questions around every bend. We were sad to say goodbye to this delightful batch of budding naturalists.

Duck Parasites

By Elliott Dabill

So you think you have problems? FOAM member John DeMartini began his presentation on September 25 with some bucolic, lovely pictures of our familiar ducks, then quickly delved into how virtually all parts of the duck anatomy host a variety of flukes (simple worms that may be either round- or flat-bodied). There are lung flukes, liver flukes, flukes of the esophagus, the skin, the kidneys, and the blood. Some flukes invade many species of ducks, while others are pickier, but any particular bird is likely to have many varieties of invaders at any one time.

A question was asked about the effect of all this food-robbing on avian health, but Dr. DeMartini, a retired HSU biology professor, indicated that the parasite load was somewhat independent of duck health. It looks like a lot of parasites are a sign of only potential destruction, so if a bird is starving or suffering from another disease, the parasites can push the duck over the edge to more serious or life-threatening danger.

Evolution has simplified the body plan for flukes (see diagram, p. 7) so that they tell a story about what is most important to their lifestyle. You couldn't have a scintillating conversation with one, for example, since their brains are all but invisible. They have no appendages and a stripped-down digestive system with only one opening. This arrangement suggests that the worms can't make good conversation because they would inevitably have to mention that wastes would be eliminated from the mouth. Equally embarrassing at a cocktail party discussion, try to imagine devoting some high percentage of their insides (easily more than half) to reproductive tissue alone (perhaps that might be fun to talk about, after all). This concentration works for them because they must produce tens of thousands of eggs to be excreted in the duck poop, then count on random luck to engage one of those eggs with conditions to hatch into a ciliated larva, then get

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2014/15 FOAM Annual Report (Issued 10/4/15)

Tours: Some 15,349 adults and children visited the Arcata Marsh Interpretive Center between September 2014 and August 2015, down 3,352 from the previous 12-month period. Some participated in the weekly 2 pm tours and monthly “Slower-Speed” tours offered rain or shine by FOAM docents. FOAM also provided docents for 42 special-request group tours.

Education: FOAM presented its first Arcata Marsh Bird of the Year Award at its October 5 Annual Meeting to Stan Harris for spotting a Painted Bunting, with a runner-up award to Alexandra Lamb for finding an Ovenbird.

FOAM’s free lecture series, coordinated by Elliott Dabill, continued, with presentations by Stassia Samuels and Elizabeth Wu on phenology, Brendan Leigh on American Wigeon, David Couch on Marsh aquaculture, Gaby Ruso (recipient of a FOAM research grant) on Western pond turtles, John Helie on thatch ant behavior, Jeff Kane on fire ecology, Erin Kelly on forest carbon credits, and Sam Polly on bird nesting boxes. FOAM also cosponsored a lecture by Laura Allen on greywater.

In March, for the 10th year, FOAM funded awards at the Humboldt County Science Fair. A \$50 prize for the best project related to wetlands went to “Death by Salt: an experiment to test the salinity tolerance of microorganisms at the Arcata Marsh” by Perrin Turney, a 9th-grader at Six Rivers Charter High School. A \$25 second prize was awarded to Nigella Baur, an 8th-grader at Sunny Brae Middle School, whose project was “Can the Number of Birds Be a Predictor of Coliform Levels in the Arcata Marsh?” Both students displayed their projects at the Interpretive Center during June and July.

In June, Katy Allen and Betsy Elkinton led a tour of the Marsh for a summer camp for underprivileged kids.

Public Events: In September, FOAM tabled at Paddlefest on the Eureka Waterfront and at an event at the Beneficial Living Center across the street from the Marsh. Also in September, Sue Leskiw and Milt Boyd staffed a FOAM table at the Volunteer & Community Involvement Fair held at HSU. In October, FOAM again sponsored a square at Pastels on the Plaza. In November, Jenny Hanson took over from originator Art Barab to lead FOAM’s 15th Thanksgiving Day morning “leg stretcher,” attended by 18 people. Also in November, David Couch led the first “Members-Only” tour of the wastewater treatment plant, attended by 12 (4 of whom joined FOAM to participate). Jane and Richard Wilson took over for Jenny Hanson to lead FOAM’s 7th New Year’s Day Ramble, attracting 6 participants.

In February, FOAM for the third year cosponsored with the HSU student chapter of the California Waterfowl Association a Duck Day at the Marsh. It included crafts, educational presentations, and guided walks for ages 5-12. Also in February, Katy Allen and Paul Pitino tabled on behalf of FOAM at the HSU Career Expo & Volunteer Fair. In March, FOAM cosponsored Take a Child Outside (TACO) Day at the AMWS, a free festival of fun outdoor play for kids and their caregivers. Ivan Soto led groups out on the floating dock, while Sue Leskiw staffed an information table. In March, Redwood Curtain Brewery across the street from the Marsh held a Pints for Nonprofits fundraiser for FOAM and Leslie Anderson presented a wetlands slideshow for the Boys & Girls Club in Eureka.

In partnership with Redwood Region Audubon, FOAM sponsored the 12th Student Bird Art Contest at Godwit Days. Some 515 entries were received from grades K-12 throughout Humboldt County. Thirty-six cash prizes and 14 honorable mentions were awarded at Godwit Days in April.

In April, FOAM continued its participation in the Godwit Days Spring Migration Bird Festival. Godwit Days selected FOAM as its “Spotlight Organization,” so Milt Boyd and George Ziminsky gave a free presentation about the Marsh during the first evening of the festival. Approximately 80-100 children and parents took part in FOAM’s free family nature activities coordinated by Sue Leskiw. The kids made peanut hummingbird ornaments, water cycle bracelets, pinecone bird feeders, fish prints, bird sticker refrigerator magnets, and hanging paper birds. HSU CWA students helped kids make rock ducks. Children’s bird walks at the Marsh were led by Betsy Elkinton and Katy Allen as part of the festival schedule. FOAM volunteers also staffed an information/sales table in the vendor area, coordinated by Janet Zich, and helped hang bird art entries. Also in April, FOAM offered a binocular decoration and bird bingo activity at the Sequoia Park Zoo’s Party for the Planet, staffed by Ivan Soto and Sue Leskiw.

In August, Ivan Soto led FOAM’s second “Members-Only” event, a bike tour of the Marsh.

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Marsh and Wildlife Through the Eyes of Local Artists: Since December 1998, FOAM has sponsored monthly art shows representative of the scenery, plants, birds, and animals that inhabit the Marsh and Humboldt Bay. This past year, Jody Bryan and Paul Rickard, Ivan Soto, Andrew Smith, Linda Parkinson, Sara Starr, Ellen Land-Weber, Louise Bacon-Ogden, and Yvonne Kern were featured. A special display of two decades of Godwit Days poster art with a free public reception was held in April. Sue Leskiw scheduled artists and Alex Stillman helped Sue hang the shows.

Publicity & Communication: We would like to thank newspapers, radio, and TV stations for helping us get the message out about our weekly tours, monthly art exhibits and lectures, and other special events at the Marsh. The Mad River Union deserves special recognition for publishing a weekly “Wren-o-meter” that displayed the progress of FOAM’s Capital Campaign. FOAM continues to publish its quarterly newsletter, UPWIND.

Hard work by Janet Zich and Sue Leskiw allowed the launch of a totally redesigned FOAM website.

FOAM enlisted Gary Bloomfield to design a new FOAM logo, which was used to make member decals.

City Relations: At the request of the City, FOAM kicked off a Capital Campaign to build an outdoor amphitheater and upgrade the AV system in the Interpretive Center (see “Fiscal Accounts” below).

A human-caused fire at the Marsh burned nearly 2 acres on August 31, the last day of FOAM’s previous fiscal year. An aerial photo of the damage topped the cake at FOAM’s October 5 annual meeting.

FOAM purchased tags to identify specimens in the native plant garden created by City naturalists in front of the Interpretive Center. FOAM’s appeal for gently used children’s nature and science books for a planned reading nook at the Interpretive Center yielded several hundred donations.

In February, July, August, and September (United Way Day of Caring), FOAM co-sponsored invasive plant workdays at the Marsh, with most focusing on invasive cordgrass (*Spartina*) removal.

FOAM funded two “Volunteer of the Year” awards, presented to Darlene Marlow and Leslie Anderson at the Annual Meeting. Sue Leskiw received a glass bird and a certificate recognizing her many years of service to FOAM.

Mary Burke and Betsy Elkinton interfaced with a group seeking to have the City build a dog park adjacent to the Marsh on South I Street.

Paul Pitino replaced Mark Wheatley as FOAM’s representative to the Arcata City Council.

Membership: As of August 31, FOAM had 167 members in good standing (up by 27!), 71 of which were Life Members and 4 were Honorary Life Members.

Fiscal Accounts: As of August 31, FOAM had a checking account balance of \$43,674.14. [NOTE: \$9,495 of that amount is earmarked for the Capital Campaign.] Expenditures totaled \$11,580.65 and non-Capital Campaign revenues totaled \$8,635.49. The largest expenditures incurred in the past year were \$3,091 for reprinting the plant and bird books, \$2,529 for website redesign, and \$1,400 for insurance. Main revenue sources were membership dues (\$3,797), donations (\$3,074), and merchandise sales (\$1,164). Overall, organization expenditures exceeded revenues by nearly \$3,000.

Board of Directors: Three current Board Members (Mary Burke, David Couch, and George Ziminsky) will be continuing, four (Katy Allen, Elliott Dabill, Betsy Elkinton, and Janet Zich) are running for another term, two (Ivan Soto and Alex Stillman) are running to confirm their appointment, and two new candidates (Jane Wilson and Richard Wilson) are running. Sue Leskiw and John McNeely are retiring from the Board.

— *Mary Burke, President*

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introduced to a snail in the water. The numbers of larvae are then magnified and morph into swimming larvae (metacercariae) that can then invade another duck and start the process over again. They do all of this without a sign that their little sucker mouths could even begin to describe the process.

Externally, fluke bodies also have tales to tell about adaptation to specific parts of a duck body. If a worm lives in a kidney, for example, there will be no strong currents of fluid, so a single weak suction disc on that species is enough to hold on while the parasite takes in the fluid for food. Contrast that with engaging the gale-force winds of the trachea, requiring strong anterior and posterior suckers just to hold their position in the duck universe. Parenthetically, bird respiration is a marvel; they breathe into air sacs surrounding the lungs, and during an exhale, the air currents pass through the lungs—one-way traffic only. This is very efficient, and since birds are dinosaurs, you can imagine a velociraptor with magnificent respiratory capacity in your rear-view mirror. The only thing that keeps humans from envying duck breathing systems is that all the parts are occupied with flukes. For their part, flukes seem to be happy without a respiratory system. They simply diffuse what they need throughout an elemental body plan.

One last thing, in case you were feeling superior to worms, bacteria, and other parasites. They have had such a strong influence on other life forms that they caused one of the great revolutions in life on Earth. Before 1.2 billion years ago, life forms generally reproduced by cloning themselves. This is fast and allows you to fill your environment, but parasites can figure you out and attack your clones with alacrity. The solution? SEX, of course, which scrambles the DNA for each generation so that those stinker parasites have to figure us out one victim at a time. If it's true that human males think about sex at least every hour that they are awake, we have a lot

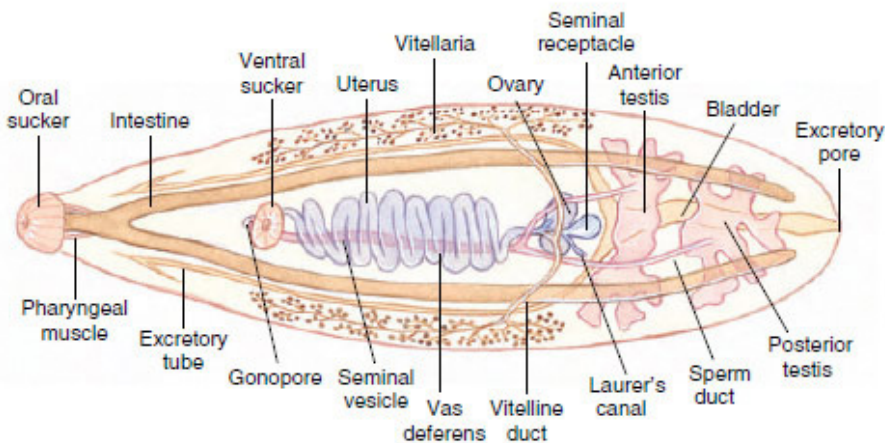


Diagram of a fluke's anatomy. Courtesy of University of Miami.

more complicated relationship with the little things that bug us.

All of us depend on folks like John DeMartini for sharing the detailed knowledge of organisms that might otherwise go unexplored. Many thanks for the evening of parasite explication. Even though the clicker that changed PowerPoint slides caused some consternation during the lecture, I imagined that he wasn't too concerned, since his interests revolve around deeper evolutionary thoughts and minimal body plans of flukes. [NOTE: All references to flukes having conversations exist only in the imagination of this writer. Dr. DeMartini has only rarely, if ever, been seen talking to worms. The lecture was recorded and is available via YouTube at the Rebecca Kimbel channel.]

Forest Carbon Credits

By Elliott Dabill

How many of us are frustrated at the knowledge that the world is driving itself into a global warming event, with too little being done to change it? This man-made disaster seems too big to change and has already affected ocean levels, increased wildfires, and changed wildlife ranges.

Some ideas arrived at FOAM's July 17 lecture by Dr. Erin Kelly, assistant professor teaching forest policy and economics at HSU. Her topic was "Bringing Nature to Market," an analysis of the California cap-and-trade market. This market creates a dollar value for carbon within the state (in the form of tons of carbon dioxide equivalent in the air) and mandates industry to enter the market in order to reduce emissions. This market follows failures at international attempts to control greenhouse gas emissions, notably the refusal of the US to ratify the Kyoto Protocol. California passed legislation to reduce CO₂ levels to 1990 levels by 2020 and reduce them a further 80% by 2050, through a

combination of regulation and the cap-and-trade market.

Dr. Kelly focused on one type of offset within the cap-and-trade market, Improved Forest Management (IFM). With IFM projects, emitting industries (eg, power plants) can purchase forestry improvements to "offset" or balance their carbon dioxide emissions. The speaker provided two separate examples of IFM projects to explain how they are created and the standards that they must achieve to enter the market.

Because the Arcata Community Forest project is in the voluntary market, it doesn't have to meet all of the strict guidelines of a cap-and-trade project. But as with all IFM projects, the City of Arcata first had to conduct an extensive inventory, then estimate what the long-term growth and health of the forest would be, then introduce management techniques that would improve carbon sequestration, like longer periods of time between timber harvests. In the voluntary market, these improvements are purchased by people who want to voluntarily

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offset their emissions—for example, if you knew how much carbon was produced in an airplane trip from California to New York, you could buy carbon credits from the community forest so that you would not add to greenhouse gas emissions.

An example of a cap-and-trade IFM project is the one underway through the Yurok tribe. Their 7600-acre project has helped the tribe to finance the purchase of the forest. Because the Yurok project is in the cap-and-trade market, its credits are purchased by industries that must offset their emissions, and they enter a market where credits can be resold like any other commodity.

The Arcata and Yurok projects must maintain elevated levels of carbon sequestration for over 100 years and demonstrate this sequestration through third-party verification.

California is monitoring this cap-and-trade market to avoid the pitfalls of policies addressing climate change in other parts of the world. You are a citizen in a state that takes on a can-do attitude toward global warming, while most of the world is driving blindly into the high-CO2 future, so keep your fingers crossed that we have found a way to make a difference.

Laura Allen on Greywater

By Elliott Dabill

We are in a severe drought. The Earth is heating up. Simplistic statements from US presidential candidates lead one to think there is doubt about those issues. You could easily slide into a funk, or you could look to Laura Allen for the kinds of little things to do around the house that improve your world and keep your hands busy. You could pay a contractor, but why not look at her book “Water-Wise Home: How to Conserve, Capture, and Reuse Water in Your Home and Landscape” to hook up pipes that put “grey” water from your washing machine into the roots of your apple tree? Imagine thumbing your nose at Donald Trump’s climate change denials as you enjoy a summertime fruit salad.

Laura came to the D Street Community Center in Arcata on August 24 to give a presentation co-sponsored by FOAM, the City of Arcata, the Northcoast Environmental Center, and Humboldt Baykeeper.

Even our little Northern California paradise of lush vegetation is not immune from worldly water worries. Think about salmon kills from overheated and diverted rivers; think of your fellow humans that don’t care about watering summer lawns that really should be in places with summer rains. You already use shower limiters to reduce water use, so why not have an outside shower that drains directly into the landscaping? Why not urinate directly onto the plants in a back corner of the yard, since your waste nutrients are just what the plants are looking for? It can be that simple.

Perhaps you don’t want simple. Maybe you want to take a look at the plumbing for your house and design diversions of usable water into the ornamentals (water-wise ones, of course). Instead of rainwater emptying onto the sidewalk, you could collect it in barrels that water the dog and feed into a seasonal pond for the birds. Reflecting on the massive systems for domestic water, like industrial-sized pumps, many miles of pipes, all the regulators and restrictors and rerouters in that system can be used for the essential water that you drink and flush with; the water you reuse is then free because it already went through the managed system one time, so you save the pumps from that amount. If you want to really get into savings, you can even re-think flushing, since there are now reliable composting toilets and water-free urinals, and keep all that water for red-legged frogs.

All of this risks preaching to the choir, since you are already associated with FOAM, responsible for the smart use of wastewater to provide a corner of Arcata dedicated to the core ideas Laura brought to us. So you already know the secret handshake of the water-wise, you sit still for arguments about undeniable belonging and connectedness to the planet, and you want to do what

you can to improve things still more. Laura’s organization, Greywater Action, can lead to the next step: talk conservation to your friends and neighbors, understand and help improve the regulations that limit recycling. Then, look carefully for the silent thank-you messages from the rest of the natural world.

Woo-hoo! The Top 2 selling items in the AMIC Bookstore are FOAM’s two books, “Common Birds of the Arcata Marsh” and “Common Plants of the Arcata Marsh”!



Marsh Wren by Dana Ballard.

OCTOBER ARTIST DANA BALLARD

“Flight & Song”

I have been selling my watercolors since 2001. As a Humboldt transplant of seven years, I find my inspiration in nature, including the shore, redwoods, and abundant wildlife of the North Coast. I am especially inspired by the diversity of the birds that live in and pass through during migration. I love walking through the Marsh and hearing the chatter of the tiny marsh wren. They are so little and sound so sweet. To me, they are the sound of the Marsh. Egrets are everywhere. Egrets are white, but in certain light, their rainbow of subtle color variations is challenging to capture with paint. Pelicans are really fun to watch, flying around the bay looking for food in the water. Soon, they catch sight of something and dive, splash, and gulp.

Most of my paintings are available as prints or art cards. Contact me at venusdeutah@yahoo.com.



Alex and Mel enjoy a rest after the creative process ends.

FOAM Square on Plaza

FOAM again participated in Pastels on the Plaza on October 3. Artwork by Melanie Dabill and Alex Cordova featured characters from *The Lorax* by Dr. Seuss. The cost of the square was underwritten by FOAM Life Members Lee and Chris House.



Standing at Attention by Terry Dotson.

NOVEMBER ARTIST TERRY DOTSON

Photography has been a hobby of mine for many years. I moved to Humboldt County almost 20 years ago and shortly thereafter had one of my photographs taken at Big Lagoon published in *Shades of Tomorrow* (2003, ISBN 0-7951-5184-5).

I love being out in nature, as everyday one gets the opportunity to see something new and amazing. Humboldt County has an abundance of natural beauty to be seen and experienced, but it was only in the past two years that I started spending significant time in the Arcata Marsh.

DECEMBER/JANUARY ARTIST "DOC RAY" FOWLER

Northern California large-scale floral and landscape artist "Doc Ray" Fowler has been painting and drawing for over 45 years. He draws inspiration from the surrounding local areas, particularly the Arcata Marsh. Known for his exquisite and intense floral work—this series in acrylic is that and more—Doc Ray's work can be found in private and corporate collections around the world.



Teasel by "Doc Ray" Fowler.

Visitor Log

The Interpretive Center saw 1335 visitors in June, 1691 in July, 1329 in August, and 1377 in September.

Calendar of Events

[Docent tours leave the Interpretive Center every Saturday at 2 pm]

October—Bird paintings by Dana Ballard

November—Photographs by Terry Dotson

November 12—FOAM Board Meeting, 6:30-8 pm

November 26—Thanksgiving Morning Ramble, 10 am (see p. 3)

December/January—Marsh acrylic paintings by Ray Fowler

December 10—FOAM Board Meeting, 6:30-8 pm

January 1—New Year's Day Ramble (see p. 3)

January 14—FOAM Board Meeting, 6:30-8 pm

Thanks to Our Supporters, July through mid-October 2015

- **Best Friends (\$100+):** Dan Staudenmaier
- **Sponsors (\$50-99):** Tom & Katy Allen; Richard & Chris Beresford; John & Julia DeMartini; * Robin Rusk; Anna Stewart* (El Dorado Hills); Sandra Wentzel*

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- **Capital Campaign:** Vintage BMW House, \$2000; Anonymous, \$1000; Wild Birds Unlimited (Santa Rosa), \$1000; Catherine Walling, \$750; Barbara Barratt, \$500; Milt Boyd, \$500; Phylis Geller, \$500; Susan Hansen, \$500; Stephanie McCaleb, \$500; Steven & Carol Pearson (Portland, OR), \$500; Alex Stillman, \$500; Janet & Arthur Zich, \$500; Khashayar Boodjeh & Melissa Bukosky, \$250; Harper Motors, \$250; Sue Lee & Archie Mossman, \$250; Bob Gearheart, \$200; Bob Rasmussen, \$200; Chip Sharpe & Celestine Armenta, \$200; Katy & Tom Allen, \$100; Aldaron Laird, \$100; Rich Ridenhour, \$100; Susan Barnstein, \$50; Bob Peck, \$50; Halimah Collingwood, \$25; Raedelle Miller, \$20

- **Other Donations:** Chris & Lee House, \$125 (for FOAM square at Pastels on the Plaza); Nancy & Paul Rickard, \$100 (September art show); Stuart Moskowitz, \$100; Eleanor & Thomas Elkinton (Philadelphia), \$50 ("in honor of our daughter Betsy"); Richard & Carol Laursen (Carmichael, CA), \$50; Sandra Nagy, \$50; Linda Rogers, \$50 (Pullman, WA); Cynthia (Cammy) Williams, \$29.40, through MikkiMoves Real Estate; Leslie & Susan Polgar, \$10 (Lafayette, CA); Arcata Community Recycling Center, audio-visual system; Bob Rasmussen, iPad; Dorothy Klein, tripod; AMIC donation box, \$325.07

* = New member

FOAM
Friends of the Arcata Marsh
PO Box 410
Arcata CA 95518

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Mark Your Calendar for:

Thanksgiving Morning Walk, Nov. 26

New Year's Day Ramble, Jan. 1

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Please check the appropriate membership category:

☐ Individual \$25 ☐ Family \$35 ☐ Student/Senior \$18

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☐ I would like more information about volunteering for FOAM,

FRIENDS OF THE ARCATA MARSH, PO Box 410, Arcata CA 95518

www.arcatamarshfriends.org

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If you are receiving a complimentary copy of this newsletter, please consider joining FOAM.

If you were a member, but have allowed your membership to lapse, please renew.

(See mailing label for your expiration date.)

Interpretive Center street address is 569 South G Street, Arcata.

FOAM mailing address is PO Box 410, Arcata CA 95518. You can reach us by phone from 9 am to 5 pm Tuesday through Sunday and 1 to 5 pm Monday at 707-826-2359.