



# Newsletter

"...When we see land as a community to which we belong, we may begin to use it with love and respect." ... Aldo Leopold (1886-1948), *American Forester*

## A GOAT RANCH IN BODEGA

by Jeremy Sharp

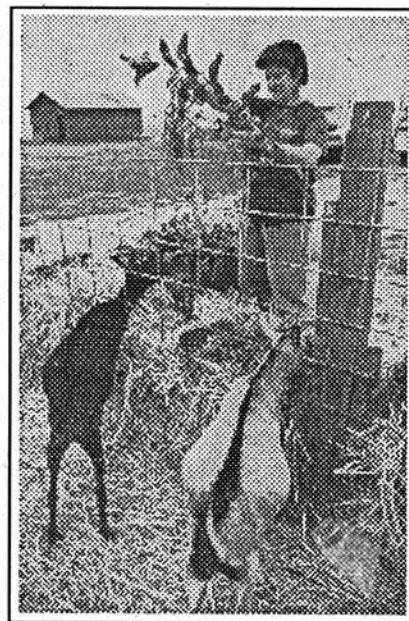
*This is the 5th in a series of articles based on interviews with local food producers. Editor*

The Salmon Ranch Goat Dairy (Bodega Goat Cheese) is situated just off Tannery Creek Road outside the town of Bodega. Looking west from the ranch house, the view rolls down the hill and across the floodplains of the creek past the remains of Chenoweth's sawmill and away to the point where Salmon Creek vanishes into the ocean. The house sits just below the tree-line, overlooking seven acres of pasture. An impressive barn anchors the property, with fences stretching forth to embrace the flock of goats who make this place their home. Also living here is a couple familiar to most of Bodega: Javier and Patty Salmon.

An April morning finds me driving up to their ranch. I am here to learn why they chose Bodega for their goat dairy, how the goats are getting along (I milked them over a short period several years ago) and to check on the progress of an ongoing experiment in permaculture begun last October. Patty had told me on the phone that the permaculture was the most exciting thing they had ever done and, knowing the lives they have led, I thought that must be very exciting indeed.

A tall man with a strong face and imposing beard, Javier greets me with a ready smile and an offer of toast. He ushers me to a seat and jokes, "We're just getting out of bed," though his grass-spattered boots indicate a more active morning. Patty rises from across the table to greet me. She is dressed simply in black slacks and a burgundy blouse which highlights the subtle auburn color of her hair. We chat for a few minutes while Patty prepares a goat milk latte. Having thus armed me, Patty comes right to the point. "And now, what questions do you have for us, young man?"

(continued on p. 2)



Bodega Land Trust



Bodega Land Trust

PO Box 254, Bodega, CA 94922

For Info Call (707)876-3422 or (707)876-1806

E-mail to: [skelly@bodeganet.com](mailto:skelly@bodeganet.com)

<http://www.bodeganet/BodegaLandTrust.html>

I asked how they happened to come to Bodega. "We moved to Bodega in 1986," she said. "We were preparing to expand our operation and wanted a ranch, a place where we could both live and work, preferably near the ocean."

Goats had entered their lives only recently. While scouring the local papers to find a job for Javier's father, a 60-year old agronomist, they ran across an ad offering eight goats, four clients, one cheese recipe and the necessary equipment to make it. A family partnership was formed in 1984 to get the farm up and running, using the family recipes Javier's father had brought from his native Peru, but two years later, only Javier and Patty maintained an interest. By this time, goats were in their blood. Bringing a goat farm to Bodega initially caused opposition from some neighbors, but Patty, in response, took a poll of community opinion which found that the majority supported the goat farm.

Javier leaves to make cheese from that morning's milking - when they say *queso fresco* (fresh cheese) they ain't kiddin' - and Patty and I decide to walk around the ranch.

During the thirteen years of their dairy business, they have streamlined their operation considerably, always staying open to beneficial changes. The down-home feel of the farm belies the modern facilities inside the goat barn. It is divided into three sections. The first, and largest, is the milking room. The concrete floor is overlooked by a platform, on which five suction milking machines stand at the ready. Their spaghetti hoses pass up to the roof and converge on a stainless steel pipe, which transports the milk to the cooler in the middle room, used for refrigeration, cheese, packing and wash-up.

"The state required us to stir each of these containers by hand," she points to the five-gallon milk jugs, "every hour until the milk was uniformly cool. Now, it takes about an hour in here to cool a morning's milking." Patty lays her hand affectionately on the 150 gallon stainless steel cooling tank, whose motor-driven paddle now does the work.

More stainless steel pipe runs between the tank and the 50-gallon pasteurizer in the next, and smallest, room - the cheese room. Outside the screened door sits a feed silo, painted with a giant lizard in Native American style which watches our movements. Right now, he is supervising as Javier strains a batch of ricotta-style cheese called *Ranchero*. After straining, it goes into a mixer where one of five different flavorings is added. All fifty gallons of milk taken from the goats this morning will be sitting in the refrigerator by evening as *Ranchero Cheese*.

The two other varieties currently being made at Salmon Ranch take slightly longer to prepare. The feta style cheese has to be shaped in molds for a day and then chilled another 24 hours. Patty likes to use it on pizza, where it melts down all gooey and yummy. *Queso crema*, a creamy cheese which is delicious on bread, bagels, artichokes or strawberries, takes a third day to make, remaining in the pasteurization vat for a full day before being strained and packed.

Two new varieties are in the works -- a dessert concoction called Natilla (similar to Mexican *cajeta*) and an aged cheese called Manchego. To make the latter requires a large walk-in cooler, which is under construction in the middle room. The state requires no pasteurization for goat cheese aged at least sixty days. "Not being pasteurized," says Patty, "will allow the cheese to soak up a distinctive Bodega flavor." The flavors she refers to come from the food the goats eat. So we head out to the pastures to see just what flavors there are to be found.

The past few months make the first time the goats have grazed the field for anything other than stress-reduction. Last October, with the help of Bloomfield farmer Michael Collins, swales were dug along the entire hillside. The swales act like terraces, catching and holding water in place where it can be used by the plants. Hardly visible from above, the swales become obvious when seen edge-on. They step down the hill in an orderly fashion, replete with greenery. The smell of alfalfa hits my nostrils. "Also amaranth, purslane and kale," Patty explains. Making swales is the first step in the process towards permaculture, or "permanent agriculture", which aims at creating a self-sustaining farm to provide food both for animals and humans. The animals and plants interact in a supportive network to ensure each other's survival, much as in nature, but in a controlled farming environment.

All told, 500 pounds of 100 different seed varieties were covered in a clay (to prevent bird spoilage) and sowed over the hillside. The separate species all germinate at different times of the year, providing the goats with a varied and constant diet of fresh fodder. After the goats eat the first wave of plants, fertilizing and burying seeds as they browse, they are rotated to a different part of the pasture and the grazed section is allowed to regrow. The whole system is designed to be as worry-free as possible. In fact some refer to permaculture as "lazy-man's gardening," but according to Patty's philosophy "permaculture is one way to perpetuate land stewardship. Whatever you take out, you put back in. That way, you maintain the natural balance." It also benefits the dairy, as Patty has noticed an increase in milk production this year.

Permaculture and a bio-diverse landscape are only one way in which the Salmons show their pro-active environmental awareness. Disgusted with the tiny plastic packages which have thus far housed their cheese, they are switching to a vacuum-packing method which will eliminate the tubs. At the same time, the shelf-life of the cheese will be extended to three months.

Promoting local agriculture and community involvement have also been at the top of Patty's agenda for the past five years, and she sees their little goat dairy as one path to those ends. One possibility she sees is for local farmers to grow organic food for the goats, using the seed list the Salmons have already developed. The feed bill for the goats can easily climb up to \$20,000 for one year and Patty makes it clear that she would rather see that money stay in the community.

(See *Goat Ranch* p.5)

## BODEGA LAND TRUST NATURE WALKS

Originally conceived of as a membership benefit, these free walks have been offered to all. Everyone who has attended has been enthusiastic. The walks have been advertised in the BLT Newsletter and on local bulletin boards. Here is a list of walks so far:

*Wildflower Exploration* led by  
Linda Esposito, April 1995

*Russian Bodega* led by  
Dan Murley, September 1995

*Winter Birds* led by  
Roger Marlow, February 1996

*Woodland Flowers and Ferns* led by  
Peggy Rockwood, April 1996

*Organic Garden Walk* -  
Linda Sauter, Anne Greenfield and  
Michael Presley showed their gardens  
July 1996

*Explore Fay Creek* led by  
Jay Sliwa, March 1997

Future walks will focus on geology, the redwoods and coastal prairie, a walk specifically for children and (maybe next winter) a visit to a sheep ranch at lambing time. 🐑



Attend the next  
Bodega Land Trust walk:

### Creek Restoration

A Walk, Talk and Slide Show  
June 18, 1997—Wed. 7:00 p.m.  
700 Salmon Creek Road,  
at the barn

For information: Call Alistair  
or Ann at 876-1806



## THE GREAT BODEGA POTLUCK:

Babette Would Have Been Proud...

by Victoria Schmidt

Double doors opened to a table which ran the length of the Bodega Fire Hall ending with a "T" of delectable desserts ranging from Catherine Newman's Plum Tart, Buffy Menuez's Chocolate Pecan Pie, to Norma Molica's Carrot Cake. Never before had a potluck yielded so many scrumptious dishes to such a varied gathering. The table was flanked on either side by rows of community members, extended families, and guests, from babes in arms to town elders. Fingers were dipped and licked, and dishes to raise the eyebrows of kings and queens were devoured.

Platters, bowls and pots were accompanied by labels stating the chef's name and page number from the BLT Potluck Cookbook. My favorite was a cheesy polenta, garnished with "never too much" roasted garlic, thanks to Columбина Albini. I confess this was the recipe that got me off my duff to buy the cookbook. The table was spread with a king's ransom of larger-than-life loaves of homemade bread: potato, Easter seed and corn with whipped butter.

The lamb stew recipe traveled from 18th century Ireland with Mary DeVay's ancestors. From Diana's colorful mixture of miner's lettuce, borage and sage, and Ann's baby spinach salad with peanut sauce, to Betsy's Spanakopita, and Javier and Patty's Peruvian Potatoes, it was a truly multi-cultural affair. Then there was cranberry salsa with cilantro, jalapeno peppers, lime, and honey... mmm. I thought I'd died and gone to heaven. I became so excited about eating I fantasized Roman orgies continuing for days. In order to taste one-third of everything, I was forced to begin with a tiny spoonful of each and still I found my way to mounds.

Barbara Petersen took charge of the kitchen. Even the teens had fun doing dishes. Not a paper plate or plastic spoon was used. Thanks go to Joe, Laird, and Sue who had rounded up a complete ceramic "potluck service", (now available for future events or rental). It was a night to remember, a good time was had by all - truly a feast fit for kings and queens.

The Cookbook and dinner were the culmination of many painstaking hours from the BLT Cookbook committee: Hazel Flett, Mary Biggs, Sue Head, Gloria Molica, and Ann Cassidy. Special thanks to Maureen Lomasney and her Tannery Creek Press for the very many hours of donated time and effort in preparing the text for printing.



**The Potluck Cookbook, Bodega Cooks for the Bodega Land Trust** is available for \$13.50 from BLT. Contact Ann Cassidy at 876-1806.

Look for the cookbook at Artisans' Co-op and Roadhouse Coffee in Bodega; Frizelle-Enos and Quicksilver Mine Co. in Sebastopol; Handgoods in Occidental; and River Reader in Guerneville. *Support the businesses who support the B L T.*



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## Preserve and Protect Our Land of Many Uses

by Melissa Schmidt

You all know John Muir, the preservationist who hiked the Sierra Nevada mountains, founded the Sierra Club, and fostered the formation of our national parks. But have you heard of Gifford Pinchot, the conservationist, who was the United States Secretary of Agriculture when the Hetch Hetchy Dam was built to provide water for the city of San Francisco? Pinchot believed the national lands should be conserved, but the resources should be available for public use. He influenced the formation of our national forests, whose watchwords have become, "the land of many uses".

Muir wanted to "Reserve and Protect" and the national parks' watchwords have become, "Preserve and Protect", a very close association. One of the major arguments between these gentlemen concerned the grazing of animals. Nowadays grazing is prohibited in national parks and allowed in national forests. Since the total square acreage in the national forests is about ten times greater than in the national parks, we should ask ourselves, which of these fellows was the better steward of the public lands. They have both protected public land from the sometimes arbitrary and violent destruction by private interests. They both lived around 100 years ago, yet their influence continues to this day, affecting our national consciousness.

In little Bodega there are those who want to protect our land from ANY human use. Others make their living from the land itself and have raised crops or grazed livestock for several generations. I suggest we develop a philosophy of sustainable living, which integrates both of these philosophies. We *can* protect endangered species and have sustainable agricultural yields. Our decisions and actions will affect the generations to come in our area in the same way that Pinchot and Muir have influenced our country. You ask, how do we do it? If you are a rancher or farmer you can participate in the ranch planning classes which are taking place in western-Sonoma/Marin County. If you are an environmentalist, please offer suggestions on how the land can be preserved and protected in such a way that it can also be a land of many uses.

Also, please consider that boundaries are more than just fences. The poet Robert Frost said that good fences make for good neighbors. But the contemporary poet Gary Snyder explains that the natural boundaries created by watersheds are age-old and will outlive more arbitrary boundaries.

Here are a few of his observations: "Habitat flows across both private and public land. We must find a way to work with wild ecosystems that respect both the rights of landowners and the rights of bears." . . . "Successful managing for the ecosystem will require as much finesse in dealing with miners, ranchers and motel owners as it does with wild animals or bark beetles." . . . "What holds people together long enough to discover their power as citizens is their common inhabiting of a single place." . . . "Watershed consciousness and bioregionalism is not just environmentalism, not just a means toward resolution of social and economic problems, but a move toward resolving both nature and society with the practice of a profound citizenship in both the natural and the social worlds. If the ground can be our common ground, we can begin to talk to each other (human and nonhuman) once again." (*A Place in Space*, "Coming into the Watershed", by Gary Snyder, Counterpoint 1995.)

His words express my point to you. So, when you read this article, drinking your tea or coffee, please consider how our community can grow into the 21st century, and how you can help. ☘



## Salmon Creek Watershed Day

by Katie Etienne

Plans for a community celebration of the Salmon Creek watershed in the Spring of 1998 are developing through a series of public meetings. We hope to hold this event at the Salmon Creek Middle School, including such activities as:

- A public forum to discuss the future of the watershed.
- A seminar on the plants, animals, geology and hydrology of this unique coastal ecosystem
- An indoor gallery to enjoy painting, sculpture, weavings, poetry, music and dance.
- A promenade of booths representing the many interesting and important community resources available throughout western Sonoma County.
- An honoring of the generous volunteers in our local Fire Departments.
- A community picnic with all the trimmings.

We would love to hear your suggestions and learn from your experience during the formative stages of this creative process. The next meeting will be Tuesday, July 1 at the CS Fund, Freestone. Questions? Please call Alistair Bleifuss, 876-1806; Katie Etienne, 874-3353; or Kathleen Kraft, 874-2014.

If anyone has slides of the Salmon Creek watershed, please call Katie, who is putting together a slide show. They will be very much appreciated and well cared for.

**Is there a grant writer out there?  
 BLT needs someone to help  
 complete our grant proposals.**

# RANCH PLANNING SHORT COURSE REPORT

By Sharon Welling Harston

In April the Bodega Land Trust and the University of California Cooperative Extension, sponsored a 4-week long Ranch Planning Short Course. The Bodega Land Trust, which might more aptly be called the Bodega Land and Watershed Trust, fills a niche that other land trusts tend to overlook: active conservation of land and water resources on working ranches. With board members having, or being familiar with livestock, their emphasis is on preventative, proactive and practical solutions to situations encountered on the typical ranch while viewing the process as ongoing.

The Tuesday night sessions of the course were geared primarily towards livestock producers in Sonoma and Marin Counties, while the Wednesday sessions were for dairy ranchers. The course was well attended by Bodega area ranchers. The Sonoma-Marin area is primarily an area of family farms and ranches. Many have been in existence for generations, and have seen a lot of changes, both social and physical. For example, some land along Salmon Creek is still healing from the effects of the January 1982 storm which caused numerous landslides and deposited six feet of silt overnight in some areas adjacent to the creek. While we cannot prevent these intense and damaging storms, we can help speed the healing process with reseeding, erosion control structures, and diversion ditches around new washes.

In the course we discussed how other damage can be caused by overgrazing or undergrazing, which, ironically, sometimes occurs on the same ranch. This may result from variations in the palatability of various grasses on the ranch, the distance animals must walk to water, salt or feeding areas, and shade availability. Cross fencing can be used to force animals to eat all forage equally, giving the more desirable grasses a better chance to grow. More water troughs can encourage animals into less utilized areas. On a day's field trip to 3 ranches we viewed riparian pastures and erosion fencing projects and we tested water quality. There seems to be a movement away from viewing riparian areas as absolutely needing stream bank protection fencing. Sometimes these areas can be properly managed as riparian pastures, and it is now more commonly agreed that grazing them can be harmless or even beneficial if done with proper grazing in early summer.

The Ranch Plan Workbook included a soil-types map and a topographical map. An aerial photo of the participant's ranch was also provided. Aerial photos can be ordered from WAC Corporation in Oregon (1-800-845-8088).

In the Ranch Plan we describe our ranch operation, types and number of livestock, or crops grown. We list our existing facilities, calculate acreage of fields and the annual pounds of forage expected per acre based on the soils map which seems quite accurate. Soil tests can be obtained through Harmony Farm Supply and LeBallisters. We also

list livestock crossings, erosion control structures, roads, water developments, and miscellaneous improvements.

In another section we enter our production goals, natural resource and water quality goals, and quality of life goals. We then rank the goals in order of importance. When we received our aerial photos, we used mylar overlays and drew in existing features and planned improvements. We also discussed photo monitoring. Even if you do not take this class, take some baseline photos, especially of problem areas, and try to repeat them annually at the same time of the year to see how things are developing.

Some small projects can be done quite easily and inexpensively. I have stopped small erosion problems with such simple and inexpensive solutions as a few bales of spoiled hay in a washing ditch, a board or waterbar across a trail or road, or willow branches to stabilize a bank. But unfortunately some projects, such as major soil retention structures and large fencing projects, are too costly for most ranchers without financial assistance. Filling out this workbook properly to better describe some projects and what they aim to accomplish may be helpful in obtaining cost share funds. Funding and other information may be obtained by calling Stephanie Larson's office at 527-2621.

Many thanks to the courses' wonderful teachers: Stephanie Larson, Livestock and Range Management Advisor, UCCE; Charlette Sanders, Range Conservationist, Natural Resource Conservation Service; and Lisa Bush, Land Steward, Marin Agricultural Land Trust. ☺



(Goat Ranch from p. 2)

"If you have a cottage industry which starts to grow just a bit, it can involve the community, and soon you have a community industry," she explains, citing the example of 93 families in Costa Rica who each began with just two or three goats and produced so much milk they had to build a cheese factory. Jim Hightower in Texas is another example. He started by converting one farmer to organic, and now oversees a million dollar industry of farmers' markets throughout the state. As the noon hour is fast approaching, Patty is called to work. "Javier and I see less of each other now that we both work at home full-time. We have to make a date to be in the same place at the same time!" Pressing samples of cheese into my hands, she bids me farewell. ☺

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**Watch for an announcement of a general BLT membership meeting next Fall. We'd like to gather the membership and see if there is interest in discussion and education regarding our community and its environments.**

# Fish and Landowners Benefit from Stream Restoration: A Win - Win Situation

by Alistair Bleifuss

Like many in the Salmon Creek watershed we suffered considerable damage in the flood of March 1995.

We heard the rain pounding all night. Before the first light I pulled on boots and a slicker. A quick glance at the rain gauge showed that five inches of rain had fallen. Despite the whistling wind I could hear the roar of Salmon Creek. First, check the pump house. Yesterday the pump house stood fifteen feet above the creek and fifty feet back. Today its roof cleaved the rushing current. Lasso it and tie it to a tree? Naw. Maybe it will hold on its own. I circumnavigated the pasture, three feet deep in water, and slogged on towards the Creek House. A fence line had been bowled over and was bobbing and ducking in the torrent. First a fence post breached, followed by a board slap. The flood ran a foot high into the barn; not waiting for an ark to appear, the animals had already moved to higher ground. Salmon Creek was two and a half feet up the foundation of the Creek House. At least the house was elevated, after all it is in the flood plain! In a few minutes the water was six inches above the door. Not much to do now except pray for the water to recede.

By noon the creek had returned to its channel and the sun peeked through the clouds at the sodden countryside. Two fence lines were down. Hay and feed were wet and the barn and house were full of silt.

Debris from a storage shed littered the pasture. The pump house had disappeared. So had 500 sq. ft. of pasture. Numerous fresh cuts delineated the new creek bank. A host of trees had uprooted. In the chocolate colored creek, our neighbors' stepladders, tires, water troughs, and soil raced to the ocean.

The flood gave us a keener understanding of Salmon Creek. My wife's and my concern about protecting our property from future floods prompted us to learn more about riparian environments and creek dynamics. We found out that the qualities that make a creek a healthy, functioning natural habitat are the same elements that mitigate flood damage.

Streams will flood. The biggest dams and the highest levees haven't been able to prevent this act of nature. At times structures may contain or lessen the damage from minor events. But in extreme flood conditions, heavy precipitation on saturated soils, manmade structures can exacerbate the flood peaks or divert the water's force elsewhere. Because of the relatively small size of Salmon Creek's watershed it

doesn't take long for a flood to crest. There is no two-day warning, as on the Russian River.

Floods happen where there is no impact from man, but roads and their associated ditches, roofs, soils bare from construction or overgrazing, and deforestation, all contribute to faster runoff, higher-peak flows and increased erosion. On a per acre basis, small parcels probably contribute more to flooding than ranches. Knowing that we have to live with periodic flooding, each of us can help lessen the impact by paying attention to drainage patterns and land uses. One important key is vegetation which slows down runoff and allows the soil to absorb and retain more water.

We started by talking with representatives from the Natural Resource Conservation Service (NRCS), the Department of Fish and Game (DFG), the Gold Ridge Resource Conservation District (GRRCD) and private consultants. A lot of information was also garnered from a watershed meeting in Bodega and a Sonoma County Farm Bureau conference. We discovered plenty of resources available to design and fund projects that improve land use practices which enhance water quality and thus fish habitat. Funding is available to help the fish and hence the means to achieve our goals. Win-win. With support from GRRCD and Bodega Land Trust we received two grants for creek restoration and habitat enhancement. GRRCD, DFG, and the NRCS provided a lot of technical advice. We also received help from Americorp volunteers, friends and neighbors.

The NRCS and DFG encourage and fund environmentally sound livestock management practices, such as exclusionary fencing, revegetation, vegetative buffer strips, stream bank protection, controlled access, alternative water development, and prescribed grazing. Implementation of any of the above should improve both water quality and range productivity over the long haul. Both the fish and the landowner benefit. We built exclusionary fencing along the creek. The fencing decreased the area of available pasture but we think that this loss will be offset in the long run by bank stabilization. Livestock had other sources of water and did not depend on access to the creek. For other ranchers, grazing riparian pastures with careful control of timing and duration, may be a beneficial alternative. We also began to practice rotational grazing to maximize productivity, reduce erosion and allow more water absorption.



We found that revegetation was an effective and inexpensive way to stabilize the creek banks. Roots hold the soil together and prevent it from washing away. If given a chance, plants readily grow in a riparian corridor where water is most plentiful during the dry months.

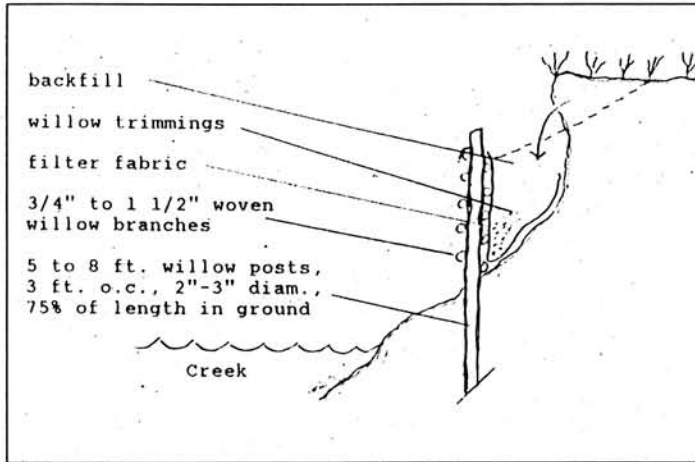


Figure 1. Willow revetment construction.

Fish require cool, good quality water, year-round pools in which to mature, clean gravel beds for spawning, cover from predators, and a food supply. By stabilizing the stream bank through revegetation and by more carefully monitoring our grazing practices we reduced the amount of sediment entering the creek; created a more favorable environment for insects (food); developed shade canopy; provided woody debris and roots for cover; and helped protect our land from the adverse effects of flooding. What we needed, the fish needed. Win-win squared.

Much of the stabilization and revegetation was in the form of willow revetments (figure 1). The structure of the wall stabilizes the bank until the roots of the growing willows incorporate into the soils. Willow revetments are inexpensive to build and the raw material is readily available. Individually, willow cuttings will take root and provide a quick and cheap method of revegetation (figure 2). We also discovered that ninebark and dogwood will grow from cuttings. Native blackberries and rushes were transplanted. We used a few container plants. To get a sense of what plants are natural and will do well, just look around. But even hearty native species require watering and care their first couple of years. Browsing by deer or livestock can quickly set back efforts.

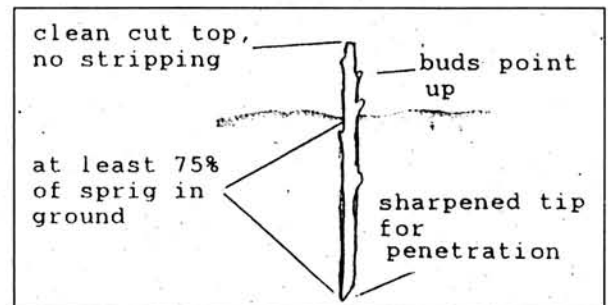


Figure 2. Willow sprig planting. Sprigs 2 1/2 to 3 ft. in length, 3/4 in. diameter, trim all branches.

A stable, vegetated riparian corridor maintains a higher water table and thus supports more vegetation than an eroding creek that downcuts and widens. A deeper and wider channel would temporarily provide more capacity for storm flows but by its very nature it also lowers the water table, supporting less vegetation, and leaving the land more susceptible to erosion (figure 3).

Vegetation along a creek does contribute a little bit to flooding by restricting the flow of water. But, if we agree that creeks will always flood, the stabilization of creek banks provided by plants easily offsets any disadvantage. Vegetation along the creek also protects against erosion where minor drainages enter. Sufficient vegetation limits the erosive force of receding flood waters pouring off the flood plain and back into the channel.

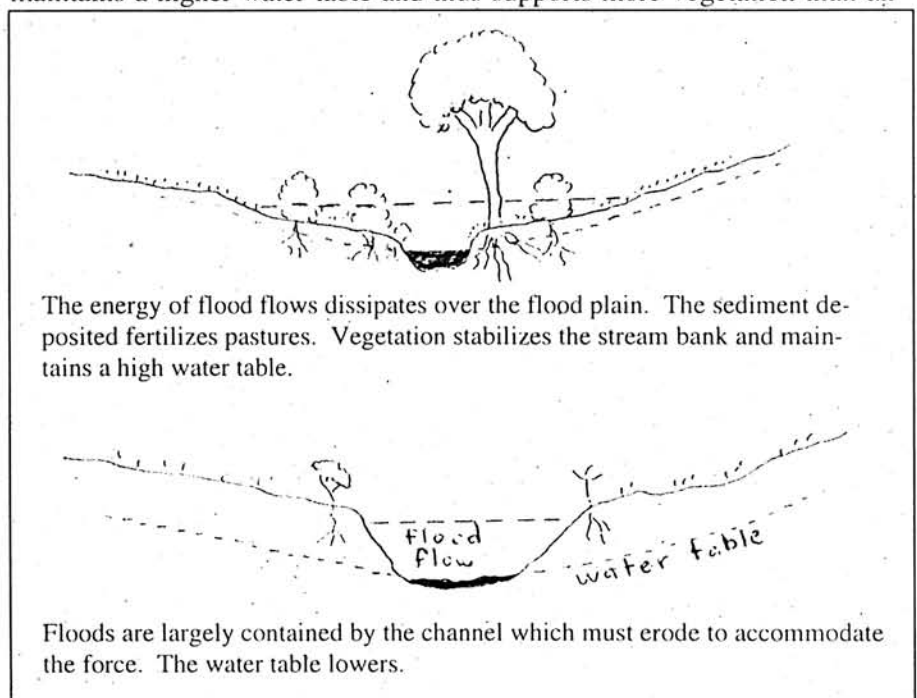


Figure 3. The effect of downcutting and widening of a stream channel on flood flows.

I've heard the argument that trees along creeks cause the bank to erode when they uproot and fall over. This can and does happen, especially when streams have downcut and flood energies cannot easily dissipate across the flood plain. Where stream bank blowouts are common along a stretch of stream, either the banks are poorly protected by a vegetative armor or the stream has downcut and undermines even the healthiest vegetation. The loss of one tree in a riparian corridor in good condition with a continuous belt of vegetation is negligible. The root mass of neighboring trees arrest erosion and prevent formation of a larger cavity. The small amount of erosion caused by the uprooting of a tree is compensated for by its roots having curbed erosion for a number of years.

Downed trees and logjams can cause the diversion of water into stream banks and the consequential scouring. But large woody debris in the creek provides essential protective habitat for fish. As stated above, an extended area of vegetation along a creek decreases the erosive impact of a blowout. On our project we disassembled the upper parts of logjams to lessen the potential for blowouts. Logs that extended beneath the surface were left in place to provide habitat. Downed trees were turned parallel to the current and bolted or cabled in place. We even plan to add anchored logs!

In response to the argument that a restored riparian corridor will diminish the amount of pasture available for livestock, I say that the pasture may not be there to graze in a few years if erosion isn't controlled. Have you ever calculated the amount of forage in a gully? It is mainly air. Headcuts in gullies are relatively easy to fix in their early stages, but can quickly grow into insatiable soil eating monsters that are costly to repair.

There is also the claim that trees compete with grasses for groundwater. Tree roots pull water from deep in the ground. We're lucky if our grass roots extend eight inches deep. Many trees are still dormant in the early growing season leaving water available for grass. While it is true that surface moisture moves down to replenish deep soil moisture, annual grasses mature before this effect is perceptible. I have also noticed that some of our lushest pasture is underneath trees where the shade retains morning dew and prevents continuous sun from drying the soil. Trees also serve as windbreaks which lessen the drying effect of the wind.

Periodic flooding of lowlands deposits sediment and minerals that increase the fertility of pastures. One can take advantage of this natural fertilization process by leaving enough residual dry matter or allowing sufficient new growth to slow down flood flows. Over-utilized pasture land may suffer erosion instead of deposition. The same practices benefit upland pastures by lessening erosion and increasing water absorption.

While studying the endangered humpback chub in the Grand Canyon, I was often asked, "What good is that fish? It's not very edible, it doesn't provide fantastic life-saving drugs from its swim bladder." I had to answer that I wasn't quite sure, but I did know that it was one of God's creatures and its health and presence is an indicator of the quality of life we all lead. The fish in Salmon Creek could be eaten if there were enough of them. More important, I feel they serve as a gauge that we can use to measure our efforts as stewards of the land that has blessed those before us and will bless those to come. As we have learned, a healthy riparian environment contributes to productive pastures and flood damage mitigation in an interactive dependence, which benefits both man and fish (figure 4). If we can do a little to help the fish, I believe we do a lot to help ourselves.

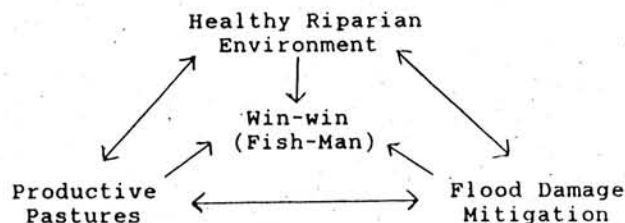


Figure 4. Interdependency produces a win-win situation for fish and man.

To undertake creek restoration requires some appreciation for the natural resources of a watershed and the willingness to put in one's own time. It pays off by helping maintain the land value over the long haul and it is enjoyable to tinker around and see the results. Voluntary action now may prevent future mandatory land use restrictions aimed at preserving some little fish at whose purpose we wonder.

*For quick and easy reading on stream restoration and erosion control, have a look at Groundwork, A Handbook for Erosion Control in North Coast California and Creek Care. Both books are available from the Marin RCD or the UC Extension Service.*

#### BLT NEWSLETTER FUNDING RUNNING OUT

The last four issues were made possible through a grant from the Trust for Public Lands. These funds run out as of June 1, 1997.

If you enjoy reading the BLT Newsletter, please let us know and help support its continued production. When you join BLT, a portion of your membership fee will be put toward production of newsletters or you may earmark your donation especially for the newsletter.



Have you joined or rejoined B.L.T. in the last year? If not, here's your **BIG CHANCE!**

## BODEGA LAND TRUST MEMBERSHIP FORM

I would like to become a member or continue my membership at \$10 \$20 \$50 \$100 Other

Please check your address on the other side of this form for accuracy and mail to:

B.L.T., PO Box 254, Bodega, CA 94922

Make checks payable to Bodega Land Trust

All donations are tax-deductible

I am interest in being involved as:

an advisor

A Board member

an occasional volunteer

other

My special interests are:

My special skills are:

A project I would like to see the Bodega Land Trust consider is:



*We, as voters and members of a land trust can affect environmental events. In 1996 voters around the country approved more than \$4 billion in state and local funding for parks, open space, and environmental revitalization. Land trusts played a role in many of the initiatives.*

Florida Raised \$11 million for land preserves and a 10% stewardship trust fund.

NC \$20 million for park trails, greenways, inner-city parks and downtown park land purchase.

GA Four-year penny sales tax earmarked for park land acquisition and development.

NY \$263 million for open space, park improvements, purchasing farmland, open space and development rights.

RI \$4 million for land purchases to protect natural and recreation resources, including farmland development rights.

MD \$6 million for parks, agricultural land protection and watershed projects.

MA Passage of an advisory referendum to create an open space land bank funded by a 1 % real estate transfer tax.

*Reprinted from Land Trust Alliance "Landscape", Jan., 1997*

### PLEASE SUPPORT THE FOLLOWING 1998 CALIFORNIA BALLOT PRIORITY BILLS!

**AB1000- \$663 million Clean Coastal Waters and River Bond Act to fund acquisition and restoration of coastal and river resources and river parkway projects.**

**CONTACT:**

The Honorable Fred Keeley, State Capitol Building, Sacramento, CA 95814

The Honorable Debra Bowen, Chair, Assembly Natural Resources Committee, State Capitol Building, Sacramento, CA 95814

**SB2- \$495 million park and open-space bond act to fund state and local park acquisition, facility and open-space protection projects.**

**CONTACT:**

The Honorable Mike Thompson, State Capitol Bldg, Sacramento, CA 95814

The Honorable Mike Machado, Chair, Assembly Water, Parks and Wildlife Committee, State Capitol, Sacramento, CA 95814

**SB87 - Creates a STATE TAX CREDIT to encourage landowners to donate important open-space lands and conservation easements on agricultural lands to state agencies, local governments and non-profit groups.**

**CONTACT:**

The Honorable Jack O'Connell, State Capitol Bldg, Sacramento, CA 95814

The Honorable Dede Alpert, Chair, Senate Revenue and Taxation Committee, State Capitol Building, Sacramento, CA 95814

You can review the text of these bills on the internet by visiting the State Senate's Home Page at <http://www.sen.ca.gov>.

These bills are being considered now, and your Legislators need and want to hear from you. Please act today.

If you have questions, call Chuck Mills at the Trust for Public Land (916) 557-1673.

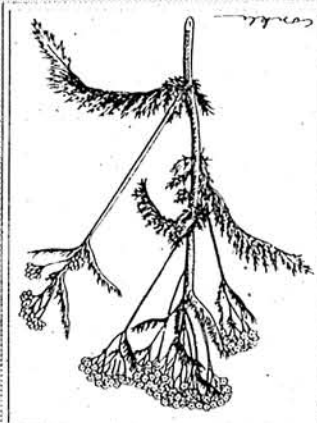


Board of Directors: Mary Biggs, President; Anne Greenfield, and Sue Head, Vice-presidents;  
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Contributors: Alistair Bleifuss, Jeremy Sharp, Sharon Welling Harsion, Melissa Schmidt,  
Victoria Schmidt, and Katie Etienne.  
**Design and Production:** Mary Biggs, Sandy Sharp, and Roberta Paskos.

Yarrow (*Achillea millefolium* L.) — Native to Europe, but fully naturalized here, yarrow can be seen along most country roads. It is also a popular decorative garden plant, with its white or pink flowerheads that bloom throughout summer. Called "allheal" in traditional medicines, yarrow's entire above-ground portions is useful as a tea for fevers, head colds or urinary or menstrual problems; or as a poultice to stop bleeding.



One of eight drawings in the series "Wild Plants of Salmon Creek Watershed." They are available as sets of notecards at the following stores:  
Bodega: Bodega Landmark Studio;  
Artisans' Co-op; Northern Light Surf Shop; Roadhouse Coffee  
Bodega Bay: Tides Gift Shop  
Occidental: Natural Connections  
Sebastopol: Wild Things  
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## BLT COOKBOOKS AND NOTECARDS MAKE GREAT PRESENTS!



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