



# FORESTLAND STEWARDS

## Watersheds: should you care?

**Y**ou hear a lot about watersheds these days—watershed planning, watershed restoration, watershed groups...But what does all that mean to a landowner? How does it affect your property, your finances, and your community? Why should you care?

Despite countless complex definitions, the basic concept is easy to visualize. Water drains down the landscape, collecting into bodies of water such as streams, rivers, and lakes. The entire drainage basin is the watershed. Unlike county lines and Congressional districts, a watershed is a natural division of the landscape that makes sense.

Generally, a ridge or elevated point separates one watershed from another. Large watersheds can be divided into smaller subwatersheds, drainages, and basins. It is important to remember that a watershed includes not only streams and waterways, but also the soil, forest, groundwater, etc.

Why should you care? Because everyone is either upstream or downstream from someone else. What you do on your property will effect those below you and what is done upstream

affects you. Every ownership within a watershed has a direct connection to every other property. Recognizing your position in the watershed is important to your land management goals.

Healthy watersheds have many positive attributes. Good water quality. Vegetation that protects the soil and prevents erosion. Plentiful and diverse aquatic and other wildlife. Low danger of catastrophic wildfire.

Everyone in a healthy watershed reaps the myriad benefits. Good stewardship activities can help maintain and enhance a healthy watershed or restore an unhealthy one.

Watersheds extend beyond property boundaries and become community concerns; individual landowners in a watershed are an integral part of that larger community. Approaching watershed issues as a community



Produced by Lane Council of Governments

matter provides greater scope for securing funding and accomplishing larger projects.

Opportunities exist for landowners and community members to work with a variety of agencies to solve the many challenges inherent in watershed management. Find out about efforts currently underway in your watershed by contacting the Forest Stewardship Helpline at 1-800-738-TREE. ▲

Cooperative Extension  
Environmental Sciences, Policy, & Management  
University of California  
163 Mulford Hall  
Berkeley, CA 94720-3114

Non-Profit Org.  
U.S. Postage  
**PAID**  
Berkeley, CA  
Permit No. 824

ADDRESS CORRECTION REQUESTED

## Out on a Limb

# New landowner curriculum is ready

**Richard Harris**  
*Extension Forester*

For more than a year we here at Extension Forestry have been developing a comprehensive curriculum on forest ecology and management. The target user for this curriculum is the non-industrial forest landowner—people who own parcels of forest land but who are not in the commercial timber production business for a livelihood.

The topics covered in the curriculum are organized around the themes of “who, where, what, when, how, why, and how much” and cover virtually all aspects of land ownership and management ranging from mapping through taxation and investment analysis.

We have used both existing sources and prepared totally new documentation to round out the information base. An example of the products appears on pages 4–6 of this newsletter.

Last summer we used some of the materials at a three-day workshop for landowners held in Redding. The exposure was very valuable and taught us some lessons on how to make the presentation better. Research sponsored by the Forest Stewardship Program on landowner learning has also been useful. We are now on the brink of completing the project. I want to tell you a little about how it works and let you know how you can get involved.

There are literally hundreds of publications, videotapes, slide tapes, and web sites that deal with topics of interest to the forest landowner. Some of these get used extensively and some are either little used or relatively inaccessible. Our intent was to develop an accessible information base that would be used. Therefore, we decided to tie the information together with a framework that helps a landowner

prepare a forest stewardship plan. Forest stewardship plans are extremely useful for documentation and as a tool for preparing cost-share assistance grant requests and timber harvesting plans.

It works in the following way. A landowner accesses the system through a personal computer. Upon entering the system, the landowner is faced with questions regarding the property. For example, who owns it? in what manner is the ownership held? where is the property located? what natural resources are found on the property? Questions range from very simple and readily answered to relatively complex requiring research or data collection on the part of the landowner.

Each group of questions is linked to a glossary that defines terms and to text that describes how to obtain the information necessary to answer the question. Over a period of time—which will vary with the landowner, level of expertise, and the property in question—the user will gradually accumulate all of the information needed for a forest stewardship plan. The plan will describe resources, landowner goals and objectives and predicted outcomes from management activities. This can then be used to schedule activities on the ground, seek cost-sharing assistance from government agencies and as a baseline for monitoring.

The entire system will be available on one CD ROM disk. In order to use the system most efficiently, it is necessary to have access to a Macintosh or a PC with Windows 95 and ClarisWorks 5.0. A limited demonstration version of ClarisWorks is provided on the CD but, if you want all its features, you will need to buy the program. It is possible to use the system manually however, with hard copies of the plan template, glossary, and content. We will be providing 500 copies of the CD ROM

to the Department of Forestry and Fire Protection in March for distribution.

We will be using the system as a basis for landowner forest stewardship workshops next summer and in coming years. Upcoming workshops will be held late summer in Plumas/Sierra and Humboldt Counties. These workshops will use the computer model to prepare a plan and will include classroom and field instruction over a period of three weekends. For Plumas/Sierra County resident landowners the contact person is Mike DeLasaux at (530) 283-6125. Humboldt County landowners should contact Kim Rodrigues at (707) 445-7351. We will let you know about future workshops in other places. ▲

## FORESTLAND STEWARD

*Forestland Steward* is a publication  
of the California Forest  
Stewardship Program  
P.O. Box 944246  
Sacramento, CA 94244-2460  
(916) 653-8286  
Fax (916) 653-8957

**Governor**  
Pete Wilson

**Secretary of Resources**  
**The Resources Agency**  
Douglas P. Wheeler

**Director**  
**Calif Dept of Forestry & Fire Protection**  
Richard A. Wilson

**Editorial Committee**  
Laurie Litman, InfoWright  
Wendy Wickizer  
Richard Harris  
Jim Geiger



## Seasonal Stewardship

# Planting success requires careful planning

It's springtime and the planting season is almost over. Can you rest now? Not yet—first, take some time to plan next year's planting.

Late fall to early spring is the best time to plant trees in most of California, but optimal timing varies with location, elevation, and local conditions. You need to have everything in place *before* the season comes upon you.

Know the growing conditions of the area you plan to plant—climate, soil type and depth, drainage, exposure, etc. and choose tree species that are appropriate for those conditions. Make sure that the seedlings are from a seed zone genetically adapted to your local area and take into consideration special concerns such as tree diseases.

There are two basic seedling types: bareroot and container. Most forest plantings use bareroot trees which are less expensive, however, they are very perishable and must be handled carefully to avoid damage. Containerized seedlings are grown in small pots and are somewhat less susceptible to damage prior to planting.

Contact nurseries and put in your order as early as possible. The number of trees you need depends on the purpose of planting, the area you plan to plant, the equipment you'll use, and spacing. If you space trees widely, they usually grow faster, but closer spacing is desirable for a number of purposes including erosion control and windbreaks.

Complete all planting arrangements ahead of time so that seedlings can be planted immediately upon delivery—prepare the site, have all necessary tools on hand, and the planting crew standing by. Have contingency plans to protect the seedlings in the event it becomes necessary to delay planting.

Information on appropriate seed selection, planting techniques, and tree care is available to landowners. Call the Forest Stewardship Helpline at 1-800-738-TREE. ▲



## Where can you go for seedlings?

The California Department of Forestry and Fire Protection (CDF) operates two nurseries that produce tree planting stock, the L.A. Moran Reforestation Center near Davis in Yolo County and the Magalia Nursery near Magalia in Butte County.

The stock at these nurseries can only be sold for the following purposes:

- ◆ Reforestation on private lands
- ◆ Erosion control and watershed protection
- ◆ Farm windbreaks
- ◆ Cut Christmas trees on private lands
- ◆ Fuel wood on private lands
- ◆ Reforestation on public lands

The trees are sold in minimum quantities of 50/species for containerized stock and 100/species for bareroot stock. Quantities are limited so orders

should be placed as early as possible to be sure to get the species you want. Advanced reservations for the 1998–99 season can be placed between February 1 and July 31. Contracts for special orders can also be made.

Tree stock for landscaping or beautification projects must be purchased from a private nursery. The CDF nurseries have lists of private sources for native plants and seeds as well as lots of information on planting.

L.A. Moran Reforestation Center  
(headquarters)  
PO Box 1590  
Davis, CA 95617  
(916) 738-2441

Magalia Nursery (bareroot nursery)  
6640 Steiffer Rd  
Magalia CA 95954 ▲



## Landowner Curriculum

# What is the right thing to do on my property?

[NOTE: The following is an abridged version of the introduction to the landowner curriculum—see page 2.]

John LeBlanc

With 20 years of resource management experience, I have talked with and listened to literally thousands of forest landowners—owners that held 3 acres, 30 acres and 3,000 acres. We have conducted surveys, workshops, and focus groups, all trying to understand what landowners really need to know to be good forest stewards. Almost without exception, they all wanted a very simple question answered—“What is the **right thing** to do on my property?”

Though the question is asked in different ways – “Should I harvest timber?” – “How do I plant trees?” – “What should I do about this insect problem?”, my answer has always been a firm, unwavering “It depends.” The **right thing** to do on your land very much depends on:

- ◆ Your goals and expectations for your land.
- ◆ The biological, and ecological conditions that exist.
- ◆ Current and expected economic conditions.
- ◆ The legal setting that your property falls under.
- ◆ The social setting that you work and live within.
- ◆ The interactions of these elements.

The order of this list is significant. The overwhelming element that needs to be considered when deciding on the **right thing** for your land is what you want and need from the property.

- ◆ How can I harvest timber?
- ◆ Do I have spotted-owls on my property?
- ◆ How do I plant trees?

- ◆ How do I control insect and diseases?
- ◆ Is my property a potential source of retirement income?
- ◆ Is my property a future house site?
- ◆ Can my forest be a private area to hunt or fish?

Whatever **your** goals are, they are the foundation on which to answer the question, what is the **right thing**.

Several years ago, working on a timber harvest for a landowner, I mapped out the perfect location for a landing—a gathering point for logs and equipment in a timber harvest. It was relatively flat, good soil, far enough away from the stream to be environmentally benign, close to an existing road so road building costs would be minimal, plus it was close to many large mature trees that would surely improve the bottom line.

When describing my plan to the landowner, he surprised me saying that I could not put the landing there. When I pressed, I found myself just about fired. My perfect landing happened to be the spot where my client had first proposed to, and then married his wife. All of their children were married on that spot, and at least one grandchild hoped to be married there. Needless to say, I found a suitable alternative.

Though the spot was well-suited for a landing from environmental, economic, and legal points of view, the only viewpoint that ultimately mattered was the landowner’s goals for that particular place. The **right thing** for this place was to avoid any disturbance at all.

How do you determine, from all of the choices available, what is the **right thing** for your land.? The best way is to create a plan.

### Why Should You Do This?

As a forest landowner, you should seriously consider creating a plan for your property. This plan will help you make

Though the question is asked in different ways, my answer has always been a firm, unwavering “It depends.”

more informed decisions about the future of your property—even if that decision is to do nothing.

You already have a type of plan for the management of your forest. If you are doing nothing, actively or intentionally, you are letting nature take its course. A forest stewardship plan is simply a list of things you should consider when deciding what to do with your forest.

The process of planning itself helps you learn about your property. As an owner of forest property, you are expected to abide by laws that govern property ownership—taxes, timber harvest, trespass. You should be familiar with the biology and ecology to keep your forest healthy. You ought to be aware of the social setting, potential laws and regulations that influence the handling of your land. Most landowners want to know about the economic condition of their land:

- ◆ How can you protect the property from wildfire?
- ◆ Can you afford to manage for timber? Can you afford not to?
- ◆ Are there other things, like mushrooms, that the land can produce?
- ◆ What kind of wildlife lives in this forest?
- ◆ Can the taxes be reduced?



- ◆ Can the property supply funds for retirement?

To answer these and other questions intelligently, you need information. This plan is one way to organize and summarize the information you need to make the right decisions. Having this information in hand and organized helps reduce the time and expense necessary to prepare applications for permits, cost-share agreements, and environmental documentation like Timber Harvest Plans (THPs).

This plan is very much **your plan!** It is not required by any government agency. It is a suggested method for you to organize information about your property, point out gaps in that information, and show you how to fill those gaps so that you can make the best decisions about your land.

You may be called to describe your property to others for a number of reasons. You ought to consider providing your family with a written record of the great store of knowledge that you have gathered on the history and future plans for the property. You can use this as a basis for other types of documents. For example, this plan could easily be certified as a Forest Stewardship Plan after review and verification by a professional forester. If you plan on selling timber from your property, you will need to file a Timber Harvest Plan (or exemption). While a Timber Harvest Plan must be signed by a Registered Professional Forester, the information in your plan can be used by the forester directly, possibly saving some preparation time for your THP.

Think of creating a plan as a systematic process for learning about your property and how it fits into an environmental, legal, social and economic system. The idea here is to learn by doing, answering questions with materials at hand, looking up and

learning about new ideas, meeting the right people that can help you do the **right thing** on your property.

### How Does This Work?

The first step is documenting what you know already. If you are like most landowners, you probably have a folder or envelope with records that describe activities on your property, deeds, tax forms, receipts, maps, and bills.

You also have a great deal of information about the property in your head. Only you know what your goals for the land are. Only you can make the decision about the mix of uses that will occur on your land.

To create a plan you need to tell the story of your family's forest. No matter who you tell the story to, you need to describe the following:

- ◆ **Who** owns or is otherwise involved with the management of the property?
- ◆ **What** do you own. What are the resources involved?
- ◆ **Where** is the property located? Where are the areas of concern on the land? Where are resources located around the property?
- ◆ **Why** do you own the land? What are your goals and objectives? Why do you prefer specific alternatives?
- ◆ **When** will activities take place? What is the history of the property?
- ◆ **How** are you going to implement your objectives?
- ◆ **How much** will all of this cost or return?

**This plan is a method to organize information about your property, point out gaps in that information, and show you how to fill those gaps so that you can make the best decisions about your land.**

### Creating Your Plan

The plan is a template that you fill out to the best of your ability. You can move at your own pace, skip the sections that are less useful and concentrate on those areas that interest you the most.

You create your plan by editing the entries to describe your property. On the title page, fill in the name of the property, who prepared the plan, and the date. From there on fill in what you can. Some of the information will require a trip to the County Recorder's or other government office, or writing for additional information. Some sections can best be answered by consulting with the appropriate resource professional. Part of this process is learning as you are doing.

A plan is a living document in many ways. You need to change and adapt it as conditions change. This is one of the reasons to use a computer file—while most of the plan does not change, you can easily change those parts that do.

### How Long Will It Take?

How long it will take to complete the plan is impossible to predict. A great deal depends on how much effort you want to put into it. Remember that in creating the plan, you are learning more about your property and resource management. A truly useful plan is never really finished. As you implement the plan, as more information comes in, and as you learn more, your plan will change.

For your first draft, estimate about 1 hour for every 10 acres you own. You may need to add some time to make trips to the County Recorder's office or local library.

Having the information on hand, organized and summarized is worth the effort. It will allow you to make the right decisions, avoid costly mistakes, and maximize the enjoyment of your property.

*John LeBlanc is a UC Extension Forester.* ▲



## Landowner Curriculum

# Estimating distances

We often need to estimate distances in forest stewardship. The need to estimate the length of a boundary line, the area of a management unit, or the length of a road segment arises in many situations. A quick and reasonably accurate way of estimating distance is counting the number of paces it takes to walk the distance.

Pacing is useful when exact measurements are not necessary. For example, when trying to locate a marked property corner, start from a known corner. Take a bearing with a compass, and pace off the approximate distance. This should put you close enough to find the missing corner without taking a great deal of time to use a steel tape.

### Some Useful Conversions

- 1 Pace is about 5' (varies greatly)
- 13 Paces is about 1 Chain (varies greatly)
- 20 Paces is about 100 feet (varies greatly)
- 1 Chain (Engineers or Gunter's) =
  - 66 Feet
  - 4 rods (16.5 feet per rod)
  - 100 Links (each link is 7.92 inches)
- 1 Acre =
  - 43,560 square feet
  - 208.7 feet X 208.7 feet (a square 208.7' on a side)
  - 10 square chains

You can also use pacing to estimate the number of acres treated by a contractor. For example, if you are paying for an operator to thin a stand on a per acre basis, you can estimate the number of acres treated by pacing the perimeter.

### Setting your pace

Everyone has a different pace. You need to establish your pace before it can become a useful measurement. A pace is usually counted as 2 steps, each time your right or left foot hits the ground. Be consistent here—always use the same foot.

### To set your pace:

- ◆ Accurately measure a pacing course on level ground. Put stakes at each end. About 200 feet or 3 chains is about right. If you put the course somewhere convenient, you can calibrate your pace often.
- ◆ Repeatedly pace off the course, counting off the number of paces it takes to complete the distance.
- ◆ Keep a natural comfortable pace that can be held all day. Don't try to adjust to even standard, but try to count your pace to the course distance

It is usually easier to adopt the number of paces per distance, say 13 paces per 1 chain (66 feet) or 20 paces per 100 feet, than it is to calculate the

number of feet per pace.

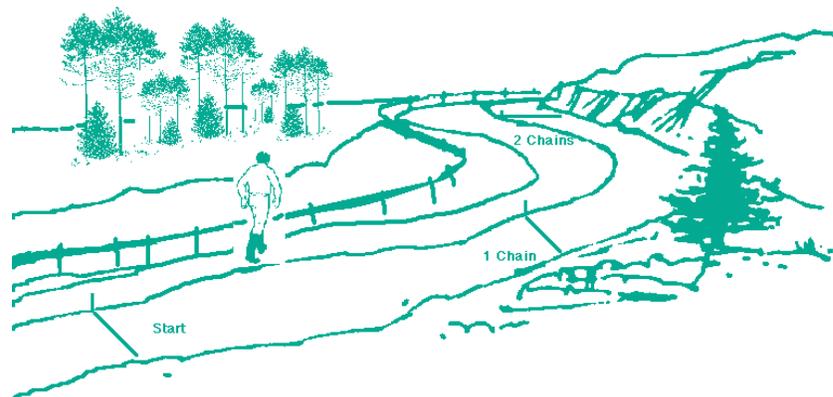
Check your pacing against known distances whenever possible. Your pace may change between the morning when you are fresh and the afternoon as you get more tired.

On steep terrain, or in dense brush skip a pace now and then rather than trying to maintain your standard pace. That is, on moderate slope count every 10th pace twice. On steeper slopes count every 5th pace twice. Some people carry a counter to keep track of the number of paces, especially over long distances. The counter is clicked at every pace or every 10th pace.

Under very difficult conditions, steep cliffs or deep ravines, estimate the number of paces from the edges of the obstacle until where you can begin pacing again.

Remember pacing is an approximation, errors of 50-100' per mile are considered reasonable accuracy for the method. If you need more accuracy, use a steel tape.

*This is just one of over 75 topics covered in the landowner curriculum entitled Working in the Woods: A Guide for California's Forest Landowners (see page 2). For more information or to get your own copy (on CD-ROM or hard copy), contact the Forest Stewardship Helpline at 1-800-738-TREE.* ▲



## Assistance Update

### Help for wetlands restoration

The Wetland Reserve Program (WRP), operated by the USDA Natural Resources Conservation Service (NRCS), provides assistance to restore wetland functions and values on non-federal lands. Private landowners and state, county, and local governments can get cost share funds to pay 75% of the restoration costs by simply agreeing to maintain the restoration for at least 10 years.

Any request for cost-share funds to restore substantial wetlands at a reasonable cost under a 10 year WRP agreement will be approved. As there are no long-term requirements to maintain the restoration, land rights payments are not available under this WRP option. WRP restorations can not be used to help meet any wetland mitigation requirements or for the development of mitigation banks.

To sign up or to get information, contact your local NRCS or Resource Conservation District (RCD) offices. The local office will also know of other

local programs (e.g. Partners for Wildlife program, EPA, etc.) to help pay the remainder of landowner's costs.

◆ Top priority is given to purchasing 30 year easements where a state or private organization has made arrangements with the landowner to make the easement permanent or to acquire the land in fee title after the 30 year easement is recorded. A very high priority is also given to permanent easement offers involving partnerships with other agencies, organizations, or programs.

◆ The WRP Coordinator in NRCS state offices is available to answer specific questions. If you have difficulty contacting the right office or need further information, send an email message to <wrp@fb-net.org>

◆ Detailed WRP information "on-line" can be found at <http://www.fb-net.org/wrp.htm>.

*For more information contact your local NRCS office or the Forest Stewardship Helpline at 1-800-738-TREE.* ▲

### Forest Stewardship grants available

A Request for Proposals has been issued for approximately \$300,000 in Forest Stewardship technical assistance funds.

The California Department of Forestry and Fire Protection (CDF) and the Forest Stewardship Coordinating Committee are interested in funding proposals that assist communities with resource management projects involving multiple ownerships and agencies. Emphasis will be placed on projects that address prefire fuels treatment, forest health, and water quality, and have established collaborative community partnerships to complete the project.

These cost-share grants are available for staffing, operating expenses, and project implementation costs. Projects in the range of \$1,000 up to \$15,000 will be ranked by priority and selected for funding as money becomes available.

Proposals must be received by Friday, June 5, 1998. Faxed copies will not be accepted. Call Jim Geiger at (916) 653-8286 for more information. ▲

### Forest Stewardship Website Online!

The Forest Stewardship Program is now on the internet with information of interest to forestland owners, professionals, and others. You will find an updated calendar of events, newsletter articles, technical and financial assistance contacts, and links to lots of related sites with even more information.

<http://ceres.ca.gov/foreststeward>

### CALFED grant announcement expected in early May

CALFED is expected to announce its next grant cycle in early May. Rather than a formal Request for Proposal (RFP), these will be focused grants for areas that have been identified as priorities by stakeholders. A specific amount of money will be allocated for each focus area.

Altogether, there will be about \$25 million in grants available. Grants will be awarded for many areas of interest to forestland owners including watershed planning, education, fish screens, flood plain acquisition, habitat restora-

tion, and unspecified research projects. These grants are available to anyone in the Bay-Delta and tributary watersheds including agencies, individuals, or nonprofit organizations.

Interested parties will have 60 days to respond after the announcement. The next funding cycle will be in 1999.

To receive a copy of the proposal solicitation package, call CALFED at (916) 657-2666. The package will also be available under "Ecosystem Restoration" at the CALFED website, <http://calfed.ca.gov>. ▲



## Fire Safe

# Rural residents learning that beauty and safety are compatible

*Cliff Heitz*

For a number of years, the foothills have attracted an ever-increasing number of residents. This has created an urban-rural forest intermix with typical parcel sizes ranging from 1/2 to 5 acres. Residents place a high value on the surrounding trees and shrubs—that is a major attraction of the area.

From a fire-safe viewpoint, this has created a real challenge. Residents typically believe that the more trees and shrubs the better. This, in turn, places their lives and property at risk when a catastrophic wildland fire occurs, plus, the vegetation often becomes competitive and the health of the forest stand is diminished. The challenge facing the community is to find ways that residents can live in the intermix and still be fire-safe.

Two of the biggest interests landowners have is maintaining the natural vegetation and providing a vegetative screen between themselves and their neighbors or an adjacent road. This can be accomplished in most cases and still have a residence that is fire-safe.

The goals are 1) to keep any fire on the ground so it doesn't get into the tree canopy, and 2) to minimize flammable material on the ground so that a fire doesn't get too hot.

By thinning out brush (not totally eliminating it), removing all dead vegetation, and pruning the limbs of trees to a height of 8–10 feet, a defensible area can be created around your home. Most vegetative screens can



*This home has an appropriate defensible space buffer while maintaining abundant natural vegetation for beauty and privacy.*

be maintained by simply clearing back from driveways 20–30 feet on either side and then leaving a vegetative strip 10–15 feet wide. Technical and/or financial assistance is available in many counties to help with this work.

Efforts to move forward on these issues have become a part of the goals of the American River Watershed CRMP, with principle support for fire safety coming from the Placer RCD, CDF, Forest Service, Natural Resource Conservation Service, and local fire

departments. It has taken some time to agree on the issues and we are now beginning to make some significant progress.

To find out more about the American River Watershed CRMP or how to start one of your own, call the Forest Stewardship Helpline at 1-800-738-TREE.

*Cliff Heitz is District Conservationist for the Natural Resource Conservation Service in Auburn.* ▲

**Residents typically feel that the more trees and shrubs the better. From a fire-safe viewpoint, this creates a challenge.**



## Forest Health

# A healthy forest needs bugs

Television commercials tell us that the only good bug is a dead bug. But stop a moment and think about all the important jobs insects do: they pollinate plants including trees, provide food for fish, birds, and other creatures, help decompose dead material and make nutrients available to the forest, and keep down populations of pest insects. Insects keep our forests healthy.

### Who are these creatures?

The animals that people call “bugs” are mostly insects (true bugs are just one group of insects) but often include spiders, mites and other related small creatures. If you slow down enough to look, you’ll find this is an amazing group of animals.

The insects we consider the biggest pests are the herbivores, the ones that eat plants. Most of the time their activities are benign, but occasionally they cause damage to plants we value, such as large trees in the forest.

Other insects are predators. These eat other animals, often other insects. Predators are important in keeping insect populations under control, however, in many cases they are generalists and eat the beneficial insects as well as the pests. Spiders are also great predators and deserve recognition for keeping insect numbers down.

Perhaps the most beneficial group in terms of population control is the parasitoids. These are very tiny insects, usually in the wasp or fly family, that lay their eggs in or on other insects. The offspring hatch and proceed to consume and kill their host as they develop. Some parasitoids are host-specific, that is, they feed on only one

or a few related species of insects. This type of association can provide excellent biological control since the population of natural enemies increases in response to increases in the pest population.

### Insect outbreaks

Occasionally insects become pests, that is, they cause economic or aesthetic damage unacceptable to a landowner. Before you go out to spray, learn about the problem. By determining the cause you may be able to solve the problem, or at least avoid unnecessary or futile treatment.

Insect population outbreaks can be caused by a number of factors.

All animal populations exhibit periodic fluctuations, perhaps due to climate or other related factors. Since this is a natural phenomenon, it may be best to do nothing—just observe the cycle. In many cases an outbreak of one species causes an increase in its natural enemies which in turn brings the pest species under control. There is a lag time before the enemies catch up with the pest so you need to be patient.

Use of broad spectrum pesticides can sometimes cause more harm than good. Insect outbreaks may occur because pesticides kill the pest’s natural enemies and allow the population to grow unchecked. Pests are often more resistant to pesticides than predators and parasitoids.

Many of the worst forest pests are non-native insects that have been relocated—either accidentally or intentionally—and are able to thrive because their natural enemies have been left behind. These include the gypsy moth, eucalyptus longhorned

borer, and elm leaf beetle. Biological control efforts may involve going to the native lands to find natural enemies that can bring the pest under control. This is a complex undertaking but there have been some spectacular successes.

Often, insect outbreaks are the result of an unhealthy forest. Healthy trees have mechanisms to ward off insect attack but stress may make trees more susceptible. Stress can occur for many reasons including trees genetically unsuited for their environment, drought, unusual heat or cold, improper pruning, overcrowding, disease, and age.

### Recommendations

Be aware that insect pest populations exhibit natural pendulum-like swings in population. When pests are in abundance, consider the following:

- ◆ Avoid preventive pesticide spraying. Just because a problem occurred last year, don’t assume another bad year.
- ◆ Don’t panic when you see a pest. A small pest population is necessary to build up the parasitoid and predator populations.
- ◆ Learn to recognize the natural enemies of pest species.
- ◆ When pest populations reach intolerable levels, select control methods that are least toxic to the natural enemies. There may be effective physical and biological strategies that can help minimize the use of toxic chemicals.
- ◆ Talk to an expert. Cooperative Extension and other agencies have entomologists on staff who can help identify the pest and provide suggestions for control.



## Resources

### California Oak Disease and Arthropod (CODA) Database now free

The California Oak Disease and Arthropod (CODA) host index is a comprehensive compilation of the many agents known to affect oaks in California.

CODA currently contains records for more than 1800 arthropods (insects and mites) that feed directly on oak tissues. CODA also documents more than 750 interactions between oaks and microorganisms. The microorganisms in CODA include plant pathogens, saprophytes, and mycorrhizal species. The information comes from over 300 published and unpublished sources. Symptom data are

also included for most of the major oak pests and diseases. The information can be easily searched with a custom database access application that runs on most PCs.

Now, all portions of the CODA software, including the updated data files, the database access program, and the user manual are available for free download at:

<http://ns2.communityonline.net/comm/phyto/phytos3.htm>

Further information about CODA and instructions for downloading the files are listed at the site. ▲

### Booklet brings up hard questions regarding fire

Get in the mood for the fire season with an excellent resource entitled *How Can We Live with Wild Land Fire?* Starting with the premise that wildland fire is part of the California landscape, the authors address some hard questions and provide excellent background for understanding the issues involved.

This 44-page booklet is written around the "Three Choices for Action" that include 1) reduce fuel to make fires easier to manage and control; 2) strengthen communities against wildland fire; and 3) let the risk-takers pay. It was developed as a discussion guide that encourages people to talk about controversial and difficult issues. The booklet is beautifully written, even entertaining, and presents in an easy-to-read format that makes the information easy to understand and consider.

You can order the booklets for \$3/copy. In addition, there is supplementary material including a videotape, a one-page summary, and case studies. Send your request (with check payable to the UC Regents) to University of Calif., Dept. of Human & Community Development, One Shields Ave, Davis, CA 95616 or call (530) 752-3007. ▲

### More funding sources

Funding for the USDA EQIP program has increased by 25% this year. Contact your local NRCS office or call (530) 757-8252 for information.

Check the Internet for additional funding opportunities. A listing of state and federal agency funding sources can be found at The Habitat Restoration Group website at <http://www.habitat-restoration.com/funds.htm>. ▲

## Technical Assistance Resources

*Many agencies are available to provide technical assistance, referrals, information, education, land management plan assistance, and advice.*

#### California Department of Forestry and Fire Protection

Forestry Assistance Program  
Jim Geiger  
(916) 653-8286  
[jim\\_geiger@fire.ca.gov](mailto:jim_geiger@fire.ca.gov)

#### California Association of Resource Conservation Districts

Thomas Wehri  
(916) 447-7237  
[carcd@ns.net](mailto:carcd@ns.net)

#### California Resources Agency: California Environmental Resources Evaluation System (CERES)

Deanne DiPietro  
(916) 653-8614  
[deanne@ceres.ca.gov](mailto:deanne@ceres.ca.gov)

#### Coastal Conservancy

Neal Fishman/Carol Arnold  
(510) 286-4181

#### Farm Service Agency

Larry Plumb  
(916) 498-5300

#### Natural Resources Conservation Service

Jerry Reieux  
(916) 757-8256  
(209) 946-6229  
[jerry.reioux@ca.nrcs.usda.gov](mailto:jerry.reioux@ca.nrcs.usda.gov)

#### California Dept of Fish & Game

Terry Mansfield  
(916) 653-1921  
[tmansfie@hq.dfg.ca.gov](mailto:tmansfie@hq.dfg.ca.gov)

#### U.C. Cooperative Extension Forestry

John LeBlanc  
(510) 642-6678  
[jleblanc@nature.berkeley.edu](mailto:jleblanc@nature.berkeley.edu)

Richard Harris  
(510) 642-2360  
[rrharris@nature.berkeley.edu](mailto:rrharris@nature.berkeley.edu)

#### USDA Forest Service

Sandra Stone  
(415) 705-2587

#### California Stewardship Helpline

(800) 738-TREE



## Calendar

### April 22–24, 1998

**California Envirothon Competition**  
Yucaipa, CA  
RCDs, California Envirothon  
Committee, USDA Nat. Res. Cons. Svc.  
Sharon J. Boyce 209-7-3714; Brian  
Hockett 805-861-4129

### April 23–25, 1998

**The Science of Restoration**  
Sacramento, CA  
Cal-Neva Chapter, American Fisheries  
Pat Coulston 209-942-6068

### April 25, 1998 9 a.m.

**Management of Small Woodland  
Parcels in the Sierra Foothills:  
Resources & Opportunities**  
Near Marysville  
Renewable Resources Extension Act,  
SFREC & IHRMP  
Joni Rippee 510-643-5429  
<riptide@nature.berkeley.edu>; \$15

### April 29–May 1, 1998

**Fire Effects in Chaparral, Coastal Sage  
Scrub & Related Plant Communities**  
Irvine, CA  
UC Davis Extension; \$330  
800-752-0881; fax 530-757-8558  
<http://universityextension.ucdavis.edu>

### April 30, 1998

**Guidelines for Managing Hardwood  
Rangelands: A Workshop for Small  
Acreage Landowners**  
Browns Valley  
UC IHRMP; \$30  
Joni Rippee 510-643-5429, fax 510-643-  
5438 <riptide@nature.berkeley.edu>  
<http://danr.ucop.edu/ihrmp/>

### April 30–May 1, 1998

**Negotiating Effective Environmental  
Agreements**  
Berkeley, CA  
510-649-8008, 510-649-1980  
<concur@igc.apc.org>;  
[www.concurinc.com](http://www.concurinc.com)

### April 30–May 2, 1998

**Forest Landowners of California  
Annual Meeting**

Redding, CA  
Forest Landowners of California  
Dan Weldon 916-972-0273  
<dweldon@forestlandowners.org>

### May 3–6, 1998

**Watershed Management: Moving  
from Theory to Implementation**  
Denver, CO  
Water Environment Federation  
WEF Member Services Center 800-666-  
0206; e-mail: <msc@wef.org>

### May 4, 1998

**Lake Tahoe Biological Forum**  
S. Lake Tahoe, CA  
California Tahoe Conservancy; no charge  
Victor Inera 530-542-5560 ext. 19  
<rick@tahoecons.ca.gov>

### May 5, 1998

**Environment on the Internet**  
San Francisco, CA  
UC Berkeley Extension; \$200  
510-642-4111, fax 510-642-0374 <[http://  
www.unex.berkeley.edu:4243/em](http://www.unex.berkeley.edu:4243/em)>

### May 5–6, 1998

**Using Prescribed Fire as a Vegetation  
Management Tool**  
Cosumnes River Preserve  
UC Davis Extension; \$195  
800-782-0881; Linda Pike 530-757-8878  
<http://universityextension.ucdavis.edu>

### May 6–7, 1998

**Conference on Coastal Watersheds–  
The Caspar Creek Story**  
Ukiah, CA  
Mendocino Co. UC Cooperative  
Extension; \$25 or \$35  
707-463-4495; fax 707-463-4477

### May 6–7, 1998

**Watershed Use & Management in the  
Santa Ana & Santa Margarita  
Watersheds**  
Riverside CA  
Watershed Management Council & others  
Hannah Kerner, 510-531-4699; Terry  
Henry, 209-784-1500 ext. 1181; Vi Slade  
909-799-7407; \$45-\$135  
<http://watershed.org>

### May 7, 1998

**Oak Workshop**  
San Andreas

UC Cooperative Extension; \$20  
Ken Churches 209-754-6477  
<agsrbag@goldrush.com>

### May 14–15, 1998

**Stream Biological Monitoring**  
San Francisco, CA  
UC Berkeley Extension  
510-642-4111 <[http://  
www.unex.berkeley.edu:4243/em](http://www.unex.berkeley.edu:4243/em)>; \$415

### May 14–16, 1998

**Russian River Watershed Symposium:  
A Living System in Transition**  
Santa Rosa, CA  
Sonoma County Water Agency; \$50 - \$75  
Shannon Wesley 707-521-2104, fax 707-  
544-6123

### May 15, 1998

**Guidelines for Managing Hardwood  
Rangelands: A Workshop for Small  
Acreage Landowners**  
Santa Barbara, CA  
UC IHRMP; \$30  
Joni Rippee 510-643-5429, fax 510-643-  
5438 <riptide@nature.berkeley.edu>  
<http://danr.ucop.edu/ihrmp/>

### May 27–30, 1998

**Specialty Conference on Rangeland  
Management and Water Resources**  
Reno, NV  
American Water Resources Assn. and  
Society for Range Mgmt.  
Don Potts 406-243-6622;  
<awrahq@aol.com>  
[http://www.uwin.siu.edu/~awra/  
meetings/reno98/reno98.html](http://www.uwin.siu.edu/~awra/meetings/reno98/reno98.html)

*For more information, call the number given or  
the Forest Stewardship Helpline, 1-800-738-  
TREE. To submit an event or to receive this  
calendar by e-mail, contact Sherry Cooper,  
shcooper@ucdavis.edu*

### ONLINE CALENDAR!

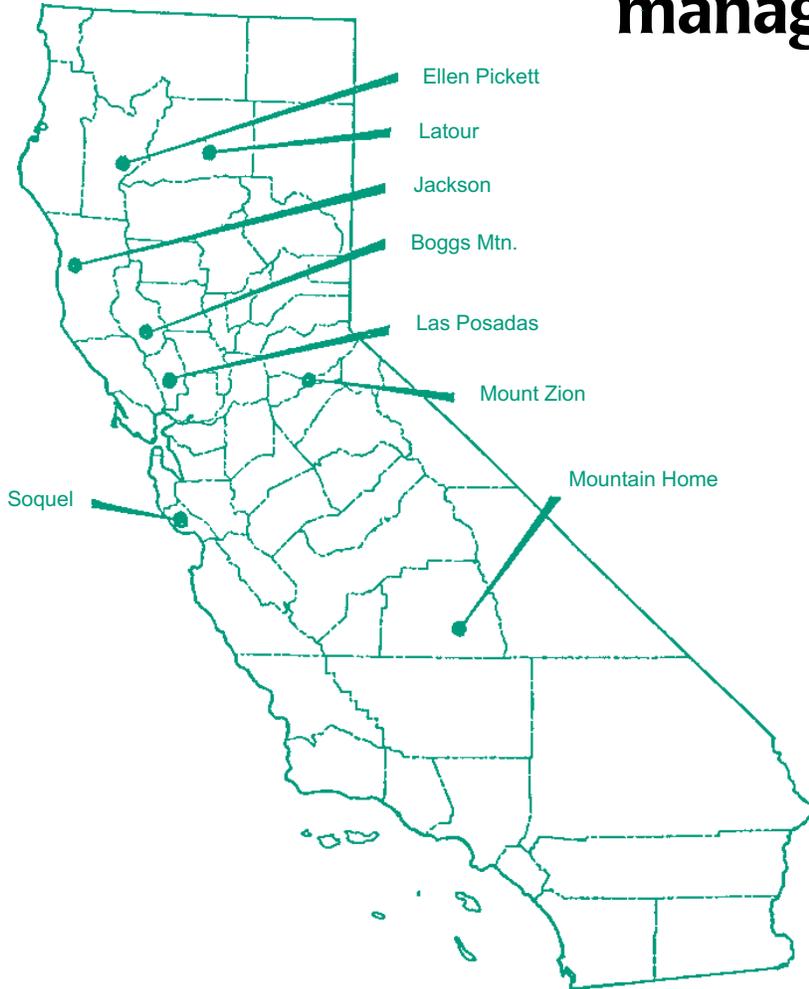
A more comprehensive and  
updated calendar can be found  
at the California Forest  
Stewardship website at  
<http://ceres.ca.gov/foreststeward>

In accordance with applicable State and Federal laws and University policy, the University of California does not discriminate in any of its policies, procedures, or practices on the basis of race, religion, color, national origin, sex, marital status, sexual orientation, age, veteran status, medical condition, or handicap. Inquiries regarding this policy may be addressed to the Affirmative Action Director, University of California Division of Agriculture and Natural Resources, 300 Lakeside Drive, Oakland, CA 94612-3560; telephone 510/987-0097.



# State Forests

## Visit your state forests for tips on good management practices



State Forests are a resource available to help forestland owners. The California Department of Forestry and Fire Protection operates eight demonstration forests, five of which are commercial forestlands managed by professional foresters for timber production, recreation, and demonstration of good forest management practices. (Las Posadas, Mount Zion, and Ellen Pickett State Forests do not have on-site managers.) The State Forests' timber revenues go to support forestry programs such as the State Forests, Forest Practice, Urban Forestry, and California Forest Improvement Program.

Landowners are welcome to call or visit the State Forests to consult with a forester about problems or questions you may have. Choose the forest closest in type to your property. You can get on-the-ground demonstrations to learn techniques and forest practices. For example, you might learn how to survey, or various techniques to control erosion or insect pests.

The State Forests also offer recreational opportunities that show recreation is compatible with forest management. Many have primitive campsites at little or no charge to the public. For additional information call the State Forest nearest you:

Jackson State Forest, Fort Bragg  
(707) 964-5674

Latour State Forest, Redding  
(916) 225-2508

Soquel State Forest, Soquel  
(408) 475-8643

Boggs Mountain State Forest, Cobb  
(707) 928-4378

Mountain Home State Forest, Springville  
(209) 539-2321 or 539-2855 ▲

### How can the *Forestland Steward* newsletter help you?

I'd like to see more information on \_\_\_\_\_

My suggestion is \_\_\_\_\_

Add me to the mailing list / change my address:

Name \_\_\_\_\_

Address \_\_\_\_\_

City, Zip \_\_\_\_\_ Phone \_\_\_\_\_

Send to CDF, Forestry Assistance, P.O. Box 944246, Sacramento, CA 94244-2460.  
Phone: (916) 653-8286; Fax: (916) 653-8957; e-mail: jim\_geiger@fire.ca.gov