The Arizona Riparian Council Newsletter

Volume 8, Number 1 *Winter 1995*

A BIRDBRAIN AT SONOITA CREEK

Matt Chew, Arizona State Parks

I always judge my employers by whether they will pay me to go birding. In 1994, acquisition of the Sonoita Creek State Natural Area allowed Arizona State Parks to meet this criterion admirably. As the first, and perhaps most enjoyable step of resource inventory and planning, I'm "required" to spend a couple of days along the creek each month, exercising the Game and Fish Department's "Arizona Breeding Bird Atlas" methodology.

For those of you familiar with The Nature Conservancy's Patagonia-Sonoita Creek Preserve, the Sonoita Creek State Natural Area is a different experience. Large cottonwood and sycamore trees are present, but widely scattered. The creek is laterally unstable, in places forming a floodplain about 75 yards wide. There are many secondary channels, and Goodding willow covered, mid–floodplain bars and islands. Most of the near–stream willows and cottonwoods probably date to the early 1980's.

About 10 feet above the floodplain, generally on both sides of the creek, is an older terrace. Although absent on one bank or the other at some points, and both sides where bedrock confines the channel, it generally varies from 20 to 50, and up to 80, yards wide. This terrace is composed of fine sediments covered in a dense, mostly closed canopy of mesquite, Mexican elder, and hackberry. More localized stands of ash, walnut, and soapberry contribute to the mix at frequent intervals. Especially along the right bank, many of these trees date from the 1940s or later, following the abandonment and salvage of the New Mexico and Arizona Railroad.

However, most of the bosque is probably much older. There are many mesquites in the 30-40 foot range, and a few massive specimens over 40 feet tall and proportionately wide. The hackberries are also often 30-40 or more feet tall, and 2 feet or more in diameter. Even some of the elders have trunks over 18 inches in diameter. One old ash a few yards up an ephemeral tributary is about 7 feet in diameter at breast height, or about 22 feet in circumference.

Well, this was supposed to be about birds. Since April, in about 10 working visits, I've checked off 125 species. Forty (more or less) of these are either confirmed or highly probable breeders at this point, and many others provided behavioral evidence. Unfortunately, ubiquity is not among my qualifications, so I'm sure I missed quite a few important moments.

The birds you should expect to find along a desert riparian area are present, sometimes in outrageous numbers, at Sonoita Creek. Vermilion Flycatchers breed there in such density (50 or more pairs) that they are, for a while, almost annoyingly

See Birdbrain page 8

Note: For scientific names of species mentioned throughout this newsletter, see page 8.

Inside This Issue

President's Message

Kris Randall

Happy New Year! The new year marks the beginning of new goals and projects. For the Riparian Area Advisory Committee (RAAC), it marks the end of a two-year process to develop recommendations for a riparian area protection program for the State of Arizona. The 34-member committee wrestled with issues such as water availability, alteration of river channels, adjacent land uses, effluent, and restoration. On top of that were the equally contentious issues of property rights, the role of state and federal government and stewardship.

Did the committee come up with any recommendations? I am happy to say that they did have unanimous agreement on several recommendations which are major first steps for riparian areas. One recommendation was to adopt a Conservation Goal which is "to sustain and enhance Arizona's riparian areas by managing land, water, and resource uses to protect ecological integrity and functionality."

RAAC members agreed that the State should establish a well-balanced riparian protection program which gives due consideration to the impact of various activities on riparian areas, as well as their environmental and economic values on various classes of landowners and land users in the State of Arizona. Full consideration of environmental, social and economic impacts of all affected/potentially affected entities, including Indian tribes, should be a part of decision-making. Legal property rights and the sovereign rights of Indian governments must be protected. To achieve this policy, the RAAC recommends cooperative efforts with local, state, federal governments and Indian tribes in the protection, maintenance and enhancement of riparian areas. Direct involvement of local groups and citizen participation should be a cornerstone of these efforts.

There was unanimous support among the members to have riparian protection solutions adaptable to the unique circumstances of each area of the State. The Committee recommended a local riparian planning process to emphasize a partnership among all levels of government and interest groups to define meaningful solutions at the local level. The initiation of local riparian planning councils would be broadly representative of the local, state, tribal and federal agencies affected by riparian decisions as well as of the various resource user and citizen groups with a stake in the future of riparian areas. The State would participate in such councils through the development of a Coordinating Council (CC), consisting of the Arizona Department of Environmental Quality (ADEQ), the Arizona Department of Water Resources, and the Arizona Game and Fish Department (AGFD). The CC would provide technical assistance and other support to the local riparian councils. The riparian mapping and inventory information produced by the AGFD would be used to assess riparian areas on an on-going basis. In the absence of local action concerning protection, maintenance or enhancement of riparian areas, the CC would be able to convene a local riparian planning process. One outcome of the process may be the formation of a riparian planning council, without new authority to impose goals for riparian protection on local areas.

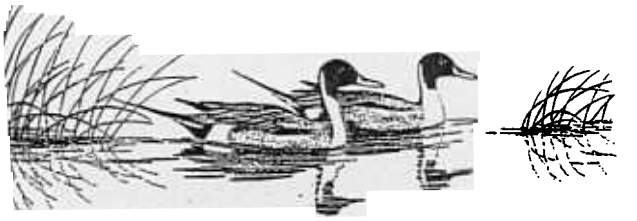
The Final Report was submitted to Governor Symington, the President of the Senate, Mark Killian, and the Speaker of the House, John Greene. RAAC strongly recommended that measures on which there was full agreement should be enacted into law this session. Issues where there was some level of agreement will need an economic analysis to determine the possible impacts. Other issues which remained unresolved and not brought to a vote need further discussion. These two items were part of a recommendation to extend the RAAC to December 31, 1995, and to request from the legislature that funds be made available to have the economic analysis performed.

These are the recommendations of RAAC. Legislation is being written by ADEQ. A sponsor has not been identified as yet. There are no new regulations or rules in these recommendations. RAAC felt that the likelihood of the legislature accepting such recommendations without an economic analysis was slight. I urge Council members to contact their state legislators to make them understand the need for riparian protection.

If these recommendations are written and passed into legislation, they would be a first step for riparian protection. However, they should not be the last. Incremental change is a step in the right direction.

Watson Woods: A New Riparian Preserve in Central Arizona

Jim Donovan, Prescott Creeks Preservation Association



In the early morning mist of a cool September day, I peer through the wispy canopy of a Goodding willow, staring intently at some unique visitors; 20 juvenile herons roosting quietly after a long journey through the twilight. I also see a hawk perched in an old Fremont cottonwood tree, waiting for the temperature to rise so she can stretch her wings and soar over the area looking for a meal. Heading through a thicket of coyote willows making my way to the abandoned railroad tracks, I stop and examine the interesting leaf–galling aphid on a Fremont cottonwood leaf. Up on an abandoned railroad trail, a 3- foot-long gopher snake lazily sunning on an old trestle barely notices my presence. Stepping over him gingerly I make my way down the trail and marvel at this rich and diverse area.

I watch this rich pageantry of nature only five minutes away from the heart of Prescott, Arizona. The place is Watson Woods; an intact cottonwood–willow gallery forest; perhaps one of the best examples of this endangered community type in central Arizona.

Watson Woods, owned by the City of Prescott, is zoned as a "Conservation Flood District." The area's values were recognized as early as 1973 when the Arizona Department of Economic Planning and Development recommended establishing an "Educational and Recreational Natural Area at the South end of Watson Lake."

Past efforts to protect the area have been unsuccessful. In the spring of 1994, Riparia, a local environmental restoration business, organized a non–profit grass roots organization Prescott Creeks Preservation Association (PCPA), comprised of biologists and activists. PCPA has been working with the City of Prescott to protect and designate Watson Woods as a riparian nature preserve.

Granite Creek runs through the forest sometimes as a trickle, other times as a tidal wave. During the summer monsoons and gentler winter rains, the creek seems to come alive as it spreads over the floodplain, as if the water was stretching out and relaxing over the area. This land represents the only intact floodplain remaining along Granite Creek in Prescott's watershed. In winter, a rich diversity of waterfowl and Bald Eagles can be seen at Watson Lake at the north end of the riparian area. In spring, Lucy's Warbler's sing throughout the woods, as do Red–winged Blackbirds down at a permanent pond near the creek. The area comes alive as the neotropical migrants return with their orchestra of sound and colorful displays.

The experience of Granite Creek and Watson Woods is similar to that of many other waterways in the Southwest: general neglect. Gravel dredging, illegal dumping, trash and non–point pollution are just a few of the abuses the area has suffered. Half of the flood plain has been consumed by an industrial park. The area is also bordered by the sewage treatment plant on the east and by Highway 89 on the west.

The Woods have many problems besides the trash and old tires, saltcedar and Siberian elm are two exotic trees that compete with native trees and shrubs. The effect of these trees on the native flora and fauna must be evaluated.

Despite the neglect the area has received, it is compelling and still supports an incredible diversity of both plants and animals. Riparian areas are dynamic systems and have the ability to rebound quickly, if managed for biodiversity. The area is still large and has great potential to heal.

PCPA intends to raise money to manage the preserve and lease the land from the City. Upon startup of the preserve, an ecological inventory will be conducted followed by the development of a comprehensive management plan. PCPA plans to run the preserve as a living learning center and wants to get people involved in all aspects of management.

This arrangement will lift the burden of management and issues of liability from the City. The City government has responded enthusiastically to the project and has given verbal approval to the plans. Final approval will be decided by the City Council. PCPA and the city are working out the legal details of the lease. Projected startup of the preserve will be Fall 1995.

The preserve represents an unusual win–win situation in riparian conservation. The City will benefit from sustainable economic stimulus and increased tourism and preserving open space for a growing community. The Woods and all of its attributes win through preservation and improved management designed for biodiversity.

Soon, I will be able to return to the same spot next year and wait for the return of my nocturnal visitors and know that they will be safe for the future.

Contributions of experience and or money would be greatly appreciated. Please contact PCPA at (602) 776–8656 or P.O. Box 12624, Prescott, AZ 86304.

NEWS BRIEFS AND UPDATES

Soil Conservation Service Changes Name and Programs

Bruce Manda, Director of the Tucson office of the newly named Natural Resources Conservation Service (NRCS), has promised us an article on those changes, but due to complications of moving the office (e.g., no power for more than a week) he will be providing an article for the Spring issue instead of this issue. In the meantime, he wishes ARC members to know that the high–elevation buffelgrass, referred to in the Fall issue (Yetman's article) was dropped three years ago as an object of research and development in the Tucson Plant Materials Center. NRCS will put much more emphasis on development of techniques for propagating and harvesting native seeds for revegetation work. In the Spring issue, Bruce will describe that work as well as a number of riparian programs.

The Santa Cruz Valley Active Management Area (AMA)

This new AMA has an office and is beginning work on water management for the area. The address and phone number are: 857 W. Bell Road Suite 3, Nogales AZ 85621, (602) 761-1814. The director is Placido dos Santos formerly of the Tucson AMA. Members of the new Groundwater Users Advisory Council are Sherry Sass (Friends of the Santa Cruz River and ARC member), John Ellinwood (attorney from Tubac), Bill Oliver (project manager for Rio Rico properties), Duke Petty (Nogales alderman), and Ron Morris (Santa Cruz County Supervisor).

Santa Cruz River Corridor Process

This process has ended without a plan for the area. A final report on the process is available from Arizona State Parks.

Some recent moves:

The Arizona Department of Water Resources and the Phoenix Active Management Area moved to: 500 North 3rd St., Phoenix 85004. New phone for ADWR: (602) 417–2400; for Phoenix AMA: (602) 417–2465; FAX for both: (602) 417–2401.

The U.S. Fish and Wildlife Service moved to: 2321 West Royal Palm Rd #103, Phoenix AZ 85021. New phone: (602) 640–2720; new FAX: (602) 640–2730.

The Phoenix office of American Rivers has been closed. For information, call Dale Pontius, (602) 621-2730.

Arizona Water Protection Fund Commission

Members have been appointed and the commission has held several meetings. Representing the "public with relevant work experience" are Julie Stromberg (Arizona State University), Dennis Parker (Patagonia rancher), Mike Block (Metropolitan Water District) and Gwendolyn Waring (Northern Arizona University Forestry School); representing municipal CAP contractors are Roger Manning (Arizona Municipal Water Users' Association), Doug Koppinger (Tucson), and Kay Otte (Mayor, Florence); representing environmental organizations are Andy Laurenzi (Nature Conservancy) and Frank Brandt (Audubon Society). Other members are Virginia Korte (Central Arizona Water Conservation District Board), John Keane (Salt River Project – the chair of the committee), Jim Hartdegan (Cyprus Mines), Paul Orme (Mayer rancher), Paul Brick (Association of Conservation Districts), and Martin Antone, Sr. (Chair Ak– Chin Community).

This commission will administer a grants program of $4 million this year, $6 million next year and $5 million annually thereafter.

For information, contact the Program Manager, Tricia McCraw at (602) 417-2460.

Constructed Wetlands

The City of Tucson is in the midst of planning for a constructed wetland using filter backwash water from the Roger Road Wastewater Treatment Plant. This is a result of a settlement with the Arizona Department of Environmental Quality in response to violations. The conditions of the settlement call for strong environmental education and recreation components.

Tucson Water is working with an advisory committee appointed by the City Council (ARC member, Barbara Tellman is one of the nine members). This is an exciting project with potential for novel results. Construction is to begin by summer 1995.

The Spring issue of this newsletter will feature an article on the Tres Rios Wetland project, downstream of the Phoenix 91st Avenue Wastewater Treatment Plant.

ARC Fall Get-together participants make

Cienega Creek Natural Preserve Management Plan

The Cienega Creek Natural Preserve (CCNP) is a 3,979 acre parcel of land located along Cienega Creek in eastern Pima County. It extends from Colossal Cave Road on the northwest to the Empirita Ranch on the southeast, and includes a 12-mile reach of Cienega Creek. The property is owned by the Pima County Flood Control District.

A management plan for the Preserve has been finalized by the Flood Control District. The planning effort was financed by the District with assistance from the Arizona Game and Fish Department Heritage Fund. Management objectives that have been established are: to preserve and protect the existing perennial stream; to preserve and protect the biological resources associated with the riparian corridor; and to provide opportunities for public use of the Preserve for recreation, education and other appropriate activities.

As a general rule, the resources of the Preserve will be managed to allow natural processes to occur. The monitoring of resources will be ongoing and remedial programs will be implemented if and when needed. Resource monitoring will focus on issues such as: water table levels, water quality, the regeneration of native aquatic plant species, the distribution and growth of saltcedar and other exotic plant species, and the presence of nonnative animal species.

A permit system, administered by Pima County Parks and Recreation Department (PCPRD) will be utilized to control access to the Preserve. Three types of permits will be issued: day–use permits, for a specific date to individuals and small groups for recreational or educational activities; special–use permit, for a specific date or period of time to organizations or groups such as trail rides or film making; multiple-use permits, for a period of one year to individuals, such as utility company personnel, who must enter the Preserve for periodic inspections or similar activities.

Upon completion of proposed developments at the Pima County Park site (near Colossal Cave Road bridge) and within the Empirita Ranch area, no permits will be required for use of these sites.

A campground is proposed for the southern end of the area. Access to the creek from the campground will be limited to preserve the creek's resources.

A system of trails is proposed for the Preserve. All but one of the trails will be a multiple-use trail. The Cienega Creek Trail will be for pedestrians only. It is proposed that a portion of the Preserve trail system be utilized as a segment of the Arizona Trail. The proposed segment would link Saguaro National Monument and the Coronado National Forest to the north with the Empire–Cienega Resource Conservation Area to the south. An alignment for this segment of the Arizona Trail has been proposed, and is under review by the various cooperating agencies.

To obtain a copy of the Management Plan Summary, call Julia Fonseca at (602) 740–6350.

Adapted from an article by Don McCann, McCann & Associates, printed in the Pima Trails Association newsletter.

discoveries in the Bill Williams River.

BIOTA Project Launched

After two years of discussion, this important project is underway. BIOTA (Diversity Team Assessment) is designed to be an interagency effort to assess biodiversity. Participants include the Environmental Protection Agency, the Arizona Riparian Council, the Nature Conservancy and many many others, with Arizona Game and Fish taking the lead role.

Scientists will address questions using the Heritage Data Management System and computer-based geographic data. Efforts will be made to assess areas with important biodiversity in order for agencies to develop protection measures. It is hoped that with the participation of multiple agencies, areas under multiple ownership can be jointly managed to protect biodiversity. The conservation measures themselves are **not** a part of BIOTA.

There are many methodological processes to be worked out in coming months and many opportunities for Riparian Council members to assist.

For more information, contact Jim Burton at Arizona Game and Fish Department at (602) 789-3602.

Many thanks to Mark Heitlinger of the Nature Conservancy in Tucson for initiating this project and seeing it to this stage of fulfillment.

UNDERSTANDING THE ENDANGERED SPECIES ACT AND HOW IT PROTECTS YOU

Tom Gatz, Endangered Species Coordinator, U.S. Fish and Wildlife Service, Phoenix.

Riparian areas in the Southwest are essential for the survival of a large number of endangered, threatened, and candidate species. The Fish and Wildlife Service (Service) estimates that two-thirds of the Federally listed species and over 80 candidate species in Arizona and New Mexico alone are dependent to a significant degree upon riparian habitats. However, there is much confusion and misinterpretation of the Endangered Species Act (Act) and how it protects both our natural resources and humans.

The Act has been called the most important environmental law ever passed. It protects the ecosystems upon which species depend. By protecting ecosystems, the Act protects us. It's that simple.

Understanding the Act does not require a degree in rocket science. However, if you've ever stayed awake through the three hours of flow diagrams and TLA's (triple letter acronyms) that it takes to try to explain all the sections and exceptions in the Act, you may understand why so few people really appreciate how important it is to them. And if you don't understand something, you can hardly be expected to champion it.

All of us, if only for reasons of human health, should be ambassadors for the Act. The following analogies won't make you an expert, but they should enable you to explain the Act in understandable terms to your friends, neighbors, co-workers, private land owners, managers and, perhaps most importantly, young people.

One could liken the Act to a "911" number for the environment. It comes into use only when other laws and land use programs fail to protect a species or an ecosystem. The Director warns that we are facing a crisis. The increasing number of 911 calls points to serious problems in our natural ecosystems that, if not corrected, will ultimately harm humans. Consider that almost half of the Nation's endangered species live in water, alerting us to the threats to our water supply from water contamination and aquifer depletion.

Like a hospital, the Act "treats" only the most seriously ill species. Not all patients (candidates) are admitted (listed). Some are awaiting testing (status surveys) to determine their condition. Others can be protected through "preventive medicine" (conservation agreements with land owners and managers), precluding the need to list them. Those in need of intensive care (endangered) are given the full protection of the Act. Even when up-graded to critical condition (threatened), they are still given full protection. The ultimate goal of the Act is to treat (recover) and discharge (delist) species. Treatment to attain recovery includes the implementation of recovery plans, habitat conservation plans with private land owners, and consultations with Federal agencies. Even when fully recovered, the Service doesn't walk away from delisted species. The Service has a commitment to monitor them for 5 years, similar to "out-patient" care. If they suffer a relapse and decline, they can be re-listed rapidly, using emergency listing procedures if necessary.

Another analogy is to compare the Act to a smoke detector that sounds an alarm when we have an ecological crisis. It's warning signal becomes more insistent as ecosystems upon which life depends further deteriorate. Disconnecting the smoke detector won't put out the fire, and discarding the Act won't make ecological crises go away.

Two species which have set off the ecological crisis smoke detector in riparian areas in the Southwest are the southwestern willow flycatcher and the Arizona willow. The southwestern willow flycatcher has been proposed for listing as endangered by the Service and is currently waiting at the emergency room door for potential admittance. The Arizona willow was proposed for listing, but due to the discovery of a healthy population in Utah this species is currently in "outpatient care," as conservation agreements are being developed with land managers to ensure its continued survival.

Ed Note: Gov. Symington recently called for repeal of the Act.

See Marie Sullivan's article on page 7 and see the Spring Issue of this newsletter for an article on the Arizona willow.

Southwestern Willow Flycatcher

Marie Sullivan,
U.S. Fish and Wildlife Service

The southwestern willow flycatcher *(Empidonax traillii extimus)*was proposed for listing as endangered with critical habitat by the Fish and Wildlife Service on July 23, 1993. Critical habitat is defined as an area with the physical and biological features essential to the "conservation" of a threatened or endangered species and that may require special management or protection. Conservation is analogous to providing treatment to a species so it may recover and eventually be discharged or delisted. A final decision to list the flycatcher has not been made.

The southwestern willow flycatcher is a riparian obligate species, nesting along rivers, streams, or other wetlands, where dense growths of willows, baccharis, arrowweed, saltcedar, alders, or other shrubs and medium-sized trees are present, often with a scattered overstory of cottonwood. It nests in thickets of trees and shrubs approximately 13 to 23 feet tall, with a high percentage of canopy cover, and a large volume of foliage from 0 to 13 feet above ground. The nest site plant community is typically even-aged, structurally homogeneous, and dense. The breeding range of southwestern willow flycatcher includes southern California, Arizona, extreme southern portions of Nevada and Utah, western New Mexico, and western Texas. It may also breed in southwestern Colorado, but nesting records are lacking. Records of probable breeding southwestern willow flycatcher in Mexico are very few and are restricted to extreme northern Baja California del Norte and Sonora. In Arizona, the southwestern willow flycatcher is known to occur along the Verde River, upper San Pedro River, Colorado River, Salt River, Bill Williams River, Little Colorado River and several of its tributaries, and Tonto Creek.

Proposed critical habitat in Arizona includes:

(1) an approximately 37-mile stretch of the San Pedro River from the Hereford Bridge downstream to the Interstate 10 bridge at Benson and a 45-mile stretch between Winkleman and Redfield Canyon;

(2) the Verde River from Sob Canyon, located upstream of Clarkdale, to its inflow into Horseshoe Reservoir, including Peck's Lake and Tavasci Marsh;

(3) Wet Beaver Creek and Beaver Creek from just east of Hog Hill downstream to the Beaver Creek/Verde River confluence;

(4) West Clear Creek from Bull Hole to the Verde River; and

(5) downstream of Lake Powell on the Colorado River from river mile 39 to river mile 71.5; and

(6) Little Colorado River and portions of the West, East, and South Forks of the Little Colorado River.

The migration routes and wintering range of this species are not well known. Various willow flycatcher subspecies have been reported to sing and defend winter territories in Mexico and Central America. Southwestern willow flycatchers most likely winter in Mexico, Central America, and perhaps northern South America. Habitats used in its wintering grounds are unknown. The southwestern willow flycatcher has declined dramatically in recent decades. This decline resulted from a number of factors, including loss and fragmentation of riparian habitat, brood parasitism by brown-headed cowbirds, invasion of riparian habitat by the exotic saltcedar, and predation.

Annual breeding surveys of the southwestern willow flycatcher are currently being implemented through the Partners in Flight program throughout its range of Arizona, New Mexico and Utah to obtain additional information on the status of this species.

Birdbrain - from Page 1

distracting. Believe it or not, "butterfly" displays and twitchy feeding forays eventually become part of the ignorable 80% (almost annoyingly distracting). Lucy's Warblers and Bell's Vireos contribute to a kind of constant creeping motion in the bosque during late spring. At midsummer, singing Yellow-breasted Chats take up territorial positions at such regular intervals that one or more is usually audible. One day in August I was favored with visits by at least seven different Yellow-billed Cuckoos, one of which was cradling a caterpillar in its beak - a Grail of the Arizona Breeding Bird Atlas, and a "CF" (carrying food) in the "confirmed" breeder column. If you see a Cuckoo, stop and watch; there's nothing else like it. Two meticulously assembled Cooper's Hawk nests appeared in late spring. Summer Tanagers often ripped through the scene in high-speed territorial disputes. One intensely red male sat still long enough to allow for inspection by a male Broad-billed Hummingbird. Phainopepla families seemed to gather to watch ME. Of course, some birds conspired to frustrate my efforts. Two pairs of Gray Hawks successfully concealed their nests. Wilson's Warblers aren't known to breed in Arizona (I've seen their nests in shrub willows at 9,000 feet in Colorado), but both males and females were in full regalia all summer. WHY?

Of course, birding for numbers means looking at everything, briefly, to identify as many uncommon or accidental species as possible. At Sonoita Creek, this yielded Arizona's eighth state record (a very patient lady in Phoenix is keeping track) for the Blue-winged Warbler, on October 12. On the same day, and again in November, we had a Green Kingfisher, fishing.

Planning for the Sonoita Creek State Natural Area is gathering momentum. One of these days we'll have it open to the public, but for the moment accessibility is very poor and there are many management issues to be debated and decided. Until then, I'll try to keep you drooling (er, informed). Maybe next time I'll tell you about coatimundis, or topminnows, or ball-moss(?)... And to the Game and Fish Department, I promise to get my real Atlas Blocks done sometime before the allotted seven years is over.

Scientific names of species mentioned in this newsletter

Birds

American white pelican *(Pelecanus erythrorhynchos)*
Bald eagle *(Haliaeetus leucocephalus)*
Bell's vireo *(Vireo bellii)*
Blue winged warbler *(Vermivora pinus)*
Broad-billed hummingbird *(Cynanthus latirostris)*
Brown-headed cowbirds *(Molothrus ater)*
Cooper's hawk *(Accipiter cooperii)*
Gray hawk *(Buteo nitidis)*
Green kingfisher *(Chloroceryle americana)*
Lucy's warbler *(Vermivora luciae)*
Phainopepla *(Phainopepla nitens)*
Red-winged blackbird *(Agelaius phoeniceus)*
Southwestern willow flycatcher *(Empidonax traillii extimus)*
Summer tanager *(Piranga rubra)*
Vermilion flycatcher *(Pyrocephalus rubinus)*
Yellow-bellied cuckoo *(Coccyzus americanus)*
Yellow-breasted chat *(Icteria virens)*

Continued on page 11

Saving Honeybee Canyon

Honeybee Canyon contains one of the very few perennially flowing streams (Class I habitat) in the Tucson Area (in addition to Cienega Creek and Sabino Creek). It is the only wildlife corridor left joining the Tortolitas to the Tucson and Catalina Mountains. It is located west of Catalina State Park in Sun City Vistoso, within the Town of Oro Valley. This short, but significant stretch provides scarce habitat for many kinds of wildlife. Expansion of Sun City Vistoso threatens to destroy this valuable stream, both through placement of homes very close to the stream and through pumping of groundwater for three new golf courses.

The Oro Valley Neighborhood Coalition is working valiantly to preserve the stream by at least getting a buffer area of at least a quarter mile on both sides of the stream for wildlife use and to preserve archaeological sites. The area was zoned long ago, but there are several options for preservation, including land purchase and restrictions on the developer. At its December meeting, the Oro Valley Town Council postponed action and requested planning staff to develop an overlay district to provide a buffer area, giving the Neighborhood Coalition more time to save the area.

If you would like to help, want more information, would buy a $10 T-shirt or make a donation, contact the Oro Valley Neighborhood Coalition at (602) 742-7283 or write them at P.O. Box 68172, Oro Valley AZ 85737.

Ecosystem profile
Buttonbush swamps

Julie Stromberg
Center for Environmental Studies
Arizona State University

Buttonbush, or honey–balls (*Cephalanthus occidentalis),* is a large shrub to small tree that derives its name from its long–stemmed ball–shaped flower clusters. Buttonbush is an obligate wetland plant that is very tolerant of inundation. It typically grows on sites with permanent or intermittent standing water, such as lakes, cienegas, or floodplains. Examples of buttonbush swamps can be found at Cook's Lake (near the confluence of Aravaipa Creek and the San Pedro River) and farther upstream along the San Pedro River at St. David's Cienega.

Buttonbush shrub swamps are relatively common in the eastern United States, where they provide important habitat for breeding waterbirds and migratory waterfowl. In the Southwest, buttonbush swamps are rare. They undoubtedly were more common in the past, prior to the loss of the swampy habitat conditions that historically occurred along many of our rivers. Besides providing habitat and food for various marsh birds, buttonbush is also used by beaver as a food source. Some parts of the plant, including the bark, contains glucosides such as cephalanthine, and have been used medicinally.

Maintenance of buttonbush populations depends upon the presence of at least a few centimeters of standing water, according to studies conducted in Ontario and Texas. Buttonbush density increases as water depth increases to over one meter, a depth that few other tree or shrub tree species can tolerate. Little information is available on factors influencing establishment of buttonbush seedlings.

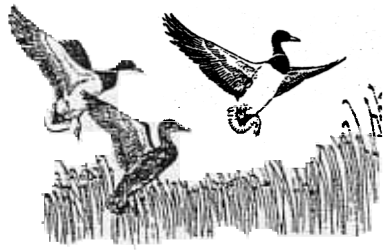
ARIZONA RIPARIAN COUNCIL
ANNUAL MEETING
MAY 12TH AND 13TH
PAYSON, ARIZONA

CALL FOR PAPERS
AND MEETING ANNOUNCEMENT
WILL BE MAILED SOON.

SAVE THESE DATES.
A VERY INTERESTING
MEETING IS PLANNED.

The Role of County Governments In Riparian Planning and Management

Martin D. Moore
Apache County Development Director



An issue of significant debate in Arizona is the role county governments should play in planning and managing for lands and resources generally, and riparian areas particularly. What follows is a discussion focussing on current conditions, and ongoing activities designed to improve the ability of Counties to work cooperatively with State and Federal agencies.

All Counties in Arizona comprise a mixture of Federal, State, and private lands. These lands and their resources are managed by various agencies who make many policies and decisions that directly affect the natural and human environments. Of particular interest to Counties are impacts of Federal and State decisions on the health of forest, rangeland, and riparian ecosystems, and on their local culture, economy, and quality of life.

Current State law gives Counties both the authority and responsibility to plan for environmental conservation and wise use of natural resources. According to Arizona Revised Statutes, §11–806, Arizona Counties are required to develop comprehensive land use plans to "...protect the health, safety, convenience, and general welfare of the public," and "... conserve the natural resources of the County...." These can include planning for "...forests, wildlife areas, projects affecting conservation of natural resources, are quality, and floodplain zoning," and may encompass private, County, State and Federal lands and resources (A.R.S. §11–806 [B]).

Another method of counties is the Floodplain Zoning Ordinance. Part of floodplain zoning is the ability to plan and zone for the protection of riparian areas to reduce both the risks of flooding and negative impacts of flooding on property, public health and safety, and general welfare of property owners in floodplain areas. An example of such plans and ordinances is the recently passed Pima County riparian protection ordinance incorporated into both their floodplain and zoning ordinances (Pima County Code, Title 18, Chapter 18.07 & Pima County Floodplain and Erosion Hazard Management Ordinance).

Even though most Counties have the skill to assist in the managing of the environment, in most cases effective cooperation needs to be developed with State and Federal agencies. To improve the capability of County, State, and Federal officials, to act cooperatively, some Arizona Counties are developing Land Use and Resource Policy Plans.

Once these plans are in place, the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4371 et seq.), provides for joint planning, research, public hearings, and negotiations to ensure that negative impacts on ecosystem health, local economies, social conditions, and quality of life are reduced or eliminated. In addition, State environmental and land management agencies are either required of allowed to coordinate and correlate their plans (see A.R.S. Titles 17, 37, 45, and 49).

The first step in the development of a Land Use and Resource Policy Plan is the establishment of an environmental planning and review, and a statement of conditions County citizens desire for land and resources.

With these established, Counties are in a position to be an active part in providing direction and influence to the State and Federal decision makers in protecting, evaluating, and enhancing local customs, culture, social stability, economy, tax based, and general health of land and resources.

Following completion of the review process and statement of desired conditions, Counties can better develop comprehensive riparian, forest, rangeland, wildlife, and other environmental plans that are more compatible with State and Federal Plans and programs, and consider citizens' desired conditions for lands and resources. With these in place, local governments can provide a positive contribution to the decision making process, and foster a productive working relationship with State and Federal agencies as they work toward a balanced solution to pressing environmental and social problems in Arizona's riparian areas.

NEPA Process Begins For CAP Greenup Area

Don Steuter

An unanticipated ecological benefit of the Central Arizona Project (CAP) has been the creation of a xeric riparian corridor near the dikes that protect the canal in north Phoenix. Periodic impounding of storm runoff behind these dikes has produced dense mesquite bosques in the retention basins, tall stands of blue palo verde along the washes, and a lush understory of grasses and shrubs.

The 7-mile length paralleling Bell Road called Reach 11 remains largely intact and continues to flourish.

The Reach 11 Recreation Area is a 1500 acre strip of land owned by the Bureau of Reclamation (BOR) and managed by the City of Phoenix. For years, lack of funding prevented Phoenix from developing the park, but in about 1989, a developer came forward who offered to privately finance construction of two golf courses, soccer fields, improvements to an existing equestrian center, picnic and ramada areas, roads, parking lots, and other related amenities. For his $10 million investment, the developer would receive most of the greens fees, the City would get the additional recreational facilities, and, after 60 years, the golf courses. Only 250 acres, according to the original proposal, were to remain undisturbed as a wildlife area, and even that might be developed if future populations north of the CAP required the space.

For the past two years, interested individuals and environmental groups have been lobbying BOR and Phoenix to leave Reach 11 mostly undeveloped and to manage the park primarily for recreation and urban wildlife. In June of 1994, a survey conducted by Game and Fish and BOR attempted to measure wildlife values in Reach 11 using Bertin Anderson and Bob Ohmart's Arizona Riparian Habitat Evaluation Model. Wildlife values in the A/O system range from a -3 on the low end to +3 on the high. About two dozen areas were delineated in the mapping process, six of which scored near 1.8 and about 10 of which scored near 1. Any rating approaching 2 is considered high quality riparian habitat. The dominant tree species found were mesquite, blue palo verde and desert broom, with some mesquite and palo verde 25 feet tall. Several cottonwoods along the dike approaching 50 feet in height add vertical configuration. Also found in Reach 11 are ironwood, hackberry, graythorn, wolfberry, and quailbush. Casual observation during the one day survey recorded 27 species of birds; large populations of raptors were particularly noted. Nesting and denning sites were numerous, three gray foxes were seen.

Ultimate jurisdiction for Reach 11 remains with the BOR, and in October the agency announced plans to prepare what will probably be the first Environmental Assessment (EA) ever written for golf courses. The EA is to be prepared by Allen Gross of Sterzer, Gross, and Hallock and will be paid for by the developer. A technical review team comprised of biologists from various agencies and consultants hired by the developer will add to the information compiled in the A/O survey. Depending on the outcome of the EA, a full Environmental Impact Statement seems a distinct possibility.

To learn more about this CAP greenup area and the effects of golf on wildlife, ask to be put on the Reach 11 EA mailing list. Write Bruce Ellis, Bureau of Reclamation Phoenix Office, P.O. Box 9980, Phoenix, AZ. 85068.

Scientific Names
Continued from Page 8

Other Animals
Beaver *(Castor canadensis)*
Gopher snake *(Pituophis melanoleucus)*
Gray fox *(Urocyon cinereoargenteus)*
Leaf-galling aphid *(Pemphigus populitrasversus)*

Plants
Alder *(Alnus* sp.)
Arizona willow *(Salix arizonica)*
Arrowweed *(Tessaria sericea)*
Ash *(Fraxinus velutina)*
Baccharis *(Baccharis* sp.)
Blue palo verde *(Cercidium floridum)*
Buttonbush *(Cephalanthus occidentalis)*
Coyote willow *(Salix exigua)*
Desert Broom *(Baccharis sarothroides)*
Fremont cottonwood *(Populus fremontii)*
Goodding willow *(Salix gooddingii)*
Graythorn *(Ziziphus obtusifolia)*
Hackberry *(Celtis* sp.)
Ironwood *(Olneya tesota)*
Mesquite *(Prosopis* sp.)
Mexican elder *(Sambucus mexicana)*
Quailbush *(Atriplex lentiformis)*
Siberian elm *(Ulmus pumilla)*
Soapberry *(Sapindus saponaria)*
Sycamore *(Platanus wrightii)*
Saltcedar *(Tamarix chinensis)*
Velvet mesquite *(Prosopis velutina)*
Walnut *(Juglans major)*
Wolfberry *(Lycium sp.)*

Conferences and Meetings

In recent months there have been many conferences and meetings, including September's Madrean Archipelago (Sky Islands) Conference, the Hydrological Society Symposium, the Mesquite Workshop in Cascabel, and Arizona Association for Learning in and about the Environment's (AALE) Environmental Education workshop in Heber; October's Conference on Connected Groundwater and Surface Water, an Ecotourism Workshop, and the Riparian Council Fall Get–Together at Planet Ranch; November's Friends of the Santa Cruz River Annual Meeting, University of Arizona's Exotic Plant Workshop, the Arizona Rural Water Association Meeting in Payson; and a Riparian Management Conference in Boise in December.

What follows here are highlights of many of those meetings – to cover all of them well would take up way too much space. All the ones I attended were quite worthwhile.

Mesquite Workshop
Julia Fonseca

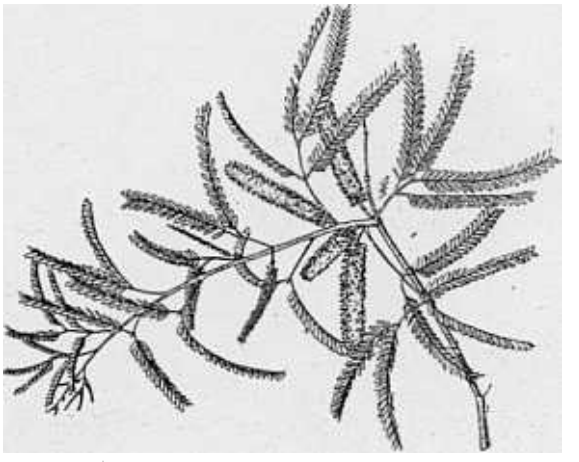
The Reddington Natural Resources Conservation District and the community of Cascabel hosted a workshop to examine the ecologic and economic role of mesquite. The weather, setting and food, along with the diverse viewpoints all contributed to an outstanding opportunity to learn about people and their relationships to these important plants. The program was diverse, ranging from ecological talks to talks on practical uses.

Some highlights:

The Lazzari Fuel company, a mesquite charcoal marketer, is no longer buying the charcoal derived from clearcuts or ironwood forests in Sonora.

Cornville resident, Jan Wegenast, is selling mesquite pods as an alternative to mesquite charcoal.

On the Santa Rita Experimental Range, one researcher found that mature isolated mesquite trees depleted soil moisture in the top several meters of soil during the growing season. The zone of use extended up to 22 m from the trunk.



The Soil Conservation Service encourages the removal of mesquite in loamy uplands for erosion control and increased livestock forage production. In limy uplands, they do not encourage mesquite removal because of the low likelihood of significantly increasing grass cover.

In the U.S. more removal of upland mesquite would occur if there were a market for the small diameter wood. Few private landowners have the funds to expend on clearing uplands. In bottomlands, however, potential economic gains are greater; mesquite continues to be cleared to provide irrigated pastures or cropland.

The hardwood industry has just adopted standards for use of mesquite as lumber. This is likely to spur increased use for fine furniture and flooring. Cascabel resident, David Perino, is pioneering the production of mesquite veneer for fine furniture.

Mesquite furnishes livestock feed and fuelwood in areas such as Haiti, India, and West Africa, where it has been promoted in economic development programs. Mesquite pod flour is tasty, however sale of the flour has been limited by lack of a steady market and regulations regarding insect parts. The flour was a staple of Native Americans in the Sonoran Desert.

Velvet mesquite has extraordinary high genetic diversity, which means that various strains can easily be selected for maximizing characteristics like pod production, sugar content, frost tolerance, etc.

Madrean Archipelago Conference

This ambitious conference (sponsored by the U.S. Forest Service and many others) extended over four days and was packed with useful and interesting information ranging from general plenary session talks to specialized papers on many topics as well as a day of excellent field trips. There will be a conference Proceedings. One handout at the conference was a draft bibliography of Sky Islands papers. This is a useful document, although arranged alphabetically by author rather than arranged by topic. For a copy, contact Leonard DeBano at (602) 621-2543.

AALE Workshop – Roy Jemison attended this workshop and presented the new ARC Fact Sheets and the slide show (in a version designed for educators.) He says the workshop was interesting and our program and Fact Sheets well received.

Boise Riparian Conference – This conference, sponsored by the Idaho Riparian Cooperative, covered a wide range of riparian management issues. Numerous examples of riparian restoration were presented ranging from an inexpensive beaver reintroduction (beavers actually increased the number of willows) to a multimillion dollar mitigation project in which a mining company restored a riparian area though highly technological means in return for being allowed to destroy a natural wetland. While the emphasis was on issues facing the Northwest (where restoring anadromous spawning areas is foremost), most of the discussion was relevant to other riparian areas.

Groundwater–Surface water conference – This meeting was sponsored by the Water Resources Research Center and featured a full day of discussions of issues relating to management of connected groundwater and surface water. The next issue of *Arroyo* (one of WRRC's newsletters) will be devoted to a summary of this conference and subsequent developments. Contact WRRC at (602) 792–9591 for a copy.

Riparian Council Fall Get-Together at Planet Ranch

This year's fall event was a great success - interesting talks, good company, fun field trips, and great food.

Ron Hill, Manager of Planet Ranch, told us about the history of the ranch and what Scottsdale is doing to manage it.

Nancy Gilbertson, Bill Williams Preserve Manager, discussed the many issues relating to the history and management of the Preserve.

Eric Swanson, of Arizona Game and Fish told about the Bill Williams Interagency Committee which is striving to develop a management process for multi-agency cooperation for habitat preservation as well as recreation.

Sarah Hooper, of the Bureau of Land Management, spoke about the Ecological Site Inventory which she has been directing for adjacent BLM lands.

Cliff Bobolinski, also of BLM talked about wilderness issues in the nearby areas.

Pat Shafroth, botanist with the National Biological Survey, described proposed NBS studies in Arizona in general and along the Bill Williams in particular.

The evening program featured a talk by John Kennedy and Matt Peirce about the Santa Maria River - a headwater for the Bill Williams, using fine photos of the area.

The Sunday field trips included a "wet" hike for people who really like to get close to rivers and a "dry" hike for those who prefer to enjoy rivers in more comfort. We all saw birds and beautiful scenery, but it was the "dry" folks who saw theAmerican white pelicans.

THANKS TO THE CITY OF SCOTTSDALE FOR THE EXCELLENT MEALS AND HOSPITALITY. AND THANKS TO OUR MEETING SPONSORS, CH2M HILL AND THE DESIGN WORKSHOP FOR HELPING MAKE THIS MEETING SUCH A SUCCESS.

We all enjoyed the field trips along the Bill Williams River.

Noteworthy Publications

Pat Ellsworth
Section Editor

BOOKS

The Association of State Wetland Managers. 1994. *National Registry of Wetland Professionals and Wetland Source Book.*

This book is divided into three parts. Part 1 is a directory of individuals and organizations with expertise in wetland research and management. Part 2 is a sourcebook of publications, maps, organizations, and agencies. Part 3 contains information about the Association.

The Association of State Wetland Managers. 1994. *Guidebook for Creating Wetland Interpretation Sites Including Wetlands and Ecotourism.* 140 pp.

This publication focuses on issues related to wetland interpretive sites, such as trails, trail guides, and boardwalks. An appendix contains 21 site profiles across the nation.

Kusler, J. and L. Krantz. (eds.) 1994. *Improving Wetland Public Outreach, Training and Education, and Interpretation.* The Association of State Wetland Managers. 180 pp.

Here are some unusual papers from two international symposia conducted by The Association of State Wetland Managers and The International Association of Ecology. Chapter titles include: Landowners; Public Education; International; State, Local, Federal; Interpretive Sites; and Slides, Photos, Films.
These three books may be ordered from the Association of State Wetland Managers, P.O. Box 269, Berne, NY 12023-9746. (518) 872-1804.

BOOKLETS

Kulakowski, L. and B. Tellman. 1994 rev. ed.. *Instream Flow Rights: A Strategy to Protect Arizona's Streams.* Water Resources Research Center, University of Arizona, Tucson. 27 pp. Free

This is a non-technical overview that defines instream flow rights, explains their benefits, and describes the permit process. Five examples of instream flow applications are then presented. They exemplify a range of purposes, stream size, and complexity of conflicting issues.

Tellman, B. 1994. *My Well v. Your Surface Water Rights: How Western States Manage Interconnected Groundwater and Surface Water.* Water Resources Research Center, University of Arizona, Tucson. 77 pp. Free

The author presents a well-written summary of the diverse management approaches in 18 western states. Chapters include a historical perspective, a scientific perspective, the federal role, and liability. Three chapters describe water law in states that: 1) manage surface water and groundwater separately; 2) have unified management; and 3) have integrated management. The purpose of the paper is to present ideas from various states that may be helpful elsewhere.

U.S. Environmental Protection Agency. 1992. *Protecting the Nation's Wetlands, Oceans, and Watersheds: An Overview of Programs and Activities.* EPA 840-S-92-001. 20 pp.

This booklet would be especially good for public education and volunteer organizations. It includes phone numbers for a hotline, electronic bulletin boards, and clearinghouses, as well as several EPA newsletter titles that may be ordered.

U.S. Environmental Protection Agency. 1994. Watershed Events. EPA 840-N-94-003. 12 pp.

This is the most recent issue of a newsletter subtitled: A Bulletin on Sustaining Aquatic Ecosystems. It is a quarterly publication available free of charge from: Office of Wetlands, Oceans and Watersheds, U.S. EPA (4501F), 401 M Street, SW, Washington, DC 20460. (202) 260-9108.

U.S. Environmental Protection Agency. 1993. *The Watershed Protection Approach, Annual Report 1992.* EPA 840-S-93-001. 59 pp.

Here we have a summary of EPA's strategy and field activities in watershed protection, followed by profiles of 34 local efforts. The Oak Creek Watershed Project in Arizona is included. The appendix lists numerous funding sources.

ARTICLE

Brock, J.H. 1994. Phenology and stand composition of woody riparian plants in the southwestern U.S. *Desert Plants* 11: 23-31.

Brock studied the phenology of eight riparian tree species at three locations proposed for reservoir construction in eastern Arizona and western New Mexico. Four phenology groups were identified: 1) spring flowering and fruit dispersal; 2) spring flowering and autumn-winter fruit dispersal; 3) spring flowering and late summer fruit dispersal; and 4) multidate flowering and fruit dispersal.

The Arizona Riparian Council (ARC) was formed in 1986 as a result of increasing concern over the alarming rate of loss of the State's riparian ecosystems. It is estimated that less than 10% of the State's original riparian acreage remains in a natural form. These habitats are considered Arizona's most rare natural communities.

The purpose of ARC is to provide for the exchange of information on the status, protection, and management of riparian systems in Arizona. The term "riparian" includes vegetation, habitats or ecosystems that are associated with bodies of water or are dependent on the existence of perennial, intermittent, or ephemeral surface or subsurface water drainage. Any person or organization interested in the management, protection, or scientific study of riparian systems, or some related phase of riparian conservation is eligible for membership. Annual dues are $10. Additional contributions are gratefully accepted.

This newsletter is published three times a year to communicate current events, issues, problems, and progress involving Arizona's riparian systems, to inform ARC members about Council business, and to provide a forum for you to express your views or news about riparian topics. The Spring Issue will be mailed in May, with the deadline for submittals April 1, 1995. Please call or write with suggestions, publications for review, announcements, articles, and/or illustrations. Information on computer disk (any type) or via E-Mail is preferred.

Barbara Tellman, Editor
Water Resources Center
University of Arizona
350 N. Campbell Avenue
Tucson AZ 85721
(602) 792-9591
FAX 792-8518
E-Mail-bjt@ccit.arizona.edu

The Arizona Riparian Council

Officers:

President: Kris Randall	(602) 207-4510
Vice-president: Ruth Valencia	(602) 789-3510
Secretary: Cindy Zisner	(602) 965-2490
Treasurer: Diane Laush	(602) 870-6763

At Large Board Members

Russ Haughey	(602) 981-9400
Duncan Patten	(602) 965-2975
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Committee Chairs:

Classification/ Inventory: Roy Jemison	(602) 556-2182
Education: Cindy Zisner	(602) 965-2490
Land Use: Marty Jakle	(602) 870-6764
Protection/Enhancement:	
Water Resources: Jeff Inwood	(602) 263-9522
Newsletter: Barbara Tellman	(602) 792-9591

To join the Arizona Riparian Council, contact

Cindy Zisner at Arizona State University Center For Environmental Studies Tempe AZ 85287-3211

(602) 965-2490

Annual dues are $10.

Calendar

Feb. 16-18. Arizona Conference on Environmental and Natural Resources Law. Scottsdale. State Bar of Arizona. Three half-day seminars. Contact: (602) 340-7322.

March 2-5. A Celebration of Desert Cultures. Caborca, Sonora. International Sonoran Desert Alliance. Contact Wendy Laird (602) 290-0828.

March 8. 7:30 p.m. Lester Brown speaks at the Arizona State University Music Theater on environmental issues. Contact: Gina Collins (602) 965-1441.

March 14-16 Using Ecological Restoration to Meet Clean Water Act Goals. Chicago IL E.P.A. and others. Contact: Bob Kirschner (312) 454-0401.

April 23-26 Watershed Management and Wetland Ecosystems. Tampa FL Association of State Wetland Managers. Contact: John Kusler (518) 872-1804

May 12-13 Arizona Riparian Council Annual Meeting. Payson. Contact Cindy Zisner (602) 965- 2490. Call for papers and program announcement will be mailed in February.

Arizona Riparian Council
Center for Environmental Studies
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