

# AZ-NM CHAPTER AMERICAN FISHERIES SOCIETY

Established 1967, Volume 31 Number 2

Fall 2000

## Notes from the President's Very Messy Desk

Larry Riley

Well, I could write at length about the upcoming AFS 2001 meeting, but there's plenty of information echoing around about that topic. I reckon that there are a host of more important topics to discuss, so I'll ramble on about a couple that I think we all ought to be thinking about.

**Legacy**... That's one of those words that I never thought would apply to me, not that it does directly. But perhaps from where we sit we can look back upon the legacy of our profession over the past century. There's a number of things to be proud of, and probably an equal number of things for us to be less than proud of. When I say that we've got things to be "less than proud of", I really am not pointing the finger of accusation at myself or any other manager, scientist, or biologist. If we have events or outcomes from wildlife management of the past or the present that we see as less than stellar successes, it's because we stand on the shoulders of those who have gone before us. Today we know more about management of communities of organisms, the importance of habitat in the wildlife management

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## Gila Topminnow Reintroduced In Lousy Canyon

*By Dave Weedman, AGFD*

On September 12, 2000, Arizona witnessed a historic event in the recovery of the endangered Gila topminnow. For the first time since 1990, a new population of this diminutive Arizona native fish was established on federally managed lands. The Gila topminnow, once the most common fish in the Gila River basin, was reduced to only about 6 populations by the late 1960's. Between 1970 and 1990, numerous reintroductions were attempted with limited success. Additional efforts over those years resulted in discovery of other natural populations. This reintroduction marks what hopefully will be a decade of renewed effort to recover this once common fish.

The effort began many years ago with the discovery of suitable habitat in a tributary of the Agua Fria River near Black Canyon City. This extremely isolated spring-fed stream is located on Bureau of Land Management (BLM) managed grasslands in what is now the Agua Fria National Monument. Before an endangered species could be released onto Federal lands, numerous administrative measures had to be taken. The culmination of these measures was a biological opinion issued by the Service stating that existing land uses and the reintroduction of Gila topminnow were compatible. This opinion opened the door to allow the reintroduction of an endangered species and provided the land-users with a measure of security and confidence in their continued operations.

Rebecca Davidson (the newest AGFD Native Fish Biologist) and I (as ex officio Native Fish biologist) departed Deer Valley Airport onboard a Bell Long Ranger helicopter, provided by the U.S. Bureau of Reclamation, bound for the remote San Cayetano Mountains northeast of Nogales. This area supports a naturally occurring population of Gila topminnow (one of about 13) that is not otherwise maintained anywhere but the natural spring pool in which it is now found. We met with AGFD Biologist Heidi Blasius, BLM Biologist Jeff Simms and FWS Biologist Doug Duncan. These three had been at the spring since daylight capturing, counting and sorting topminnow for their flight north. About 650 adult and juvenile fish were placed in two coolers, provided with oxygen and placed aboard the

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helicopter for the 1.5 hour flight. Halfway through the flight, the portable oxygen **tank** emptied, and oxygen supply to the fish was replaced using two battery powered air pumps and airstones. Ross Timmons, AGFD and a BLM biologist had hiked the 1.5 miles and 800 vertical feet into the canyon earlier in the day in preparation for receiving fish, and could be seen from the chopper. The two coolers with air pumps were placed in a cargo sling at the end of a 100 foot long cable beneath the helicopter. The chopper lifted the fish over the canyon lip and down to the waiting biologists at the drop zone. Gila topminnow were released into two pools about 25 yards apart where they immediately dispersed and began schooling and feeding behavior. Shortly thereafter, the helicopter returned to the drop zone where the sling was re-attached to the cable and lifted out of the canyon.

Lousy Canyon, an obvious misnomer for this beautiful desert oasis, will hopefully provide a long-term home for this rare desert dweller. The spring emerges from numerous seeps and flows through a dense riparian gallery. Walking was difficult as one had to avoid stepping on hundreds of another disappearing desert animal, the lowland leopard frog, which calls this canyon home. A short distance below the stocking area, the stream flowed over a cascading 10 foot waterfall into another large pool below. Twenty yards below this, the stream flowed over an even larger 30 foot waterfall. Crystal clear water in this deep pool failed to aid in seeing the bottom, estimated at over twenty feet deep. The pools were framed by ferns, overhanging ash trees and red monkey flower. Truly a rare retreat from the desert heat.



This reintroduction activity marks the first for this endangered fish to Federal lands since 1990, and is only the second since then. The other occurred on State owned lands. After functioning for over eight years as the Department's Topminnow and Pupfish Project coordinator, I was excited to see this stocking finally occur. It took several years of concerted coordination between the Department, BLM, FWS and the grazing permittee to achieve this final outcome. The initial environmental documentation identified stocking three different streams (Larry Canyon and Silver Creek being the other two); however, management concerns by permittees and the Forest Service precluded stocking of the other two. Implementation of the third is still a valuable accomplishment in the recovery of Gila topminnow, as other reintroduced populations continue to suffer or disappear. Increased effort and willingness on the part of the Federal land management agencies and continued coordination with permittees will be vital to continue progress towards recovery of the Gila topminnow. ♪

## **“Give A Sucker A Break”**

### Native Fish Promoted

Thanks to a contract from the Bureau of Reclamation, the Arizona Game & Fish Department (AGFD) will receive \$100,000 a year for the next 4 years to promote Arizona's native fish, particularly in the Gila basin. Specific objectives include:

- 1) To increase public awareness of the value of native fishes and their habitats, and the problems that nonnative organisms create for indigenous species.
- 2) Modify human attitudes and behaviors related to introductions of nonnative aquatic species - conveying the message to the public about their ethical and legal obligation to save native fishes and their habitats.

Each year a featured species will serve as a mascot for the campaign. This year the Razorback sucker will implore folks to "Give a sucker an even break". The following years will feature pupfish, topminnow and loach minnow as the headliners.

Besides posters and trinket giveaways, brochures and videos will be produced to get the message across. The first brochure/video for this year will deal with native awareness by highlighting natural history, ecological functions, human benefits, ethical considerations of conservation and species descriptions of our native fish. The next brochure/video offering will concentrate on problems created by introductions of nonnative aquatic organisms to native fishes and established nonnative sport fisheries (attitude and behaviors). Coupled with this message are practices that anglers, aquarists, and the general public can use to reduce or eliminate unwanted nonnative species introductions (i.e. bait bucket transfers, dumping of pet aquarium fish). The videos will air annually via the AGFD TV show "Wildlife Views" on the state's PBS affiliates.

Targeted audiences include not just the general public through traditional agency outreach sources, but also bait and tackle shops, pet stores, aquaria and sportsman's clubs and boat marinas.

Rounding out the video production schedule and brochure development the last three years of the contract will be highlighting habitat types and the fish that live within them. Big river systems that Pikeminnows and humpback chubs call home, the small streams that dace and Gila chub roam in and the cienegas the pupfish and topminnow abound within will be featured. When completed, all three of these videos can be grouped together for a fine presentation on Arizona's diverse water systems and native fish species at schools and universities.

Reprinting of existing native fish materials like "Rivers at Risk", the AGFD Native fish poster, and the "T&E Species" and "Native Fishes of the Southwest" booklets will be forthcoming as well.



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## Upcoming Meetings

*Give A Sucker A Break...Continued from Page 2*

A live Native Fish Display within the AGFD Wildlife Building at the State Fairgrounds in Phoenix will be under construction shortly. When completed it will be viewed by hundreds of thousands of people every year during the State and County fairs.

All in all our native fish heritage will move to front stage over the next 4 years. And coupled with the probable downlisting of the Apache trout, more Arizonans will learn to "Think Native!"

*By Jim Warnecke, AGFD  
Region VI Fish Program Manager*

### *President's message...continued from page 1*

equation, the changes that we as wildlife managers and wildlife scientists can wreak on the landscape, and the role that we play in the future of wildlife in the Southwest. We can begin to forge today the legacy that will be left for the future. Building the next addition to the fisheries science legacy will not come all at once. The construction will come in small steps. Steps that balance and meet the resources and resource demands we have today with the resources we intend to leave for our successors at the end of this century. We'll take small steps toward the future, and we need to celebrate those small steps each time we make one. Few of us will be around to celebrate our legacy in 2099. But I bet that our successors will get to look back at the events of their century and assess what they are proud of, and they might pick some things that they will consider items to be "less than proud of". I hope that they won't be arrogant in their assessment of us, and recognize that they can see the fisheries landscape with greater clarity than we could because they stand on our shoulders.

Maybe this seems to be a depressing perspective, but it's really not. It's an opportunity for us to consider the "small steps" that we can contribute, a reminder to celebrate our successes, and a warning to avoid arrogance in our evaluation of all that's gone before.

***Leadership... Now is the time to consider how each of us as fisheries biologists and fisheries managers can assure that the "small steps" we make are balanced and make important progress for our new legacy.***

Assuming leadership in this organization is a key way that you and I can influence those steps and prepare ourselves and our peers to make an impact upon our new legacy.

*Consider being a leader!*



**Managing River Flows for Biodiversity**- A Conference on Science, Policy and Conservation Action. July 30 - August 2, 2001 (Colorado State University, Fort Collins (CO)). This conference will also include poster sessions (a call for abstracts will be announced soon). To receive further announcements via e-mail, send a request to [nsilk@tnc.org](mailto:nsilk@tnc.org).

**First Announcement of the 11<sup>th</sup> International Conference on Aquatic Invasive Species**, 2001 Conference, being held October 1 to 4, 2001 in Alexandria, Virginia. Elizabeth Muckle-Jeffs [profedge@renc.igs.net](mailto:profedge@renc.igs.net)

**Integrated Decision-making for Watershed Management: Processes and Tools**- It will be held on January 7-9, 2001 at ChevyChase, Maryland. Detailed info about this symposium is available at: <http://www.conted.vt.edu/watershed.htm>

## SAFETY ALERT ELECTROFISHING HAZARD

We recently purchased a very light-weight chest wader sold by Cabela's that goes by the following description: Dry-Plus G-II Breathable Waders, Bootfoot, Catalog # CA-81-1295. We've discovered that these waders are conductive and should not be used in any stream or backpack electrofishing application.

We've had two separate instances of personnel receiving multiple jolts while wearing these waders (new, no leaks apparent). Boom or mini-boom applications should be OK, the problem seems to be in the composition of the upper, "fabric" portion of the wader. We couldn't figure out how (in a hurry) to get an e-mail out to everyone and anyone within Water (or anyone else for that matter) who may be in the water with these waders, and electricity on at the same time. Could you please advise folks at your discretion?

Thanks.

Jim Thompson  
WDNR - Lake Michigan Fisheries Work Unit  
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Milwaukee, WI 53204  
(414) 382-7924 (ph.)  
[thompjm@dnr.state.wi.us](mailto:thompjm@dnr.state.wi.us)

### **NEW RELEASE FROM AFS:**

#### **Rotenone Use in Fisheries Management: Administrative and Technical Guidelines Manual**

Brian J. Finlayson, Rosalie A. Schnick, Richard L. Cailteux, Leo DeMong, William D. Horton, William McClay, Charles W. Thompson, and Gregory J. Tichacek

212 pages

Published by American Fisheries Society

Publication date: June 2000

Stock #550.32; ISBN 1-888569-22-0

<http://www.fisheries.org/Publications.shtml>

# Whirling disease - What is it? Where is it? And how does it effect Fisheries Management?

## AZ-NM AFS Chapter Workshop, February, 2000

**Instructors:** To Be Determined

Whirling disease is on the move and effecting all of us. This workshop will inform attendees about the biology and issues of whirling disease in the southwest. The workshop will include a modest amount of lecture time on the biology and distribution of *Myxobolus cerebralis* followed by a facilitated discussion on "now what".

This workshop will be conducted on February 1, and will run from 8:00 to 5:00. Due to subject matter, the workshop is limited to the first 50 participants to register (pre-registration is highly encouraged). The cost of the workshop is \$25 payable in advance or at the beginning of the workshop.

To pre-register or for additional information contact **Casey Harthorn at 505-522-9796.**

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### Gila Trout Summary of Activities

(as of September 2000) by Adele Girmendonk

This has been a busy year towards Gila trout recovery. In April 2000, New Mexico activities included the transfer of Gila trout spawning stock from Spruce Creek to Mescalero National Fish Hatchery, and from Whiskey Creek to Mora National Fish Hatchery. Whiskey Creek Gila trout were also stocked into Little Creek.

As of September 2000, Dude Creek, Verde River drainage, Gila County, Arizona has been stocked (September 1999; November 1999; and May 2000) with about 160 mixed age-class fish (fingerlings to adult spawners) from Spruce Creek, New Mexico. Gila trout have persisted in all stocked reaches since September 1999. No signs of reproduction (nest building, spawning behavior or fry or fingerling presence) have been observed, but the fish appear to be healthy.

The current focus is on the proposed November 2000 Gila trout stocking into Raspberry Creek, Blue River drainage, Greenlee County, Arizona. The conclusion after several reconnaissance trips to assess environmental conditions, is that the creek is suitable for reintroduction. Evaluations followed Dude Creek reintroduction criteria. If stocked, Raspberry Creek will be the second Arizona waterway to receive Gila trout from the Spruce Creek strain.

Public (Alpine and Clifton in August 2000) and interagency meetings among cooperators, stakeholders (Alpine Ranger District Office) and potentially affected permittees have been held. Both permittees appear

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## COMMISSION SELECTS LARRY BELL FOR NEW DIRECTOR ALBUQUERQUE, N.M. –

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Larry Bell, a 22-year veteran of the New Mexico Department of Game and Fish, was appointed director of the agency during the Sept. 28-29 meeting of the State Game Commission. Bell had been interim director following the retirement of Jerry Maracchini in May. Bell previously held positions in Santa Fe as Assistant Director responsible for operations, Chief of the Law Enforcement Division and Assistant Chief of Law Enforcement. He began his career with Game and Fish as a District Conservation Officer in Quemado. He also worked in Reserve and Las Vegas before moving to Santa Fe. Bell is confident the Department staff has the expertise to resolve the many controversial issues the agency faces.

*"I'm looking forward to working with the staff and moving forward on some of the high-profile issues we face, like elk, whirling disease and endangered species," Bell said.*

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### Remember the Web!

The Arizona-New Mexico Chapter of the American Fisheries Society web page is great and we want to encourage all to check it out. You can find it at <http://www.fisheries.org/aznm>.

Scott Bryan (Webmaster)  
602-789-3250

#### **Additional websites to check out are:**

Unified Federal Policy Watershed Management [www.cleanwater.gov/ufp](http://www.cleanwater.gov/ufp) - is one of the action items in the President's Clean Water Action Plan. This policy is effective October 18, 2000.

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### ONLY call for papers!!!

**34th Joint Annual Meeting of the AFS/TWS** in Gallup (Feb 1-3, 2000) is now on the Chapter web page ([www.fisheries.org/aznm](http://www.fisheries.org/aznm)). Please go to the web site for author guidelines, hotel information, a printable registration form, and an overview of the plenary session.

We realize that everyone is getting geared up for the Phoenix 2001 National Meeting, but our Chapter Meeting is very important. It gives us an opportunity to share information on a local scale, so please get your abstracts submitted and let's have a great meeting!

**PLEASE** encourage student involvement as well. There is a paucity of student papers at this meeting each year and it is time we get them involved – **they are our future!**

### *Gila Trout...Continued from page 4*

supportive of the Gila trout stocking into Raspberry Creek, provided that actions would not constrain their operations. They are awaiting the outcome of consultations with the USFWS. The permittees also have the option of applying for "applicant status."

Other pre-stocking activities include the preparation of a Biological Assessment and Evaluation (BA/E) by the Apache-Sitgreaves National Forest (with AGFD review); current BA/E review by USFWS; public input via an electronic News Release; and an internal Environmental Assessment to be conducted by the AGFD Habitat Branch upon USFWS approval of the BA/E. A final creek survey will be conducted to finalize site suitability.

Depending on consultation decisions by November 2000, Raspberry Creek will be stocked with progeny from the spent spawners that were stocked into Dude Creek in May 2000 (130 fingerlings as of late August 2000). These fish are currently housed at Mescalero Federal Hatchery. Stocking plans may change if consultations determine that the actions require a "will or may affect" ruling in the Biological Opinion. The USFWS has stated that formal consultation would be required for the Federal Aid action to stock; for determining potential impacts to fauna in the Blue River drainage; and for USFS management actions (grazing and FS Trail 35). If Raspberry Creek is not stocked, the Gila trout fingerlings will be released into Dude Creek. And, if Mescalero hatchery closes before the fingerlings are stocked, the fish will be transferred to the USFWS facility at Mora, New Mexico.

In regard to overall Gila trout activities, Gila Trout Recovery Plan revisions are complete, and the document is under technical review. This plan should detail steps to achieving delisting while serving as a future management tool. Delisting is not possible until reproduction is confirmed in Mogollon and South Diamond creeks, New Mexico (South Diamond lineage). The Recovery Team will discuss whether to recommend downlisting at their December 2000 meeting. The current expected vote is to initiate the downlisting process.

## **Professional of the Year Award And Conservationist of the Year Award**

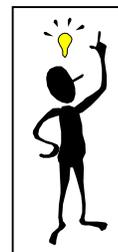
The annual meeting is drawing near and we need nominations for our fisheries awards, something we have been lacking in the past few meetings. I know everyone is swamped with more than they can possibly do, but take a minute and think about some of your hard working colleagues that go above and beyond the average overworked and under paid government employee. Also don't forget about volunteers, Sportsmen's and civic groups deserving of our recognition. These awards are one of the few ways we can say thanks for the hard work they are doing to help preserve our dwindling resources. The two awards are:

**The Professional Award** is for someone employed in the capacity that works with the aquatic resource. Service, impact on the resource and other professionals, significant accomplishments, and a brief biography should be included in the nomination.

**The Conservationist Award** is for significant involvement and accomplishments by an individual or group not employed in the profession. A brief biography and discussion of significant involvement and contributions

### **Please send nominations ASAP to:**

Marc Wethington  
AFS AZ/NM Chapter Past President  
NM Dept of Game & Fish  
P.O. Box 6429  
Navajo Dam NM 87419  
e-mail: mwethington@state.nm.us  
(505) 632-8818



### **Comings and Goings...**

***Farewell***...to Nick Schmal who is moving from USFS SW Reg. 3 as Fish Program Leader to Reg 9!! See you in Phoenix, 2001!

***Welcome***...to Richard Wiggins ... formerly working with salmon for the Washington Dept. of Fish and Wildlife. He is AGFD new Urban Fishing Program Specialist.

## **WHIRLING DISEASE...IN ARIZONA**

### **Part II of a Series**

**By Pat Lopez, Fish Health Specialist, AGFD**

Who would have thought the field of Fish Health to be fraught with irony? Even as I toiled over Part I of this series last Spring, a whirling disease crisis was brewing in Arizona. Which is actually a good thing for this series, because I'd quite forgotten, since my boss and I first discussed writing, what we'd suggested as topics for subsequent pieces of the series. But seriously folks, this article will detail the background of the present whirling disease situation, and our subsequent response.

On August 21<sup>st</sup> of this year, just before quitting time, stunned federal counterparts in my lab informed me that trout from a whirling disease positive hatchery in Colorado had been imported into Arizona. For the next three days, I gathered details and helped my supervisors formulate a response to the long-dreaded news. On August 25<sup>th</sup>, the Arizona Game and Fish Department issued a press release. which many of you no doubt have already seen.

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A private trout hatchery near Durango, Colorado was routinely inspected in October of 1999 and was found to be negative for all pathogens tested, including whirling disease. In the spring of 2000, this hatchery made a number of routine deliveries of trout to private landowners in northern Arizona. These included one shipment to each of two individual, privately held ponds near Flagstaff; one shipment to several waters in the privately held Forest Highlands golf course complex in Flagstaff; two shipments to a single, privately held lake on Walnut Creek in Lakeside; and finally, two shipments to two ponds on the golf course of White Mountain Summer Homes in Pinetop.

Meanwhile, the State of Colorado, which has been struggling with production of whirling disease-free fish for a number of years, was considering a lease of the Durango facility to help meet demand, in part because of the facility's long history as a clean hatchery. As part of their evaluation of the site, my counterparts collected samples from every lot on station in May of 2000. In July, they confirmed a grim discovery: several of the lots tested positive for *Myxobolus cerebralis*, the pathogen responsible for causing whirling disease. Although levels of infection were found to be comparatively low and fish were not showing clinical signs of the disease, the news was enough to persuade the hatchery owner to halt production and close the facility.

At this point, you may be asking yourself what we were thinking in those first, incredulous hours after the discovery: How could this have happened? How could whirling disease positive fish have made it into Arizona through a routine stocking? The answer is somewhat dismaying. The State of Arizona allows the public to import and stock fish on their property, with some restrictions. Prospective importers must obtain both an import permit from the Arizona Department of Agriculture and a stocking permit from the Arizona Game and Fish Department. Both agencies require a valid inspection report on the disease status of fish at the originating facility. By convention, inspection reports are valid for one year after the date of the annual inspection. The clean health report for the Durango facility would therefore have been valid through September of this year. In other words, the system functioned as it should have, but the parasite slipped in nonetheless.

Back to our response. In subsequent discussions with everyone involved, including the owner of the Durango facility and my counterparts in Colorado, I discovered that some of the fish brought into Arizona had come from lots that tested positive for whirling disease, some had come from lots that tested negative, and some had come from lots that were already off-station by the time the May 2000 inspection was conducted. Because testing includes a small, random sample of the total fish population, falsely negative results, especially in the case of a light infection, are an inherent possibility. Also, since all fish in the facility are on the same water supply, we must assume that if one lot is positive, that the entire facility is contaminated. We therefore decided to consider all lots of fish from that facility as suspect and tailored our response in Arizona accordingly. We decided to do an immediate and complete trout depopulation at each of the five sites involved. Thus ensued a mammoth effort, using all different means of physical capture. For some locations, the task was simplified by earlier summer kills that in one case, wiped out the entire fish population. In other places, fish had been regularly removed by anglers throughout the summer, thus reducing the risk of the parasite's establishment, and in yet other facilities, the removal involved dozens of fish, and continues to this date.

Because it is important to have an idea of the infection level of the stocked fish for future management decisions, we decided to test heads of fish removed from the four locations (one location being completely devoid of fish).

I would like to mention that throughout the crisis, both the owner of the Durango facility and the private landowners affected in Arizona have been eager to cooperate with us in our course of action. Without such affability, our efforts to curb the possible introduction might have been seriously hampered. Likewise, regional fisheries personnel worked closely with the Fisheries Branch in coordinating the removal and head collection effort.

There is, of course, no guarantee that our response has completely eliminated the risk of the parasite's establishment in Arizona. However, our response was swift and conservative, and went as far as it could in reducing the odds of the catastrophic.

***Don't miss the exciting part III of this series: the lab results and what our plans for the future are!***



### **Chapter Leaders Needed!**

As our February Chapter meeting grows closer, you should be thinking about how you will provide leadership for our profession in the upcoming year. Opportunities abound, and your chance to influence the direction of the Chapter and our profession in the Southwest is at hand. Please consider nominating someone you know to help lead our chapter into the new century. We're looking for nominations for President Elect and Secretary/Treasurer. Please submit your nominations by e-mail ([lriley@gf.state.az.us](mailto:lriley@gf.state.az.us)), mail (Larry Riley, Fisheries Branch, 2221 West Greenway Rd., Phoenix, Arizona 85023), or in person at our Chapter meeting. A nomination form is attached to the newsletter.

## 2001 - A Fisheries Odyssey: The Journey of Science and Education Continues

Excerpts from “President’s Hook”  
By Carl V. Burger

**My theme for the coming AFS work year is “2001 - A Fisheries Odyssey: The Journey of Science and Education Continues.”** Kudos to Western Division Past President Pete Bisson and to the members of the Phoenix 2001 Organizing Committee for helping develop it! This “opportune” theme captures the title of next year’s Annual Meeting. It also provides the broad umbrella for some of the goals (leadership training, international visibility, and education outreach) I plan to pursue in my coming Program of Work.

The term odyssey is often defined as a long and arduous voyage or journey, usually marked by many changes of fate. Most of us who work in fisheries will agree that we embarked on such a voyage as soon as we entered the profession! Not only have we been thus challenged during the pursuit of our conservation goals, the resources we steward and manage have experienced analogous changes of fate, in attempts to survive pollution, habitat loss, and myriad other impacts from world-wide exploitation and human population growth. Our ever-expanding global population rate has reduced the resilience our resources once had, for surviving the arduous conditions that Mother Nature once exclusively imposed.

During the middle of the previous century, it was commonplace for fishery workers to be involved in environmental assessments. Then, the theme of the day seemed to be one of *assessing* the impacts to our resources from the Industrial Revolution of the 1900’s. Nowadays, many would argue that it’s no longer sufficient *just* to quantify or assess the impacts of past development projects. We appear to be moving, and will continue to move beyond the “environmental assessment stage.” In tandem with ongoing monitoring and assessment needs, we also must have trend information to identify problems while they can still be solved. Society now wants and expects us to fix the problems of the past – to restore and recover the aquatic populations we humans have impacted – and to rectify the predicaments created over many decades of use. We’re not magicians, but the public sometimes thinks we are!!

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### **So where have we been, and where are we going? What kind of fates can we expect for our aquatic resources as “the odyssey” continues?**

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During the past AFS work year, and as for the “*where have we been*” question, President Moffitt chose as her theme, “Reflections.” Her introspective challenged us to take a moment – to reflect – on the history of fisheries science and on the individuals who’ve worked so hard for our profession and our resources. Historically, fisheries biology was a discipline unto itself, a very *inward-looking* profession, and one that emerged from strong roots in fish culture. As our profession evolved into the middle of the previous century, and in that “age of growing awareness,” we learned how much our fish and fisheries were affected by complexities humans imposed on the dynamics of natural systems.

In the continuing fisheries odyssey, and as for the “*where are we going*” part, fishery scientists who view the profession as a discipline unto itself become a threatened species. Rather, a rapid transition continues, from an inward- to a very *outward-looking* profession that relies on interdisciplinary collaboration. In this, the new millennium, it won’t be enough to narrowly focus within our historic discipline. Human society and demographics will dictate the skills and approaches we will use, and the needs (most assuredly) will be for multidiscipline-oriented scientists who can address and rectify ecological problems of the past. We’ll rely on broadly trained individuals having numerous quantitative and computer skills for modeling applications. We’ll need professionals with top-notch outreach abilities who are also knowledgeable about socioeconomics. We’ll need leaders having extraordinary electronic media and communication skills, with well-tempered credentials and superb continuing education training. And we’ll need individuals having the ability to adapt a collaborative approach towards ecosystem-level, problem-solving. *The fishery professional of the future has already begun to:* use and refocus fish culture facilities as conservation tools for recovery; model the dynamics of complex aquatic ecosystems; lead community-based watershed restoration efforts; implement native fish recovery plans; consider cultural and recreational values in policy decisions; apply remote sensing techniques; and develop conservation education programs for stakeholder partners. The “new” fisheries science is the application of a battery of approaches to address a common set of ecological problems, goals, and objectives. Our professionals, our fishery education institutions, and our professional Society must continue to evolve to meet these newly imposed challenges...

...Looking ahead to next year’s Annual Meeting in Phoenix, our “2001 odyssey” will also focus on Strategic Plan goals, and will address some of the most challenging contemporary issues we face, as fishery professionals. At the 2001 Phoenix Annual Meeting, we intend to address the future fates of many aquatic resources as our fisheries odyssey continues into the first full year of the new

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millennium. Nearly all fisheries across North America are faced with threats to their sustainability. Numerous questions are being posed as to whether certain fish populations will survive, and in what state. For example, "Can viability models help us rescue some of our native fish populations, or is it just too late?" In many ways, scientists, managers, and politicians are presently unprepared to deal with some of the most inexorable problems, such as those associated with human population growth and global climate change. The 2001 Annual Meeting will explore some of these extremely complex issues:

**Sustainability of North American Fisheries:** Sponsored by the Western Division and the Sustainable Fisheries Foundation, this day-long Symposium will address tough issues such as human population growth and expanding urbanization, the effects of broad, landscape changes on fisheries, the biological, social, and economic impacts of over-harvest, and new paradigms for management that account for ecosystem-wide effects.

**Global Climate Change:** Co-sponsored by Sea Grant, this major session will address the extent to which global climate change is affecting marine and freshwater aquatic resources and why and how our professionals need to consider such changes.

**Water-Use Conflicts and Fishery Values:** This session will highlight desert southwest fishery issues, particularly the growing agribusiness conflicts with fisheries. Is there a "win-win" way to do business? Will there be sufficient water for sustaining and recovering native fishes?

**Integration of Native and Sportfish Management:** How can we comply with federal and state mandates for the conservation of threatened and endangered fishes in a way that still meets management needs?

The above is but a glimpse of things to come. See you in Phoenix for what is shaping up to be a wonderful Annual Meeting! I thank you in advance for your support and encouragement! Together, we'll implement specific goals of the AFS vision to promote conservation and sustainability of our aquatic resources, and the development and professional excellence of our future leaders.

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## **Our Southwestern Natural History: Exploring Across Millennia**

AZ-NM AFS/TWS Annual Meeting Plenary Session  
Friday morning, February 2, 2001

This session will expose meeting participants to an historic perspective on southwestern natural history exploration and evolution of our society chapters. A combination of panel presentations and Q & A will provide (1) overview of significant naturalist exploration in the Southwest, (2) awareness of key conservation actions in the history of our AFS/TWS chapters, and (3) a synthesis of how these histories diverge or coincide.

### **Panel 1: Natural History Exploration**

Travel with 3 prominent biologists as they review and relive adventures of our ecological predecessors in the Southwest. Learn more of the people, names, and places that have left their mark on our vegetation, animals, rivers, and more.

### **Panel 2: Exploring our Chapters**

Gain insight from 3 seasoned chapter leaders about the *Genesis*, *Leaders of Notoriety*, and some *Conservation Actions That May Surprise You* concerning our Fisheries and Wildlife chapters. Learn how some recent conservation endeavors may not be as recent as you may think.

### **Synthesis: the Next 100 or 1000 Years**

Join our guest speaker in examining how our history relates to Restoration Challenges or Conundrums facing natural resources professionals in the Southwest. The follow-up Panelist Comments and Q & A will spark invigorating discussion and set you to thinking.

***This Plenary is sure to stimulate and entertain; bring an inquisitive mind and don't miss it!***

# 34<sup>th</sup> Joint Annual Conference Information and Registration

Gallup Holiday Inn 2915 West 66 Gallup, New Mexico 87301 505-722-2201

The Holiday Inn is located on the west end of the main East–West business route through Gallup. When you make your reservations, be sure to tell them you will be attending the Fish and Wildlife Conference. If you do not identify yourself as attending the meeting, you may not get a room because most of the rooms are being reserved for our use. You must make reservations by January 15, 2000 to receive the meeting rate.

Room Rates, February 1 and 2: single \$54 double \$59 additional persons \$5/person/room

Specify 4WILD to get this rate when making reservations.

Tax is an additional 11.4%

See page 4 of this newsletter  
for information on:  
**Call For Papers**

## Registration

### 34th Joint Annual Conference

Arizona and New Mexico Chapters of The Wildlife Society

Arizona/New Mexico Chapter of The American Fisheries Society

Full Name: \_\_\_\_\_ Registration Fee \_\_\_\_\_

Home Address: \_\_\_\_\_ Additional Banquet Tickets \_\_\_\_\_

City/State/Zip: \_\_\_\_\_ Chapter/Dues\* \_\_\_\_\_

Employer: \_\_\_\_\_ Total \_\_\_\_\_

Work Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Home Phone: \_\_\_\_\_

Work Phone: \_\_\_\_\_

Email Address: \_\_\_\_\_

Preferred mailing address: Home \_\_\_ Work \_\_\_

### Registration Fees and Banquet Tickets

Early Bird Registration postmarked by Dec. 9, 2000  
Registration postmarked after Dec. 9, 2000  
Additional banquet ticket\*

### Regular

\$55.00  
\$80.00  
\$20.00

### Student

\$20.00  
\$25.00

### Mail form and check or money order to:

NMSU Wildlife Society, P.O. Box 4677, Las Cruces NM , 88003

Make check out to New Mexico Chapter of The Wildlife Society

\*Chapter & Dues: AZ TWS, \$5.00; NM TWS, \$8.00; NM/AZ AFS, \$5.00

\*One banquet ticket is included with the registration fee. A few additional banquet tickets are available on a first-come, first-served basis.

You must be registered to attend the conference. No exceptions. For more information and to download a copy of this form, visit our web site at <http://leopold.nmsu.edu/nmcws/>

**Vendors:** For information about selling items at our Joint Annual Conference February 1-3, 2001 contact James Biggs at biggsj@lanl.gov or (505) 665-5714

## **AZ/NM AFS Chapter 2001 and 2002 Annual Meetings**

There's been a whole lot of activity of late to prepare for the Parent Society Meeting coming at us in August. There's so much activity that it's easy to forget that we have chapter meetings scheduled for February of 2001 and 2002. Please don't forget your involvement and commitment to the chapter just because there's an awesome opportunity to participate at the Parent Society meeting! If you are planning to contribute a paper or a poster for the "big show", why not plan to try out your ideas at the Chapter meeting in February. It would be an outstanding opportunity to try your wings and get some critical feedback from your peers with lots of time remaining for honing your paper or poster prior to August. Please, submit your abstracts in response to the call for papers and let's make our 2001 meeting an exceptional opportunity for professional development.

We're trying to set up at least two continuing education opportunities to immediately precede our Chapter Meeting. One will focus on Whirling Disease, and we're attempting to set up a second concurrent opportunity for a short course in Fluvial Geomorphology. Details will be forthcoming.

The 2002 Chapter Meeting is starting to take form as well. We're attempting to return to an old venue - Safford, Arizona. New construction of a convention facility in Safford affords the promise of an outstanding location that will be convenient and comfortable for all of our members.

### **Your Chapter needs new recruits to help with the following committees for the 2002 meeting in Arizona.**

As if preparing for the AFS 2001 meeting in Phoenix this August wasn't enough, we have the honor of hosting the 2002 AZ-NM AFS/TWS meetings in February of 2002. I guess that means that we'll be a well oiled machine when it comes to presenting an outstanding professional

gathering. To do the 2002 meeting and do it well we'll need lots of help - new committee chairs to help plan, organize, and conduct the meetings. Please consider volunteering! Past chairs will be available for mentoring new chairs. We really need folks to step forward ...many of the old chairs will be committee chairs for the National AFS meeting in 2001 to be held in Phoenix. They will be planning and preparing for the next year and a half. It is crucial to the Chapter that we recruit new volunteers to help share in the responsibilities that the Chapter has in putting together the annual meetings that we all look forward to attending year after year. Following is a list of the jobs to be filled. Please contact one of the Chapter officers on the back cover of this newsletter and volunteer today! It is really not difficult and a great way to get to know your peers!

List of committee chairs:

*Local Arrangements* - An opportunity to be had!

*Program* - **Andy Clark**

*Raffle* - **Jim Warnecke, Ernie Jaquez**

*Poster Session* - A unique chance to coordinate!

*Photo Contest* - Artist in the house?

*Social* - The chance to try your wings as a social butterfly!

*Registration* - Piece of Cake!

*Student Papers* - What a way to influence the next generation of wildlife professionals!

Be a hero and volunteer. It should be a real BLAST.



## Technology Sucks, but What are YOU Going to Do.

During the past year we've developed a pretty neat web page for both our Chapter and for the upcoming AFS 2001 Parent Society Meeting. We're finding that more and more of us have both the access to and the grasp of electronic technologies. Because of that, and the opportunity to save precious Chapter Funds, we're trying to reduce or eliminate our dependence upon surface snail mail. We're posting our newsletter on the Web page and e-mailing it to our members that have e-mail addresses in our membership database. We'll only do a limited surface mailing this time, addressing those only to our members who have no listed e-mail. We hope by the end of this year to virtually eliminate the costs associated with Newsletter mailings. Help us out. If you want to receive this newsletter by surface mail, please send us the attached request. If we don't have your e-mail yet, please send it to Dana Bayer (our Editor Delux) at [Dbayer@gf.state.az.us](mailto:Dbayer@gf.state.az.us).

*Larry Riley, President*

Dana Bayer  
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AFS AZ/NM Chapter  
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