



Trogon News

Declining San Pedro River: it's not the mesquite by Conrad Moore May 18, 2010 HAS Program— 7 pm, Cochise College Room 313

Editor's note: Conrad Moore has been studying San Pedro flows, and he'll be delivering the following analysis for our May program.



Streamflow Decline

1. For the 72-year period from March 1936 through February 2008, overall average monthly stream flow in the San Pedro River declined by 39%.

2. However, when major storm flow events are excluded, the volume loss of stream flow was much greater. During the summer months (July-September) that account for 59% of average annual precipitation, stream flow declined by 64%. For the spring, fall, and winter months there was a 49% volume loss of stream flow.

Stream flow data are missing for 6 of the 10 years from 1926 through 1935.

Continued on page 2

Groundwater Consumption by Mesquite

1. For decades, deep-rooted mesquite shrubs have been identified as major contributors to groundwater depletion in the Southwest.

2. Two reports published by the U.S. Geological Survey in 2006 attributed most of the loss of San Pedro River stream flow to groundwater consumption by mesquite.

3. The first report, *Trends in Stream Flow of the San Pedro River*, attributed most of the 85% decline in summer stream flow from 1913 through 2002 to a misidentified "400 percent increase of mesquite acreage" from 1973 to 1997 based on photographs taken from outer space. In fact, 2,300 acres of dense mesquite woodland between the international border and Tombstone were cleared for agricultural expansion in 1977-85 (Lacher 1994).

4. The second report, *Consumptive Groundwater Use by Riparian Vegetation Along the San Pedro River*, concluded that "mesquite groundwater use was the dominant component of the riparian water use, owing to high abundance." Groundwater use was estimated to have been "12 to 37 percent higher" in 2003 than in 1997. No mention was made of the fact that 1997 was a very wet year (15.88 inches of precipitation), while 2003 was a severe drought year (10.46 inches of precipitation). The enormous comparative loss of soil moisture in 2003 should have resulted in a substantially greater consumption of groundwater than was estimated.

Calendar Highlights

- **Tuesday March 16**
HAS Program
Priscilla & Hank
Brodkin / Colombia
- **Tuesday April 20**
HAS Program
Sandy & Betsy
Kunzer 30th Parallel
Photographs
- **Tuesday May 18**
HAS Program
Conrad Moore
(above)

Annual Meeting, Potluck, and Election of Officers

June 12 at Ramsey Canyon Preserve, 5 pm

Please join us for this important yearly assembly. We'll be repeating last year's Ramsey Canyon venue (we're daring it to rain again in early June). We'll aim to eat at 5:30 followed by the election.

Note that all positions are up for election this year (President, Vice President, Secretary, Treasurer, plus up to six board members). The slate of officers will be announced at our May 18 meeting and on our website www.huachuca-audubon.org.

Quarterly Program Lineup (third Tuesday of the month at 7 pm)

Cochise College Room 313

March 16, 2010

Priscilla and Hank Brodtkin

Creatures of Colombia's Emerald Mountains

Our presentation will be: "Creatures of Colombia's Emerald Mountains" featuring birds, butterflies and other insects, and plants of northern and central Colombia, arguably the world's most biologically diverse country. We spent the month of July 2008 in this beautiful country photographing butterflies for a book that a friend of ours is producing on the butterflies of the northern Andes.



April 20, 2010

Betsy and Sandy Kunzer

Photographers 30 North

Follow Betsy and Sandy as they wander along the 30th parallel from the swamps, glades and bayous of the gulf coast, west to the high Chihuahuan desert in Big Bend



Betsy and Sandy somewhat north of 30°.

National Park and vicinity. From ecosystems totally different from ours to ones that form a significant portion of our environment.

Continued from page 1—Conrad Moore, May 18, 2010 HAS Program

Recent Surveys of the San Pedro River

1. For the past 11 years (1999-2009), the Bureau of Land Management that is responsible for maintaining the San Pedro Riparian National Conservation Area has, with the assistance of The Nature Conservancy, conducted annual surveys of wet and dry stretches of the river from the international border to north of the U.S. Geological Survey stream gauge at Charleston. These surveys are conducted in late spring when stream flow is lowest. Average total precipitation for May and June is 0.72 inches and evaporative soil moisture loss is at the annual peak due to intense solar surface heating. As a result, mesquite shrubs are almost entirely dependent on groundwater for photosynthesis and transpiration. In summer, when average total precipitation is 8.17 inches, mesquite shrubs obtain almost all of their water from soil moisture resulting from monsoon rains, rather than groundwater (Tennesen, *Science*, 2008).

2. Neither of the two U.S. Geological Survey reports compared San Pedro River stream flow in late spring, when groundwater consumption by mesquite is at the annual peak, with stream flow in winter (December-February) when the average minimum temperature is 34 degrees F. and mesquite shrubs are dormant and consume virtually no groundwater.

Evidence from the U.S. Geological Survey San Pedro River Charleston Stream Gauge Record, 1936-2008

1. The U.S. Geological Survey stream gauge record shows that for the three lowest stream flow years during each of six 12-year periods from 1936 through 2008, average monthly stream flow in late spring declined from 5.5 cubic feet per second (CFS) in 1936-48 to 2.3 CFS in 1996-2008, a 58 percent volume loss.

2. In comparison, average monthly stream flow for the three lowest stream flow years in winter declined from 15.8 CFS in 1936-48 to 7.1 CFS in 1996-2008, a 55 percent volume loss.

3. Although some precipitation data are missing, the precipitation and stream flow records for 1936-48 and 1996-2008 suggest that the two periods were about equally dry in the Upper San Pedro basin.

4. The only explanation for the nearly equal percentage loss of stream flow in late spring and winter is the expansion of the Sierra Vista groundwater depression cone from 5 square miles in 1968 to over 35 square miles in 2001 (AZ Department of Water Resources, 2005) as a result of increased groundwater pumping for residential and commercial use in the Sierra Vista area.

Sierra Vista resident Conrad T. Moore received a Ph.D. in Geography from UCLA in 1972. He is a Professor Emeritus, Department of Geography and Geology, Western Kentucky University, Bowling Green, KY

Huachuca Audubon and the Prospect of an Upper San Pedro Water District

The HAS Conservation Committee is meeting and talking in a pretty intense fashion right now around the issue of the proposed Upper San Pedro Water District. We're trying to analyze the pros and cons of having an elected water district and what it might entail. But even before we decide if we support the establishment of the district, we're attending the public outreach meetings and putting in comments.

Probably one of our biggest concerns is a potential reliance on imported Colorado River water to "solve" our water deficit. Such a scenario is one of the long-term solutions listed in the draft comprehensive plan created by the water district's organizing board. Most of us think that's a foolish idea of dependence and possibly keeps our current elected officials from dealing seriously enough with how to achieve water sustainability.

Another concern that many people have expressed at many meetings is how to fund the proposed district's operations and projects. It's a pretty big question with no easy or obvious answers at this point.

By the time you read this, the first round of public outreach meetings will be over. The organizing board for the water district will then review all the comments they have received and may choose to make some revisions to their plans. There will then be a second round of outreach meetings in April and May to present any of those changes. The vote to establish (or not) a water district, as well as election of 7 directors, is planned to occur in the general election in November.

We certainly urge you to attend one or more meetings of the second round of outreach meetings. We also welcome your assistance in the Conservation Committee as we try for a recommendation on the establishment of the water district. We're trying to protect the San Pedro River and its wonderful habitat for future generations of wildlife and people.

—Mike Guest and Tricia Gerrodette

President's Message

Hello,

We are off to a good start this year. Attendance at our monthly meetings has been well above average, and I was delighted to see so many snowbirds at Rick Thompson's show. Field trips are also going well.

On the down side, legend has it that many years ago one of my predecessors was sure that people weren't reading all of the Trogon News (maybe we didn't have such a fine editor). On the last page of one issue he placed a notice saying if anyone had read so far, and cared to call him, he'd give them \$5! He had no calls! Why am I telling this story? Page 6 of our December issue contained an article on "Audubon Adventures: an invitation to help." Audubon Adventures is our single most important education outreach program, each year reaching hundreds of school children and giving them their first introduction to the world of nature. There wasn't a single response. My sincere thanks to all of you who gave prior to the article.

In a few short months we'll be having our annual meeting, potluck, election of officers. All positions including President will be open—I shall not seek a third term. Please don't wait for the nominating committee to approach you—tell any member of the Board you are interested in helping to run our chapter. Like a certain other organization, we need a few good people.

Regards, Mike

HAS 2009-2010 Committee Chairs

Field Trips, **Alan Blixt & Robert Weissler**
 Conservation, **Tricia Gerrodette**
 Education, **Ginny Bealer**
 Membership, **Ginny Bealer**
 Audubon Adventures, **Sally Rosen**
 Webmaster, **Robert Weissler**
 Trogon News Editor, **Brooke Gebow**

Spring 2010 Huachuca Audubon Society Field Trips

Sunday March 14

Patagonia Lake State Park

Meet at Sierra Vista City Hall at 7:00 am to carpool to Patagonia. Located just south of the Hwy 90 bypass on N Coronado Drive.

Wednesday March 24

Grasslands & River

Meet at San Pedro House at 8:00 am. Located just west of the river, south of Hwy 90.

Tuesday April 20

Hummers of the Huachucas

Meet at Ash Canyon Bed and Breakfast at 7:00 am. Located west of Hwy 92 on Turkey Track Road.

Wednesday May 5

Brown Canyon Bird Walk

Meet at the Brown Canyon parking lot on the south side of Ramsey Canyon Road.

Wednesday May 19

Ramsey Canyon Bird Walk

Meet at the preserve parking lot at 7:00 am. Located west of Hwy 92 at the very end of Ramsey Canyon Road.

Friday May 28

Hunter Canyon Bird Walk

Meet at Cinema parking lot to carpool at 7:00 am. Located on the east side of Hwy 92 at Choctaw/Beverly.

Remember to bring water, snacks, sunscreen, and a hat on all trips. Dry, warm days are part of the glory of spring in Southeastern Arizona. Also, carpool passengers are expected to provide adequate compensation to their drivers, about 8 cents per mile. ¡Gracias!

Regular Events

Check the web site (<http://www.huachuca-audubon.org>) for the latest updates to the schedule of events.

WEEKLY

Sundays at 7 or 8 am (8 am through March then 7 am beginning April) **Bird Walk at Sierra Vista Environmental Operations Park.** Limited to 20 participants with two docents. Sponsored by Huachuca Audubon, Friends of the San Pedro, and SE AZ Bird Observatory.

HAS leads 2-3-hour **Monday bird walks on the San Pedro River** on the Lewis/Prezyna property. Meet at 8 am at the pulloff just west of the Hwy 92 bridge over the river in Palominas. Look for the Quonset hut just before the turnoff and a gate numbered 10663. Bring water, sunscreen, and warm clothes for those cool March mornings.

Friends of the San Pedro

Trips require \$5 per person at departure

Every Saturday Interpretive Walk, 9 am through March and 8 am beginning in April. Meet at the San Pedro House just west of the river, south of Hwy 90.

Sunday Bird Walks (and other times). Meet at the San Pedro House just west of the river, south of Hwy 90. See details at www.sanpedroriver.org.

St. David Birding Walk

April 17, 2010

Explore the trails at the Monastery and walk along the San Pedro River. Bring water and be prepared to get wet feet. See warblers, tanagers, and raptors. Beginning birders welcome. Meet at Holy Trinity Monastery at 7:30 am. (4 miles, easy.)

Lewis Springs

May 15, 2010

Walk from San Pedro House to Lewis Springs and return. We should see a beaver dam or two and lots of birds. This is one of the least visited sections of the river, so be prepared to bush-wack and get your feet wet! Meet at San Pedro House at 7:00 am. (8 miles, rated strenuous.)

Volunteers are still needed for the Coronado National Forest fuels treatment monitoring.

How do prescribed fire and thinning treatments affect breeding birds in the Huachucas? Join year two of the study. If you'd like to know more, contact Forest Service Biologist Glenn Frederick (378-0311 or gfredrick@fs.fed.us) or Robert Weissler (803-0794 or weissler@aves.org)

New volunteers will receive training in bird identification and the monitoring protocol. Repeat volunteers are welcome to retrain, as well.

Rick Romea's Birding by Ear class schedule for participants is as follows:

Class 1: March 18

Class 2: March 25

Field trip 1: March 27

Class 3: April 1

Class 4: April 8

Classroom sessions take place at the Coronado NF office at 5990 S. Hwy 92 in Hereford. Field trip 2 (protocol training) takes place April 10 .

The Coronado National Forest is also holding a public meeting on the Forest Plan Revision on Thursday March 11, 4-7 pm at the Windemere.

HAS Field Trip: Whitewater Draw WMA—13 February 2010

By Erika Wilson

Eleven HAS members, and a visiting birder from Moab, UT, had a good morning at Whitewater Draw Wildlife Management Area in the Sulphur Springs Valley. The weather was clear and mild, with no wind, which made for excellent birding conditions. There was water in all the impoundments, although the main area was quite shallow, with large patches of mud flat. Waterfowl and other water birds were the main attraction. Seventeen waterfowl species were noted, with the following highlights:

In the first impoundment the continuing presence of a male Greater Scaup and several Lesser Scaup gave us great views of these similar species. In the bright sunshine the green sheen on the rounded head of the Greater Scaup was quite different from the purple sheen on the peaked head of the Lesser Scaup. Later in the morning, when we were working our way back along the south edge of the first impoundment, a male Redhead Duck was spotted among a handful of female Canvasback. Out in the big impoundment a large flock of Ring-necked Ducks completed the list of diving ducks.

A flock of about 250 Snow Geese, including two blue phase adults and a few immature birds, was a good find. We first noted the geese feeding in the fields to the west of the impoundments. When they flew, they settled in the water on the far side and then kept milling about in the water, making it hard to get a reliable count. Scattered among the Snow Geese were at least 10 Ross' Geese, although a scope was needed to pick them out.

Near the southwest platform a fine male Blue-winged Teal was spotted among a small group of colorful Cinnamon Teal. This species is uncommon here during the winter, although in a few weeks there will be more as migration gets underway. Six other species of dabbling duck—all the usual suspects—were tallied in the various impoundments.

Three Sora were delight to watch at close quarters; we had two adults and one immature working along the reeds and exposed roots of the willows. Two immature Common Moorhens were preening at the edge of the reeds, but no red-beaked adults were seen. Numerous American Coots completed the rail list. Shorebirds were few and far between, but two Wilson's Snipe were well seen through the scopes. A Greater Yellowlegs, nine Least Sandpipers, and a few Killdeer rounded out the shorebird tally.

Loafing Sandhill Cranes were few in number until early afternoon, when skein after skein came in from feeding in fields to the north. Even so, we did have cranes calling and flying overhead most of the morning. Land birds, especially sparrows were hard to find, but a Tree Swallow was a good sighting, as was a single American Robin, well away from its usual mountain haunts. Both Crissal and Curve-billed Thrashers were noted at Whitewater Draw proper, and later we saw a Curve-billed Thrasher in McNeal carrying nesting material in its beak.

The fields north of Davis Road and west of Central Highway held only two Ferruginous Hawks for us in the early afternoon. Several small flocks of Horned Larks were seen, but no pipits, longspurs, or plover could be found. Our tally for the day was 67 species.



Blue-winged (above) and Cinnamon (below) teals at Whitewater Draw. Photos by Mel Emeigh.



MEMBERSHIP APPLICATION

Name: _____

Address: _____ City/State/ZIP: _____

Phone: _____ E-mail: _____

NATIONAL AUDUBON SOCIETY: \$20 New Member \$30 Two Years \$35 Renewal \$15 Seniors

Make checks payable to: National Audubon Society

FRIENDS OF HUACHUCA AUDUBON SOCIETY: \$10 Year - Individual Member \$15 Year - Household

Make checks payable to: Huachuca Audubon Society

TOTAL: \$ _____



Mail all applications to: Huachuca Audubon Society • P.O. Box 63 • Sierra Vista, AZ 85636-0063

Please get involved with Huachuca Audubon Society!

Check your area of interest: Publicity Programs Conservation Hospitality Board of Directors

Welcome New Members

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 Michael Bragg, Sierra Vista
 David Branham, Hereford
 Laura Buckley, Sierra Vista
 Patricia Burr, Sierra Vista
 Joseph Chovance, Pearce
 Mary Coble, Sierra Vista
 Judy Couchenour, Bisbee
 Patricia Couse, Sierra Vista
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 Catherine Dalton, Hereford
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 Martha Stampfer, Willcox
 Barbara Stratton, Tombstone
 Joan Tavares, Benson
 Tom Treasure, Sierra Vista
 Granny Wagner, Hereford

And thanks to
 all of you loyal
 renewing
 members, too.

HUACHUCA AUDUBON SOCIETY
P.O. BOX 63
SIERRA VISTA, ARIZONA 85636

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Ginny Bealer	378-6341
Alan Blixt	515-9458
Mel Emeigh	458-4588
Tricia Gerrodette	378-4937

Arizona Audubon Council Representative

Tricia Gerrodette

Audubon Adventures Representative

Sally Rosen

Visit the website for current information:

www.huachuca-audubon.org

Webmaster, Robert Weissler

Submit Trogon News items to:

has_admin@huachuca-audubon.org

“Print” Trogon News Editor, Brooke Gebow

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Programs	vacant		