



VIRGIN RIVER  
PROGRAM

# Newsletter

Spring 2014

VirginRiverProgram.org

## Virgin River Gorge Invasive Fish Eradication Set for June

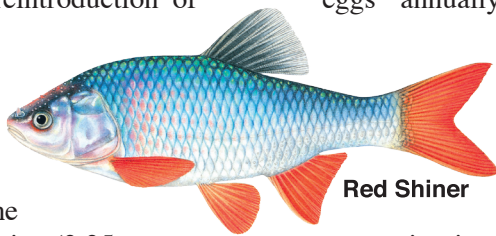
Biologists from the Virgin River Program, Utah Division of Wildlife Resources and Arizona Game and Fish Department are working to remove invasive fish to benefit and protect native fish species in the Virgin River from June 16-30, 2014. The effort consists of extensive fish monitoring, salvage of the native fishes, treatment of the river and reintroduction of native fishes.

Treatment will occur in the 17-mile stretch of the Virgin River Gorge from the Stateline Fish Barrier (2.25 miles upstream of the Utah/Arizona border) to the Gorge Fish Barrier near Littlefield, AZ. Direct access to the river will be closed to the public during treatment to comply with the State of Arizona's regulations.

Rotenone will be used during treatment to eradicate the invasive red shiner and protect the endangered woundfin in the Virgin River. Although rotenone is toxic to fish, it poses no threat to

wildlife, birds, livestock or humans. It's a natural product that decomposes without leaving any harmful residue.

The red shiner preys upon the native fish and competes with them for habitat and food resources, making it impossible for them to survive. Female red shiners begin spawning at one year of age and can produce up to 10,000 eggs annually, significantly out-



Red Shiner

producing native fish populations.

The eradication of a highly reproductive, invasive fish

species is expensive. Millions of dollars have been invested to date in the construction, repair and enhancement of fish barriers; monitoring efforts and chemical treatments.

For more information on the treatment or endangered species protection, call 435.673.3617.



### What to expect during treatment?

- Travel along the I-15 through the Virgin River Gorge is not expected to be impacted.
- Direct access to the river in the 17-mile treatment area will be closed to the public from June 16-30, 2014 in accordance with the regulations of the State of Arizona regarding use of rotenone. Conservation officers from Utah Division of Wildlife Resources and Arizona Game and Fish Department will be onsite to monitor access.
- Neutralization of rotenone will temporarily turn the river water purple in color.



## Be on the lookout for Arundo



Arundo, also known as giant reed, is an invasive species in Washington County that displaces native plants and wildlife. It can grow up to 30-foot tall and uses excessive amounts of water. Once established, it is very difficult to eliminate. If you see this plant along our streams or rivers, email the location and a

picture to Nolan Hahn at vrade@usaconservation.org. Hahn is a biologist for American Conservation Experience, a national leader in recruiting, coordinating and training volunteers to undertake practical restoration in America's public lands. He will coordinate the removal of the species.



## Program considers stocking endangered fish above Quail Creek Diversion Dam

Virgin River Program officials are evaluating a 5-10 year plan to stock the endangered woundfin, one of the rarest species on earth, above the Quail Creek Diversion in the stretch of the Virgin River downstream from Rockville and near Grafton.

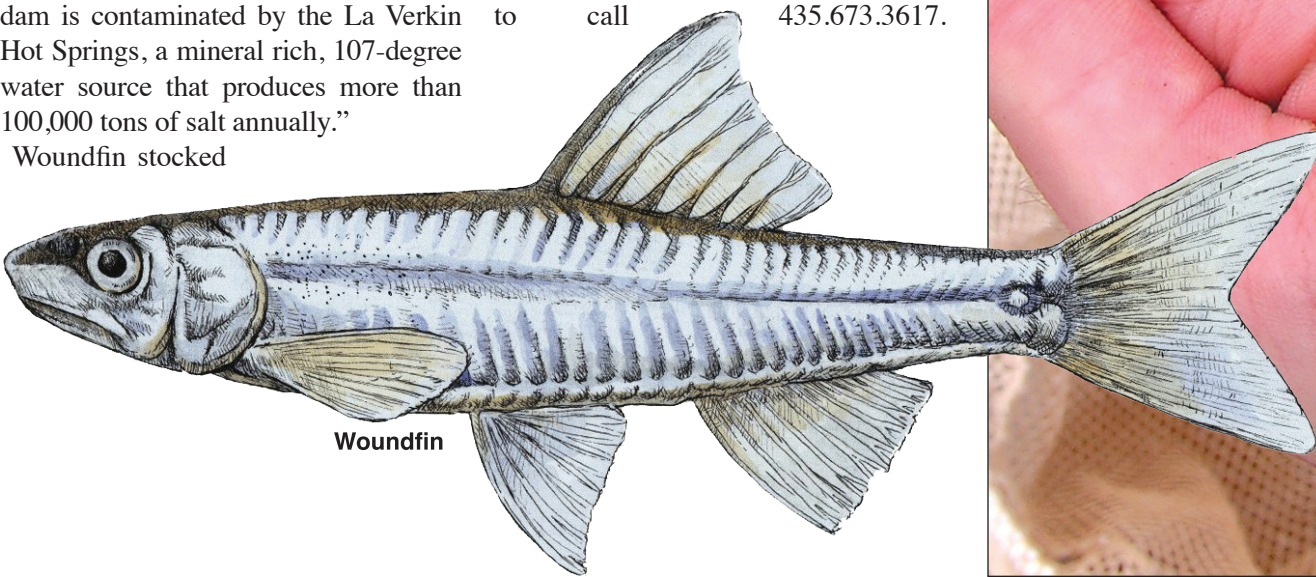
Approximately 2,000 captive bred woundfin may be introduced above the diversion dam later this fall or in the early spring of 2015. Additional woundfin releases will likely occur through 2017.

"The fish are more likely to thrive in this area because of the appropriate water quality, higher flows and cooler water temperatures," said Henry Maddux, director of Virgin River Program. "Water below the diversion dam is contaminated by the La Verkin Hot Springs, a mineral rich, 107-degree water source that produces more than 100,000 tons of salt annually."

Woundfin stocked

above the diversion dam will not be legally protected. The program is working on documentation with the appropriate federal agencies to prevent any restrictions on upstream land owners and water users that may result from woundfin stocking – a protection required by the Washington County Commission. Any attempt by government agencies or outside parties to protect the woundfin would result in removal of the species from this area.

Program representatives have met with local property owners and water users to discuss the action. Additional meetings will be held in the future. Individuals interested in attending these meetings are encouraged to call 435.673.3617.



Woundfin



Endangered woundfin





# In Fish News

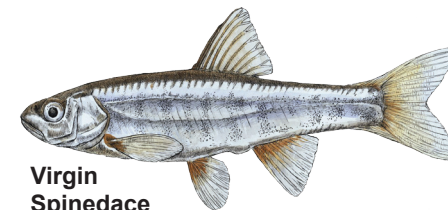
During a recent fish monitoring in the river, all six native Virgin River species were captured including more endangered woundfin and Virgin River chub than were expected.



**Woundfin**  
(2 - 4 in long)



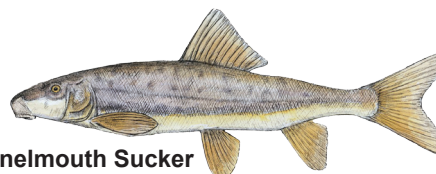
**Virgin River Chub** (8 - 18 in long)



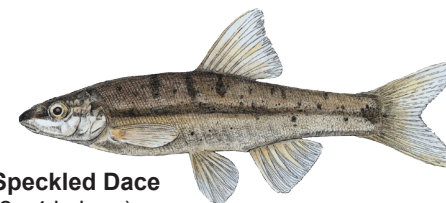
**Virgin Spinedace**  
(3 - 5 in long)



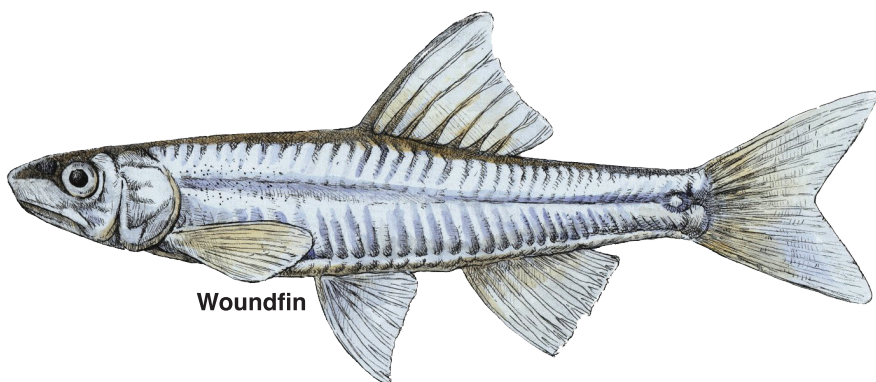
**Desert Sucker**  
(6 - 18 in long)



**Flannelmouth Sucker**  
(10 - 24 in long)

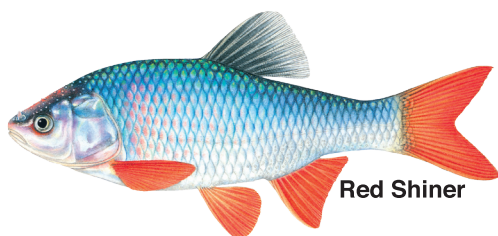


**Speckled Dace**  
(2 - 4 in long)



**Woundfin**

More than 3,000 endangered woundfin were stocked in the Virgin River to help supplement populations for spring spawning. Approximately 20,000 more are being held in hatcheries until improved water conditions this fall. The red shiner, a non-native predator that competes with native fish for habitat and food, was not found during a 4-mile sampling upstream from the Fort Pearce Wash, near River Road in St. George.

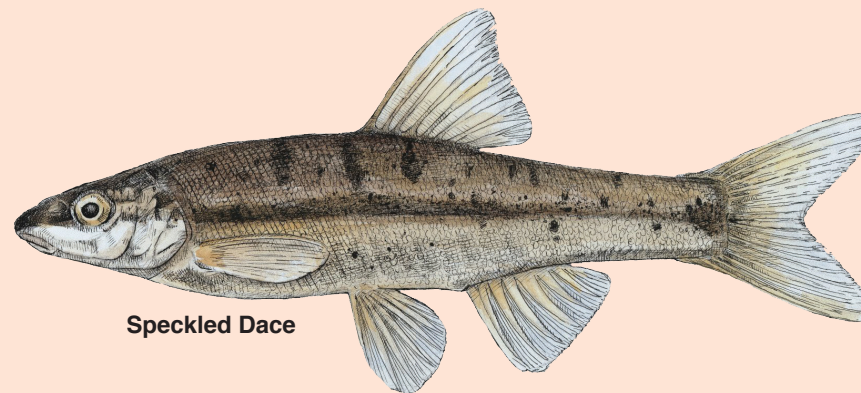


**Red Shiner**



**Desert Sucker**

Native fish in the Virgin River are now spawning. Male fish are displaying spawning coloration including black and orange racing stripes on the Desert Sucker and red lips and fins on the Speckled Dace.



**Speckled Dace**

# Virgin River Program Calendar Contest

More than 500 photos were submitted in the 6th annual Virgin River 2014 Calendar Competition making the selection of winners particularly difficult.

This year's grand prize was awarded to Shay Jolley for a scenic photo of Toquerville Falls in La Verkin Creek, pictured to the right. Monthly winners included Tim Wright, Greg Murray, Dewey Farmer, Doug Buckley, Diane Ottosen, Cameron Rognan, Amy Osness, Gary Leverett, Ron Broad, Brad Campbell, Robin Mueller and David Whalen.

Photos for the 2015 calendar will be accepted online at [www.virginriverprogram.org](http://www.virginriverprogram.org) beginning in June 2014.



## Virgin River Program Word Search



Rotenone	X	Z	K	A	D	Q	Y	W	E	Z	F	K	W	K	B	C	D
Arundo	Z	A	T	N	V	C	Y	Q	N	P	T	G	Q	F	R	K	H
Woundfin	J	W	Y	A	I	H	Z	E	D	O	O	Q	A	D	X	W	A
Virgin River	J	G	N	U	M	T	Y	R	A	S	Q	C	K	M	Y	X	T
Spawning	H	W	S	K	A	A	N	Q	N	O	U	C	R	G	I	O	C
Red Shiner	J	O	M	V	D	Q	Z	P	G	R	E	A	E	Q	R	H	H
Toquerville	L	U	S	I	N	T	S	A	E	O	R	L	X	V	E	H	E
Diversion Dam	I	N	T	R	O	A	X	U	R	T	V	E	Q	Z	D	V	R
Endangered species	G	D	O	G	I	L	A	N	E	E	I	N	T	U	S	N	I
Stocking	N	F	C	I	S	J	X	E	D	N	L	D	L	V	H	W	E
Hatcheries	I	I	K	N	R	C	U	X	S	O	L	A	K	R	I	A	S
Calendar	N	N	I	R	E	W	K	A	P	N	E	R	J	T	N	R	R
	W	A	N	I	V	E	L	C	E	E	O	Y	B	K	E	U	A
	A	Z	G	V	I	A	E	M	C	Q	D	S	C	Q	R	N	Z
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	M	A	K	Z	I	P	O	N	S	A	Z	Y	J	S	U	B	T



## VIRGIN RIVER PROGRAM

### Virgin River Program Newsletter Summer 2014

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Available online at:

[www.virginriverprogram.org](http://www.virginriverprogram.org)

#### Program Signatory Partners

Washington County Water Conservancy District

U.S. Fish and Wildlife Service

Utah Department of Natural Resources

U.S. National Park Service

U.S. Bureau of Land Management

U.S. Forest Service

Dixie Conservation District

Washington County Farm Bureau

The Nature Conservancy