



Recovery

Winter
2005/2006
Newsletter

The Upper Columbia White Sturgeon Recovery Initiative (UCWSRI) is a transboundary collaboration of over 25 partners from government, First Nations and American tribes, industry, environmental groups and others who are working together to build a healthy future for the white sturgeon in the upper Columbia River in British Columbia and Washington. The Initiative's Recovery Plan, completed in 2002, provides the goals and recovery measures for rebuilding the white sturgeon population.

Recent estimates put the upper Columbia white sturgeon population at approximately 750 wild fish in the Canadian portion of the basin and 1,500 to 2,000 fish from the Canada-U.S. border to the Grand Coulee Dam in the U.S. Almost all fish are greater than 30 years old, suggesting a lack of reproductive success with relatively few young surviving to replace the old.

2006 will mark our sixth year since the UCWSRI was started and our fifth year of research, education outreach programs, and conservation aquaculture operations. Aquaculture programs are located at the Kootenay River Sturgeon Conservation Hatchery, near Cranbrook, BC and at the pilot Columbia Basin Hatchery facility in Moses Lake, Washington.

...“helping hands for ancients of the deep”

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Two year old white sturgeon juvenile

INCIDENTAL JUVENILE CATCH CONCERNS

A very active sport fishery occurs throughout the Transboundary Reach of the upper Columbia River and into Lake Roosevelt. This area includes the portion of river from Hugh L. Keenleyside Dam to the international border and the lower Kootenay River from Brilliant Dam downstream to the mouth.

A creel survey and angler education program was conducted between November 2003 and spring 2004 to provide information on the extent of incidental and illegal catches of white sturgeon in this reach. Creel survey technicians used aerial flights to obtain gear counts and geographic distribution of anglers. The team also completed in-person surveys and combined this information with the flight data to obtain estimates of white sturgeon encounters and catch rates. Informational brochures and tackle-box pocket facts about white sturgeon were distributed to anglers and information signage was posted at boat launches. The survey also provided an opportunity to inform the angling community about the work of the UCWSRI. Initial results indicated that the local fishing community has an increased awareness of the sturgeon population and threats to its survival. As a result, the Initiative supports the need to continue outreach and education programs to help minimize incidental catches of white sturgeon.

The UCWSRI fish culture conservation program has released year-old white sturgeon juveniles for the last four years. The older fish are now large enough to be caught by angling techniques used to catch walleye and trout. The proposed 2006 and 2007 education program aims to minimize angling impacts on young sturgeon (as well as adults) by delivering an updated angler contact program supported by the angling community and Initiative partners.

The proposal for 2006 will be to conduct angler contact at popular fishing sites to provide information on habitat and gear selection to minimize angling impacts on white sturgeon. Angling guides will also be contacted to obtain similar information

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Colin Spence, Recovery Team member, Ministry of Environment



Chris Beers, Action Planning Group member, CKFRP

Incidental Juvenile Catch Concerns continued from page 1

and to convey best handling practices for incidental captures. In addition, the Initiative will support displays at outreach events such as the spring juvenile sturgeon release and Kootenay Trout Hatchery Open House events and BC Rivers Day, to help educate the local community.

Through this proposed program, the Initiative aims to reduce mortality resulting directly from capture and to minimize stress from captures or improper handling techniques. A 25% reduction in incidental sturgeon captures has been targeted. The long term goal of the Initiative is to restore natural recruitment while the goal of this project is to assist in increasing survival of juvenile sturgeon by minimizing human caused mortality.

How To's for Releasing a Sturgeon

If you have hooked a juvenile or sub-adult white sturgeon (less than 1 metre in length), land and release it as quickly as possible to minimize the stress of capture. Once the fish is landed, keep it in the water, remove the hook, and avoid touching the gills.

If you have hooked a large sturgeon (greater than 1 metre in length), avoid "playing the fish" and break your line immediately to reduce injury or stress to the fish. You can avoid having a long piece of line trailing from the fish if you use a short leader with a low-breaking strength. For example, a small section of 8 lb test leader on 15 lb test main line will only leave a small piece of the leader when the fish is broken off.

Measures to Avoid Incidental Catches

Anglers can avoid incidental catches of white sturgeon while angling by employing some simple techniques:

Use non-stainless, single barbless hooks (single, barbless hooks are now required by regulation on all streams in BC). Stainless steel hooks are slow to corrode if the hook happens to remain in the fish.

Avoid bottom-fishing in areas where white sturgeon frequently occur (e.g., directly below dams and deep pool areas).

Use artificial lures without bait.

Anglers may provide information regarding incidental catches by e-mailing to info@uppercolumbiasturgeon.org

DEVELOPING EDUCATION KITS FOR SCHOOLS

The Upper Columbia White Sturgeon Education Resource Kit, sponsored by BC Hydro and Fisheries and Oceans Canada, was recently developed by Kootenay-based consultants and teachers, Nancie Dohan and Ali Daley of Ecosense Interpretive Services.

Developing a resource kit will be extremely beneficial as education is a key component of the recovery initiative and it will be the younger generations who lead the conservation efforts for white sturgeon in the future. The kit includes everything from learning modules to games, puppets, a song, life-size posters, clay models, photographs, video and quizzes. "The reaction to the kit in the pilot phase was tremendous," notes Jayson Kurtz, Senior Habitat Biologist with Fisheries and Oceans Canada. "Even those schools who were not testing the kits, called us to find out how they could get involved. There is also interest in the kits from other parts of the province and United States." During late September in conjunction with BC Rivers Day, the Initiative provided each of the Columbia River basin School Districts # 8, 9, 10, and 20 with two K - Grade 3, and two Grade 4 to 7 kits at no cost.

Each year the UCWSRI organizes the Sturgeon Release Day in either Castlegar or Trail. Students are invited to attend, learn more about white sturgeon and release a year-old sturgeon into the Columbia River. Organizers, volunteers and educators alike agree that the combination of classroom learning with the kit and the field trip prove to be very effective in increasing the children's knowledge of the local white sturgeon population.



If you would like further information on the resource kits, please contact Sue Heaton at BC Hydro at (250) 365-4562 or Angus Glass at the Columbia Basin Fish and Wildlife Compensation Program (CBFWCP) at (250) 352-6874.

Where's My Sturgeon?

During May 2005, more than 300 students from the West Kootenay were in Castlegar to help release 6,000 tagged juvenile white sturgeon. More than 40 students from Stanley Humphries Secondary School's biology 11 classes handled everything from traffic control to providing information on the sturgeon and its life cycle to the visiting elementary school groups. Students from Castlegar, Trail, Robson, Blewett, Warfield, Harrop and Kaslo attended the rainy day event.

The 2005 school-oriented release events marked the Initiative's 3rd Year to host release events, and each year it gets bigger and more popular for schools. Many thanks to our Initiative partners for their support and the community volunteers who come out to help.

To find out if your fish has been found, check out the Web site:

www.uppercolumbiasturgeon.org
under Sturgeon Findings!

What's New!

● "Scutie", Born, January 2006, – the Initiative's 2nd toy sturgeon—a friend for "Spike!" Sales of the \$10 fish toys have been brisk, so get yours while quantities last! All funds raised go directly to furthering outreach and education activities. Initiative ball caps are also available to purchase.

● Our life-sized white sturgeon model has a new look and is currently on display at the Castlegar Airport! Partner funding enabled the model to be upgraded with a light-weight plexiglass cover to permit viewing for extended periods of time without supervision. Basin organizations and businesses are invited to display our model for two – three month periods.



RESEARCH UPDATE – FALL/WINTER HIGHLIGHTS

The UCWSRI coordinates more than thirty technical and supporting programs annually, a few of which are highlighted for this issue:

● On December 2nd and 3rd, 2005 the Initiative completed its first late fall release of juvenile sturgeon into the Columbia River. These fish were six months old and just over 5,000 fish from four families were released. Despite the cold air temperatures, the river was around 6°C in temperature, the sturgeon moved into deeper water as they do in spring/summer river releases. This is an experimental approach to determine if fish released in the fall survive better than those released in the spring. The rest of the brood of sturgeon, estimated at more than 10,000 juveniles will be tagged and released in early May.

● Canadian and American researchers continue monitoring juvenile sturgeon between Hugh L. Keenleyside Dam, BC and Kettle Falls, Washington to understand their movements, growth and survival. The Initiative is tracking young sturgeon from one to four years old using a combination of sonic telemetry, gillnetting, and mobile underwater video imaging. To assist in reducing field costs and minimize impacts from handling sturgeon for data collection, Golder Associates Ltd. staff will pilot a unique underwater PIT tag reading system that will be stationed on the river bottom in known high-use sturgeon habitats. As sturgeon pass over these readers, the PIT tags that have been placed under the skin of the nearly 50,000 juvenile releases since 2002, and every adult captured, will be detected and stored for later analysis. This program is expected to start in February. Results of recent months' sturgeon findings will be posted to the Web site during March 2006.

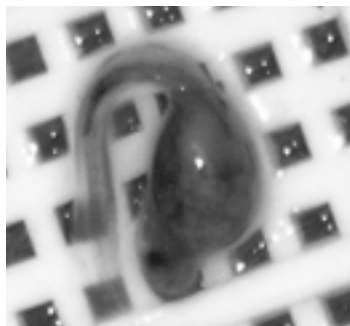
● Following four years of research and analysis, the Sturgeon Contaminants Working Group provided preliminary results of a comprehensive report on contaminant effects on white sturgeon to the Recovery Team last fall. Lead by consultants Gretchen Kruse and Molly Webb, the purpose of the study was to address concerns that pollution may be a potential limiting factor for sturgeon reproduction and recruitment. The study focussed on the Columbia River from Hugh L. Keenleyside Dam to the International border. The report included an historic data summary, contaminants sampling interpretation results, a fin deformities assessment interpretation, and an effluent/genotoxicity study overview.

Recommendations for refining future contaminants monitoring programs as well as future study needs were also presented.



Mickey McDonald, Fish Culturist, Freshwater Fisheries Society of BC

The Ktunaxa word for white sturgeon is wiyat, pronounced wee yath. The Secwepemc word for sturgeon is pronounced Hoo ee.



Newly hatched Arrow Lakes Reservoir larvae



Mark Tiley, Hydro Impacts Biologist, CCRIFC

Address:

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For more information

about the UCWSRI view the
Initiative Web site at

www.uppercolumbiasturgeon.org

or contact us at

info@uppercolumbiasturgeon.org

Our Sturgeon Hot Line was retired
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by the public.

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**FIRST NATIONS HELP PREVENT LOCAL EXTINCTION OF
WHITE STURGEON IN ARROW LAKES**

It's 8 a.m. and the mist is still hovering over the Columbia River at Revelstoke, as Jim and I head down river to begin our field day of assessing white sturgeon habitat and tracking adult sturgeon movements. By tracking tagged sturgeon, adult seasonal migration patterns and spawning, rearing and overwintering habitats in the Arrow Lakes Reservoir system have been identified.

Jim and I are members of the Canadian Columbia River Inter-Tribal Fisheries Commission (CCRIFC), an organization that assists the Ktunaxa and Secwepemc First Nations with fisheries management and research in the Columbia River basin. Modeled estimates suggest that the Arrow Lakes system likely supported a much larger population than occurs today, but was comparatively smaller than populations that spawned downstream of the Arrow Lakes.

The Columbia River has been dramatically altered since Mica and Hugh L. Keenleyside dams were built under the terms of the Columbia River Treaty. It was about this time that sturgeon recruitment failure began. Sediment and nutrients that were transported downstream by the current of the Columbia River now settle out in the Kinbasket, Revelstoke and Arrow Lakes reservoirs.

The Arrow Lakes Reservoir floods the Columbia River downstream of Revelstoke every year. Combined with a lack of nutrients and dramatic daily fluctuations in Revelstoke Dam discharge, the aquatic habitat structure of the river from Revelstoke to Beaton has been altered, possibly making survival for young sturgeon very difficult. The dams may block sturgeon migrations, possibly preventing them from reaching essential spawning and rearing areas. Human development, changes in flow patterns, loss of habitat, and introduction of exotic species are also contributing factors to the white sturgeon's decline.

CCRIFC's research has focused on improving our understanding of white sturgeon habitat requirements and assessing the effects of cold water temperatures on sturgeon egg and juvenile survival. Study results to date suggest that the altered seasonal water temperature patterns have not directly resulted in recruitment failure as eggs and juveniles can still survive and grow despite the temperature changes.

UP AND COMING EVENTS

Check our Web site or contact us for details if you are interested in:

Sturgeon Release Events - Juvenile white sturgeon release events are currently being planned for schools and the community over two days: **May 3rd** in Trail for school groups, and **May 4th** in Castlegar for a special community event.

Public Open House - Kootenay Trout Hatchery/Kootenay and Columbia Sturgeon Conservation Hatchery, will host its 40th Anniversary Celebration Open House, **April 1st**. Special family events and outreach displays will be provided by Initiative partners as well as be on hand to answer questions about the upper Columbia River white sturgeon.

Initiative Update - October 2006. A public workshop on 2005-2006 UCWSRI progress will be held at a Columbia basin environmental-cultural conference in Castlegar, **October 19th - 22nd, 2006**. It will be the Initiative's opportunity to exchange program highlights with the public and community organizations. View the Conference Web site at www.basinculture.com under Basin Events.