



Paddlefish Wars

GAME WARDENS lay motionless in the black, shadowy patches of boulders, weeds, and roots. As if playing a game of hide and seek, an occasional water snake popped its head up out of the water casting a periscope-like silhouette, then eased up onto a rock near the officers. Then, sensing something wasn't quite right, it suddenly sloshed back into their black, watery escape. Except for an occasional mosquito, only the consistent lapping of waves onto shore could be heard clearly. Those sounds served only to blend with and mask what the observers were straining to hear.

Continually adjusting the focus and light-gathering settings to improve the green, grainy images seen in their night-vision scopes, both wardens tried to keep their "targets" in ever-perfect view. They clearly understood it was two men whose deep voices dripped with a heavy, foreign accent. But, not until a pattern emerged would the odd scenario reveal its savagery.

Voices and clanging gear echoed faintly from the hull of their aluminum boat while interrupted only by an occasional, loud splash. Had it not been for the high-tech surveillance equipment

The event evoked thoughts and emotions that even the most veteran officer would have found difficult: the wardens now had perspective on the harsh and hardened nature of the violators, and could relate to those epic tales of buffalo slaughtered centuries ago.

aided by scant moon and starlight, the camouflaged observers might have missed what both hated watching. It was possibly the most brutal and wasteful poaching behavior to actually be observed – as it was happening.

On this recon-only mission, wardens had to quietly watch and document the slaughter and dumping of more than fifty adult paddlefish by one group in just one night. The event evoked thoughts and emotions that even the most veteran officer would have found difficult: the wardens now had perspective on the harsh and hardened nature of the violators, and could relate to those

epic tales of buffalo slaughtered centuries ago.

"This must be how the game protectors of the 'dark continent' probably feel when they find the poaching handiwork of slaughtered rhino or elephant, simply for its horn or ivory," one officer thought.

PADDLEFISH FACTS

Native to rivers of the Mississippi watershed in the central U.S., paddlefish swim upstream in rivers and tributaries each spring to spawn, particularly in rivers that empty into lakes. This is where most paddlefish angling takes place. Paddlefish are filter feeders and despite their large adult size eat only tiny crustaceans and insects, called zooplankton, while constantly swimming slowly through water with their mouths gaping wide. For that reason, paddlefish have no interest in traditional fishing lures and bait, and a fishing method known as "snagging" must be employed to harvest them.

Anglers using the snagging method flock to these waters each spring to fish for the spawning giants, but regulated commercial (netting) fishing may be permitted in certain U.S. waters as well. Paddlefish, also known as "spoonbill" are



The clear Ozark waters of the OK-MO-AR & KS areas will produce some large paddlefish where weights in excess of 100 pounds are not uncommon.

one of the largest freshwater fishes, attaining lengths of six or seven feet and weights of more than 100–160 pounds, with the egg masses in a female contributing up to 25 percent of her body weight. Paddlefish are easily identified by their paddle-shaped noses or rostrums, which accounts for about one-third of their body length.

Female paddlefish spawn from early March to late June – only every two or three years – and may not reach sexual maturity until they are at least eight to ten years old. Paddlefish are cartilaginous, meaning they have no bones. They



This USGS map highlights the Mississippi watershed system historically inhabited by the prehistoric paddlefish in the US.

are bluish-gray to blackish on the back and gray to white on the belly, and have small eyes and no scales.

Biologists have seen a decline in paddlefish populations historically due to habitat loss from river channelization, damming, impoundments, and other river modifications that have greatly diminished needed breeding habitat. Paddlefish are an ancient species, and evidence suggests they lived during the time of dinosaurs. However, though valued as a sport fish for both their sheer size and as table fare, the mechanism of their reproduction could undo the very future of this iconic fish.

These giants have emerged in modern time as a valued source of caviar. Paddlefish eggs, or roe, when treated and preserved properly make an excellent replacement for the Beluga Sturgeon: the historic, once plentiful, and extremely lucrative source of true caviar. Beluga Sturgeons were decimated by unrelenting overharvest in their native Caspian



The allure of giant “spoonbills” attracts anglers from across the continent. If the strong pull from the giants is not enough, the big fish also produce a lot of meat and potential caviar as well.

Sea. Then, as an unintended consequence of the fall of the Soviet Union, poaching increased exponentially when government regulators could offer the fish scant protection at best after the ‘political breakup’ left monitoring in a chaotic state.

Up to 20 pounds of eggs can be harvested from one large, pregnant female paddlefish, and 10 pounds is average. Retail prices for the caviar vary, but \$35 per ounce is not uncommon. Caviar prices on the illegal or black market also vary, but a common black-market price is about \$13 per ounce. Do the math, and one large female with 20 pounds of eggs is carrying about \$4,000 worth of potential caviar for black-market sales. Because of international restrictions on the commercial importation of caviar (to protect remnant survivors) from the Caspian region, extreme pressure has become focused on paddlefish populations in the United States.

LITTLE GRAY PEARLS

More than a dozen years ago in Oklahoma, a paddlefish poaching investigation began from one simple Operation Game Thief tip. It ultimately yielded eight arrests in northeast Oklahoma on state and federal charges relating to illegal commercialization of paddlefish. The federal charges arose from violations of the Lacey Act, which prohibits people from transporting, selling, receiving, acquiring, or purchasing any fish or wildlife species in violation of any law of any involved state, and carries a maximum fine of \$250,000 and/or five years imprisonment, plus confiscation of all equipment



Processed caviar is highly prized by elites who can afford it and cultural groups that historically enjoyed the product from Beluga Sturgeon in the Caspian Sea. Current retail market prices for this food typically exceed \$35 per ounce.



Clockwise from top left:

Fresh roe removed from a paddlefish can be processed and sold for thousands. A large female can top 100 pounds and her spring reproductive cargo can account for 25% of that weight.

Black market caviar in its finished condition is most often stored in vacuum sealed canning jars for safe storage and later consumption or sale.

Roe and caviar contraband and discovered and tagged after discovery in various sorts of storage. But prior to the eggs reaching the processed stage for human consumption, they must be kept clean, cool and have a very short shelf-life.

Processing of paddlefish roe requires that it pass through numerous specific steps of treatment for preservation including cleaning and screening while on its way to developing the delicacy's highest market value.



used. In that case, equipment included a pickup truck, motorboat, fishing gear and paddlefish processing equipment, and other property used in the crime.

One night, during the surveillance phase of that investigation, wardens watched in horror as poachers pulled in fish after fish only to slice open the stomachs, examine the contents for roe, then dump the fatally injured fish back into the water to die a slow, helpless death. The operation, dubbed Operation

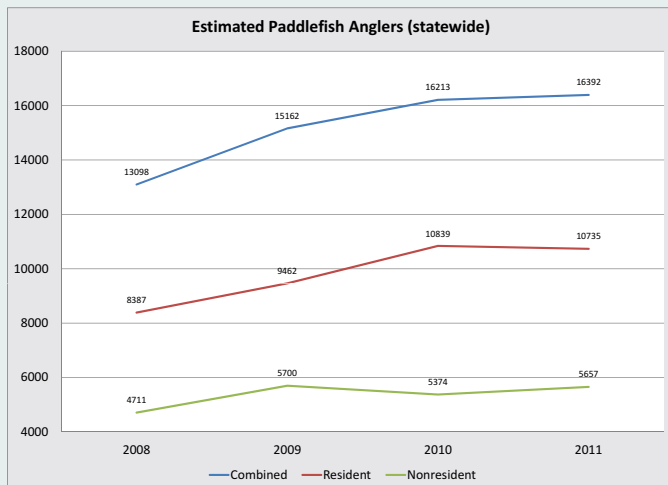
Gray Pearl, revealed interstate black-market caviar poaching afoot, and some 120 wildlife violations brought for prosecution were merely the tip of the iceberg.

The national and international popularity of paddlefish eggs as a source of caviar has grown so dramatically in recent years that wildlife managers are becoming increasingly concerned about the need for commensurate tightening of regulations and strengthened penalties.

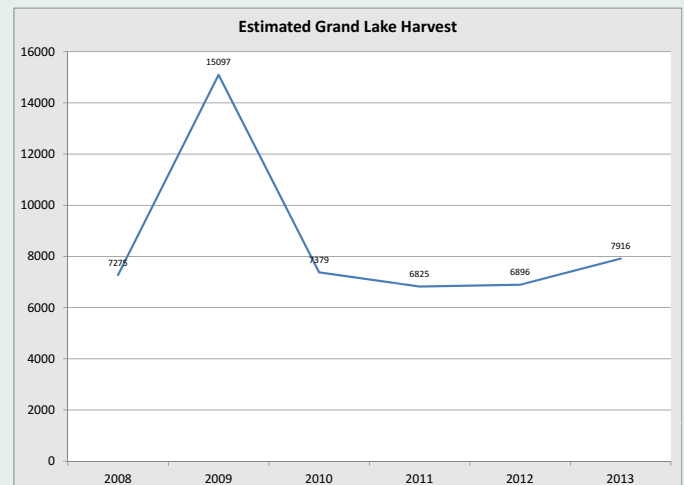
OKLAHOMA BECOMES A HOTBED

Pressure on the Oklahoma paddlefish resource continued to grow and reveal itself to uniformed wardens working typical snagging areas by 2007. A confluence of information indicated an "illegal, commercial enterprise" was operating out of the greater Tulsa metro area.

Uniformed officers with the Oklahoma Department of Wildlife Conservation



Thanks to a newly required "paddlefish permit" in 2008, Oklahoma researchers are able to estimate the total number of snaggers pursuing these unique fish. Despite ongoing efforts to fine tune harvest regulations, pressure on the resource from the flood of non-residents has not significantly dropped in the state. When combined with resident numbers, an unrelenting overall number of anglers continue to fish despite the existence of fewer large fish.



Oklahoma biologists were able to estimate fish populations in one of the state's primary paddlefish lakes (Grand) and declining numbers due to harvest and natural mortality. The data was generated by comparing tagged fish captured in nets in the lake and recovering a percentage of tagged fish at the agency's Paddlefish Research Center (PRC). The PRC is a state of the art processing facility that allows sportsmen to deposit their legally harvested fish. Agency personnel butcher and vacuum wrap the meat for sportsman while collecting data from the fish and recovering the otherwise lost resource of roe to be sold as 'legal caviar.'



Recognizing the loss of valuable resources and needed research data, the Oklahoma Department of Wildlife Conservation implemented a research and recovery program called the “Paddlefish Research & Processing Center.” The facility encourages fishermen to bring their catch in for free meat processing and vacuum sealing, while allowing researchers to collect needed data on the anglers as well as their quarry.

(ODWC), and special agents with the law enforcement branch of the US Fish & Wildlife Service (USFWS) agreed that an all-out investigation would have to be developed to stem the flow of illegal activity. In order to uncover, catalog, and present evidence for prosecution, many agencies would have to coordinate if Oklahoma waters and the paddlefish were going to have any chance of surviving this latest onslaught of marketeers.

Led by USFWS Special Agent Matthew Bryant, State Game Warden District One Captain Jeff Brown, and State Game Warden Lieutenant Brek Henry also of District One in northeast Oklahoma, meetings, schedules, and plans were organized and Operation Red Snag was begun. The several-year effort used ODWC personnel from across the entire state, agents of the USFWS (Office of Law Enforcement and Refuges), Homeland Security (ICE), Oklahoma Highway Patrol, FBI, Tulsa

County and Kay County Sheriff’s Departments, Kansas Department of Wildlife and Parks, Missouri Department of Natural Resources, Washington Department of Fish and Wildlife, Oregon State Police (Wildlife Division), and Environment Canada.

Investigations revealed an undeniable influx of eastern European persons into the local region, noting over 500 uniquely “eastern-euro” surnamed individuals. They were eventually identified and found to be intensively fishing a two-mile stretch of (paddlefish) river area. Consistent fishing visits from that unique segment of anglers gave wardens an opportunity to learn that a vast majority of “the 500” claimed to reside in nearby Tulsa, but many also showed recent previous addresses from 12 different states. Around-the-clock, intensely fished areas by the thousands were placing a strain on the 15 uniformed wardens assigned to work the region, so other wardens from all over

the state began rotating into the area to provide desperately needed support for the northeast region of Oklahoma. The spring snagging activity quickly became known as everyone’s “second deer season.”

Needing to identify separate operating groups that were “hammering the paddlefish,” wardens came to recognize many of the general (local) population of snaggers who would become known as “bubbas.” Thousands of fishermen were examined in the investigation. However, only one other specific segment of fishermen would persistently draw attention to themselves: the eastern Europeans. They exhibited extremely brazen behavior when attempting to collect paddlefish, often offering to buy (fish) from other fishermen snagging around them, and routinely asserting dominance over others, coercing them to abandon a desirable locale.

The group worked in a very organized fashion and commonly operated in groups as large as 20 to 25 men. Some of their “team” would only fish while others would only perform butchering duties. As fish were caught, some men had the assignment of running the fish up to waiting cars, where drivers would speed away for Tulsa destinations carrying the valuable load of evidence. They would often drive so fast and erratically (presumably to lose any unmarked wardens tailing them), that the tactic became known among wardens as performing a ‘crazy Ivan.’

Most disturbing to officers, however, was how some men had the duty of counter-surveillance. Not only did they routinely challenge the authority and probable cause of wardens when contacted, but they would also attempt to videotape or photograph uniformed wardens or any others they suspected were related to the enforcement effort. And, it was not too difficult to discern who might be their kingpin. Occasionally a single, usually much older man would arrive at the river’s edge to either fish or simply observe the operation. There, members of the poaching group were observed taking turns making their way over to greet the man, at times even bowing to him or kissing his ring.

It was learned that some kingpins lived in upscale, \$500,000 homes where a typical, middle-income home was valued at \$150,000. The men also owned and operated various ‘legitimate’ businesses in the

Numbers of paddlefish have been aged annually by ODWC biologists since 2004 demonstrating a diminishing number of mature (reproductive-aged) fish. The prevalence of one year’s mature age class (1999) within the population and its percentage of that population in parentheses, compared to a relatively smaller number of older and younger fish in the population is raising red flags with Oklahoma managers. (D. Scarnecchia, unpublished).

Harvest Year	# Aged >	1999 “Younger”	1999	< 1999 “Older”
2004	147	7 (0.05)	53 (0.36)	87 (0.59)
2008	4,073	205 (0.05)	2,928 (0.72)	940 (0.23)
2009	2,428	410 (0.17)	1,741 (0.72)	277 (0.11)
2010	3,9452	56 (0.06)	3,195 (0.81)	474 (0.12)
2011	4,5604	23 (0.09)	3,756 (0.82)	381 (0.08)
2012	pending			
Total	15,153	1,301 (0.09)	11,673 (0.77)	2,159 (0.14)

Courtesy Jason D. Schooley, ODWC Paddlefish Biologist



Wildlife-related “Illegal commercial enterprises” such as the one interrupted by “Operation Red Snag,” typically involves the slaughter and waste of fish and wildlife natural resources. Here, illegal netters likely spooked by their fear of detection, abandoned a hapless school of paddlefish to die and waste away in the expendable nets.

community. One owned a roofing business in the Tulsa area, but surveillance teams never observed any roofing materials or people appearing to be roofers coming or going from that locale.

A SERIOUS CASE FOR ENFORCEMENT

Some states actively stock the fishery, believing fish numbers would sharply decline and reduce sportsman opportunity if left alone, but many other states simply manage the legal harvest pursued by an ever-increasing number of anglers. This is where the game warden clearly places him/herself



Oklahoma game warden Steve Loveland keeps watchful eyes on paddlefish snagging activity along the Neosho river in NE Oklahoma.

squarely between a plan for wildlife management and the total annihilation of a species.

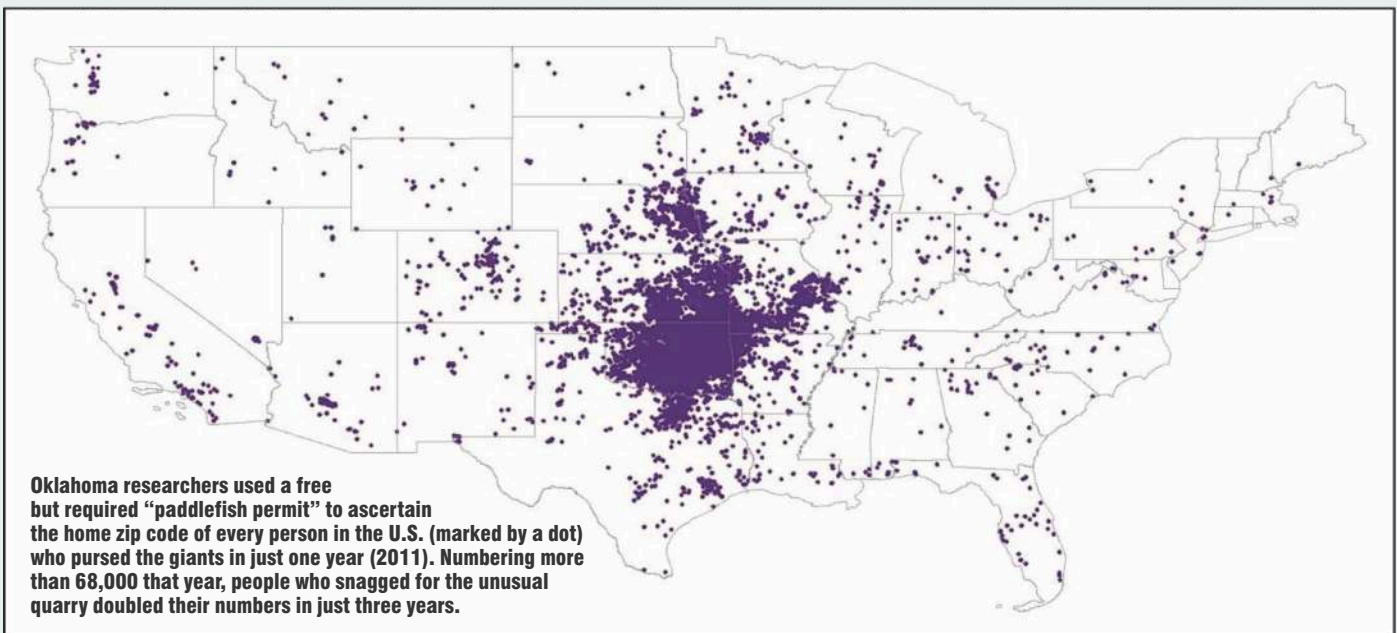
Opting for a combination effort in 2008, the ODWC opened the Paddlefish Research and Processing Center (PRPC). The center is a site where anglers can bring their paddlefish to be cleaned and processed for free in

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exchange for the collection of biological data from the fish. Fisheries personnel with the agency use the data to help manage the state's unique paddlefish population, and eggs from female fish brought to the center are collected and sold worldwide as caviar, the proceeds of which are used by the department to fund the paddlefish program.

Each year, a survey of paddlefish permit holders is implemented at the end of the main paddlefish run to evaluate several factors, including the impact of the PRPC on paddlefish harvest. These results will assist with planning long-range paddlefish management. Gathered information has indicated permit holders come from 48 states and provinces, as determined by the addresses used when acquiring the permit.

On the enforcement end, operations were literally running in all directions. Wardens were staking out numerous homes, sheds, and businesses where hundreds of pounds of roe were suspected of being processed in clandestine



Oklahoma researchers used a free but required “paddlefish permit” to ascertain the home zip code of every person in the U.S. (marked by a dot) who pursued the giants in just one year (2011). Numbering more than 68,000 that year, people who snagged for the unusual quarry doubled their numbers in just three years.

operations. Every trick in the law enforcement book was employed to aid in the investigation, including GPS trackers, pole cameras, vehicle surveillance, long-term stationary surveillance, undercover officers/agents, and multiple informants.

Then, administrative subpoenas, GJ subpoenas, and search warrants were used to collect evidence and review suspects' emails and telephone records. Vehicles hauling away fish parts were tailed to trash sites, where wardens would go dumpster-diving to yield vital information for estimating the sheer numbers of fish illegally taken, butchered, and "egged." This was accomplished by counting discarded fish tails, rostrum-bills, and heads.

According to annual reports from the ODWC over the past five years, dating back to the beginning of the newly created "paddlefish permit" in 2008, the number of anglers who specifically target the paddlefish in Oklahoma has nearly tripled.

2008 – 32,853
 2009 – 45,378
 2010 – 63,075
 2011 – 68,697
 2012 – 88,071

Sometimes other equipment such as nets and boats were observed at these illegal processing locations, clueing investigators further as to what and where else they might find illicit activity. At one point, officers came to believe caviar was being smuggled out of the country just so it could be re-labeled as a more exotic caviar, then imported and resold at a much inflated price.

Poachers would attempt to run elaborate schemes to disguise their caviar shipments by shuffling vehicles and transferring loads, and were even caught consolidating big egg shipments from smaller vehicles after crossing over the state line of origin, proving they wished to avoid "placing all their eggs in one basket."

'SPINOFF' INVESTIGATIONS

Black market egg shipments were sometimes followed through numerous states and would end up literally in



Combining effort, enforcement agents from the US Fish & Wildlife Service teamed with Oklahoma Game Wardens and other states as well to formulate an aggressive enforcement plan to defend the region's paddlefish resource. When found to be operating a suspected "illegal commercial enterprise", groups of suspects working in concert to poach fish and collect caviar were captured by "Operation Red Snag."

various different corners of the nation. In turn, this discovery triggered additional 'spinoff' investigations, such as one larger case in Missouri. That successful case opened when the Missouri Department of Conservation (MDC) learned they had similar problems that resulted in the deployment of undercover wardens whose work led to the arrests and/or citations of more than 100 subjects.

Because the paddlefish is their state fish, MDC took special exception to this illegal conduct around the city of Warsaw, otherwise known as "the Paddlefish Capital of the World." There, eight suspects from Missouri and other states were cited and/or picked up on arrest warrants for state and federal crimes related to paddlefish poaching.



Fishermen pursuing paddlefish require heavy tackle for landing the giant fish. Both are usually found just below river dams because spring spawning runs will push large schools of the ancient fish up river to the barricade.

Over the course of two days in March, as many as 85 conservation agents of the MDC, 40 special agents of the U.S. Fish and Wildlife Service (USFWS), and wildlife officers from numerous other states coordinated an operation where interviews and information-gathering were conducted regarding ongoing paddlefish poaching investigations.

Eight Coloradans with eastern European surnames were indicted for federal crimes involving the illegal trafficking of paddlefish and their eggs for use as caviar (Lacey Act), and other states were involved in the sweep, including Colorado, Illinois, Kansas, Minnesota, New Jersey, Oregon, Pennsylvania, and South Carolina. That investigation grew from a combination of leads from neighboring agencies and tips from the public about the illegal activities, and took more than two years during 2011 and 2012.

As in Oklahoma, it was also alleged that, during the interstate transportation part of these crimes, these defendants also engaged in counter-surveillance efforts. One of the men was charged with attempting to form an enterprise with other individuals who would sell processed paddlefish caviar at markets in Chicago. Another suspect from Colorado is accused of attempting to export paddlefish eggs in checked luggage on an international flight departing from Dulles International Airport in Washington, D.C. Those eggs were seized at Dulles, as paddlefish eggs may only be exported if they are



Oklahoma Game Warden Lt. Brek Henry (left) and Oklahoma Game Warden Cpt. Jeff Brown (right) share a moment of success with undercover USF&WS agents while conducting an inventory of confiscated paddlefish evidence collected from just one seizure during "Operation Red Snag." More than 300 pounds of processed caviar having a black market value of more than \$63,000 along with fish fillets, were collected after it was illegally transported across state lines.



USF&W special agent Matt Bryant addresses a group of investigators and uniformed wardens from a four state area on the developments of "Operation Red Snag." Officers from AR, OK, KS and MO regularly convene in the region for the sharing of 'Intel' on criminal activities that know no state boundaries.

accompanied by a valid permit issued by the USFWS under the Convention for International Trade in Endangered Species (CITES) Act. The case was investigated by the USFWS and the MDC, with assistance from the ODWC. The Environmental & Natural Resources Division of the Department of Justice (ENRD of DOJ) is also assisting in that case.

Back in Oklahoma, a rental vehicle occupied by two eastern Europeans was pulled over by the Oklahoma Highway Patrol on I-35 as it approached the Kansas state line. Inside the vehicle were 305 pounds of processed caviar with a black-market value of more than \$63,000. Packaged in unmarked jars along with several pounds of fish fillets, the contraband is all believed to have come from paddlefish. Each man faces a maximum penalty of one year in jail and

stabilization due to a predictable and sizeable natural mortality event. Fish older than 15 are rare, and research indicates that a major segment of that adult population (in NE Oklahoma) is from the 1999 age class. Reactive regulations are continuously fine-tuned and implemented to help support a biological rebound as well as an even stronger enforcement response. Snagging is now closed between 10 p.m. and 6 a.m., and the limit was lowered from two to one fish per day. Fish must be either tagged or released immediately, and if held, snagging must cease. To stem the flow of weekend, non-resident pressure on the resource, no snagged fish can be legally kept on Mondays or Fridays. Also, no person may possess more than three pounds of preserved paddlefish eggs. A strong member of NAWEOA, the Oklahoma State Game Wardens

\$10,000 in fines. In addition to fines and possible jail time, courts are now required by new laws to order violators to pay restitution in all fish and wildlife cases in Oklahoma. This occurred thanks to the state's recent decision to increase penalties and join the Interstate Wildlife Violators Compact, a growing and unified enforcement tool now used by most state wildlife agencies. The two alleged smugglers were booked into the Kay County jail and had their vehicles seized, but were later released after each posted a \$5,000 bond.

Recent age data indicates that the Grand Lake population, possibly Oklahoma's largest paddlefish fishery, may need re-

Wardens watched in horror as poachers pulled in fish after fish only to slice open the stomachs, examine the contents for roe, then dump the fatally injured fish back into the water to die a slow, helpless death.

Association recently put their money where their hearts are. The officers raised and donated \$2,000 in reward money to the Oklahoma Department of Wildlife Conservation's Operation Game Thief program, hoping to garner continued support and encouragement from sportsmen to participate in the enormous effort. Amidst increased fishing popularity, and concentrations of egg-laden female paddlefish making dams a prime location for poachers to collect eggs for national and international illegal caviar markets, we'll all have to do our parts. Game wardens across the country continue to network, share information, and give their all. If we've learned the lessons from the Great Plains, and we're determined to hold back the floodwaters of greed, we'll have to do more than just win some battles. We'll have to continue to fight the Paddlefish Wars.



By Carlos Gomez, Game Warden, Oklahoma Department of Wildlife Conservation. Son of a Colombian immigrant and fisheries biologist, Carlos Gomez

began his career as an Oklahoma Game Warden in 1979 and has served in his NE Oklahoma, Tulsa assignment since 1986. Active in the NAWEOA organization, Gomez currently serves as jurisdictional representative for Oklahoma, advertising manager for IGW magazine, and editor of his officer's association magazine.