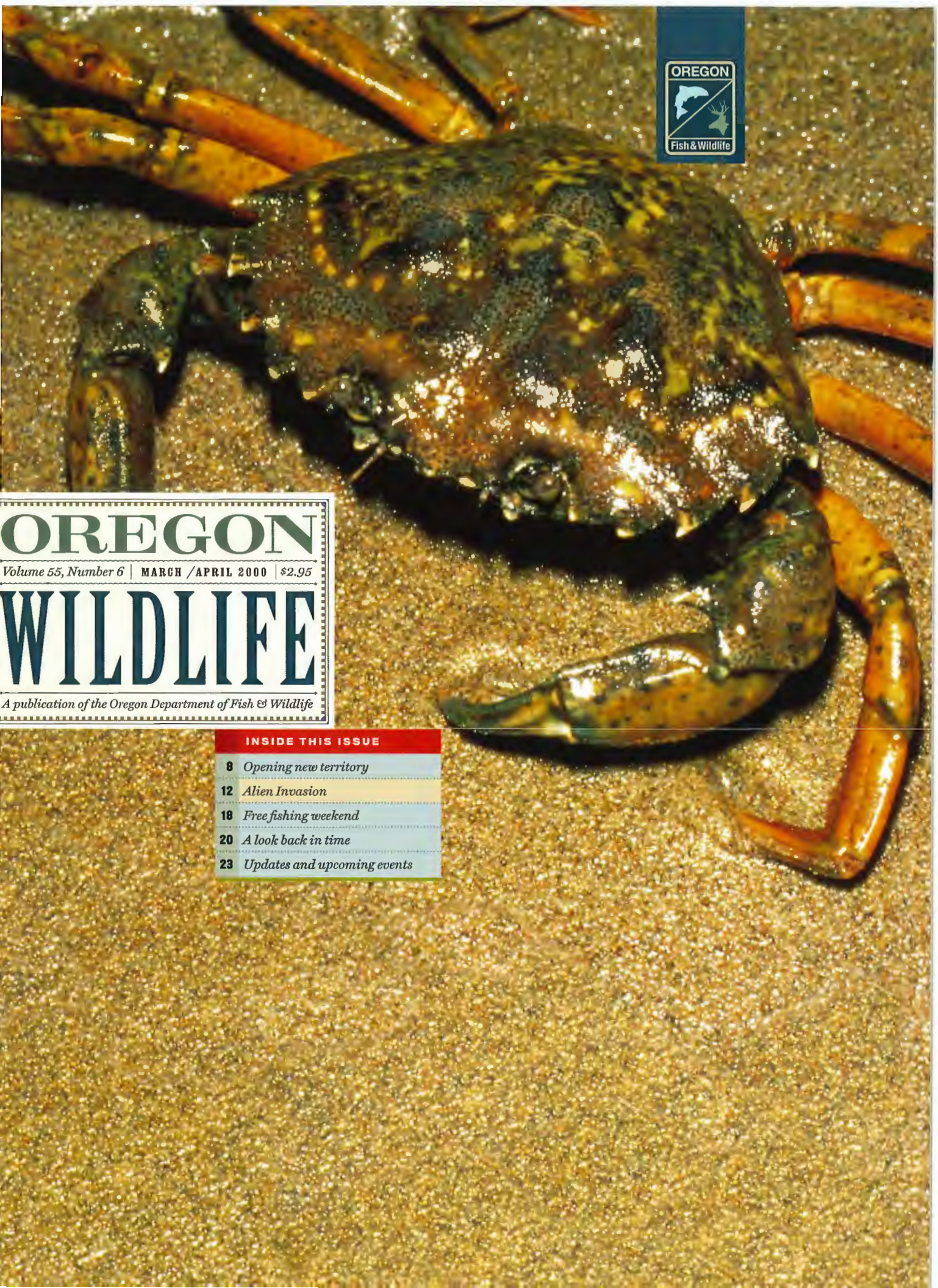


OREGON WILDLIFE

Volume 55, Number 6 | MARCH /APRIL 2000 | $2.95

A publication of the Oregon Department of Fish & Wildlife

INSIDE THIS ISSUE

8 *Opening new territory*

12 *Alien Invasion*

18 *Free fishing weekend*

20 *A look back in time*

23 *Updates and upcoming events*

Our mission is to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations.

OREGON WILDLIFE
A publication of the Oregon Department of Fish & Wildlife

Volume 55, Number 6 | MARCH/APRIL 2000

OREGON WILDLIFE (ISSN 0094-7113) is published bi-monthly by the Oregon Department of Fish & Wildlife at:

2501 Southwest 1st Avenue
Portland, Oregon 97207
tel 503.872.5264
fax 503.872.5276
email ow.editor@dfw.state.or.us
web www.dfw.state.or.us

Periodicals postage paid, Portland, OR

SUBSCRIPTION: $12.95/year, *Oregon Wildlife*, Subscription Department, P.O. Box 7792, Red Oak, IA 51591-0792
Single copies, $2.95

POSTMASTER: send address changes to *Oregon Wildlife*, P.O. Box 7792, Red Oak, IA 51591-0792.

Design and Production
The Felt Hat

FROM THE DIRECTOR

Hatcheries are important to the recovery of salmon, but adding more hatchery fish won't solve the problem. We need to repair what has caused the decline, then use our hatcheries as part of...

THE WINNING COMBINATION

OREGONIANS HAVE a right to know the facts about Oregon's fish hatchery programs and the role hatcheries play to provide sport and commercial fishing opportunities and restore native salmon runs.

The 34 fish hatcheries operated by ODFW produce fish for three purposes. They provide fish for harvest by recreational and commercial fishermen, because naturally spawning runs are generally no longer capable of providing enough fish for this purpose. In some basins, they mitigate for the loss of salmon and steelhead habitat. And in a new role, it is hoped that Oregon's hatchery system can help speed the recovery of naturally spawning, or wild, salmon stocks.

When the state of Oregon began in the fish hatchery business over a century ago, hatcheries had only one role – to increase salmon production for harvest. Little was understood about the complex life history and biology of salmon and steelhead. Often eggs and milt (sperm) were taken from salmon from completely different river basins, with the young fish being released in yet another basin. In the last 20-30 years, however, hatchery runs produced a lot of harvest opportunity.

The State's hatchery system has not prevented the continued decline of Oregon's wild salmon and steelhead stocks. There are many reasons for this decline: overfishing, habitat loss, dams, and poor ocean conditions. The key fact is that Oregon's fish hatchery system was never designed to help in the recovery of declining naturally spawning fish stocks. Their primary goal is to provide fish for harvest.

Hatchery fish are bred to survive, and thrive, in their associated freshwater and ocean habitats. It's not surprising that most hatchery fish do not have the genetic or behavioral flexibility to adapt to changing conditions within the natural habitat. To date, there are few, if any, successes in using hatchery fish to rebuild naturally spawning populations of salmon and steelhead in Oregon or elsewhere.

Each year a portion of the returning adult fish not caught by commercial or sport fishers return to the hatchery where they were released as smolts. Most returning hatchery salmon are killed quickly and humanely with a sharp blow to the head, a method used worldwide in hatchery systems.

Depending on hatchery purpose and need, ODFW will spawn a number of the returning fish for the next generation of hatchery production. The remaining fish or, surplus fish, are used in a number of ways, including:

- Donating fish to Oregon food share programs;
- Providing fish to tribal governments to meet treaty obligations;
- Processing the fish to make fish food for the next generation of fish;
- Selling the carcasses and eggs to buyers to fund hatchery programs; or
- Placing the carcasses in streams and creeks for nutrient enrichment.

If "surplus" fish were allowed to spawn in the wild they might negatively interact with naturally spawning fish. Hatchery fish can interbreed with wild fish, passing on genetic traits that are ill suited for survival in the wild. Hatchery fish can produce juveniles that compete for food and habitat with juveniles of naturally spawning fish.

This attitude is changing with the continual decline of wild salmon and steelhead in Oregon, and their subsequent listing under the federal Endangered Species Act. ODFW is now striving to produce hatchery fish in some basins with behavioral and genetic traits that mimic wild salmon. Where it is not feasible to produce hatchery fish that are more similar to wild fish, efforts are underway to reduce the interaction between hatchery and wild fish.

The Oregon Department of Fish and Wildlife believes that new and improving hatchery programs can help meet the public's goals of providing fishing opportunities and restoring native anadromous fish runs. Increasing the numbers of hatchery fish returning from the ocean, by itself, will not rescue wild fish stocks, or affect the status of salmon or steelhead listed as threatened or endangered under the federal Endangered Species Act. Ending the legitimate use of surplus hatchery fish and allowing them to attempt to spawn in nearby rivers or streams will not help restore or protect Oregon's native salmon runs of the future.

Jim Greer

JAMES W. GREER | *Director*

contents

Volume 55, Number 6

4 **BECOMING AN OUTDOOR WOMAN**—*Since the first BOW class in 1991, thousands of women have have been able to truly experience the great outdoors at Oregon Outdoor Women seminars.*

6 **HATCHERY MANAGEMENT IN 2000**—*Oregon's first fish hatchery was constructed in 1877. ODFW currently operates 34 fish hatcheries and 15 rearing facilities. The facts about Oregon's hatcheries.*

10 **OPENING NEW TERRITORY**—*For years, life-altering injuries had kept many of Oregon's outdoor enthusiasts from doing those things they loved most. But now, thanks to new laws and improved accessibility, sportsmen – and women with disabilities – are back in the game.*

14 **ALIEN INVASION**— *They come on ocean currents. On ships hulls and in their holds. Even packed in crates. Once here they often out compete native flora and fauna, pushing them out and changing entire ecosystems. It's no wonder biologists see invasive species as one of Oregon's most important concerns.*

18 **THE BEST THINGS IN LIFE ARE FREE**—*Fishing is more than just a sport. In fact, to some it's a way of life. Free fishing weekend is an opportunity for kids of all ages to get hooked.*

24 **A LOOK BACK IN TIME**— *You can't know where you're going until you know where you've been. Nowhere is that more true than in fish and wildlife management. Fortunately, a number of people have chronicled the history of our efforts.*

DEPARTMENTS

2 FROM THE DIRECTOR

32 WILDLIFE WATCH
The Harlequin Duck

34 CALENDAR
Events, programs and opportunities over the course of the next couple of months.

COVER European Green Crab (*Carcinus maenas*)
Photograph by Gregory C. Jensen

Rarely having the opportunity to learn outdoor skills growing up, it's been difficult – and sometimes imposing – for women who want to experience the same hunting and fishing thrills as their male counterparts. But since the first BOW *class in 1991, thousands of women have have been able to truly experience the great outdoors.*

EQUAL OPPORTUNITY ENJOYMENT

by LISA DEBRUYCKERE

OREGON WOMEN will have a new opportunity to learn outdoor skills in the fall of 2000 when the Oregon Department of Fish & Wildlife offers its first "Becoming an Outdoors-Woman (BOW)" workshop. This three-day workshop will complement the existing Oregon Outdoor Women (OOW) program by providing a slightly different format and increased course offerings. The BOW workshop will be able to accommodate up to 100 women and will include fun-filled evening entertainment, such as a game feed, raffle drawings, and an outdoor fashion show where models strut the latest in outdoor gear, designed especially for women.

The BOW program is designed for women 18 years of age and older. The workshop courses are broken down into categories, with one-third of the classes relating to hunting and shooting, one-third of the classes relating to fishing, and one-third of the classes relating to non-harvest activities. Typical classes offered throughout the weekend may include shotgun skills, archery, basic fishing, mountain biking, camp skills, outdoor cooking, turkey hunting, bird watching, and rifle skills. This workshop will give women a chance to learn about a wide variety of outdoor activities in a casual, non-threatening atmosphere. All classes will emphasize hands-on learning, while keeping safety and good outdoor ethics in mind. Women in each class will be able to participate to the extent that they feel comfortable and try out the equipment that they would need to pursue that activity further. Instructors are chosen not only for their knowledge, but also for their ability to communicate that knowledge to the participants and serve as role models. The key is not finding necessarily the best instructors, but the best instructors for women. Instructors throughout the United States are amazed at the camaraderie that develops during these workshops. Women constantly cheer each other on, whether it's shooting clay birds during the shotgun class or landing their first fish and returning it safely to the water.

BOW workshops generally cost between $100 and $200. A limited number of scholarships are available, thanks to the contributions of corporate sponsors and conservation groups. The registration fee includes meals and lodging, starting with lunch on Friday and running through lunch on Sunday. All class equipment is provided, as well. Participants are encouraged to bring their own equipment, if they have it, so that they may become more familiar with its use. Most women who take part in a BOW event leave for home at the end of the weekend with an armload of free materials so that they can pursue their outdoor interests on their own. Women leave the workshop with newfound confidence in their abilities, the knowledge to continue the new activity, and perhaps, some new friends to share their outdoor experience.

The international BOW program

THE INTERNATIONAL BOW program began at the University of Wisconsin in 1991 after a workshop was held to identify the barriers that prevented women from participating in angling and hunting. Most of the 21 barriers identified were related to the lack of opportunities that women were offered to learn about outdoor skills as children. Let's face it; most girls don't get a BB gun on their tenth birthday and one rarely sees hunting and fishing activities that include father/daughter or mother/daughter images.

How popular is the BOW program? This year, 44 states and 10 Canadian provinces will host workshops, reaching over 12,000 women. There are numerous national and international sponsors who recognize the value of women's participation in hunting and angling by providing monetary and logistical support for the workshops. Even the federal government has given its blessing by recognizing the BOW, Inc. program with full tax-exempt 501 (c)(3) status. This means that all contributions made to the program are tax deductible.

The BOW program has proven so popular that numerous groups have formed throughout the United States that provide opportunities for women to network after participating in a workshop. Flygirls, a Michigan-based women's fly fishing club, and Women Who Fish, a Texas-based women's angling club, are just two examples of how the skills and knowledge acquired at a BOW event can lead to new friends, new adventures, and a whole new outlook on outdoor recreation and how you can get involved.

If you have questions about the "Becoming an Outdoors-Woman" program or Oregon Outdoor Women, you can call the ODFW at (503) 872-5358.

HATCHERY MANAGEMENT IN 2000

THE FACTS ABOUT OREGON'S HATCHERIES

ABOVE AND RIGHT: *Seining fish; Coho sorting at Big Creek.*

OREGON'S FIRST fish hatchery was constructed in 1877. ODFW currently operates 34 fish hatcheries and 15 rearing facilities. Annually, they release about 43 million salmon, 5.7 million steelhead and 8.3 million trout. In the last decade, about 80 percent of all trout and 70 percent of all steelhead and coho harvested in Oregon originated from these hatcheries. Managers operate each hatchery differently based on each facility's original purpose, management plans written for the basin, state policies, and federal rules stemming from threatened and endangered species. The actions taken at the state's four dozen hatchery facilities must be viewed within this context.

FROM RIGHT:
Combining eggs and milt at Tanner Creek; measuring eggs into troughs; recently hatched chinook at Bonneville.

Hatchery salmon were bred with society's harvest needs in mind: Type of fish, size of fish, and time and place of return.

Benefits of Oregon's hatcheries

MOST HATCHERIES operate to produce fish for fishing – both recreational and commercial. They were originally constructed to replace fisheries on native salmon that were declining due to overfishing or to increase the number of harvestable fish. Over time, their role expanded to include mitigating for habitat loss from dam construction and to speed recovery of severely depleted native salmon populations.

Hatchery fish and native fish: Yes, there is a difference

NATIVE SALMON evolved under nature's law of "Survival of the Fittest." They developed characteristics making them uniquely suited to survive and reproduce in their home stream. As a result, they have a greater resistance to local diseases, time their return to optimal river conditions, time the building of their nests (redds) to maximize success of the eggs, and are better adapted than their hatchery counterparts to avoid predators and forage for food.

Hatchery salmon were bred with society's harvest needs in mind: Type of fish, size of fish, and time and place of return. The protected environments of hatcheries maximize survival during early life stages. Thus, weaker individuals are not selectively removed as rigorously as in the wild. Over several generations, rearing fish in a hatchery leads to domestication of the run. Domestication reduces the ability of the fish to successfully spawn and produce competitive offspring that return as adults. Hatchery offspring that reproduce in the wild can compete with native fish and hinder their survival. Hatchery fish can also mate with native fish and pass along undesirable characteristics that make their offspring less fit to survive in the continually changing wild environment.

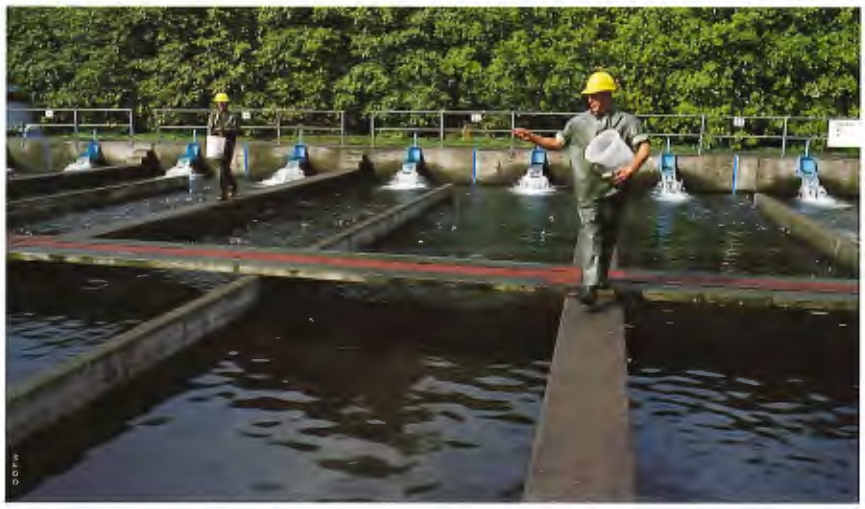
ODFW prevents hatchery fish from spawning in the wild

NOT ALL returning hatchery salmon are caught by anglers. They return to the stream of their release after spending several years in the ocean to complete their life cycle. If allowed to spawn in the wild, hatchery fish would compete with native fish for spawning sites and their progeny would compete for food and shelter. Some studies have shown that with years of domestication,

The protected environments of hatcheries maximize survival during early life stages. Thus, weaker individuals are not selectively removed as rigorously as in the wild.

hatchery fish may not effectively build nests (redds) or successfully breed. By their presence, the larger numbers of hatchery fish may prevent native fish from spawning or may breed with the native fish. The result is a population less fit to survive into the future.

In basins where salmon stocks are listed as threatened or endangered, ODFW would be in violation of the federal Endangered Species Act if the agency allowed hatchery fish to spawn in the wild.



CLOCKWISE FROM ABOVE: *Feeding at hatchery. Fish eggs; fingerlings in pond*

ODFW traps returning hatchery fish at places where they were released or at the hatchery. Technicians take fish from throughout the run and artificially spawn them to produce the next generation of fish. Returning hatchery fish must be quickly and humanely killed before breeding or using the fish for other purposes. Worldwide, the main method to kill fish is a sharp blow to the head with a weighted stick. Some are killed with electrical current.

The dead fish in excess of production needs (surplus) are used in a number of ways, depending on the condition of the returning fish. If the fish is in good condition, ODFW:

- Gives fish to tribal governments as part of their treaty rights;
- Provides anglers another opportunity to catch the fish by loading them into trucks and transporting them downstream or to another location;
- Donates the fish to food share programs
- Sells the fish and eggs to buyers and uses the revenue for hatchery programs

Fish in poor condition may be used as fish food, placed in streams for nutrient enrichment, given to wildlife rehabilitation centers, or buried in landfills.

Surplus hatchery fish in 2000

ODFW PREDICTS up to 40,000 surplus hatchery salmon and steelhead will return from the ocean this year in the Willamette and Rogue basins, and Columbia Basin above Bonneville dam.

In the Willamette Basin, 19,000 spring chinook will arrive at five hatchery facilities. After tribal obligations are met, fish will be trucked to areas for anglers to catch or distributed to food share programs. Unlike other salmon species, spring chinook arrive back from the ocean several months before spawning. As a result, "springers" are great food fish.

A specific case: Fall Creek Hatchery

FALL CREEK HATCHERY began releasing hatchery-reared coho into the Alsea River Basin in the 1950s to supplement commercial and recreational ocean fisheries. By the late 1990s, less than one percent of the hatchery run was returning to the basin as adults, making the program cost ineffective. At the same time, the Alsea Basin also supported a struggling wild coho population. In 1998, the federal government listed the run as threatened when less than 300 wild fish returned compared to historic runs of 80,000.

The Oregon Fish and Wildlife Commission adopted an Alsea Basin Plan in 1997 after extensive public review that called for terminat-

BELOW: *Redband trout*

ing the hatchery program. Research showed that the hatchery coho was not productive in the wild and contributed to reductions in the native coho population. The last release of hatchery coho smolts occurred in 1997 and the last return of adults occurred in 1999.

Angling for coho in the Alsea River ended in 1994. All returning hatchery fish were fin-clipped in 1998, but the risk to wild fish from hooking mortality was too high to allow angling.

All hatchery fish returning to the Fall Creek Hatchery in 1998 and 1999 were humanely killed. The fish were sold to processors and the revenue used to support future hatchery programs.

What's the future?

HATCHERY PROGRAMS are in transition. Managers are using research from the last decade to make hatchery fish act more like wild fish. The result will be a product better adapted to the local environment that poses less risk to wild populations. Practices include:

- Clipping the fins of hatchery fish to allow anglers to distinguish them from wild fish;
- Transitioning to local stocks of native fish as a source for eggs and sperm;
- Timing the release and location of smolts to minimize competition between both juvenile and adult hatchery and native fish;
- Separating hatchery from native adults at trapping facilities and trucking the hatchery adults to areas where anglers can catch them; and
- Exploring modification of facilities and practices to more closely resemble natural conditions during the incubation and rearing process.

ODFW is using recent research to rebuild wild stocks using "conservation" hatcheries to increase the number of surviving smolts from severely depressed populations. Eggs are collected from native fish and reared to maturity in specially designed facilities to provide maximum genetic diversity. A proposal to change four existing hatcheries to conservation hatcheries will be considered by the 2001 Oregon Legislature.

Finally, ODFW is re-writing the state's Wild Fish Management Policy in 2000. The new policy, called the Native Fish Conservation Policy, allows biologists to use the latest scientific findings, local knowledge and risk analysis to protect native fish populations.

FOR MORE INFORMATION:

Contact ODFW's Information and Education Division in Portland, (503) 872-5264, or your local ODFW office. Additional information may also be found on ODFW's website: http://www.dfw.state.or.us/ODFWhtml/InfoCntrFish/InfoCntrFish.html

PHOTO FROM KEMP

For years, life-altering injuries had kept many of Oregon's outdoor enthusiasts from doing those things they loved most. But now, thanks to new laws and improved accessibility, sportsmen – and women with disabilities – are back in the game.

CLOCKWISE FROM LEFT: *Steve Sharp, a disabled hunter with the 1000-pound elk he brought down; platform for disabled fishermen; Jim Kennedy and a fine brace of trout.*

OPENING NEW TERRITORY

by DEIRDRE STEINBERG

IN STEVE SHARP'S world, there are ways of doing and acting that are unimaginable to able-bodied people. For Steve, whose hands were severed in a farming accident when he was 17, it's actually harder to hold a fishing rod than fire a gun.

Fire a gun? Hold a fishing rod? How can a man without hands fire a gun, let alone hold a fishing rod? It's not easy, but Steve Sharp fishes and is a crack hunter to boot. Last year, the 25-year-old hunted alone in the Idaho wilderness and shot a 1,000-pound bull elk, gutted and dressed the massive animal by himself, and hauled it out to his home in Cove, Oregon near La Grande.

After Steve's accident, one of his relatives, who is a gunsmith, rigged up a contraption for the young man that replaced the trigger of his gun with a mouthpiece and cable running from the firing pin. Sharp can fire by biting down on the cable, which is connected to the mouthpiece of his Ruger Number 1.

"Since timing and aim are everything, I've perfected my shot by grabbing the front of the gun with my left hand hook, steadying it and then when everything's lined up the way I want it, I just bite that thing and the gun goes off," says Sharp matter-of-factly.

It was harder, says Sharp, to figure out how to fish again after his accident. Sharp has a hook where his left hand was amputated and just a stump where he lost his right hand, because there is too much nerve damage to allow him to wear a hook comfortably on that hand. Sharp and his father eventually welded a fixture onto his rod that allows him to flip up a bell that releases the line. The line is in his hook and he opens it to cast. Then he uses his right stump to reel in the line.

Jim Kennedy is another sportsman with a disability who loves to fish, but found his options severely limited after being shot and paralyzed from the chest down 20 years ago. Kennedy was one month shy of his twenty-first birthday when he found himself in the wrong place at the wrong time and paid for it with the permanent loss of his mobility. The Portland

➤ CONTINUED ON PAGE 12

resident walked into a downtown gas station while a burglary was in progress. The burglars shot him as they were fleeing.

"I didn't waste too much time feeling sorry for myself," remarks Kennedy, 41, who runs his family's business, Consolidated Business Machines. "I got back to my life as quickly as possible."

And getting back to his life meant resuming fishing, something he'd loved doing since he was a boy with his dad and grandfather. Kennedy said after the shooting, he began fishing again by using charter companies who could accommodate his wheelchair on ocean trips. He even went so far as to be lashed to the boat in rough waters in order to reel in the fish. "Whew, that's a workout," he says of his unique solution to a tossing boat and an unstoppable passion for angling.

Steve Sharp and Jim Kennedy are among the estimated 4,000 sports enthusiasts licensed by the Oregon Department of Fish and Wildlife to hunt and fish around the state. It is believed that their ranks will grow even larger because the regulations defining who qualifies as disabled for hunting and fishing purposes broadened on January 1 of this year.

Before the laws changed, hunters and anglers with disabilities were defined as those people who were blind or in wheelchairs. As of January 1, 2000, the laws expanded to include people with certain heart and lung conditions, permanent mobility problems, highly impaired vision or who are unable to hold a gun, fishing rod or bow. Under the revised statutes, these conditions must be permanent and verified in writing on the permanent disabilities permit application by a licensed physician. Once issued, the disabled permit must be carried in the field at all times along with the appropriate tags and licenses.

Besides expanding the definition of who is disabled, the new regulations offer hunters and anglers with disabilities other benefits. For instance, hunters with a disability can now hunt deer of either sex from parked cars not on public roads. They're also allowed under the law to kill cow elk during bull elk seasons. Anglers with a disability now can fish from anchored boats where angling from a boat is otherwise prohibited. Similarly, the new laws have changed licensing fees so that with or without a disability, sportsmen pay the same amount, depending on the type of license they are issued.

"We realized that we needed to broaden the definitions of who is disabled for angling and hunting purposes to provide better opportunities and access to individuals with physical disabilities," comments Sue Korn, Human Resources Specialist for the Oregon Department of Fish and Wildlife. Korn served as the staff liaison to the department's Disability Advisory Committee which helped craft the legislation that was sent to the last Oregon legislative session and passed in the spring of 1999. The committee was composed of hunters and anglers with disabilities and others who wanted to make it possible for people with disabilities to have better access and the state's laws compatible with the federal Americans with Disabilities Act. ODFW's permits are issued separately from those of the state's Department of Transportation (blue parking stickers for the disabled).

Korn says that some critics of the expanded definitions of "disabled" for hunting and angling worry with that an increase in licensees may threaten certain managed species. She says ODFW will monitor the situation over the next three years and then decide if changes or controls are needed to ODFW regulations.

Accessibility is one of the biggest issues facing hunters and anglers with disabilities. For anglers, it's a question of getting close enough to the water source to be able to cast and reel. Dimi Panciarelli, a double amputee, who lost his legs as a young Marine in Viet Nam during a rocket attack in 1969, has stopped at nothing to fish and hunt. "I love hunting, but fishing is my passion," says the Gresham resident, who repairs fishing reels for a living. Panciarelli has been known to wheel his manual wheelchair as close to the fishing spot as possible and then simply pop out of the chair and "scoot" even closer to his desired location. When he's hunting, he'll sometimes use a four-wheel drive motorcycle to get closer to his target. Mostly he hunts from a vehicle and waits... patiently.

Dimi hunts with a friend, Kirk Parker, who is a paraplegic. Over the years, the two have developed a flawless system for their week long deer hunting trips. They set up their own camp "very slowly" according to Panciarelli. Often it takes them a whole day.

We broadened the definitions of who is disabled for angling and hunting purposes to provide better opportunities and access to individuals with physical disabilities.

Sue Korn
HUMAN RESOURCES SPECIALIST FOR ODFW

"The trick is to park your vehicle as close as possible to where you want to have your site and unload your stuff," he recommends. That way, the men only have to move their gear a few feet. They set up near water which allows them to clean up without having to "hike" distances. Sometimes they bring along what Panciarelli calls "a walker," a non-disabled friend with a good chain saw who will cut their firewood for them, but often it's just Panciarelli and Parker

WHAT CONSTITUTES A DIABILITY FOR ANGLERS & HUNTERS?

AS OF JANUARY 1, 2000, Oregon's definition of what constitutes a disability for anglers and hunters expanded to include people who are:

Unable to walk without the assistance of a brace, cane, crutch, prosthetic device, wheelchair, scooter or walker.

Have serious lung diseases,

Have serious cardiac conditions,

Are legally blind or who have severely limited visual acuity.

Are unable to hold a fishing rod, firearm or bow.

NOTE: *all conditions must be permanent and verified by a licensed physician with a signature and address on the permit application.*

To find more specific language describing qualifications, see the disability permit application form.

HOW TO APPLY: Qualifications for a disability permit are listed on application forms. These forms are available at most offices of the Oregon Department of Fish and Wildlife and in the 2000 Angling and Big Game Regulation pamphlets. The pamphlets are found at large sporting stores such as GI Joes and Fred Meyers and anywhere that licenses are sold.

ANGLING LOCATIONS: For more information about angling locations in Oregon for the disabled, visit this website: www.HandiAngler.com.

LICENSING WEBSITE INFO: Check out ODFW's website for licensing information at: www.dfw.state.or.us/.

alone, in the woods. "We've spent plenty of time out of our wheelchairs, scooting around collecting firewood," he adds. "It can take hours, that's why you have to be patient."

Both Panciarelli and Kennedy have used ODFW's disabled access fishing platform at the Nehalem Fish Hatchery and like it very much. Kennedy worries about use of the platform by people who aren't disabled, but enjoys fishing there nonetheless.

The platform was built using ODFW Restoration and Enhancement Funds in 1992, mainly by volunteers from the Northwest Steelheaders Association, Nehalem Chapter. It is 50 feet long, 8 feet wide and can accommodate about a dozen wheelchairs. The platform is made of asphalt with curbs and a rail with rod holders surrounding the platform. There are picnic tables and accessible restrooms nearby. The only time non-disabled anglers can drive to the platform is if they are launching a boat.

"We've had the 'regulars' come here for years," says Joe Watkins, the Nehalem Fish Hatchery manager, "but now that the regulations have changed, we're beginning to see more and more disabled anglers."

Watkins likes the atmosphere around the disabled fishing ramp. He remembers special instances about those who come to fish here. "There was one 93-year-old gentleman who was here on his birthday," recalls Watkins. "He was in an assisted living situation and was wheelchair bound. He'd been a fisherman all his life, but it had become almost impossible for him to fish. On this particular day, he caught a salmon. That was pretty wonderful to see." Watkins also enjoys watching as children with disabilities have their first experiences angling. "Watching them catch their first fish can be magical," he adds.

The Oregon Department of Fish and Wildlife is in the process of compiling a list of accessible locations for both hunting and fishing due out later this year. Two valuable websites for finding accessible locations include: www.HandiAngler.com and the ODFW webpage: www.dfw.state.or.us/. The HandiAngler page lists accessible locations for fishing, although there is a caveat at the top of the page reminding viewers that accessibility may vary according to the individual's disability. The ODFW website has information on how to obtain disabled permits and a phone number for questions: (503) 872-5275.

ALIEN

CALIFORNIA DEPT OF FISH AND GAME

They come on ocean currents. On ships hulls and in their holds. Even packed in crates. Once here they often out compete native flora and fauna, pushing them out and changing entire ecosystems. It's no wonder biologists see invasive species as one of Oregon's most important concerns.

FAR LEFT: *Mitten crab,* Eriocheir sinensis; **ABOVE & RIGHT:** *Aerial view of Spartina showing spread;* Spartina alterniflora.

INVASION

by MICHELE LABOUNTY

THEY'RE COMING. Some are already in estuaries on Oregon's coast. They go by many names, but are usually grouped under the broad titles of invasive species or exotic species. These are organisms— animals and plants— that have been transported into areas where they don't naturally occur and have established populations that can reproduce.

The individual names of these Oregon intruders are striking — European green crab, Japanese oyster drill, varnish clam, Japanese mitten crab, zebra mussel, Brazilian elodea and Spartina alterniflora.

Across the United States, approximately 5,000 non-native species have been introduced. Biological pollution alarms scientists in Oregon, and across the globe where other invasive species have taken hold. Invasive species can have a devastating effect on marine ecosystems if they crowd out native flora and fauna, changing the food web that life depends upon.

"These are organisms, including amphipods, clams, crabs, fish, aquatic weeds, terrestrial weeds, insects and disease. All these critters represent a real threat to fish, to wildlife, to agriculture, to forestry and to industry — to everything in our ecosystem," said Jay Nicholas, an Oregon Department of Fish and Wildlife (ODFW) fisheries biologist. Nicholas is project leader for the Oregon Plan for Salmon and Watersheds, a statewide effort to restore healthy watersheds and the salmon populations they once supported. He's been assigned to Governor Kitzhaber's office since 1995.

➤ CONTINUED ON PAGE 16

MARINE INVASIVE SPECIES

EUROPEAN GREEN CRAB
Carcinus maenas
throughout the Oregon coast

JAPANESE OYSTER DRILL
Ceratostoma inornatum
Netarts Bay, possibly Tillamook Bay

JAPANESE VARNISH CLAM
Nuttallia obscurata
Nestucca, Nehalem bays

BRAZILIAN ELODEA
Egeria densa
coastal lakes

ZEBRA MUSSEL
Dreissena polymorpha
threat

SPARTINA
Spartina alterniflora
threat

CHINESE MITTEN CRAB
Eriocheir sinensis
threat

BLUE CRAB
Callinectes sapidus
threat

ASIAN ESTUARY CLAM
Corbicula fluminea
threat

HYDRILLA
Hydrilla verticillata
threat

RIGHT: *European green crab,* Carcinus maenas *a problem species found throughout the Oregon coast*

INVADERS ➤ CONTINUED FROM PAGE 15

"The problem is a threat looming on the horizon that few scientists understand," Nicholas said. "If few scientists understand it, fewer managers (in government and administration) understand it, and even fewer of the public recognize this threat of invasive species."

Look closely at green crabs as an example of an exotic creature with punch. The crabs, which are often not actually green, but more mottled, are a problem everywhere along the Oregon coast, said Jim Golden, of ODFW's marine resources program in Newport. Their larvae is believed to have drifted up the coast from California on Pacific Ocean currents. By the mid-1990s, this crab with variable coloring from green through orange to red, was established in Coos Bay.

A native of Europe and northern Africa, this crab's behavior makes it a bully of the water community. Foraging green crabs can open shells of prey in more ways than other crabs. The voracious three-inch adults eat clams, oysters, mussels, small crustaceans and smaller crabs, such as young Dungeness. They threaten commercial shellfish, Dungeness operations and the balance of the intertidal ecosystem by devouring so much prey that little is left for native species. By eating small invertebrates, the crab may also be competing with migrating shore birds for food.

Invading species, such as the green crab, hitch rides on ocean currents. They also are passengers in ballast water and on hulls of transoceanic ships, in seaweed packing material for live shellfish, and on recreational boats, fishing and watersport equipment.

The ballast water that ships use for stability carries sea life from plankton to fish. Near or at ports, ships usually exchange the original water with fresh. A new U.S. Coast Guard rule encourages ships to exchange ballast water 200 miles offshore where the water is more saline and coastal organisms will find little food. But the rule only addresses transoceanic vessels, not coastal shipping.

A University of North Carolina marine biologist studied ballast water of 159 Japanese cargo ships entering Coos Bay in the early 1990s. Samples showed 367 kinds of marine organisms – the variety includes crabs, fish, shrimp, sea urchins, barnacles, jellyfish, worms, snails, clams and starfish.

Species have been introduced to new environments over the last 500 years, said John Chapman, an Oregon State University marine ecologist at the Hatfield Marine Science Center in Newport.

"Every ship that sailed had hundreds of thousands of passengers, and only a few were people," he said. "We've homogenized the flora and fauna of the world," Chapman said. "There are very fewpla ces in the world that we are confident there are no introduced species." So make no mistake. The mysterious and sometimes unseen creatures are coming. The question is how to respond to this invasion on non-native flora and fauna. "We are pretty well booked up dealing with the problems that are already here," Nicholas said. "Invasive species are only superficially addressed in the Oregon Plan. We try to save a little energy to deal with the problem that is just over the horizon."

The challenge is to spread the word about invasive species. And the challenge also depends on transforming concern into action – and doing it all with finite money, people and resources."

Jay Nicholas
ODFW FISHERIES BIOLOGIST

The state's greatest attention focuses on restoring watersheds and providing a suitable, functional, physical environment for native fish. To Nicholas, the biological environment is no less important than the physical environment. "It's hard to get people to take action against potential problems," Nicholas said. "The state has a hard enough time with such environmental problems as conserving water, repairing culverts, and restoring streams and riparian areas. The challenge is to spread the word about invasive species. And the challenge also depends on transforming concern into action-and doing it all with finite money, people and resources." A few people are sounding the alarm.

"The state of Oregon is way behind its neighbors trying to manage these species," said Mark Sytsma, associate professor in the environmental biology department at Portland State University. Sytsma is highly regarded by his peers in and out of government as one of the few people who really understands the biological and economic danger that invasive species represent. "What we really need is a state comprehensive management plan for these species," he said. "It's a matter of getting every agency on the same page, to agree on priorities and to wisely invest in some research on managing the species we have now."

He's hopeful. There is interest in ballast water legislation. And talk is circulating about a state legislative concept to create an invasive species council. At the federal level, President Clinton signed an executive order last year to create a federal invasive species council that would, among other jobs, write an invasive species management plan.

Managing invasive species in Oregon is divided among ODFW, the Oregon Department of Agriculture and the Marine Board. ODFW handles management of exotic fish and their potential to damage native fish, and regulations

GREGORY C. JENSEN

If they reached the Columbia, these filter-feeders would change the amount of algae in the water column, which is the basis of the food web. That in turn would have a negative effect on salmon.

Mark Sytsma
ASSOCIATE PROFESSOR
DEPARTMENT OF ENVIRONMENTAL BIOLOGY
PORTLAND STATE UNIVERSITY

INVADERS ➤ CONTINUED FROM PAGE 16

pertaining to mammals and birds. The Oregon Department of Agriculture and Oregon State University concentrates on weeds that could harm crops and livestock. The Oregon State Marine Board deals with recreational boating.

Oregon's hot list of marine invasive species, in addition to the green crab, includes the Japanese oyster drill in Netarts Bay and possibly Tillamook Bay. Another is the Japanese varnish clam in Nestucca and Nehalem bays on the north coast. ODFW hasn't evaluated the potential effect of this clam on native species. Since drifting larvae arrived from British Columbia, the clam has rapidly multiplied.

Almost every coastal lake is invaded with Brazilian elodea, which was originally introduced in North America for use in aquariums. Boaters can accidentally carry it from lake to lake.

"It's everywhere, and it was introduced without any of the herbivores that eat it," Sytsma said. Dense mats of the bushy stems choke native plants, changing the structure of the underwater environment for coho salmon rearing. The chemistry of the water changes to a high pH and dissolved oxygen fluctuates.

Invading species are a growing threat to this state. Oregon sits between California and Washington, each already battling invasive species. Chinese mitten crabs are a particular threat to the Columbia River estuary. One was found in the Columbia River near Astoria in 1996, but no others have been spotted. One theory is that it fell off a passing ship.

Mitten crabs may have been introduced to San Francisco Bay by ballast water from Asia or China, according to Sytsma. Or they might have been intentionally brought in because they could be exported to China as a delicacy. Mittens are catadromous — they spawn in saltwater and rear in freshwater. In California, mittens impinge on fish screens and power diversion screens. "If anyone sees a freshwater crab, it's a mitten. Report it to ODFW. It's very dangerous," Sytsma said.

From Washington, *Spartina alterniflora*, poses a significant threat to fish and wildlife habitat. Willapa Bay in southwest Washington is infested. The aquatic plant changes unvegetated, low intertidal mudflats to low marshes. The algae-based food web of the mudflat is gone and with it the Dungeness crab nursery, said Dennis Isaacson, special project coordinator in the Oregon Department of Agriculture, weed control section.

Aerial surveys of Oregon estuaries in 1998-99 found no *Spartina alterniflora*. Last fall, Isaacson also surveyed the mouths of 27 coastal streams with the same result. Small patches of the less aggressive *Spartina patens* grows on Nature Conservancy land on Cox Island in the Siuslaw estuary. This variety invades marshes, not mudflats, and replaces an existing grass with itself.

A local resident planted Spartina alterniflora in the Siuslaw estuary to control erosion a few years ago. The state convinced the person it was a bad idea, Isaacson said, and the plants have been eradicated.

What invasive species do biologists fear the most today? It's a tiny mollusk, about the size of a pistachio shell. "Zebra mussels are one of the biggest threats to the ecosystems in the Northwest," Sytsma said. If they reached the Columbia, these filter-feeders would change the amount of algae in the water column, which is the basis of the food web. That in turn would have a negative effect on salmon, according to Sytsma.

The small mollusks have caused millions of dollars of damage to intake pipes of factories, power plants and water supplies on the Great Lakes. Scientists believe they came in as larvae in the ballast water of a ship from an eastern European port in the mid-1980s. Since then, zebra mussels have invaded waterways in about 19 states.

Sytsma worries that modern explorers retracing the Lewis and Clark Trail for the bicentennial celebration will accidentally bring zebra mussels from the Missouri River into Oregon.

"We are going to deal with invasive species now or in the future," Nicholas said. "If we deal with the threat now, we have a better chance to limit or prevent damage. Once established, invasive species are difficult, if not impossible, to get rid of."

Time is running out.

Zebra mussels; blocking a pipe; encrusting an outboard motor

As you've read, invasive species are becoming a serious problem in Oregon. But fortunately, there are some things each one of us can do to help – particularly when it comes to boating. Just follow a few easy steps and the fish you save may end up being your own.

PREVENTATIVE MEASURES

by RANDY HENRY

It's an easy scenario to imagine: after visiting another state on a fishing trip, you launch your boat in a local Oregon lake and turn on the bilge pump. Without even knowing it, you could have just introduced a potentially dangerous new species into the watershed.

"If you use a boat, you need to be aware of this issue and be responsible," said Paul Donheffner, Oregon State Marine Board director. "Trailer boats are one way for zebra mussels, hydrilla and many other species to travel from one state to the next. The best way to protect Oregon's waters is to prevent these species from hitching a ride."

Even in-state boaters need to be careful. "The tui chub in Diamond Lake could have come from someone's bait bucket or live-well. Three-spine stickleback have shown up in Crane Prairie, potentially pumped from someone's bilge water after a day of crabbing on the coast," said Donheffner.

Fortunately, boaters can take some basic steps to prevent the spread of these species:

INSPECT your boat and trailer. Remove any plants and animals you see before leaving any waterbody.

DRAIN your motor, live-well and bilge while on land — preferably near the facility from which you just pulled your boat.

EMPTY your bait bucket appropriately — not into a waterbody. Use of live bait is prohibited in most Oregon waters.

RINSE your boat, trailer and equipment to kill harmful species that were not visible at the boat launch. It's best to use high-pressure hot water, but a garden hose and brush are better than nothing. If you use any soap or chemicals, rinse your boat, live-wells and bilge thoroughly before re-entering the water.

AIR-DRY your boat and equipment as long as possible — five days is optimal.

Fishing is more than just a sport. In fact, to some it's a way of life. But for most of us, fishing is a way to share memories and pass down experiences with friends and family. In fact, on one weekend this year we can truly say that...

THE BEST THINGS IN LIFE ARE FREE

CHANGING SEASONS often stir lively memories, particularly the onset of springtime. And springtime often pushes us to the warmer days of summer – a time to relish the outdoors, a time to play. For many, summertime conjures up childhood memories flooded with first-time experiences: sleeping under the stars, catching a frog, perfecting the technique of skipping stones, discovering a whole sand dollar and catching that first fish.

Growing up in the Northwest, fishing was a prominent childhood memory. It was part of the landscape and lifestyle. Fishing stories and experiences were passed from one generation to the next with a sense of pride and accomplishment. If you were lucky, the stories would become larger in scale – both literally and figuratively. Fishing was a celebration of the outdoors – a way to discover nature's treasures. It was a practice – connecting family and friends while enjoying independence, peace and solitude. Simply put, fishing had to be experienced.

Whether you have recently discovered the wonders of rod and reel or fished all your life, now is the time to consider becoming involved in this year's Free Fishing Weekend events. With 44 events statewide to choose from, you will have an opportunity to introduce a youngster to fishing for free on June 10 and 11. Free Fishing Weekend will offer kids of all ages (that means adults, too) the sheer joy and exhilaration of landing a fish. It's a chance to be with people of different abilities, backgrounds and experiences, to share and to learn. It's an opportunity to enjoy the great outdoors, challenge the senses and reel in perhaps your first fish. Above all, it's a weekend of fun.

As adults, some of our greatest joys can be met by the experiences we pass onto and share with others. As a teacher, seeing your efforts live through another's achievements renews inspiration. As a student, the gift of a new experience is cherished for a lifetime. There are few "lifetime" activities that can be easily shared and passed on to generations with the same sense of accomplishment, pride and joy as fishing. Memories and experiences keep us coming back for more. Tall tales keep us listening and looking for that next big fish story.

The Oregon Department of Fish and Wildlife offers Free Fishing Weekend events that will inspire you to bring your old memories and new experiences out to a weekend of fun. Consider taking a youngster, parent, grandparent or neighbor to a Free Fishing Weekend event on June 10 or 11. You'll leave with memories that will last a lifetime. And, if you're lucky, perhaps a few good stories to tell.

Find Free Fishing Weekend event sites at www.dfw.state.or.us/ODFWhtml – ODFW's website.

NATURAL HISTORY

You can't know where you're going until you know where you've been. Nowhere is that more true than in fish and wildlife management. Fortunately, a number of people have chronicled the history of our efforts and it's time to thank those who have provided us...

by LISA A. DEBRUYCKERE

WE CANNOT ESCAPE HISTORY. Bookstore shelves are lined with biographies documenting the lives and accomplishments of presidents and folk heroes. Movies are made on every war that has stripped our nation of its youth. The mere push of the button on a television remote control can take you to the History Channel, where you can watch the construction of the Hoover Dam or the lineage of Winchester products that helped settle the West and arm our overseas troops.

History increases our awareness and understanding, provides perspective, causes reflection, instills pride and gives information that can help us avoid the repetition of mistakes. History also brings a respect and recognition of those who came before us. To know where we are going, we must reflect on where we have been.

"Finding" history is like opening a door to the past. A couple of months ago, an ODFW employee discovered a document in a file titled, "Chronological History of Fish and Wildlife Administration in Oregon." The document credited ODFW ex-Deputy Director Bob Mace for making the effort to look back in time and document the history of fish and wildlife management in Oregon from 1792 to 1976. The author of the information from 1977 to 1991 is unknown. The existing ODFW administration provided the information from 1992-2000.

The history of fish and wildlife management in Oregon is a fascinating chronology of people and natural resources. It is a study in changing societal values and attitudes. The monetary value of a salmon today is certainly worth more to Oregonians than in 1792 – at that time it was worth the price of one nail. The cultural significance and recreational values of a salmon today are exceptional.

From the naming of the Columbia River in 1792 to the theft of the first Herman the Sturgeon in 1983, "A Look Back in Time" is an informative summary filled with the success stories of bighorn sheep and elk, and the failures of red-legged partridges and the planting of salmon yolk sacs. But for every failure came knowledge and a pioneering spirit to make adjustments, try something new, or abandon the project and refocus efforts.

Over 200 years of history helped shape Oregon's Department of Fish and Wildlife. Creating a legacy of triumph, failures and challenges, "A Look Back in Time" is a celebration of Oregonians and their values, and the men and women whose dedication and commitment continue to inspire stewardship of our fish and wildlife resources.

1792 Captain Robert Gray sailed across Columbia bar on a trading expedition for fur, salmon, and deer and elk meat. Bartering was at the rate of one nail for two salmon, two spikes for one beaver hide, and a small piece of copper for a sea otter hide. He named the river after his ship, the Columbia Rediviva. Prior to that time it was known as the Oregon, which some believe meant "River of the West."

1805-06 Journals of the Lewis and Clark Expedition reveal that salmon and steelhead in the Snake and upper Columbia rivers were more impressive than any other wildlife. Expedition members grew so tired of eating salmon that they purchased dogs from the Nez Perce to vary their diet. Expedition members rarely mentioned deer and elk until they reached Astoria, where they lived for five months on a solitary diet of elk meat.

1821 Hudson Bay Company established headquarters at Vancouver under the leadership of John McLaughlin. The Hudson Bay Company was responsible for early exploration in search of fur. They established the first conservation policy based on limiting fur catch, probably accounting for the successful tenure of the company for over half a century.

CLOCKWISE FROM LEFT:
Egg taking crew loads snow cat for trip into the Diamond Lake egg station. Deep snow during some years necessitated this form of travel; Oregon City and the Willamette Falls in the 1880s; Hunter's license issued in 1905; The first successful introduction of Chinese pheasants in North America was near Petersen Butte in Linn County.

1848 Oregon became a territory. Section 12 of the Territorial Constitution declared that rivers and streams supporting salmon shall not be dammed or otherwise obstructed unless to provide for fish passage.

1866 The first cannery was built by the Hume Brothers on the Columbia River at

Eagle Cliff, Washington. The cannery packed 4,000 cases the first year at a value of $64,000.

1872 The first game laws provided for a closed season on deer from February 1-June 1 and prohibited taking deer or elk for hides and antlers.

1877 The first hatchery was built by the U.S. Fish Commission on Clackamas River and was operated by Livingston Stone.

1878 The first State Fish Commission was created, but was not legally recognized until 1887.

1882 The first successful introduction of Chinese pheasants in North America was near Petersen Butte in Linn County.

1887 A three-member State Board of Fish Commissioners was established by the Legislature with a $1,000 budget to enforce fish and game laws and operate a hatchery for two years. The board leased a hatchery at the mouth of Clear Creek on the Clackamas River in April for one dollar from the Oregon and Washington Fish Propagation Company.

1893 The first combined fish and game administration in the state's history was created when the Legislature appointed Hollister McGuire as the State Game and Fish Protector. McGuire proved to be progressive, initiating the first fish-marking program in 1895 by clipping the adipose fin on 5,000 Clackamas Hatchery salmon of which 32 returned.

1898 A special session of the Legislature abolished the Fish and Game Protector position and created a Board of Fish Commissioners comprised of the Governor, Secretary of State, and Hollister McGuire as Fish Commissioner.

Shortly thereafter, McGuire drowned on the Umpqua River while in search of a hatchery site, but not before submitting a report on his activities to the Governor. In that 1897-1898 report, McGuire outlined some concerns.

He was troubled by the lack of protection for salmon, particularly on the upper Columbia and Snake and recommended several actions to be taken by the Legislature. The 1898 special session did respond to many of those concerns, passing a salmon law which included, among other things, the following provisions:

- Licensed industry to support hatcheries.
- Prohibited fishing on spawning tributaries to Columbia.
- Authorized Fish Commissioner to remove fish passage barriers.
- Divided the state into sex fishing districts with all fines and license fees to be spent on hatchery programs in the district where collected.
- Provided for enforcement through gear registration.
- Required screening of irrigation ditches.
- Prohibited introduction of fish not indigenous to the state.
- Delegated Commissioner authority to close streams stocked with fish.
- Established reporting system for canneries, dealers, and others.
- Required an annual report from the Fish Commissioner.
- Authorized the Commissioner to appoint a deputy in each county to enforce fish laws and to be paid from one half of all fines collected.
- Authorized the Board of Fish Commissioners to purchase and build fish hatcheries and audit all claims in connection with fisheries department.

Another law passed at the special session prohibited elk hunting until 1910; that closure was later extended.

1899 A commercial fishing license was required for the first time.

1901 The first bag limits for trout and ducks were established at 125 per day and 50 per day respectively. Nonresidents were required to purchase a $10 license.

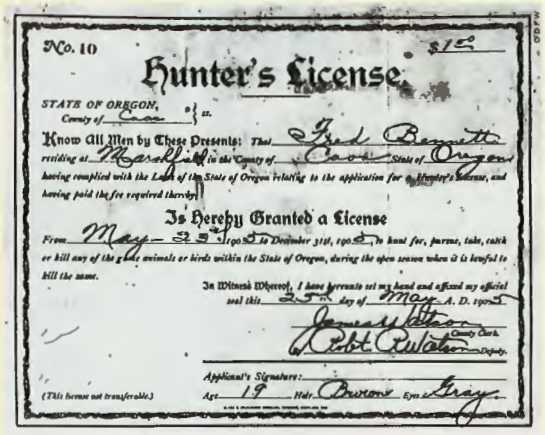
1903 The first record of concern over water quality was documented when Deputy Warden Webster filed complaint against Rainier Mill and Lumber Company for allowing sawdust to enter the Columbia River. The fine was $50 plus court costs. The budget approved by the Legislature included General Fund appropriations of $15,000 for Columbia River hatcheries, $5,000 for coastal hatcheries, and $5,000 for constructing a fishway over Willamette Falls.

1905 The State Game Fund was established. A $1 resident hunting license was created and the selling of game was prohibited.

1907 The first fishway over Willamette Falls was constructed at a cost of $2,600. After completion, the gradient of the upper portion proved too steep for fish to pass.

1908 The Lower Klamath and Malheur Lake refuges were established by Presidential Proclamation.

ABOVE: *68 Salmon caught in one night, 1907 Pearson Brothers salmon fishery Winchester, North Umpqua;* **RIGHT:** *Hunter's license issued in 1905;* **LEFT:** *Crowd gathered in Lostine to see elk being transported by train to Enterprise in 1912.*



No. 10 $1.00

Hunter's License.

STATE OF OREGON, County of Linn } ss.

Know All Men by These Presents: That Fred Bennett residing at Marshfield in the County of Coos State of Oregon having complied with the Laws of the State of Oregon relating to the application for a Hunter's License, and having paid the fee required thereby

Is Hereby Granted a License

From May 25 1905 to December 31st, 1905 to hunt for, pursue, take, catch or kill any of the game animals or birds within the State of Oregon, during the open season when it is lawful to kill the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal this 25th day of May A. D. 1905

James Watson County Clerk

Robt Webster Deputy.

Applicant's Signature:

(This license not transferable.) Age 19 Hgt. Brown Eyes Gray

1909 The Central Hatchery at Bonneville was completed, including hatchery house, several nursery ponds, one rearing pond and the superintendent's residence.

The Legislature appropriated $1,000 for seal and sea lion control on the Columbia River. A total of 288 seals and 670 sea lions were killed the first year.

A law was passed requiring ditches and mill race intakes to be screened.

1911 Fish and game activity merged for the second time and a new organization known as the State Board of Fish and Game Commissioners was created.

The Legislature established refuges totaling one and a half million acres.

1912 Elk from Wyoming were released at Billy Meadows in Wallowa County.

1915 The Board of Fish and Game Commissioners was abolished and a Fish and Game Commission was created. Governor Withycombe served as chairman on the three-member group while R. E. Clanton was Master Fish Warden and Carl Shoemaker served as State Game Warden.

CLOCKWISE FROM ABOVE: *In 1933, elk season reopened for the first time since closure in early 1900s. Fish transported by horseback for stocking; Fish stocking on McKenzie Pass, Benson Lake;* The Oregon Sportsman *Volume 1, Issue 1, September 1924*

1917 The Fish and Game Commission's biennial report references World War I and it's impact, including a revenue decline of $30,000 and a reduction in enforcement from 30 to 17 wardens.

The Master Fish Warden reported releasing 68.7 million salmon and 15.6 million game fish. Problems were still evident at Willamette Falls and plans were being made to improve the fishway with funds appropriated by the Legislature.

1920 At a special legislative session, the Board of Fish and Game Commissioners was abolished and replaced by a three-member Fish Commission and a five-member Game Commission. That organization remained in effect until the 1975 merger, although Commission members were later appointed by the Governor rather than the Legislature. The major operational change involved divorcing all commercial activities from sports interests.

In his first report, Hatchery Superintendent Clanton credited the increased Columbia River salmon run to Oregon hatchery methods.

1925 The annual report of the Game Commission expressed concern about water shortages, increased pressure on fish and wildlife reserves because of increased access created by the automobile, and the demands for more fish, more game, more patrol, and more protection. Problems were increasing and becoming more difficult to solve each year.

1931 Fish and game enforcement was transferred to Oregon State Police. The beaver season was closed.

The depression was in full swing and pay was both low and irregular. Although rates varied, $80 to $90 per month was the going rate for a hatcheryman who worked six days a week with no overtime pay. Checks arrived at irregular intervals, dependent on availability of funds, and could be three to five months late.

1933 Elk season reopened for the first time since closure in early 1900s.

1937 The Pittman-Robertson Act passed, providing for an excise tax on sporting arms and ammunition to be used for state fish and wildlife programs.

1938 The first class of fish and wildlife students graduated from Oregon State.

1941 The Legislature delegated authority to the Game Commission to set seasons and bag limits and to install screens in ditches under eight feet wide.

A total of 232,000 hunting and angling licenses valued at $719,000 were sold. A total of $162,000 was received from the sale of 5,622 commercial licenses, including 1,167 gillnet and 61 troll licenses.

1942 South Twin Lake was chemically treated, marking first lake rehabilitation project.

1944 Summer Lake was purchased with Pittman-Robertson funds, becoming the first wildlife management area.

1945 Employees on military leave began returning from service. Phil Schneider became Game Coordinator, and Bob Holloway was placed in charge of lake and stream surveys for the Game Commission. Don McKernan was named Director of the Research for the Fish Commission, assisted by Don Johnson.

1946 The Game Commission Bulletin, now Oregon Wildlife magazine, was published. The Game Commission moved from Oregon Building to its new headquarters at SW 17th and Alder. The Game Division organized with biologists assigned to districts.

1950 Mountain goats were planted in the Wallowa Mountains. The Dingell-Johnson Act passed, providing for excise taxes on fishing tackle to finance sport fisheries programs. Environmental concerns prompted the establishment of the Basins Investigations Section in the Game Commission. The organization decentralized with creation of five regions.

1951 Phil Schneider became State Game Director. Fishing and hunting license sales totaled 400,000. The Game Commission operated on a $5,000,000 biennial budget.

Research expanded to include studies on the Columbia River, troll salmon, coastal rivers, hatchery management, marine fisheries and shellfish. Three hundred fifty-seven thousand chinook passed Bonneville Dam. Commercial fishing licenses totaled 7,026 with only 91 being issued for trolling. The biennial budget totaled $2,000,000.

1954 California bighorns were reintroduced to Hart Mountain.

1956 Troll license sales nearly doubled from 486 in 1955 to 866 in 1956

1961 Merriam's turkey was successfully introduced. Six hundred seventy thousand hunting and angling licenses were sold. Game Commission operated on a $7,500,000 biennial budget.

1966 A Russian trawl fleet appeared off the Oregon coast.

1969 John McKean was named State Game Director and a marine laboratory was constructed at Newport.

1971 The Legislature delegated responsibility for 235 nongame species of wildlife to the Game Commission. The Basins Investigations Section was renamed Environmental Management. The biennial budget was $15,000,000.

1975 The Fish and Wildlife Commissions merged effective July 1 and a seven member Commission was appointed for staggered four-year terms. Qualifications for commission membership excluded anyone holding office in a sport or commercial fishing organization or having interest in a commercial fish processing company.

At the time of the merger, the Oregon Department of Fish and Wildlife employed approximately 750 people, operated 31 hatcheries and four rearing ponds, raised 3.6 million fish yearly, operated one game farm with an annual capacity of 20,000 pheasants, owned and managed 22 wildlife areas encompassing approximately 140,000 acres, controlled 82 fish management areas, totaling 6,000 acres, accommodated 766,00 anglers and 390,000 hunters who enjoyed 10 million days of recreation annually and spent $190,000,000 in the process, issued 5,570 licenses to commercial fishermen who harvested $102,000,000 worth of fish and shellfish products annually, and operated on a biennial budget of $40,000,000 of which 50 percent was provided from user fees, 33 percent by the federal government, and 17 percent from the State General Fund.

1976 Congress passed the Fishery Conservation and Management Act that claimed responsibility for fishery management from three to 200 miles off the coast. The Oregon Department of Fish and Wildlife is represented on both the Pacific and North Pacific

Regional Councils, providing a voice in and responsibility for managing fisheries in over a million square miles of ocean.

1977 A five-year fishery management plan for the Columbia River was signed, following months of negotiations between the State of Oregon, Washington, and the four treaty Indian nations. The "Five Year Plan," as it soon became known, provided a real breakthrough for both user groups and fisheries managers and was the first step in joint management of the river's fisheries resources.

The bobcat received legal protection as a furbearer by legislative action. The Legislature also elevated certain game and commercial fish violations to Class C felonies, giving the courts authority for tougher punishment options for repeat and major law violators.

1979 A new fish hatchery on the Clackamas River brought the number of state-operated hatcheries to 32. A totally reconstructed McKenzie Hatchery and an expanded Bonneville Hatchery also came on-line.

Oregon borrowed a good idea from Colorado and became the second state in the union to allow its taxpayers to donate a part of their income tax refunds to help nongame wildlife. The Wildlife Checkoff earned $337,000 for nongame animals and habitat in its first year.

1980 Limited entry began for Oregon's commercial offshore fisheries. For the first time, salmon trollers, groundfish and shrimp trawlers had to procure permits to land their catches in Oregon and had to maintain evidence of fishing activity each year to keep these permits active.

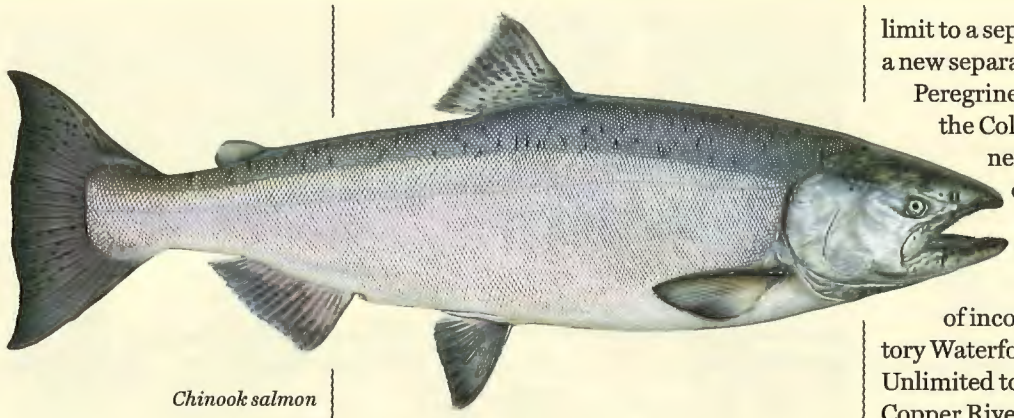
CLOCKWISE FROM LEFT: *In 1957, Celilo Falls was flooded by completion of The Dalles dam. Employees and visitors to fish hatcheries. Governor Tom McCall at the dedication of the Willamette Falls fishway.*

Congress passed the Northwest Power Planning Act. For the first time ever, management of fish and wildlife resources became an equal partner with power generation, irrigation and flood control in the Columbia Basin. The act set up the Northwest Power Planning Council for administration, which provided funding for fish and wildlife mitigation.

STEP, Oregon's Salmon-Trout Enhancement Program, became a reality with the Legislature's blessing.

1981 "Herman the Sturgeon" officially opened the 1982 Oregon State Fair. The 8-foot fish had been with the Department for 50 years, making it to nearly every state fair during that time.

1982 El Niño, an environmental imbalance that caused a general warming of the Pacific Ocean and other climate changes created severe problems with salmon and other



JOSEPH R. TOMELLERI

Chinook salmon

ocean fish populations. The results were disastrous economic impacts on the commercial and sport fisheries and coastal communities dependent on tourism.

The Department received six mountain goats from Idaho and released them into the Elkhorn Mountains of Baker County with hopes of establishing a population of the goats in Northeast Oregon.

The Oregon Wildlife Heritage Foundation organized a fund-raising drive, providing the needed support for acquisition of the lower 13 miles of the Deschutes River banks for public access. The land became the Lower Deschutes Wildlife Area, under department management.

Lookingglass Fish Hatchery, located 18 miles from Elgin on Lookingglass Creek, a tributary of the Grande Rhonde River, was completed and dedicated.

1983 The first annual Oregon "Plague of Plastics" beach cleanup was sponsored by Oregon Fish and Wildlife. During four hours on a Saturday morning, volunteers collected and bagged 23.6 tons of solid waste from Oregon's public beaches.

The first Oregon Migratory Waterfowl Stamp was issued by the department.

1984 The U.S.-Canada Treaty for management of Pacific salmon was ratified by both countries. Under the treaty, each country gained general management control of stocks originating in its own rivers. Treaty goals include prevention of overfishing, increased production of salmon, and ensuring that each country receives the benefit of its own production.

The first French red-legged partridge eggs were shipped from Canada to the Department's game farm on the E. E. Wilson Wildlife Area, north of Corvallis. This was the beginning of extensive changes for the state's game bird propagation program, which centered around raising and release of ring-neck pheasants.

1985 An angling license was required for all species, not just game fish. The salmon-steelhead tag changed from a yearly 20-fish limit to a separate fee for each unit of ten fish a new separate tag was created for sturgeon.

Peregrine falcons were reintroduced into the Columbia Gorge, where they had not nested for 30 years. Wildlife Check-off money helped fund the cooperative project between ODFW and the U.S. Forest Service.

A portion of the state's share of income from the first Oregon Migratory Waterfowl Stamp was given to Ducks Unlimited to build 400 nesting islands on the Copper River Delta in Alaska for dusky Canada geese. Oregon Trout issued its first edition trout stamp to generate funding for wild fish projects in the state.

1986 The Department and Oregon Wildlife Heritage Foundation jointly released the first game farm red-legged partridges on the White River Wildlife Area.

The Legislature eliminated funding for two hatcheries. The north coastal Siletz Hatchery was closed and demolished. But central Oregon residents' strong opposition to closing Fall River Hatchery near Bend stayed the facility's closure when trout production from northeast Oregon was temporarily moved there.

The first "Governor's sheep tag" was sold at auction during the annual convention of the Oregon Hunters Association. The tag went for $56,000. An additional $13,000 for Oregon's sheep program was raised during the convention.

ODFW

Peregrine falcon made a comeback in 1989

A blood virus epidemic infected bighorn sheep in the area of the Lostine River. More than 100 animals died including one large ram, known as Spot. Later measurement of his horns set a North American record with the Boone and Crocket Club.

1987 Extreme forest fire danger in western Oregon caused the state forester to close ten million acres of public and private lands to recreational access for two weeks in October. Fish and Wildlife Commissioners extended the blacktail deer season by three days in response to the closure.

1988 Governor Neil Goldschmidt lent his support to a department legislative proposal to launch a major effort to restore aging hatcheries, improve natural fish production and increase angling access. The Legislature passed the Fish Restoration and Enhancement Act, which placed a $2 surcharge on sportfishing licenses and increased the commercial salmon permit and poundage fees to fund the program. The fee increases were expected to raise more than $4 million dollars.

The first major hatchery restoration project was at Cedar Creek Hatchery in Tillamook County. This was the last department steelhead facility that was not able to finclip fish because of old pond structures. Several ponds were replaced or lines as part of the project.

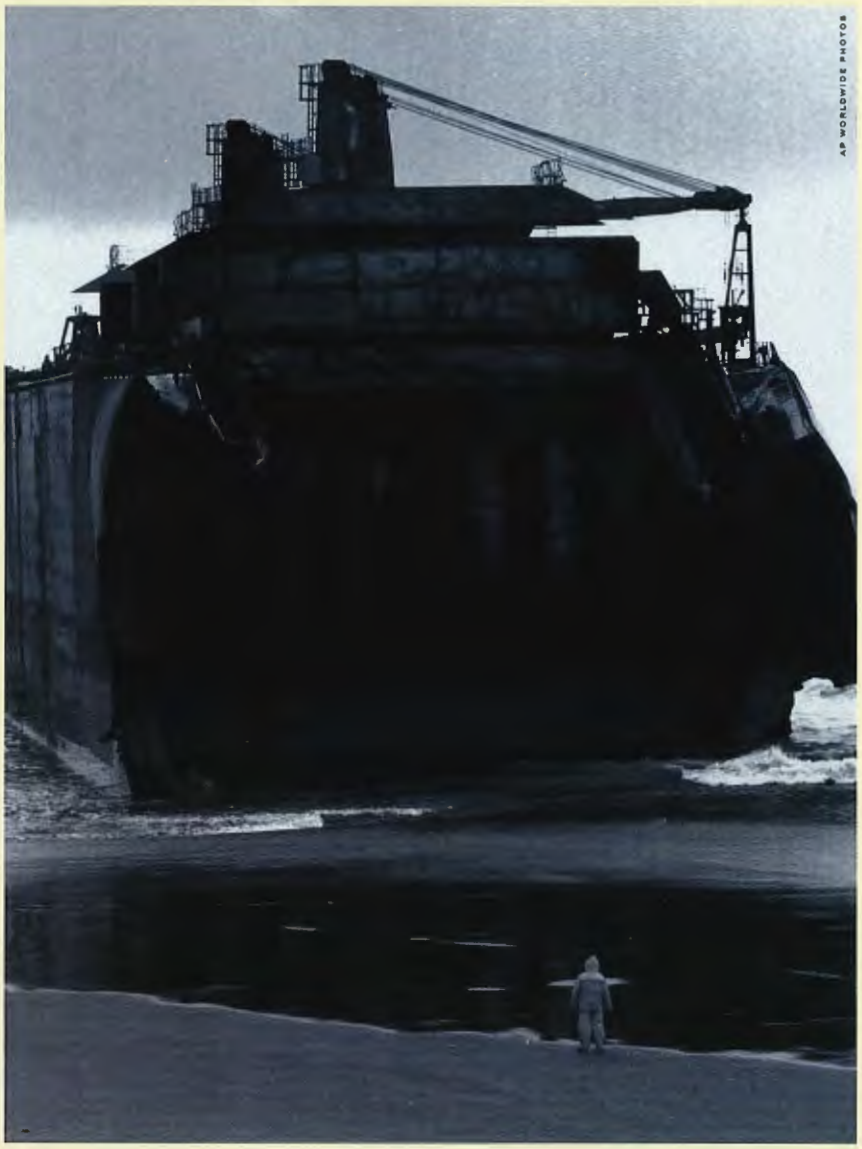
The 1989 Legislature approved a $5 upland game bird stamp, and also decided that the department could receive the interest on the Wildlife Fund. Proceeds from this interest would be split between nongame management programs and fish hatchery maintenance

1989 The department sponsored its first, statewide Free Fishing Day on June 9 as part of National Fishing Week. The U.S. Forest Service also participated, offering free camping in some forest campgrounds.

The year turned out to be a very good one for peregrine falcons in Oregon. During the year, biologists found five wild nest sites, bringing the statewide nest total to 16. This compares to just one known site in 1985. The department also "hacked" 26 young birds in five additional sites and placed two foster chicks in a southwest Oregon nest.

The Central Region hired the department's first female district (field) biologist.

1990 This started as a big year of transition for fish and wildlife management and state government in general. November 1990 voter approval of a tax limitation measure forced heavy general fund budget cuts.



AP WORLDWIDE PHOTOS

ABOVE: *the aft section of the New Carissa aground in 1999*

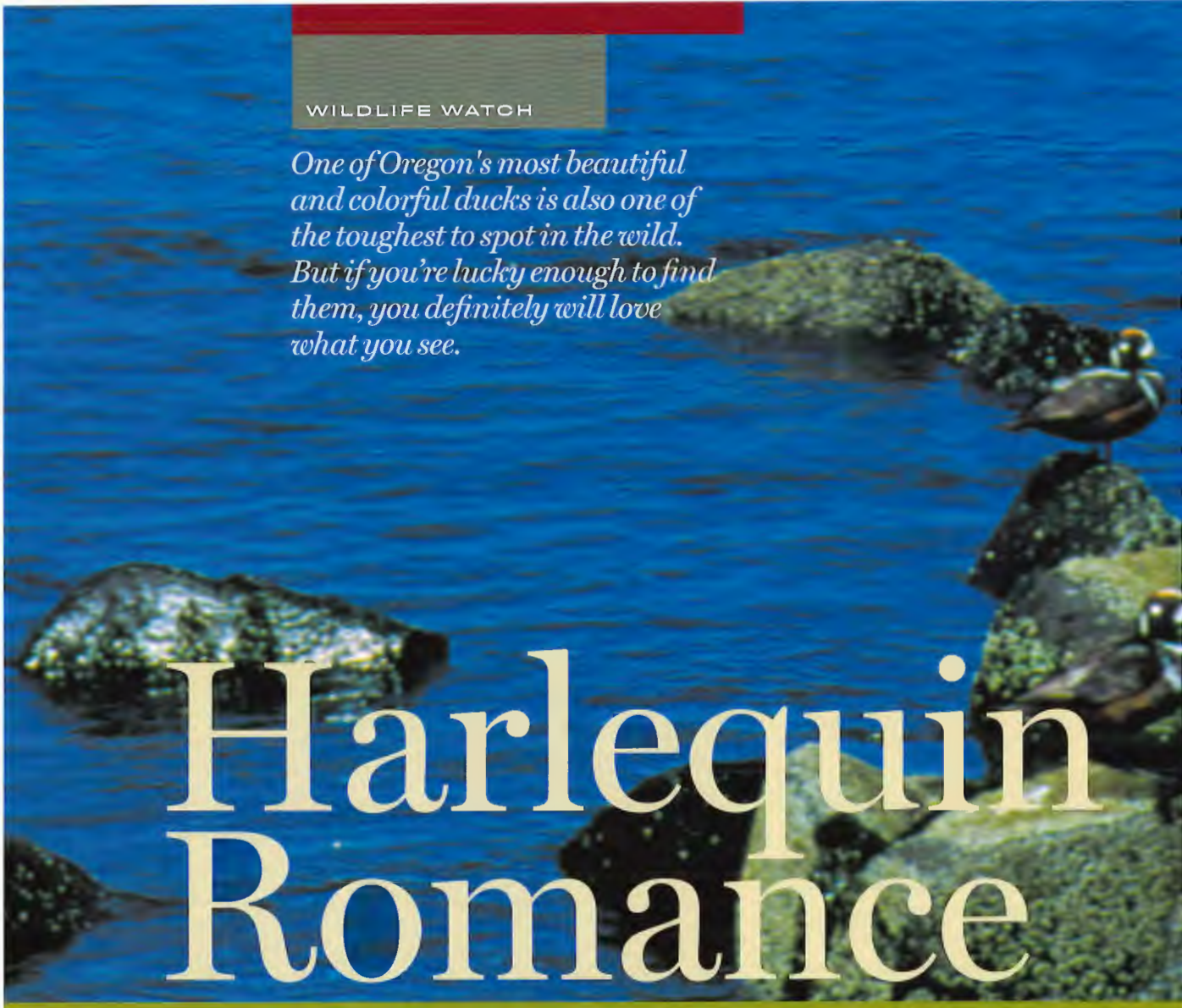
The Fish and Wildlife Commission approved wildlife division proposals to go to full limited entry for buck mile deer hunting and first period Rocky Mountain elk bull seasons in 1991.

Governor Barbara Roberts started a process to review state government operations and seek alternative methods of organizing natural resource agencies, and developing different funding approaches for agency programs. Without new funding sources to offset losses to Measure 5 cuts, state agencies could face 25 percent cut from base budgets in the 1993-95 biennium.

This year was one that focused heavily on species and agency planning. The Mule Deer Management Plan was approved by the commission and the process started on an elk plan. On the fish side, the Coastal Chinook Management Plan was headed for commission review while a public process to update the Coho Plan was started.

A budget note in the 1991 agency budget also called on the department to develop a strategic plan for future fish and wildlife management by 1993.

One of Oregon's most beautiful and colorful ducks is also one of the toughest to spot in the wild. But if you're lucky enough to find them, you definitely will love what you see.



Harlequin Romance

by PEG BOULAY & REBECCA GOGGANS

WHEN YOU THINK of ducks, what comes to mind? A temperamental Disney character? A university football team? The chubby waddlers who look for handouts at your neighborhood park? Perhaps even an *entrée* served with a delicate cherry-rosemary sauce? Would you consider a Renaissance jester?

One of Oregon's most beautiful ducks was named after the brightly costumed clowns that starred in Italian plays during the 16th and 17th centuries. The harlequin duck gets its name from the male's colorful plumage of slate blue and rusty red accented with bold white patches. Even the duck's scientific name, *Histronicus histronicus*, refers to its theatrical coloration.

Large crashing waves and river rapids set the stage for this duck. Harlequins are *anadromous* ducks that travel between the ocean and fresh water streams. They breed in cold, clear, turbulent mountain streams, but winter in the churning surf of the Pacific Ocean. Harlequins have adapted to take advantage of the abundant food that occurs where water is fast and frothy. Generally, the harder water is churned the higher its oxygen content and nutrient levels. It provides a great abundance and diversity of invertebrate life. Harlequins feed on a banquet of crustaceans, mollusks, insects and worms while wintering at the coast. They can swallow mussels whole, grinding the shells in their gizzards.

Harlequins are shy, elusive birds that are rarely observed in their summer breeding streams. Mated pairs travel to western Cascade streams in the early spring. They are often faithful to a single stream, even a single nest site, returning year after year. However, once the females start incubating their eggs, the males return to the coast, leaving the hens to raise their broods alone.

Harlequin females usually lay four to seven eggs, and the chicks hatch after 28 days. Females immediately lead the downy chicks

away from the nest to a brooding area in shallow, calm water where there are plenty of rocks for safe loafing. "Loafing" is the term biologists use to describe when an animal rests for long periods of time to conserve energy, not unlike someone loafing in a hammock on a hot day. In their summer mountain homes, harlequins feed on caddisfly larvae and other aquatic invertebrates. Like American dippers, another bird that lives in swift streams, harlequins are graceful in tumultuous torrents and can even walk underwater. Young harlequins stay with their mother through the summer, and may accompany her to the coast in the fall.

During the summer, harlequins are difficult to see and highly sensitive to disturbance. You will probably have better luck viewing them during the winter along the Oregon coast, where they gather at rocky areas like Tillamook Bay near Garibaldi in Tillamook County, the South Jetty of Yaquina Bay and Seal Rocks in Lincoln County, or Stonefield Beach in Lane County.

Because female and young harlequins are drab in color and males look dark at a distance, the ducks are well camouflaged in their winter homes. You will need sharp observation skills,

and perhaps a good pair of binoculars, to detect them. Look for these ducks swimming and feeding in the surf of the intertidal zone and resting on rocks just off shore. On a sunny day, harlequins bask on their rock perches, and the males' costume of blue and red offer a striking contrast to the foamy surf. So if you are visiting the coast this winter to watch whales or hunt agates, keep an eye out for Oregon's little clowns. Seeing these beautiful sea ducks can brighten the stormiest winter day.

Wildlife Viewing Opportunities

SPRING IS HERE and the wildlife action is heating up. Here is a sampling of sites with sights

Portland/Willamette Valley

- See a variety of **SONGBIRDS, PILEATED WOODPECKERS, GREAT BLUE HERONS, GREEN-BACKED HERONS** and waterfowl at Oaks Bottom Wildlife Refuge in Portland.
- The Willamette Valley is a significant wintering area for bald eagles, other birds of prey and waterfowl. Excellent viewing opportunities for waterfowl can be found at Ankeny, Baskett Slough or Finley National Wildlife refuges, and state parks along the Willamette River. **BALD EAGLES** may be seen most commonly in south Linn and north Lane counties. Other birds of prey are widely scattered throughout the Willamette Valley.
- Look for **RED-TAILED** and **ROUGH-LEGGED HAWKS** on fence posts and utility towers along I-5. Other birds of prey are widely scattered throughout the Willamette Valley.
- **SONGBIRDS, HAWKS** and others are moving into and through Oregon in the Willamette Valley, the coastal mountains and along the ocean shoreline.

Coast

- Wintering **DUSKY AND ALEUTIAN CANADA GEESE** can be seen along Highway 101 at the Nestucca Bay National Wildlife Refuge.
- **BRANT, LOONS AND SEA DUCKS** are wintering in Netarts and Tillamook Bays.
- Look for seals and sea lions at **YAQUINA HEAD.**
- **CALIFORNIA GRAY WHALES** are migrating, with prime viewing at Ecola, Cape Blanco and Cape Lookout state parks, Yaquina Head and Cape Perpetua.
- Over **200 ELK** winter at **JEWELL MEADOWS WILDLIFE AREA.** During the winter, they are usually in the meadows along Highway 202 or Beneke Creek Road. The area usually hosts about 60 bulls, most of which have branched antlers.

Southwest

- Visit **OREGON CAVES NATIONAL MONUMENT** to look for bats and Pacific giant salamanders, among other things.
- **DENMAN WILDLIFE AREA** is one of several ODFW sites with wintering waterfowl habitat.
- Ducks, geese and swans can be viewed at **PLAT-I, COOPER CREEK, EMIGRANT** and other reservoirs.
- Look for **BALD EAGLES ALONG THE UMPQUA RIVER** between Interstate 5 and the coast (sate roads 138 and 38).
- Lithia Park in Ashland hosts **WOOD DUCKS, MALLARDS, GREY SQUIRRELS AND TURTLES.**

**For more information about Oregon Outdoor Women Seminars, call 503-872-5264 ext. 5358.*

For general information on seasons, regulations, and events call 503-872-5268 or check ODFW's web site at www.dfw.state.or.us

MAY

5-7 STEP Conference, Bend *Call ODFW for information 503-872-5252*

7 Eastern Oregon Deer Hunt auction *Call Access & Habitat for information 503-872-5260*

8 Public meeting to review 2001 Angling Regulation proposals in LaGrande, 7 pm-10-pm *Call local ODFW office for location*

9 Public meeting to review 2001 Angling Regulation proposals in Bend, 7 pm-10 pm *Call local ODFW office for location*

10 Public meeting to review 2001 Angling Regulation proposals in Klamath Falls, 7 pm-10 pm *Call local ODFW office for location*

11 Public meeting to review 2001 Angling Regulation proposals in Roseburg, 7 pm-10 pm *Call local ODFW office for location*

13 International Migratory Bird Day

15 Pronghorn Antelope, Bighorn Sheep, Deer, Elk, Rocky Mt. Goat deadline to purchase controlled hunt application

15 Public meeting to review 2001 Angling Regulation proposals in Springfield, 7 pm-10 pm *Call local ODFW office for location*

16 Public meeting to review 2001 Angling Regulation proposals in Newport, 7 pm-10 pm *Call local ODFW office for location*

17 Public meeting to review 2001 Angling Regulation proposals in Portland, 7 pm-10-pm, ODFW Headquarters Building, 2501 SW First Ave., Portland, Oregon *Call 503-872-5252 for further information*

19 Commission Meeting – The Dalles

20 Statewide Elk Hunt auction *Call Access & Habitat for information 503-872-5260*

20-21 Oregon Outdoor Women Seminar* *Fly Fishing the Rogue River, Trail*

27 Opening of main trout angling season in most streams *Refer to 2000 Oregon Sport Fishing Regulations for details*

31 Close of 2000 Spring Turkey Season statewide

JUNE

9-10 Commission Meeting – Portland

9-10 Oregon Outdoor Women Seminar* *Capture the Coast, Gold Beach*

Central

- Warblers, western tanagers, flycatchers and pygmy nuthatches can be seen at the head of the **METOLIUS RIVER** through July.
- Davis Lake is the place for **COURTSHIP AND NESTING OF WESTERN GREBES** through July. It's also an excellent place to watch forest birds such as red crossbills, pygmy nuthatches, western tanagers, and white-headed woodpeckers.
- Wintering raptors are abundant in the **FT. ROCK AREA.** Bald eagles can be observed at Lake Billy Chinook.
- Winter migrating birds of prey have moved into the central area of the state. **VIEW POINTS ALONG THE POST PAULINA HIGHWAY** offer good opportunities to see bald and golden eagles, red-tailed, rough-leg and marsh hawks, prairie falcons and great-horned owls.
- **BALD EAGLES** have shown up in fair numbers in the Klamath Basin. Excellent viewing opportunities can be found at the Klamath Wildlife Area where eagles are actively working flocks of geese. Good viewing can also be found at the Lower Klamath National Wildlife Refuge as well as other areas in the basin where eagles are foraging. Also, look for other raptors, including rough-legged hawks and northern harriers.
- **WHITE-FRONTED GEESE AND SNOW GEESE** have shown up in the Klamath Basin in good numbers These spring migrants will stage here in the Klamath Basin as their last stopover prior to moving north to their arctic nesting grounds.
- Large numbers of **TUNDRA SWANS** can be found at most wetland areas around Klamath Basin. Sandhill cranes and American White Pelicans have also returned to the basin. Look for other spring migrants to start showing up in the basin, including shorebirds and neotropical migrants.

Northeast

- Good opportunities for viewing **BALD EAGLES** along Brownlee and Oxbow reservoirs, the Snake River and the Wallowa River Canyon between Minam and Wallowa.
- Viewing opportunities for waterfowl and shorebird species are good along the **COLUMBIA RIVER, IRRIGON WILDLIFE AREA AND WILLOW CREEK WILDLIFE AREA.** Viewing opportunities are also available on the Umatilla Wildlife Refuge complex.
- **ROCKY MOUNTAIN ELK, BIGHORN SHEEP AND MULE DEER** can be watched and photographed in ODFW's Wenaha and Elkhorn (esp. the North Powder and Auburn units) wildlife areas until warmer weather comes.

Southeast

- Southeast Oregon can be spectacular for birds during late winter-early spring migration (March-May). Try Summer Lake Wildlife Area, Malheur National Wildlife Refuge and the Harney Basin for **MIGRANT WATERBIRDS.** Bald eagles are attracted to these large concentrations as well.
- At Summer Lake Wildlife Area the main marsh area south of the Headquarters Road near Bullgate and Windbreak Campgrounds, and the County Road Field offer good opportunities to view large flocks of **FEEDING SNOW GEESE** and **BALD EAGLES.** This area is especially productive during the late afternoon hours.
- The **HARNEY BASIN** is receiving migrant waterfowl daily, with large numbers of pintails and snow geese dominating the waters. Shallow, open water is attracting most of the birds. Wintering raptors are present in good numbers in the Harney Basin also. Bald eagle numbers are continuing to build, as they follow waterfowl from the Klamath Basin.
- Early **MIGRATING SONGBIRDS** and **WADING BIRDS** are showing up around the melting landscape.

10-11 Oregon Free Fishing Weekend
Call ODFW for information – 503-872-5268

10-11 Oregon Outdoor Women Seminar*
Basic Seminar, – La Pine State Park

17 Oregon Outdoor Women Seminar*
A Day on the Range, Springfield

20 Pronghorn Antelope, Bighorn Sheep, Deer, Elk, Rocky Mt. Goat tags and results available

24 Oregon Outdoor Women Seminar*
Basic Seminar, Corvallis – E.E. Wilson Wildlife Area

JULY

1 Opening for Extended Season Cougar Hunting *Refer to 2000 Oregon Big Game Regulations for details*

1 Opening of "Youth First Time" Hunt application period *Refer to 2000 Oregon Big Game Regulations for details*

15-16 Oregon Outdoor Women Seminar*
Capture the Coast - Garibaldi

21 Commission Meeting – Baker City

22 Oregon Outdoor Women Seminar*
Basic Seminar, La Grande, Elkhorn Wildlife Area