FOR FISH BIOLOGISTS, NO EASY CHOICES

Curt Kraemer is Regional Fish Biologist with the Washington Department of Wildlife’s Region 4 office near Seattle. He has a lot to say, and do, about wild steelhead in Puget Sound rivers. Curt has appeared twice before in these pages (issues 5 and 8) and we’re glad to have him back.

Steelhead, like all fish, are products of their environment.

The characteristics of a particular race of steelhead, including those that are of interest to anglers, are genetically determined and passed from one generation to the next. There is usually some variation in these characteristics that determines the probability of an individual surviving to adulthood and contributing to the continuation of the species.

It is this selection by the environment, within the genetic variability of a population, that allows a population to adapt to environmental changes and to evolve over time.

So the wild steelhead found today in Washington state are different genetically than those found here 200 years ago.

All our river systems have been altered by man’s activities. Critical estuarine marshes have been filled, roads and parking lots built, rivers impounded by dams.

All these changes have resulted in changes in the riverine environment that steelhead use. River flows have been altered, with peak flows higher and low flows lower. Often the summer water temperatures are higher. The amount of sand and gravel being moved by the stream has changed, with major changes occurring in the quality of the spawning gravel. These changes have resulted in subtle shifts in the characteristics of each river’s steelhead populations.

Washington’s Tolt River gives us a chance to watch this process in action. The dam on the Tolt’s South Fork may have changed the winter high flows so that winter-run steelhead now have access to a section of river that was once used exclusively by summer runs.

With the summer runs losing the advantage of exclusive use of the river habitat just below the dam, one would expect over time to see a decline in the number of summer runs and an increase in the number of winter fish. The stream can be producing just as many smolts but now of a different race.

A factor that determines how quickly the environment influences the selection process on a population is the density of fish using a given habitat. The more fish using the environment, the more severe the selection against individuals within the population that are out of tune with the environment.

In other words, the closer a population is to carrying capacity, the less likely it is that a maladapted individual will contribute to the continuation of the population. In a healthy wild population near carrying capacity, hatchery fish have little chance of passing on maladapted genes.

Long-term survival of wild fish populations requires the maintenance of the population’s reproductive potential.

In populations at less than carrying capacity, spawning fish must produce enough fry, parr, and smolts to ensure that more adults return than those that spawned them. As long as the reproductive potential of the population is maintained, spawning escapements below carrying capacity will produce more adults than the parent generation and move the total (Continued on page 7.)
THE ANNUAL REPORT: FOCUS ON OPPORTUNITY

This year’s report details the activities and issues confronted by the Steelhead Committee of the Northwest Regional Council. Its author, Pete Soverel, was elevated to National/Steelhead Chairman after this report was prepared for the region. Pete continues to wear the regional hat, as well.

Based upon steelhead returns up and down the West Coast, 1990-91 was a very bad year. Wild and hatchery returns from California to Alaska appear from initial information to have been severely depressed.

Managers and sportmen alike are searching for answers, although most attribute the depressed runs to poor ocean survival. The on-going illegal and intensive Japanese, Taiwanese, and Korean fisheries north of the so-called squid zone harvest substantial numbers of steelhead along with other salmons. They contributed to some degree to the decline in steelhead runs over the past several years. We hope this fishery will be phased out by June 30, 1992, when a world-wide ban mandated by UN resolution 44/225 goes into effect.

Taiwan has announced that it will obey the UN ban, but the announcement came furled with a coating of weasel words that all spell “Yes, maybe.”

In addition to running the gauntlet of drift nets, steelhead must evade thousands of American, Canadian and tribal nets as they approach and then enter their natal rivers.

The massive mixed-stock salmon fishery off the mouth of the Skeena River in British Columbia is perhaps the worst example. During the salmon-fishing season, the nets take 80 to 90 percent of the Skeena steelhead. No wonder that many stocks of Skeena steelhead, particularly early returning stocks, are in deep trouble.

Sadly, although the technology exists to provide for a targeted fishery (e.g., captures of millions of pink salmon while permitting depressed stocks of steelhead and coho to pass through the fishery without interception), the Canadian federal government has not taken effective steps to protect the last remaining great run of Skeena wild steelhead.

Many readers will recall Tom Pero’s definitive article, “Wonderful Skeena,” in the autumn issue of Trout, which details the problems confronting steelhead. Read it, get mad and send a letter off to the Minister of Fisheries and Oceans, Government of Canada, 200 Kent Street, Ottawa, Ontario, Canada K1A 0E6.

Less well known is the huge harvest of Alaska-BC bound summer steelhead by southeast Alaska commercial fishermen who increasingly target steelhead as the steelhead make landfall in certain specific areas off the Alaska coast. Reportedly this fishery captures 25,000 to 40,000 steelhead annually! A note to the governor of Alaska might be in order.

On the brighter side, as our stocks of steelhead have declined, public and official awareness of their importance has risen.

I attended a symposium on steelhead in Portland, OR, put on by the Association of Northwest Steelheaders. With a couple of notable exceptions, most state and federal managers recognized the value of wild steelhead stocks and said they are taking steps to manage increasingly for wild production.

Most seem to have finally, if belatedly, come to recognize the pernicious impact hatchery programs have had on wild stocks:

- Hatchery programs injure wild juveniles, cause hatchery fish to interbreed with wild stocks and so undermine genetic diversity and introduce diseases which may devastate wild stocks.

- Hatchery production deflects public attention from the root causes of steelhead declines (habitat alteration, negligent timber-harvest practices, water-diversion programs, and excessive sports/commercial/tribal harvests and so on) until the stocks are on or beyond the edge of extirpation.

For example, scores of Columbia upriver steelhead and salmonid stocks are already extinct and wild stocks are currently at about one percent of historic abundance!

I am especially pleased to report that the Washington Wildlife Commission has approved a progressive set of regulations designed to protect depressed stocks of wild summer steelhead in the Tolt River. The new regulations require release of all wild steelhead in the Tolt and the Snoqualmie Rivers (the Tolt is a tributary), impose a ban on the Tolt to provide a sanctuary area for the wild steelhead and terminate stocking of hatchery smolts in the Tolt.

The Steelhead Committee has helped lead the push for these changes and we think we finally have the right answer. We hope that this wonderful strain of steelhead will recover quickly. Over the last three years the kill of Tolt wild fish has averaged over 200 annually. With these fish now making it back to spawn over their natal gravels, the Tolt should reach full seeding within a couple of generations (10 years).

Additionally, the Washington Wildlife Department agreed to go to work on the over 200 species of Columbia River salmon, endorse fishing practices under control.

With the petitioning of the National Marine Fisheries Service for protection under the Endangered Species Act (ESA) of five stocks of Columbia River salmonids, agencies suddenly have discovered wild fish and are scrambling to take last minimal actions to forestall additional petitions.

The past several months has seen a flurry of meetings, “salmon summits” and so on, as agencies try to avoid a “spotted salmon” ruling which would certainly be good for steelhead but tough on the irrigators, electron pushers, barge operators and commercial fishermen. I believe the Federation needs to be active in this arena. We have an excellent opportunity to help right past wrongs. (Continued on page 9.)
EDITORIAL
NOW WE'VE GOT HOGS ———— John de Yonge

Without fanfare, the Washington Department of Fisheries, which manages salmon in Washington state, has applied commercial and sports-catch regulations to something relatively new in West Coast waters, Atlantic salmon.

At first glance, readers of The Osprey might tremble with joy: Atlantic salmon within range of a cast fly on the Pacific Coast.

That might be true, though the Steelhead Committee of the FFF has yet to hear of an Atlantic from Washington or British Columbia waters creating a tight line for an excited fly angler. (And we would dearly like to hear from anyone who catches one. We do know that thousands of Atlantic salmon are being taken in commercial fisheries and that non-fly anglers have taken a number of Atlantic salmon steelhead and salmon rivers.)

The problem is that the Atlantic salmon from Washington and British Columbia waters are not the genetic equivalents of the great wild fish that return to East Coast and European waters.

No, the Atlantic salmon of the Pacific Coast are escapees from the farms—from the floating, net-pen fish farms that have begun to choke some British Columbia marine waters and threaten to proliferate beyond the handful now operating in Washington marine waters.

The escapees are the genetic equivalents of farm-raised hogs.

They are domesticated Atlantic salmon that carry genes selected to make them grow fat on hand-tossed fish-food pellets, selected to make them tolerate being crowded nose to tail for months on end in a corral of nylon webbing, selected to tolerate big doses of antibiotics, selected to be docile.

Worse, the Atlantic salmon are not the only domesticated salmonids fattening in commercial net pens. Yes, the pens bulge with Pacific salmon too, especially chinook and coho, and yes, they bulge with domesticated steelhead.

And far worse, all of these species have been escaping from the pens by the tens of thousands to roam in British Columbia and Washington—and for all anybody knows—Alaska, Oregon and California waters compete with wild, natural stocks for space, food and spawning areas.

For wild Pacific salmon and steelhead, the threat is obvious. As more and more not penned fish escape during storms and during times when pen operators fail to pay attention to their business (a common problem), the genes of wild Pacific salmon and steelhead are bound to become diluted over time with inferior genes.

Fish biologists until recently poo-pooed the idea that escaped Atlantic salmon might establish spawning populations in streams already short of good spawning areas thanks to logging, agriculture and urban development. Much of the poo-poo stemmed from the fact that fisheries agencies have been ordered by governing politicians to rah-rah fish farming. The latest word from fisheries biologists is that Atlantic salmon have been seen on spawning beds in several Puget Sound rivers, including the Skagit.

Genetic competition and dilution is only one problem stemming from the fish farms.

The farms are demonstrated sites for concentrating and communicating to wild native stocks both native fish diseases and exotic fish diseases. Commercial fish farmers—a rich, energetic, politically savvy group of business people—routinely accept losses from disease as high as 50 percent of the fish in their pens.

The fish farm lobby, very powerful in British Columbia and Washington state, does not like to talk about it, but in Norway diseases from marine fish farms spread to wild Atlantic salmon stocks, to the point where the Norwegian government had to poison a score of streams in yet-to-be-infected areas.

The U.S. government has announced it will impose sanctions against fish products from countries that refuse to obey the UN resolution.

KOREAN DRIFTNETTING

The Republic of Korea is giving graver consideration to the United Nations' resolution calling for an end to high-seas drift netting in the North Pacific, according to Changsoo Ko, Korea's consul general in Seattle.

On September 4, Ko met with John de Yonge of the Steelhead Committee, Ben Deeb and Greenpeace Action and Bill Robinson of Trout Unlimited to hear why their organizations want high-seas drift netting outlawed.

The meeting was a direct result of a demonstration staged by FFF, Greenpeace, TU and other environmental organizations last spring in front of the Seattle consulates of Korea, Japan and Taiwan.

De Yonge outlined how drift netting with 50-mile gill nets intercepts and kills steelhead and salmon and how that not only depletes fish runs to North American waters but also increases the likelihood that endangered salmon and steelhead stocks will become extinct.

Deeb detailed Greenpeace's objection to any fishery that indiscriminately kills off salmon, steelhead, tuna, bill fish, sharks and other fish and dolphins, porpoises, small whales, other marine mammals and sea birds, all in unknown numbers.

Robinson focused on the environmental and economic damages wreaked by "strip-mining" North Pacific waters with the giant nylon nets.

All three told Ko that they hoped Korea would soon join Taiwan in agreeing with the UN resolution. Taiwan recently announced that it would meet the resolution's deadline of July 1, 1992, in raising the drift nets from the North Pacific.

The U.S. government has announced it will impose sanctions against fish products from countries that refuse to obey the UN resolution.

Ko said his government is listening closely to opponents of drift netting. Hence (Continued on page 11.)

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THE CHAIRMAN'S MEND

In my last MEND, I spoke to the need for volunteers for steelhead conservation. This time I want to talk about what the Steelhead Committee has been doing and where I believe we have significant opportunities.

FEDERAL ENERGY REGULATORY COMMISSION (FERC)

Throughout the west, hundreds of federally licensed dams face FERC relicensing. The process gives us a chance to require adequate provisions for fish passage, river ramp rates, temperature regimes, water velocities for smolt migration, minimum flows and so on. Dam removal is an option on Washington's Elwha River.

Dealing with FERC is a daunting challenge. We need to be on top of hearing/comment deadline dates, locations and timing of meetings and so on. The despoilers certainly will be there at every meeting defending their profligate ways. We need to be there for steelhead.

NORTHWEST POWER PLANNING COUNCIL (NPPC)

The Northwest Power Planning Act of 1979 requires that salmon/steelhead receive equal treatment. Plainly the Northwest Power Planning Council has not performed. Throughout the Columbia watershed salmon and steelhead runs are on the verge of extinction. Indeed, hundreds of stocks are already extinct as a result of the irresponsible manner in which the Bureau of Reclamation, the U.S. Army Corps of Engineers, private and public utilities, and the Bonneville Power Administration operate the Columbia-Snake hydro system.

Between the listing under the Endangered Species Act of several stocks of Columbia-Snake salmon stocks and growing public concern about the health of the Columbia-Snake system, the Northwest Power Planning Council is under extreme pressure to do "something" effective for fish. In this context, the council is taking testimony as part of a plan to develop a salmon-friendly hydro operational regime.

Much can be done to modify the Columbia hydro system to help salmon/steelhead.

Write a note to the Northwest Power Planning Council and your governor underscoring your expectation that they will take effective action to restore WILD salmon and steelhead. Business as usual or the solutions of the Bonneville Power Administration and/or the Corps of Engineers do not cut it.

These folks are, after all, the ones who got us into the current mess. They are part of the problem, not the solution. The Steelhead Committee has been an active participant with the Columbia-Snake River Main Flow Coalition.

Other participants include Trout Unlimited, Northwest Resource Institute, Audubon Society, Wilderness Society, Friends of the Earth, Earth Trust, League of Women Voters, Greenpeace and commercial and tribal fishing groups.

TIMBER HARVEST PRACTICES
(Continued on page 9)

A CHALLENGE TO OUR READERS

In this issue readers will be reminded of a number of important events and issues that are going on right now, political and administrative processes that have critical potential for the future of wild steelhead.

Letters from our readers suggest that many of you read the newsletter because you really care about the resource; we hope so. We are not in the entertainment business, although we try to include light fare now and then for obvious reasons. We publish because we are scared to death of what's going on out there and if you've been with us for even a few issues you should know by now some things you didn't know before.

So what? So let's really do something about it.

Those of us who work actively on the Committee and/or the newsletter know from bare knuckles experience that resource managers and bureaucrats really do pay attention to "the public."

That's you, dear reader, not the guy in the drift just below you or across the river.

For example, each of us should be absolutely incensed at FERC's asinine decision on the meaning of "fishways." (See the FFR's Annual Report, beginning on p. 2.) If ever there was a stupid and spineless ruling by faceless bureaucrats (forget about logic or even morality), this is a prime example. The way to get that changed is for the person who made that decision, and that person's boss, to get clobbered by a pile of letters from informed, irate, but even-spoken users: that's each one of us.

We don't have to scream and cuss, but we do have to write. Don't ever think "my letter won't do any good." It will, but only if you write it. There are about 800 of you on our mailing list; just imagine the good things that would happen if only half of you responded. On page 11 is a list of "targets," with names and addresses; these are the folks that need to hear from you.

Look through the Mend and the Annual Report for those current and important happenings that concern you. Then act. Take an hour or two out of your TV schedule and write; it'll make you feel a hell of a lot better and it will help. Count on it.

Here's the challenge: If you send us a copy of your letter, we'll do our best to run it in a near-future issue, subject to space and editing needs, of course. (If you don't know precisely to whom to address your beef, send it to us and we'll forward it for you.) We might even have a contest and figure out an award of some kind for the most creative or effective missile. Go for it, for wild steelhead!
EXTENDING THE STRIKE INDICATOR'S RANGE

Bill Keep is a member of the Four Corner Fly Fishers in Bellingham, WA. He professors at Western Washington University. Keep has fished all over the Pacific Northwest for salmon, steelhead and other trout.

A fly angler’s interest during chuck-and-chance-it fishing for steelhead or salmon may more often lock on cedar waxwings or swallows swooping up midges than on what’s happening with the fly.

Here’s a scenario to keep oneself from falling asleep in midstream:

You’ve cast upstream and begun to watch your black and white polypropylene strike indicator make its dead drift down the inside edge of the heavy current.

For half the cast the indicator lies flat. Then as the weighted fly sinks to an almost vertical angle six to eight feet under the fluf of polypropylene, the indicator rises, riding the surface like a small, alert sail.

You see it dip slightly, two or three times—probably a whitefish nibbling. Then the indicator is pulled under sharply—a motion you’ve come to distinguish from its slower disappearance under pressure from drag or contrary currents.

You set up—perhaps on a rock or perhaps on a fresh-run pink salmon that reacts very much like a small steelhead, jumping several times and making surprisingly strong, fast runs.

You back toward the beach, keeping as much pressure on the fish as you can. But the hook pulls free, as it will from perhaps half the pinks you hook, thanks to its soft mouth. But no matter, they’re rolling all along the drift, and you know your next cast will swim the fly among dozens more.

Most of us know the strike indicator from nymph fishing in streams and chironomid fishing in still water.

My nearly 60-year-old eyes have come to cherish it in dry fly fishing as well.

Even when I can’t see the fly, whether it’s floating or sunken, I know where it is, precisely.

I especially appreciate its pleasures in river fishing for salmon and steelhead. With a floating line, weighted fly and strike indicator, even in midwinter I can work virtually any drift—that I’ve traditionally fished with a sink-tip or full sinking line.

When fish will move freely to a fly just under or on the surface, as summer steelhead will, an indicator isn’t useful; but for steelhead in cold water and for salmon under almost any conditions, where running them depends upon drifting the fly at the current’s speed and at the fish’s depth, the strike indicator comes into its own.

Success with the strike indicator depends on fishing it in suitable water—i.e., in a moderate to slow current and a depth of two to 10 feet; upon weighting the fly (or the leader) sufficiently to sink the fly to the bottom and adjusting leader length accordingly (one might need a 12-foot leader for a slow, deep drift or for a faster, shallower one); and finally upon having a strike indicator buoyant enough to support a heavily weighted fly.

Here’s the setup I use:

An indicator made from polypropylene yarn in white, black, red, etc., well combed out and greased with fly floatant; this I loop to the leader, above a knot; below the indicator, six to 12 feet of untapered 3X leader (though a tapered leader might cast a bit better); either a weighted fly (a #2 sprout 3399A wrapped densely with heavy lead wire is often none too heavy) or matchbook lead wrapped on the leader above a knot, say 18” from the (unweighted) fly (about half a length of the lead is reasonable to start with; it stays on remarkably well if you wrap it snugly, and you can add more if you need to).

I cast this rig with a 30-foot #7 floating head attached to ice-fishing line.

To keep the rig from feeling as mon-strous as it looks, here are a couple of casting basics:

Use a short, sharp power stroke and give the rod lots of time to load up; it’s almost impossible to slow the rhythm too much. Use surface tension to build line speed. Lower the rod at the end of the drift and let the line straighten out below you completely, then roll cast upstream and across. As soon as the line hits the water, make one backcast, and shoot.

False cast as little as possible. This rig will hinge, and it can be dangerous, so by all means fish barbless hooks and wear glasses.

(Ed’s note: Keep, I think for safety reasons, exaggerates the difficulties of casting a weighted fly with a strike indicator. The stroke is different, but it is different with all heads, and not hard to learn. Any fly, but especially weighted flies, are dangerous. Keep is correct. Fish barbless and wear glasses.)

Here’s the simplest method I know for making indicators:

Cut a six-inch length of white polypropylene yarn and another of black or red. Poly yarn floats. Do not use the commonly sold “steelhead” yarn. It sucks up water like a sponge.

Cut a six-inch length of 5X tippet. Loop it back on itself and tie a doublesurgeon’s knot in it, leaving about two inches between loop and knot. Cut off the tag ends about 3/8 of an inch beyond the knot (The tag ends will be your handles when you want to remove the indicator).

Double the two lengths of yarn and lay them side by side. Loop the tippet around their middle, back through itself, and pull tight.

Cut the loops in the (now) inch-and-a-half lengths of poly. Then comb them with a bodkin, needle or safety pin point until all strands are free. Trim the top for looks.

(Continued on page 10.)
LETTERS

From Our Readers

Editor, The Osprey

Wouldn’t want to miss a single copy of The Osprey—a desperately needed publication which I’ve supported since the beginning and will continue to do so. Indeed, I’d very much support a subscription fee.

Don Johnson, Olympia, WA

Editor, The Osprey

Congratulations on the May 1991 issue. It’s the best yet. I like your attitudes and reporting. It seems to be on the positive side. Less hand wringing and more proof of progress than is found in some environmental editorial approaches.

Gordy Young, FFF Senior Advisor, Seattle

Editor, The Osprey

I have been receiving your newsletter for several years now, thanks to a chance meeting of Stan Young on the North Fork of the Sillaguanamish River. Thank you for doing a superb job of keeping me informed.

This past year has brought an increase of logging (clear cuts) on the upper sections of the Stilly, and the increase of silt in the river has been substantial during periods of heavy rain. It now takes several days for the river to clear up, where it used to be just a day or so. Maybe the logging will end soon as most of the trees are now gone.

Thanks again and keep up the great work.

Kent Feldsted, Arlington, WA

LINES FOR SPEY RODS

Does Bog know spey fishing? Pete Soverel does. Leapfrogging over the mysteries of spey rods, our Chairman here talks about an equally arcane aspect of the technique: lines. The offerings of an inveterate do-it-yourselfer, Pete’s pointers may save us money as well as enlighten. Caution: You could get hooked.

Many steelhead anglers have taken to using long, two-handed spey rods for both winter and summer steelhead fly fishing. I based my decision to get a spey rod after observing another successful angler. The next several years were an expensive and, at times, frustrating adventure.

In retrospect, I could have avoided most of my problems had I adopted double taper lines as the basis for my line formulas. Conventional weight forward lines cast well enough on 8-9 rods but are not well suited for two-handed rods in general and are completely worthless for spey casting. Fly and large, spey rodders have had to make their own lines for their rods and fishing conditions.

The formulas below are for a 10-weight rod, the most common power rating for spey rods. The basic notions apply to rods of differing weights.

Basic Dry Line

My choice is a DT-10-F with 50 feet of floating running line (level 3 weight works fine) spliced to the end of the fly line and then connected to the backing. Thirty-yard "out of the box" double tapers are not long enough. Since these lines can easily be cast 100-120 feet with both spey and overhead casts I have added additional fly line to the end of the line. It is easy to handle, will not cut you on a hard take and does not tangle like dacron.

Basic Sinking Line

I use the same DT-10 float described above with 10-12 feet of 9-weight type 6 sinking line spliced in as a tip. I have found that 10-12 feet of 9-weight type 6 sinking line is fine for virtually all winter sink-flying— if you need to get the fly deeper in faster water, cast more upstream with a heavier fly; if you are hanging up, cast more downstream with a lighter fly.

Steelhead are pretty aggressive, even in the winter. This line combination will sink your fly at least 3-4 feet even in very fast water.

To get the proper length of sink tip, start with the basic dry line outlined above, and cut off the front taper (e.g., where the line assumes an even diameter, usually about 10 feet from the end of the line). Then splice in half of a 9-weight type 6 sinking shooting head (Sci-Angler or Cortland). Take the outfit down to the river, attach a leader and fly and start spey casting.

You will almost certainly find the full 15 feet of sink tip awkward to cast. Simply start cutting the sink tip back a foot at a time until it speys casts comfortably. For me, this procedure results in a sink tip of 10-12 feet. It is easy to cast and gets the fly to where it needs to be. I see other folks using much longer and heavier sink tips. I do not think they are necessary. I assure you they are a serious pain to cast.

Splicing

I use "ZAP-A-GAP" glue. It dries quickly but retains its strength when soaked.

STEP ONE: Strip the finish from six inches of the sinking line. Fray the last inch of the dacron core and then carefully cut off all but five to eight strands of the frayed end.

STEP TWO: Push a needle two inches up the core of the DT-10-F line and pull a loop of six pound test mono up through the core and out the side of the line. Leave the loop exposed.

STEP THREE: Position the frayed end of the dacron core in the mono loop exactly at the base of the remaining five to eight dacron strands. In one smooth movement, pull the mono loop through.

(Continued on page 11.)
NO EASY CHOICES
(Continued from page 1.)

population numbers towards carrying capacity.

At carrying capacity, by definition, each
generation only produces enough fish to
replace themselves. Here all the habitat
is being used to its fullest and maximum
selective pressures are at work on the
population.

At carrying capacity there is no harvest-
able surplus. Even a strict catch-and-
release fishery will result in some hooking
mortality and result in the population
being somewhat below carrying capacity.

In rivers managed with both hatchery
and wild populations, the closer the wild
population is to carrying capacity, the less
the chance the maladapted hatchery fish have
to contribute to the genetic pool of the
population. The higher the density of wild
fish, the more the selective pressure that
operates against the hatchery fish.

The closer wild populations are to
carrying capacity in a river system, the
more escape and hatchery fish the
population can tolerate with minimal
impacts on the wild fish.

Any discussion of hatchery and wild
steelhead soon leads to the question of
what brood fish for a hatchery program
minimizes hatchery impacts on wild stocks.

On the surface the answer would seem
to be straightforward: Use wild fish as
your brood stock. But as is the case in
many biological issues, the answer is rarely
that simple.

The best brood stock depends in part on
what the goals of enhancement are. If the
enhancement program is a short term effort
to rebuild depressed wild stocks, then wild
stocks from the system would be the best
choice.

In the more common case, where en-
hancement is undertaken to provide more
fish for harvest, the answer may be differ-
cent. Often the need for additional fish to
harvest is the result of overharvest of the
wild stocks. Here the choice of brood
stock can be much more complicated.
Hatchery-wild interactions, harvest-
management questions and much more
must be considered. If the wild population
is being overfished (too many fish being
killed), the use of wild stocks as brood fish
for a hatchery program can lead to prob-
lems.

When steelhead or any fish are held for
long periods in a hatchery environment
they experience genetic selection by the
hatchery system. Over time this may result
in a fish that has different fresh-water traits
and behaviors than the original wild fish
while retaining similar run timing and
other adult characteristics.

Steelhead raised in a hatchery experience
environmental selection just like their wild
cousins. Those fish most successful in the
hatchery are those that tolerate crowding,
average feeding, etc. The wild pa that
are successful in streams are those that are
able to establish and defend territories and
develop energy-efficient feeding strategies.

Thus the offspring of fish raised in a
hatchery will be out of tune in a wild river
system. The selective pressures on both
hatchery and wild fish are about the same
once they leave their rivers and begin their
seaward journey.

When enhancement efforts aim to
increase the number of fish available for
harvest, the result is often the continued
overharvest of the wild fish, with the
shortfall in needed escapement made up
with surplus hatchery adults. The more
fish available, the more anglers on the
rivers. Enhancement efforts are many times
a quick political remedy to overfishing that
postpones making difficult user decisions.

Much discussion has taken place recently
about the undesirability of hatchery fish
and their potential impacts on the genetic
pool of wild fish. The current dogma is
that if one must have hatchery fish, then
the best fish are wild brood stock from the
river system to be enhanced.

Given the current and growing popularity
of steelhead fishing, hatchery fish will
continue to play an important role in
Washington's steelhead management. The
fisheries manager's job will be to be aware
of potential pitfalls and to manage to
safeguard the wild resource while providing
opportunities to the many and varied user
groups. We the users have the responsibil-
ty of being the resource's watch dog and
of providing our managers with clear and
concise statements as to how we wish to
use the steelhead resource.

In Puget Sound rivers the Chambers
Creek winter run steelhead, the much
maligned Washington Department of
Wildlife's product, remains the fish of
choice for enhancement. By marking all
hatchery releases, taking advantage of this
particular race of fish's early run timing,
managers have successfully managed to
harvest the hatchery product at a high rate
while maintaining reasonable (lower)
harvest rates on the wild fish.

A commonly expressed concern is that
these maladapted fish—and they are
maladapted—have damaged the wild stock's
gene pool. After 50 years of enhancement
in some Puget Sound streams, the wild stocks have retained their
productivity. In recent years, where
management changes have been made to
reduce the harvest of wild fish, stocks have
quickly and positively responded.

Depressed runs have usually returned
to healthy levels in a generation.

The wild stocks have many characteristics
different from the hatchery product. They
spawn much later in the spring, generally
are older fish (more three-salt adults), have
higher fecundities, and later run timing.

All these factors have operated to
minimize the interaction between the
Chamber's Creek fish and a particular river
system's wild stocks.

The foregoing should show that fish
management rarely has easy answers. We
have altered all our rivers' ecosystems. We
can't return them and their inhabitants
back to their original conditions. We can
and must make conscientious and responsi-
ble decisions about how man will interact
in these systems and with the fish that use
them.
Mitch Friedman is president of the Greater Ecosystem Alliance. He has earned a well deserved reputation as a successful activist in saving old-growth forests. This is Mitch’s first contribution to the newsletter and it describes a much-needed umbrella concept for coordinating and focusing on the many issues that affect wild steelhead.

A storm is blowing in from the Pacific. It’s a political storm raging over the fate of wild salmonid stocks in the Northwest.

The first squalls came as requests to list several Columbia and Snake stocks under the Endangered Species Act. But the full force of the storm is still collecting offshore.

To date the controversy has largely focused on the Columbia, where stakes may be the highest. But advocates for protection and recovery of wild stocks in coastal Washington and Puget Sound systems see a need to prepare and expand the battle to this area.

A legacy of poor and excessive logging, deleterious hatcheries, overfishing at sea and in stream, and other impacts have reduced the size and number of wild runs throughout the west side of Washington. From the dams on the Elwha River to the slide on the North Fork of the Stillaguamish, from urbanization of the Cedar and Snoqualmie Rivers to the muddying of the Nooksack River, from Japanese driftnets to the hatchery invasion of most major streams, wild salmonids are paying the cost human meddling. The need for action is clear.

On June 9th, a small “salmonid summit” was held over lunch in a Renton restaurant. Present were several sportsfishers, tribal biologists, conservationists and scientists. The group decided to organize a unified voice for wild stocks in western Washington: the Wild Salmon and Trout Alliance.

The Wild Salmon and Trout Alliance is loose-knit, more of a think-tank than an organization. It is not incorporated and there are no by-laws. It is simply a vehicle for those with concern for wild stocks to communicate and work together on strategies and projects.

The first project of the Alliance will be to organize another summit, much larger than the first, to be held in Seattle on February 29, 1992.

We have received funding to hire a program coordinator to conduct education and outreach to encourage participation in the February summit. Following the summit, the staff will coordinate implementation of the action plan. Funding for this position comes through a generous grant from the W. Alton Jones Foundation, obtained by the Greater Ecosystem Alliance.

The Greater Ecosystem Alliance, a regional conservation group based in Bellingham, will continue to raise funds in trust for the WSTA. We have advertised widely to fill this position with an impassioned conservationist experienced in natural resource issues, preferably fisheries. (See advertising box, c/f)

A committee has been formed to help steer the Wild Salmon and Trout Alliance. This committee is comprised of seven positions, each belonging to fish conservation, environmental and Indian interests, the last to be occupied by a scientist.

Until a complete steering committee is assembled, the following serve as the interim committee: Pete Soverel (Steelhead Committee of the Federation of Fly Fishers), Mike Anderson (The Wilderness Society), Mitch Friedman (Greater Ecosystem Alliance) and Jeffrey Thomas (Puyallup Tribe). Members of Washington Trout are also very involved.

We hope this gathering will attract participation from a broad range of groups concerned with wild stocks. In theory, these groups will prepare for this summit by discussing their concerns and ideas in-house, then send a representative to convey these positions to the summit. From this effort will be formulated an “action plan” for the protection and recovery of wild salmon and trout stocks in coastal Washington and Puget Sound stream systems.

The entire structure of the Alliance is (Continued on page 11.)
CHAIRMAN'S MEND
(Continued from page 4.)

Spotted owls, export bans and such are much in the news. The committee has established contact with non-fishing organizations committed to old growth forests, wildlife and wilderness on the premise that we share substantial commonality of interests.

These organizations tend to be heavily involved in the process of reviewing timber cutting applications. They carefully monitor timber sales and generally work to make state and federal regulatory agencies adhere to correct forest practices. We have offered the steelhead as the "Ultimate Indicator Species." The response has been excellent.

The Committee is part of the Wild Salmon Trout Alliance (WSTA), a group committed to restoring wild salmon and trout. WSTA received recently a $25,000 grant to hire staff which should help. (Eds' note: See related article on page 8.)

OVER-EXPLOITATION

I believe the Committee has been especially effective in encouraging more conservative management of our wild steelhead resources.

The Washington Department of Wildlife has proposed an excellent package of regulations for the 1992/4 period that include wild searun cutthroat and wild summer steelhead release regulations statewide. I hope that the tide may be changing. Ask each of you today to write the Washington Wildlife Commission urging them to enact the proposed wild release regulations. Finally, the Committee has been active with the Coalition to Ban High Seas Driftnets. As you know, the Senate passed recently a tough bill that would require the president to impose trade sanctions against nations driftnetting after June 30, 1992. The sanctions would not necessarily be limited to fish products. I expect the House of Representatives will pass similar legislation soon. We all need to keep the pressure on both the president and members of the House of Representatives to ensure that the U.S. adopts measures that permanently and effectively end this destructive fishery that steals millions of our salmon and steelhead.

In addition to working closely with the fish-management departments, the Committee has established contact and meets regularly with Trout Unlimited and Washington Trout at high levels, to identify those areas where we can take joint positions which will increase our impact.

HATCHERIES

We face some battles over hatcheries. In spite of growing public recognition of the deteriorous link between hatcheries and the destruction of wild fish and of broad opposition to hatcheries within the scientific community, hatcheries retain significant appeal among some user groups.

Of special concern is the growing tribal interest in hatcheries and an alarming expansion of "aquaculture" in Alaska—the last frontier for wild salmonids.

On the immediate horizon, we must contend with proposed hatcheries at Grandy Creek on the Skagit River and on the Yakima and Klickitat Rivers as well as the general question regarding reliance on hatchery "enhancement."

I recommend that when you write the Washington Wildlife Commission about the 1992/4 regulations outlined above, tell them that you expect a full scale environmental review of both Grandy Creek and the Yakima/Klickitat facilities BEFORE they are built.

Unfortunately, the Washington Department of Wildlife has adopted the public position that the Grandy Creek hatchery is a done deal. Get your letters to the Commission before October 15.

Oh yes, on a positive note, just when my optimism needed it most, I released a beautiful wild summer steelhead recently from a nearby stream—pale fins, chrome bright sides, perfectly proportioned body. I hope there will be more.

Tight lines, release wild steelhead.

Pete Soverel

ANNUAL REPORT
(Continued from page 2.)

In a separate but related development, over the next 10 years numerous dams in the West will face relicensing by the Federal Energy Regulatory Commission (FERC).

This process offers us an outstanding opportunity to insist that dam operations be conducted with a view to the best interests of wild salmonids. Evidently mindful of this opportunity, FERC, in an unbelievable decision, has ruled that "fishways" apply only to upstream passage. This ruling, if permitted to stand, undercuts the ability of the National Marine Fisheries Service to prescribe downstream fish passage conditions for juveniles as requirements of relicensing.

As most readers know, downstream passage of juveniles is the critical factor limiting survival of anadromous stocks in the dam blocked streams.

Pretty simple: If no little ones make it to the sea no big ones will come back.

This is another area ripe for a letter expressing concern: Federal Energy Regulatory Commission, 810 1st Street, Washington, DC, 20426. Write about this dismaying ruling. Cite "Regulations governing submittal of proposed hydroelectric license conditions, docket #RM 89-7-000, order 533."

In sum, although steelhead stocks regionally are not in good shape, agencies and the public appear to be alive to the threat. Let's keep that sensitivity vibrant by prodding them with facts.
STRIKE INDICATOR
(Continued from page 5.)

Double colors make the indicator easier to see in broken and pewter light. The inch-and-a-half size I've described here is the biggest I use. You may fish where something smaller will work equally well.

Since the fly moves at or near the speed of the current, fly patterns with lots of action (soft and palmered hackles, marabou, fuzzy yarn bodies for catching air bubbles, etc.) seem to work best. A very simple pattern I call the "Pinko" has during the last month hooked steelhead, pink salmon, Dolly Warden and whitefish.

Hook: #6 - 2 barbless; tail: none; body: hot orange fuzzy yarn, picked out; wing: none; hackle: large hot pink, about 3-4 turns; hot orange tying thread.

Two patterns that work well for pink salmon are:

1) "Pink Shrimp": hook: #6 - 2 barbless; tail: long hot pink marabou, saddle hackle or fantastic fur; shellback: clear plastic strip, 1/8" - 3/16" wide; palmered hackle: hot pink; body: hot orange or pink fuzzy yarn or Chenille.

2) "Kennect Special": hook: #6 silver finish, barbless; tail: fairly long hot pink or orange; butts: one turn of hot pink/orange Chenille; body: several turns of pearl braided yarn; shoulder: one turn of hot pink/orange Chenille; silver bead eyes.

One of the things you may discover fishing this method is that undisturbed fish may be much closer in than you had supposed.

I usually start by fishing the nearest current I can get a drift in, and work out from there. I cast upstream and fish the indicator like a dry fly, trying to keep it drag-free as long as possible by mending, either upstream or down, adjusting the rod angle, feeding line, etc.

I rarely fish with more than 50 feet of line—more than that is hard to control. Fish take both on the dead drift and the swing, so I fish every cast out completely.

When the indicator dips you can set up with vigor. If you have lots of slack, strike horizontally instead of vertically. Those loops on the water will telegraph the movement instantly.

If you haven't already tried it, I think you'll find this method adds interest to river fishing for salmon and steelhead because you can fish either straight up or down stream, opening up new water. You'll see currents you haven't seen before, and detect nuances (the gentle plucks of whitefish, for instance) you had previously missed. And of course it's fun to watch the strike.

(1'd like to acknowledge having stolen most of these ideas and techniques from various anonymous Canadian bobber drift fishermen and from Dana Bottcher and John de Yonge of Seattle and Dick Van Demark of Bellingham.)

*****

(Further Ed's note: Keep is too modest. He has devoted himself to mastering and improving this method of fishing with techniques and a will that others envy. We steal the techniques, of course.)

TFW AND WILD STEELHEAD

Howard Johnson is an early member of the Steelhead Committee who lives in rural eastern King County, a bucolic adirondack environment with its own share of man-made threats to wild fish. When not angling local streams he slips off to British Columbia's Dean River, figuring it the nearest thing to heaven left around here.

What does it take to produce steelhead? Not million-dollar hatcheries subject to funding problems and infectious diseases. All the wild steelhead need is cool, pure water.

One of the programs that is promoting better wildlife habitat in Washington state is the TFW process. TFW stands for Timber, Fish and Wildlife.

It is an agreement between timber growers, environmentalists and Indian tribes that allows private citizens and tribal fisheries personnel to influence how logging is done. These citizens and tribal personnel review all of the Forest Practice Applications (FPAs) for environmental considerations.

They look at issues such as steep slopes prone to slides, streamside riparian zones, road construction, buffer strips, wetland protection, and wildlife corridors. They discuss these issues with the Department of Natural Resources (DNR) and with landowners.

For a particularly sensitive application, an Interdisciplinary Team forms, made up of state agency personnel, tribal biologists and citizens. This team goes to the site and inspects for the environmental impacts. It makes recommendations to DNR. DNR then establishes conditions for that specific logging operation.

These conditions may require safer logging practices for steep slopes—helicopter logging, requiring trees to be left on a streambank for shade or stability, no spraying of pesticides or herbicides near a stream or wetland. In this manner our streams and wetlands may provide the cool pure water needed for steelhead spawning and rearing. As could be expected, this process has not been completely successful. Many problems still remain.

Citizen and tribal participation is primarily to recommend, not require, and not all timber companies cooperate fully.

Even so, the results in most cases have been positive and our streams are benefiting. New and innovative logging practices are being developed and used and the logging industry is becoming very concerned about its public image. Many more trees and snags are being left for wildlife under TFW's Combined Monitoring and Research program. Temperature monitoring of streams is taking place. In addition, improved logging road maintenance programs to reduce landslides are being carried out.

The final results of the ongoing TFW process are not yet in, but the habitat for our wild steelhead is improving.
QUICKLY 
(Continued from page 3.)

his reason for calling for a meeting to hear views from the three organizations.

Ko asked many questions during the two-hour session, which also was attended
by Yong Ha Cho, Korea’s consul in Seattle.

Both men expressed great interest in understanding how steelhead and salmon
are important to the culture and economics of the western states.

They apparently had not made the connection between how invoking the
Endangered Species Act to save a salmon or steelhead stock may have grave effects
on the hydroelectric and farm outputs of the region.

Ko said that his government is investigating how it might phase out the high-seas
driftfjettet with out causing great economic harm to the Korean fishermen involved.

He said his government cooperates with the U.S., Japan and Taiwan in trying to
stop high-seas “piracy” driftfjettet, a name applied to driftfjettet, ostensibly fishing
for squid, who sneak into closed areas in the North Pacific to take salmon and steelhead.

Fish from such catches have shown up on American and European markets and
have been seized as evidence in fish-buying stings staged by the U.S. National Marine
Fisheries Service in the U.S. and overseas.

Ko noted, however, that no nation has had much success in stopping the high-seas
fish pirates.

SPEY LINES
(Continued from page 6.)

the floating line core. The loop will pull with it the exposed dacron core from the
sinking fly line.

STEP FOUR: Cover the exposed sinking-line dacron core with glue. In one smooth
movement, pull the exposed core fully into the floating line so that the two sections
of fly line finish about one another.

IMPORTANT: Do not stop pulling

before the finishes are abutted or the glue
will set up. Wipe off excess glue and you
are finished.

The splice is neat, smooth and strong. I
have never had one break. This same
splice can be used to connect the fly line
to the backing and the leader butt to the
end of the fly line. The line may be fished
in five minutes.

RELEASE ALL WILD STEELHEAD

THE CONCERNED ANGLER’S MAILING LIST

The Honorable Booth Gardner
Governor of Washington
State Capitol Building
Olympia, WA 98504-0413

The Honorable Barbara Roberts
Governor of Oregon
254 State Capitol
Salem, OR 97310

The Honorable Cecil D. Andrus
Governor of Idaho
State Capitol
Boise, ID 53720

The Honorable Stan Stephens
Governor of Montana
23 S. Last Chance Gulch
Helena, MT 59601

Washington Wildlife Commission
600 N. Capitol Way
Olympia, WA 98501-1091

General Ernest J. Harrell, Cdr.
North Pacific Division
U.S. Army Corps of Engineers
P.O. Box 2870
Portland, OR 97208-2870

Northwest Power Planning Council
851 S.W. 6th Ave., Suite 1100
Portland, OR 97204-1348

Director, Bonneville Power Administration
Department of Energy
P.O. Box 1299
Portland, OR 97212

Federal Energy Regulatory Commission
810 - 1st Street
Washington, D.C. 20426

W. S. T. A.
(Continued from page 8.)
geared to maximize participation and
diversity. Those involved in the group
needn’t formally represent their fishing
cub, tribe, employer, etc. Instead, they will
represent themselves and the perspective
of the groups they associate with. This will
help assure that the WSTA addresses the
needs and concerns of a broad base, while
allowing us to circumvent cumbersome
representation mechanisms.

In essence, no group needs to throw
its lot with the Wild Salmon and Trout
Alliance, nor trust that it will always agree
with the Alliance’s positions. Instead,
Alliance participants will work to formulate
positions, then be responsible for
carrying these back to their constituents
for consideration.

Will the Alliance undertake endangered
species petitions for dozens of stocks? Will
it work to reshape policy and law, or
litigate against government agencies? Will
our primary focus be logging, hatcheries
or creative solutions like fishwheels? The
efforts of all who participate will determine
the answers.

We encourage you to donate to and get
involved in the Wild Salmon and Trout
Alliance, to help us set and execute strategies on behalf of wild salmonids. Dona-
tions may be mailed to Greater Ecosystem Alliance, P.OB 2813, Bellingham WA 98227
(Write check to GEA, but clearly indicate “for WSTA”).

THE EDITORS’ APPEAL

The Osprey staff again appeals for manu-
scripts from readers, especially those in
Oregon, Idaho, California and the Midwest
who have something worthwhile to say
about wild steelhead. Articles should be
in the range of 1000-1400 words, triple
spaced and preferably accompanied by
a personal computer disk compatible with
WordPerfect (i.e. ASCII language).

We can pay only in pride of accomplish-
ment, but we believe that the appearance
of your articles in the newsletter improves
its interest and credibility. And we can edit
sufficiently well to help those who may be
convinced they “can’t write,” a claim
usually rooted more in inertia than in
reality. Give us a try, you’ll like it!
EDITORIAL
(Continued from page 3.)
be successful efforts to rid the streams of all fish and so rid the streams of disease exterminating certain Atlantic salmon stocks. Apparently for these streams, what the disease failed to kill off the government had to finish. The Norwegian government has established an Atlantic salmon gene bank as a result of this experience.

Disease problems in Norway became so severe that the Norwegian government enacted strict regulations about placement and operations of net pens. Disease problems and new regulations caused many of the fish-farm companies to relocate or spread their operations to the coasts of Canada and the United States, where word has been slow to spread about the threat fish farms pose to wild and hatchery-supported commercial and sports fisheries.

Disease is not the only major problem connected with the pen farms.

The ordinary fish farm—whether floating in salt or fresh waters—produces the sewage equivalent per day of a city of 10,000 persons. (All the fish feces must go somewhere.) Some British Columbia inlets have floating on them enough pens to dump into the water daily oxygen-demanding sewage equivalent to that from a city of 1 million persons.

In Washington state, shoreline owners—outraged by the aesthetics of net pens floating in their views and outraged by the arrogance of the pen operators and state officials touting for them—joined environmentalists in bringing a successful court action against pen operators and the State of Washington for not requiring each pen to have a National Pollution Discharge Elimination System permit as required by the U.S. Clean Water Act.

The state, in a complicated settlement, has agreed to require the pen operators to use best-available and as yet unknown technology for catching the fish feces and subjecting them to sewage treatment. The process will add considerable cost to the pen operations and to the cost of farmed salmon and steelhead in the markets and restaurants.

The FFF and all other conservation organizations have a duty to acquaint themselves with the science concerning fish pens and with the threats the rapidly spreading fish-farm business poses in marine and fresh waters.

Some sports-angling organizations have, alas, embraced fish farms as ways to free up more returning wild steelhead and salmon for catching by sports anglers.

The logic of this so far escapes any devoted angler who has studied fish farming and its ramifications. As it stands, the fish-farm industry is a direct, major threat to the sport that we all love.

FEDERATION OF FLY FISHERS
THE OSPREY
Federation of Flyfishers
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Seattle, WA 98114

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