

# SPORT FISHERIES – GENERAL EVALUATION

by

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At the Ninth Resources Conference we examined fairly thoroughly the nature, extent and quality of the sport fish resources. It seems a good time now to ask ourselves what we are doing with them and for them.

We can still congratulate ourselves on a heavy and increasing demand, both from our own people and from the thousands of tourist visitors who come every year. British Columbia is better known than ever, throughout the world, as a producer of excellent trout and salmon fishing, usually in magnificent surroundings and without the restraints of private ownership. Finally, and at this point our self-congratulation should end, we are achieving

improved in sophistication and intensity and will undoubtedly continue to do so. So far most of this research has been keyed to the needs of the great commercial industry, but inevitably it has often had application to the game fishery. As a result, the life history, freshwater needs and to some extent the saltwater movements of the game species of Pacific salmon are fairly well known. But it must be emphasized that the concern with the game fishery has been almost entirely indirect and many extremely important things about it are not known. We have no idea, for instance, which spawning stocks are of primary importance in maintaining the game fishery. We do not know whether the fishery is supported mainly by fish that never leave the Gulf of Georgia or by fish that return from outside waters. These are questions of absolutely fundamental importance and it is gratifying to know that initial steps towards answering them have been taken within the past year.

Within the past ten years three projects of progressively increasing scope and importance have been undertaken by the Federal Fisheries Department—at Jones Creek, Robertson Creek and Big Qualicum River. All three projects and the lessons learned from them have direct bearing on the welfare of game fish stocks. It could be said that the future looks bright—if the future will wait for us or we can afford to wait for it.

But in spite of the lack of precise information there can be little doubt that the Gulf of Georgia fishery has been declining steadily in both quantity and quality over the past twenty years. Enormously increased fishing effort is producing generally declining catches. Fishermen are forced into less and less attractive satisfying methods in their search for fish. In spite of this there can be no reasonable doubt that the fishing effort, based on increasing leisure and higher living standards, will continue to increase so long as there are significant numbers of fish to be caught.

Some, perhaps much, of the decline is due to the increased intensity of the commercial effort. The commercial fishery is at present controlled to allow a minimum spawning escapement. It is quite unlikely that an escapement so reduced is even nearly large enough to provide a good game fishery. Further, the whole question of spawning escapements is at present under review. It has been pointed out that all fisheries outside the rivers themselves bear upon complex mixtures of stocks—the farther out from the streams, the more complex the stocks will be. Fish returning to the Gulf from outside waters must pass through intensive fisheries in Johnstone Straits or in the Strait of Juan de Fuca; fish resident in the Gulf itself are subjected to a steady fishery at all stages of growth beyond the legal limit. It is clear that such fisheries can be only approximately controlled to provide an overall escapement, without precision as to the welfare of the smaller or weaker runs. From this it follows that a satisfactory minimum overall escapement may permit serious depletion of an individual stock in any given year or, more serious, cumulative depletion over a series of years, if the stock happens to be exceptionally exposed to the habits of the fishery.

Even where spawning escapements are theoretically adequate to maintain the runs, it is frequently the case that spawning streams offer inferior conditions, through natural deficiencies, man-made damage or both. It is submitted that present knowledge, though still imperfect, is quite good enough to permit economic and useful remedial action. It is well established, for instance, that controlled flow and permeable gravel of good size greatly

increase survival from egg to fry stage; adequate shallows with protection nearby and maximum obtainable summer flows are essential to the raising of pre-migrants. Many of the small coastal streams that now support minor runs of cohos, pinks, chums and cutthroats could be greatly improved in all these respects at comparatively small cost. In a few cases some measure of control, or at least a cushion of water for dry periods, could be achieved by the construction of small dams. In others better use of flow could be made by stepping with cross-logs or rock barriers in steep, rocky reaches. Some streams could be improved by cleaning out accumulated silt, others by the addition of gravel from nearby beaches. In some cases bank protection is needed; in others it may be advantageous to open up old channels or create new ones.

A relatively small programme of this nature, covering perhaps a dozen streams each year, could be undertaken at quite small cost. Continued annually, such a programme would quickly develop its own special techniques and machinery and in time, if justified by results, could be extended to cover all the small spawning streams of the Province. It can be argued, of course, that action of this sort should wait upon more detailed results from such projects as Big Quisicum. But the proposal itself is to some extent experimental and reasonably close observation should produce a good deal in the way of "learning by doing". There would be possibilities of co-ordination with the Gulf of Georgia tagging programme and early assessment of results in terms of both commercial and sport fisheries could probably be achieved.

Resistance to licencing for saltwater sport fishing seems to remain fairly strong, although any logical background for it is elusive. It seems unlikely that any licencing system will be implemented until public opinion changes. But so long as this is so, sportsmen must face that accurate estimates of the scope and size of the fishery will be impossible and their claims on federal funds for research and rehabilitation as well as for enforcement and administration, will be much weaker than they might be.

In both fresh and saltwater game fisheries, it has always been difficult for biologists and administrators to determine the precise nature of the public they are trying to serve. This difficulty will continue, but it would seem that we have now reached a stage when it can be recognized that this public is diverse, not homogenous. At least three broad categories exist and probably will exist for a long while to come. They are:—

1. The Meat Fisherman, for whom there is really no place in any sport fishery but who is bound to exist so long as fish of considerable size, such as salmon and steelhead, enter the catch.
2. The man, woman or child who "goes fishing". These individuals make up the large majority of the fishing public. Fishing is usually incidental to other recreation and not too much is expected from it. The average effort may be very slight, but the total is very great. It must be closely studied and adequately provided for, but there is no reason why this cannot be achieved without detriment to quality fishing. A limited proportion of this category will and should be encouraged to do so.
3. The dedicated angler, for whom fishing is a major lifetime recreation. Though this category is a minority, it has firm claim to recognition if

only because its demands on other available forms of recreation are slight. However, it is also arguable that without these individuals the sport would soon lose its meaning and a recreational enthusiasm that now serves great numbers in Category 2 would be largely lost.

Any system of fishery management must recognize all three categories. It must effectively control the first category, direct and encourage the second without too much inhibiting its enthusiasm and give at least reasonable consideration to the needs of the third category.

In conclusion, it may be salutary to consider a few outstanding examples of recent decline in the sport fishery. In the 1946-50 cycle the Campbell River tyee fishery produced an average of 220 registered fish per year. In 1951-55, 177 fish per year, In 1955-60, 76 fish per year. In the three years since 1960 this average has dropped to less than 45 fish. Reasons for the decline unfortunately are not clear, but the loss to the Province is not merely a fishery of outstanding quality, but an incalculable value in worldwide advertising.

The loss of the early spring salmon run of the Puntledge and the reasons for it are too well known to need comment. A number of small interior lakes of international reputation have been reduced in value through failure to control competing forms of recreation. The Coquihalla summer steelhead run has been reduced to negligible proportions and the Stamp River run no longer attracts anglers as it once did. The Upper Skagit in Manning Park and the Elk in Strathcona Park, both high quality trout streams, now have only limited value. Freshwater salmon fishing on a number of streams has now been prohibited or seriously curtailed through failure to check abuses.

These are a few examples taken at random. It is not suggested that the losses are irremediable or the declines irreversible. But it must be recognized that the nature and degree of the losses cannot be understood, much less countered, without far more thorough and detailed biological knowledge than we now possess or present expenditures are likely to yield. What we are doing with our fisheries is not good, and what we are doing for them is not enough.