under treaty in forming the Inter-American Tropical Tuna Commission which since 1950 has been studying the tuna fishery of the whole eastern tropical Pacific from California to Central Peru. It is now in a position to make adequately substantiated statements about the state of the resources. With respect to tuna bait it has affirmed that no over fishing is taking place on any species being fished. With respect to skipjack tuna it has shown that the resource is underfished. With respect to yellowfin tuna the Commission feels that the fishery in 1951 had probably reached the maximum productivity that could be had from the area on a sustainable basis. But for the past four years the intensity of fishing for yellowfin had been decreasing steadily because of economic causes and no overfishing could be anticipated without a sharp reversal of the economic trend, which was not in immediate prospect.

The meetings held this year, and referred to above, have been important. There will be held during the coming year four additional meetings of equal, or perhaps even greater, importance: (1) The Inter-American Council of Jurists at Mexico City, (2) The specialized conference on the conservation of Marine Resources to held under the auspices of the Organization of American States in Ciudad Trujillo, (3) The eighth session of the International Law Commission to be held in Geneva, and (4) The eleventh session of the General Assembly of the United Nations to be held in New York.

It is not likely that full agreement among nations will be reached on these subjects even at the end of this coming year's series of meetings. But there are these straws in the wind that the participants in high seas commercial fisheries of the world can profitably take heed of:

- 1. They had better get an adequate program of scientific research going in their fishery so that when someone challenges them on overfishing they can either prove to an unbiased court or arbitral board that they are not over fishing the resource in question, or that the regulations under which they are fishing are adequate and appropriate to prevent overfishing.
- 2. If they fish off the coast of other countries and the coastal villages need the product of their coastal resources for their sustenance, the foreign fisherman had better be prepared to give way before that humanitarian plea.
- 3. If a group of fishermen are fully utilizing a resource and are keeping it at a stage of maximum sustainable productivity by curtailing their effort under conservation regulation, then the new fisherman coming from another shore had better be prepared to go elsewhere for his fishing because the careful husbanders of the resource will in the end win their plea before the sounding board of world public opinion too.

With these limitations, however, it looks as if the fisheries of the sea will be permitted to develop with a minimum amount of political interference.

Resolving Controversy Between Sport and Commercial Fishermen

J. L. McHugh

Virginia Fisheries Laboratory Gloucester Point, Va.

ABSTRACT

Ignorance is clearly the basis of the disputes that often arise concerning

the exploitation of our saltwater fisheries. Seldom, if ever, do we know whether the claims of the opposing parties are justified. The two groups are widely removed at the social, economic, educational, and philosophical level, and these differences are aggravated by emotional

factors, often influenced by irresponsible journalists.

In Virginia, such controversy does not often reach serious proportions. Several reasons may be cited: a generally thoughtful and tolerant attitude on the part of the leading sportswriters, a feeling by the leading sport fishermen's organizations that the seafood supply is sufficient for all, and a personal interest by many commercial seafood operators in recreational fishing.

The ultimate solution to such controversy is facts. Pending the accumulation of knowledge, however, there is a pressing need for education, to convince the public that argument is futile unless supported by facts, that commercial and sport fishermen must cooperate with each other, and with biologists and legislators, if the facts are to be secured, and that opinions are not synonymous with reason. The conservation agency must take the lead in promoting goodwill and understanding.

Conservation of an East Coast Shad Fishery

G. B. TALBOT

U. S. Fish and Wildlife Service, Beaufort, North Carolina

MOST FISHERY ADMINISTRATORS and biologists would agree that Conservation relating to fishes means to them something like "wise utilization of fishery resources." This, of course, implies some sort of management of the fishery. How this is to be accomplished, or indeed, even if it can be, does not seem to be so

readily agreed upon.

Usually a fishery is depleted before critical management procedures are considered, and corrective measures then call for restriction of the catch, at least during the initial stages of recovery. Huntsman (1953), however, has stated, "There seems to be no good basis for restricting fishing in order to increase the long term yield." Taylor (1951) has also pointed out that although "particular species have fluctuated in abundance, the yield of the sea fisheries as a whole or of any considerable region has not only been sustained, but has generally increased . . ." Others have argued (Burkenroad, 1951) that natural fluctuations in abundance may be the cause of the declines in some fisheries and that little can be done in controlling them.

On the other hand, where serious attempts have been made to understand the dynamics of a fish population and then to manage the fishery on scientific principles, the results have been most encouraging. Outstanding examples on our west coast are the work on Pacific halibut which has been notably successful, and on Fraser River sockeye, which has been a spectacular success.

In 1950 the Atlantic States Marine Fisheries Commission sponsored legislation to provide funds to the Fish and Wildlife Service for a coast-wide study of the shad (Alosa sapidissima) in order to provide basic information for state shad fishery regulations along the Atlantic Coast. As part of that study the Service began its work with investigation of the Hudson River shad. Emphasis