

# Understanding Trends in Recreational Fisheries in the Gulf of Mexico and the Caribbean

ROBERT B. DITTON

*Department of Wildlife and Fisheries Sciences  
Texas A&M University  
College Station, Texas 77840-2258 USA*

## ABSTRACT

Sport fisheries or recreational fisheries? Sport fishing or recreational fishing? Fisheries or fishing? What is the difference? What is a fishery? The words are confusing especially when used interchangeably. Also, these words have been used differently over time and there have been differences by discipline. I was assigned the task of analyzing the thematic area of sport fishing using papers presented at previous GCFI meetings in the GCFI archives, but chose instead to consider four categories of papers instead: sport fishing (including sports fishing and sport fishing), recreational fishing, sport fisheries, and recreational fisheries. The purpose of this was to focus on the larger more inclusive term of recreational fisheries for analysis purposes. Using the file of papers as a proxy or trend line for recreational fisheries topics from 1949 to the present, a temporal and spatial analysis of papers in this category will be presented. Over the past 58 years, we would expect to find increased attention to the economics of recreational fisheries in recent years. Likewise, we would expect to find more recent attention to particular types of recreational fisheries, *i.e.*, tournaments, charter and party boat fleets, artificial reefs, scuba, etc instead of recreational fisheries in general. Finally, we would expect to find an increasing diversity of researchers from various scientific disciplines involved in this important topic.

KEY WORDS: Management, anglers, history.

## Hacia el entendimiento de las tendencias en las pesquerías recreativas del Golfo de México y el Caribe

Pesquerías deportivas o pesquerías recreativas?. Pescar por deporte o pescar por entretenimiento?. Pesquerías o pescar?.Cuál es la diferencia?. Que es una pesquería?. Los términos son confusos, especialmente cuando se usan de manera indistinta. Igualmente, estos términos han sido utilizados de manera diferente a lo largo de los tiempos y ha habido diferencias en cada disciplina. Me fue asignado el examinar las tendencias en el campo de las pesquerías deportivas a través de la información que ha sido publicada en las Memorias del Instituto de Pesquerías del Golfo y el Caribe (GCFI, por sus siglas en ingles), para lo cual la búsqueda se amplió a cuatro categorías como son: pescar por deporte (incluyendo "sportsfishing" y "sportfishing"), pescar por entretenimiento, pesquerías deportivas y pesquerías recreativas. El objetivo final fue el de incluir todos los términos vinculantes con el propósito de realizar el solicitado análisis. Para ello, se consultaran los trabajos que han sido publicados entre 1949 y el presente, de manera que se puedan analizar las tendencias temporales y espaciales sobre el tema. Uno podría esperar que en fechas recientes de esta larga trayectoria de 58 años, haya habido un incremento en las publicaciones vinculadas al aspecto económico de las pesquerías recreativas. Igualmente, se espera encontrar una más reciente atención a tratar aquellos temas vinculados a aspectos particulares de la pesquería recreativa (ej., torneos, flotas de alquiler y festejos, arrecifes artificiales, buceo, etc), más allá de la consideración de la pesquería recreativa como generalidad. Finalmente, se espera encontrar un incremento en la diversidad de investigadores en las diferentes disciplinas que involucran este importante tópico.

PALABRAS CLAVES: Manejo, pescadores, historia.

## INTRODUCTION

I was invited to present a temporal analysis of sport fishing topics using the GCFI archive of papers as a proxy or trend line from 1949 to 2004. Using the GCFI search engine, I was able to locate 96 papers on "sport fishing" (or "sports fishing") from 1949 to 2004. I followed up on the search terms of "sport fishery", "recreational fishing", and "recreational fisheries" and found another 4, 15, and 29 references, respectively. Fifteen of the references using these latter terms were not included under the "sport fishing" heading. The overall number of recreational fisheries papers and respective references analyzed for this paper was 122. The papers were distributed as follows: 1949 (2), 1950-1959 (5), 1960 – 1969 (4), 1970 -1979 (8), 1980 – 1989 (24), 1990 – 1999 (43), and 2000- (36). From inspection, there is a trend toward an increasing number of papers dealing with recreational fisheries topics being presented at GCFI.

Many of the additional papers dealt with fishery resources either allocated to recreational fisheries for social and economic reasons or by tradition. Many more papers dealt with what have come to be known as "sport fish" and could have been included in the sport fishing category. These initial findings indicate that our categories are not well defined and are incomplete due to the use of keywords provided to the authors or assignment error by someone else. This is not a fatal flaw in the system but rather a caution that it should not be relied on for reaching conclusions until additional means of searching text are available.

References and corresponding papers were reviewed on a decade by decade basis to ascertain prevalent topics reflective of differences in thinking and work by decade. If the number of papers dealing with recreational fisheries topics was an indicator of the importance of sport fishing in the Gulf of Mexico and the Caribbean in 1949 (2), the

1950s (5), 1960s (4), and 1970s (8), then there was little interest overall in this topic area. Only about 19 of the 122 (16%) papers presented at GCFI during this 30-year time period dealt with recreational fisheries topics. During the first four GCFI meetings, there were only five papers dealing with recreational fisheries topics and 4 of these were contributed by U.S. authors and dealt with U.S. perspectives. Papers reviewed from 1949 - 1979 dealt with a wide variety of topics including the potential for conflicts between anglers and commercial fishermen, U.S. recreational fisheries policy promulgation efforts. These were mostly descriptive papers on a wide variety of topics. The majority of the nineteen papers presented during this 30-year time period could be characterized as discussion papers with little if any data and little if any references to previous work. Many were idea papers that reflected previous research findings, their observations, and opinions on current conditions and on the future. All were presented by U. S. authors, most of who worked for federal and state agencies with few academics included. Most were simply bringing their ideas to the GCFI venue to promote further discussion and understanding.

The first two papers on recreational fisheries presented at GCFI are indicative of thinking at the time. DeQuine (1949) addressed the emerging controversy of why recreational fishermen could only take a particular number of fish while commercial fishermen with their much more efficient methods could harvest what seemed like unlimited numbers. Accordingly, it was easy for anglers to blame commercial fishermen for their lack of success. Avoiding controversy, according to deQuine, would require sound research to determine the basis and extent of each group's interests and both groups needed be educated on their role in ensuring the greatest good to the greatest number. Once determined where the balance lies between groups, decision makers must consider the interests of both groups so their activities compliment each others'. And Rowan (1949) used anecdotal information to illustrate some the major expenditures associated with recreational fishing and that it was indeed big business. Neither paper included any references but each provided a number of rich examples to sustain their discussion points. These two papers reflect topics of continuing concern, namely, fisheries allocation issues and the basis for making allocations and recreational fishing as an economic engine in local and regional economies.

In 1979, I presented a paper titled "Marine recreational fisheries (MRF): Implications for development in the Caribbean". In the paper, I addressed the overall significance of marine recreational fisheries, their harvest and economic impact. I viewed recreational fishing in a larger tourism context. I concluded that there were recreational fishing markets of sufficient size being served in the Caribbean and identified data needs to guide development and management efforts. Overall, I sought to put marine recreational fisheries development in some perspective.

The priorities identified appeared as follows: First, develop local subsistence fisheries; second, develop the nation's seafood industry; and third, create jobs and economic impacts through indirect spending associated with recreational fisheries development.

Between 1980 - 1989, there was continuing emphasis on the topic of recreational fisheries development in the Caribbean from research, policy, and funding perspectives. At a time when restrictions were being placed on commercial fisheries in order to promote recreational fisheries in various Gulf States, there was a wide discussion of what was needed to promote recreational fishing as tourism in the Caribbean because of the social and economic benefits involved. Eleven of 24 (46%) papers during this time period dealt with various aspects of recreational fisheries development with a focus on the Caribbean. Three of the papers dealing with recreational fisheries development were contributed by Schmied. As he noted in one of his papers, "the development of MRF in the Caribbean would be a challenging but rewarding effort that could easily translate into economic stability and growth for Caribbean nations, jobs for area citizens, and overall improvements in the quality of life in the region. The success of development efforts, however, will depend on each nation's ability to initiate a multidisciplinary development effort. This effort should recognize the limitations of the fishery resource base, respond to the nature, motivations and preferences of anglers visiting the region, and provide sufficient economic incentives and assistance to support the establishment of necessary MRF-related support businesses and services." (Schmied 1983)

Unlike the early days of GCFI where almost all papers were given by U.S. authors, 12 of 24 (50%) of the papers presented in the eighties were contributed by Caribbean nation authors from Venezuela, U.S. Virgin Islands, Puerto Rico, Mexico, Costa Rica, Bermuda, Bahamas, and Jamaica. Billfish conservation and management emerged as an important topic of interest with seven papers (29%). Two of the 24 (8%) papers dealt with either the need for better recreational fishing statistics programs or a discussion of current programs.

In the nineties, there was less talk of marine recreational fisheries development in general and more focus on particular elements of recreational fisheries. Of the 43 papers presented at GCFI between 1990 and 1999, eleven (26%) dealt with tournaments due in part to a special symposium held on this topic in 1991. In addition, there were 8 of 43 papers overall (19%) that dealt with various social and economic aspects of charter and party boats in the southeast U.S and U.S. Caribbean. Another topic receiving attention were multi-disciplinary perspectives on billfish conservation and management (n = 8).

Between 1990 and 1999, about 6 papers dealing with what have been considered "sport" fish were presented at GCFI. These include papers that detail the population size, status, age and growth of various species of interest to the

recreational fishing community including red snapper, red drum, greater amberjack, and reef fish and pelagic species overall. Some topics appearing for the first time include billfish fisheries as ecotourism, angler support for rules and regulations, recreational SCUBA diving interactions with fishing, and applied social science or human dimensions in support of management.

By virtue of the number of papers included under “recreational fisheries”, there appears to be little continuing interest in this topic (including studies of species considered to be “sport” fish as well as an interest in all aspects of recreational fisheries) among those who live in the Caribbean. Only 8 of 43 papers presented on recreational fisheries at GCFI between 1990 and 1999 were by Caribbean authors (including the U.S. Caribbean).

Between 2000 and 2005, there were 36 papers dealing with various recreational fisheries topics. This is well on a pace to eclipse the 43 papers presented from 1990 and 1999. Furthermore, the papers being presented in this category appear more diverse than any other previous time period reviewed. Based on what is included in the recreational fisheries category, there is no mention of recreational fisheries development any more but rather more focus on sustainability and ecotourism issues. There were six papers dealing with various policy aspects of recreational fishing including an evaluation of the Florida net ban, various surveys of sport fishing participants as well as four stated preference analyses that seek to help managers to understand participant preferences for conservation and the trade-offs they are and are not willing to make. These papers make use of complicated multivariate analyses in support of management decision making and contrast sharply with the opinion and discussion style used predominantly in papers during the early years of the GCFI.

Furthermore, there were four papers dealing with various aspects of charter and party boat fisheries, three papers dealing with various aspects of billfish fisheries, and two papers dealing with SCUBA activity including fishing adjacent to a marine protected area. The trend, whereby papers that deal with “sport” fish end up under recreational fisheries is continuing. In this regard, six (14%) papers deal with various topics such as age and growth of red snapper, genetics of tarpon, observations of abundance of snappers, status of yellowfin grouper spawning aggregations, and a comparison of recreational and commercial dolphinfish fisheries. About 15 of 36 (42%) papers presented on recreational fisheries at GCFI between 2000 and 2005 were by authors from the Caribbean (including the U.S. Caribbean).

### DISCUSSION

Is this a valid exercise of ascertaining trends in Gulf and Caribbean fisheries or does it just reflect the nature of disciplinary research being done by government and academic scientists, as well as their students. Or are we

looking at trends that are influenced by topical themes being promoted by the GCFI Board? Our content analysis should reflect the issues of interest in the field but perhaps it does not for the above mentioned reasons. But is this situation any different than any other application of content analysis? I don’t think so.

There appears to be a continuing misunderstanding over the use of the words “sport fishing” or “fishery”. This misunderstanding may have lead to misclassification problems in this paper. Some authors dealing with particular fishery resources of interest to anglers may have chosen the “recreational fisheries” keyword while others did not. Categories will require additional definition and explanation in the future if they are to be meaningful for classification purposes. Likewise, it may be necessary for analyses like this to rely on searching key words in context rather than searching based on keywords assigned by authors who have different understandings of word meanings.

There has been substantial change over time in the “recreational fisheries” topics dealt with at annual GCFI meetings. First and foremost, there has been a shift from management – oriented discussion papers by agency biologists where observations and opinion drive what presenters have to say about the status of fisheries in their particular fisheries to a more recent focus on students and faculty presenting data based science papers, often with a disciplinary peer review focus. Second, there has been a shift from more general recreational fisheries-related topics that might be of interest to all in attendance to more specific topics which fail to elicit much interest and discussion because the topics are so narrowly focused. Third, there has been a shift away from a fishery development focus to concerns for sustainability and ecotourism perspectives on fishery resources. And finally, in contrast with the early beginnings of GCFI, there is increased interest in recreational fisheries topics in the Gulf and Caribbean study area and an increasing number of presenters from the Caribbean.

### LITERATURE CITED

- deQuine, J.F. 1949. Conflicting interests of sports and commercial fishing, *Proceedings of the Gulf and Caribbean Fisheries Institute* 1:29 – 30.
- Ditton, R.B. 1982. Information and data needs for marine recreational fisheries development in the Caribbean. *Proceedings of the Gulf and Caribbean Fisheries Institute* 35:144 – 151.
- Rowan, E. 1949. Sport fishing as an industry. *Proceedings of the Gulf and Caribbean Fisheries Institute* 1:51 - 53.
- Schmied, R.L. 1984. Tools and methods for fisheries development. Marine Recreational Fisheries. *Proceedings of the Marine Recreational Fisheries Symposium* 9:145 -155.