

U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL MARINE FISHERIES SERVICE  
DUVAL BUILDING  
9450 KOGER BOULEVARD  
St. Petersburg, Florida 33702

REPORT FOR:

[ ] COMMERCIAL FISHERIES RESEARCH AND DEVELOPMENT ACT (PL 88-309)

[ ] ANADROMOUS FISH ACT (PL 89-304)

[ X ] STATE/FEDERAL

[ ] COUNCIL LIAISON

STATE Puerto Rico

TYPE OF REPORT: [ ] Quarterly (Coordination projects only)  
[ ] Annual Progress or Segment  
[ X ] Completion

PROJECT NO. NA17FT1006 SEGMENT NO. 3

PROJECT TITLE Puerto Rico/NMFS Cooperative Fisheries Statistics Program 2001-04.

PERIOD COVERED April 1st 2001-March 31st, 2004.

PREPARED BY *Daniel Matos Caraballo*  
Daniel Matos Caraballo DATE 6/28/2004.

APPROVED BY Luis E. Rodríguez Rivera DATE \_\_\_\_\_

ABSTRACT

This project have the following jobs:

- Job 1. Collection of Puerto Rico's commercial landings data, April 2001-March, 2004.
- Job 2. Collection of Puerto Rico's biostatistics data, April 2001-March, 2004.
- Job 3. Comprehensive Census of the marine fishery of Puerto Rico 2001-02.
- Job 4. Hydroacoustic evaluation of spawning red hind (*Epinephelus guttatus*) along the coast of Puerto Rico in February 2002.
- Job 5. Historical landings and biostatistics CFSP's data analysis for five important fishes in Puerto Rico.
- Job 6. Determination of the correction factor for landings data and catch per unit effort (CPUE) for a single trip, 2002-03.

All jobs were completed successfully and are discussed in this final report.

## INTRODUCTION

The Fisheries Research Laboratory (FRL) of the Puerto Rico Department of Natural and Environmental Resources (DNER) monitors the commercial landings of fish and shellfish in Puerto Rico. The Commercial Fisheries Statistics Program (CFSP) was implemented in 1967 under the Commercial Fisheries Research and Development Act of 1964 (PL 88-309) to collect data on the commercial fishery. Currently, this project is funded by the NOAA/National Marine Fisheries Service (NMFS) through the State/Federal Cooperative Fisheries Program, Interjurisdictional Fisheries Programs and the DNER. The Puerto Rico/NMFS State Federal Cooperative Fisheries Statistics Program (S/F) NA17FT1006 started in April 1<sup>st</sup> 2001 and finished in March 31<sup>st</sup>, 2004. This project funded the following jobs:

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DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES

Final Report to the  
National Marine Fisheries Service  
NOAA

Entitled

**Puerto Rico/NMFS Cooperative Fisheries Statistics Program**  
**April 2001 - March 2004**  
**NA17FT1006**

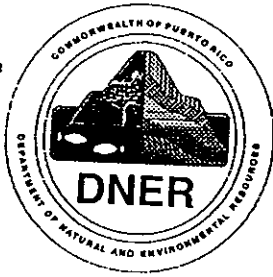
by

Daniel Matos-Caraballo  
Principal Investigator  
DRNA Fisheries Research Laboratory

Submitted by

Luis E. Rivera-Rodriguez  
Secretary of Department of Natural and Environmental Resources

June 2004



COMMONWEALTH OF PUERTO RICO  
DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES

Ms. Cynthia Binkley  
Southeast Regional Office  
9721 Executive Center Drive N.  
St. Petersburg, FL 33702

Dear Ms. Binkley:

Enclosed you will find the original and two copies of the Final Report of the Puerto Rico/NMFS Cooperative Fisheries Statistics (NA17FT1006-03), cover the period from April 1<sup>st</sup> 2001 to March 31<sup>st</sup> 2004.

If you have any question, please contact Mr. Daniel Matos-Caraballo, at the Fisheries Research Laboratory, telephone number (787) 833-2025 or e-mail [matos\\_daniel@hotmail.com](mailto:matos_daniel@hotmail.com).

Sincerely,

Luis E. Rodríguez Rivera  
Secretary

LERR/dmc



DEPARTAMENTO DE RECURSOS NATURALES Y AMBIENTALES  
NEGOCIADO DE PESQUERIAS Y VIDA SILVESTRE

HOJA DE TRAMITE

Fecha: 28 de junio de 2004

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Secretario

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Aida Rosario  
Directora  
Laboratorio de Investigaciones Pesqueras

DE : *Daniel Matos Carbelló*  
Daniel Matos  
Biólogo III  
Programa Estadísticas Pesqueras

ASUNTO : REPORTE FINAL PROPUESTA NA17F3106

OBSERVACIONES: PARA SU FIRMA Y DISTRIBUCION

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Anexos

U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
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April 2001 - March 2004**

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by

Daniel Matos-Caraballo  
Principal Investigator  
DRNA Fisheries Research Laboratory

## ACKNOWLEDGMENTS

I wish to express my gratitude to all the people who contribute to the completion of this report. Port agents Walter Irizarry, Jesús León, Héctor Y. López and Luis A. Rivera, who collected the data and help in the data entry process. Statistic clerks Lucía T. Vargas and Albaliz Mercado, they handled, entered the data, and helped to make some tables of this report. In particular, I wish to acknowledge the cooperation of the commercial fishers for assisting the Fisheries Statistics Project: without their help this report would not have been possible.

## INTRODUCTION

The objective of the Puerto Rico/NMFS State Federal Cooperative Fisheries Statistics Program (S/F) is to maintain reporting services on the commercial finfish and shellfish resources of Puerto Rico, as well as manage and disseminate the fisheries statistics through coordination of activities between NMFS and the Commercial Fishery Statistics Program (CFSP) of the Department of Natural and Environmental Resources (DNER). This includes the processing and summary of monthly landings (by species or species group, weight, value, numbers of trips, hours fishing, gear type, etc.), which is need to manage marine resources effectively. Close cooperation in these activities will avoid duplication and promote efficiency of operations.

This report includes data from January 2001 - March 2004. Raw data form, have been submitted by e-mail to Joshua Bennett, and John Poffenberger, Technical Monitor of the Research Management Division, NMFS Southeast Fisheries Science Center, Miami, Florida.

The Puerto Rico/NMFS SF has four principal goals:

- 1) Collect landing data from the island of Puerto Rico ensuring coverage of all coastal municipalities and their major fishing centers.
- 2) Determine the total weight of principal finfish and shellfish landed in Puerto Rico each month.
- 3) Determine the ex-vessel value of principal finfish and shellfish species landed in Puerto Rico each month.
- 4) Manage, correct, evaluate, summarize data and prepare semiannual and annual performance reports.
- 5) Collect biostatistics data (i.e. individual lengths and weight, species composition) as needed.
- 6) Collect data to estimate catch per unit effort (CPUE) for landing and bistatistics data.

The mentioned goals cover the following jobs of this final report:

Job 1. Collection of Puerto Rico's commercial landings data, April 2001- March 2004.

Job 2. Collection of Puerto Rico's biostatistics data, April 2001-March 2004.

## PROCEDURES

### Job 1. Commercial Landings Data

Commercial fishery landing data were collected from voluntary fishers, fish buyers and fishing associations from around Puerto Rico. Four port agents and the principal investigator visited the 42 coastal municipalities including the islands of Vieques and Culebra, and the 88 identified fishing centers, (Figure 1). The data collection occurred from January 2001-March 2004. Data were collected using a landing trip ticket system (Figure 2) on a biweekly or monthly basis during 2001 and 2002. Started in 2003, the Trip Ticket System (only one trip reported by one ticket) was established by the CFSP. Special boxes were placed in most fishing centers to enable port agents to collect trip tickets from fishers.

Efforts were made to collect the following data: fishing date; name of fish buyer, fisherman and/or helper (to avoid data duplication); fishing license number; municipality; fishing center (municipality landing area); number of trips; gear type; fishing effort (hours spent fishing); weight in pounds by species or taxonomic family; market value to the fisherman (price in U.S. dollars/pound); maximum and minimum fishing depth; and fishing area. Trip tickets were completed using species common names and identification was possible by using an amended version of the bilingual technical report "Common Names of Fishes in Puerto Rico" (Erdman, 1987). A numerical system of species identification was developed to correspond with species codes used in Erdman's publication (additional species and their numbers are included in Appendix 1). Fishers usually landed fishes in the round (not eviscerated), except the deepwater snapper and large grouper that they usually landed gilled and gutted. Lobster, oyster and octopus were also landed in the round, and conch weights included meat only. Land crab statistics were reported in number of dozens with each dozen assumed to produce 1 lb. of meat. Some landings were reported as one of four classes of fish (first, second, third and "trash" fish) reflecting their market value: "trash" fish are perceived to have little or no market value. Classification varied somewhat by region but the following descriptions were used to characterize each class broadly: first class fish included large snappers, grouper, grunt, trunkfish and hogfish; second class included small snapper and grouper, parrotfish, goatfish, and triggerfish; third class included smaller individuals of second class fish and large squirrelfish. The "trashfish" category included butterflyfish, angelfish, surgeonfish, small squirrelfish and small fishes of a large number of species (Matos-Caraballo and Sadovy, 1990).

Catch per unit of effort (CPUE) was evaluated in two ways: 1) for landings data by calculation of total pounds per trip, making a subsample by month, using only those landings trip tickets that clearly indicated a single trip; 2) use of the biostatistical sampling program (explained in biostatistical procedures).

Landings data were entered on MS-DOS computers, using Microsoft FoxPro and dBASE III+, checked against the original landing trip tickets; corrected and analyzed using Microsoft FoxPro and Microsoft Excel. All data presented in this report are raw data. As in previous years (1988-99) a correction factor was used in calculations to correct for under-reporting. The correction factor was expressed as the percentage of fishers that regularly cooperated with statistics during 2001 and 2002 were 86 % divided by the total number of active fishers in the Island of Puerto Rico (Matos-Caraballo, et. al. in press). For year 2003, was determined 56%, by Job 6 of this project. Correction factors before 2001 are discussed in Matos-Caraballo and Sadovy (1990; 1991) and Matos-Caraballo (1992; 1993; 1995, 1998, in press b).

## Job 2. Commercial Biostatistics Data

Biostatistics data from finfish and spiny lobster were collected by port agents three days per week. Each individual was identified by species to determine catch composition. Finfishes were measured in fork length (FL) and spiny lobster in carapace length (CL), both in millimeters (mm), and weighed in grams. Data were recorded on the field and copied in the biostatistics data sheets using the format shown in Figure 3. The form was designed to facilitate entry and processing of effort data. Biostatistics data were entered in Trip Interview Program (TIP) developed by NMFS Southeast Science Center. Later, the data stored in TIP was converted to .dbf format and analyzed using Microsoft FoxPro and Microsoft Excel. The data collected include date, name of fisherman, fishing area, depth, gear, species, length, weight and effort by gear type. When possible, the whole catch was identified at species level, weight in grams (g), identified by sex visual gonad stage and fork length measured in millimeters (mm). When measuring the whole catch was not possible (incomplete sample), port agents tried to identify the species level, and tried to sample at least 50 randomly selected individuals measured and weighed. However, sometimes fishers or fish buyers did not allow the port agents to sample 50 individuals. Thus, some incomplete samples resulted in  $n < 50$ . Measurements on complete catches are more difficult to obtain when the catch is particularly large, because fish buyers or fishers wish to remove, sell or store fish and/or shellfish rapidly. Biostatistics CPUE data was handled as follows: catch is total capture expressed in pounds. Effort is expressed by gear:

- a) net categories are measured as "fathom/hour".
- b) trap categories are measured as "trap/day".
- c) hook categories are measured as "hook/hours".
- d) diving categories are presented as "man/hours".

## Other Data Users

The fishery's data were used for scientific investigations by various entities such as: the University of Puerto Rico (UPR), Mayaguez Campus (Marine Sciences Department), Sea Grant College Program, NOAA/NMFS Caribbean Fisheries Management Council, P.R. Department of Agriculture (Agro-Statistics Division, Fisheries Development Program and Mayaguez Regional Office), P.R. Department of Natural and Environmental Resources, Government Developing Bank, Promoting Cooperative Administration, NOAA/NMFS SEFSC, Food and Agriculture Organization of the United Nations. Fishery data was also requested by two local newspapers (The San Juan Star, and El Nuevo Día) and T.V. news of Telemundo Channel 2, WIPR Channel 6 to provide information to the general public. Elementary, secondary school level students, and college (Metropolitan University, Interamerican University, UPR Humacao Campus, UPR Río Piedras Campus, Louisiana University) students requested fishery statistics data. Commercial fishers also used fishery statistics data. Private institutions use the statistics data, for example; Estudios Técnicos, ASC Group, Puerto Rico's Legislature, Environconsult and Coastal Planning Inc.

## RESULTS

### Commercial Landings Data

Using the correction factor of 86%, in Puerto Rico during 2001, it was estimated that a total of 4,138,400 pounds of fish and shellfish were landed, with a market value of \$9,394,168.00. The correction factor of 86%, for 2002, estimated a total of 3,805,595 pounds of fish and shellfish were landed, with a market value of \$7,344,799.00. For 2003, the correction factor of 56%, estimated that 4,265,645 pounds were landed with a value of \$7,848,786.00. Raw data shows that from January-December 2001 a total of 3,559,024 pounds was reported (Table 1A), in 2002 was reported 3,272,812 (Table 1B), and in 2003 was reported 2,388,761 (Table 3C).

A total of 42,436 trip tickets were collected during 2001, 41,142 during 2002, 43,564 during 2003 and 11,397 during January – March 2004 (Table 2). Landings were principally comprised by five species of shellfish and 36 categories of species, or families of finfish (Figure 2), although a total of 142 finfish groups and/or species and 11 shellfish species were reported by fishers (Table 3).

The most important fish, in terms of percentage of total pounds landed (fish and shellfish), for 2001-03, were the yellowtail snapper (*Ocyurus chrysurus*) 8.6%, silk snapper (mainly *Lutjanus vivanus*) 7.1%, lane snapper (*Lutjanus synagris*) 5.4%, various species of tuna 4.0%, various species of grunts mainly the white grunt (*Haemulon plumieri*) 3.7%, mackerel or king mackerel (*Scomberomorus cavalla*) 3.3, dolphinfish (*Coryphaena hippurus*) 3.0%, various species of parrotfish 3.0%, various species of trunkfish 2.3%, red hinds (*Epinephelus guttatus*) reported 2.2%, and cero (*Scomberomorus regalis*) 1.9%, and (Table 1A, AB and 1C). The most important of the shellfish species were the queen the spiny lobster (*Panulirus argus*) 8.9% and conch (*Strombus gigas*) 8.1% of the reported landings, and (Table 1A, 1B and 1C).

Matos-Caraballo (1998; in press b) mentioned that several fish and shellfish species, usually discarded by fishers in the past, have now become commercial species. These species did not have market value years ago, but are now sold at reasonable prices. The Table 1A, 1B and 1C shows that the squirrelfish (e.g. *Holocentrus ascensionis* and *H. rufus*) was sold in 2001-03 at an average price of \$1.25 per pound. Shellfish species in the same situation are *Carpilius corallinus* and *Mythrax spp* (Table 3). On the other hand, *Acanthurus spp*, *Holocanthus ciliaris*, *Pomacanthus. arcuatus*, and *P. paru* are fished in the municipality island of Vieques, to be sold in the market of Saint Thomas and Saint Croix, USVI.

During 2001-03, prices varied markedly by species (Tables 1A, 1B and 1C) and municipality (Table 4A, 4B and 4C). For example, the lowest average price per pound for fish and shellfish was obtained on the west coast, in the municipality of Aguadilla at \$1.00 (Table 4c), and the highest average price was obtained in the North Coast, in the municipality of Carolina at \$3.75 (Table 4C). The highest fish price value during 2001-03, was the silk snapper, \$2.98 per pound in 2002 (Table 4B). The most valued shellfish during 2001-03, were the land crab \$14.26 per pound (Table 1A), and the spiny lobsters, \$5.66 per pound (Table 1B). The most productive of the 42 municipalities during 2001-03, was Cabo Rojo accounting for 14.6% of the total landings, by weight (Table 4A, 4B and 4C). The west coast reported 31.0% of the total weight, was the most productive, followed by the south coast that reported 30.6%, east coast with 24.7% and north coast with 13.7% (Tables 1A, 1B and 1C).

The gear types (as defined in Matos and Torres, 1989), which accounted for the highest

percentage of landing, by weight during 2001-03, were lines (hand line, troll line, long line and rod and line together) taking 40.0% (3,681,028 pounds) of the total catch (Table 5A, 5B and 5C). Lines were followed by traps (fish trap and lobster trap) with 22.1% (2,036,582 pounds) from the total catch. Divers (skin and SCUBA) caught 19.6% (1,808,949 pounds) of the total reported catch (Table 5A, 5B and 5C). Finally nets (beach seine, gill net, cast net and trammel net) that accounted for the 18.3% (1,693,186 pounds) of the total reported catch (Table 5A, 5B and 5C).

Landings reported by species and by month are in Tables 6. Some species were reported in greater quantities in some months of the year. The dolphinfish and the red hind were caught mostly during December, January and February (Table 6A, 6B and 6C). The tunas (Scombridae) were caught in greater quantities during May-September. The yellowtail snappers were caught in greater quantities during the 12 months, showing picks for January-April and September. Fishing activity was affected during the hurricane season, especially during August and September. In August and September 2001-03, many hurricanes and storms passed close to Puerto affecting, affecting the whole coastal areas with surge wave action, winds and rain that produced flooded areas. These conditions resulted in a decrease in commercial effort.

Fishing trips are generally of a half-day duration. The CPUE average for landings/trip during 2001-03, was reported in Table 7. In 2001, the average CPUE was 71 pounds per trip (Tables 7). In 2002, the average CPUE was 63 pounds per trip and for 2003, was 61 pounds per trip. The months of February, March and April have a high average CPUE landings per trip (Table 7), probably due to the religious season of the Lent, this tradition involve an increase in human fish consumption..

#### Commercial Biostatistics Data

A total of 62,559 finfish individuals and 3994 spiny lobsters were measured during 2001-03 (Tables 8A, 8B and 8C). Approximately 3,500 finfish and 300 lobsters were measured and weighed during January-March 2004. Sex determination of fishes in the field has been difficult because of the reluctance of fishers to permit this activity, and the general limitation in available time for measuring samples, and difficulties in assessing any but the ripest individuals, for sex. Tables 8, lists and ranks all fish species and lobster, as well as the number of the total biostatistics samples taken for each species, and weights. The species most frequently measured from 2001-03 were *Ocyurus chrysurus*, *Haemulon plumieri*, *Lutjanus vivanus*, *Sparisoma viride*, *Panulirus argus*, *Sparisoma chrysopterum*, *Epinephelus guttatus*, *Scomberomorus cavalla* and *Lutjanus synagris* (Table 8A, 8B and 8C). A total of 668 landings were interviewed to collect biostatistics data in 2001, 519 interviews in 2002, 578 interviews in 2003 and approximately 114 during January-April 2004.

Biostatistics effort data is shown in Table 9. The gear efforts were analyzed only when  $n \geq 5$ . Troll line, SCUBA divers and troll lines were the most effective gears during 2001-03 (Table 9).

## DISCUSSION

#### Commercial Landings Data

Commercial landings reported data have been around two millions pounds from 1987-94 (Matos-Caraballo, in press a.) Throughout 1997-2000, it was observed that fishers cooperated more with the Statistics Program, resulting an 3.8, 3.5 and 3.3 millions pounds reported. One possible reason to explain the increased landings would be the increases of 500 more active commercial

fishers that cooperated with FSP during 1987-94. Also, the increase in participation occurred because the PRDNER and the Puerto Rico Department of Agriculture have provided economical help to fishers who regularly cooperated with the FSP. When we compare the landings reported in late 70's and early 80's (around 5 million-7 million pounds), with the reported landings of 1987-96, an indication of overfishing is observed. During 2001-02 it was observed that 86% of the active commercial fishers cooperated with the CFSP. This resulted in over 3 millions pounds reported. However, for 2003, landings reported dramatically to 2.38 millions of pounds. Two reasons were observed that explain this reduction. First, the fishers cooperation decreased from 2001-02 of 86% to 56% in 2003. The mentioned reduction occurred because the CFSP required a trip ticket system and many fishers prefers to report the whole month in a single trip ticket. Many did not report for the mentioned reason. However, many fishers that initially resisted the change at the end of the 2003 started to cooperate with CFSP. Second, since 1996 to 2002, commercial fishery had a reduction of approximately 600 active commercial fishers (Matos-Caraballo, et. al., in press). Due to limited fishery resources many commercial fishers change to work on construction, agriculture or migrate to work in the continental USA.

Landings reported by species for 2001-2003, showed that snappers, grunts, groupers, tunas, parrotfishes, mackerels, dolphinfish and trunkfishes were the most reported groups by weight in the commercial fisheries. This CFSP has been successful to educate commercial fishers to report by species deep water snappers that in previous reports were four species reported as silk snapper. Since early 70's the deep water snappers category was the most reported in pounds for fish and shellfish. During the last 1988-2001 CFSP collected data that shown over 90% of *Lutjanus vivanus* was caught before reach the MSSM (420mm FL). During the 80's the Puerto Real fishing center at Cabo Rojo had approximate 15-20 boats with >40 feets long, dedicated to the deep sea water snappers fishery. The CFSP reported that approximately five or less of the mentioned boats still active in this fishery. Interviewed fishers reported that the main cause that provoked the elimination of the 40 feets long > boats was that the silk snapper catch did not produce money enough to pay the fishing trip expenses. *L. vivanus* will be managed by DNER fishing regulation, that forbidden the catch of *L. vivanus* before reach MSSM.

Snappers (Lutjanidae) is the main fish category in pounds landed and price per pound caught in Puerto Rico's commercial fishery during 2001-2004. The lobster and queen conch were the most important shellfish in pounds landed and price per pound. CFSP personnel observed that many fishers continued to catch the lobster under the legal size of 3.5 inches carapace length. SCUBA divers reported to CFSP that they were diving at 70-120 feet to catch queen conch. The shallow water population of this specie has been over exploited. DNER and CFMC has a close season for queen conch (July 1<sup>st</sup>- September 30<sup>th</sup>) and a quota (150 queen conch per fisher or 450 queen conch per vessel per day).

Several species discarded by fishers in the past, have now become commercial species (e.g. *Holocentrus ascensionis*, *H. Rufus*, *Holocanthus ciliaris*, *Carpilus coralinus* and *Mythrax spp*). Thus species considered with no market value in the past, are now easily sold at good price today. Probably these species are now marketable due to the decrease in landings, and an increase in the demand of more fresh fish products. This fact is another indication of overfishing.

The fish market of Saint Croix and Saint Thomas USVI, purchase the Vieques landings of *Acanthurus spp*, *Holocanthus ciliaris*, *Pomacanthus. arcuatus*, *Pomacanthus paru* and many juvenile reef fish species. The mentioned species are subject to severe fishing pressure. Thus, the



CFSP must continue to monitor the exploitation of these resources.

Since 1968-99, the municipality of Cabo Rojo and the West coast had been the most productive municipality and coast respectively (Weiler and Suárez-Caabro, 1980; Collazo and Calderón, 1988; Matos-Caraballo and Sadovy, 1990 and 1991; Matos-Caraballo, 1993; 1998, in press b and c). In 2000, the south coast fished 268,923 more pounds than the west coast. This result can be associated with the silk snapper fishery and the overfished resources of the west coast. During 2001-03, west coast reported 31.0% and south coast reported 30.6%. The CFSP will continue monitoring this trend to identify the probable facts that are producing these results.

Various storms and hurricanes passed close to Puerto Rico during August and September 2001-03. The mentioned storms caused ocean surge action affecting negatively the fishing activity. However thanks to the good Lord, no hurricane hit directed Puerto Rico since 1998, thus the negative factor is not the worst as occurred with Hurricane Georges. This hurricane stopped completely the fishery activity during 4-8 weeks.

Traps caught 22.4% of the total catch during 1997-99 (Matos-Caraballo, in press b). During 2000, traps were reported 19.6%, exceeded by lines (40.0%), nets (19.7%) and diving (20.5). During 2001-04 traps reported 22.1%. That means this gear landings has been steady since 1997-2003. However, during 1982 fish traps alone caught 71.2% of the total pounds reported (Collazo and Calderón, 1988) and decrease during the late 1980's to the 22%-25% during the last 10 years. On the other hand, an increasing trend was observed in the percentage of reported landings taken by all lines combined, when compared with year 1982, in which the percentage was 12.4% (Collazo and Calderón, 1988) to 40.0% during 2000-04. Nets have shown a similar trend. For example the gill nets and trammel nets caught 2.7% in 1982 (Collazo and Calderón, 1988), while in 1997-99 they caught 21.9%, although decreased to 18.3 during 2001-03.. Diving shows a trend to increase. Principal Investigator and port agents of this project observed that approximately 90% of the new and young commercial fishers are divers. These observations resulted in the fact that diving was the third gear category most productive in landings reported during 2001-03.

During 2001-03 the CPUE in pounds reported by trip was steady, 71 pounds/trip in 2001, 63 in 2002 and 61 in 2003. In 1995 the annual average pounds per trip were 80. In 1996, the annual average pounds per trip were 63. In 1997, the annual average pounds per trip were 72 (Matos-Caraballo, 1998). On the other hand the result for 1998 was 54 pounds annual average pounds per trip and 53 for 1999 (Matos-Caraballo, in press c). In 2000, the annual average pound per trip was 71. It is necessary to continuing observation of this trends..

#### Commercial Biostatistics Data

All the biostatistics data collected in this project during 2001-04 is available in NMFS/SEFSC in Miami FL and in CFSP at Cabo Rojo Puerto Rico. The CFSP principal investigator and personnel from CFMC (Graciela-García-Moliner) and NMFS /SEFSC (Nancie Cummings) will study and analyzed the collected data to provide knowledge to fishery managers at NMFS and DNER. The fishery managers will take decisions that address the wisely use of the overfished resources of Puerto Rico.

### **CONCLUSION**

Since 1987, Puerto Rico's reported landings of fish and shellfish have continued to be in the vicinity of 2-3 million pounds. In 1979, reports of landings in Puerto Rico recorded 7,212,000 pounds of fish and shellfish. During the decade of the eighties, landings decreased consistently.

During 1995-2002, reported landings were ranged between 3,617,039 to 3,895,980 pounds of fish and shellfish. In 2003, a decrease in landings reported occurred mainly because of the CFSP change to trip ticket system. The landings show that the fishery resource has been steady during 1997-2003. However the mentioned stability in the fishery resource, signs of overfishing are still present. For example, landings and biostatistics information have shown that several fish and shellfish species that were discarded by fishers in the past and that did not have market value (e.g. *Holocentrus ascensionis*, *H. rufus*, *Acanthurus sp*, *Carpilius corallinus*) are now sold easily. These species are probably now important because of the decreased landings of the traditional valuable species. During the 70's the traps were the most productive gear. During 2001-03, the traps were the second more productive gear with 22.1% of the total pounds reported.

Another set of problems associated with the fishery resources is observed thru biostatistics data, which shows species such as *L. vivanus* that need urgently management. The FMP for *P. argus* shows to be enforced, but the enforcement on this FMP should be increased. On the other hand the *S. gigas*, shallow water populations seems to be overexploited and the commercial fishers mentioned they were deeper (70-125 feet) to catch this resource. The DNER needs to increase the surveillance during the queen conch closing season.

After the analysis of these facts, it is concluded that during 2001-04, several fishery resources in Puerto Rico have continued to decline, despite the stable number of landings reported. The information presented in this report urges the need for measures to protect the fishery resources of Puerto Rico, including the improvement of the enforcement of the existing FMP.

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APPENDIX 1. SPECIES ADDED TO ERDSMAN'S LIST.

05/25/00

List of Fish

Carcharhinidae

- 400 - Carcharhinus perezii
- 401 - Carcharhinus springeri
- 402 - Carcharhinus obscurus
- 403 - Carcharhinus limbatus
- 525 - Mustelus canis

Muraenidae

- 440 - Enchelycore nigricans
- 441 - Gymnothorax vicinus
- 442 - Gymnothorax moringa

Congridae

- 450 - Cynoponticus savanna

Synodontidae

- 460 - Synodus synodus

Haemulidae

- 500 - Haemulon carbonarium
- 501 - Haemulon parra
- 502 - Haemulon bonariense
- 503 - Orthopristis rubra
- 505 -

05/25/00

506 - Haemulon melanurum

507 - Haemulon striatus

Centropomidae

515 - Centropomus pectinatus

Clupidae

540 - Harengula clupeola

Scorpaenidae

545 - Scorpaenodes caribbaeus

Sparidae

551 - Calamus penna

552 - Calamus calamus

553 - Calamus spp.

Chaetodontidae

560 - Chaetodon ocellatus

561 - Chaetodon striatus

574 - Chaetodon sedentarius

Pomacanthidae

575 - Holacanthus tricolor

576 - Pomacanthus arcuatus

577 - Pomacanthus paru

578 - Holacanthus bermudensis

Pomacentridae

580 - Microspathodon chrysurus

581 - Stegastes partitus

Echeneididae

590 - Remora remora

Carangidae

601 - Caranx hippos

603 - Uraspis secunda

604 - Selene vomer

605 - Seriola fasciata

606 - Alectis crinitus

Holocentridae

625 - Holocentrus rufus

Acanthuridae

651 - Acanthurus chirurgus

652 - Acanthurus coeruleus

Labridae

660 - Halichoeres garnoti

661 - Halichoeres maculipinna

662 - Halichoeres bivittatus

663 - Xyrichtys martinicensis

664 - Xyrichtys novacula

Scaridae

675 - Sparisoma chrysopterum

676 - Scarus vetula

677 - Sparisoma aurofrenatum

678 - Scarus taeniopterus

679 - Sparisoma rubripinne

680 - Scarus croicensis (iserti)

Ostraciidae

700 - Acanthostracion quadricornis \*\*

701 - Acanthostracion polygonius \*\*

702 - Lactophrys bicaudalis

703 - Lactophrys triqueter

\*\* From 1990 were reclassified as genus Lactophrys.

Lutjanidae

710 - Lutjanus purpureus

Ephippidae

715 - Chaetodipterus faber

Balistidae

725 - Aluterus schoepfii

726 - Aluterus scriptus

727 - Cantherhines macrocerus (Hollard)

728 - Monacanthus setifer = Stephanolepis setifer

729 - Balistes capriscus

730 - Aluterus monoceros

Tetraodontidae

740 - Canthigaster rostrata

741 - Sphoeroides greeleyi

Serranidae

750 - Mycteroperca tigris

751 - Mycteroperca bonaci

752 - Mycteroperca interstitialis

753 - Dyplectrum formosum

754 - Hypoplectrus puella

755 - Serranus tortugarum

756 - Diplectrum bivittatum

757 - Serranus phoebe

758 - Hypoplectrus nigricans\*\*\*

759 - Hypoplectrus unicolor

\*\*\* From 1990 was reclassified as species Hypoplectrus unicolor

Sciaenidae

775 - Umbrina coroides

776 - Bairdiella ronchus

Classified

795 - Other fishes

796 - First class

797 - Second class

798 - Third class

799 - Trash fish



Diotontidae

- 820 - Diodon holacanthus
- 821 - Chilomycterus antennatus
- 822 - Chilomycterus antillarum

Bothidae

- 830 - Paralichthys tropicus
- 831 - Bothus ocellatus

Grammistidae

- 840 - Pseudogramma gregoryi

List of Shellfish

- 900 - Strombus gigas
- 901 - Panulirus argus
- 902 - Octopus spp.
- 903 - Crassostrea rhizophorae
- 904 - Cardisoma quahumi (land crab)
- 905 - Other shellfish
- 906 - Crab (marine)
- 907 - Clams
- 908 - Shrimp
- 917 - Mithrax spinosissimus
- 918 - Scyllarides aequinoctialis
- 919 - Scyllarides nodifer
- 920 - Calappa flammea
- 921 - Fasciolaria tulipa
- 930 - Arenaeus cribrarius
- 931 - Panulirus guttatus
- 932 - Cittarium pica
- 933 - Panulirus laevicauda

TABLE 1A. LANDINGS REPORTED BY SPECIES AND BY COAST IN PUERTO RICO DURING 2001.

SPECIES	EAST		NORTH		SOUTH		WEST		TOTAL	
	POUNDS	*P/P	POUNDS	*P/P	POUNDS	*P/P	POUNDS	*P/P	POUNDS	*P/P
<b>FISH</b>										
<b>Tunas</b>										
Blackfin tuna	551	1.87	1,050	1.51	895	1.01	22,790	1.04	25,286	1.08
Little tunny	669	1.34	8,372	1.39	383	1.60	10,899	0.86	20,323	1.08
Skipjack tuna	3,180	1.20	4,811	1.49	2,399	1.34	28,001	0.87	38,391	1.07
Yellowfin tuna	1,961	2.29	4,273	1.46	950	1.65	28,208	1.03	35,392	1.31
Tuna category	6,387	1.51	6,479	1.55	1,317	1.62	11,964	0.93	26,147	1.33
Ballyhoo	14,164	1.34	7,118	1.29	22,534	1.24	17,089	1.27	60,905	1.28
Grunts	46,528	1.55	13,390	1.69	60,859	1.46	35,864	0.84	156,641	1.43
Hogfish	25,178	2.20	3,007	2.32	30,296	2.30	10,362	2.22	68,843	2.25
Trunkfish	19,097	1.53	2,828	2.19	19,694	1.82	36,195	1.99	77,814	1.78
Dolphinfish	3,980	2.31	20,220	2.24	37,284	2.12	49,591	1.54	111,075	1.89
Squirrelfishes	4,109	1.33	5,927	1.28	6,109	1.30	2,168	0.78	18,313	1.23
Mulletts	4,241	1.43	27,580	1.35	23,252	1.16	6,056	0.92	61,129	1.23
<b>Jacks</b>										
Bar jack	10,606	1.36	12,931	1.71	15,072	1.50	12,236	1.06	50,845	1.41
Horse-eye jack	694	1.96	2,925	1.61	674	1.11	2,314	0.94	6,607	1.40
Yellow jack	247	0.95	270	1.83	1,344	1.42	2,073	1.08	3,934	1.29
Jack Category	1,959	1.30	19,028	1.57	3,438	1.31	13,743	1.20	38,168	1.41
Parrotfishes	26,722	1.43	8,195	1.74	46,954	1.56	17,384	0.81	99,255	1.46
<b>Groupers</b>										
Coney	4,901	2.02	3,990	2.18	4,707	1.74	2,493	1.60	16,091	1.88
Red hind	18,293	2.09	9,666	2.42	20,267	2.17	20,872	2.03	69,098	2.16
Misty grouper	587	2.09	2,189	2.45	1,257	2.08	2,189	2.13	6,222	2.18
Nassau grouper	5,413	1.92	4,333	2.30	1,331	1.63	7,629	1.46	18,706	1.85
Yellowfin grouper	1,491	2.07	608	2.41	801	2.18	808	2.01	3,708	2.16
Grouper category	22,924	2.32	11,021	2.33	11,126	2.18	9,109	1.90	54,180	2.22
Mojarras	2,371	1.67	13,259	1.71	2,272	1.53	1,543	1.06	19,445	1.60
<b>Snappers</b>										
Lane snapper	32,929	2.19	12,577	2.35	108,003	2.08	32,716	2.04	186,225	2.12
Yellowtail snapper	119,003	2.27	65,975	2.30	90,233	2.06	53,787	1.86	328,998	2.14
Silk snapper	55,818	2.88	64,922	2.84	29,979	3.08	141,003	2.80	291,722	2.88
Mutton snapper	17,970	2.30	15,692	2.30	37,745	2.06	19,176	1.94	90,583	2.13
Queen snapper	4,194	2.45	18,953	2.88	9,035	3.33	75,489	2.79	107,671	2.88
Vermillion snapper	31,624	2.15	8,824	2.36	593	2.49	3,850	2.93	44,891	2.34
Wenchman	1,255	2.05	622	2.79	1,557	3.01	4,297	2.94	7,731	2.72
Snapper category	10,628	2.20	13,718	2.24	24,265	1.98	11,503	1.87	60,114	2.06
Triggerfishes	18,777	1.40	6,445	1.87	22,658	1.70	13,049	1.15	60,929	1.50
Barracudas	1,370	1.54	5,833	1.49	10,362	1.58	2,323	1.22	19,888	1.50
Porgies	14,162	1.48	2,714	1.51	18,194	1.59	1,961	1.24	37,031	1.51
Snooks	1,625	1.71	3,621	1.75	4,659	1.69	1,925	1.12	11,830	1.60
Tarpon	20	0.63	1,872	1.17			301	0.47	2,193	0.87
Goatfishes	12,071	2.15	1,614	1.80	8,221	1.74	569	1.10	22,475	1.95
Sardines	879	1.23	19,053	1.21	3,612	1.24	1,854	0.98	25,398	1.20
King Mackerels	21,304	2.16	21,510	1.85	23,150	2.00	35,608	1.75	101,572	1.94
Cero	29,350	2.18	8,270	1.96	40,470	1.61	6,621	1.94	84,711	1.92
Rays	1,005	1.33	1,151	0.98	45	2.50	1,436	0.92	3,637	1.07
Sharks	9,980	1.82	19,160	1.65	6,465	1.78	9,564	1.07	45,169	1.57
Wahoo			180	2.04	1,108	1.64	7,056	1.56	8,344	1.60
<b>CLASSIFIED</b>										
First Class	60,045	2.04	131	1.61	15,567	2.06	20,796	1.78	96,539	1.98
Second Class	15,124	1.53	116	1.00	5,498	1.08	12,037	1.02	32,775	1.31
Third Class	36,038	1.06	19	1.00	10,501	0.80	97	0.83	46,655	1.01
Trash	17	1.00	25	1.00	393	1.59	80	1.50	515	1.52
Other fishes	6,568	1.84	20,961	1.97	50,231	1.81	5,812	1.40	83,572	1.80
<b>Total Fishes</b>	<b>728,009</b>	<b>1.76</b>	<b>507,428</b>	<b>1.84</b>	<b>837,759</b>	<b>1.78</b>	<b>814,490</b>	<b>1.47</b>	<b>2,887,686</b>	<b>1.70</b>
<b>SHELLFISH</b>										
Conch	96,686	2.55	2,313	2.71	41,465	2.55	188,003	2.16	328,467	2.44
Land crab	1,527	14.71	1,261	14.35	397	13.69	3,137	14.28	6,322	14.26
Lobster	97,141	5.79	20,955	5.96	110,004	5.35	56,918	5.26	285,018	5.53
Octopus	2,837	2.86	2,500	2.61	25,987	2.58	2,615	2.24	33,939	2.58
Marine crabs	286	2.16	560	3.74	1,859	2.28	646	1.94	3,351	2.50
Other shellfish	1,988	4.00	4,800	2.53	2,942	4.68	4,511	2.77	14,241	3.83
<b>Total Shellfish</b>	<b>200,465</b>	<b>5.35</b>	<b>32,389</b>	<b>5.32</b>	<b>182,654</b>	<b>5.19</b>	<b>255,830</b>	<b>4.78</b>	<b>671,338</b>	<b>5.16</b>
<b>TOTAL</b>	<b>928,474</b>	<b>2.21</b>	<b>539,817</b>	<b>2.26</b>	<b>1,020,413</b>	<b>2.21</b>	<b>1,070,320</b>	<b>1.87</b>	<b>3,559,024</b>	<b>2.14</b>

\*P/P = Average Price per Pound in U.S. Dollar.

TABLE 1B. LANDINGS REPORTED BY SPECIES AND BY COAST IN PUERTO RICO DURING 2002.

SPECIES	EAST		NORTH		SOUTH		WEST		TOTAL	
	POUNDS	*P/P	POUNDS	*P/P	POUNDS	*P/P	POUNDS	*P/P	POUNDS	*P/P
FISH										
Tunas										
Blackfin tuna	821	1.46	1,293	1.92	964	1.29	24,029	1.09	27,107	1.44
Little tunny	1,052	2.08	3,436	1.58	439	1.52	9,559	0.88	14,486	1.52
Skipjack tuna	3,187	2.12	1,206	1.73	1,751	1.29	32,299	0.88	38,443	1.51
Yellowfin tuna	765	2.30	1,980	1.63	1,853	1.52	14,705	1.08	19,303	1.63
Tuna category	3,882	1.66	1,518	2.00	1,468	1.37	4,187	1.14	11,055	1.54
Ballyhoo	21,381	1.22	6,820	1.31	21,521	1.32	18,323	1.39	68,045	1.31
White Grunt	42,303	1.53	9,562	1.82	54,835	1.52	40,400	0.89	147,100	1.44
Hogfish	26,908	2.19	2,479	2.34	29,459	2.47	9,732	2.35	68,578	2.34
Trunkfish	19,308	1.49	1,013	2.43	24,638	1.86	34,151	2.04	79,110	1.96
Dolphinfish	6,308	2.30	12,604	2.51	32,628	2.02	49,082	1.43	100,622	2.07
Squirrelfishes	3,633	1.26	5,151	1.25	6,287	1.29	1,015	1.03	16,086	1.21
Mullets	4,137	1.45	25,507	1.32	22,246	1.24	5,133	0.99	57,023	1.25
Jacks										
Bar jack	12,376	1.40	14,122	1.81	22,987	1.59	13,652	1.11	63,137	1.48
Horse-eye jack	209	1.47	3,033	1.73	513	1.26	1,068	1.13	4,823	1.40
Yellow jack	36	1.63	389	1.99	1,709	1.63	1,081	1.23	3,215	1.62
Jack Category	1,595	1.76	16,693	1.65	5,016	1.38	6,813	1.03	30,117	0.85
Parrotfishes	22,593	1.50	4,727	1.92	49,500	1.54	30,723	0.85	107,543	1.45
Groupers										
Coney	4,234	2.03	2,818	2.22	9,318	1.69	2,668	1.83	19,038	1.94
Red hind	18,598	2.09	10,280	2.42	28,479	2.20	23,849	2.02	81,206	2.18
Misty grouper	456	2.04	1,880	2.20	1,241	1.98	2,102	2.01	5,679	2.06
Nassau grouper	7,801	2.19	3,061	1.98	1,065	1.33	6,781	1.51	18,708	1.75
Yellowfin group	2,023	2.09	241	2.61	1,113	2.26	3,539	1.85	6,916	2.20
Grouper category	20,145	2.37	8,401	2.33	12,268	2.32	6,023	1.85	46,837	2.22
Mojarras	1,561	1.70	16,930	1.80	1,520	1.43	984	1.02	20,995	1.49
Snappers										
Lane snapper	29,606	2.23	10,743	2.52	114,993	2.10	29,288	2.04	184,630	2.22
Yellowtail snapper	102,234	2.28	52,144	2.43	88,898	2.11	47,745	1.86	291,021	2.17
Silk snapper	18,407	2.97	39,511	2.92	14,554	3.12	125,556	2.90	198,028	2.98
Mutton snapper	16,590	2.30	7,721	2.60	47,830	2.09	19,701	2.02	91,842	2.25
Queen snapper	4,135	2.53	8,785	3.19	6,384	3.28	90,754	2.86	110,058	2.97
Vermillion snapper	9,355	1.91	9,866	2.33	1,018	2.85	2,896	2.55	23,135	2.41
Wenchman	819	1.91	640	2.36	1,602	3.29	3,136	2.92	6,197	2.62
Snapper category	8,091	2.13	11,173	2.39	27,108	2.00	10,322	1.92	56,694	2.11
Triggerfishes	18,259	1.47	5,463	2.10	15,569	1.74	14,255	1.26	53,546	1.64
Barracudas	1,385	1.22	8,802	1.62	11,314	1.60	3,087	1.25	24,588	1.42
Porgies	13,128	1.54	1,307	1.84	20,636	1.55	2,765	1.17	37,836	1.53
Snooks	3,713	1.80	23,193	1.99	14,316	1.56	3,930	1.55	45,152	1.73
Tarpon	0	0.00	3,978	1.28	0	0.00	443	1.23	4,421	1.26
Goatfishes	10,379	2.16	571	2.42	7,565	1.74	489	1.24	19,004	1.89
Sardines	1,703	1.51	14,142	1.31	7,212	1.32	4,996	1.08	28,053	1.31
Mackerel	18,806	2.10	14,106	2.10	40,051	1.90	44,906	1.78	117,869	1.99
Cero	21,262	2.26	6,442	2.23	18,501	1.90	7,121	1.88	53,326	2.07
Sharks	14,772	1.63	8,948	1.83	4,933	1.96	9,784	1.22	47,409	1.66
Wahoo	323	3.00	459	2.22	281	2.13	32	1.25	1,095	2.15
CLASSIFIED										
First Class	55,385	2.03	30	3.00	3,103	1.84	16,784	1.97	75,302	2.21
Second Class	25,912	1.02	46	2.00	11,716	1.34	9,300	1.04	46,974	1.35
Third Class	19,456	1.18	0	0.00	10,252	1.02	209	1.04	29,917	1.08
Trash	218	1.74	0	0.00	423	0.50	150	0.73	791	0.99
Other fishes	15,503		6,514		54,520		19,713		96,250	
Total Fishes	634,753	1.88	389,728	2.07	855,597	1.75	809,260	1.52	2,689,338	1.80
SHELLFISH										
Conch	118,272	2.48	1,201	3.18	37,704	2.61	78,431	2.19	235,608	2.62
Land crab	734	7.26	544	8.09	948	6.74	4,234	5.14	6,460	6.81
Lobster	106,080	5.82	12,329	5.99	107,916	5.50	74,428	5.32	300,753	5.66
Octopus	1,338	3.21	1,308	2.91	23,981	2.63	1,934	2.30	28,561	3.21
Other shellfish	1,307	3.28	2,504	4.89	4,424	3.60	3,857	2.47	12,092	3.56
Total Shellfish	227,731	3.68	17,886	4.18	174,973	3.51	162,884	2.90	583,474	3.57
TOTAL	862,484	2.16	407,614	2.40	1,030,570	2.05	972,144	1.73	3,272,812	2.07

TABLE 1C. LANDINGS REPORTED BY SPECIES AND BY COAST IN PUERTO RICO DURING 2003.

SPECIES	EAST		NORTH		SOUTH		WEST		TOTAL	
	POUNDS	*P/P	POUNDS	*P/P	POUNDS	*P/P	POUND	*P/P	POUNDS	*P/P
<b>FISH</b>										
<b>Tunas</b>										
Blackfin tuna	695	1.46	2,470	1.85	799	1.47	30,232	0.98	34,196	1.44
Little tunny	126	1.42	2,452	1.46	119	1.50	9,007	0.77	11,704	1.29
Skipjack tuna	844	1.78	464	1.70	1,792	1.44	27,555	0.62	30,655	1.39
Yellowfin tuna	478	2.25	1,393	1.49	553	1.49	21,043	1.04	23,467	1.57
Tuna category	2,565	1.61	869	1.67	1,267	1.39	10,117	0.83	14,818	1.38
Ballyhoo	15,827	1.06	3,357	1.27	13,818	1.09	8,092	0.66	41,094	1.02
White Grunt	22,569	1.43	9,440	1.71	39,299	1.63	36,258	0.89	107,566	1.42
Hogfish	19,220	2.20	952	2.32	19,575	2.63	16,210	2.44	55,957	2.40
Trunkfish	14,154	1.61	671	2.29	18,522	1.87	25,249	1.97	58,596	1.94
Dolphinfish	2,206	2.38	5,793	2.32	17,602	1.91	39,247	1.22	64,848	1.96
Squirrelfishes	1,719	1.52	3,470	1.22	4,841	1.40	671	1.02	10,701	1.29
Mullets	2,554	1.32	18,090	1.18	12,194	1.28	10,008	0.89	42,846	1.17
<b>Jacks</b>										
Bar jack	7,490	1.43	8,742	1.70	9,819	1.65	11,034	1.15	37,085	1.48
Horse-eye jack	83	1.83	2,157	1.55	390	1.22	1,558	1.00	4,188	1.40
Yellow jack	0	0.00	59	2.21	79	1.51	689	1.08	827	1.60
Jack Category	418	1.78	13,477	1.62	2,263	1.35	6,914	1.09	23,074	1.46
Parrotfishes	9,146	1.79	3,003	1.74	40,352	1.59	17,089	0.95	69,590	1.52
<b>Groupers</b>										
Coney	2,463	1.93	2,906	2.01	3,018	1.98	2,615	1.95	11,002	1.97
Red hind	7,403	2.15	7,598	2.35	14,354	2.28	18,690	1.98	48,045	2.19
Misty grouper	576	2.01	725	2.16	704	2.26	3,856	2.24	5,861	2.17
Nassau grouper	4,038	2.20	1,631	2.00	585	1.74	3,963	1.44	10,217	1.85
Yellowfin grouper	662	2.02	203	2.36	3,352	2.14	676	2.23	4,893	2.19
Grouper category	9,374	2.45	4,736	2.28	11,507	2.33	6,092	1.86	31,709	2.23
Mojarras	1,699	1.49	12,753	1.71	1,603	1.63	1,356	1.17	17,411	1.50
<b>Snappers</b>										
Lane snapper	17,531	2.23	6,436	2.34	71,943	2.09	27,240	2.01	123,150	2.17
Yellowtail snapper	56,443	2.28	33,649	2.26	51,303	2.06	35,174	1.75	176,569	2.09
Silk snapper	29,636	2.84	31,702	2.41	22,580	2.71	85,908	2.26	169,826	2.56
Mutton snapper	18,293	2.19	5,619	2.12	35,419	2.06	20,649	1.94	79,980	2.08
Queen snapper	1,633	2.85	6,518	2.98	8,784	3.25	110,064	2.17	126,999	2.81
Vermillion snapper	4,607	1.97	8,752	2.17	875	2.05	1,601	2.80	15,835	2.25
Wenchman	2,033	1.89	780	2.58	1,478	3.46	2,942	2.98	7,233	2.73
Blackfin snapper	2,504	3.06	539	1.75	1,631	2.80	5,270	2.59	9,943	2.56
Snapper category	5,469	2.12	6,410	2.18	16,251	1.91	7,867	1.90	35,998	2.03
Triggerfishes	9,272	1.47	3,402	1.62	18,259	1.77	11,064	1.18	41,997	1.51
Barracudas	848	1.24	3,896	1.34	4,080	1.43	2,452	1.11	11,276	1.28
Porgies	7,029	1.59	520	1.67	9,650	1.68	3,701	1.10	20,900	1.51
Snooks	4,338	1.57	18,977	1.42	6,706	1.45	6,982	1.35	37,003	1.45
Tarpon	0	0.00	1,228	0.98	0	0.00	1,208	0.69	2,436	0.84
Goatfishes	5,442	2.05	321	1.68	5,757	1.65	1,264	1.01	12,784	1.60
Sardines	461	0.71	12,041	0.95	976	1.26	3,468	0.85	16,946	0.94
Mackerel	12,206	2.35	10,377	1.63	30,759	1.65	27,555	1.65	80,897	1.82
Cero	12,460	1.99	3,473	1.68	15,052	1.43	4,639	1.67	35,624	1.69
Sharks	6,184	1.39	5,832	1.24	4,082	1.68	9,112	0.87	25,210	1.30
Wahoo	79	2.50	502	3.13	1,410	1.87	21	2.05	2,012	2.39
<b>CLASSIFIED</b>										
First Class	12,682	1.89	119	1.95	37,971	1.75	12,159	1.97	62,931	1.89
Second Class	652	2.05	142	0.33	30,423	0.84	11,873	0.88	43,090	1.03
Third Class	8,986	0.94	120	0.73	527	1.00	383	1.19	10,016	0.96
Trash	49	1.65	0	0.00	22	1.19	43	1.38	114	1.41
Other fishes	1,658	2.75	5,419	1.35	2,009	1.77	3,731	1.61	12,817	1.87
Total Fishes	346,804	1.90	274,185	1.87	596,354	1.88	704,591	1.64	1,921,936	1.82
<b>SHELLFISH</b>										
Conch	48,465	2.02	795	1.90	32,771	2.57	105,989	1.85	188,020	2.09
Land crab	193	9.15	279	4.92	386	5.03	761	8.25	1,619	6.85
Lobster	67,401	5.25	7,743	5.48	93,929	5.24	73,510	4.42	242,583	5.11
Octopus	603	2.50	240	1.80	24,137	2.38	1,496	1.90	26,476	2.17
Other shellfish	1,157	2.25	1,202	2.92	2,880	2.63	2,890	1.44	8,127	2.36
Total Shellfish	117,819	4.31	10,259	3.40	154,103	3.57	184,646	3.57	466,825	3.71
<b>TOTAL</b>	<b>464,623</b>	<b>2.07</b>	<b>284,444</b>	<b>1.75</b>	<b>750,457</b>	<b>1.90</b>	<b>889,237</b>	<b>1.70</b>	<b>2,388,761</b>	<b>1.84</b>

\* P/P = Average Price Per Pound in U.S. Dollar.

**TABLE 2. TOTAL TRIP TICKETS COLLECTED IN PUERTO RICO BY MONTH DURING JANUARY 2001 - March 2004.**

MONTH	2001 NUMBER OF TICKETS	2002 NUMBER OF TICKETS	2003 NUMBER OF TICKETS	2004 NUMBER OF TICKETS
JANUARY	3,858	3,831	3,872	3,794
FEBRUARY	3,162	3,596	3,433	3,435
MARCH	3,908	3,772	4,514	4,168
APRIL	3,601	3,621	4,193	
MAY	3,492	3,528	4,009	
JUNE	3,472	3,377	3,654	
JULY	3,342	3,557	3,376	
AUGUST	4,218	4,014	3,676	
SEPTEMBER	3,650	3,399	3,391	
OCTOBER	3,518	3,392	3,977	
NOVEMBER	3,107	2,872	2,854	
DECEMBER	3,107	2,184	2,615	
TOTAL	42,436	41,142	43,564	11,397

**TABLE 3. LIST OF FISH AND SHELLFISH REPORTED IN  
PUERTO RICO'S LANDINGS DATA DURING 2001-03.**

List of Fish

FAMILY	GENUS	SPECIES
Acanthuridae	<i>Acanthurus</i>	<i>bahianus</i>
Albulidae	<i>Albula</i>	<i>vulpes</i>
Albulidae		
Antennarilidae	<i>Histrio</i>	<i>histrio</i>
Apogonidae	<i>Apogon</i>	<i>maculatus</i>
Balistidae	<i>Aluterus</i>	<i>monocerus</i>
Balistidae	<i>Balistes</i>	<i>vetula</i>
Balistidae	<i>Cantherines</i>	<i>pullus</i>
Balistidae		
Belonidae	<i>Tylosurus</i>	<i>crocodilus</i>
Carangidae	<i>Alectis</i>	<i>ciliaris</i>
Carangidae	<i>Caranx</i>	<i>bartholomaei</i>
Carangidae	<i>Caranx</i>	<i>ruber</i>
Carangidae	<i>Caranx</i>	<i>crysos</i>
Carangidae	<i>Caranx</i>	<i>hippos</i>
Carangidae	<i>Caranx</i>	<i>latus</i>
Carangidae	<i>Chloroscombrus</i>	<i>chrysurus</i>
Carangidae	<i>Elagatis</i>	<i>bipinnulatus</i>
Carangidae	<i>Selar</i>	<i>crumenophthalmus</i>
Carangidae	<i>Seriola</i>	<i>rivoliana</i>
Carangidae	<i>Seriola</i>	<i>dumerili</i>
Carangidae	<i>Trachinotus</i>	<i>falcatus</i>
Carangidae	<i>Trachinotus</i>	<i>goodei</i>
Carangidae	<i>Vomer</i>	<i>setapinnis</i>
Carangidae		
Carcharhinidae	<i>Prionace</i>	<i>glauca</i>
Centrarchidae	<i>Lepomis</i>	<i>gulosus</i>
Centrarchidae	<i>Lepomis</i>	<i>macrochirus</i>
Centropomidae	<i>Centropomus</i>	<i>undecimalis</i>
Centropomidae	<i>Centropomus</i>	<i>parallelus</i>
Chaetodontidae		
Clupeidae	<i>Harengula</i>	<i>jaguana</i>
Clupeidae	<i>Opisthonema</i>	<i>oglinum</i>
Clupeidae		
Congridae	<i>Conger</i>	<i>triporiceps</i>
Coryphaenidae	<i>Coryphaena</i>	<i>hippurus</i>
Coryphaenidae		
Dasyatidae	<i>Dasyatis</i>	<i>americana</i>
Dasyatidae		
Diodontidae		
Echeniidae		
Elopidae	<i>Elops</i>	<i>saurus</i>
Elopidae	<i>Megalops</i>	<i>atlanticus</i>
Elopidae		

TABLE 3. LIST OF FISH AND SHELLFISH REPORTED IN  
 PUERTO RICO'S LANDINGS DATA DURING 2001-03. Continued.

List of Fish

FAMILY	GENUS	SPECIES
Engraulidae	<i>Cetengraulis</i>	<i>edentulus</i>
Ephippidae		
Exocoetidae	<i>Hemiramphus</i>	<i>brasiliensis</i>
Exocoetidae	<i>Hyporhamphus</i>	<i>unifasciatus</i>
Gerreidae	<i>Diapterus</i>	<i>plumieri</i>
Gerreidae	<i>Eucinostomus</i>	<i>gula</i>
Gerreidae	<i>Gerres</i>	<i>cinereus</i>
Gerreidae		
Gobiidae	<i>Sicydium</i>	<i>plumieri</i>
Holocentridae	<i>Holocentrus</i>	<i>ascensionis</i>
Holocentridae		
Istiophoridae	<i>Makaira</i>	<i>nigricans</i>
Istiophoridae	<i>Tetrapterus</i>	<i>albidus</i>
Kyphosidae	<i>Kyphosus</i>	<i>incisor</i>
Kyphosidae		
Labridae	<i>Bodianus</i>	<i>rufus</i>
Labridae	<i>Lachnolaimus</i>	<i>maximus</i>
Labridae		
Lamnidae		
Lobotidae	<i>Lobotes</i>	<i>surinamensis</i>
Lutjanidae	<i>Apsilus</i>	<i>dentatus</i>
Lutjanidae	<i>Etelis</i>	<i>oculatus</i>
Lutjanidae	<i>Lutjanus</i>	<i>cyanopterus</i>
Lutjanidae	<i>Lutjanus</i>	<i>griseus</i>
Lutjanidae	<i>Lutjanus</i>	<i>jocu</i>
Lutjanidae	<i>Lutjanus</i>	<i>analis</i>
Lutjanidae	<i>Lutjanus</i>	<i>synagris</i>
Lutjanidae	<i>Lutjanus</i>	<i>mahogoni</i>
Lutjanidae	<i>Lutjanus</i>	<i>buccanella</i>
Lutjanidae	<i>Lutjanus</i>	<i>vivanus</i>
Lutjanidae	<i>Ocyurus</i>	<i>chrysurus</i>
Lutjanidae	<i>Pristipomoides</i>	<i>macrophthalmus</i>
Lutjanidae	<i>Rhomboplites</i>	<i>aurorubens</i>
Lutjanidae		
Malacanthidae	<i>Caulolatilus</i>	<i>cyanops</i>
Malacanthidae	<i>Malacanthus</i>	<i>plumieri</i>
Mobulidae	<i>Manta</i>	<i>birostris</i>
Mobulidae		
Mugilidae	<i>Mugil</i>	<i>liza</i>
Mugilidae	<i>Mugil</i>	<i>curema</i>
Mugilidae		
Mullidae	<i>Joturus</i>	<i>pichardi</i>
Mullidae	<i>Mulloidichthys</i>	<i>martinicus</i>
Mullidae	<i>Pseudupeneus</i>	<i>maculatus</i>
Muraenidae	<i>Enchelycore</i>	<i>nigricans</i>
Muraenidae	<i>Gymnothorax</i>	<i>ocyllatus</i>
Myliobatidae	<i>Aetobatus</i>	<i>narinari</i>

TABLE 3. LIST OF FISH AND SHELLFISH REPORTED IN  
 PUERTO RICO'S LANDINGS DATA DURING 2001-03. *Continued.*

List of Fish

FAMILY	GENUS	SPECIES
Ogcocephalidae	<i>Ogcocephalus</i>	<i>nasutus</i>
Orectolobidae		
Ostraciidae	<i>Acanthostracion</i>	<i>poligonius</i>
Ostraciidae	<i>Acanthostracion</i>	<i>quadricornis</i>
Ostraciidae	<i>Lactophrys</i>	<i>trigonus</i>
Polynemidae	<i>Polydactylus</i>	<i>virginicus</i>
Pomacentridae		
Pomadasydae	<i>Anisotremus</i>	<i>surinamensis</i>
Pomadasydae	<i>Conodon</i>	<i>nobilis</i>
Pomadasydae	<i>Haemulon</i>	<i>album</i>
Pomadasydae	<i>Haemulon</i>	<i>plumieri</i>
Pomadasydae	<i>Haemulon</i>	<i>sciurus</i>
Pomadasydae	<i>Haemulon</i>	<i>chrysargyreum</i>
Pomadasydae	<i>Haemulon</i>	<i>melanurum</i>
Pomadasydae	<i>Pomadasys</i>	<i>croco</i>
Priacanthidae	<i>Priacanthus</i>	<i>arenatus</i>
Priacanthidae	<i>Priacanthus</i>	<i>cruentatus</i>
Priacanthidae		
Scaridae	<i>Scarus</i>	<i>coelestinus</i>
Scaridae	<i>Sparisoma</i>	<i>viride</i>
Scaridae	<i>Sparisoma</i>	<i>chrysopterum</i>
Sciaenidae	<i>Micropogonias</i>	<i>furnieri</i>
Sciaenidae	<i>Odontoscion</i>	<i>dentex</i>
Sciaenidae	<i>Bairdiella</i>	<i>ronchus</i>
Sciaenidae		
Scombridae	<i>Acanthocybium</i>	<i>solanderi</i>
Scombridae	<i>Euthynnus</i>	<i>pelamis</i>
Scombridae	<i>Euthynnus</i>	<i>alletteratus</i>
Scombridae	<i>Scomberomorus</i>	<i>cavalla</i>
Scombridae	<i>Scomberomorus</i>	<i>regalis</i>
Scombridae	<i>Thunnus</i>	<i>albacares</i>
Scombridae	<i>Thunnus</i>	<i>atlanticus</i>
Scombridae		
Serranidae	<i>Cephalopholis</i>	<i>fulvus</i>
Serranidae	<i>Epinephelus</i>	<i>itajara</i>
Serranidae	<i>Epinephelus</i>	<i>mystacinus</i>
Serranidae	<i>Epinephelus</i>	<i>guttatus</i>
Serranidae	<i>Epinephelus</i>	<i>striatus</i>
Serranidae	<i>Mycteroperca</i>	<i>bonaci</i>
Serranidae	<i>Mycteroperca</i>	<i>venenosa</i>
Serranidae	<i>Mycteroperca</i>	<i>tigris</i>
Sparidae	<i>Archosargus</i>	<i>rhomboidalis</i>



TABLE 3. LIST OF FISH AND SHELLFISH REPORTED IN  
 PUERTO RICO'S LANDINGS DATA DURING 2001-03. Continued.

List of Fish

FAMILY	GENUS	SPECIES
Sparidae	<i>Calamus</i>	<i>bajonado</i>
Sphyraenidae	<i>Sphyraena</i>	<i>guachancho</i>
Sphyraenidae	<i>Sphyraena</i>	<i>picudilla</i>
Stromateidae		
Synodontidae	<i>Synodus</i>	<i>intermedius</i>
Trichiuridae		
Trichiuridae	<i>Trichiurus</i>	<i>lepturus</i>
Trichuridae	<i>Gempylus</i>	<i>serpens</i>
Trichuridae	<i>Ruvettus</i>	<i>pretiosus</i>
Xiphiidae	<i>Xiphias</i>	<i>gladius</i>

List of Shellfish

COMMON NAME	GENUS	SPECIES
Caribbean king crab	<i>Mithrax</i>	<i>spinosissimus</i>
Coral crab	<i>Carpilius</i>	<i>corallinus</i>
Land crab	<i>Cardisoma</i>	<i>ghuanhumi</i>
Mangrove oyster	<i>Crassostrea</i>	<i>rhizophorae</i>
Octopus	<i>Octopus</i>	<i>sp</i>
Queen conch	<i>Strombus</i>	<i>gigas</i>
Spiny lobster	<i>Panulirus</i>	<i>argus</i>
Spotted spiny lobster	<i>Panulirus</i>	<i>guttatus</i>
Whelk	<i>Cittarium</i>	<i>pica</i>
	<i>Arenaeus</i>	<i>cribrarius</i>
	<i>Callinectes</i>	<i>spp</i>

TABLE 4A. LANDINGS REPORTED BY MUNICIPALITY AND BY COAST IN PUERTO RICO DURING 2001.

LOCATION	POUNDS	Value	P/P*
NORTH	569,893	1,266,063	2.14
Isabela	11,735	41,777	3.56
Quebradillas	0	0	0.00
Camuy	4,060	10,881	2.68
Hatillo	4,232	9,649	2.28
Arecibo	73,812	182,316	2.47
Barceloneta	36,736	83,023	2.26
Manatí	17,361	35,416	2.04
Vega Baja	68,169	164,287	2.41
Vega Alta	28,694	61,692	2.15
Dorado	28,069	75,786	2.70
Toa Baja	1,010	1,505	1.49
Cataño	23,769	55,619	2.34
San Juan	133,003	279,306	2.10
Carolina	56,785	98,238	1.73
Loíza	43,752	86,191	1.97
Río Grande	34,254	71,248	2.08
Luquillo	4,452	9,127	2.05
EAST	948,758	2,299,947	2.37
Fajardo	179,003	393,807	2.20
Ceiba	139,003	336,387	2.42
Naguabo	178,003	450,348	2.53
Humacao	111,003	300,818	2.71
Yabucoa	39,869	80,934	2.03
Maunabo	23,120	50,864	2.20
Culebra	21,754	51,992	2.39
Vieques	257,003	634,797	2.47
SOUTH	1,040,871	2,449,315	2.43
Patillas	47,939	151,967	3.17
Arroyo	56,950	122,443	2.15
Guayama	106,592	240,898	2.26
Salinas	83,597	200,633	2.40
Santa Isabel	54,992	152,328	2.77
Juana Díaz	143,003	371,808	2.60
Ponce	103,003	222,486	2.16
Peñuelas	69,042	225,077	3.26
Guayanilla	69,747	106,713	1.53
Guánica	107,003	258,947	2.42
Lajas	199,003	396,016	1.99
WEST	999,502	2,136,059	2.14
Cabo Rojo	491,062	1,114,711	2.27
Mayaguez	87,763	179,037	2.04
Añasco	44,847	120,190	2.68
Rincón	122,003	314,768	2.58
Aguada	96,824	165,569	1.71
Aguadilla	157,003	241,785	1.54
TOTAL	3,559,024	8,151,383	2.27

\*P/P = Average Price per Pound.

TABLE 4B. LANDINGS REPORTED BY MUNICIPALITY AND BY COAST IN PUERTO RICO DURING 2002.

LOCATION	POUNDS	VALUE	P/P*
NORTH	407,614	924,476	1.97
Isabela	14,194	42,275	1.97
Quebradillas	0	0	0.00
Camuy	2,961	6,060	1.56
Hatillo	1,799	4,860	1.30
Arecibo	27,627	70,325	2.43
Barceloneta	10,400	21,596	2.11
Manati	9,797	20,274	2.00
Vega Baja	44,046	113,079	1.99
Vega Alta	18,665	35,554	1.80
Dorado	19,829	49,045	2.27
Toa Baja	494	1,738	1.90
Cataño	36,575	92,129	2.34
San Juan	90,814	207,983	2.12
Carolina	18,775	29,695	1.21
Loiza	63,302	112,898	1.38
Río Grande	33,791	73,895	1.74
Luquillo	14,545	43,070	2.15
EAST	862,484	2,128,659	2.06
Fajardo	148,734	381,739	1.81
Ceiba	67,367	172,332	1.99
Naguabo	119,255	279,401	2.22
Humacao	84,357	223,868	2.51
Yabucoa	48,592	98,739	1.74
Maunabo	13,776	27,290	1.65
Culebra	22,602	59,333	2.45
Vieques	357,801	885,957	1.86
SOUTH	1,030,570	2,347,462	1.99
Patillas	31,840	98,707	2.47
Arroyo	61,279	132,591	1.95
Guayama	106,913	288,691	2.02
Salinas	71,047	182,336	2.04
Santa Isabel	47,100	136,823	2.54
Juana Díaz	133,992	309,008	1.95
Ponce	87,322	170,907	1.83
Peñuelas	31,149	110,447	2.81
Guayanilla	60,270	87,978	1.13
Guánica	149,206	358,056	2.18
Lajas	250,452	471,918	1.79
WEST	972,144	2,105,880	1.67
Cabo Rojo	450,820	1,007,172	1.93
Mayaguez	100,485	198,852	1.67
Añasco	37,938	103,136	1.78
Rincón	147,533	444,880	1.52
Aguada	94,536	146,250	1.48
Aguadilla	140,832	205,590	1.09
<b>TOTAL</b>	<b>3,272,812</b>	<b>7,506,477</b>	<b>1.93</b>

P/P\* = Average Price per Pound in U.S. Dollar.

**TABLE 4C. LANDINGS REPORTED BY MUNICIPALITY AND BY COAST IN PUERTO RICO DURING 2003.**

LOCATION	POUNDS	VALUE	P/P*
<b>NORTH</b>	284,444	1,223,360	1.75
Isabela	2,436	4,463	0.87
Quebradillas	0	0	0.00
Camuy	4,150	8,284	1.15
Hatillo	1,464	3,694	1.22
Arecibo	31,816	78,502	2.13
Barceloneta	10,262	20,110	1.76
Manatí	2,711	5,703	1.84
Vega Baja	7,694	28,659	2.57
Vega Alta	14,020	28,004	1.41
Dorado	16,215	40,419	2.04
Toa Baja	560	862	1.18
Cataño	30,644	674,453	1.90
San Juan	83,735	178,499	1.90
Carolina	100	455	3.75
Loiza	57,966	106,821	1.42
Río Grande	18,845	40,363	1.47
Luquillo	1,826	4,069	1.52
<b>EAST</b>	464,623	1,206,012	2.07
Fajardo	124,849	370,598	1.87
Ceiba	51,836	131,553	1.94
Naguabo	83,516	201,053	2.04
Humacao	91,798	236,258	2.40
Yabucoa	28,502	59,290	1.68
Maunabo	6,754	16,133	1.82
Culebra	15,800	41,405	2.52
Vieques	61,568	149,722	1.78
<b>SOUTH</b>	750,457	1,821,942	1.90
Patillas	23,674	75,930	2.32
Arroyo	44,674	99,069	1.35
Guayama	97,657	286,195	2.16
Salinas	58,830	163,380	2.04
Santa Isabel	29,904	83,477	2.29
Juana Díaz	77,855	188,013	1.74
Ponce	98,058	209,654	1.51
Peñuelas	57,015	199,996	2.77
Guayanilla	28,771	42,755	0.94
Guánica	64,439	149,372	1.94
Lajas	169,580	324,101	1.73
<b>WEST</b>	889,237	2,010,602	1.65
Cabo Rojo	403,108	923,483	1.92
Mayaguez	82,421	173,471	1.74
Añasco	19,713	87,821	1.31
Rincón	176,202	524,522	1.44
Aguada	76,507	111,629	1.48
Aguadilla	131,286	189,676	1.00
<b>TOTAL</b>	<b>2,388,761</b>	<b>6,261,916</b>	<b>1.84</b>

P/P\* = Price per Pound in U.S. Dollar.

TABLE 5A. LANDINGS REPORTED BY SPECIES AND BY GEAR IN PUERTO RICO DURING 2001.

SPECIES	BEACH SEINE (Pounds)	FISH TRAP (Pounds)	LOBSTER TRAP (Pounds)	GILL NET (Pounds)	BOTTOM LINE (Pounds)	TROLL LINE (Pounds)	LONG LINE (Pounds)	LAND CRAB TRAP (Pounds)	ROD AND SKIN LINE (Pounds)	SCUBA DIVING (Pounds)	TRAMMEL NET (Pounds)	TOTAL (Pounds)
FISH												
Tunas												
Blackfin tuna	465	0	0	816	2,905	20,435	705	0	0	0	0	0
Little tunny	5,205	0	0	2,224	4,346	8,461	87	0	0	0	0	25,286
Skipjack tuna	707	0	0	3,673	8,702	24,222	0	0	0	0	0	20,323
Yellowfin tuna	199	0	0	530	2,542	30,844	1,159	0	1,087	0	0	38,391
Tuna category	978	0	0	4,938	9,387	10,375	340	0	2,497	0	0	33,392
Ballyhoo	578	898	155	36,695	1,951	82	0	0	476	0	0	26,147
Grouper	16,573	57,938	205	40,607	21,026	2,191	414	0	69	0	0	60,905
Hogfish	436	14,108	49	2,400	3,702	134	0	0	118	0	0	15,383
Trunkfish	2,175	54,624	520	6,597	3,285	171	32	0	121	0	0	68,843
Dolphinfish	0	0	0	1,815	20,117	84,649	1,781	0	2,547	0	0	2,900
Squid/fishes	1,498	7,362	25	2,668	5,664	427	15	0	136	0	0	11,075
Mullet	1,800	1,037	19	51,693	2,975	591	20	0	329	0	0	18,313
Jacks												
Bar jack	3,663	3,261	21	20,244	18,294	1,121	355	0	272	0	0	61,129
Horse-eye jack	51	650	0	1,090	4,044	319	10	0	30	0	0	50,845
Yellow jack	897	177	1	1,058	887	30	0	0	23	0	0	6,607
Jack Category	6,629	1,723	0	10,299	16,239	2,125	43	0	0	0	0	3,934
Parrotfishes	864	23,695	17	21,396	841	55	31	0	344	0	0	38,168
Groppers	0	4,978	0	1,947	7,017	0	0	0	101	0	0	99,255
Coney	0	15,244	0	2,759	38,795	0	241	0	177	0	0	822
Red hind	0	635	0	519	3,672	0	330	0	103	0	0	16,091
Misty grouper	34	2,406	0	722	9,755	0	32	0	8	0	0	69,098
Nassau grouper	0	553	0	191	1,222	0	0	0	79	0	0	143
Yellowfin grouper	0	18,930	0	2,828	21,872	249	879	0	1,742	0	0	948
Grouper category	279	1,090	0	14,529	1,648	40	19	0	30	0	0	18,706
Mojarras	0	4,480	336	32,503	66,659	571	17,482	0	148	0	0	3,708
Shappers	0	23,371	175	15,706	265,728	354	2,577	0	162	0	0	54,180
Lane snapper	0	2,800	111	12,508	46,329	0	1,241	0	216	0	0	60
Yellowtail snapper	0	2,724	0	94,381	0	0	10,366	0	0	0	0	408
Mutton snapper	0	27,845	0	0	17,014	0	32	0	0	0	0	60,929
Queen snapper	0	1,764	0	0	5,650	0	117	0	0	0	0	19,888
Vermillion snapper	0	844	13	12,498	24,866	528	600	0	139	0	0	824
Wenchman	0	29,325	57	2,263	12,159	1,015	288	0	390	0	0	37,031
Snapper category	0	4,775	0	6,315	6,384	1,814	72	0	55	0	0	37
Trigerfishes	59	13,100	8	17,134	4,319	382	67	0	47	0	0	625
Baracudas	0	1,241	0	2,017	2,653	793	0	0	6	0	0	824
Porgies	0	1,764	0	3,803	1,422	0	12	0	34	0	0	54
Snooks	0	8,904	0	3,246	2,539	0	211	0	110	0	0	19,888
Tarpon	0	29,325	0	14,520	53,628	28,044	248	0	17,682	0	0	824
Goatfishes	0	1,632	0	10,025	39,773	30,415	293	0	200	0	0	34
King Mackerels	0	669	0	7,267	21,038	993	9,311	0	2,359	0	0	11,830
Sardines	0	526	0	1,501	1,162	0	15	0	0	0	0	0
King Mackerels	0	548	0	221	7,811	0	0	0	0	0	0	0
Cero	0	255	0	26	130	27	0	0	0	0	0	0
Rays	0	631	0	45,308	7,923	1,019	37	0	134	0	0	0
Sharks	0	141	0	44,151	1,091,938	253,844	56,512	5	25,627	0	0	0
Whale	0	0	0	28	6,395	1,180	0	0	0	0	0	0
CL ASSIFIED												
First Class	80	45,333	151	427	14,475	102	15	0	0	0	0	8,344
Second Class	180	20,701	559	1,501	1,162	0	0	0	0	0	0	0
Third Class	533	28,402	0	221	7,811	0	0	0	0	0	0	0
Trash	0	124	0	26	130	27	0	0	0	0	0	0
Other fishes	5,773	20,866	28	45,308	7,923	1,019	37	0	134	0	0	0
Total Fishes	80,376	637,293	2,450	444,151	1,091,938	253,844	56,512	5	25,627	0	0	0
SHELLFISH												
Cowh	0	0	0	0	0	0	0	0	0	0	0	0
Land crab	0	0	0	203	0	0	0	0	0	0	0	0
Lobster	281	102,003	32,128	1,480	0	0	0	6,322	0	0	0	0
Octopus	0	1,482	363	212	0	0	0	317	0	0	0	0
Marine crabs	15	1,903	15	157	0	0	0	0	0	0	0	0
Other shellfish	9	3,747	3	1,418	0	0	0	10	0	0	0	0
Total Shellfish	305	109,135	32,579	3,470	0	0	0	829	0	0	0	0
TOTAL	80,681	746,428	35,029	447,621	1,091,938	253,844	56,512	6,322	26,793	14,402	67,801	3,559,024

TABLE 5B. LANDINGS REPORTED BY SPECIES AND BY GEAR IN PUERTO RICO DURING 2002.

SPECIES	BEACH SEINE (Pounds)	FISH TRAP (Pounds)	LOBSTER TRAP (Pounds)	GILL NET (Pounds)	BOTTOM LINE (Pounds)	TROLL LINE (Pounds)	LONG LINE (Pounds)	LAND CRAB TRAP (Pounds)	CAST NET (Pounds)	ROD AND LINE (Pounds)	SKIN DIVING (Pounds)	SCUBA DIVING (Pounds)	TRAMMEL NET (Pounds)	TOTAL (Pounds)
Tunas														
Blackfin tuna	1,112		364	0	986	3,774	20,691	107	0	0	0	0	0	26,964
Little tunny	2,235		678	0	1,495	1,753	8,201	0	0	0	0	0	73	37,107
Skipjack tuna	660		1,673	0	1,498	5,215	29,342	0	0	0	118	0	16	36,456
Yellowfin tuna	8		612	0	992	1,832	15,706	8	0	0	0	0	57	18,441
Tuna category														
Baliwoo	5,641		1,169	0	233	3,528	6,077	0	0	0	80	0	59	11,455
White grunt	14,769		57,622	311	1,213	1,216	2,395	23	0	137	0	0	0	73,832
Hopfish	311		33,396	133	18,741	137	462	6	0	0	0	0	286	53,045
Trunkfish	2,193		54,412	246	1,796	2,082	16	2	0	0	0	0	1,470	68,578
Dolphinfish	338		3,960	0	852	2,843	161	0	0	0	0	0	45,501	50,862
Squid/fishes	222		6,859	5	2,142	22,111	72,858	16	0	0	0	0	2,197	88,278
Mullet	2,752		1,264	0	48,479	516	316	6	0	0	169	0	301	50,661
Jacks														
Bar jack	5,326		5,727	5	26,239	20,137	533	0	0	0	12	0	70	33,833
Horse-eye jack	22		128	0	1,021	3,152	85	0	0	77	0	0	0	1,228
Yellow jack	30		41	0	1,428	905	92	0	0	0	13	0	0	1,606
Jack category	2,661		1,405	0	12,136	12,894	962	0	0	0	25	0	0	14,823
Parrotfishes	1,314		32,543	0	19,321	115	0	0	0	30	0	0	371	33,215
Grouper														
Coney	11		6,741	0	1,613	9,136	113	0	0	0	0	0	0	18,485
Red hind	44		17,341	28	1,904	49,123	89	40	0	0	0	0	0	67,337
Misty grouper	700		430	0	488	3,403	38	0	0	0	6	0	0	1,627
Nassau grouper	938		4,068	0	522	12,288	11	0	0	0	10	0	0	19,018
Yellowfin grouper	939		1,011	0	82	669	0	0	0	0	0	0	0	2,699
Grouper category	11,139		146	0	13,770	13,023	143	0	0	0	66	0	0	15,778
Mollusks	2,024		706	0	15,486	1,517	7	0	0	0	0	0	0	8,916
Snappers														
Lean snapper	2,089		61,315	62	31,480	57,509	287	0	0	0	0	0	0	117,393
Yellowtail snapper	10,078		30,634	73	16,724	224,516	1,839	0	0	0	2	0	0	343,763
Silk snapper	0		55,046	0	139,667	43,113	0	0	0	0	0	0	0	247,836
Mutton snapper	4,541		22,006	120	11,937	4,113	0	0	0	0	0	0	0	38,590
Queen snapper	2,807		2,807	0	106,558	18,709	0	0	0	0	0	0	0	118,071
Vermilion snapper	133		3,630	234	3,931	18,709	0	0	0	0	0	0	0	23,276
Wetmore	0		129	0	6,008	0	0	0	0	0	0	0	0	6,137
Blackfin snapper	0		2,418	0	7,034	0	0	0	0	0	0	0	0	9,452
Snapper category	524		9,289	5	12,085	19,204	0	0	0	0	0	0	0	31,498
Triggerfish	385		25,290	35	1,084	10,538	182	0	0	0	0	0	0	37,396
Barracudas	10,555		0	0	3,938	4,209	0	0	0	0	0	0	0	18,702
Perches	7,083		13,808	24	17,317	4,290	0	0	0	0	0	0	0	39,432
Shoals	0		0	0	32,981	3,696	0	0	0	0	0	0	0	36,677
Tarpon	109		0	0	3,398	600	114	0	0	0	0	0	0	4,117
Gosfishes	261		13,613	15	3,827	1,019	0	0	0	0	0	0	0	17,466
Sardines	209		697	0	2,108	2,824	341	0	0	0	0	0	0	4,871
King Mackerels	1,218		0	0	13,598	65,288	36,560	0	0	0	0	0	0	115,654
Cero	1,041		0	0	10,810	29,456	11,441	0	0	0	0	0	0	52,548
Sharks	893		0	0	5,790	19,507	1,283	0	0	0	0	0	0	27,373
Wahoo	0		0	0	196	899	0	0	0	0	0	0	0	1,095
CLASIFIED														
First Class	467		28,884	46	671	4,297	116	0	0	0	0	0	0	34,971
Second Class	880		17,021	0	8,807	921	0	0	0	0	0	0	0	26,629
Third Class	0		21,041	90	3,711	1,936	0	0	0	0	0	0	0	25,768
Trash	0		288	0	461	42	0	0	0	0	0	0	0	1,091
Other fishes	522		27,683	154	20,712	8,498	6,955	614	0	0	0	0	0	55,438
Total Fishes	86,072		562,628	2,047	436,444	976,976	223,190	53,068	0	0	0	0	0	1,802,875
SHELLFISH														
Conch	0		126	8	45	0	0	0	0	0	0	0	0	179
Land crabs	0		108,702	0	0	0	0	0	0	0	0	0	0	108,702
Lebster	482		32,334	641	3,674	0	0	0	0	0	0	0	0	37,131
Octopus	15		1,352	107	105	0	0	0	0	0	0	0	0	1,814
Other shellfish	10		4,005	51	669	0	0	0	0	0	0	0	0	5,775
Total Shellfish	507		114,185	32,501	1,262	4,448	0	0	0	0	0	0	0	130,403
TOTAL	86,579		676,813	34,548	437,706	981,424	223,190	53,068	0	0	0	0	0	1,933,278

TABLE 3A. CATCHINGS RETURNED BY SPECIES AND BY GEAR IN PUERTO RICO DURING 2003.

SPECIES	BEACH SEINE (Pounds)	FISH TRAP (Pounds)	LOBSTER TRAP (Pounds)	GILL NET (Pounds)	BOTTOM LINE (Pounds)	TROLL LINE (Pounds)	LONG LINE (Pounds)	LAND CRAB TRAP (Pounds)	CAST NET (Pounds)	ROD AND LINE (Pounds)	SKIN DIVING (Pounds)	SCUBA DIVING (Pounds)	TRAMMEL NET (Pounds)	TOTAL (Pounds)
Tunas														
Blackfin tuna	218	0	0	634	7,280	25,908	25	0	0	7	0	125	0	34,196
Little tunny	3,408	0	0	427	1,981	5,543	0	0	0	334	0	11	0	11,704
Skipjack tuna	785	0	0	966	6,857	21,958	0	0	0	0	0	89	0	30,655
Yellowfin tuna	0	0	0	40	3,230	19,812	0	0	0	385	0	0	0	23,467
Tuna category	41	0	0	155	4,395	9,935	35	0	0	225	0	32	0	14,818
Ballyhoo	6,561	838	0	32,847	502	97	7	0	125	0	28	0	69	41,094
White grunt	9,171	41,890	29	21,120	13,906	44	227	0	280	3	0	853	20,043	107,566
Hogfish	89	16,483	38	1,026	10,788	0	0	0	3	0	674	26,441	415	55,957
Tunkfish	1,273	43,848	763	3,106	1,820	0	0	0	48	0	35	5,759	1,944	58,596
Dolphinfish	0	925	0	555	9,120	53,800	0	0	0	200	0	248	0	64,848
Squidrefishes	38	5,366	4	1,098	3,709	28	52	0	26	0	0	380	0	10,701
Mullets	3,615	688	0	36,122	1,748	9	2	0	641	0	0	0	21	42,846
Jacks														
Bar jack	3,807	3,381	0	13,329	13,383	408	388	0	33	69	3	364	1,920	37,085
Horse-eye jack	545	114	0	772	2,626	109	22	0	0	0	0	0	0	4,188
Yellow jack	5	33	2	230	425	0	0	0	0	0	0	0	9	123
Jack Category	4,897	547	0	9,110	7,426	724	14	0	38	80	0	162	56	23,074
Parrotfishes	10,754	18,386	0	9,748	96	0	4	0	30	0	218	8,328	21,526	69,590
Groupers														
Coney	0	4,774	8	859	5,031	0	40	0	0	0	0	162	128	11,002
Red hind	8	14,757	96	1,009	24,680	0	639	0	0	31	33	6,667	125	48,045
Misty grouper	0	487	0	179	4,984	0	193	0	0	0	0	18	0	5,861
Nassau grouper	0	2,905	0	317	3,947	0	109	0	0	0	5	2,919	15	10,217
Yellowfin grouper	0	579	0	55	499	0	0	0	0	0	0	3,760	0	4,893
Groupers category	768	7,773	0	1,333	10,728	53	242	0	0	0	98	10,634	80	31,709
Mojarras	1,073	354	0	13,691	935	0	20	0	396	0	0	906	36	17,411
Snappers														
Lane snapper	412	47,757	4	13,868	40,753	12	18,421	0	30	0	15	1,548	330	123,150
Yellowtail snapper	8,947	18,233	4	5,764	138,324	49	1,229	0	160	6	8	1,773	2,072	176,569
Silk snapper	0	51,702	0	272	115,963	0	787	0	0	0	0	1,083	19	169,826
Mutton snapper	2,457	19,549	0	7,078	44,397	0	1,629	0	0	5	239	3,893	733	79,980
Queen snapper	0	967	0	290	124,951	0	645	0	0	0	0	146	0	126,999
Vermillion snapper	0	2,266	0	111	13,115	0	84	0	0	0	0	259	0	15,835
Wenchman	0	1,216	0	827	4,984	0	130	0	0	0	0	76	0	7,235
Blackfin snapper	0	4,083	0	143	5,956	0	33	0	0	0	0	70	58	9,943
Snappers category	574	6,928	7	7,315	12,394	268	495	0	0	0	167	6,196	1,654	35,998
Triggrfish	51	24,768	9	649	5,935	175	260	0	30	20	35	9,666	399	41,997
Barracudas	2,230	401	0	2,726	3,620	1,989	10	0	0	8	0	271	21	11,276
Porfies	466	9,867	4	5,662	2,047	18	67	0	5	0	0	1,115	1,649	20,900
Snooks	6,070	631	0	25,172	3,498	235	9	0	232	16	319	615	206	37,003
Tarpon	970	0	0	1,239	227	0	0	0	0	0	0	0	0	2,436
Goatfishes	42	9,077	22	1,831	891	168	0	0	31	0	0	679	44	12,785
Sardines	470	31	0	2,352	786	17	1	0	13,260	0	0	29	0	16,946
King Mackerels	711	2,194	0	5,347	38,374	33,723	53	0	44	142	2	307	0	80,897
Cero	703	685	0	3,820	22,057	7,720	81	0	54	69	6	236	193	35,624
Sharks	238	1,689	0	2,850	11,372	1,292	5,502	0	60	501	0	213	1,493	25,210
Wahoo	0	144	0	19	345	1,446	0	0	0	23	11	24	0	2,012
CLASSIFIED														
First Class	28	15,160	0	4,232	29,459	9	0	0	0	0	7	8,622	5,414	62,931
Second Class	141	14,772	0	10,425	4,725	2	0	0	0	0	0	772	12,253	43,090
Third Class	0	6,719	0	67	697	19	0	0	198	0	0	2,167	149	10,016
Trash	0	68	0	5	28	0	0	0	0	0	13	0	0	114
Other fishes	660	472	0	6,102	4,520	354	247	0	23	22	14	302	101	12,817
Total Fishes	72,226	404,027	990	256,893	769,114	185,924	31,702	0	15,767	2,146	1,930	107,929	73,289	1,921,936
SHELLFISH														
Conch	29	2,585	0	320	198	0	0	0	0	0	8,678	176,058	152	188,020
Land crab	0	0	0	0	0	0	0	1,619	0	0	0	0	0	1,619
Lobster	187	103,062	30,336	1,671	1,198	0	6	0	3	0	2,939	90,796	12,385	242,583
Octopus	43	635	265	194	156	0	2	0	0	0	14,701	10,460	20	26,476
Other shellfish	180	1,771	93	804	364	0	0	0	28	0	922	3,196	769	8,127
Total Shellfish	439	108,053	30,694	2,989	1,916	0	8	1,619	31	0	27,240	280,510	13,326	466,825
TOTAL	72,665	512,080	31,684	259,882	771,030	185,924	31,710	1,619	15,798	2,146	29,170	388,439	86,615	2,388,761

TABLE 6A. LANDINGS REPORTED BY SPECIES AND BY MONTH IN PUERTO RICO DURING 2001.

SPECIES	JANUARY (Pounds)	FEBRUARY (Pounds)	MARCH (Pounds)	APRIL (Pounds)	MAY (Pounds)	JUNE (Pounds)	JULY (Pounds)	AUGUST (Pounds)	SEPTEMBER (Pounds)	OCTOBER (Pounds)	NOVEMBER (Pounds)	DECEMBER (Pounds)	TOTAL (Pounds)
<b>FISH</b>													
<b>Tunas</b>													
Blackfin tuna	2,303	779	944	1,404	2,459	2,581	5,476	2,241	2,792	2,589	1,342	379	25,286
Little tunny	2,019	1,029	1,169	2,664	2,604	2,590	2,123	1,962	1,225	1,220	1,062	655	20,320
Skipjack tuna	2,555	3,114	3,035	3,513	4,061	5,433	3,185	5,942	1,242	2,580	2,589	1,143	38,391
Yellowfin tuna	1,225	1,387	1,180	3,388	949	1,340	3,762	6,492	7,616	5,080	2,422	554	35,392
Tuna category	2,479	2,692	4,190	1,594	4,258	3,848	794	1,907	940	1,151	261	2,034	26,147
Ballyhoo	5,512	3,083	5,684	4,545	3,633	2,428	1,971	4,197	4,934	7,915	7,897	9,106	60,905
White grunt	13,034	11,872	13,885	14,035	12,373	10,226	9,820	18,634	13,137	13,129	15,039	11,557	156,641
Hogfish	5,845	4,882	4,063	5,555	4,838	5,692	6,530	7,763	6,734	6,049	6,714	4,178	68,843
Trunkfish	7,746	8,435	8,148	6,903	5,410	6,081	5,385	9,100	4,953	5,565	5,397	4,691	77,814
Dolphinfish	16,370	31,333	11,709	6,770	6,846	3,449	1,038	1,902	3,309	3,323	10,197	14,829	111,075
Squidrelfishes	1,859	1,493	2,202	1,717	1,395	1,401	1,202	1,379	1,177	1,553	1,932	1,003	18,319
Mullet	6,523	3,541	4,204	4,141	3,894	4,178	4,825	8,267	6,040	7,447	4,647	3,422	61,129
<b>Jacks</b>													
Bar jack	4,893	4,307	4,349	4,624	3,976	4,408	3,586	5,348	4,262	3,497	4,148	3,448	50,845
Horse-eye jack	605	305	460	1,649	416	524	551	693	587	385	145	288	6,607
Yellow jack	157	176	190	252	634	1,153	110	357	655	140	61	49	3,934
Jack Category	2,744	2,206	3,448	2,350	2,921	4,530	3,250	5,050	2,161	2,547	4,673	2,290	38,168
Parrotfishes	7,872	9,561	11,299	8,639	6,718	7,352	9,812	12,747	8,065	6,404	6,384	4,402	99,255
<b>Groupers</b>													
Coney	1,587	1,347	1,198	1,275	1,085	1,120	1,157	2,882	1,511	1,263	853	814	16,091
Red hind	9,889	5,342	5,721	4,403	4,776	4,506	4,999	6,137	6,260	5,830	4,956	6,279	69,098
Misty grouper	372	501	455	756	536	482	581	798	504	427	558	253	6,222
Nassau grouper	2,427	1,069	3,555	1,598	1,365	1,255	1,572	2,257	1,873	50	584	1,101	18,706
Yellowfin grouper	359	280	592	213	457	183	221	358	340	198	81	426	3,708
Grouper category	8,627	8,158	4,972	2,949	3,963	4,351	2,914	4,408	4,722	4,350	2,675	2,092	54,180
Mojarras	1,305	1,879	1,523	1,576	1,396	2,558	1,366	1,535	1,703	1,963	1,409	1,232	19,445
<b>Snappers</b>													
Lane snapper	16,553	16,634	21,215	24,048	15,592	11,632	10,375	14,230	13,549	13,782	13,768	14,847	186,225
Yellowtail snapper	20,703	41,378	42,021	30,604	25,458	14,274	20,703	31,378	42,021	20,604	25,458	14,396	328,998
Silk snapper	28,917	33,664	27,761	25,983	23,712	15,040	18,814	24,590	25,573	35,013	17,188	15,467	291,722
Mutton snapper	8,055	5,848	8,379	11,422	12,114	7,925	4,779	8,946	7,126	6,691	5,491	3,807	90,583
Queen snapper	12,527	5,054	7,664	9,386	8,782	6,710	7,752	21,311	8,558	9,326	7,468	3,134	107,671
Vermillion snapper	5,450	9,567	4,931	1,294	1,395	1,094	1,545	2,897	7,501	6,479	1,438	1,302	44,891
Wenchman	1,185	757	566	1,167	765	399	432	396	276	999	566	224	7,731
Blackfin snapper	1,204	784	1,116	729	500	625	622	1,144	942	598	798	444	9,506
Snapper category	5,079	4,875	6,469	6,370	4,584	3,874	4,327	6,237	5,989	5,804	3,460	3,046	60,114
Triggerfishes	5,258	4,458	4,994	5,369	5,235	4,782	5,137	6,633	8,859	4,546	3,139	2,519	60,929
Barracudas	2,278	1,666	1,514	2,193	2,210	2,136	1,956	1,579	1,542	1,080	755	979	19,888
Porgies	3,988	3,405	3,695	4,060	2,975	2,213	2,323	3,648	2,766	3,064	2,882	2,012	37,031
Snooks	479	396	332	369	432	386	438	1,634	2,351	2,502	1,272	1,239	11,830
Tarpon	0	0	57	762	108	0	318	804	0	126	11	7	2,193
Goatfishes	2,726	1,643	1,715	965	1,393	1,455	1,492	2,171	3,323	2,161	1,670	1,761	22,475
Sardines	1,746	1,992	1,378	2,343	2,220	3,519	2,043	2,737	2,113	2,041	1,236	2,030	25,398
King Mackerels	5,386	7,680	8,604	9,497	9,756	7,989	5,687	6,894	17,789	6,962	7,173	8,155	101,572
Cero	8,869	5,493	11,904	13,002	10,443	7,138	10,204	5,870	5,870	2,397	1,873	1,646	84,711
Sharks	3,983	2,440	3,419	2,853	4,314	4,267	4,545	7,487	4,406	3,038	2,667	1,750	45,169
Wahoo	394	49	527	3,571	3,262	0	64	0	50	27	401	0	8,344
<b>CLASSIFIED</b>													
First Class	8,568	7,426	8,660	8,273	7,112	6,107	9,040	14,201	11,586	4,561	3,801	7,204	96,539
Second Class	2,374	1,686	1,824	2,201	1,479	3,045	4,091	5,956	4,484	1,115	1,724	2,796	32,775
Third Class	5,640	4,540	6,732	5,765	4,083	3,850	4,405	3,226	2,273	2,620	1,252	2,269	46,655
Trash	44	133	244	0	10	18	9	43	0	0	14	0	515
Other fishes	15,000	15,000	15,000	15,000	2,000	15,000	0	0	0	0	0	706	77,706
Total Fishes	274,711	285,337	288,894	273,736	230,795	205,145	197,328	286,366	265,690	220,188	191,530	167,964	2,887,686
<b>SHELLFISH</b>													
Conch	49,368	43,127	40,045	34,989	21,904	33,579	205	1,363	1,714	48,786	37,743	15,644	328,467
Land crab	3,456	472	542	691	648	181	42	2	49	70	66	103	6,322
Lobster	28,023	24,100	23,463	19,441	19,972	21,024	22,622	29,362	25,975	26,831	21,883	22,322	285,018
Octopus	3,890	1,442	2,529	1,801	1,658	2,309	1,821	2,652	4,164	3,811	4,988	2,874	33,939
Marine crabs	465	365	285	654	125	346	252	314	254	125	101	65	3,351
Other shellfish	3,703	876	976	1,394	442	1,325	1,145	1,131	733	1,555	630	331	14,241
Total Shellfish	88,905	70,382	67,840	58,970	44,749	58,764	26,087	34,824	32,889	81,178	65,411	41,339	671,338
TOTAL	363,616	355,719	356,734	332,706	275,544	263,909	223,415	321,190	298,579	301,366	256,941	209,303	3,559,024



TABLE 6B. LANDINGS REPORTED BY SPECIES AND BY MONTH IN PUERTO RICO DURING 2002.

SPECIES	JANUARY (Pounds) (Pounds)	FEBRUARY (Pounds) (Pounds)	MARCH (Pounds) (Pounds)	APRIL (Pounds) (Pounds)	MAY (Pounds) (Pounds)	JUNE (Pounds) (Pounds)	JULY (Pounds) (Pounds)	AUGUST (Pounds) (Pounds)	SEPTEMBER (Pounds) (Pounds)	OCTOBER (Pounds) (Pounds)	NOVEMBER (Pounds) (Pounds)	DECEMBER (Pounds) (Pounds)	TOTAL (Pounds) (Pounds)
<b>FISH</b>													
<b>Tunas</b>													
Blackfin tuna	2,290	2,035	2,410	1,167	2,134	4,891	1,012	1,980	2,361	4,168	1,988	671	27,107
Little tunny	997	1,033	1,413	1,081	1,668	1,755	1,375	1,202	1,259	1,225	836	642	14,486
Skipjack tuna	3,119	2,985	2,830	3,138	4,332	3,115	2,495	1,658	2,063	5,373	5,634	1,701	38,443
Yellowfin tuna	663	838	603	1,249	962	382	633	1,039	6,513	5,006	1,192	223	19,303
Tuna category	1,004	1,260	970	608	1,089	1,385	754	981	827	1,227	692	258	11,055
Ballyhoo	6,299	5,886	5,365	5,163	4,991	3,358	3,616	4,964	12,669	6,430	4,954	4,350	68,045
Grunts	15,991	14,266	15,924	13,352	11,161	12,169	13,158	14,055	10,232	9,934	8,664	8,194	147,100
Hogfish	7,630	6,179	6,020	6,072	6,065	6,305	6,895	7,644	6,125	3,857	3,326	2,460	68,578
Trunkfish	8,815	8,719	7,486	5,897	6,362	7,112	7,865	7,005	5,889	5,214	4,429	4,317	79,110
Dolphinfish	20,604	17,636	14,723	8,612	8,436	3,112	1,577	1,535	1,406	6,414	4,995	11,572	100,622
Squidfishes	1,809	1,392	1,825	1,860	1,201	1,032	1,197	1,309	1,296	1,316	1,242	607	16,086
Mullets	6,786	5,482	6,116	6,314	4,045	4,327	6,026	4,847	3,957	3,093	3,347	2,683	57,023
<b>Jacks</b>													
Bar jack	5,604	4,711	5,334	4,996	3,993	6,690	5,258	6,110	5,845	4,608	6,887	3,101	63,137
Horse-eye jack	306	645	392	381	463	238	391	467	523	432	362	223	4,823
Yellow jack	276	214	293	87	202	654	315	145	666	227	104	32	3,215
Jack Category	3,324	2,138	2,836	2,843	2,678	2,293	2,776	2,936	2,115	2,010	2,407	1,761	30,117
Parrotfishes	9,886	10,530	10,354	9,944	7,225	7,391	10,130	11,528	8,036	7,731	7,719	7,069	107,543
<b>Groupers</b>													
Coney	1,716	1,508	1,367	3,046	1,316	1,288	1,324	1,484	1,348	1,914	1,348	1,379	19,038
Red hind	13,018	7,146	4,965	5,571	5,988	6,210	9,010	7,989	6,829	5,664	4,800	4,016	81,206
Misty grouper	403	183	472	252	1,146	304	1,061	513	262	608	303	172	5,679
Nassau grouper	1,039	1,171	1,527	1,131	1,121	1,460	2,959	1,996	2,163	1,702	1,527	912	18,708
Yellowfin grouper	743	1,348	1,098	420	395	675	411	717	506	339	178	86	6,916
Grouper category	3,238	4,589	5,037	4,236	4,017	4,114	4,255	4,315	4,859	3,330	2,917	1,930	46,837
Mojarras	2,630	1,531	1,947	2,081	1,490	1,566	2,091	1,941	1,291	1,913	1,615	899	20,995
<b>Snappers</b>													
Lane snapper	17,872	14,396	22,151	23,831	11,329	16,440	19,961	13,466	11,802	12,528	12,227	8,627	184,630
Yellowtail snapper	22,311	23,037	29,085	32,702	22,361	27,828	27,272	27,265	23,527	23,267	19,642	12,724	291,021
Silk snapper	13,925	12,858	17,075	19,462	18,092	17,242	16,727	22,080	18,111	18,182	13,516	10,758	198,028
Mutton snapper	7,016	6,842	8,677	15,943	11,414	6,996	8,410	7,467	5,562	5,491	4,476	3,548	91,842
Queen snapper	4,955	4,976	3,777	3,586	5,550	5,665	6,147	13,404	9,775	19,780	18,628	13,815	110,058
Vermillion snapper	1,095	1,391	1,793	1,931	2,249	2,280	2,041	2,990	2,030	2,655	1,596	1,084	23,135
Wenchman	144	288	92	309	265	408	474	1,236	1,043	807	606	525	6,197
Blackfin snapper	397	482	824	412	561	805	664	1,676	1,338	1,101	651	584	9,495
Snapper category	4,624	4,446	5,131	6,152	5,034	5,117	6,223	5,572	4,549	4,505	3,250	2,091	56,694
Triggerfishes	5,215	4,130	6,688	4,149	5,052	4,764	4,800	5,622	4,027	3,749	3,018	2,332	53,546
Barracudas	1,795	2,127	1,288	1,816	1,878	2,013	1,907	2,354	2,832	2,314	2,790	1,474	24,588
Porgies	3,244	3,352	4,134	2,981	3,415	3,902	4,360	3,338	2,913	2,476	2,201	1,520	37,836
Snooks	4,585	2,735	3,449	3,912	3,604	3,768	4,066	5,844	4,485	3,143	2,997	2,564	45,152
Tarpon	114	2,006	0	573	559	27	196	96	244	182	277	147	4,421
Goatfishes	2,421	1,788	1,248	1,369	1,132	1,188	1,214	2,514	1,252	1,592	1,895	1,391	19,004
Sardines	1,952	1,750	2,953	2,683	2,524	3,025	3,698	1,465	1,708	3,159	2,026	1,110	28,053
Mackerels	6,911	7,023	10,395	8,749	11,845	17,273	19,186	12,450	7,407	5,729	5,879	5,022	117,869
Cero	3,722	4,050	2,991	3,361	6,838	6,988	4,578	5,197	4,150	4,827	3,943	2,681	53,326
Sharks	3,565	3,192	2,503	2,612	3,183	2,980	4,113	3,458	4,005	3,941	2,771	2,114	38,437
Wahoo	133	304	27	35	132	0	56	86	64	7	115	136	1,095
<b>CLASSIFIED</b>													
First Class	5,531	8,709	10,470	6,198	4,189	6,117	6,711	6,517	6,099	4,641	6,659	3,461	75,302
Second Class	3,235	6,597	7,551	3,641	2,639	3,531	2,676	7,661	1,540	1,870	3,865	2,168	46,974
Third Class	2,741	2,936	2,543	1,920	2,299	3,381	2,770	3,911	1,921	1,609	2,211	1,675	29,917
Trash	72	139	10	117	55	134	103	28	63	32	0	38	791
Other fishes	6,361	5,686	6,003	15,686	6,150	6,009	10,058	8,009	6,725	4,969	6,012	5,087	86,755
Total Fishes	242,126	228,665	252,165	253,631	214,829	229,707	244,995	252,066	216,212	216,291	192,717	145,934	2,689,338
<b>SHELLFISH</b>													
Conch	32,054	32,671	35,607	24,180	21,964	24,678	468	308	4,351	28,889	15,312	15,126	235,608
Land crab	392	820	1,827	2,088	445	285	140	180	0	86	93	104	6,460
Lobster	30,530	29,839	30,054	25,298	23,049	24,489	24,154	27,083	24,340	24,197	20,391	17,329	300,753
Octopus	2,850	2,466	2,945	2,818	1,687	1,758	2,084	2,607	2,754	2,466	2,356	1,770	28,561
Other shellfish	1,228	720	1,234	767	973	833	1,949	1,493	719	582	662	932	12,092
Total Shellfish	67,054	66,516	71,667	55,151	48,118	52,043	28,795	31,671	32,164	56,220	38,814	35,261	583,474
<b>TOTAL</b>	<b>309,180</b>	<b>295,181</b>	<b>323,832</b>	<b>308,782</b>	<b>262,947</b>	<b>281,750</b>	<b>273,790</b>	<b>283,737</b>	<b>248,376</b>	<b>272,511</b>	<b>231,531</b>	<b>181,195</b>	<b>3,272,812</b>

TABLE 6C. LANDINGS REPORTED BY SPECIES AND BY MONTH IN PUERTO RICO DURING 2003.

SPECIES	JANUARY (Pounds)	FEBRUARY (Pounds)	MARCH (Pounds)	APRIL (Pounds)	MAY (Pounds)	JUNE (Pounds)	JULY (Pounds)	AUGUST (Pounds)	SEPTEMBER (Pounds)	OCTOBER (Pounds)	NOVEMBER (Pounds)	DECEMBER (Pounds)	TOTAL (Pounds)
<b>FISH</b>													
<b>Tunas</b>													
Blackfin tuna	1,154	1,344	1,962	2,576	4,770	4,691	3,525	3,314	2,676	2,781	3,295	2,108	34,196
Little tunny	914	1,195	1,129	1,124	1,896	1,138	626	392	712	1,527	505	546	11,704
Skipjack tuna	1,357	2,592	2,235	3,374	6,367	4,641	3,263	2,385	1,123	1,865	828	625	30,655
Yellowfin tuna	627	468	913	1,111	863	3,071	1,732	5,393	4,122	3,052	957	1,158	23,467
Tuna category	1,058	1,339	2,208	1,457	1,172	1,504	931	1,262	1,621	1,080	751	435	14,818
Ballyhoo	6,845	2,722	2,775	2,397	2,195	1,583	1,319	1,582	2,417	5,769	3,806	7,684	41,094
White grunt	9,869	7,945	9,588	8,839	9,471	8,731	9,112	10,380	10,478	9,254	6,015	7,884	107,566
Hogfish	4,085	2,963	3,878	3,470	4,281	3,396	4,234	3,693	4,296	4,549	3,719	13,393	55,957
Trunkfish	5,727	5,924	6,293	5,071	4,841	4,569	4,552	4,515	3,585	5,343	4,305	3,871	58,596
Dolphinfish	7,199	6,593	5,975	4,379	5,501	1,557	1,078	838	1,671	9,662	5,872	14,523	64,848
Squirrelfishes	1,037	770	1,287	835	777	781	842	866	1,036	1,052	719	699	10,701
Mulletts	3,530	3,325	3,966	4,493	3,174	3,444	2,829	3,885	4,517	4,294	2,993	2,396	42,846
<b>Jacks</b>													
Bar jack	2,542	2,850	3,398	3,603	3,741	3,093	2,988	3,532	4,018	3,458	2,108	1,754	37,085
Horse-eye jack	351	348	262	464	399	373	518	252	387	310	409	115	4,188
Yellow jack	142	107	145	48	59	85	21	7	27	140	9	37	827
Jack Category	2,097	1,676	3,011	2,239	2,084	1,263	1,819	2,687	1,723	1,852	1,425	1,198	23,074
Parrotfishes	6,110	5,101	6,865	5,131	4,618	3,692	6,888	8,404	6,641	5,935	5,214	4,991	69,590
<b>Groupers</b>													
Coney	1,117	816	674	1,013	705	753	1,023	950	962	851	1,105	1,033	11,002
Red hind	8,633	2,186	3,562	3,607	3,221	4,124	4,248	4,130	3,872	3,922	3,547	2,993	48,045
Misty grouper	405	847	351	499	410	441	447	321	419	1,000	371	350	5,861
Nassau grouper	830	781	1,044	1,121	751	564	444	655	1,108	1,399	870	650	10,217
Yellowfin grouper	167	108	85	86	180	323	86	88	3,432	248	30	60	4,893
Grouper category	4,838	2,688	2,388	1,690	2,172	1,490	3,296	2,915	3,369	2,937	2,173	1,753	31,709
Mojarras	2,087	2,184	2,079	1,954	879	1,395	836	1,137	920	1,826	938	1,176	17,411
<b>Snappers</b>													
Lane snapper	9,990	9,658	19,534	14,403	9,830	8,796	7,737	10,064	8,859	10,030	7,500	6,749	123,150
Yellowtail snapper	15,799	11,674	26,381	17,825	15,615	9,897	14,972	15,704	19,228	13,538	8,270	7,666	176,569
Silk snapper	17,150	12,094	18,472	14,450	12,920	12,623	14,532	14,805	15,259	19,998	10,269	7,254	169,826
Mutton snapper	5,150	4,566	11,882	18,379	11,260	4,394	3,921	4,700	4,866	3,954	3,982	2,926	79,980
Queen snapper	13,474	8,842	13,636	13,331	11,381	8,407	7,629	11,150	5,268	19,047	8,779	6,055	126,999
Vermillion snapper	1,510	1,461	2,075	1,254	1,369	937	1,326	1,791	1,208	1,557	1,083	264	15,835
Wenchman	326	266	132	145	303	617	364	1,499	305	1,727	1,106	443	7,233
Blackfin snapper	586	355	931	675	1,003	770	1,017	743	717	1,666	1,028	452	9,943
Snapper category	2,811	2,658	3,732	3,888	3,121	3,217	2,737	3,160	3,679	3,336	1,906	1,753	35,998
Triggerfishes	3,083	2,840	3,807	5,086	3,761	3,745	4,371	3,711	3,244	2,758	2,735	2,856	41,997
Barracudas	1,633	1,311	1,072	1,227	1,518	791	678	776	634	583	642	411	11,276
Porgies	2,354	1,351	2,035	1,643	1,857	1,949	1,540	1,492	1,671	1,864	1,549	1,595	20,900
Snooks	3,342	3,245	2,513	4,371	3,026	2,731	3,558	3,156	2,256	3,092	4,225	1,488	37,003
Tarpon	147	17	108	408	127	130	201	203	25	158	687	225	2,436
Gadfishes	1,418	710	1,062	572	675	483	787	1,455	1,392	1,405	1,651	1,174	12,784
Sardines	2,359	738	2,085	1,551	2,460	1,288	1,228	1,349	634	1,276	1,250	728	16,946
King Mackerels	5,978	3,135	5,662	11,166	12,078	10,238	10,887	8,930	4,046	3,333	2,090	3,354	80,897
Cero	3,223	3,879	6,557	5,960	3,191	3,064	2,548	2,046	2,222	1,023	934	977	35,624
Sharks	1,755	1,947	3,432	2,941	1,699	2,018	2,107	1,509	1,737	2,342	1,720	2,003	25,210
Wahoo	345	248	149	93	384	71	34	11	104	77	310	186	2,012
<b>CLASSIFIED</b>													
First Class	8,028	5,053	10,091	7,803	5,527	3,151	3,302	5,593	4,935	3,712	2,983	2,753	62,931
Second Class	3,107	2,262	5,783	3,901	4,084	3,470	3,197	4,162	4,516	4,015	2,216	2,377	43,090
Third Class	907	1,038	1,647	984	826	815	358	964	953	418	607	499	10,016
Trash	0	11	35	0	0	0	25	0	0	18	4	21	114
Other fishes	1,202	564	1,033	2,148	915	1,296	1,134	684	1,665	634	1,198	344	12,817
Total Fishes	178,398	136,795	209,919	194,785	173,457	141,600	146,847	163,240	154,555	175,667	120,688	125,985	1,921,936
<b>SHELLFISH</b>													
Conch	14,795	21,053	22,104	18,926	20,839	24,703	124	100	625	33,129	13,762	17,860	188,020
Land crab	113	285	220	329	139	151	75	60	1	66	89	91	1,619
Lobster	21,729	17,973	20,582	14,911	17,308	15,623	17,734	26,038	23,673	28,902	19,400	18,710	242,583
Octopus	2,304	1,402	2,090	2,262	2,043	1,536	2,304	2,435	2,646	3,733	1,848	1,873	26,476
Other shellfish	541	669	886	522	769	650	720	483	1,282	820	421	364	8,127
Total Shellfish	39,482	41,382	45,882	36,950	41,098	42,663	20,957	29,116	28,227	66,650	35,520	38,898	466,825
TOTAL	217,880	178,177	255,802	231,735	214,555	184,265	167,804	192,356	182,779	242,316	156,244	164,888	2,388,761

TABLE 7. AVERAGE POUNDS PER SINGLE TRIP IN PUERTO RICO DURING 2001-2003.

Month	2001				2002				2003						
	Average Pounds Landed/Trip	Standard Deviation	Samples n	Month	Average Pounds Landed/Trip	Standard Deviation	Samples n	Month	Average Pounds Landed/Trip	Standard Deviation	Samples n	Month	Average Pounds Landed/Trip	Standard Deviation	Samples n
January	85	129	200	200 January	51	39	200	200 January	71	44	200	200 January	71	44	200
February	77	33	200	200 February	58	58	200	200 February			200	200 February	62	38	200
March	63	33	200	200 March	90	68	200	200 March			200	200 March	81	66	200
April	52	43	200	200 April	53	30	200	200 April			200	200 April	77	76	200
May	74	81	200	200 May	68	63	200	200 May			200	200 May	75	69	200
June	53	39	200	200 June	58	50	200	200 June			200	200 June	47	35	200
July	65	69	200	200 July	68	63	200	200 July			200	200 July	54	53	200
August	88	66	200	200 August	63	53	200	200 August			200	200 August	72	68	200
September	91	21	200	200 September	63	63	200	200 September			200	200 September	42	26	200
October	53	44	200	200 October	77	65	200	200 October			200	200 October	59	74	200
November	49	35	200	200 November	58	82	200	200 November			200	200 November	57	96	200
December	69	87	200	200 December	64	34	200	200 December			200	200 December	60	68	200
2001 Average	71	82		2002 Average	63	57		2003 Average				2003 Average	61	65	
Total Samples			2,400	Total Samples			2,400	Total Samples			2,400	Total Samples			2,400

TABLE 8A. SUMMARY OF BIOSTATISTICS DATA (COMPLETE AND INCOMPLETE SAMPLES) IN PUERTO RICO DURING JANUARY - DECEMBER 2001.

RANK*	SPECIES	NUMBER MEASURED	WEIGHT (KILOGRAMS)	% **
1	<i>Ocyurus chrysurus</i>	3,707	1,033.23	15.31
2	<i>Lutjanus vivanus</i>	2,662	586.31	11.00
3	<i>Haemulon plumieri</i>	1,634	323.76	6.75
4	<i>Lutjanus synagris</i>	1,509	221.65	6.23
5	<i>Panulirus argus</i>	1,457	1,173.88	6.02
6	<i>Scomberomorus cavalla</i>	1,335	124.03	5.51
7	<i>Epinephelus guttatus</i>	1,148	358.37	4.74
8	<i>Sparisoma viride</i>	1,089	403.58	4.50
9	<i>Sparisoma Chrysopterum</i>	1,011	342.83	4.18
10	<i>Calamus pennatula</i>	844	121.34	3.49
11	<i>Caranx ruber</i>	650	181.65	2.69
12	<i>Haemulon sciurus</i>	624	122.08	2.58
13	<i>Cephalofolis fulvus</i>	532	112.10	2.20
14	<i>Lachnolaimus maximus</i>	455	300.63	1.88
15	<i>Rhomboplites aurorubens</i>	295	39.69	1.22
16	<i>Lutjanus analis</i>	288	138.23	1.19
17	<i>Scarus taeniopterus</i>	276	78.82	1.14
18	<i>Selar crumenophthalmus</i>	243	0.00	1.00
19	<i>Sparidae</i>	231	60.28	0.95
20	<i>Thunnus atlanticus</i>	218	0.00	0.90
21	<i>Calamus bajonado</i>	186	31.04	0.77
22	<i>Balistes vetula</i>	183	70.22	0.76
23	<i>Centropomus undecimalis</i>	173	0.00	0.71
24	<i>Etelis oculatus</i>	168	2.19	0.69
25	<i>Scarus vetula</i>	162	69.01	0.67
26	<i>Lutjanus apodus</i>	143	55.49	0.59
27	<i>Opisthonema oglinum</i>	141	0.00	0.58
28	<i>Pseudupeneus maculatus</i>	139	12.80	0.57
29	<i>Scomberomorus regalis</i>	137	60.32	0.57
30	<i>Anisotremus virginicus</i>	122	29.70	0.50
31	<i>Lutjanus buccanella</i>	120	10.14	0.50
32	<i>Coryphaena hippurus</i>	117	0.00	0.48
33	<i>Caranx latus</i>	112	17.84	0.46
34	<i>Caranx bartholomaei</i>	111	21.88	0.46
35	<i>Holocentrus ascensionis</i>	101	8.26	0.42
36	<i>Euthynnus pelamis</i>	96	0.00	0.40
37	<i>Epinephelus cruentatus</i>	86	14.21	0.36
38	<i>Balistes capriscus</i>	84	68.57	0.35
39	<i>Odontoscion dentex</i>	83	31.04	0.34
40	<i>Euthynnus alletteratus</i>	79	0.00	0.33
41	<i>Scaridae</i>	70	31.90	0.29
42	<i>Haemulon flavolineatum</i>	67	11.09	0.28
43	<i>Lactophrys quadricornis</i>	64	6.03	0.26
44	<i>Lutjanus jocu</i>	63	14.73	0.26
46	<i>Thunnus albacares</i>	63	0.00	0.26
47	<i>Mulloidichthys martinicus</i>	62	7.97	0.26
48	<i>Clupeidae</i>	61	16.60	0.25

\* Species rank according to total number of individual measured..

\*\* Percentage of total individuals measured.

TABLE 8A. SUMMARY OF BIOSTATISTICS DATA (COMPLETE AND INCOMPLETE SAMPLES) IN PUERTO RICO DURING JANUARY - DECEMBER 2001. Continued.

RANK*	SPECIES	NUMBER MEASURED	WEIGHT (KILOGRAMS)	% **
49	<i>Lutjanus mahogoni</i>	60	21.55	0.30
50	<i>Acanthocybium solanderi</i>	52	0.00	0.26
51	<i>Nomeus gronovi</i>	50	0.00	0.25
52	<i>Trichiurus lepturus</i>	41	0.00	0.20
53	<i>Lactophrys polygonius</i>	39	6.13	0.19
54	<i>Diapterus plumieri</i>	38	0.82	0.19
55	<i>Epinephelus striatus</i>	37	27.05	0.18
56	<i>Megalops atlantica</i>	36	15.17	0.18
57	<i>Haemulon album</i>	36	12.99	0.18
58	<i>Lactophrys bicaudalis</i>	35	7.99	0.17
59	<i>Mycteroperca tigris</i>	35	95.21	0.17
60	<i>Elops saurus</i>	31	0.00	0.15
61	<i>Mugil curema</i>	29	0.00	0.14
62	<i>Pomacanthus arcuatus</i>	29	1.93	0.14
63	<i>Gerres cineris</i>	27	6.02	0.13
64	<i>Lepomis macrochirus</i>	27	20.05	0.13
65	<i>Mugilidae</i>	23	32.20	0.11
66	<i>Pristipomoides macrophthalmus</i>	21	5.66	0.10
67	<i>Scyllarides aequinoctialis</i>	21	11.36	0.10
68	<i>Vomer setapinnis</i>	20	0.00	0.10
69	<i>Haemulon parra</i>	20	4.44	0.10
70	<i>Lactophrys triqueter</i>	18	2.29	0.09
71	<i>Ogcocephalus nasutus</i>	17	0.00	0.08
72	<i>Sphyræna picudilla</i>	17	0.00	0.08
73	<i>Pomadasyidae</i>	16	5.53	0.08
74	<i>Pomadasyd crocro</i>	16	0.00	0.08
75	<i>Scarus guacamaia</i>	15	21.49	0.07
76	<i>Holocanthus ciliaris</i>	14	4.39	0.07
77	<i>Priacanthidae</i>	12	0.00	0.06
77	<i>Malacanthus plumieri</i>	12	0.00	0.06
78	<i>Holocentridae</i>	10	3.63	0.05
79	<i>Sparisoma rubripinne</i>	10	3.90	0.05
80	<i>Lutjanus griseus</i>	9	3.65	0.04
81	<i>Labridae</i>	9	0.00	0.04
82	<i>Pomacanthus paru</i>	9	1.73	0.04
83	<i>Synodus intermedius</i>	8	0.00	0.04
84	<i>Anisotremus surinamensis</i>	8	3.63	0.04
85	<i>Bodianus rufus</i>	7	3.03	0.03
86	<i>Haemulon carbonarium</i>	7	1.35	0.03
87	<i>Tylosurus crocodilus</i>	6	0.73	0.03
88	<i>Epinephelus itajara</i>	6	17.24	0.03
89	<i>Acanthurus bahianus</i>	6	1.55	0.03
90	<i>Caranx hippos</i>	6	2.13	0.03
91	<i>Syngnathidae</i>	5	3.30	0.02
92	<i>Sparisoma aurofrenatum</i>	5	1.03	0.02
93	<i>Serranidae</i>	4	2.29	0.02

\* Species rank according to total number of individual measured..

\*\* Percentage of total individuals measured.

TABLE 8A. SUMMARY OF BIOSTATISTICS DATA (COMPLETE AND INCOMPLETE SAMPLES) IN PUERTO RICO DURING JANUARY - DECEMBER 2001. Continued.

RANK*	SPECIES	NUMBER MEASURED	WEIGHT (KILOGRAMS)	% **
94	<i>Epinephelus adscensionis</i>	4	1.81	0.02
95	<i>Seriola dumerili</i>	4	5.41	0.02
96	<i>Elagatis bipinnulatus</i>	4	0.00	0.02
97	<i>Epinephelus morio</i>	3	5.84	0.01
98	<i>Mycteroperca venenosa</i>	3	2.58	0.01
99	<i>Condon nobilis</i>	3	0.00	0.01
100	<i>Sicydium plumieri</i>	3	0.00	0.01
101	<i>Lepomis gulosus</i>	3	2.18	0.01
102	<i>Lutjanidae</i>	2	1.05	0.01
103	<i>Mycteroperca bonaci</i>	2	2.52	0.01
104	<i>Panulirus guttatus</i>	2	0.58	0.01
105	<i>Carcharhinidae</i>	1	0.31	0.00
106	<i>Dasyatidae</i>	1	0.23	0.00
107	<i>Centropomidae</i>	1	0.32	0.00
108	<i>Epinephelus mystacinus</i>	1	0.00	0.00
109	<i>Rachycentron canadum</i>	1	0.00	0.00
110	<i>Trachinotus falcatus</i>	1	3.52	0.00
111	<i>Trachinotus goodei</i>	1	0.00	0.00
112	<i>Coryphaenidae</i>	1	3.52	0.00
113	<i>Lutjanus cyanopterus</i>	1	0.51	0.00
114	<i>Kyphosus sectatrix</i>	1	1.53	0.00
115	<i>Scarus coelestinus</i>	1	0.98	0.00
116	<i>Sphyrnaena barracuda</i>	1	0.98	0.00
117	<i>Acanthuridae</i>	1	0.06	0.00
118	<i>Xiphias gladius</i>	1	0.00	0.00
119	<i>Panulirus guttatus</i>	2	0.58	0.01
	TOTAL	24,207	6,699.45	100.00

\* Species rank according to total number of individual measured..

\*\* Percentage of total individuals measured.

TABLE 8B. SUMMARY OF BIOSTATISTICS DATA (COMPLETE AND INCOMPLETE SAMPLES) IN PUERTO RICO DURING JANUARY - DECEMBER 2002.

RANK*	SPECIES	NUMBER MEASURED	WEIGHT (KILOGRAMS)	% **
1	<i>Ocyurus chrysurus</i>	4,643	1,423.96	21.34
2	<i>Haemulon plumieri</i>	1,983	252.98	9.11
3	<i>Lutjanus vivanus</i>	1,752	292.93	8.05
4	<i>Lutjanus synagris</i>	1,632	273.05	7.50
5	<i>Scomberomorus cavalla</i>	1,243	404.31	5.71
6	<i>Sparisoma viride</i>	1,212	191.96	5.57
7	<i>Sparisoma chrysopterum</i>	1,130	176.63	5.19
8	<i>Epinephelus guttatus</i>	998	312.85	4.59
9	<i>Panulirus argus</i>	758	396.01	3.48
10	<i>Caranx ruber</i>	619	49.46	2.84
11	<i>Lutjanus analis</i>	461	113.80	2.12
12	<i>Euthynnus alletteratus</i>	458	0.85	2.10
13	<i>Calamus pennatula</i>	398	24.46	1.83
14	<i>Haemulon sciurus</i>	350	23.29	1.61
15	<i>Cephalofolis fulvus</i>	330	49.58	1.52
16	<i>Rhomboplites aurorubens</i>	275	20.74	1.26
17	<i>Balistes Vetula</i>	237	122.07	1.09
18	<i>Etelis oculatus</i>	232	0.00	1.07
19	<i>Coryphaena hippurus</i>	191	0.00	0.88
20	<i>Lachnolaimus maximus</i>	187	152.88	0.86
21	<i>Lutjanus apodus</i>	177	44.81	0.81
22	<i>Scomberomorus regalis</i>	145	22.10	0.67
23	<i>Calamus bajonado</i>	136	15.82	0.63
24	<i>Lobotes surinamensis</i>	119	54.19	0.55
25	<i>Thunnus atlanticus</i>	109	23.31	0.50
26	<i>Anisotremus virginicus</i>	92	13.53	0.42
27	<i>Euthynnus pelamis</i>	91	0.00	0.42
28	<i>Scarus vetula</i>	90	32.26	0.41
29	<i>Scarus taeniopterus</i>	90	20.80	0.41
30	<i>Selar crumenophthalmus</i>	89	0.00	0.41
31	<i>Caranx latus</i>	85	13.64	0.39
32	<i>Sparidae</i>	85	24.21	0.39
33	<i>Pseudupeneus maculatus</i>	83	8.27	0.38
34	<i>Centropomus undecimalis</i>	78	0.00	0.36
35	<i>Scaridae</i>	68	27.12	0.31
36	<i>Lutjanus buccanella</i>	65	10.40	0.30
37	<i>Elegatis bipinnulatus</i>	60	61.05	0.28
38	<i>Lutjanus jocu</i>	60	31.40	0.28
39	<i>Acanthostracion quadricornis</i>	55	9.50	0.25
40	<i>Haemulon parra</i>	51	9.89	0.23
41	<i>Haemulon flavolineatum</i>	50	1.65	0.23
42	<i>Thunnus albacares</i>	46	0.00	0.21
43	<i>Holocentrus ascensionis</i>	45	5.73	0.21
44	<i>Lutjanus mahogoni</i>	45	24.88	0.21
46	<i>Clupeidae</i>	40	10.45	0.18
47	<i>Mulloidichthys martinicus</i>	37	3.22	0.17

\* Species rank according to total number of individual measured..

\*\* Percentage of total individuals measured.

TABLE 8B. SUMMARY OF BIOSTATISTICS DATA (COMPLETE AND INCOMPLETE SAMPLES) IN PUERTO RICO DURING JANUARY - DECEMBER 2002. Continued.

RANK*	SPECIES	NUMBER MEASURED	WEIGHT (KILOGRAMS)	% **
48	<i>Micropogonias furnieri</i>	35	0.00	0.16
49	<i>Trachinotus falcatus</i>	34	3.13	0.16
50	<i>Caranx bartholomaei</i>	33	0.61	0.15
51	<i>Opisthonema oglinum</i>	32	0.00	0.15
52	<i>Holocanthus ciliaris</i>	32	9.60	0.15
53	<i>Scyllarides aequinoctialis</i>	30	7.57	0.14
54	<i>Sphyrna picudilla</i>	28	0.00	0.13
55	<i>Trichiurus lepturus</i>	28	0.00	0.13
56	<i>Acanthostracion polygonius</i>	28	2.48	0.13
57	<i>Epinephelus cruentatus</i>	27	6.17	0.12
58	<i>Holocentridae</i>	19	4.81	0.09
59	<i>Ephippidae</i>	19	0.00	0.09
60	<i>Vomer setapinnis</i>	17	0.00	0.08
61	<i>Mugil curema</i>	16	0.00	0.07
62	<i>Acanthocybium solanderi</i>	15	3.90	0.07
63	<i>Eplinephelus adscensionis</i>	12	8.34	0.06
64	<i>Acanthurus bahianus</i>	12	2.64	0.06
65	<i>Melichthys niger</i>	12	0.00	0.06
66	<i>Megalops atlantica</i>	11	0.00	0.05
67	<i>Caranx crysos</i>	11	2.76	0.05
68	<i>Lactophrys bicaudalis</i>	11	1.49	0.05
69	<i>Lutjanus griseus</i>	9	2.55	0.04
70	<i>Gerres cinereus</i>	9	1.31	0.04
71	<i>Fistularia tabacaria</i>	8	0.00	0.04
72	<i>Haemulon aurolineatum</i>	8	0.00	0.04
73	<i>Odontoscion dentex</i>	8	0.00	0.04
74	<i>Haemulon album</i>	7	1.35	0.03
75	<i>Epinephelus mystacinus</i>	6	0.00	0.03
76	<i>Lutjanidae</i>	6	3.23	0.03
77	<i>Peprilus paru</i>	5	0.00	0.02
78	<i>Epinephelus striatus</i>	4	6.74	0.02
79	<i>Mycteroperca venenosa</i>	4	0.61	0.02
80	<i>Sparisoma rubripinne</i>	4	1.16	0.02
81	<i>Lactophrys triqueter</i>	4	0.11	0.02
82	<i>Coryphaenidae</i>	3	14.36	0.01
83	<i>Pristipomoides macrophthalmus</i>	3	0.00	0.01
84	<i>Haemulon chrysargereus</i>	3	0.70	0.01
85	<i>Bodianus rufus</i>	3	0.00	0.01
86	<i>Malacanthus plumieri</i>	2	0.00	0.01
87	<i>Anisotremus surinamensis</i>	2	1.48	0.01
88	<i>Mycteroperca tigris</i>	2	5.72	0.01
89	<i>Carcharhinidae</i>	1	0.00	0.00
90	<i>Sphyrna lewini</i>	1	0.20	0.00
91	<i>Syngnathidae</i>	1	0.00	0.00
92	<i>Epinephelus afer</i>	1	0.00	0.00
93	<i>Epinephelus itajara</i>	1	7.63	0.00

\* Species rank according to total number of individual measured..

\*\* Percentage of total individuals measured.



TABLE 8B. SUMMARY OF BIOSTATISTICS DATA (COMPLETE AND INCOMPLETE SAMPLES) IN PUERTO RICO DURING JANUARY - DECEMBER 2002. Continued.

RANK*	SPECIES	NUMBER MEASURED	WEIGHT (KILOGRAMS)	% **
94	<i>Epinephelus morio</i>	1	2.22	0.00
95	<i>Trachinotus goodei</i>	1	0.88	0.00
96	<i>Lutjanus cyanopterus</i>	1	0.36	0.00
97	<i>Archosargus rhomboidalis</i>	1	0.00	0.00
98	<i>Acanthuridae</i>	1	0.24	0.00
99	<i>Scombridae</i>	1	1.46	0.00
100	<i>Poecilia reticulata</i>	1	0.41	0.00
101	<i>Pomacanthus arcuatus</i>	1	0.00	0.00
102	<i>Sparisoma aurofrenatum</i>	1	0.00	0.00
103	<i>Mycteroperca bonaci</i>	1	0.00	0.00
104	<i>Mycteroperca interstitialis</i>	1	0.00	0.00
				0.00
				0.00
	TOTAL	21,758.00	4,856.24	100.00

\* Species rank according to total number of individual measured..

\*\* Percentage of total individuals measured.

TABLE 8C. SUMMARY OF BIOSTATISTICS DATA (COMPLETE AND INCOMPLETE SAMPLES) IN PUERTO RICO DURING JANUARY - DECEMBER 2003.

RANK*	SPECIES	NUMBER MEASURED	WEIGHT (KILOGRAMS)	% **
1	<i>Ocyurus chrysurus</i>	5,349	1,672.28	25.98
2	<i>Lutjanus vivanus</i>	1,954	56.92	9.49
3	<i>Panulirus argus</i>	1,779	333.49	8.64
4	<i>Haemulon plumieri</i>	1,499	166.98	7.28
5	<i>Lutjanus synagris</i>	1,003	227.33	4.87
6	<i>Epinephelus guttatus</i>	1,002	290.49	4.87
7	<i>Sparisoma chrysopterum</i>	760	108.01	3.69
8	<i>Sparisoma viride</i>	611	68.64	2.97
9	<i>Lutjanus analis</i>	589	195.67	2.86
10	<i>Calamus pennatula</i>	496	11.77	2.41
11	<i>Caranx ruber</i>	475	87.83	2.31
12	<i>Scomberomorus cavalla</i>	464	91.03	2.25
13	<i>Cephalofolis fulvus</i>	352	41.98	1.71
14	<i>Coryphaena hippurus</i>	326	52.09	1.58
15	<i>Haemulon sciurus</i>	323	23.53	1.57
16	<i>Etelis oculatus</i>	297	0.00	1.44
17	<i>Balistes vetula</i>	240	62.74	1.17
18	<i>Scomberomorus regalis</i>	202	45.21	0.98
19	<i>Lachnolaimus maximus</i>	196	155.09	0.95
20	<i>Rhomboplites aurorubens</i>	175	4.57	0.85
21	<i>Thunnus atlanticus</i>	143	0.00	0.69
22	<i>Calamus bajonado</i>	138	10.96	0.67
23	<i>Lutjanus apodus</i>	128	48.34	0.62
24	<i>Lutjanus buccanella</i>	115	0.61	0.56
25	<i>Pseudupeneus maculatus</i>	108	11.82	0.52
26	<i>Caranx latus</i>	100	16.16	0.49
27	<i>Sparidae</i>	94	29.07	0.46
28	<i>Holocentridae</i>	88	19.18	0.43
29	<i>Acanthostracion polygonius</i>	87	17.56	0.42
30	<i>Euthynnus pelamis</i>	83	0.00	0.40
31	<i>Scaridae</i>	77	22.83	0.37
32	<i>Thunnus albacares</i>	69	0.00	0.34
33	<i>Scarus vetula</i>	67	18.38	0.33
34	<i>Centropomus undecimalis</i>	63	6.51	0.31
35	<i>Selar crumenophthalmus</i>	61	0.00	0.30
36	<i>Lutjanus jocu</i>	60	4.35	0.29
37	<i>Odontoscion dentex</i>	60	0.00	0.29
38	<i>Haemulon flavolineatum</i>	57	3.18	0.28
39	<i>Anisotremus virginicus</i>	52	5.30	0.25
40	<i>Euthynnus alletteratus</i>	49	3.46	0.24
41	<i>Acanthostracion quadricornis</i>	47	3.75	0.23
42	<i>Lutjanus mahogoni</i>	40	17.11	0.19
43	<i>Acanthocybium solanderi</i>	40	0.00	0.19
44	<i>Clupeidae</i>	39	10.80	0.19
46	<i>Harengula jaguana</i>	33	0.00	0.16
47	<i>Scarus taeniopterus</i>	33	1.99	0.16

\* Species rank according to total number of individual measured..

\*\* Percentage of total individuals measured.

TABLE 8C. SUMMARY OF BIOSTATISTICS DATA (COMPLETE AND INCOMPLETE SAMPLES) IN PUERTO RICO DURING JANUARY - DECEMBER 2003. Continued.

RANK*	SPECIES	NUMBER MEASURED	WEIGHT (KILOGRAMS)	% **
48	<i>Caranx bartholomaei</i>	32	0.60	0.16
49	<i>Scyllarides aequinoctialis</i>	31	2.92	0.15
50	<i>Trachinotus falcatus</i>	29	0.00	0.14
51	<i>Mulloidichthys martinicus</i>	28	3.09	0.14
52	<i>Holocanthus ciliaris</i>	28	8.40	0.14
53	<i>Caranx crysos</i>	27	13.06	0.13
54	<i>Holocentrus</i>	26	3.64	0.13
55	<i>Haemulon parra</i>	25	1.42	0.12
56	<i>Sparisoma rubripinne</i>	24	0.64	0.12
57	<i>Lactophrys bicaudalis</i>	23	3.53	0.11
58	<i>Gerres cinereus</i>	22	1.17	0.11
59	<i>Epinephelus cruentatus</i>	21	1.51	0.10
60	<i>Archosargus rhomboidalis</i>	20	1.94	0.10
61	<i>Lutjanidae</i>	15	4.31	0.07
62	<i>Acanthurus bahianus</i>	15	4.08	0.07
63	<i>Trichjurus lepturus</i>	15	0.00	0.07
64	<i>Micropogonias furnieri</i>	14	1.78	0.07
65	<i>Lactophrys triqueter</i>	13	1.10	0.06
66	<i>Carcharhinidae</i>	12	16.87	0.06
67	<i>Epinephelus adscensionis</i>	10	14.03	0.05
68	<i>Pristipomoides macrophthalmus</i>	10	0.00	0.05
69	<i>Malacanthus plumieri</i>	9	1.21	0.04
70	<i>Haemulon album</i>	9	3.39	0.04
71	<i>Sparisoma aurofrenatum</i>	8	1.38	0.04
72	<i>Mycteroperca bonaci</i>	8	9.16	0.04
73	<i>Serranidae</i>	7	0.00	0.03
74	<i>Haemulon carbonarium</i>	7	0.00	0.03
75	<i>Ostraciidae</i>	6	2.45	0.03
76	<i>Scarus guacamaia</i>	5	6.77	0.02
77	<i>Mycteroperca tigris</i>	5	0.00	0.02
78	<i>Epinephelus afer</i>	4	0.00	0.02
79	<i>Lutjanus griseus</i>	4	0.73	0.02
80	<i>Anisotremus surinamensis</i>	4	0.55	0.02
81	<i>Mugil curema</i>	4	1.40	0.02
82	<i>Syngnathidae</i>	3	0.89	0.01
83	<i>Epinephelus itajara</i>	3	5.10	0.01
84	<i>Epinephelus morio</i>	3	0.00	0.01
85	<i>Epinephelus striatus</i>	3	9.79	0.01
86	<i>Priacanthidae</i>	3	0.00	0.01
87	<i>Scombridae</i>	3	4.08	0.01
88	<i>Pomacanthus paru</i>	3	1.30	0.01
89	<i>Mycteroperca venenosa</i>	2	0.00	0.01
90	<i>Elagatis bipinnulatus</i>	2	0.00	0.01
91	<i>Lutjanus cyanopterus</i>	2	0.24	0.01
92	<i>Gerreidae</i>	2	0.32	0.01
93	<i>Bodianus rufus</i>	2	1.10	0.01

\* Species rank according to total number of individual measured..

\*\* Percentage of total individuals measured.

TABLE 8C. SUMMARY OF BIOSTATISTICS DATA (COMPLETE AND INCOMPLETE SAMPLES) IN PUERTO RICO DURING JANUARY - DECEMBER 2003. Continued.

RANK*	SPECIES	NUMBER MEASURED	WEIGHT (KILOGRAMS)	% **
94	<i>Sphyraenidae</i>	2	0.00	0.01
95	<i>Megalops atlantica</i>	1	0.00	0.00
96	<i>Centropomidae</i>	1	0.37	0.00
97	<i>Epinephelus mystacinus</i>	1	0.00	0.00
98	<i>Vomer setapinnis</i>	1	0.16	0.00
99	<i>Haemulon chrysargereus</i>	1	0.00	0.00
100	<i>Equetus punctatus</i>	1	0.22	0.00
101	<i>Sphyraema picudilla</i>	1	0.00	0.00
102	<i>Balistidae</i>	1	0.39	0.00
103	<i>Canthidermis sufflamen</i>	1	0.29	0.00
104	<i>Poecilia reticulata</i>	1	0.00	0.00
105	<i>Caranx hippos</i>	1	0.00	0.00
106	<i>Mycteroperca interstitialis</i>	1	0.00	0.00
	TOTAL	20,588	4,082	100

\* Species rank according to total number of individual measured..

\*\* Percentage of total individuals measured.

**TABLE 9. BIOSTATISTICS DATA - CATCH PER UNIT EFFORT (CPUE) AND MEAN LANDINGS PER TRIP FOR THE MOST SAMPLED GEARS IN PUERTO RICO DURING 2001-2003.**

2001

Gear	n	Mean CPUE (Pounds)	Effort Unit	Standard Deviation	Mean Gear Amount	Mean Unit of Time	Mean Landings per Trip	Standard Deviation
Beach Seine	26	0.27	Fathoms/Hour	0.38	178	3	147	123
Fish Trap	51	0.31	Trap/Day	0.56	35	6	62	55
Gill Net	9	0.12	Fathoms/Hour	0.26	147	6	106	95
Bottom Line	106	1.71	Hook/Hour	2.14	6	8	77	102
Troll Line	31	7.22	Hook/Hour	4.12	3	8	136	114
SCUBA Divers	107	8.76	Diver/Hour	3.22	1	4	48	40
Trammel Net	63	0.01	Fathoms/Hour	0.25	1834	6	107	68

2002

Gear	n	Mean CPUE (Pounds)	Effort Unit	Standard Deviation	Mean Gear Amount	Mean Unit of Time	Mean Landings per Trip	Standard Deviation
Beach Seine	27	0.14	Fathoms/Hour	0.62	185	5	130	91
Fish Trap	45	0.41	Trap/Day	0.82	40	5	80	69
Gill Net	6	0.02	Fathoms/Hour	0.22	624	5	65	43
Bottom Line	37	1.65	Hook/Hour	2.3	6	9	82	82
Troll Line	26	7.79	Hook/Hour	2.8	2	9	135	118
SCUBA Divers	84	8.19	Diver/Hour	3.11	1	4	40	22
Trammel Net	61	0.01	Fathoms/Hour	0.42	2786	8	118	87

2003

Gear	n	Mean CPUE (Pounds)	Effort Unit	Standard Deviation	Mean Gear Amount	Mean Unit of Time	Mean Landings per Trip	Standard Deviation
Beach Seine	23	0.14	Fathoms/Hour	0.56	242	5	196	189
Fish Trap	48	0.36	Trap/Day	0.82	33	5	58	52
Gill Net	10	0.03	Fathoms/Hour	0.34	310	7	56	22
Bottom Line	153	1.54	Hook/Hour	2.01	5	9	70	73
Troll Line	33	9.27	Hook/Hour	12.15	2	9	164	139
SCUBA Divers	104	8.49	Diver/Hour	2.62	1	4	45	23
Trammel Net	50	0.01	Fathoms/Hour	0.03	2873	7	99	68



Gobierno de Puerto Rico  
 DEPARTAMENTO DE RECURSOS NATURALES Y AMBIENTALES  
 Laboratorio de Investigaciones Pesqueras  
 P.O. Box 3665 Mayagüez, P.R. 00681  
 Tel. 833-2025



Fecha del desembarco \_\_\_\_ / \_\_\_\_ / \_\_\_\_  
 Mes Día Año

Pueblo \_\_\_\_\_  
 Centro de desembarco \_\_\_\_\_ Uso Oficial \_\_\_\_\_  
 Número de salidas \_\_\_\_\_ Número de horas pescando \_\_\_\_\_  
 Nombre del pescador \_\_\_\_\_  
 Número licencia del pescador \_\_\_\_\_  
 Nombre de proel 1 \_\_\_\_\_  
 Número de licencia del proel 1 \_\_\_\_\_  
 Nombre de proel 2 \_\_\_\_\_  
 Número licencia del proel 2 \_\_\_\_\_  
 Profundidad máxima en brazas \_\_\_\_\_ Profundidad mínima en brazas \_\_\_\_\_  
 Nombre del área donde capturó la pesca \_\_\_\_\_  
 Pesca capturada a una distancia de la costa:  
 Mayor de 10 millas \_\_\_\_\_ Menor de 10 millas \_\_\_\_\_

CLASE DE PESCAO	ESPECIE	PRECIO POR LIBRA	ARTE	CANTIDAD O TAMAÑO DE ARTE
(226) ATUN ALETA AMARILLA				
(219) BONITO				
(230) VACA				
(227) ALBACORA				
(225) ATUNES				
(053) BALAJU				
(155) BOQUICOLORADO				
(189) CAPITAN				
(256) CHIAPINES				
(127) DORADO				
(064) GALLOS				
(199) JAREA				
(115) COHINA				

LISTA DE PESCAO Y MARISCO CONTINUA AL REVERSO DE ESTA HOJA

Figure 2. Landings data Collection ticket.

CLASE DE PESCADO	PESO	PRECIO POR LIBRA	ARTE	CANTIDAD O TAMAÑO DE ARTE
(146) GUAYMEH AMARILLO				
(118) JURÉL OJON				
(109) JURÉLES				
(192) LOROS				
(088) CABRILLA				
(049) CHIENA				
(091) GUAHL				
(086) GUASA				
(080) MANTEQUILLA				
(079) MEROS				
(147) MOJARRAS				
(136) ARRAYADO				
(142) BESUGO				
(143) CARRUCCIO				
(140) COLIRRUBIA				
(139) CHILLO				
(144) ATUNIAMA DE ATUERA				
(138) NEGRA O ALINEGRA				
(134) SANA				
(120) PARGOS				
(251) PEJE PUERCO				
(202) PICUAS				
(164) PLUMAS				
(075) ROVALOS				
(170) SALMONETE AMARILLO				
(175) SALMONETE COLORADO				
(076) SARDINAS				
(234) SIERRA ALASANA				
(233) SIERRA CARITE				
(008) TIBURONES				
CLASE DE MARISCO	PESO	PRECIO POR LIBRA	ARTE	CANTIDAD O TAMAÑO DE ARTE
(906) LANGREJOS MARINOS				
(900) CARRUCIO				
(904) JUEY DE TIERRA				
(901) LANGOSTA				
(903) OSTION				
(902) PULPO				
(905) OTROS MARISCOS				

Figure 2. Landings data Collection ticket. Continued.



Figure 3. Biostatistical Data Collection Sheet

# PUERTO RICO FSP BIOSTATISTICS DATA SHEET

Fishermen or Business name

Interview Number (Sequence)

Fishing Center

Landing Type

Gear Code

Total Effort

Date  
 month  day  year

Port Agent Initials

Fishing Location  
 Latitude   
 Longitude

Distant from shore

Total Weight (pounds)

Gear Code	Gear Amount	Length (Fathoms)	# of Sets	Mesh Size (Inches)	Soak Time	Fishing Time (Hours)	Max Depth (Fathoms)	Min Depth (Fathoms)	Effort Unit
100									
101									Fathom/Hour
102									Trap/Day
103									Trap/Day
104									Fathom/Hour
105									Hook/Hour
107									Hook/Hour
109									Hook/Hour
112									Fathom/Hour
114									Hook/Hour
116									Diver/Hour
118									Diver/Hour
									Fathom/Hour

