

A REVIEW OF TAG RELEASE AND RECAPTURE FILES FOR ISTIOPHORIDAE
FROM THE SOUTHEAST FISHERIES CENTER'S COOPERATIVE GAME FISH
TAGGING PROGRAM, 1954 TO PRESENT

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ABSTRACT

Tag release and recapture files for blue marlin (*Makaira nigricans*), white marlin (*Tetrapturus albidus*), and sailfish (*Istiophorus platypterus*) from the Southeast Fisheries Center's Cooperative Game Fish Tagging Program are reviewed and updated for the period 1954 to 1992 (June). General movement patterns (including transatlantic and transequatorial movements), maximum days at large, and minimum distances traveled are presented for each species and an evaluation of the data base for deficient information (i.e. size at release and recapture) is reviewed.

RESUME

Les fichiers de marquage et de recapture de makaire bleu (*Makaira nigricans*), de makaire blanc (*Tetrapturus albidus*) et de voilier (*Istiophorus platypterus*) du "Cooperative Game Fish Tagging Program" du "Southeast Fisheries Center" sont examinés et mis à jour pour la période 1954 à 1992 (juin). Les modes généraux de déplacement (y compris les déplacements transatlantiques et trans-équatoriaux), le nombre maximum de jours de liberté, et la distance minimum parcourue sont présentés pour chaque espèce, ainsi qu'une évaluation de la base de données pour détecter l'information déficiente (c'est-à-dire la taille au marquage et à la recapture).

RESUMEN

Se examinan y actualizan, para el período 1954-1992 (junio), los archivos de marcado y recaptura de aguja azul (*Makaira nigricans*), aguja blanca (*Tetrapturus albidus*) y pez vela (*Istiophorus platypterus*), del "Cooperative Game Fish Tagging Program" del "Southeast Fisheries Center". Se presentan, para cada especie, las pautas generales de movimiento (incluyendo los desplazamientos transatlánticos y transequatoriales), máximo de días en libertad y distancias mínimas recorridas, y una evaluación de la base de datos respecto a información deficiente (es decir, talla en el momento de la liberación y de la recaptura).

1. INTRODUCTION

The Cooperative Game Fish Tagging Program (CGFTP) was first initiated by Frank J. Mather III of Woods Hole Oceanographic Institute (WHOI) in 1954. At that time, the primary species of interest was bluefin tuna (*Thunnus thynnus*) but soon expanded to cover the billfishes (Istiophoridae) and other large pelagic species. The National Marine Fisheries Service (NMFS) and WHOI combined their efforts to operate the program from 1973 through 1980. After Frank Mather's retirement in 1980, the NMFS Southeast Fisheries Center's (SEFC) Miami Laboratory assumed sole responsibility for funding and operation of the program.

More than 16,000 anglers, charter boat captains, and commercial fishermen have participated in the CGFTP since 1954. The number of participants has grown every year and at present over 3,000 persons

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are listed as active cooperators, including individuals from Canada, Mexico, South America, western Africa, Europe, numerous Caribbean Island countries, as well as the USA.

The objectives of this report are to summarize the CGFTP tag release and recapture files for blue marlin (*Makaira nigricans*), white marlin (*Tetrapturus albidus*), and sailfish (*Istiophorus platypterus*) from 1954 to present in order to: (1) Describe the general movement patterns, including transatlantic or transequatorial movements, maximum days at large, and minimum distance traveled; and (2) Evaluate the tag release and recapture data base for deficient information that may effect the usefulness of these data for stock assessments, such as size at release and recapture or other data which are either inaccurate or omitted from the files.

2. METHODS

The CGFTP program materials are described by Scott et al. (1990) and have remained relatively consistent throughout the years of operation. The tag type (stainless steel dart, made by Floy Tag and Manufacturing, Inc., item number FH-69), distribution policy, and tagging procedures used for istiophorids in the CGFTP were generally adopted by the International Commission for the Conservation of Atlantic Tunas (ICCAT) in 1987 when a billfish tagging program was developed as part of the Enhanced Research Program for Billfish (Miyake 1990). The CGFTP is operated independently from the ICCAT billfish tagging program, although they are intended to operate in a parallel fashion. The CGFTP also provides ICCAT with names of participants for ICCAT tag return lotteries.

The policies for distribution of tagging materials are summarized by Scott et al. (1990) and Witzell and Scott (1990). When the release information is received by the CGFTP, the data are coded and entered into the mainframe database. Locations reported in Loran-C are converted to degrees and minutes of latitude and longitude by use of a spherical geometry algorithm developed by Shudde (1984)². Locations given more imprecisely, such as by name or a distance offshore, are assigned generic locations (i.e. latitude and longitude within about 1 degree) based on the general area, type of fishery, and other information included in the release/recapture record. Locations given in degrees and minutes of latitude and longitude are entered as reported.

All lengths and weights are entered into the CGFTP database as estimated unless otherwise indicated on the release report form. Weights are usually assumed to be round weight unless reported otherwise. The policy of the CGFTP has been to assume all lengths are estimated or measured total length (TL) unless another length type was specified.

After all locations for release and recapture files were in latitude and longitude format, minimum distance traveled was determined for each set of release/recapture coordinates. Initially, simple geometry was used to assign approximate distances for the whole set of billfish recaptures in order to rank the movements. The ten longest movements for each species were then calculated more precisely using the algorithm of Shudde (1984). Illustrations using lines to connect points of release and recapture were done for diagrammatic purposes only and are not meant to illustrate routes of travel; the direction of each movement is indicated by an arrow. In addition, some arbitrary adjustments were made in some movement calculations to avoid crossing land.

All lengths were converted to lower-jaw-to-fork length (LJFL) in inches to establish a standard unit of measurement. Total length (TL) was converted to LJFL using the regression equations for females of each species given in Lee and Prince (1990). Weights were similarly converted to round weight in pounds using: round weight = dressed weight * 1.33 (Anonymous 1989). Where a length or weight was not available, the missing value was calculated from the appropriate weight or length formula given in Prager et al. (1992). This was done when a measure or estimate of size (either length or weight but not both) was reported for a particular record.

² Programmed in Microsoft Quickbasic by C. P. Goodyear, Fisheries Scientist, National Marine Fisheries Service, Southeast Fisheries Science Center, 75 Virginia Beach Dr., Miami, Florida, 33149 (pers. comm.).

3. RESULTS AND DISCUSSION

3.1 Blue Marlin

A total of 15,009 blue marlin have been tagged and released since 1954 and 68 (0.50 %) have been recaptured (Fig. 1 A and B). The extremely low recapture rate for Atlantic blue marlin is the lowest recapture rate for any of the target species in the CGFTP, and this trend has been consistent throughout the historical time series. A substantial increase in blue marlin tag releases and recaptures has occurred from the mid-1980's to the present compared to earlier years (Fig. 1 A and B). Historical highs for blue marlin releases and recaptures occurred in 1990 and 1991, respectively (Fig. 1 B), and these trends may be related to the overall increase in the release aspect of the recreational fisheries for billfish (Prince et al. 1990), or increases in the mortality from the commercial fisheries. In addition, the formation of the ICCAT Enhanced Research Program for billfish in 1987 appears to have had the effect of increasing the numbers of recaptures, particularly from Venezuela and the Leeward islands where ICCAT samplers publicize the program (in the native language) and offer immediate rewards for tag-recaptured billfish as soon as they are brought to the dock (Fig. 2). Release and recapture information for the 68 tag-recaptured blue marlin are given in Appendix 1--recaptures that had no release data are not listed for any of the species.

Movement. The ten longest movements (minimum distance traveled) for tag-recaptured blue marlin are illustrated in Figure 3; the detailed release and recapture data for these 10 movements are given in Table 1. The longest minimum distance traveled by a recaptured blue marlin is about 3,815 nautical miles; this specimen was at large for 153 days. The longest time at large for a tag-recaptured blue marlin was 2,906 days (8 years). Transatlantic movements occurred for six blue marlin and the direction of movement in each instance was from west to east (Fig. 3). One of the recaptures was within 100 nautical miles of the equator, but no transequatorial movements have been observed. Therefore, these movement patterns support the hypothesis of one single north Atlantic stock. However, they do not preclude the possibility that there is interchange between the north and south Atlantic, nor does it provide insight into how extensive this interchange might be, if it does occur.

Seasonality. In general, there is a north and south movement pattern for blue marlin that appears to be related to changes in seasonal weather patterns. In the winter months when water temperatures are lowest, blue marlin apparently stay primarily within the confines of the Caribbean sea and tropical Atlantic. During summer periods, the distribution of blue marlin expands to more northerly latitudes as water temperatures increase. This general movement pattern has been described by others (Witzell and Scott 1990; Mather et al. 1972; Mather et al. 1974a; and Mather et al. 1974b) and is also supported, in part, by some of the data we provide in this report. For example, many of the movements illustrated in Figure 3 and detailed in Table 1 support this general north/south seasonality. However, it should be noted that the objectives of the tagging program were not necessarily designed to provide rigorous answers to questions concerning seasonal movements.

3.2 White Marlin

A total of 24,690 white marlin have been tagged and released since 1954 and 377 (1.5%) have been recaptured (Fig. 4 A and B). The 1.5% recapture rate for white marlin is the highest recapture rate among istiophorids in the CGFTP but is still low compared to other target species (Scott et al. 1990). A substantial increase in white marlin tag releases and recaptures has occurred since the start of the program (Fig. 4 A and B), with a peak of activity in the early 1970's (1969 for releases, 1971 for recaptures), followed by another peak in activity in the most recent years. Release and recapture information for the 377 tag-recaptured white marlin is given in Appendix 2.

Movement. The ten longest movements (minimum distance traveled) for tag-recaptured white marlin are illustrated in Figure 5; the detailed release and recapture data are given in Table 2. The longest distance traveled by a recaptured white marlin is about 1,895 nautical miles; this specimen was at large for 516 days. The longest time at large for a tagged white marlin is 4,305 days (11.8 years). Transatlantic movements were not observed for white marlin. Although one movement was within about 50 miles of the equator (movement number 5), transequatorial movements were not observed. All ten movements illustrated in Figure 5 were in a southerly or southeasterly direction. These movement patterns tend to

support the hypothesis of a western north Atlantic stock but these data do not provide insight into a possible single north Atlantic stock or on information about the interchange in the south Atlantic, if it exists.

Seasonality. In general, there is a north and south movement pattern for white marlin (similar to that discussed for blue marlin) which appears to be related to changes in seasonal weather patterns. This seasonality has been described in numerous other reports (Mather et al. 1972; Mather et al. 1974a; Mather et al. 1974b) and is also supported by the data illustrated in Figure 5 and described in Table 2. For example, of the 10 longest movements reported in Figure 5, 8 were originally tagged in temperate waters in the summer and were recaptured in more tropical waters in the winter.

3.3 Sailfish

A total of 52,503 sailfish have been tagged and released since 1954 and 709 (1.4%) have been recaptured (Fig. 6 A and B). Sailfish have the second highest recapture rate of istiophorids in the CGFTP. Low recapture rates for istiophorids have been reported in other tagging programs and are consistently below 2% (Squire 1974; Pepperell 1990). A substantial increase in sailfish tag releases and recaptures has occurred from the start of the program with historical highs occurring in 1990 and 1991, respectively (Fig. 6 A and B). Release and recapture information for the 709 tag-recaptured sailfish are given in Appendix 2.

Movement. The ten longest movements (minimum distance traveled) for tag-recaptured sailfish are illustrated in Figure 7; the detailed release and recapture data for these 10 movements are given in Table 3. The longest minimum distance traveled by a recaptured sailfish is about 1,895 nautical miles; this specimen was at large for 501 days. The longest time at large for tag-recaptured sailfish is 3,977 days (10.9 years). The extensive offshore movements illustrated in Figure 7 suggest that sailfish have more of an oceanic existence than was previously reported (Mather et al. 1974b). This point is well illustrated by movement number 3, which involved a minimum distance of about 1,605 nautical miles from Juno, Florida, to the mid-Atlantic (Fig. 7). No transatlantic or transequatorial movements for sailfish have been observed. The majority of movements are in a southerly direction, except for two examples which are in a northwesterly direction, and one movement going due east. These movement patterns tend to support the hypothesis of a western north Atlantic stock for sailfish, although these data do not provide insight into a possible single north Atlantic stock or information about interchange in the south Atlantic.

Seasonality. There appears to be a north-south movement pattern for sailfish which is similar to the seasonality described for the marlins (Mather et al. 1974c). However, the seasonal expansion of sailfish distributions don't appear to extend as far north as the marlins and the movement patterns illustrated in Figure 7 support this trend.

4. DATA DEFICIENCIES

One of the most frequently recognized problems in the CGFTP has been obtaining reliable measures or estimates of the size of fish at release (Scott et al. 1990). Since most billfish tagging in the CGFTP is done by recreational anglers on a volunteer basis, measurements of size for tag-released billfish are normally not possible. Large billfish can be dangerous when brought alongside the boat and, as a consequence, most participants in the CGFTP only attempt to make an estimate of the size at release. Errors in estimates of size at release (particularly over-estimates) are most easily observed in the data base when these errors are so extreme that the size of recaptured billfish (which is a measured value in virtually all cases) is smaller than the estimated size at release. This situation results in negative growth for recaptures; the extent of these problems in the data base are given in Table 4. We regard this as a minimum error, since it refers only to negative size changes; less severe errors in overestimating size at release undoubtedly occur, but are not reflected in this analysis because they do not result in negative growth. Of the blue marlin recaptures that had size information available at release and recapture (66), 43.9% of these had negative growth in length (Table 4). Likewise, 42.3% of white marlin recaptures and 31.2% of sailfish recaptures showed negative growth in length. The proportions of negative growth in weight were slightly lower compared to length; 39.4% of the blue marlin, 38.3% of the white marlin, and 29.9% of the sailfish showed negative growth (Table 4). These results suggest that (1) the probability for

over-estimating the size of billfish at release increases as the size of fish increases, and (2) anglers are slightly better at estimating weight compared to length.

Another major deficiency in the data base is the low tag-recapture rate, which for billfishes has averaged less than 2% in the CGFTP since 1954. This problem has consistently hindered the quality and quantity of useful information that can be derived from the program. Perhaps at the heart of this problem is the view held by many participants that the CGFTP is a tag and release program--the recapture aspect of the program has been neglected and this is the critical link to fulfilling program objectives. There are numerous factors that potentially contribute to the low recapture rate, including: (1) non-reporting of recaptures, particularly from the offshore longline fleet that catches about 90% of the Atlantic billfish landings (it seems reasonable to assume that this fishery also lands a similar percentage of tagged billfish); (2) shedding of tags; and (3) mortality of billfish as a result of the tagging event. Numerous closely related factors, such as language barriers and inadequate reward incentives, also influence the low recapture rate.

The omission or inaccurate recording of data on the release cards is another problem that limits the usefulness of the data (Fig. 8A). For example, reports on the location of the releases are often so general that making estimates of latitude and longitude are difficult. The type of length estimates in fish tagging reports are frequently left unidentified and non-reporting of releases occurs more often than is desirable. Of the 1,241 recaptured marlins and sailfish reported to the CGFTP, 87 (7%) did not have a fish tagging report card in our records.

4.1 Suggested Improvements

Lucy (1992) presents an approach to resolving the problem of estimating the size of released billfish through use of a video camera. This approach shows promise and maybe practical for certain components of the billfish tagging community, but will probably not be the solution in all cases. We feel that the low recapture rate of tagged billfish can be improved in a number of ways. The ICCAT Enhanced Research Program for Billfish experience in the Caribbean, particularly from Venezuela, Barbados, and Grenada (Fig. 2), suggests that the return rate can be increased by: (1) offering immediate rewards when possible, communicated in the native language, as soon as the fish are brought to the dock; (2) issuing a highly-visible international-orange tag-recapture card (to the commercial as well as the recreational community) that lists all the information needed from the recapture (Fig. 9); (3) printing the recapture cards and reward posters in the native languages of important billfishing nations, particularly Japanese and Chinese to cover the large offshore longline fleet; and (4) publicizing the need for increased efforts on reporting recaptures, particularly in critical geographical areas where returns have been sparse or non-existent. The National Marine Fisheries Service and the Billfish Foundation have been involved in research to develop a biologically-compatible fish tag for billfish which is intended to reduce the short- and long-term shedding rate. Preliminary results of tag performance experiments are not expected until the fall of 1993, at the earliest.

The movement patterns for blue marlin, white marlin, and sailfish shown in figures 3, 5, and 7 clearly indicate that increasing the release and recapture efforts in certain Atlantic locations would provide more comprehensive results. For example, increased tagging and recapture efforts off Brazil might provide a clearer picture of the possible interchange between the north and south Atlantic. Likewise, increasing tag release and recapture efforts along the west coast of Africa could clarify billfish movement patterns in the eastern Atlantic. Since Brazil and the eastern Atlantic are not normally covered by the CGFTP, it seems logical that this effort might be undertaken by ICCAT Billfish tagging program.

Some of the problems associated with omissions or errors in filling out the fish tagging report could be addressed by re-wording or clarifying critical parts of the release card. An example of changes that could be attempted are shown in Figure 8 B. These include framing the sections on tagging location and size to emphasize the critical nature of these parameters and adding less ambiguous language to clarify these and other sections of the card.

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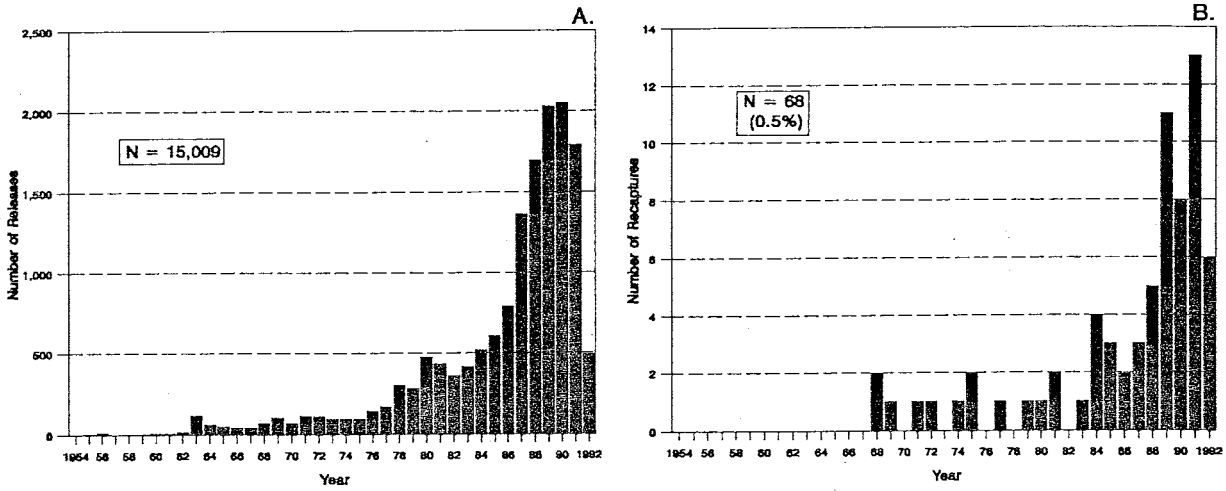


Figure 1. Number of tag-released (A) and tag-recaptured (B) Atlantic blue marlin in the National Marine Fisheries Service's Cooperative Game Fish Tagging Program, 1954 to 1992 (June). Sample sizes (N) are given for (A) and (B), and percent (%) tag recaptures are given for (B).

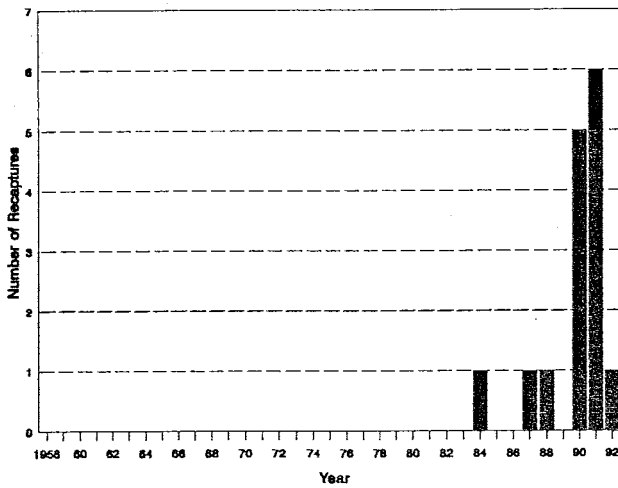


Figure 2.

Number of recaptured Atlantic blue marlin in the National Marine Fisheries Service's Cooperative Game Fish Tagging Program, 1954 to 1992 (June) from Venezuela, Barbados, and Grenada.

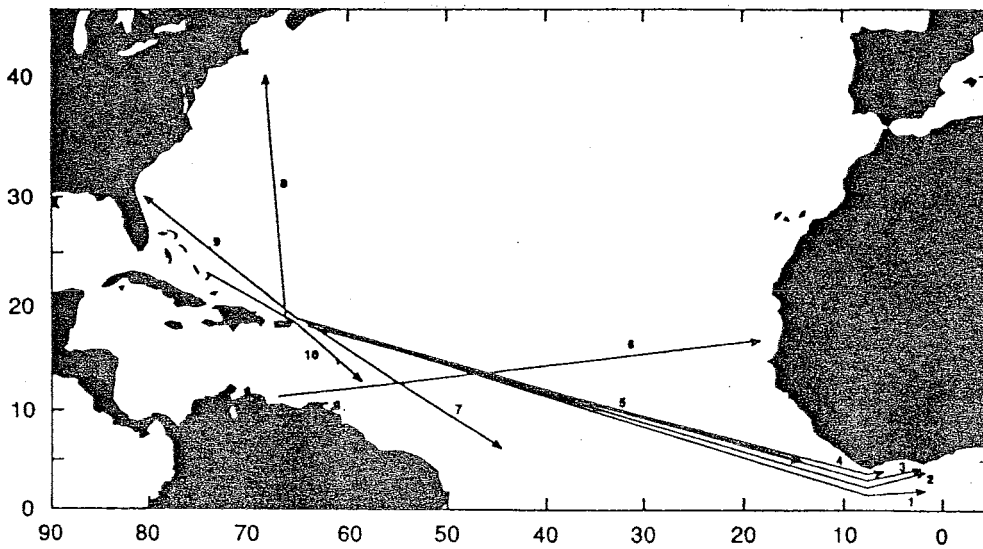


Figure 3.

Ten of the longest movements (minimum distance traveled, see text) for Atlantic blue marlin in the National Marine Fisheries Service's Cooperative Game Fish Tagging Program, 1954 to 1992 (June).

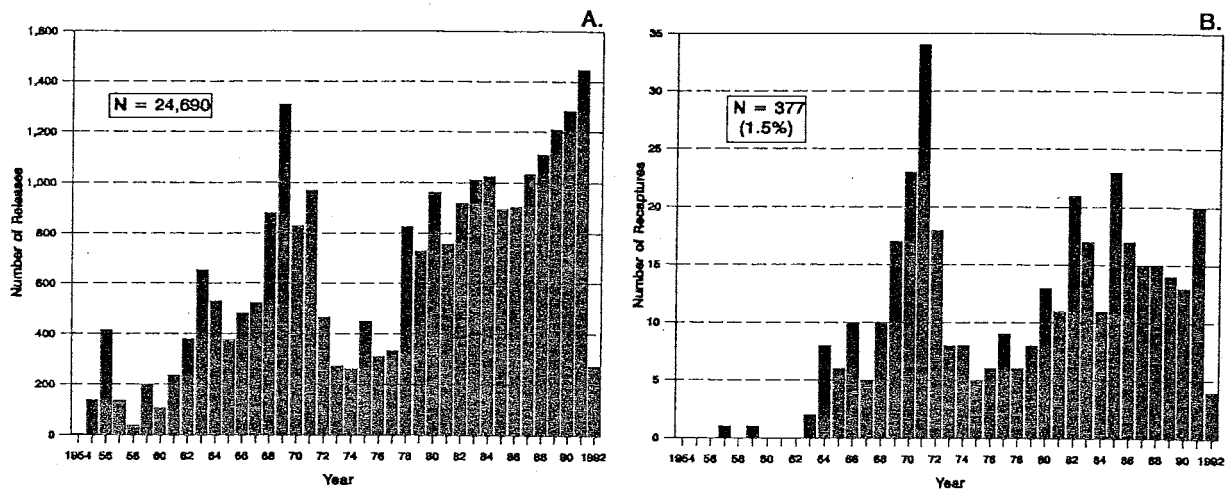


Figure 4. Number of tag-released (A) and tag-recaptured (B) Atlantic white marlin in the National Marine Fisheries Service's Cooperative Game Fish Tagging Program, 1954 to 1992 (June). Sample sizes (N) are given for (A) and (B), and percent (%) tag recaptures are given for (B).

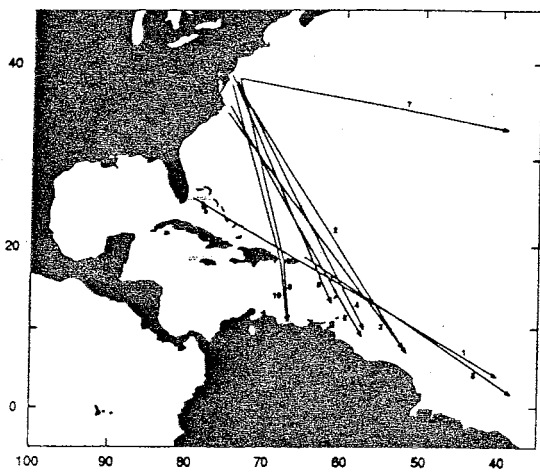


Figure 5.

Ten of the longest movements (minimum distance traveled, see text) for Atlantic white marlin in the National Marine Fisheries Service's Cooperative Game Fish Tagging Program, 1954 to 1992 (June).

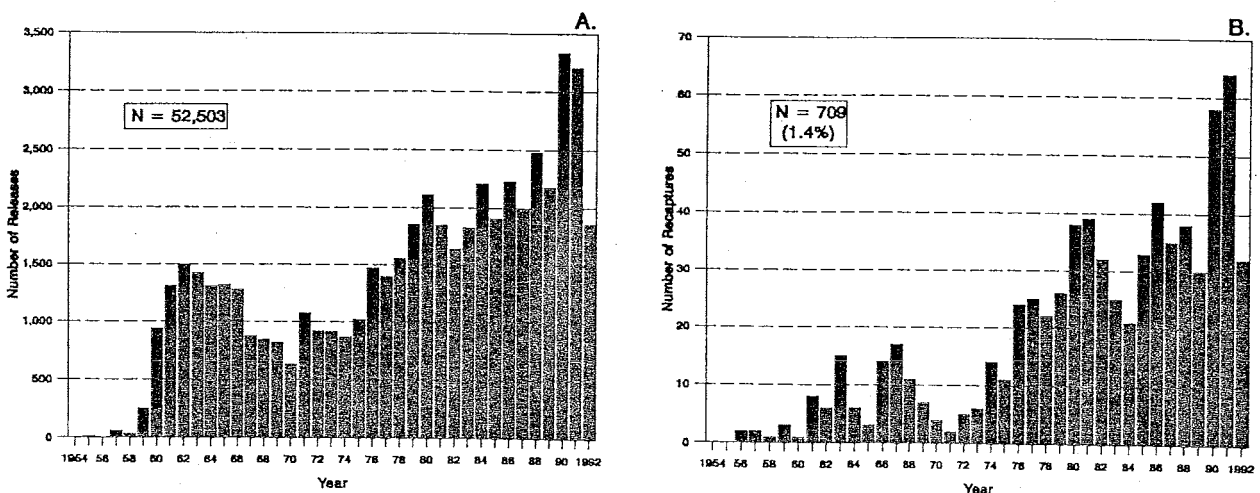


Figure 6. Number of tag-released (A) and tag-recaptured (B) Atlantic sailfish in the National Marine Fisheries Service's Cooperative Game Fish Tagging Program, 1954 to 1992 (June). Sample sizes (N) are given for (A) and (B), and percent (%) tag recaptures are given for (B).

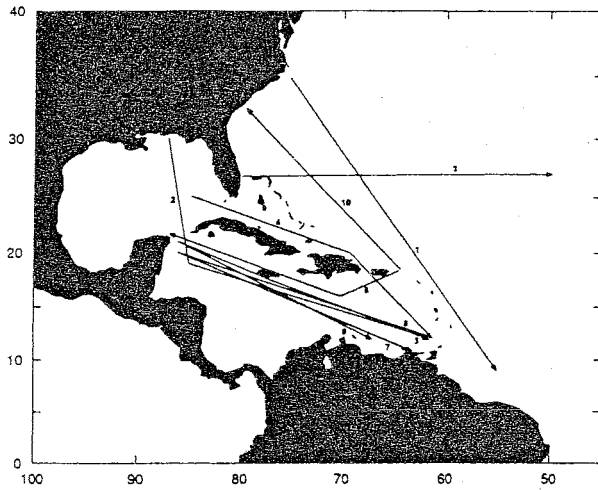


Figure 7.

Ten of the longest movements (minimum distance traveled, see text) for Atlantic sailfish in the National Marine Fisheries Service's Cooperative Game Fish Tagging Program, 1954 to 1992 (June).

A.

| | | | |
|--|-----------|--|--------------|
| NOAA FORM 34-121 (REV. 11/78) U.S. DEPARTMENT OF COMMERCE NOAA-NMFS | | OMB Approved No. 0648-0009 Expires 9-30-99 | |
| FISH TAGGING REPORT (PLEASE PRINT) | | Please complete applicable items and return card today. Otherwise tagging is of no value. | |
| TAGGING DATE | LOCALITY | LENGTH (Est) | TAG NO. R |
| SPECIES | | WEIGHT (Est) | LB |
| ANGLER | | CAPTAIN | |
| ADDRESS | | ADDRESS | |
| CITY-STATE-ZIP | | CITY-STATE-ZIP | |
| REMARKS | | | |
| FISH CONDITION | BAIT TYPE | <input type="checkbox"/> LIVE <input type="checkbox"/> DEAD <input type="checkbox"/> OTHER | |
| SEND MORE TAGS TO | | QUANTITY | CLUB |
| <input type="checkbox"/> CAPTAIN <input type="checkbox"/> ANGLER | | | |
| This Report is authorized by law U.S.C. P.L. 86-359. While you are not required to respond, your cooperation is needed to make the results of this survey comprehensive, accurate, and timely. | | | |

B.

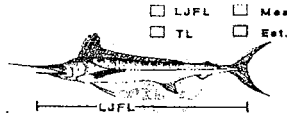
| | | | |
|--|---------------|---|---|
| Fish Tagging Report (PLEASE PRINT) | | NOAA FORM 00-000 F.SEC U.S. DEPARTMENT OF COMMERCE (7-92) OMB Approved No. 0000-0000 NOAA-NMFS | |
| Tagging Date | | Tag No. | |
| Species | | Length (in.) | |
| Tagging Location (Lat. and Long. Preferred) | | <input type="checkbox"/> LJFL <input type="checkbox"/> Mess. <input type="checkbox"/> TL <input type="checkbox"/> Est. | |
| Fish Condition/Remarks | |  | |
| Hooks Removed <input type="checkbox"/> Yes <input type="checkbox"/> No, leader out | Fighting Time | Weight (lbs.) | <input type="checkbox"/> Mess. <input type="checkbox"/> Est. |
| Angler | | Captain | |
| Address | | Address | |
| City/State/Zip | | City/State/Zip | |
| Send more tags to <input type="checkbox"/> Captain <input type="checkbox"/> Angler | | Quantity: | |
| This report is authorized by law U.S.C.P.L. 00-000. While you are not required to respond, your cooperation is needed to make the results of this survey comprehensive, accurate, and timely. Thank you for your contribution. | | | |

Figure 8. Original (A) fish tagging report card for the National Marine Fisheries Service's Cooperative Game Fish Tagging Program, and (B) suggested new fish tagging report.

A.

GMS Approved No. 0648-0259 Expires 09/30/94

TAG RECAPTURE CARD

1. SPECIES: _____
2. TAG NUMBER: _____
3. DATE RECAPTURED: _____
4. LOCATION/COUNTRY RECAPTURED: _____
5. LENGTH (inches/centimeters): _____ (lower jaw fork length)
6. WEIGHT (pounds/kilograms): _____ SEX: Male Female
7. FISHING GEAR: _____
8. NAMES OF BOAT AND CAPTAIN/ANGLER: _____
9. ADDRESS OF (8) ABOVE: _____
10. PHONE OF (8) ABOVE: _____
11. HAS FISH BEEN SAVED (FREEZING) SO IT CAN BE SAMPLED?
YES NO

THERE IS AN EXTRA REWARD FOR A FROZEN FISH. CALL COLLECT
(305) 361-4248 (Daytime)
(305) 598-0944 (Night/Weekends)

- 12. COMMENTS: _____

B.

GMS Approved No. 0648-0259 Expires 09/30/94

INFORMACION SOBRE PECES CAPTURADOS CON MARCAS

1. ESPECIE: _____
2. NUMERO DE LA MARCA: _____
3. FECHA DE RECAPTURA: _____
4. LOCALIDAD/PAIS DE RECAPTURA: _____
5. LONGITUD DEL PES (pulgadas/centimetros): _____ (mandibula inferior-horquilla)
6. PESO (libras/kilogramos): _____ SEXO: Masc. Fem.
7. ARTE DE PESCA: _____
8. NOMBRE DEL CAPITAN/PESCADOR: _____
9. DIRECCION DEL CAPITAN/PESCADOR: _____
10. TELEFONO DEL CAPITAN/PESCADOR: _____
11. HA SIDO EL PES CONGELADO PARA QUE PUEDA SER EXAMINADO?
SI NO

SE PROVEERA RECOMPENSA ADICIONAL POR AQUELLAS ESPECIES QUE HAYAN SIDO CONGELADAS Y PUEDAN EXAMINARSE. FAVOR
COMUNICARSE CON NOSOTROS EN LA CIUDAD DE MIAMI, FLORIDA, ESTADOS UNIDOS DE AMERICA A LOS SIGUIENTES NUMEROS
TELEFONICOS (COBRO REVERTIDO):
(305) 361-4248 (DURANTE EL DIA)
(305) 598-0944 (SABADOS, DOMINGOS Y DIAS FESTIVOS)

- 12. COMENTARIOS ADICIONALES: _____

Figure 9. Tag recapture card for the National Marine Fisheries Service's Cooperative Game Fish Tagging Program. English (A) and Spanish (B) versions are each issued to participants in international orange.

Table 1. Ten (1-10) of the longest movements by tag-recaptured north Atlantic blue marlin reported in the Southeast Fisheries Center's Cooperative Game Fish Tagging Program, 1954 to present.

| Movement Number | RELEASE | | RECAPTURE | | Distance (Naut. Miles) | Time at Large (Days) |
|-----------------|---|-----------|---|-----------|------------------------|----------------------|
| | Location (lat-lon) | Date | Location (lat-lon) | Date | | |
| 1 | St Thomas, U.S. Virgin Islands (18°40'N, 64°50'W) | 29-Sep-83 | off Ghana (1°30'N, 2°22'W) | 29-Feb-84 | 3815 | 153 |
| 2 | St. Thomas | 16-Jul-81 | near Ghana (4°06'N, 2°08'W) | 29-May-89 | 3775 | 2874 |
| 3 | St. Thomas | 14-Sep-89 | near Ghana (4°30'N, 2°30'W) | 27-Dec-89 | 3750 | 104 |
| 4 | U.S. Virgin Islands (18°N, 64°W) | 9-Aug-76 | Abidjan (4°N, 6°10'W) | 12-Feb-77 | 3500 | 187 |
| 5 | St. Thomas | 3-Aug-91 | Sierra Leone (5°N, 14°25'W) | 26-Apr-92 | 3065 | 267 |
| 6 | La Guaira, Venezuela (11°20'N, 66°50'W) | 21-Sep-84 | Mauritania (16°42'N, 18°29'W) | 21-Nov-85 | 2830 | 426 |
| 7 | St. Thomas | 9-Sep-81 | N.E. of Amazon Rive (6°18'N, 44°46'W) | 3-Nov-81 | 1390 | 55 |
| 8 | San Juan, Puerto Rico (18°30'N, 66°10'W) | 4-Sep-90 | S.E. of Nantucket, U.S. East Coast (39°59'N, 68°10'W) | 1-Aug-91 | 1290 | 331 |
| 9 | St. Thomas | 15-Jul-89 | off St. Augustine, Florida (29°55'N, 80°20'W) | 6-Dec-89 | 1080 | 144 |
| 10 | San Salvador, Bahamas (23°N, 74°W) | 20-Jun-83 | E. of Barbados (13°N, 58°50'W) | 30-Apr-84 | 1050 | 315 |

Table 2. Ten (1-10) of the longest movements by tag-recaptured north Atlantic white marlin reported in the Southeast Fisheries Center's Cooperative Game Fish Tagging Program, 1954 to present.

| Movement Number | RELEASE | | RECAPTURE | | Distance (Naut. Miles) | Time at Large (Days) |
|-----------------|---|-----------|---|-----------|------------------------|----------------------|
| | Location (lat-lon) | Date | Location (lat-lon) | Date | | |
| 1 | Miami, Florida (25°40'N, 79°20'W) | 23-Apr-69 | E.N.E of Amazon River (3°57'N, 40°20'W) | 21-Sep-70 | 2595 | 516 |
| 2 | off New Jersey (38°N, 74°W) | 31-Aug-64 | N.E. of Surinam (7°25'N, 52°20'W) | 15-Feb-67 | 2175 | 898 |
| 3 | Hatteras, North Carolina (35°N, 75°W) | 9-Aug-70 | N.E. French Guiana (7°N, 52°W) | 15-Jul-75 | 2100 | 1801 |
| 4 | E. of Maryland (38°10'N, 73°50'W) | 15-Aug-68 | E. of Trinidad (10°02'N, 57°22') | 13-Feb-69 | 1905 | 182 |
| 5 | St. Thomas U.S. Virgin Islands (18°40'N, 64°50'W) | 18-Aug-89 | N. of Fortaleza, Brazil (1°43'N, 38°30'W) | 1-Dec-89 | 1850 | 105 |
| 6 | Virginia Beach, Virginia (35°40'N, 74°40'W) | 3-Jul-71 | E. of Trinidad (9°03'N, 57°37'W) | 7-Jan-72 | 1845 | 188 |
| 7 | E. of Maryland (38°30'N, 73°30'W) | 13-Sep-66 | mid-Atlantic (33°15'N, 39°21') | 22-Oct-68 | 1685 | 770 |
| 8 | E. of Maryland (38°30'N, 73°30'W) | 28-Jul-73 | La Guaira, Venezuela (11°N, 66°50'W) | 27-Oct-74 | 1685 | 456 |
| 9 | E. of Delaware (38°50'N, 74°30'W) | 8-Aug-63 | St. Vincent (13°15'N, 61°30') | 10-Dec-63 | 1680 | 124 |
| 10 | E. of Virginia (37°50'N, 74°30'W) | 27-Jul-66 | La Guaira, Venezuela (10°55'N, 67°W) | 2-Jan-67 | 1660 | 159 |

Table 3. Ten (1-10) of the longest movements by tag-recaptured north Atlantic sailfish reported in the Southeast Fisheries Center's Cooperative Game Fish Tagging Program, 1954 to present.

| Movement Number | RELEASE | | RECAPTURE | | Distance (Naut. Miles) | Time at Large (Days) |
|-----------------|--|-----------|---|-----------|------------------------|----------------------|
| | Location (lat-lon) | Date | Location (lat-lon) | Date | | |
| 1 | S.E. Cape Hatteras (34°50'N, 75°10'W) | 18-Oct-69 | N.E. of Guyana (9°05'N, 55°10'W) | 3-Mar-71 | 1895 | 501 |
| 2 | Pensacola, Florida (30°N, 87°W) | 30-Sep-69 | N. of Grenada (12°08'N, 61°49') | 6-Jan-70 | 1765 | 98 |
| 3 | Juno, Florida (26°50'N, 80°W) | 15-Mar-87 | mid-Atlantic (27°N, 50°W) | 28-Feb-88 | 1605 | 350 |
| 4 | N.W. of Dry Tortugas Florida (25°05'N, 84°43'W) | 18-Aug-89 | Grenada (12°10'N, 61°30') | 13-Feb-91 | 1530 | 544 |
| 5 | Cancun, Mexico (21°N, 86°W) | 8-May-86 | Grenada (12°N, 61°50'W) | 17-Feb-87 | 1490 | 285 |
| 6 | Cozumel, Mexico (20°N, 86°W) | 7-Jun-79 | Grenada (12°10'N, 61°30') | 10-Jan-81 | 1490 | 583 |
| 7 | Cozumel, Mexico | 28-Apr-71 | E. of Margarita (10°47'N, 63°09') | 14-Dec-71 | 1435 | 230 |
| 8 | St. Thomas, U.S. Virgin Islands (18°20'N, 64°40'W) | 21-Feb-67 | N. of Cancun, Mexico (21°42'N, 86°46') | 28-Jun-67 | 1265 | 127 |
| 9 | Cancun, Mexico | 4-May-89 | Bonaire (12°N, 67°20'W) | 23-Mar-91 | 1200 | 688 |
| 10 | U.S. Virgin Islands (18°30'N, 64°30'W) | 26-Jan-67 | Charleston, South Carolina (32°23'N, 79°25') | 18-Jun-67 | 1160 | 143 |

Table 4. Percentage of positive, negative, and no growth based on size data from tag-recaptured blue marlin, white marlin and sailfish from the Cooperative Game Fish Tagging Program, 1954-1992 (June). Sample size (N) indicates numbers of recaptured fish for which size (length or weight) was reported at release and recapture.

| Species | | Length | | Weight | |
|---------------------|-----------------|--------|-------|--------|-------|
| <i>Blue marlin</i> | | | | | |
| | Positive Growth | 50.0% | (33) | 56.1% | (37) |
| | No Growth | 6.1% | (4) | 4.5% | (3) |
| | Negative Growth | 43.9% | (29) | 39.4% | (26) |
| | Sample Size (N) | | 66 | | 66 |
| <i>White marlin</i> | | | | | |
| | Positive Growth | 35.4% | (133) | 54.0% | (203) |
| | No Growth | 22.3% | (84) | 7.7% | (29) |
| | Negative Growth | 42.3% | (159) | 38.3% | (144) |
| | Sample Size (N) | | 376 | | 376 |
| <i>Sailfish</i> | | | | | |
| | Positive Growth | 63.7% | (443) | 62.3% | (433) |
| | No Growth | 5.0% | (35) | 7.8% | (54) |
| | Negative Growth | 31.2% | (217) | 29.9% | (208) |
| | Sample Size (N) | | 695 | | 695 |

Appendix 1. Release and Recapture information for 68 tag-recaptured blue marlin from the Southeast Fisheries Science Center's Cooperative Game Fish Tagging Program, 1954-1992 (June). Lengths were converted to lower-jaw-to-fork, and are given in centimeters. Weights were converted to round weight, and are given in kilograms. Size information are indicated for each value as either reported (R) or calculated (C). Four recapture records are not listed due to lack of release information.

| Tag Number | Release | | | Recapture | | | Days | |
|------------|---------|----------|------------|-----------|-----------|------------|------|-------|
| | Length | weight | Date | Length | weight | Date | Sex | Large |
| R001352 | 121.92 | R 34.02 | R 01/08/77 | 213.36 | R 82.80 | C 12/23/84 | | 2906 |
| R031867 | 182.88 | R 136.08 | R 07/16/81 | 253.00 | R 146.95 | C 05/29/89 | | 2874 |
| R096230 | 140.77 | R 113.40 | R 10/29/85 | 206.98 | R 124.74 | R 11/06/91 | | 2199 |
| R109049 | 140.77 | R 56.70 | R 10/02/87 | 215.90 | R 86.17 | C 04/25/92 | | 1667 |
| M014638 | 165.10 | R 34.93 | C 07/15/70 | 109.22 | R 118.84 | R 08/30/74 | | 1507 |
| R057542 | 243.84 | R 226.80 | R 08/26/84 | 162.56 | R 72.58 | R 08/18/88 | F | 1453 |
| R096178 | 146.62 | R 68.04 | R 08/07/88 | 167.64 | R 36.77 | C 12/29/91 | | 1239 |
| R083260 | 245.92 | R 158.76 | R 10/12/85 | 81.00 | R 180.90 | R 01/07/89 | | 1183 |
| R099937 | 187.51 | R 113.40 | R 07/21/86 | 182.88 | R 56.70 | R 10/13/89 | | 1180 |
| R031444 | 182.88 | R 181.44 | R 08/16/81 | 231.14 | R 169.65 | R 08/18/84 | | 1098 |
| H031246 | 222.56 | R 90.72 | R 08/21/72 | 228.60 | R 140.16 | R 06/29/75 | | 1042 |
| M013436 | 210.87 | R 90.72 | R 02/13/69 | 205.74 | R 181.44 | R 08/13/71 | | 911 |
| R117013 | 234.24 | R 170.10 | R 07/13/87 | 151.00 | R 175.09 | R 01/08/90 | | 910 |
| R101174 | 182.88 | R 56.70 | R 02/15/86 | 156.35 | R 54.43 | R 07/18/88 | | 884 |
| R107947 | 142.24 | R 45.36 | R 03/25/87 | 214.77 | R 83.46 | R 08/09/89 | | 868 |
| M007332 | 198.12 | R 81.65 | R 08/20/66 | 154.40 | R 97.98 | R 10/27/68 | | 799 |
| R108324 | 189.45 | R 90.72 | R 04/08/90 | 166.09 | R 113.40 | R 04/05/92 | | 728 |
| R164274 | 187.51 | R 136.08 | R 09/14/89 | 228.60 | R 110.22 | R 08/04/91 | | 689 |
| R065080 | 248.92 | R 45.36 | R 06/06/83 | 238.76 | R 120.92 | C 04/20/85 | | 684 |
| R097671 | 220.98 | R 93.18 | C 10/28/85 | 166.09 | R 63.50 | R 07/26/87 | | 636 |
| R007703 | 121.92 | R 68.04 | R 08/22/78 | 121.92 | R 12.59 | C 02/10/80 | | 537 |
| R201266 | 160.25 | R 68.04 | R 08/25/89 | 183.61 | R 90.72 | R 01/27/91 | | 520 |
| R016132 | 198.12 | R 38.56 | R 06/01/78 | 193.04 | R 66.68 | R 10/06/79 | | 492 |
| R200606 | | | 09/28/90 | 195.29 | R 58.97 | R 01/28/92 | | 487 |
| R176769 | 169.91 | C 36.29 | R 09/27/90 | 152.40 | R 79.83 | R 12/07/91 | | 436 |
| H039451 | 213.36 | R 82.80 | C 07/15/74 | 213.36 | R 112.49 | R 09/15/75 | | 427 |
| R080839 | 190.50 | R 56.54 | C 09/21/84 | 208.28 | R 82.01 | R 11/21/85 | | 426 |
| R147895 | 199.19 | R 68.04 | R 10/30/89 | 227.12 | C 102.06 | R 12/28/90 | | 424 |
| R113561 | 238.13 | R 124.74 | R 07/25/88 | 157.48 | R 124.74 | R 09/16/89 | | 418 |
| A010706 | 205.74 | R 81.65 | R 05/18/91 | 152.46 | R 86.18 | R 06/11/92 | | 390 |
| R210369 | 158.30 | R 36.29 | R 06/03/91 | 175.82 | R 56.70 | R 06/11/92 | | 374 |
| H025270 | 152.40 | R 68.04 | R 07/10/71 | 190.50 | R 86.18 | R 07/01/72 | | 357 |
| R111270 | 175.82 | R 90.72 | R 06/17/89 | 160.25 | R 90.72 | R 05/27/90 | | 344 |
| R183252 | 132.08 | R 56.70 | R 09/04/90 | 140.77 | R 45.36 | R 08/01/91 | | 331 |
| R196967 | 136.88 | R 58.97 | R 07/06/90 | 190.50 | R 113.40 | R 05/28/91 | | 326 |
| R049015 | 213.36 | R 79.38 | R 06/20/83 | 226.06 | R 71.15 | R 04/30/84 | | 315 |
| R201330 | 208.28 | R 45.36 | R 08/17/89 | 238.76 | R 90.72 | R 06/10/90 | | 297 |
| R219789 | 218.44 | R 124.74 | R 08/03/91 | 237.00 | R 117.94 | R 04/26/92 | | 267 |
| R124891 | 249.82 | R 147.42 | R 10/06/87 | 208.28 | R 77.11 | R 06/25/88 | | 263 |
| R081104 | 187.51 | R 86.18 | R 06/29/85 | 144.67 | R 91.17 | R 01/23/86 | | 208 |
| R183660 | 132.08 | R 68.04 | R 08/05/90 | 231.07 | C 108.54 | R 03/01/91 | | 208 |
| R171205 | 228.60 | R 58.97 | R 10/01/89 | 185.42 | R 86.64 | R 04/20/90 | | 201 |
| WH000053 | 200.00 | R 124.74 | R 08/09/76 | 216.00 | R 86.30 | C 02/12/77 | | 187 |
| R073993 | 210.87 | R 102.06 | R 09/14/86 | 96.40 | R 5.71 | C 03/19/87 | | 186 |
| M015159 | 203.20 | R 90.72 | R 06/26/69 | 228.60 | R 96.62 | R 11/27/69 | | 154 |
| R059578 | 190.50 | R 181.44 | R 09/29/83 | 506.84 | R 1523.91 | C 02/29/84 | | 153 |
| R119146 | 182.88 | R 181.89 | R 07/15/89 | 215.90 | R 186.43 | R 12/06/89 | | 144 |
| R096961 | 234.24 | R 79.38 | R 10/17/85 | 162.56 | R 135.17 | R 02/28/86 | | 134 |
| M013438 | 127.14 | R 22.68 | R 08/14/68 | 169.98 | R 45.36 | R 12/22/68 | | 130 |
| R110963 | 121.92 | R 56.70 | R 09/06/89 | 215.90 | R 60.90 | R 01/10/90 | | 126 |
| R073052 | 292.65 | R 181.44 | R 07/10/85 | 176.90 | R 44.06 | C 11/05/85 | | 118 |
| R171206 | 228.60 | R 226.80 | R 09/14/89 | 185.42 | R 51.62 | C 12/27/89 | | 104 |
| R192778 | 202.69 | C 68.04 | R 08/29/90 | 241.00 | C 126.08 | R 11/23/90 | | 86 |
| R120916 | 156.35 | R 56.70 | R 06/18/87 | 223.52 | R 35.83 | R 09/01/87 | | 75 |
| R152306 | 164.14 | R 45.36 | R 09/16/88 | 92.57 | R 4.98 | C 11/24/88 | | 69 |
| R065060 | 191.40 | R 56.70 | R 01/09/83 | 183.61 | R 48.54 | R 03/13/83 | | 63 |
| R055082 | 152.40 | R 102.06 | R 09/09/81 | 195.58 | R 119.70 | R 11/03/81 | | 55 |
| R212026 | 165.10 | R 79.38 | R 09/07/91 | 235.00 | R 114.62 | C 11/01/91 | | 55 |
| R265601 | 213.36 | R 68.04 | R 09/28/91 | 114.00 | R 10.04 | C 11/20/91 | | 53 |
| R208948 | 251.81 | C 147.42 | R 09/19/91 | 117.00 | R 23.94 | R 11/09/91 | | 51 |
| R149783 | 193.04 | R 102.06 | R 06/03/89 | 220.98 | R 88.00 | R 07/21/89 | | 48 |
| A016634 | 205.74 | R 68.04 | R 05/18/91 | 156.35 | R 58.97 | R 07/04/91 | | 47 |
| R006448 | 152.46 | R 102.06 | R 06/27/81 | 203.20 | R 109.77 | R 07/18/81 | | 21 |
| R165158 | 243.84 | R 136.08 | R 08/26/88 | 228.60 | R 104.45 | C 09/16/88 | | 21 |
| R178931 | 187.51 | R 102.06 | R 09/02/89 | 213.36 | R 82.80 | C 09/23/89 | | 21 |
| R195040 | 234.24 | R 136.08 | R 08/10/90 | 234.24 | R 129.73 | R 08/30/90 | | 20 |
| R219215 | 140.77 | R 90.72 | R 07/31/91 | 140.77 | R 90.72 | R 08/29/91 | | 20 |
| R172283 | 219.73 | C 90.72 | R 08/25/89 | | | 09/02/89 | | 8 |

Appendix 2. Release and Recapture information for 377 tag-recaptured white marlin from the Southeast Fisheries Science Center's Cooperative Game Fish Tagging Program, 1954-1992 (June). Lengths were converted to lower-jaw-to-fork, and are given in centimeter. Weights were converted to round weight, and are given in kilograms. Size information are indicated for each value as either reported (R) or calculated (C). Twenty-two recapture records are not listed due to lack of release information.

| Tag Number | Release | | | Recapture | | | Days | |
|------------|---------|---------|------------|-----------|---------|------------|------|-------|
| | Length | weight | Date | Length | weight | Date | Sex | Large |
| H019208 | 182.88 | R 33.90 | C 09/26/70 | 180.34 | R 32.50 | C 07/10/82 | | 4305 |
| WH001099 | 120.54 | R 22.68 | R 08/19/72 | 228.60 | R 28.58 | R 08/18/83 | | 4016 |
| H019298 | 182.88 | R 33.90 | C 08/30/71 | 215.90 | R 55.89 | C 06/25/81 | | 3587 |
| M002915 | 203.20 | R 15.88 | R 06/22/71 | 182.88 | R 41.23 | R 10/15/80 | | 3403 |
| H014039 | 163.90 | R 20.41 | R 06/08/70 | 163.90 | R 47.17 | R 07/23/79 | | 3332 |
| R068050 | 129.58 | R 22.68 | R 09/10/83 | 185.42 | R 35.34 | C 12/15/90 | | 2653 |
| H090513 | 228.60 | R 36.29 | R 06/01/78 | 198.12 | R 43.14 | C 04/04/85 | | 2499 |
| M007313 | 198.12 | R 22.68 | R 07/17/66 | 139.70 | R 55.79 | R 11/03/72 | | 2301 |
| H086337 | 174.74 | R 27.22 | R 09/01/80 | 174.74 | R 29.56 | C 10/14/86 | | 2234 |
| R095558 | 138.61 | R 29.48 | R 09/12/85 | 118.00 | R 28.12 | R 10/20/91 | | 2229 |
| M007329 | 198.12 | R 43.14 | C 08/20/66 | 153.06 | R 44.91 | R 08/12/72 | | 2184 |
| R071474 | 142.22 | R 24.95 | R 09/25/84 | 142.22 | R 15.90 | C 07/15/90 | | 2119 |
| R098434 | 138.61 | R 22.68 | R 09/13/86 | 182.88 | R 33.90 | C 11/15/91 | | 1889 |
| R066202 | 142.22 | R 34.02 | R 07/12/84 | 187.00 | R 36.25 | C 08/16/89 | | 1861 |
| R031303 | 182.88 | R 34.02 | R 08/28/82 | 231.14 | R 27.22 | R 09/08/87 | | 1837 |
| R054164 | 152.40 | R 15.88 | R 07/02/83 | 200.66 | R 56.70 | R 07/01/88 | | 1826 |
| WH007866 | 182.88 | R 24.95 | R 08/24/76 | 149.86 | R 18.61 | C 08/08/81 | | 1810 |
| H019589 | 182.88 | R 33.90 | C 08/09/70 | 147.32 | R 34.02 | R 07/15/75 | | 1801 |
| H022051 | 213.36 | R 27.22 | R 08/25/72 | 213.36 | R 54.43 | R 07/28/77 | | 1798 |
| R095741 | 177.80 | R 20.41 | R 08/29/85 | 167.64 | R 25.40 | R 07/20/90 | | 1786 |
| M010411 | 213.36 | R 18.14 | R 08/06/67 | 163.90 | R 24.37 | C 06/25/72 | | 1785 |
| R136120 | 120.54 | R 27.22 | R 07/28/87 | 120.54 | R 29.48 | R 06/15/92 | | 1784 |
| R066506 | 120.54 | R 13.61 | R 07/10/84 | 187.00 | R 27.22 | R 05/02/89 | | 1757 |
| M000489 | 198.12 | R 43.14 | C 08/15/65 | 160.02 | R 22.67 | C 04/16/70 | | 1705 |
| M012256 | 172.72 | R 15.88 | R 09/10/67 | 185.42 | R 29.94 | R 04/15/72 | | 1679 |
| M000712 | 198.12 | R 20.41 | R 07/16/66 | 223.52 | R 14.97 | R 12/02/70 | | 1600 |
| R056064 | 213.36 | R 28.58 | R 08/21/82 | 160.02 | R 28.58 | R 01/03/87 | | 1596 |
| M000472 | 198.12 | R 18.14 | R 08/04/66 | 160.02 | R 14.06 | R 10/25/70 | | 1543 |
| H034757 | 182.88 | R 20.41 | R 07/17/75 | 142.22 | R 30.84 | R 09/18/79 | | 1524 |
| H014156 | 203.20 | R 46.56 | C 08/22/70 | 226.06 | R 26.31 | R 10/20/74 | | 1516 |
| H041369 | 213.36 | R 27.22 | R 07/05/73 | 163.90 | R 29.94 | R 08/13/77 | | 1500 |
| C027627 | 131.38 | R 24.95 | R 07/22/78 | 236.22 | R 73.28 | C 08/23/82 | | 1493 |
| H026091 | 160.29 | R 22.68 | R 08/22/72 | 160.29 | R 29.48 | R 09/13/76 | | 1483 |
| M000708 | 198.12 | R 18.14 | R 09/04/71 | 153.06 | R 36.29 | R 09/15/75 | | 1472 |
| B001558 | 167.52 | R 26.03 | C 07/11/55 | 203.20 | R 24.95 | R 07/18/59 | | 1468 |
| H099138 | 142.22 | R 13.61 | R 08/31/79 | 142.22 | R 20.41 | R 09/07/83 | | 1468 |
| R031829 | 182.88 | R 24.95 | R 07/24/81 | 231.14 | R 33.57 | R 07/27/85 | | 1464 |
| H052611 | 228.60 | R 22.68 | R 08/18/80 | 174.74 | R 29.56 | C 08/15/84 | | 1458 |
| M007125 | 198.12 | R 20.41 | R 08/13/66 | 198.12 | R 24.95 | R 08/08/70 | | 1456 |
| H041010 | 213.36 | R 22.68 | R 07/22/73 | 163.90 | R 21.77 | R 07/15/77 | | 1454 |
| R096235 | 111.51 | R 27.22 | R 09/09/86 | 111.51 | R 22.68 | R 08/18/90 | | 1439 |
| M004628 | 153.06 | R 19.83 | C 08/18/64 | 226.06 | R 14.52 | R 07/20/68 | | 1432 |
| H021661 | 213.36 | R 53.93 | C 09/14/70 | 200.66 | R 44.83 | C 08/15/74 | | 1431 |
| R046870 | 203.20 | R 20.41 | R 07/17/81 | 195.58 | R 41.50 | C 06/01/85 | | 1415 |
| R082646 | 129.54 | R 18.14 | R 09/17/84 | 104.28 | R 40.82 | R 07/28/88 | | 1410 |
| R091434 | 198.12 | R 22.68 | R 09/17/86 | 153.06 | R 19.83 | C 07/15/90 | | 1397 |
| H036761 | 163.90 | R 22.68 | R 07/18/73 | 163.90 | R 41.28 | R 04/15/77 | | 1367 |
| R124384 | 203.20 | R 27.22 | R 10/30/87 | 208.28 | R 50.16 | C 07/15/91 | | 1354 |
| R056652 | 195.58 | R 22.68 | R 09/12/82 | 151.26 | R 19.50 | R 05/14/86 | | 1340 |
| R0 | | | | | | | | |

Appendix 2. Continued...

| Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large |
|------------|--------|----------------|------------|--------|------------------|------------|-----|------------|
| R044792 | 142.22 | R 18.14 | R 11/19/79 | 169.00 | R 23.59 | R 07/25/82 | | 979 |
| M012904 | 182.88 | R 20.41 | R 07/21/68 | 142.22 | R 19.96 | R 03/26/71 | | 978 |
| CC000216 | 121.92 | R 10.00 | C 09/06/61 | 200.66 | R 44.83 | C 05/05/64 | | 972 |
| R070352 | 167.64 | R 27.22 | R 11/23/87 | 131.38 | R 12.52 | C 07/15/90 | | 965 |
| R086490 | 185.58 | R 31.75 | R 07/15/85 | 185.58 | R 35.43 | C 03/03/88 | | 962 |
| M001569 | 205.74 | R 24.95 | R 07/05/68 | 180.34 | R 48.08 | R 01/26/71 | | 935 |
| WH004249 | 198.12 | R 22.68 | R 07/24/69 | 200.66 | R 44.83 | C 02/07/72 | | 928 |
| M005116 | 198.12 | R 17.24 | R 08/31/64 | 226.06 | R 64.19 | C 02/15/67 | | 898 |
| H034107 | 223.52 | R 22.68 | R 08/15/75 | 233.68 | R 70.93 | C 01/15/78 | | 884 |
| H009632 | 228.60 | R 29.48 | R 04/19/69 | 147.32 | R 26.76 | R 09/19/71 | | 883 |
| R053726 | 153.06 | R 18.14 | R 09/04/83 | 223.52 | R 19.05 | R 01/04/86 | | 853 |
| M004245 | 153.06 | R 20.41 | R 08/20/64 | 226.06 | R 24.95 | R 12/12/66 | | 844 |
| R070333 | 167.64 | R 22.68 | R 11/23/87 | 160.00 | R 22.67 | C 03/14/90 | | 842 |
| R078184 | 120.54 | R 22.68 | R 06/10/84 | 213.36 | R 53.93 | C 09/15/86 | | 827 |
| R092662 | 152.40 | R 22.68 | R 06/19/86 | 180.00 | R 34.02 | R 09/22/88 | | 826 |
| M013169 | 167.52 | R 31.75 | R 07/17/71 | 167.52 | R 22.68 | R 10/04/73 | | 810 |
| R060261 | 174.74 | R 36.29 | R 08/31/86 | 174.74 | R 36.29 | R 11/09/88 | | 801 |
| H084769 | 142.22 | R 24.95 | R 07/10/76 | 236.22 | R 18.14 | R 09/11/78 | | 793 |
| M008031 | 153.06 | R 19.05 | R 08/16/69 | 200.66 | R 24.95 | R 10/07/71 | | 782 |
| R050888 | 93.44 | R 14.97 | R 08/21/85 | 93.44 | R 24.95 | R 10/11/87 | | 781 |
| M008005 | 162.56 | R 22.68 | R 07/14/67 | 200.66 | R 22.68 | R 08/31/69 | | 779 |
| M010444 | 213.36 | R 15.88 | R 08/10/68 | 163.90 | R 20.41 | R 09/26/70 | | 777 |
| N000422 | 182.88 | R 20.41 | R 07/25/69 | 142.22 | R 11.79 | R 09/10/71 | | 777 |
| H001761 | 213.36 | R 23.59 | R 09/13/66 | 163.90 | R 24.37 | C 10/22/68 | | 770 |
| R082586 | 104.28 | R 18.14 | R 10/03/86 | 104.28 | R 29.48 | R 11/02/88 | | 761 |
| H089372 | 121.92 | R 22.68 | R 08/15/78 | 543.56 | R 25.40 | R 09/13/80 | | 760 |
| R073057 | 120.54 | R 20.87 | R 06/30/89 | 165.10 | R 34.97 | R 07/30/91 | | 760 |
| H035046 | 215.90 | R 27.22 | R 07/27/72 | 165.71 | R 23.59 | R 08/24/74 | | 758 |
| H038915 | 213.36 | R 27.22 | R 08/09/74 | 163.90 | R 31.75 | R 09/03/76 | | 756 |
| M006510 | 198.12 | R 24.95 | R 07/12/68 | 153.06 | R 27.22 | R 08/05/70 | | 754 |
| C025540 | 163.90 | R 24.37 | C 08/18/64 | 163.90 | R 22.68 | R 09/10/66 | | 753 |
| B027257 | 195.58 | R 41.50 | C 07/26/71 | 151.26 | R 18.14 | R 08/15/73 | | 751 |
| R074183 | 274.32 | R 18.14 | R 09/15/83 | 207.26 | R 26.31 | R 10/04/85 | | 750 |
| R103458 | 165.10 | R 24.91 | C 05/27/86 | 223.52 | R 62.05 | C 06/13/88 | | 748 |
| WH006843 | 91.44 | R 20.41 | R 07/26/69 | 77.18 | R 2.52 | C 08/13/71 | | 748 |
| R153787 | 160.29 | R 24.95 | R 09/12/88 | 185.42 | R 28.58 | R 09/27/90 | | 745 |
| R005676 | 213.36 | R 24.95 | R 09/16/83 | 163.90 | R 21.71 | R 09/27/85 | | 742 |
| H083742 | 190.50 | R 22.68 | R 08/31/80 | 213.36 | R 53.93 | C 09/07/82 | | 737 |
| R052138 | 129.58 | R 22.68 | R 09/28/80 | 205.74 | R 36.29 | R 10/05/82 | | 737 |
| R014303 | 163.90 | R 20.41 | R 08/27/78 | 163.90 | R 27.22 | R 08/28/80 | | 732 |
| R036716 | 213.36 | R 29.48 | R 08/09/85 | 163.90 | R 21.32 | R 08/11/87 | | 732 |
| R014696 | 106.09 | R 6.57 | C 07/04/78 | 208.28 | R 25.40 | R 07/04/80 | | 731 |
| R166980 | 156.68 | R 18.14 | R 07/26/89 | 156.68 | R 25.40 | R 07/27/91 | F | 731 |
| H017644 | 213.36 | R 20.41 | R 07/25/71 | 163.90 | R 26.76 | R 07/23/73 | | 729 |
| C019074 | 223.52 | R 22.68 | R 08/24/64 | 171.13 | R 16.78 | R 08/14/66 | | 720 |
| R055532 | 163.90 | R 36.29 | R 07/28/85 | 160.02 | R 22.67 | C 07/18/87 | | 720 |
| WH002539 | 148.00 | C 15.88 | R 08/31/69 | 157.16 | C 20.41 | R 08/20/71 | | 719 |
| R071463 | 142.22 | R 24.95 | R 09/25/84 | 175.26 | R 24.95 | R 09/13/86 | | 718 |
| R071461 | 142.22 | R 24.95 | R 09/30/84 | 142.22 | R 30.84 | R 09/17/86 | | 717 |
| H080050 | 198.12 | R 27.22 | R 07/04/81 | 169.00 | R 25.40 | R 06/18/83 | | 714 |
| R081725 | 147.64 | R 20.41 | R 06/19/86 | 236.22 | R 22.68 | R 06/02/88 | | 714 |
| BL000626 | 98.86 | R 27.22 | R 10/04/84 | 159.00 | R 22.23 | R 09/17/86 | | 713 |
| H085448 | 156.68 | R 20.41 | R 11/04/78 | 156.68 | R 19.50 | R 10/14/80 | | 710 |
| N002733 | 203.20 | R 46.56 | C 09/18/70 | 156.68 | R 23.13 | R 08/26/72 | | 708 |
| R048717 | 213.36 | R 53.93 | C 09/20/80 | 226.06 | R 22.68 | R 08/27/82 | | 706 |
| R029186 | 142.22 | R 24.95 | R 09/20/80 | 142.22 | R 33.11 | R 08/16/82 | | 695 |
| M014328 | 165.10 | R 24.95 | R 08/05/70 | 109.22 | R 7.18 | C 06/29/72 | | 694 |
| WH001489 | 167.52 | R 26.03 | C 07/24/68 | 167.52 | R 43.09 | R 06/16/70 | | 692 |
| R005372 | 213.36 | R 22.68 | R 09/16/79 | 181.00 | R 18.14 | R 08/05/81 | | 689 |
| R180795 | 120.54 | R 29.48 | R 08/20/89 | 200.00 | R 20.41 | R 06/30/91 | | 679 |
| H053373 | 198.12 | R 20.41 | R 09/27/75 | 153.06 | R 27.67 | R 08/05/77 | | 678 |
| C026485 | 153.06 | R 19.83 | C 09/03/66 | 88.90 | R 15.88 | R 07/11/68 | | 677 |
| C019022 | 171.13 | R 27.22 | R 07/25/67 | 171.13 | R 19.05 | R 05/31/69 | | 676 |
| R071906 | 156.68 | R 22.68 | R 09/05/83 | 203.20 | R 20.41 | R 07/11/85 | | 675 |
| R104678 | 163.90 | R 18.14 | R 08/06/86 | 159.00 | R 22.24 | C 06/01/88 | | 665 |
| H084430 | 190.50 | R 22.68 | R 09/29/76 | 236.22 | R 29.94 | R 07/23/78 | | 662 |
| R183956 | 167.52 | R 24.95 | R 02/09/90 | 117.00 | R 23.94 | R 11/28/91 | | 657 |
| R048058 | 138.61 | R 20.41 | R 09/15/80 | 195.58 | R 54.43 | R 07/03/82 | | 656 |
| R042451 | 131.38 | R 13.61 | R 07/14/79 | 131.38 | R 34.93 | R 04/27/81 | | 653 |
| C027439 | 182.88 | R 40.82 | R 08/09/66 | 142.22 | R 40.82 | R 05/18/68 | | 648 |
| H008018 | 215.90 | R 55.89 | C 09/14/68 | 165.71 | R 20.41 | R 06/13/70 | | 637 |
| M008555 | 213.36 | R 20.41 | R 08/12/66 | 163.90 | R 24.95 | R 05/10/68 | | 637 |
| H021034 | 203.20 | R 15.88 | R 09/17/70 | 156.68 | R 24.95 | R 06/12/72 | | 634 |
| N002305 | 152.40 | R 20.41 | R 08/26/69 | 120.54 | R 35.38 | R 05/15/71 | | 627 |
| R001018 | 98.86 | R 22.68 | R 08/24/83 | 98.86 | R 5.32 | C 05/05/85 | | 620 |
| R082171 | 142.22 | R 20.41 | R 10/19/84 | 142.22 | R 29.48 | R 07/01/86 | | 620 |
| M006580 | 198.12 | R 24.95 | R 10/16/65 | 153.06 | R 16.78 | R 06/14/67 | | 606 |

Appendix 2. Continued...

| Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large |
|------------|--------|----------------|------------|--------|------------------|------------|-----|------------|
| R074425 | 142.22 | R 18.14 | R 09/16/83 | 167.64 | R 26.09 | C 04/20/85 | | 582 |
| R050712 | 185.58 | R 19.05 | R 09/21/83 | 185.58 | R 40.82 | R 04/18/85 | | 575 |
| N001690 | 205.74 | R 17.24 | R 08/04/69 | 158.48 | R 22.02 | C 01/27/71 | | 541 |
| M008812 | 213.36 | R 15.88 | R 11/02/68 | 163.90 | R 20.87 | R 04/16/70 | | 530 |
| M012111 | 172.72 | R 15.88 | R 04/23/69 | 135.00 | R 24.04 | R 09/21/70 | | 516 |
| WH002945 | 169.66 | C 28.12 | R 08/17/69 | 203.20 | R 27.22 | R 01/02/71 | | 503 |
| H015950 | 163.90 | R 36.29 | R 05/16/70 | 139.70 | R 18.14 | R 09/20/71 | | 492 |
| N001304 | 158.48 | R 22.68 | R 09/02/70 | 208.28 | R 50.16 | C 01/03/72 | | 488 |
| R209972 | 171.13 | R 25.86 | R 10/27/90 | | | 02/20/92 | | 481 |
| R043848 | 167.52 | R 15.88 | R 05/03/82 | 167.52 | R 22.23 | R 08/07/83 | | 461 |
| R072414 | 142.22 | R 22.68 | R 08/23/84 | 203.20 | R 28.34 | R 11/25/85 | | 459 |
| H017886 | 205.74 | R 48.34 | C 07/09/70 | 223.52 | R 22.68 | R 10/10/71 | | 458 |
| R096247 | 120.54 | R 24.95 | R 09/13/86 | 213.36 | R 53.93 | C 12/15/87 | | 458 |
| H031508 | 182.88 | R 33.90 | C 07/28/73 | 223.52 | R 16.78 | R 10/27/74 | | 456 |
| N002720 | 156.68 | R 21.28 | C 07/18/70 | 156.68 | R 26.76 | R 10/03/71 | | 442 |
| BL000154 | 120.54 | R 18.14 | R 05/02/85 | 213.36 | R 15.88 | R 07/15/86 | | 439 |
| WH001491 | 218.44 | R 36.29 | R 07/03/69 | 167.52 | R 39.01 | R 09/15/70 | | 439 |
| R014503 | 213.36 | R 53.93 | C 06/15/78 | 163.90 | R 28.58 | R 08/18/79 | | 429 |
| M001534 | 158.48 | R 18.14 | R 07/12/65 | 158.48 | R 31.75 | R 09/13/66 | | 428 |
| H018565 | 153.06 | R 18.14 | R 07/13/74 | 153.06 | R 29.03 | R 09/13/75 | | 427 |
| N001173 | 213.36 | R 53.93 | C 07/15/69 | 163.90 | R 20.87 | R 09/15/70 | | 427 |
| R056970 | 160.29 | R 22.68 | R 07/29/83 | 162.56 | R 23.78 | C 09/25/84 | | 424 |
| R123439 | 182.88 | R 15.88 | R 07/03/88 | 198.12 | R 29.48 | R 08/29/89 | | 422 |
| M007151 | 198.12 | R 43.14 | C 09/11/69 | 139.70 | R 15.06 | C 11/06/70 | | 421 |
| N002363 | 152.40 | R 19.58 | C 07/23/70 | 195.58 | R 41.50 | C 09/14/71 | | 418 |
| R126403 | 127.77 | R 18.14 | R 07/09/89 | 215.90 | R 29.94 | R 08/26/90 | | 413 |
| H009603 | 174.74 | R 27.22 | R 07/30/75 | 174.74 | R 29.56 | C 09/14/76 | | 412 |
| N002799 | 193.04 | R 39.00 | C 09/14/70 | 213.36 | R 19.05 | R 10/30/71 | | 411 |
| R109488 | 182.88 | R 31.75 | R 08/02/87 | 142.22 | R 15.90 | C 09/12/88 | | 407 |
| R058402 | 120.54 | R 20.41 | R 07/09/83 | 120.54 | R 27.22 | R 08/15/84 | | 403 |
| R213519 | 195.82 | C 51.26 | R 04/27/91 | 174.65 | C 31.75 | R 06/02/92 | | 402 |
| R014675 | 111.51 | R 7.64 | C 07/01/78 | 111.51 | R 29.48 | R 08/04/79 | | 399 |
| R180509 | 131.38 | R 18.14 | R 08/26/89 | 131.38 | R 12.52 | C 09/27/90 | | 397 |
| R017614 | 233.68 | R 20.41 | R 08/30/79 | 178.36 | R 31.44 | C 09/29/80 | | 396 |
| N001136 | 213.36 | R 53.93 | C 07/16/73 | 163.90 | R 24.37 | C 08/14/74 | | 394 |
| H028002 | 163.90 | R 22.68 | R 07/18/73 | 182.88 | R 22.68 | R 08/15/74 | | 393 |
| CJ000095 | 182.88 | R 11.34 | R 07/17/63 | 215.90 | R 55.89 | C 08/09/64 | | 389 |
| C024549 | 149.45 | R 18.46 | C 08/02/64 | 149.45 | R 30.39 | R 08/25/65 | | 388 |
| N001066 | 176.55 | R 30.49 | C 08/07/71 | 218.44 | R 57.89 | C 08/28/72 | | 387 |
| R031652 | 182.88 | R 36.29 | R 07/29/82 | 231.14 | R 27.22 | R 08/19/83 | | 386 |
| H098028 | 152.40 | R 27.22 | R 09/24/77 | 53.00 | R 0.81 | C 10/13/78 | | 384 |
| C011362 | 153.06 | R 19.83 | C 07/31/62 | 153.06 | R 29.03 | R 08/18/63 | | 383 |
| H001653 | 163.90 | R 27.22 | R 07/21/68 | 163.90 | R 24.95 | R 08/07/69 | | 382 |
| N001882 | 120.54 | R 15.88 | R 07/24/70 | 120.54 | R 19.96 | R | | |

Appendix 2. Continued...

| Tag Number | Length | Release weight | Date | Recapture Length | Recapture weight | Date | Sex | Days Large |
|------------|--------|----------------|------------|------------------|------------------|------------|-----|------------|
| H054040 | 210.82 | R 22.68 | R 08/09/75 | 215.90 | R 22.68 | R 07/15/76 | | 341 |
| N000103 | 142.22 | R 24.95 | R 07/10/69 | 182.88 | R 19.96 | R 06/14/70 | | 339 |
| R032545 | 174.74 | R 27.22 | R 08/28/81 | 203.20 | R 28.58 | R 07/30/82 | | 336 |
| R000312 | 163.90 | R 18.14 | R 06/19/87 | 210.00 | R 27.22 | R 05/17/88 | | 333 |
| C015771 | 145.84 | R 17.14 | C 08/01/64 | 145.84 | R 17.14 | C 06/27/65 | | 330 |
| R078595 | 127.77 | R 18.14 | R 08/08/84 | 180.34 | R 22.23 | R 07/04/85 | | 330 |
| M010440 | 213.36 | R 18.14 | R 07/13/68 | 163.90 | R 22.68 | R 06/07/69 | | 329 |
| R055402 | 152.40 | R 18.14 | R 09/07/81 | 195.58 | R 16.33 | R 08/02/82 | | 328 |
| M007659 | 127.77 | R 18.14 | R 07/04/66 | 127.77 | R 24.95 | R 05/28/67 | | 329 |
| C019285 | 223.52 | R 31.75 | R 07/23/65 | 198.12 | R 18.14 | R 06/14/66 | | 326 |
| WH004183 | 198.12 | R 17.24 | R 09/18/70 | 200.66 | R 44.83 | C 08/10/71 | | 326 |
| R055900 | 213.36 | R 20.41 | R 07/23/83 | 160.02 | R 29.48 | R 06/12/84 | | 325 |
| R103734 | 120.54 | R 19.05 | R 08/12/86 | 120.54 | R 19.05 | R 07/03/87 | | 325 |
| H039756 | 163.90 | R 22.68 | R 10/31/81 | 213.36 | R 25.40 | R 09/19/82 | | 323 |
| M014973 | 156.68 | R 24.95 | R 07/13/71 | 156.68 | R 34.47 | R 06/10/72 | | 322 |
| R030552 | 208.28 | R 50.16 | C 09/15/80 | 182.88 | R 18.14 | R 08/01/81 | | 320 |
| R112255 | 228.60 | R 15.88 | R 11/22/87 | 208.28 | R 50.16 | C 10/07/88 | | 320 |
| C020042 | 223.52 | R 18.14 | R 08/17/64 | 152.40 | R 22.68 | R 07/02/65 | | 319 |
| H084432 | 190.50 | R 19.05 | R 09/18/76 | 236.22 | R 22.68 | R 08/03/77 | | 319 |
| R054357 | 120.54 | R 20.41 | R 08/07/83 | 408.94 | R 24.49 | R 06/21/84 | | 319 |
| R034908 | 182.88 | R 20.41 | R 09/25/82 | 220.98 | R 19.05 | R 08/09/83 | | 318 |
| H019018 | 182.88 | R 22.68 | R 07/25/70 | 223.52 | R 20.41 | R 06/05/71 | | 315 |
| R128342 | 152.40 | R 22.68 | R 10/11/88 | 147.32 | R 32.66 | R 08/20/89 | | 313 |
| R017460 | 233.68 | R 22.68 | R 09/06/80 | 178.36 | R 22.68 | R 07/15/81 | | 312 |
| R079733 | 156.68 | R 27.22 | R 08/24/85 | 167.64 | R 20.41 | R 07/01/86 | | 311 |
| R097549 | 220.98 | R 59.95 | C 07/21/86 | 169.32 | R 26.88 | C 06/03/87 | | 311 |
| R151167 | 174.74 | R 27.22 | R 09/18/88 | 162.56 | R 23.59 | R 07/24/89 | | 309 |
| M000425 | 120.54 | R 9.66 | C 08/02/69 | 134.62 | R 18.14 | R 06/01/70 | | 303 |
| H008462 | 153.06 | R 20.41 | R 08/23/68 | 153.06 | R 19.96 | R 06/21/69 | | 302 |
| R113426 | 183.78 | R 36.29 | R 04/25/87 | 183.78 | R 26.31 | R 02/20/88 | | 301 |
| C024020 | 218.44 | R 57.89 | C 08/19/64 | 233.68 | R 70.93 | C 06/14/65 | | 299 |
| N001577 | 205.74 | R 27.22 | R 08/29/70 | 158.48 | R 25.40 | R 06/19/71 | | 294 |
| H004927 | 215.90 | R 20.41 | R 07/15/68 | 165.71 | R 9.98 | R 05/04/69 | | 293 |
| H028259 | 213.36 | R 22.68 | R 08/09/71 | 182.88 | R 19.50 | R 05/28/72 | | 293 |
| R149736 | 149.45 | R 22.68 | R 09/03/88 | 149.45 | R 45.36 | R 06/20/89 | | 290 |
| B008454 | 218.44 | R 57.89 | C 07/15/56 | 210.82 | R 27.22 | R 04/30/57 | | 289 |
| M008111 | 198.12 | R 31.75 | R 07/21/66 | 153.06 | R 29.94 | R 05/05/67 | | 288 |
| H031231 | 167.52 | R 29.48 | R 07/17/75 | 228.60 | R 66.39 | C 06/22/76 | | 280 |
| H014035 | 142.22 | R 22.68 | R 09/16/70 | 213.36 | R 53.93 | C 06/19/71 | | 276 |
| H049880 | 228.60 | R 18.14 | R 09/04/77 | 215.90 | R 19.05 | R 06/07/78 | | 276 |
| M007592 | 198.12 | R 27.22 | R 06/20/71 | 153.06 | R 38.10 | R 03/20/72 | | 274 |
| H027595 | 120.54 | R 15.88 | R 07/11/71 | 120.54 | R 24.04 | R 04/08/72 | | 272 |
| M015594 | 203.20 | R 13.61 | R 08/31/69 | 228.60 | R 31.75 | R 05/30/70 | | 272 |
| R066612 | 163.90 | R 27.22 | R 09/13/82 | 163.90 | R 23.59 | R 06/12/83 | | 272 |
| R112271 | 174.74 | R 56.70 | R 12/07/88 | 174.74 | R 49.90 | R 09/01/89 | | 268 |
| N001513 | 205.74 | R 18.14 | R 08/16/69 | 158.48 | R 24.95 | R 05/07/70 | | 264 |
| R061239 | 160.29 | R 27.22 | R 12/29/81 | 160.29 | R 22.68 | R 09/19/82 | | 264 |
| M001716 | 205.74 | R 36.29 | R 07/15/65 | 158.48 | R 40.82 | R 04/02/66 | | 261 |
| R009664 | 167.64 | R 22.68 | R 08/30/78 | 164.00 | R 23.94 | R 05/18/79 | | 261 |
| R146855 | 163.90 | R 34.02 | R 10/16/88 | 163.90 | R 31.30 | R 07/02/89 | | 259 |
| R192137 | 142.22 | R 18.14 | R 09/07/90 | 142.22 | R 24.49 | R 05/23/91 | | 258 |
| C016291 | 187.96 | R 36.82 | C 08/29/63 | 193.04 | R 22.68 | R 05/08/64 | | 253 |
| H035742 | 215.90 | R 22.68 | R 09/19/76 | 165.71 | R 25.19 | R 05/30/77 | | 253 |
| H091445 | 198.12 | R 27.22 | R 06/23/83 | 190.50 | R 38.34 | C 03/01/84 | | 252 |
| R105394 | 113.31 | R 22.68 | R 09/13/86 | 182.88 | R 33.90 | C 05/15/87 | | 244 |
| M013877 | 165.10 | R 24.91 | C 09/17/67 | 129.58 | R 14.97 | R 05/15/68 | | 241 |
| R030557 | 165.71 | R 24.95 | R 08/18/82 | 165.71 | R 22.68 | R 04/16/83 | | 241 |
| H029268 | 163.90 | R 27.22 | R 08/31/74 | 223.52 | R 62.05 | C 04/24/75 | | 236 |
| R064507 | 109.70 | R 15.88 | R 09/20/85 | 109.70 | R 9.07 | R 05/10/86 | | 232 |
| R068226 | 153.06 | R 20.41 | R 09/04/83 | 154.94 | R 20.87 | R 04/20/84 | | 229 |
| H008293 | 215.90 | R 27.22 | R 09/24/68 | 195.58 | R 23.13 | R 04/27/69 | | 215 |
| R005311 | 213.36 | R 53.93 | C 09/02/83 | 181.00 | R 35.83 | R 03/22/84 | | 202 |
| D000465 | 228.60 | R 22.68 | R 01/18/64 | 236.22 | R 22.23 | R 07/25/64 | | 189 |
| H051396 | 228.60 | R 24.95 | R 09/25/71 | 215.90 | R 27.22 | R 04/02/77 | | 189 |
| H018719 | 142.22 | R 29.48 | R 07/03/71 | 223.52 | R 30.39 | R 01/07/72 | | 188 |
| H022590 | 213.36 | R 29.48 | R 03/09/71 | 163.90 | R 17.69 | R 09/13/71 | | 188 |
| H011690 | 218.44 | R 57.89 | C 08/15/68 | 203.20 | R 20.41 | R 02/13/69 | | 182 |
| R052445 | 163.90 | R 20.41 | R 10/22/81 | 163.90 | R 24.95 | R 04/19/82 | | 179 |
| C026439 | 152.40 | R 18.14 | R 07/27/66 | 213.36 | R 53.93 | C 01/02/67 | | 159 |
| WH0002492 | 157.16 | C 20.41 | R 07/18/69 | 218.44 | R 16.78 | R 12/16/69 | | 151 |
| R087561 | 205.74 | R 34.02 | R 04/20/85 | 220.98 | R 18.14 | R 09/10/85 | | 143 |
| R091409 | 198.12 | R 43.14 | C 08/08/86 | 208.28 | R 50.16 | C 12/19/86 | | 133 |
| R177320 | 120.54 | R 22.68 | R 07/06/91 | 152.40 | R 19.58 | C 11/15/91 | | 132 |
| M002872 | 213.36 | R 29.48 | R 08/21/65 | 163.90 | R 13.61 | R 12/28/65 | | 129 |
| CL000575 | 213.36 | R 53.93 | C 08/08/63 | 203.20 | R 18.14 | R 12/10/63 | | 124 |
| M000437 | 153.06 | R 18.14 | R 08/18/69 | 134.62 | R 13.47 | C 12/14/69 | | 118 |
| R107554 | 142.24 | R 15.90 | C 08/29/89 | 182.88 | R 33.90 | C 12/19/89 | | 112 |

Appendix 2. Continued...

| Tag Number | Length | Release weight | Date | Recapture Length | Recapture weight | Date | Sex | Days Large |
|------------|--------|----------------|------------|------------------|------------------|------------|-----|------------|
| R152691 | 182.88 | R 18.14 | R 09/07/88 | 184.00 | R 24.95 | R 12/24/88 | | 108 |
| R179012 | 243.84 | R 27.22 | R 08/18/89 | 165.00 | R 24.87 | C 12/01/89 | | 105 |
| WH005636 | 156.68 | R 23.59 | R 09/09/70 | 156.68 | R 26.31 | R 12/20/70 | | 102 |
| H019016 | 182.88 | R 22.68 | R 07/03/71 | 223.52 | R 19.96 | R 10/09/71 | | 98 |
| H053932 | 162.10 | R 21.77 | R 06/26/77 | 162.10 | R 24.04 | R 10/01/77 | | 97 |
| R288064 | 163.90 | R 24.95 | R 11/16/91 | 160.02 | R 22.67 | C 02/20/92 | | 96 |
| N001795 | 115.12 | R 22.68 | R 06/14/71 | 218.44 | R 57.89 | C 09/15/71 | | 93 |
| R047670 | 205.74 | R 22.68 | R 08/12/69 | 139.70 | R 16.78 | R 11/13/69 | | 93 |
| R079816 | 163.90 | R 24.95 | R 06/17/82 | 195.58 | R 41.50 | C 09/17/82 | | 92 |
| R262984 | 120.54 | R 22.68 | R 05/18/87 | 167.64 | R 22.68 | R 08/14/87 | | 88 |
| C026423 | 167.52 | R 22.68 | R 09/13/91 | 57.00 | R 28.60 | R 12/10/91 | | 88 |
| C026490 | 120.54 | R 9.66 | C 08/04/69 | 213.36 | R 24.95 | R 10/29/69 | | 86 |
| M007424 | 198.12 | R 20.41 | R 09/04/66 | 153.06 | R 20.41 | R 11/25/66 | | 82 |
| N002392 | 152.40 | R 24.95 | R 07/16/71 | 120.54 | R 22.68 | R 10/04/71 | | 80 |
| M012723 | 182.88 | R 24.95 | R 07/17/71 | 215.90 | R 18.14 | R 10/04/71 | | 79 |
| R084179 | 84.41 | R 15.88 | R 05/25/85 | 157.48 | R 21.11 | R 08/12/85 | | 79 |
| R079728 | 120.54 | R 27.22 | R 08/17/84 | 103.00 | R 6.02 | C 10/30/84 | | 74 |
| R000158 | 120.54 | R 22.68 | R 08/27/78 | 120.54 | R 9.66 | C 11/08/78 | | 73 |
| M001347 | 213.36 | R 18.14 | R 03/24/66 | 213.36 | R 20.41 | R 06/03/66 | | 71 |
| R043878 | 178.36 | R 29.48 | R 05/18/82 | 168.00 | R 26.25 | C 07/25/82 | | 68 |
| M014965 | 156.68 | R 22.68 | R 07/13/71 | 109.22 | R 7.18 | C 09/15/71 | | 64 |
| C019071 | 223.52 | R 18.14 | R 07/12/64 | 205.74 | R 18.14 | R 09/10/64 | | 60 |
| R116989 | 193.04 | R 18.14 | R 06/17/87 | 149.45 | R 24.04 | R 08/12/87 | | 56 |
| R216495 | 102.47 | R 22.68 | R 06/30/91 | 102.47 | R 20.41 | R 08/25/91 | | 56 |
| R092205 | 163.90 | R 27.22 | R 05/22/85 | 199.00 | R 45.81 | R 07/13/85 | | 52 |
| R113938 | 138.61 | R 18.14 | R 08/14/87 | 215.90 | R 55.89 | C 10/05/87 | | 52 |
| R037889 | 213.36 | R 22.68 | R 07/27/81 | 187.96 | R 36.82 | C 09/15/81 | | 50 |
| R032634 | 228.60 | R 18.14 | R 08/28/83 | 174.74 | R 22.68 | R 10/15/83 | | 48 |
| R059405 | 147.64 | R 34.02 | R 06/28/86 | 198.12 | R 43.14 | C 08/15/86 | | 48 |
| R043876 | 174.74 | R 24.95 | R 05/17/82 | 168.00 | R 24.04 | R 07/20/82 | | 46 |
| R087165 | 142.22 | R 18.14 | R 07/21/85 | 142.22 | R 15.90 | C 09/02/85 | | 43 |
| R128406 | 152.40 | R 24.95 | R 05/30/88 | 120.54 | R 45.81 | R 07/12/88 | | 43 |
| R079686 | 205.74 | R 24.95 | R 06/12/84 | 158.48 | R 22.02 | C 07/24/84 | | 42 |
| H001505 | 198.12 | R 43.14 | C 09/04/71 | 153.06 | R 24.95 | R 10/15/71 | | 41 |
| R262900 | 163.90 | R 23.59 | R 09/28/91 | 155.00 | R 27.93 | R 11/08/91 | | 41 |
| R219673 | 167.52 | R 24.95 | R 11/05/91 | 220.00 | R 59.15 | C 12/15/91 | | 40 |
| H012292 | 213.36 | R 45.36 | R 07/09/68 | 163.90 | R 20.87 | R 08/17/68 | | 39 |
| R262992 | 163.90 | R 22.68 | R 09/06/91 | 114.00 | R 27.93 | R 10/11/91 | | 35 |
| H014090 | 203.20 | R 22.68 | R 08/15/70 | 210.82 | R 52.02 | C 09/15/70 | | 31 |
| R153272 | 135.00 | R 22.68 | R 08/13/91 | 184.00 | R 13.61 | R 09/13/91 | | 31 |
| C015668 | 174.74 | R 27.22 | R 07/27/64 | 175.26 | R 29.82 | C 08/26/64 | | 30 |
| H020865 | 182.88 | R 22.68 | R 09/17/71 | 139.70 | R 15.06 | C 10/17/71 | | 30 |
| R014456 | 213.36 | R 18.14 | R 07/17/82 | 163.90 | R 27.22 | R 08/14/82 | | 28 |
| R219651 | 156.68 | R 18.14 | R 11/05/91 | 220.00 | R 34.58 | R 11/28/91 | | 23</ |

Appendix 3. Release and Recapture information for 709 tag-recaptured blue marlin from the Southeast Fisheries Science Center's Cooperative Game Fish Tagging Program, 1954-1992 (June). Lengths were converted to lower-jaw-to-fork, and are given in centimeters. Weights were converted to round weight, and are given in kilograms. Size information are indicated for each value as either reported (R) or calculated (C). Sixty-one recapture records are not listed due to lack of release information.

| Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large |
|------------|--------|----------------|------------|--------|------------------|------------|-----|------------|
| H026197 | 159.94 | R 18.14 | R 03/05/73 | 171.31 | R 24.49 | R 01/24/84 | | 3977 |
| R075626 | 169.42 | R 31.75 | R 04/28/85 | 185.42 | R 29.32 | C 11/01/91 | | 2378 |
| H084100 | 190.50 | R 10.43 | R 09/15/77 | 180.79 | R 19.05 | R 01/28/83 | | 1961 |
| R092275 | 118.23 | R 18.14 | R 05/10/85 | 161.84 | R 22.68 | R 04/03/90 | | 1789 |
| M007079 | 198.12 | R 21.32 | R 02/22/66 | 198.12 | R 27.22 | R 09/20/70 | | 1671 |
| R046474 | 156.15 | R 17.24 | R 11/29/79 | 169.42 | R 22.68 | R 12/26/83 | | 1488 |
| R019127 | 163.73 | R 15.88 | R 12/19/80 | 220.98 | R 51.81 | C 01/11/85 | | 1484 |
| R063225 | 165.10 | R 20.12 | C 04/13/84 | 163.73 | R 20.41 | R 05/02/88 | | 1480 |
| R059350 | 72.73 | R 3.18 | R 01/25/82 | 198.12 | R 20.41 | R 02/08/86 | | 1475 |
| R100898 | 140.98 | R 15.88 | R 04/12/88 | 173.21 | R 23.51 | C 01/17/92 | | 1375 |
| R118327 | 170.55 | C 22.68 | R 05/23/87 | 163.73 | R 36.29 | R 01/10/91 | | 1328 |
| H081595 | 139.08 | R 11.79 | R 02/15/79 | 190.50 | R 19.50 | R 06/10/82 | | 1211 |
| R071172 | 146.67 | R 16.78 | R 12/04/87 | | | 03/14/91 | | 1196 |
| R006248 | 156.15 | R 18.14 | R 11/19/79 | 156.15 | R 22.68 | R 01/30/83 | | 1168 |
| M006427 | 198.12 | R 29.48 | R 08/15/69 | 213.36 | R 46.23 | C 10/08/72 | | 1150 |
| R088638 | 208.28 | R 20.41 | R 01/10/87 | 391.16 | R 22.68 | R 03/03/90 | | 1148 |
| R034205 | 114.30 | R 15.88 | R 12/16/80 | 173.21 | R 15.88 | R 02/05/84 | | 1146 |
| R113927 | 152.36 | R 18.14 | R 12/22/88 | 175.11 | R 23.59 | R 02/03/92 | F | 1138 |
| H090525 | 163.73 | R 19.59 | C 12/15/77 | 163.73 | R 24.95 | R 01/22/81 | | 1134 |
| H097708 | 118.23 | R 6.35 | R 10/23/77 | 125.81 | R 19.96 | R 11/29/80 | | 1133 |
| R070010 | 158.04 | R 22.23 | R 04/05/84 | 152.36 | R 15.51 | C 05/10/87 | | 1130 |
| R100006 | 163.73 | R 18.14 | R 01/24/88 | 152.36 | R 22.68 | R 02/15/91 | | 1118 |
| H035341 | 215.90 | R 11.34 | R 01/03/73 | 205.74 | R 41.09 | C 01/24/76 | | 1116 |
| R056494 | 140.98 | R 18.14 | R 12/21/81 | 163.73 | R 25.86 | R 01/10/85 | | 1116 |
| R062673 | 215.90 | R 27.22 | R 07/13/82 | 198.12 | R 36.35 | C 07/30/85 | | 1113 |
| R085123 | 182.88 | R 28.04 | C 12/15/84 | 169.42 | R 19.96 | R 01/02/88 | | 1113 |
| R059926 | 163.73 | R 18.14 | R 01/19/82 | 171.31 | R 23.59 | R 02/01/85 | | 1109 |
| R115796 | 148.56 | R 9.07 | R 11/28/87 | 163.73 | R 19.50 | R 11/23/90 | | 1091 |
| R5000007 | 153.76 | R 9.00 | R 02/19/56 | 165.70 | R 20.36 | C 02/12/59 | | 1089 |
| R069043 | 161.84 | R 18.86 | C 01/26/84 | 172.72 | R 22.68 | R 01/17/87 | | 1087 |
| R088071 | 175.11 | R 22.68 | R 01/23/85 | 173.21 | R 22.68 | R 01/10/88 | | 1075 |
| R101405 | 118.23 | R 18.14 | R 01/24/87 | 177.00 | R 31.75 | R 12/29/89 | | 1070 |
| R090125 | 186.48 | R 29.48 | R 12/31/85 | 159.94 | R 27.22 | R 12/04/88 | | 1069 |
| R034224 | 140.98 | R 18.14 | R 12/16/80 | 208.28 | R 26.31 | R 11/13/83 | | 1062 |
| R109616 | 165.63 | R 31.75 | R 10/28/86 | 233.68 | R 62.10 | C 09/23/89 | | 1061 |
| R112651 | 118.23 | R 15.88 | R 06/21/88 | 159.94 | R 20.41 | R 05/14/91 | | 1057 |
| R097951 | 137.19 | R 18.14 | R 05/11/87 | 140.98 | R 24.95 | R 03/03/90 | | 1027 |
| M008342 | 198.12 | R 36.35 | C 02/26/66 | 173.21 | R 26.31 | R 11/19/68 | | 997 |
| H049061 | 187.96 | R 30.65 | C 10/15/74 | 101.51 | R 4.15 | C 07/04/77 | | 993 |
| R168899 | 118.23 | R 20.41 | R 02/26/89 | 163.73 | R 19.59 | C 11/16/91 | | 993 |
| R066250 | 156.15 | R 17.24 | R 01/15/79 | 161.84 | R 19.96 | R 01/27/82 | | 927 |
| R025062 | 156.15 | R 18.14 | R 10/20/83 | 142.88 | R 24.49 | R 04/13/86 | | 906 |
| R060828 | 198.12 | R 36.35 | R 09/12/81 | 156.15 | R 22.68 | R 01/28/84 | | 868 |
| R119094 | 140.98 | R 13.61 | R 08/20/87 | 165.63 | R 20.41 | R 01/04/90 | | 868 |
| H096856 | 208.28 | R 42.76 | C 11/01/77 | 213.36 | R 46.23 | C 02/26/80 | | 847 |
| R174152 | 201.65 | R 20.41 | R 11/21/89 | 137.19 | R 29.48 | R 03/14/92 | | 844 |
| R060587 | 163.73 | R 22.68 | R 01/06/82 | 171.31 | R 18.60 | R 04/01/84 | | 816 |
| R084048 | 163.73 | R 22.68 | R 12/15/85 | 169.42 | R 26.31 | R 03/06/88 | | 812 |
| R027123 | 156.15 | R 22.68 | R 10/26/80 | 190.50 | R 15.88 | R 01/14/83 | | 810 |
| R114487 | 163.73 | R 15.88 | R 12/27/89 | 171.31 | R 28.12 | R 03/09/92 | | 803 |
| R119562 | 140.98 | R 18.14 | R 11/07/87 | 171.31 | R 22.68 | R 01/15/90 | | 800 |
| R188897 | 118.23 | R 11.34 | R 12/22/89 | 154.00 | R 16.06 | C 03/01/92 | F | 800 |
| H031429 | 140.98 | R 12.06 | C 12/31/71 | 228.60 | R 57.83 | C 03/08/74 | | 798 |
| R053894 | 152.36 | R 12.70 | R 11/17/84 | 200.66 | R 22.68 | R 01/24/87 | | 798 |
| R103256 | 137.19 | R 15.88 | R 02/14/87 | 169.42 | R 23.59 | R 04/20/89 | | 796 |
| RS000006 | 147.04 | R 14.00 | R 12/30/53 | 169.43 | R 21.89 | C 02/20/56 | | 782 |
| R060989 | 177.80 | R 15.88 | R 12/29/82 | 171.31 | R 19.05 | R 02/15/85 | | 779 |
| R083774 | 140.98 | R 18.14 | R 01/24/86 | 167.52 | R 21.77 | R 03/12/88 | | 778 |
| R148045 | 259.08 | R 22.68 | R 06/01/88 | 224.00 | R 24.95 | R 07/15/90 | | 774 |
| WH006942 | 140.98 | R 9.98 | R 11/02/70 | 149.86 | R 14.70 | C 12/15/72 | | 774 |
| R031165 | 163.73 | R 22.68 | R 12/17/86 | 177.00 | R 25.40 | R 01/24/89 | | 769 |
| R050529 | 213.36 | R 11.34 | R 12/06/79 | 156.15 | R 20.41 | R 01/12/87 | | 768 |
| R013403 | 228.60 | R 15.88 | R 12/22/79 | 167.52 | R 24.04 | R 01/22/82 | | 762 |
| R049292 | 223.32 | R 53.76 | C 01/09/81 | 215.90 | R 21.77 | R 01/25/83 | | 746 |
| R008260 | 213.36 | R 11.34 | R 01/02/78 | 203.20 | R 11.34 | R 01/15/80 | | 743 |
| R075694 | 167.52 | R 22.68 | R 01/07/84 | 142.88 | R 20.41 | R 01/19/86 | | 743 |
| R043083 | 152.36 | R 20.41 | R 02/23/79 | 158.04 | R 15.88 | R 03/06/81 | | 742 |
| R131205 | 175.11 | R 18.14 | R 12/31/88 | 182.69 | R 33.57 | R 01/09/91 | | 739 |
| H029218 | 213.36 | R 15.88 | R 01/06/79 | 171.31 | R 24.04 | R 01/12/81 | | 737 |

Appendix 3. Continued...

| Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large |
|------------|--------|----------------|------------|--------|------------------|------------|-----|------------|
| R001669 | 140.98 | R 13.61 | R 01/22/81 | 213.36 | R 17.24 | R 01/24/83 | | 732 |
| H030658 | 213.36 | R 18.14 | R 01/30/74 | 228.60 | R 57.83 | C 01/31/76 | | 731 |
| R113928 | 163.73 | R 15.88 | R 12/29/88 | 165.63 | R 22.68 | R 12/29/90 | | 730 |
| R181173 | 103.06 | R 5.44 | R 10/30/88 | 152.40 | R 13.61 | R 10/28/90 | | 728 |
| R103581 | 159.94 | R 18.14 | R 01/22/90 | 118.23 | R 18.14 | R 01/18/92 | | 726 |
| R166205 | 129.61 | R 14.97 | R 12/31/88 | 165.73 | C 20.41 | R 12/22/90 | | 721 |
| H045626 | 159.94 | R 20.41 | R 02/10/74 | 213.36 | R 20.41 | R 01/31/76 | | 720 |
| R113946 | 177.80 | R 15.88 | R 02/17/90 | 215.90 | R 27.22 | R 02/07/92 | | 720 |
| H030397 | 198.12 | R 36.35 | C 01/08/73 | 165.63 | R 20.41 | R 12/26/74 | | 717 |
| R168024 | 140.98 | R 18.14 | R 01/25/89 | 159.94 | R 24.95 | R 01/11/91 | | 716 |
| R062742 | 163.73 | R 22.68 | R 12/28/85 | 161.84 | R 22.23 | R 12/12/87 | | 714 |
| R085322 | 182.88 | R 28.04 | C 10/14/84 | 220.98 | R 22.68 | R 09/28/86 | | 714 |
| R098563 | 152.36 | R 24.95 | R 03/29/89 | 171.31 | R 23.13 | R 03/11/91 | | 712 |
| R034810 | 198.12 | R 20.41 | R 01/29/83 | 173.21 | R 29.03 | R 01/07/85 | | 709 |
| R121285 | 182.88 | R 22.68 | R 03/11/84 | 182.88 | R 30.84 | R 02/18/90 | | 709 |
| R189473 | 182.69 | R 27.95 | C 03/02/90 | 182.88 | R 24.95 | R 02/09/92 | | 709 |
| R043508 | 156.15 | R 20.41 | R 01/05/80 | 152.36 | R 21.32 | R 12/13/81 | | 708 |
| R011287 | 140.98 | R 18.14 | R 02/09/80 | 161.84 | R 29.03 | R 01/15/82 | | 706 |
| R063026 | 127.71 | R 22.68 | R 01/27/85 | 177.00 | R 23.59 | R 12/31/86 | | 703 |
| R087276 | 140.98 | R 12.06 | C 05/01/87 | 163.73 | R 19.05 | R 04/01/89 | | 701 |
| R187895 | 127.00 | R 29.48 | R 03/05/90 | 175.26 | R 30.84 | R 02/02/92 | | 699 |
| PA000002 | 213.36 | R 46.23 | C 09/15/59 | 168.69 | R 21.58 | C 08/14/61 | | 699 |
| H096298 | 110.65 | R 8.16 | R 02/20/78 | 163.73 | R 20.41 | R 01/19/80 | | 698 |
| R035112 | 139.70 | R 9.07 | R 05/30/83 | 223.52 | R 13.61 | R 04/27/85 | | 698 |
| R063557 | 184.59 | R 33.57 | R 02/11/82 | 159.94 | R 23.13 | R 01/08/84 | | 696 |
| R192181 | 144.77 | R 18.14 | R 04/22/90 | 167.52 | R 20.41 | R 03/16/92 | | 694 |
| R049583 | 118.23 | R 18.14 | R 01/19/80 | 215.90 | R 18.14 | R 12/12/81 | | 693 |
| H023731 | 213.36 | R 6.80 | R 02/12/73 | 140.98 | R 15.88 | R 01/05/75 | | 692 |
| R110695 | 121.92 | R 11.34 | R 01/14/87 | 165.63 | R 21.77 | R 12/04/88 | | 690 |
| R100101 | 182.69 | R 27.22 | R 12/22/87 | 173.21 | R 24.49 | R 11/10/89 | | 689 |
| R130976 | 150.46 | R 18.14 | R 05/04/89 | | | 03/23/91 | | 688 |
| H087883 | 133.40 | R 10.08 | C 02/15/78 | 223.52 | R 53.76 | C 12/23/79 | | 676 |
| M003405 | 152.36 | R 15.51 | C 02/04/66 | 173.21 | R 23.51 | C 12/07/67 | | 671 |
| H008392 | 156.15 | R 16.79 | C 07/20/68 | 140.98 | R 18.14 | R 05/20/70 | | 669 |
| H045823 | 208.28 | R 42.76 | C 01/25/86 | 192.17 | R 29.03 | R 11/23/87 | | 667 |
| R087127 | 140.98 | R 13.61 | R 02/17/85 | 203.20 | R 26.31 | R 12/03/86 | | 654 |
| R173368 | 165.63 | R 22.68 | R 04/20/90 | 125.81 | R 20.41 | R 02/01/92 | | 652 |
| PA000001 | 213.36 | R 46.23 | C 06/08/55 | 203.20 | R 39.47 | C 03/09/57 | | 640 |
| M007427 | 198.12 | R 36.35 | C 08/20/66 | 172.72 | R 29.48 | R 05/15/68 | | 634 |
| H093886 | 152.36 | R 20.41 | R 12/19/78 | 158.04 | R 18.14 | R 08/25/80 | | 615 |
| R113917 | 118.23 | R 6.80 | R 03/03/89 | 137.16 | R 11.03 | C 10/20/90 | | 596 |
| R045508 | 171.31 | R 20.41 | R 06/07/79 | 200.66 | R 21.77 | R 01/10/81 | | 583 |
| H035300 | 215.90 | R 48.04 | C 04/19/76 | 205.74 | R 16.33 | R 11/06/77 | | 566 |
| R154052 | 208.28 | R 13.61 | R 06/02/90 | 157.00 | R 17.09 | C 12/17/91 | | 563 |
| R008125 | 163.73 | R 19.59 | C 01/12/80 | 165.63 | R 19.96 | R 07/18/81 | | 553 |
| C007251 | 131.50 | R 9.62 | C 12/26/61 | 156.15 | R 15.42 | R 06/24/63 | | 545 |
| R174528 | 264.16 | R 9.07 | R 08/18/89 | 51.00 | R 19.30 | R 02/13/91 | | 544 |
| R147183 | 163.73 | R 18.14 | R 04/28/89 | 118.23 | R 15.88 | R 10/21/90 | | 541 |
| H023429 | 213.36 | R 22.68 | R 02/15/73 | 99.27 | R 13.61 | R 08/09/74 | | 540 |
| R115173 | 140.98 | R 20.41 | R 10/27/86 | 95.48 | R 21.32 | R 04/10/88 | | 531 |
| H029771 | 152.36 | R 18.14 | R 01/08/73 | | | | | |

Appendix 3. Continued...

| Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large |
|------------|--------|----------------|------------|--------|------------------|------------|-----|------------|
| R112713 | 152.36 | R 18.14 | R 12/22/87 | 208.28 | R 42.76 | C 03/08/89 | | 442 |
| R203099 | 133.40 | R 24.95 | R 11/02/90 | 149.86 | R 18.82 | R 01/18/92 | | 442 |
| H089718 | 152.36 | R 15.51 | C 01/08/77 | 543.56 | R 960.32 | C 03/23/78 | | 439 |
| B008567 | 163.73 | R 20.87 | R 02/05/58 | 161.84 | R 23.13 | R 04/19/59 | | 438 |
| H057736 | 152.36 | R 27.22 | R 11/24/77 | 259.08 | R 27.22 | R 02/01/79 | | 434 |
| R164043 | 127.71 | R 15.88 | R 10/28/88 | 178.90 | R 26.31 | R 01/05/90 | | 434 |
| H046880 | 198.12 | R 15.88 | R 12/14/74 | 148.56 | R 19.50 | R 02/15/76 | | 428 |
| R013974 | 213.36 | R 46.23 | C 12/15/78 | 173.21 | R 22.68 | R 02/16/80 | | 428 |
| RS000009 | 153.76 | R 15.97 | C 07/16/57 | 165.70 | R 20.36 | C 09/15/58 | | 426 |
| R056642 | 150.46 | R 15.88 | R 12/12/89 | 165.63 | R 22.68 | R 02/10/91 | | 425 |
| R060939 | 133.40 | R 15.88 | R 12/08/81 | 203.20 | R 39.47 | C 02/03/83 | | 422 |
| R076489 | 140.98 | R 18.14 | R 12/15/85 | 152.36 | R 15.88 | R 02/10/87 | | 422 |
| R042135 | 159.94 | R 16.33 | R 12/20/79 | 156.15 | R 16.33 | R 02/12/81 | | 420 |
| H091823 | 198.12 | R 36.35 | C 05/01/76 | 111.21 | R 5.59 | C 06/24/77 | | 419 |
| R038864 | 144.77 | R 14.97 | R 12/17/78 | 161.84 | R 24.04 | R 02/08/80 | | 418 |
| R068256 | 152.36 | R 18.14 | R 12/19/82 | 175.11 | R 31.30 | R 02/10/84 | | 418 |
| R087121 | 140.98 | R 13.61 | R 12/11/87 | 203.20 | R 18.14 | R 01/31/89 | | 417 |
| H087826 | 182.88 | R 28.04 | C 12/15/77 | 171.31 | R 26.76 | R 02/04/79 | | 416 |
| H094339 | 156.15 | R 18.14 | R 12/10/78 | 193.04 | R 33.42 | C 01/30/80 | | 416 |
| R042142 | 156.15 | R 15.88 | R 01/04/80 | 146.67 | R 19.96 | R 02/22/81 | | 415 |
| R100520 | 170.55 | C 22.68 | R 12/24/90 | 182.88 | R 28.04 | C 02/11/92 | | 414 |
| R126044 | 140.98 | R 13.61 | R 03/16/88 | 132.08 | R 18.14 | R 05/02/89 | | 412 |
| R148712 | 95.48 | R 13.61 | R 11/18/89 | 140.98 | R 31.75 | R 01/04/91 | | 412 |
| R257823 | 129.61 | R 15.88 | R 11/02/90 | 173.21 | R 34.02 | R 12/19/91 | | 412 |
| R133982 | 156.15 | R 18.14 | R 11/11/87 | 163.73 | R 17.24 | R 12/24/88 | | 409 |
| R008163 | 152.36 | R 15.51 | C 12/24/77 | 156.15 | R 16.79 | C 02/05/79 | | 408 |
| R078987 | 156.15 | R 17.24 | R 12/12/85 | 163.73 | R 21.77 | R 01/24/87 | | 408 |
| C002925 | 195.58 | R 34.86 | C 01/28/60 | 165.63 | R 20.41 | R 03/08/61 | | 405 |
| R011886 | 182.88 | R 15.88 | R 11/19/78 | 159.94 | R 16.78 | R 12/28/79 | | 404 |
| H045401 | 152.36 | R 15.51 | C 12/13/73 | 228.60 | R 19.05 | R 01/20/75 | | 403 |
| B006208 | 167.52 | R 21.10 | C 01/31/62 | 161.84 | R 17.69 | R 03/09/63 | | 402 |
| M001425 | 140.98 | R 12.06 | C 12/19/65 | 165.63 | R 18.14 | R 02/23/67 | | 400 |
| R074840 | 152.36 | R 18.14 | R 01/18/90 | | | 01/22/91 | | 400 |
| R149730 | 140.98 | R 13.61 | R 11/25/89 | 169.42 | R 18.14 | R 12/30/90 | | 400 |
| R049799 | 159.94 | R 16.78 | R 12/21/79 | 154.25 | R 14.52 | R 01/28/81 | | 398 |
| H088846 | 95.48 | R 5.44 | R 12/23/76 | 410.19 | R 15.42 | R 01/24/78 | | 397 |
| R063547 | 180.79 | R 24.95 | R 01/31/83 | 180.79 | R 25.86 | R 03/03/84 | | 397 |
| H095536 | 148.56 | R 14.52 | R 12/12/76 | 163.73 | R 19.96 | R 01/12/78 | | 396 |
| R049491 | 223.52 | R 20.41 | R 12/17/80 | 165.63 | R 28.58 | R 01/15/82 | | 394 |
| R068318 | 198.12 | R 11.34 | R 11/14/87 | 118.23 | R 21.77 | R 12/12/88 | | 394 |
| R069357 | 140.98 | R 20.41 | R 12/14/84 | 223.52 | R 18.14 | R 01/12/86 | | 394 |
| R010978 | 161.84 | R 18.86 | C 01/15/78 | 236.22 | R 64.32 | C 02/12/79 | | 393 |
| R034848 | 140.98 | R 20.41 | R 12/11/82 | 169.42 | R 25.40 | R 01/08/84 | | 393 |
| H044784 | 163.73 | R 18.14 | R 01/19/75 | 160.00 | R 18.18 | C 02/15/76 | | 392 |
| R079255 | 156.15 | R 20.41 | R 02/09/85 | 173.21 | R 21.77 | R 03/08/86 | | 392 |
| R038711 | 140.98 | R 12.70 | R 12/26/78 | 163.73 | R 21.32 | R 01/20/80 | | 390 |
| R052373 | 203.20 | R 17.69 | R 11/29/80 | 215.90 | R 48.04 | C 12/24/81 | | 390 |
| R111223 | 163.73 | R 24.95 | R 12/16/86 | 163.73 | R 20.41 | R 01/10/88 | | 390 |
| R189741 | 133.40 | R 15.88 | R 12/15/90 | 147.32 | R 17.24 | R 01/09/92 | | 389 |
| R097440 | 169.42 | R 21.88 | C 12/28/90 | 165.63 | R 20.41 | R 01/21/92 | | 389 |
| R056490 | 213.36 | R 20.41 | R 12/12/81 | 160.02 | R 18.18 | C 01/04/83 | | 388 |
| R031452 | 182.88 | R 27.22 | R 11/20/82 | 231.14 | R 59.54 | C 12/12/83 | | 387 |
| R223708 | 133.40 | R 9.07 | R 11/03/90 | 165.63 | R 17.01 | R 11/23/91 | | 385 |
| R012678 | 118.23 | R 13.61 | R 01/06/79 | 150.46 | R 18.60 | R 01/25/80 | | 384 |
| R090314 | 152.36 | R 13.61 | R 12/08/86 | 208.28 | R 42.76 | C 12/27/87 | | 384 |
| R147576 | 118.23 | R 22.23 | R 12/16/89 | 170.55 | C 22.68 | R 01/04/91 | | 384 |
| D003759 | 163.73 | R 19.59 | C 11/11/62 | 165.63 | R 21.77 | R 11/28/63 | | 382 |
| H034404 | 106.86 | R 4.91 | C 11/09/73 | 159.94 | R 15.88 | R 11/26/74 | | 382 |
| R055508 | 156.15 | R 24.95 | R 04/29/89 | 160.02 | R 15.88 | R 05/16/90 | | 382 |
| R069071 | 171.31 | R 24.95 | R 01/09/84 | 178.90 | R 27.22 | R 01/23/85 | | 380 |
| R041089 | 173.21 | R 26.31 | R 01/19/80 | 186.48 | R 27.22 | R 02/01/81 | | 379 |
| D001165 | 156.15 | R 16.79 | C 01/06/60 | 178.90 | R 22.68 | R 01/18/61 | | 378 |
| R187341 | 140.98 | R 18.14 | R 02/16/91 | 213.36 | R 46.23 | C 02/28/92 | | 377 |
| A000267 | 0.00 | R 0.00 | C 01/01/55 | 158.04 | R 15.88 | R 01/12/56 | | 376 |
| M012507 | 140.98 | R 12.06 | C 12/26/75 | 165.63 | R 18.14 | R 01/05/77 | | 376 |
| C007721 | 152.36 | R 11.34 | R 12/31/61 | 152.36 | R 14.97 | R 01/09/63 | | 374 |
| H024276 | 213.36 | R 20.41 | R 02/12/73 | 159.94 | R 20.41 | R 02/21/74 | | 374 |
| R050133 | 163.73 | R 14.52 | R 12/01/81 | 161.84 | R 16.78 | R 12/10/82 | | 374 |
| R171809 | 171.31 | R 21.77 | R 08/06/89 | | | 08/15/90 | | 374 |
| R098238 | 159.94 | R 18.14 | R 01/25/89 | 182.88 | R 28.04 | C 02/02/90 | | 373 |
| H088537 | 163.73 | R 18.14 | R 01/03/76 | 180.79 | R 24.95 | R 01/09/77 | | 372 |
| R152065 | 140.98 | R 18.14 | R 02/13/89 | 137.00 | R 20.41 | R 02/19/90 | | 371 |
| R061629 | 152.36 | R 15.88 | R 01/16/85 | 159.94 | R 19.50 | R 01/21/86 | | 370 |
| R078339 | 137.19 | R 14.97 | R 12/20/84 | 139.08 | R 15.88 | R 12/25/85 | | 370 |

Appendix 3. Continued...

| Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large |
|------------|--------|----------------|------------|--------|------------------|------------|-----|------------|
| R080133 | 190.50 | R 18.60 | R 12/24/84 | 159.94 | R 24.95 | R 12/29/85 | | 370 |
| R171805 | 203.54 | R 34.02 | R 08/06/89 | 175.03 | C 24.95 | R 08/11/90 | | 370 |
| R100308 | 106.86 | R 18.14 | R 01/27/88 | | | 01/30/89 | | 369 |
| M010845 | 213.36 | R 18.14 | R 05/02/67 | 203.20 | R 20.87 | R 05/04/68 | | 368 |
| R018079 | 70.83 | R 1.29 | C 02/14/85 | 152.36 | R 19.05 | R 02/17/86 | | 368 |
| H012210 | 213.36 | R 20.41 | R 01/03/68 | 169.42 | R 25.40 | R 01/03/69 | | 366 |
| R076755 | 163.73 | R 18.14 | R 01/29/84 | 213.36 | R 46.23 | C 01/29/85 | | 366 |
| R088411 | 137.19 | R 20.41 | R 02/16/86 | 152.36 | R 15.51 | C 02/17/87 | | 366 |
| WH004984 | 198.12 | R 36.35 | C 04/15/72 | 165.63 | R 22.23 | R 04/16/73 | | 366 |
| H037254 | 213.36 | R 9.07 | R 01/14/73 | 165.63 | R 20.41 | R 01/14/74 | | 365 |
| H046034 | 152.36 | R 24.95 | R 01/09/77 | 173.21 | R 22.68 | R 01/08/78 | | 364 |
| R002375 | 137.19 | R 18.14 | R 01/22/79 | 173.21 | R 24.95 | R 01/21/80 | | 364 |
| R168564 | 95.48 | R 11.34 | R 11/25/90 | 156.15 | R 22.68 | R 11/24/91 | | 364 |
| R171240 | 228.60 | R 20.41 | R 10/16/89 | 178.40 | C 26.76 | R 10/15/90 | | 364 |
| R259772 | 118.23 | R 6.81 | C 04/27/91 | 226.06 | R 20.41 | R 04/25/92 | | 364 |
| R043049 | 137.19 | R 19.05 | R 01/02/82 | 156.15 | R 17.24 | R 12/31/82 | | 363 |
| H033454 | 203.20 | R 20.41 | R 02/02/75 | 210.82 | R 44.47 | C 01/30/76 | | 362 |
| R218473 | 140.98 | R 24.95 | R 12/28/79 | 159.94 | R 13.61 | R 03/16/92 | | 360 |
| H080551 | 152.36 | R 15.88 | R 12/14/74 | 173.21 | R 32.66 | R 12/08/75 | | 359 |
| R010336 | 137.19 | R 18.14 | R 01/23/81 | 163.73 | R 19.50 | R 01/17/82 | | 359 |
| R215097 | 127.71 | R 15.88 | R 02/07/91 | 149.86 | R 15.88 | R 02/01/92 | | 359 |
| H095861 | 106.86 | R 18.14 | R 12/28/91 | 148.56 | R 18.14 | R 12/20/80 | | 358 |
| R173423 | 118.23 | R 13.61 | R 01/06/90 | 169.42 | R 18.14 | R 12/30/90 | | 358 |
| R076256 | 146.67 | R 18.14 | R 01/14/84 | 159.94 | R 19.05 | R 01/05/85 | | 357 |
| R129325 | 118.23 | R 15.88 | R 02/11/89 | 120.13 | R 20.41 | R 02/03/90 | | 357 |
| R033760 | 152.36 | R 20.41 | R 12/07/81 | 152.36 | R 20.41 | R 11/28/82 | | 356 |
| R128283 | 118.23 | R 13.61 | R 02/11/90 | 147.32 | R 16.33 | R 02/02/91 | | 356 |
| H098925 | 175.11 | R 24.36 | C 01/08/77 | 159.94 | R 19.05 | R 12/28/77 | | 354 |
| R056496 | 80.31 | R 4.54 | R 12/06/81 | 213.36 | R 46.23 | C 11/25/82 | | 354 |
| CL000165 | 152.36 | R 15.88 | R 01/20/62 | 158.04 | R 13.61 | R 01/09/63 | | 354 |
| R035677 | 139.70 | R 18.14 | R 01/05/85 | 223.52 | R 53.76 | C 12/23/85 | | 352 |
| R064114 | 140.98 | R 13.61 | R 11/25/82 | 150.46 | R 17.24 | R 11/12/83 | | 352 |
| R078295 | 129.61 | R 13.61 | R 02/07/85 | 165.63 | R 19.96 | R 01/25/86 | | 352 |
| B008568 | 167.52 | R 21.10 | C 01/28/58 | 167.52 | R 18.14 | R 01/14/59 | | 351 |
| R148195 | 95.48 | R 9.07 | R 10/28/89 | 157.48 | R 15.88 | R 10/14/90 | | 351 |
| R114489 | 213.36 | R 46.23 | C 03/15/87 | 158.04 | R 18.60 | R 02/28/88 | | 350 |
| CL000427 | 198.12 | R 36.35 | C 12/26/65 | 165.63 | R 18.14 | R 12/11/66 | | 350 |
| H088586 | 213.36 | R 20.41 | R 01/22/76 | 186.48 | R 36.29 | R 01/05/77 | | 349 |
| R071546 | 140.98 | R 20.41 | R 01/11/85 | 156.15 | R 16.79 | C 12/26/85 | | 349 |
| R115350 | 163.73 | R 29.48 | R 12/04/88 | 144.77 | R 13.14 | C 11/18/89 | | 349 |
| CH000023 | 140.98 | R 12.06 | C 04/02/64 | 165.63 | R 20.33 | C 03/17/65 | | 349 |
| M000960 | 159.94 | R 18.14 | R 12/01/65 | 154.25 | R 17.69 | R 11/13/66 | | 347 |
| R063394 | 171.31 | R 27.22 | R 01/07/86 | 213.36 | R 29.48 | R 12/20/86 | | 347 |
| H046597 | 198.12 | R 20.41 | R 02/01/75 | 163.73 | R 18.14 | R 01/13/76 | | 346 |
| R034974 | 165.63 | R 26.31 | R 02/04/81 | 161.84 | R 24.95 | R 01/16/82 | | 346 |
| H038626 | 152.36 | R 19.50 | R 01/17/74 | 158.04 | R 19.96 | R 12/27/74 | | 344 |
| R034677 | 152.36 | R 18.14 | R 01/23/88 | 163.73 | R 18.14 | R 12/31/88 | | 343 |
| R042783</ | | | | | | | | |

Appendix 3. Continued...

| Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large | Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large |
|------------|--------|----------------|------------|--------|------------------|------------|-----|------------|------------|--------|----------------|------------|--------|------------------|------------|-----|------------|
| R063621 | 158.04 | R 18.14 | R 02/11/82 | 208.28 | R 42.76 | C 01/02/83 | | 325 | C027214 | 140.98 | R 11.34 | R 11/15/68 | 133.40 | R 10.08 | C 05/18/69 | | 184 |
| R040604 | 182.88 | R 15.88 | R 12/09/78 | 213.36 | R 20.41 | R 10/29/79 | | 324 | R118412 | 163.73 | R 20.41 | R 05/11/89 | 153.76 | R 20.41 | R 11/11/89 | | 184 |
| C006757 | 163.73 | R 18.14 | R 03/02/61 | 163.73 | R 19.59 | C 01/19/62 | | 323 | R041179 | 218.44 | R 18.14 | R 01/20/81 | 129.61 | R 9.18 | C 07/21/81 | | 182 |
| R077740 | 140.98 | R 22.68 | R 02/17/84 | 163.73 | R 22.23 | R 01/05/85 | | 323 | R189259 | 118.23 | R 22.68 | R 11/03/89 | 154.00 | R 16.06 | C 05/04/90 | | 182 |
| R098569 | 118.23 | R 9.98 | R 12/26/86 | 156.15 | R 15.42 | R 11/13/87 | | 322 | H000820 | 198.12 | R 36.35 | C 02/11/67 | 200.66 | R 37.89 | C 08/11/67 | | 181 |
| R076500 | 182.88 | R 13.61 | R 01/17/87 | 163.73 | R 18.14 | R 12/03/87 | | 320 | H033365 | 203.20 | R 29.48 | R 08/20/74 | 161.84 | R 21.77 | R 02/15/75 | | 179 |
| D001583 | 186.48 | R 29.87 | C 04/14/62 | 233.68 | R 23.13 | R 02/25/63 | | 317 | R093678 | 152.36 | R 20.41 | R 09/29/86 | 213.36 | R 19.05 | R 03/27/87 | | 179 |
| R178509 | 137.19 | R 22.68 | R 03/01/90 | 213.36 | R 23.59 | R 01/11/91 | | 316 | H032850 | 203.20 | R 18.14 | R 12/27/75 | 226.06 | R 55.77 | C 06/15/76 | | 171 |
| R186720 | 118.23 | R 20.41 | R 03/04/90 | 147.32 | R 31.75 | R 01/14/91 | | 316 | R078681 | 162.56 | R 13.61 | R 03/16/84 | 163.73 | R 23.59 | R 09/03/84 | | 171 |
| H029208 | 213.36 | R 46.23 | C 03/05/73 | 213.36 | R 46.23 | C 01/13/74 | | 314 | PA000003 | 161.22 | R 18.63 | C 07/04/61 | 143.31 | R 12.71 | C 12/22/61 | | 171 |
| R203386 | 213.36 | R 9.07 | R 01/14/90 | 140.98 | R 24.95 | R 11/19/90 | | 309 | R038818 | 137.19 | R 18.14 | R 01/07/79 | 169.42 | R 27.22 | R 06/24/79 | | 168 |
| H091388 | 198.12 | R 36.35 | C 02/15/81 | 146.67 | R 17.24 | R 12/14/81 | | 302 | R216753 | 118.23 | R 13.61 | R 09/15/91 | 108.75 | R 13.61 | R 03/01/92 | | 168 |
| R059354 | 91.44 | R 18.14 | R 02/15/82 | 198.12 | R 22.68 | R 12/11/82 | | 299 | H042474 | 167.64 | R 21.14 | C 01/31/76 | 123.90 | R 7.93 | C 07/14/76 | | 165 |
| R076846 | 213.36 | R 13.61 | R 01/18/88 | 173.21 | R 20.41 | R 11/12/88 | | 299 | R209531 | 152.36 | R 18.14 | R 11/19/90 | | | 05/03/91 | | 165 |
| R192341 | 140.98 | R 20.41 | R 02/09/91 | 218.44 | R 15.88 | R 12/04/91 | | 298 | R087130 | 118.23 | R 9.98 | R 05/28/88 | 203.20 | R 39.47 | C 11/08/88 | | 164 |
| R034524 | 213.36 | R 18.14 | R 01/26/81 | 152.36 | R 18.14 | R 11/17/81 | | 295 | R096503 | 146.67 | R 15.88 | R 01/04/87 | 162.56 | R 17.69 | R 06/12/87 | | 159 |
| R035019 | 171.31 | R 22.68 | R 01/18/82 | 171.31 | R 24.04 | R 11/09/82 | | 295 | CK000219 | 118.23 | R 8.62 | R 04/03/62 | 144.77 | R 12.70 | R 09/08/62 | | 158 |
| R189472 | 152.40 | R 9.07 | R 03/23/90 | 140.98 | R 20.41 | R 01/08/91 | | 291 | M003128 | 140.98 | R 13.61 | R 11/14/65 | 144.77 | R 15.88 | R 04/15/66 | | 152 |
| R205603 | | | 04/30/91 | 191.08 | R 21.32 | R 02/15/92 | | 291 | R130982 | 156.15 | R 16.79 | C 05/17/88 | 123.90 | R 20.41 | R 10/16/88 | | 152 |
| R203416 | 99.27 | R 6.80 | R 11/03/89 | 182.88 | R 11.34 | R 08/19/90 | | 289 | M007334 | 198.12 | R 36.35 | C 08/06/66 | 200.66 | R 37.89 | C 01/02/67 | | 149 |
| R188027 | 122.92 | C 6.80 | R 01/18/91 | | | 11/01/91 | | 287 | M002808 | 163.73 | R 18.14 | R 10/21/65 | 218.44 | R 20.41 | R 03/17/66 | | 147 |
| R103072 | 156.15 | R 22.68 | R 05/08/86 | 152.36 | R 15.51 | C 02/17/87 | | 285 | R123245 | 140.98 | R 15.88 | R 02/26/88 | 152.36 | R 13.61 | R 07/22/88 | | 147 |
| H038760 | 213.36 | R 31.75 | R 04/11/73 | 148.56 | R 16.78 | R 01/19/74 | | 283 | H026772 | 152.36 | R 13.61 | R 12/11/72 | 167.52 | R 19.05 | R 05/05/73 | | 145 |
| H094103 | 156.15 | R 15.88 | R 01/16/78 | 159.94 | R 22.68 | R 10/26/78 | | 283 | R034824 | 198.12 | R 20.41 | R 01/29/82 | 226.06 | R 18.14 | R 06/22/82 | | 144 |
| R190343 | 122.02 | R 11.34 | R 04/18/90 | 175.03 | C 24.95 | R 01/26/91 | | 283 | R102235 | 163.73 | R 18.14 | R 09/20/86 | 173.21 | R 27.22 | R 02/11/87 | | 144 |
| R090298 | 175.03 | C 24.95 | R 01/23/91 | 208.28 | R 20.41 | R 11/06/91 | | 282 | C012341 | 198.12 | R 9.07 | R 01/26/67 | 233.68 | R 11.79 | R 06/18/67 | | 143 |
| C020093 | 223.52 | R 18.14 | R 09/27/63 | 161.84 | R 14.52 | R 06/30/64 | | 277 | R017329 | 178.90 | R 24.95 | R 12/23/78 | 159.94 | R 23.59 | R 05/15/79 | | 143 |
| M012103 | 172.72 | R 22.68 | R 08/28/68 | 163.73 | R 18.14 | R 05/31/69 | | 276 | R087341 | 158.04 | R 18.14 | R 12/21/85 | 169.42 | R 24.95 | R 05/13/86 | | 143 |
| R223473 | 140.98 | R 15.88 | R 04/27/90 | 163.73 | R 22.68 | R 01/28/91 | | 276 | R010851 | 175.11 | R 22.68 | R 12/01/79 | 180.79 | R 27.22 | R 04/20/80 | | 141 |
| R019069 | 148.56 | R 14.52 | R 03/12/81 | 169.42 | R 17.69 | R 12/12/81 | | 275 | R102665 | 156.15 | R 24.95 | R 01/01/87 | 180.34 | R 28.58 | R 05/21/87 | | 140 |
| R087590 | 175.11 | R 18.14 | R 02/26/85 | 220.98 | R 20.41 | R 11/28/85 | | 275 | R036658 | 163.73 | R 20.41 | R 12/12/81 | 213.36 | R 22.68 | R 04/29/82 | | 138 |
| C006565 | 129.61 | R 9.18 | C 03/16/62 | 140.98 | R 11.34 | R 12/15/62 | | 274 | R019211 | 95.48 | R 6.80 | R 01/15/81 | 220.98 | R 10.43 | R 05/31/81 | | 136 |
| H053886 | 198.12 | R 13.61 | R 08/26/77 | 215.90 | R 48.04 | C 05/26/78 | | 273 | R260742 | 122.02 | R 18.14 | R 10/25/91 | 182.88 | R 19.05 | R 03/07/92 | | 134 |
| R014097 | 213.36 | R 24.95 | R 02/01/79 | 169.42 | R 27.22 | R 10/31/79 | | 272 | H002840 | 152.36 | R 15.51 | C 03/02/66 | 154.25 | R 14.52 | R 07/12/66 | | 132 |
| H004618 | 215.90 | R 48.04 | C 01/17/67 | 218.44 | R 49.90 | C 10/15/67 | | 271 | M002031 | 152.36 | R 15.51 | C 12/08/67 | 167.52 | R 18.14 | R 04/18/68 | | 132 |
| H021522 | 163.73 | R 18.14 | R 10/21/71 | 158.04 | R 17.46 | C 07/15/72 | | 268 | H012187 | 163.73 | R 19.59 | C 10/07/67 | 163.73 | R 19.59 | C 02/15/68 | | 131 |
| R102012 | 182.88 | R 17.69 | R 12/28/87 | 154.25 | R 19.05 | R 09/21/88 | | 268 | R008766 | 106.68 | R 16.78 | R 12/10/77 | 163.73 | R 20.87 | R 04/20/78 | | 131 |
| R141076 | 163.73 | R 19.59 | C 04/22/88 | 215.90 | R 21.77 | R 01/14/89 | | 267 | R085557 | 182.88 | R 28.04 | C 08/30/85 | 220.98 | R 26.76 | R 01/06/86 | | 129 |
| R257749 | 129.61 | R 20.41 | R 05/11/91 | 165.10 | R 22.68 | R 01/31/92 | F | 265 | R217759 | 140.98 | R 15.88 | R 11/27/91 | 165.10 | R 17.24 | R 04/09/92 | | 129 |
| R068316 | 198.12 | R 11.34 | R 02/17/88 | 205.74 | R 13.61 | R 11/06/88 | | 263 | B008663 | 118.23 | R 6.81 | C 01/10/63 | 218.44 | R 49.90 | C 05/17/63 | | 127 |
| R015872 | 152.36 | R 17.24 | R 04/26/86 | 193.04 | R 21.77 | R 01/12/87 | | 261 | C027920 | 175.11 | R 24.36 | C 02/21/67 | 236.22 | R 64.32 | C 06/28/67 | | 127 |
| BL000392 | 156.15 | R 18.14 | R 01/26/86 | 158.04 | R 17.46 | C 10/11/86 | | 258 | R026752 | 148.56 | R 13.61 | R 09/21/84 | 205.74 | R 13.61 | R 01/26/85 | | 127 |
| H086635 | 165.63 | R 22.68 | R 12/13/81 | 118.23 | R 22.68 | R 08/24/82 | | 254 | R128868 | 95.48 | R 9.07 | R 12/11/88 | 106.86 | R 4.91 | C 04/15/89 | | 125 |
| M001135 | 208.28 | R 15.88 | R 04/25/66 | 171.31 | R 22.68 | R 01/03/67 | | 253 | M007089 | 198.12 | R 22.68 | R 04/06/66 | 198.12 | R 28.12 | R 08/07/66 | | 123 |
| C006326 | 218.44 | R 12.70 | R 05/20/61 | 213.36 | R 46.23 | C 01/21/62 | | 246 | R052244 | 156.15 | R 13.61 | R 01/01/81 | 215.90 | R 14.97 | R 05/04/81 | | 123 |
| R186223 | 203.20 | R 11.34 | R 03/04/90 | 95.48 | R 6.80 | R 11/04/90 | | 245 | R067456 | 95.48 | R 6.80 | R 12/26/83 | 213.36 | R 46.23 | C 04/27/84 | | 123 |
| H010957 | 218.44 | R 9.07 | R 12/08/66 | 156.15 | R 16.79 | C 08/01/67 | | 236 | R127327 | 163.73 | R 24.95 | R 02/16/88 | 195.58 | R 24.95 | R 06/18/88 | | 123 |
| H086954 | 152.36 | R 15.51 | C 12/28/75 | 213.36 | R 46.23 | C 08/15/76 | | 231 | R034927 | 140.98 | R 18.14 | R 12/08/81 | 220.98 | R 51.81 | C 04/09/82 | | 122 |
| H023323 | 163.73 | R 34.02 | R 04/28/71 | 195.58 | R 34.86 | C 12/14/71 | | 230 | H013085 | 171.31 | R 22.69 | C 03/21/68 | 213.36 | R 18.14 | R 07/20/68 | | 121 |
| R042126 | 156.15 | R 14.52 | R 07/14/79 | 158.04 | R 21.32 | R 02/26/80 | | 227 | M011639 | 133.40 | R 11.34 | R 06/17/67 | 171.31 | R 17.24 | R 10/16/67 | | 121 |
| R013584 | 158.04 | R 15.88 | R 04/28/79 | 218.44 | R 49.90 | C 12/06/79 | | 222 | R184156 | 156.15 | R 20.41 | R 04/18/90 | 117.00 | R 22.68 | R 08/17/90 | | 121 |
| R102442 | 142.88 | R 11.34 | R 03/23/88 | 158.04 | R 15.42 | R 10/30/88 | | 221 | H031865 | 156.15 | R 15.88 | R 01/17/72 | 163.73 | R 20.41 | R 05/16/72 | | 120 |
| R001436 | 118.23 | R 8.16 | R 09/24/86 | 163.73 | R 19.05 | R 05/01/87 | | 219 | H088561 | 213.36 | R 15.88 | R 12/24/76 | 142.88 | R 8.16 | R 04/19/77 | | 116 |
| R070705 | 167.64 | R 18.14 | R 06/11/85 | 163.73 | R 20.41 | R 01/16/86 | | 219 | R083998 | 152.36 | R 22.68 | R 02/01/85 | 163.73 | R 19.59 | C 05/26/85 | | 114 |
| R067827 | 146.67 | R 20.41 | R 08/15/83 | 142.88 | R 16.78 | R 03/18/84 | | 216 | H037068 | 213.36 | R 34.02 | R 01/05/73 | 186.48 | R 43.09 | R 04/27/73 | | 112 |
| R130215 | 142.88 | R 12.59 | C 04/02/89 | 208.28 | R 42.76 | C 11/04/89 | | 216 | R069735 | 182.88 | R 24.95 | R 07/20/86 | 205.74 | R 41.09 | C 11/09/86 | | 112 |
| R013870 | 163.73 | R 19.59 | C 05/20/78 | 165.63 | R 21.77 | R 12/19/78 | | 213 | C020314 | 163.73 | R 18.14 | R 04/13/64 | 210.82 | R 44.47 | C 08/02/64 | | 111 |
| R154206 | 140.98 | R 22.68 | R 09/03/90 | | | 04/04/91 | | 213 | R039151 | 127.71 | R 20.41 | R 12/21/78 | 182.88 | R 28.04 | C 04/11/79 | | 111 |
| R168939 | 139.08 | R 17.24 | R 10/14/89 | 123.92 | R 22.23 | R 05/12/90 | | 210 | R089708 | 163.73 | R 20.41 | R 02/22/86 | 154.25 | R 17.69 | R 06/13/86 | | 111 |
| R190542 | 80.31 | R 22.68 | R 06/25/90 | 140.98 | R 18.14 | R 01/20/91 | | 209 | R082188 | 175.11 | R 20.41 | R 01/01/86 | 182.88 | R 29.48 | R 04/20/86 | | 109 |
| R220835 | 152.40 | R 18.14 | R 09/28/91 | 182.88 | R 34.93 | R 04/24/92 | | 209 | R216349 | 156.15 | R 22.68 | R 03/14/91 | 165.10 | R 20.41 | R 06/30/91 | | 108 |
| R017185 | 203.20 | R 20.41 | R 12/12/78 | 167.52 | R 16.78 | R 07/07/79 | | 207 | R098504 | 177.80 | R 13.61 | R 01/15/87 | 161.84 | R 17.24 | R 04/30/87 | | 105 |
| R114497 | 118.23 | R 4.54 | R 04/15/87 | 104.96 | R 11.34 | R 11/08/87 | | 207 | R151416 | 99.27 | R 3.86 | R 08/10/90 | 106.74 | | | | |

| Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large | Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large | | | | | | |
|------------|--------|----------------|-------|--------|------------------|--------|-----|------------|------------|----------|----------------|----------|--------|------------------|-------|-----|------------|--------|---|-------|---|----------|----|
| C007225 | 167.52 | R | 21.10 | C | 02/04/61 | 171.31 | R | 20.87 | R | 05/11/61 | 96 | R025863 | 137.19 | R | 11.34 | R | 11/22/80 | 156.15 | R | 15.88 | R | 01/10/81 | 49 |
| R141025 | 171.31 | R | 27.22 | R | 02/07/90 | 167.52 | R | 23.13 | R | 05/14/90 | 96 | R076899 | 118.23 | R | 18.60 | R | 01/27/84 | 161.84 | R | 20.41 | R | 03/16/84 | 49 |
| R192496 | 170.55 | C | 22.68 | R | 05/04/90 | | | | | 08/08/90 | 96 | M001291 | 163.73 | R | 19.59 | C | 11/30/65 | 163.73 | R | 24.49 | R | 01/17/66 | 48 |
| R104957 | 140.98 | R | 18.14 | R | 07/14/87 | 140.98 | R | 17.24 | R | 10/17/87 | 95 | R060645 | 152.36 | R | 20.41 | R | 01/13/82 | 156.15 | R | 14.52 | R | 03/02/82 | 48 |
| R062889 | 118.23 | R | 15.88 | R | 12/18/82 | 139.08 | R | 13.15 | R | 03/22/83 | 94 | R099535 | 163.73 | R | 24.95 | R | 03/26/90 | 140.98 | R | 18.14 | R | 05/12/90 | 47 |
| R014807 | 132.08 | R | 9.76 | C | 01/13/81 | 208.28 | R | 42.76 | C | 04/15/81 | 92 | R154050 | 208.28 | R | 24.95 | R | 06/01/90 | 168.69 | R | 24.95 | R | 07/18/90 | 47 |
| R045271 | 140.98 | R | 20.41 | R | 10/24/81 | 154.25 | R | 16.14 | C | 01/24/82 | 92 | R173990 | 139.08 | R | 18.14 | R | 12/06/90 | 165.63 | R | 18.14 | R | 01/22/91 | 47 |
| BL000278 | 161.84 | R | 22.68 | R | 01/25/86 | 122.02 | R | 15.88 | R | 04/27/86 | 92 | R218231 | 172.72 | R | 15.88 | R | 11/27/91 | 147.32 | R | 15.88 | R | 01/13/92 | 47 |
| H081691 | 180.34 | R | 13.61 | R | 01/09/77 | 159.94 | R | 20.41 | R | 04/10/77 | 91 | H025239 | 118.23 | R | 15.88 | R | 11/20/76 | 190.50 | R | 15.88 | R | 01/05/77 | 46 |
| R067340 | 137.19 | R | 12.70 | R | 02/06/88 | 163.73 | R | 43.09 | R | 05/07/88 | 91 | R052372 | 203.20 | R | 20.41 | R | 12/13/80 | 215.90 | R | 48.04 | C | 01/28/81 | 46 |
| H025265 | 152.40 | R | 13.61 | R | 01/21/77 | 190.50 | R | 13.61 | R | 04/21/77 | 90 | R098560 | 140.98 | R | 11.34 | R | 01/13/88 | 159.94 | R | 18.14 | R | 02/27/88 | 45 |
| R013015 | 152.40 | R | 18.14 | R | 01/25/80 | 158.04 | R | 17.46 | C | 04/21/80 | 87 | R103086 | 152.36 | R | 20.41 | R | 05/28/86 | 198.12 | R | 36.35 | C | 07/12/86 | 45 |
| R103278 | 156.15 | R | 90.72 | R | 06/29/90 | 171.31 | R | 17.24 | R | 09/24/90 | 87 | C008983 | 228.60 | R | 57.83 | C | 01/02/67 | 218.44 | R | 49.90 | C | 02/15/67 | 44 |
| H049485 | 175.11 | R | 18.14 | R | 01/26/87 | 165.63 | R | 24.04 | R | 04/22/87 | 86 | R069297 | 175.11 | R | 22.68 | R | 01/05/86 | 171.31 | R | 19.05 | R | 02/17/86 | 43 |
| R008559 | 228.60 | R | 57.83 | C | 12/09/77 | 167.64 | R | 13.61 | R | 03/04/78 | 85 | R096992 | 140.98 | R | 15.88 | R | 12/08/85 | 162.56 | R | 19.14 | C | 01/20/86 | 43 |
| R088631 | 159.94 | R | 15.88 | R | 02/15/85 | 296.44 | R | 20.41 | R | 05/11/85 | 85 | R127336 | 220.98 | R | 24.95 | R | 03/03/89 | 195.58 | R | 11.34 | R | 04/15/89 | 43 |
| R212379 | 165.10 | R | 15.88 | R | 09/15/91 | 140.98 | R | 9.98 | R | 12/08/91 | 84 | R260140 | 152.40 | R | 15.52 | R | 10/25/81 | 226.06 | R | 15.88 | R | 12/07/91 | 43 |
| R010288 | 165.10 | R | 20.41 | R | 01/07/85 | 200.66 | R | 28.58 | R | 03/31/85 | 83 | V000216 | 161.84 | R | 18.86 | C | 02/05/82 | 167.52 | R | 18.14 | R | 03/20/82 | 43 |
| R034828 | 198.12 | R | 22.68 | R | 01/28/82 | 137.19 | R | 11.04 | C | 04/21/82 | 83 | H095765 | 163.73 | R | 19.59 | C | 01/06/78 | 171.31 | R | 20.41 | R | 02/17/78 | 42 |
| R134023 | 203.20 | R | 29.48 | R | 04/30/87 | 138.83 | R | 11.47 | C | 07/21/87 | 82 | R051932 | 114.30 | R | 36.29 | R | 01/16/80 | 173.21 | R | 25.40 | R | 02/26/80 | 41 |
| R209530 | 156.15 | R | 18.14 | R | 11/11/90 | 167.70 | C | 21.32 | R | 02/01/91 | 82 | R090111 | 175.11 | R | 20.41 | R | 11/16/85 | 177.00 | R | 23.13 | R | 12/27/85 | 41 |
| R045674 | 159.94 | R | 15.88 | R | 01/22/81 | 169.42 | R | 20.87 | R | 04/12/81 | 80 | H046886 | 198.12 | R | 13.61 | R | 12/16/75 | 152.36 | R | 15.88 | R | 01/25/76 | 40 |
| R094172 | 116.33 | R | 11.34 | R | 12/04/88 | 213.36 | R | 46.23 | C | 02/22/89 | 80 | H083214 | 190.50 | R | 32.01 | C | 01/04/76 | 213.36 | R | 46.23 | C | 02/13/76 | 40 |
| R169307 | 146.67 | R | 15.88 | R | 01/15/90 | 200.66 | R | 20.41 | R | 04/05/90 | 80 | BL000103 | 140.98 | R | 13.61 | R | 01/23/86 | 213.36 | R | 24.04 | R | 03/04/86 | 40 |
| R278191 | 135.29 | R | 14.97 | R | 03/21/92 | 160.02 | R | 20.41 | R | 06/09/92 | 80 | R016852 | 156.15 | R | 20.41 | R | 01/29/80 | 152.36 | R | 15.88 | R | 03/08/80 | 39 |
| BL000012 | 163.73 | R | 20.41 | R | 01/23/86 | 163.73 | R | 20.87 | R | 04/12/86 | 79 | R062495 | 165.63 | R | 24.95 | R | 06/24/83 | 198.12 | R | 36.35 | C | 08/02/83 | 39 |
| R085974 | 175.11 | R | 22.68 | R | 01/02/86 | 163.73 | R | 22.68 | R | 03/20/86 | 77 | R076769 | 213.36 | R | 46.23 | C | 12/11/85 | 158.04 | R | 17.46 | C | 01/19/86 | 39 |
| C012723 | 171.31 | R | 22.69 | C | 05/10/63 | 154.25 | R | 16.14 | C | 02/25/63 | 76 | R088615 | 152.40 | R | 14.97 | R | 04/28/85 | 140.98 | R | 24.95 | R | 06/06/85 | 39 |
| H086535 | 150.46 | R | 22.68 | R | 11/15/79 | 178.90 | R | 18.14 | R | 01/30/80 | 76 | R173984 | 144.77 | R | 18.14 | R | 01/16/90 | 144.78 | R | 18.14 | R | 02/24/90 | 39 |
| R027026 | 152.40 | R | 15.52 | C | 01/26/81 | 150.46 | R | 15.88 | R | 04/12/81 | 76 | H086813 | 152.36 | R | 18.14 | R | 12/11/77 | 163.73 | R | 19.05 | R | 01/18/78 | 38 |
| H090480 | 175.11 | R | 24.95 | R | 04/15/76 | 198.12 | R | 36.35 | C | 06/29/76 | 75 | R117032 | 160.50 | C | 18.14 | R | 04/07/91 | 165.63 | R | 36.29 | R | 05/15/91 | 38 |
| M012303 | 163.73 | R | 17.24 | R | 08/03/67 | 152.36 | R | 16.33 | R | 10/17/67 | 75 | R124034 | 156.15 | R | 18.14 | R | 12/30/87 | 159.94 | R | 22.68 | R | 02/06/88 | 38 |
| R007960 | 182.88 | R | 28.04 | C | 10/16/77 | 159.94 | R | 24.95 | R | 12/29/77 | 74 | R172141 | 183.16 | C | 29.48 | R | 07/08/90 | | | | | 08/15/90 | 38 |
| H014103 | 203.20 | R | 22.68 | R | 10/12/69 | 173.21 | R | 24.04 | R | 12/23/69 | 72 | C027150 | 198.12 | R | 27.22 | R | 04/29/67 | 88.90 | R | 27.22 | R | 06/05/67 | 37 |
| R060974 | 172.72 | R | 23.29 | C | 12/30/81 | 121.92 | R | 18.14 | R | 03/12/82 | 72 | R035764 | 198.12 | R | 22.68 | R | 01/21/82 | 223.52 | R | 53.76 | C | 02/27/82 | 37 |
| R128858 | 171.31 | R | 22.68 | R | 12/14/90 | 159.94 | R | 18.15 | C | 02/24/91 | 72 | R049279 | 171.31 | R | 22.68 | R | 11/30/81 | 215.90 | R | 18.14 | R | 01/06/82 | 37 |
| R029846 | 198.12 | R | 36.35 | C | 12/11/77 | 171.31 | R | 21.77 | R | 02/20/78 | 71 | BL000372 | 127.71 | R | 15.88 | R | 01/23/86 | 157.48 | R | 17.26 | C | 03/01/86 | 37 |
| H017773 | 158.04 | R | 20.41 | R | 12/23/73 | 171.31 | R | 19.96 | R | 03/03/74 | 70 | H009944 | 148.56 | R | 18.14 | R | 10/26/69 | 165.63 | R | 24.49 | R | 12/01/69 | 36 |
| R036635 | 139.70 | R | 20.41 | R | 05/01/81 | 163.73 | R | 19.59 | C | 07/10/81 | 70 | R090321 | 152.36 | R | 15.51 | C | 01/03/86 | 208.28 | R | 17.24 | R | 02/08/86 | 36 |
| R086851 | 243.84 | R | 71.30 | R | 12/15/85 | 156.15 | R | 18.60 | R | 02/23/86 | 70 | H037492 | 213.36 | R | 31.75 | R | 02/15/73 | 167.52 | R | 20.41 | R | 03/22/73 | 35 |
| R123764 | 159.94 | R | 17.24 | R | 02/28/88 | 148.56 | R | 17.24 | R | 05/08/88 | 70 | R008306 | 163.73 | R | 18.14 | R | 05/20/80 | 156.15 | R | 18.14 | R | 06/24/80 | 35 |
| R208965 | 148.42 | C | 13.61 | R | 01/17/92 | 142.24 | R | 15.88 | R | 03/26/92 | 69 | H081381 | 220.98 | R | 13.61 | R | 11/05/77 | 154.25 | R | 14.97 | R | 12/09/77 | 34 |
| C008782 | 175.11 | R | 24.36 | C | 01/05/63 | 167.52 | R | 23.59 | R | 03/14/63 | 68 | R087322 | 163.73 | R | 18.14 | R | 01/24/85 | 200.66 | R | 25.86 | R | 02/26/85 | 33 |
| R088025 | 163.73 | R | 19.59 | C | 01/25/85 | 140.98 | R | 12.06 | C | 04/03/85 | 68 | R109895 | 215.90 | R | 20.41 | R | 11/10/86 | 233.68 | R | 62.10 | C | 12/12/86 | 32 |
| R113388 | 163.73 | R | 18.14 | R | 11/08/87 | 208.28 | R | 42.76 | C | 01/15/88 | 68 | C003865 | 144.77 | R | 13.14 | C | 12/23/60 | 163.73 | R | 20.41 | R | 01/23/61 | 31 |
| R217794 | 172.72 | R | 21.77 | R | 12/16/91 | 203.20 | R | 21.77 | R | 02/22/92 | 68 | R008164 | 163.73 | R | 19.59 | C | 12/24/77 | 203.20 | R | 23.13 | R | 01/24/78 | 31 |
| R089799 | 137.19 | R | 11.34 | R | 12/07/85 | 161.84 | R | 14.97 | R | 02/12/86 | 67 | R026399 | 99.27 | R | 3.18 | R | 01/16/85 | 203.20 | R | 20.41 | R | 02/16/85 | 31 |
| R060905 | 140.98 | R | 15.88 | R | 01/19/82 | 203.20 | R | 39.47 | C | 03/26/82 | 66 | R052101 | 124.46 | R | 8.05 | C | 01/24/80 | 158.04 | R | 16.78 | R | 02/24/80 | 31 |
| H003067 | 215.90 | R | 18.14 | R | 01/13/67 | 218.44 | R | 15.42 | R | 03/19/67 | 65 | R068653 | 118.23 | R | 15.88 | R | 01/01/86 | 172.72 | R | 23.29 | C | 02/01/86 | 31 |
| R017986 | 140.98 | R | 15.88 | R | 11/08/79 | 163.73 | R | 20.41 | R | 01/12/80 | 65 | R033799 | 89.79 | R | 18.14 | R | 11/29/81 | 163.73 | R | 18.14 | R | 12/29/81 | 30 |
| R034269 | 163.73 | R | 20.41 | R | 01/05/81 | 175.11 | R | 34.02 | R | 03/11/81 | 65 | R191621 | 152.36 | R | 27.22 | R | 12/08/90 | 156.15 | R | 16.79 | C | 01/07/91 | 30 |
| R131722 | 140.98 | R | 18.14 | R | 04/16/88 | 238.76 | R | 15.88 | R | 06/19/88 | 64 | D005682 | 152.36 | R | 13.61 | R | 12/24/62 | 158.04 | R | 14.06 | R | 01/22/63 | 29 |
| H042206 | 129.61 | R | 9.18 | C | 06/28/80 | 139.08 | R | 15.88 | R | 08/30/80 | 63 | H045446 | 198.12 | R | 22.68 | R | 02/26/75 | 163.73 | R | 19.59 | C | 03/27/75 | 29 |
| R110470 | 95.48 | R | 22.68 | R | 12/07/90 | 149.86 | R | 16.56 | R | 02/08/91 | 63 | M002887 | 156.15 | R | 16.79 | C | 06/04/66 | 182.88 | R | 19.96 | R | 07/03/66 | 29 |
| R121246 | 140.98 | R | 15.88 | R | 11/30/88 | 140.98 | R | 14.06 | R | 01/30/89 | 61 | R029081 | 137.19 | R | 15.88 | R | 02/09/83 | 167.52 | R | 18.14 | R | 03/09/83 | 28 |
| R141130 | 163.73 | R | 34.02 | R | 09/16/91 | 180.00 | R | 26.63 | C | 11/15/91 | 60 | R114875 | 137.19 | R | 22.68 | R | 10/25/86 | 134.62 | R | 15.88 | R | 11/22/86 | 28 |

Appendix 3. Continued...

| Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large |
|------------|--------|----------------|------------|--------|------------------|------------|-----|------------|
| C007145 | 213.36 | R 46.23 | C 02/05/61 | 156.15 | R 16.79 | C 02/26/61 | | |
| H028833 | 213.36 | R 11.79 | R 12/10/77 | 163.73 | R 15.88 | R 12/31/77 | | |
| H038640 | 163.73 | R 15.88 | R 01/18/74 | 205.74 | R 18.14 | R 02/08/74 | | |
| H046258 | 198.12 | R 36.35 | C 01/01/78 | 163.73 | R 22.68 | R 01/22/78 | | |
| H094334 | 140.98 | R 22.68 | R 12/25/78 | 148.56 | R 19.50 | R 01/15/79 | | |
| R015740 | 159.94 | R 22.68 | R 11/27/78 | 148.56 | R 11.34 | R 12/18/78 | | |
| R048451 | 163.73 | R 18.14 | R 12/02/79 | 173.21 | R 18.60 | R 12/23/79 | | |
| R126859 | 162.56 | R 12.70 | R 07/27/89 | 215.90 | R 48.04 | C 08/17/89 | | |
| R191010 | 150.46 | R 20.41 | R 01/05/91 | 148.56 | R 22.68 | R 01/26/91 | | |
| H032674 | 156.15 | R 20.41 | R 01/22/76 | 173.21 | R 18.14 | R 02/10/76 | | |
| R095016 | 156.15 | R 18.14 | R 01/13/86 | 171.31 | R 20.41 | R 02/01/86 | | |
| H096725 | 159.94 | R 18.15 | C 12/11/76 | 213.36 | R 46.23 | C 12/29/76 | | |
| R065492 | 140.98 | R 13.61 | R 12/29/82 | 187.00 | R 30.14 | C 01/16/83 | | |
| BL001370 | 121.92 | R 18.14 | R 01/23/87 | 118.23 | R 18.14 | R 02/10/87 | | |
| H037192 | 213.36 | R 19.50 | R 01/26/75 | 167.52 | R 18.14 | R 02/12/75 | | |
| R050578 | 159.94 | R 15.88 | R 12/26/79 | 210.82 | R 44.47 | C 01/12/80 | | |
| R173972 | 142.88 | R 19.50 | R 01/20/91 | 112.54 | R 5.81 | C 02/06/91 | | |
| R187227 | 121.92 | R 7.53 | C 01/18/90 | 163.73 | R 19.05 | R 02/04/90 | | |
| H000816 | 198.12 | R 36.35 | C 02/02/68 | 154.25 | R 15.88 | R 02/18/68 | | |
| H088159 | 172.72 | R 23.29 | C 04/15/77 | 161.84 | R 19.50 | R 05/01/77 | | |
| R008418 | 175.11 | R 20.41 | R 12/11/77 | 203.20 | R 39.47 | C 12/27/77 | | |
| R068328 | 140.98 | R 18.14 | R 01/03/85 | 152.40 | R 15.52 | C 01/19/85 | | |
| R129328 | 172.72 | R 20.41 | R 02/11/89 | 208.28 | R 18.14 | R 02/27/89 | | |
| R213450 | 95.48 | R 20.41 | R 04/05/92 | 175.11 | R 25.17 | R 04/21/92 | | |
| R192751 | 154.78 | C 15.88 | R 01/18/91 | 108.75 | R 20.41 | R 02/02/91 | | |
| C021792 | 167.52 | R 19.05 | R 11/20/64 | 233.68 | R 62.10 | C 12/04/64 | | |
| H088199 | 172.72 | R 18.14 | R 01/24/87 | 167.52 | R 44.47 | C 01/02/77 | | |
| R010196 | 127.71 | R 8.75 | C 02/03/79 | 154.25 | R 19.05 | R 02/17/79 | | |
| R034266 | 163.73 | R 15.88 | R 01/16/81 | 159.94 | R 19.05 | R 01/30/81 | | |
| R101223 | 182.88 | R 18.14 | R 01/24/87 | 167.52 | R 21.10 | C 02/07/87 | | |
| R150414 | 146.67 | R 15.88 | R 12/10/88 | 152.36 | R 15.88 | R 12/24/88 | | |
| CC000750 | 178.90 | R 26.11 | C 12/15/62 | 163.73 | R 24.04 | R 12/29/62 | | |
| R010882 | 140.98 | R 18.14 | R 01/15/79 | 236.22 | R 64.32 | C 01/28/79 | | |
| R017328 | 186.48 | R 29.48 | R 12/23/78 | 165.63 | R 24.95 | R 01/05/79 | | |
| R026515 | 156.15 | R 18.14 | R 12/28/80 | 158.04 | R 21.77 | R 01/10/81 | | |
| H099097 | 140.98 | R 18.14 | R 02/18/87 | 171.31 | R 21.77 | R 03/02/87 | | |
| R007930 | 140.98 | R 10.89 | R 01/09/79 | 121.92 | R 7.53 | C 01/21/79 | | |
| R117924 | | | 05/03/87 | 215.90 | R 48.04 | C 05/15/87 | | |
| R260625 | 118.23 | R 18.14 | R 10/25/91 | 140.98 | R 15.42 | R 11/06/91 | | |
| H012722 | 156.15 | R 16.79 | C 09/12/68 | 158.04 | R 17.46 | C 09/23/68 | | |
| R043023 | 171.31 | R 22.69 | C 12/26/79 | 180.79 | R 18.14 | R 01/06/80 | | |
| R192444 | 110.65 | R 27.22 | R 01/06/91 | | | 01/17/91 | | |
| R060915 | 163.73 | R 21.77 | R 12/09/81 | 203.20 | R 22.68 | R 12/19/81 | | |
| R092271 | 118.23 | R 18.14 | R 05/10/85 | 167.52 | R 18.60 | R 05/20/85 | | |
| R130232 | 173.21 | R 23.51 | C 11/07/88 | 163.73 | R 24.95 | R 11/17/88 | | |
| R017664 | 152.36 | R 22.68 | R 01/11/81 | 175.11 | R 23.59 | R 01/20/81 | | |
| R062289 | 127.71 | R 15.88 | R 01/09/83 | 198.12 | R 36.35 | C 01/18/83 | | |
| R187644 | 133.40 | R 20.41 | R 03/25/90 | 173.21 | R 29.48 | R 04/03/90 | | |
| H086432 | 154.25 | R 17.24 | R 12/19/75 | 163.73 | R 15.88 | R 12/27/75 | | |
| M008389 | 163.73 | R 20.41 | R 11/11/66 | 161.84 | R 16.33 | R 11/19/66 | | |
| R060495 | 99.27 | R 20.41 | R 12/05/81 | 133.40 | R 12.70 | R 12/13/81 | | |
| R062145 | 198.12 | R 17.24 | R 01/17/83 | 198.12 | R 18.14 | R 01/25/83 | | |
| R172429 | 140.98 | R 24.95 | R 01/18/91 | 165.73 | C 20.41 | R 01/26/91 | | |
| BL000555 | 163.73 | R 18.14 | R 01/23/86 | 161.84 | R 17.24 | R 01/31/86 | | |
| WH005721 | 72.73 | R 9.07 | R 11/18/70 | 122.02 | R 6.35 | R 11/26/70 | | |
| H088731 | 213.36 | R 18.14 | R 01/31/76 | 161.84 | R 21.32 | R 02/07/76 | | |
| R018503 | 88.90 | R 15.88 | R 05/23/81 | 173.21 | R 20.41 | R 05/30/81 | | |
| R093564 | 163.73 | R 17.24 | R 06/06/87 | 163.73 | R 15.42 | R 06/13/87 | | |
| R115322 | 182.88 | R 28.04 | C 04/24/88 | 140.98 | R 31.75 | R 05/01/88 | | |
| H052680 | 228.60 | R 24.95 | R 01/19/75 | 139.08 | R 19.50 | R 01/25/75 | | |
| H081926 | 152.36 | R 15.88 | R 12/17/77 | 163.73 | R 20.41 | R 12/23/77 | | |
| H099403 | 182.88 | R 20.41 | R 12/09/77 | 163.73 | R 19.59 | C 12/15/77 | | |
| R013135 | 175.11 | R 24.36 | C 01/10/80 | 205.74 | R 41.09 | C 01/16/80 | | |
| H002430 | 213.36 | R 18.14 | R 09/04/66 | 208.28 | R 28.12 | R 09/09/66 | | |
| H021369 | 129.61 | R 18.14 | R 01/29/84 | 161.84 | R 17.24 | R 02/03/84 | | |
| H087472 | 140.98 | R 16.78 | R 02/05/76 | 163.73 | R 18.14 | R 02/10/76 | | |
| M005365 | 198.12 | R 18.14 | R 12/28/66 | 163.73 | R 22.68 | R 01/02/67 | | |
| R079422 | 158.04 | R 24.95 | R 06/21/88 | 226.06 | R 55.77 | C 06/26/88 | | |
| R087652 | 228.60 | R 20.41 | R 12/06/88 | 140.98 | R 13.61 | R 12/11/88 | | |
| R031993 | 148.56 | R 27.22 | R 01/30/81 | 156.15 | R 18.14 | R 02/03/81 | | |
| R035920 | 163.73 | R 24.95 | R 02/05/83 | 175.11 | R 19.05 | R 02/08/83 | | |
| R044334 | 80.31 | R 22.68 | R 01/09/80 | 187.96 | R 22.23 | R 01/12/80 | | |
| R050290 | 163.73 | R 18.14 | R 12/29/80 | 210.82 | R 44.47 | C 01/01/81 | | |
| R050523 | 213.36 | R 22.68 | R 01/21/80 | 210.82 | R 44.47 | C 01/24/80 | | |

Appendix 3. Continued...

| Tag Number | Length | Release weight | Date | Length | Recapture weight | Date | Sex | Days Large |
|------------|--------|----------------|------------|--------|------------------|------------|-----|------------|
| R080005 | 190.50 | R 13.61 | R 04/22/84 | 210.82 | R 44.47 | R 04/25/84 | | 3 |
| T001753 | 154.25 | R 15.88 | R 11/30/88 | 160.02 | R 15.42 | R 12/03/88 | | 3 |
| WH000308 | 200.00 | R 18.14 | R 01/21/69 | 140.98 | R 13.61 | R 01/24/69 | | 3 |
| B005095 | 163.73 | R 19.59 | C 01/29/62 | 154.94 | R 15.88 | R 01/31/62 | | 2 |
| M011578 | 163.73 | R 20.41 | R 11/22/67 | 175.11 | R 23.13 | R 11/24/67 | | 2 |
| R091188 | 152.36 | R 20.41 | R 12/09/86 | 208.28 | R 42.76 | C 12/11/86 | | 2 |
| C008430 | 152.36 | R 15.51 | C 12/10/65 | 161.84 | R 27.22 | R 12/11/65 | | 1 |
| C013053 | 95.48 | R 9.07 | R 05/11/63 | 135.29 | R 11.79 | R 05/12/63 | | 1 |
| H012621 | 213.36 | R 20.41 | R 10/11/69 | 208.28 | R 22.68 | R 10/12/69 | | 1 |
| H012754 | 152.36 | R 13.61 | R 02/14/68 | 163.73 | R 19.59 | C 02/15/68 | | 1 |
| H030479 | 163.73 | R 18.14 | R 01/30/76 | 163.73 | R 18.14 | R 01/31/76 | | 1 |
| M007308 | 198.12 | R 24.95 | R 06/19/66 | 139.70 | R 27.22 | R 06/20/66 | | 1 |
| R011910 | 182.88 | R 22.68 | R 01/13/79 | 208.28 | R 29.48 | R 01/14/79 | | 1 |
| R042743 | 152.36 | R 18.14 | R 01/26/80 | 161.84 | R 19.05 | R 01/27/80 | | 1 |
| R042824 | 198.12 | R 18.14 | R 02/10/79 | 175.11 | R 29.94 | R 02/11/79 | | 1 |
| R175161 | 264.16 | R 18.14 | R 07/04/90 | 118.23 | R 16.33 | R 07/05/90 | | 1 |
| BL000510 | 152.36 | R 15.88 | R 01/25/86 | 158.04 | R 17.69 | R 01/26/86 | | 1 |
| CF000746 | 148.56 | R 14.52 | R 12/06/63 | 142.88 | R 13.61 | R 12/07/63 | | 1 |
| C017240 | 187.96 | R 30.65 | C 04/29/68 | 193.04 | R 33.42 | C 04/29/68 | | 0 |
| C020851 | 178.90 | R 26.11 | C 12/28/64 | 210.82 | R 44.47 | C 12/28/64 | | 0 |
| C020857 | 178.90 | R 26.11 | C 12/29/64 | 178.90 | R 26.11 | C 12/29/64 | | 0 |
| H037974 | 169.42 | R 17.24 | R 01/31/75 | 169.42 | R 17.24 | R 01/31/75 | | 0 |
| H047165 | 198.12 | R 36.35 | C 04/21/76 | 198.12 | R 36.35 | C 04/21/76 | | 0 |
| H080890 | 169.42 | R 20.41 | R 01/28/77 | 169.42 | R 20.41 | R 01/28/77 | | 0 |
| H081333 | 220.98 | R 14.52 | R 02/29/76 | 220.98 | R 14.52 | R 02/29/76 | | 0 |
| H086085 | 203.20 | R 18.14 | R 12/14/75 | 200.66 | R 37.89 | C 12/14/75 | | 0 |
| H086881 | 198.12 | R 13.61 | R 01/30/76 | 213.36 | R 13.61 | R 01/30/76 | | 0 |
| H089769 | 152.36 | R 14.52 | R 07/10/77 | 152.36 | R 14.52 | R 07/10/77 | | 0 |
| H089780 | 198.12 | R 24.95 | R 12/25/78 | 198.12 | R 24.95 | R 12/25/78 | | 0 |
| H094172 | 203.20 | R 39.47 | C 02/22/89 | 208.28 | R 42.76 | C 02/22/89 | | 0 |
| H097324 | 163.73 | R 19.59 | C 12/24/77 | 213.36 | R 22.68 | R 12/24/77 | | 0 |
| H097497 | 152.36 | R 18.14 | R 01/18/78 | 152.36 | R 18.14 | R 01/18/78 | | 0 |
| H099844 | 156.15 | R 20.41 | R 08/21/77 | 175.11 | R 24.95 | R 08/21/77 | | 0 |
| R008893 | 129.61 | R 13.61 | R 03/10/85 | 175.26 | R 27.22 | R 03/10/85 | | 0 |
| R010489 | 144.77 | R 20.41 | R 12/19/78 | 213.36 | R 46.23 | C 12/19/78 | | 0 |
| R025746 | 152.36 | R 18.14 | R 02/13/80 | 156.15 | R 18.14 | R 02/13/80 | | 0 |
| R025841 | 152.36 | R 18.14 | R 01/28/82 | 152.36 | R 18.14 | R 01/28/82 | | 0 |
| R033782 | 129.61 | R 15.88 | R 12/08/84 | 129.61 | R 15.88 | R 12/08/84 | | 0 |
| R035771 | 163.73 | R 18.14 | R 01/01/82 | 223.52 | R 53.76 | C 01/01/82 | | 0 |
| R038721 | 118.23 | R 13.61 | R 01/30/79 | 213.36 | R 46.23 | C 01/30/79 | | 0 |
| R044113 | 144.77 | R 15.88 | R 01/24/80 | 144.77 | R 15.88 | R 01/24/80 | | 0 |
| R044130 | 187.96 | R 12.70 | R 02/01/80 | 187.96 | R 12.70 | R 02/01/80 | | 0 |
| R087315 | 152.36 | R 17.24 | R 12/01/85 | 213.36 | R 46.23 | C 12/01/85 | | 0 |
| R100183 | 156.15 | R 15.88 | R 02/16/86 | 226.06 | R 55.77 | C 02/16/86 | | 0 |
| R103347 | 127.71 | R 18.14 | R 05/20/86 | 223.52 | R 53.76 | C 05/20/86 | | 0 |
| R154625 | 140.98 | R 18.14 | R 01/02/89 | 198.12 | R 22.68 | R 01/02/89 | | 0 |
| R203212 | 163.73 | R 24.95 | R 08/21/90 | 149.86 | R 14.70 | C 08/21/90 | | 0 |
| RS000008 | 200.00 | R 37.48 | C 10/01/57 | 216.00 | R 48.11 | C 10/01/57 | | 0 |