U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center
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USER'S MANUAL

Marine Turtle Database Management System

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INTERNAL DOCUMENT
CD-01-92-H

```
  ┌──────────────────────────────────────────────────────────────────────────┐
  │          View/Edit Driftnet Data - Main Screen          Ver 1.0           │
  │  ┌──────────────────────────────────────────────────────────────────────┐ │
  │  │ Turtle ID:             Gear: ▓        Mesh Size (mm): ▓▓              │ │
  │  │                                                                        │ │
  │  │ License No.: ▓▓▓        Flag: ▓▓▓▓▓▓▓                                 │ │
  │  │                                                                        │ │
  │  │ Vessel: ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓                                         │ │
  │  │                                                                        │ │
  │  │ Observer Name: ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓                                 │ │
  │  │                                                                        │ │
  │  │ Observer Nationality: ▓                                               │ │
  │  │                                                                        │ │
  │  │ Date: ▓▓▓▓▓▓▓         Time Zone: ▓▓                                   │ │
  │  │                                                                        │ │
  │  │ Latitude: ▓▓°▓▓'       Longitude: ▓▓▓°▓▓'▓                            │ │
  │  │                                                                        │ │
  │  │ Sea Surface Temp. (°C): ▓▓▓▓▓                                         │ │
  │  │                                                                        │ │
  │  │ Oper. No.: ▓▓         Sec. No.: ▓▓▓                                   │ │
  │  └──────────────────────────────────────────────────────────────────────┘ │
  └──────────────────────────────────────────────────────────────────────────┘

              [Ctrl-W] Save & Add Another     [ESC] Abandon & Exit
              [PgUp] Previous screen          [PgDn] Next screen
```

The main screen will appear with each field being highlighted (the turtle ID
field is not highlighted because it will be entered from the tag screen). The
following describes the fields found on the main screen.

Field names	Description
Gear	Type of gear used (see Appendix B for codes).
Mesh size	Mesh size used in (mm).
License Number	Vessels' license number (see Appendix B for codes).
Flag	National origin of the vessel (see Appendix B for codes).
Vessel	Name of vessel.
Observer name	Name of the observer.
Observer nationality	Nation the observer is representing (see Appendix B for codes).
Date	Start of haul date.
Time zone	Time zone relative to the GMT.
Latitude	Latitude position of the vessel.
Longitude	Longitude position of the vessel.
Sea surface temperature	Sea surface temperature in celsius.
Operation number	Operation number.
Section number	The nets' section number where turtle was captured or encountered.

Notice at the bottom of the screen new commands are displayed. Pressing
(CTRL-W) will add the new record to the database and another blank record will
be displayed (see Appendix C for keys used to edit fields). The gear, mesh

size, license number, flag, observer name, observer nationality, latitudinal
hemisphere, and longitudinal hemisphere field of the new record will retain
the information entered from the previous record added. Pressing the (ESC)
key will abandon the new record and exit the Add option. (PgUp) and (PgDn)
allows you to move to different screens.

You may get help for fields which require specific codes (these fields include
flag, observer nationality, gear, species, status, condition, and the
disposition) by entering ? as the code for the field. For this example we
will list the gear codes.

```
                    View/Edit Driftnet Data - Main Screen        Ver 1.0

   Turtle ID:              Gear:          Mesh Size (mm):

   License No.:     ┌─────────────────────────────────────────┐
                    │                                         │
   Vessel:          │ Longline                                │
                    │ Small-mesh or Squid gillnet             │
   Observer Name:   │ Large-mesh or Tuna/Billfish gillnet     │
                    │ Purse seine                             │
   Observer Nationali│ Trawl                                  │
                    │ Trap                                    │
   Date:            └─────────────────────────────────────────┘

   Latitude:    °  '        Longitude:        °  '

   Sea Surface Temp. (°C):

   Oper. No.:            Sec. No.:

              <ENTER> To select option    [ESC] to Abandon
```

Use the (up) and (down) arrow keys to move the bar selector and (ENTER) to
select an option or (ESC) to abandon the menu. Both procedures will return
you to the edit screen. Selecting an option will place the selected code in
the field and advance the cursor to the next field, in this case the mesh size
field. Abandoning the menu will place the cursor in the current field, in
this case the gear field.

Return to the edit screen and press (PgDn) to get to the descriptive screen.

```
           View/Edit Driftnet Data - Descriptive Screen        Ver 1.0
 ┌───────────────────────────────────────────────────────────────────────┐
 │  Turtle ID:                License No:   0  Date: 10/15/91             │
 │                                                                        │
 │  Species: ▓                                                            │
 │                                                                        │
 │  Status: ▓           Condition (D/A/U): ▓    Disposition: ▓            │
 │                                                                        │
 │  Curved Carapace Length (mm): ▓▓▓▓      Accuracy (M/E/U): ▓            │
 │                                                                        │
 │  No. Old Tags: ▓              No. New Tags: ▓                          │
 │                                                                        │
 │  Description:                                                          │
 │                                                                        │
 │                                                                        │
 │                                                                        │
 │                                                                        │
 │                                                                        │
 └───────────────────────────────────────────────────────────────────────┘

        [Ctrl-W] Save & Add Another      [ESC] Abandon & Exit
            [PgUp] Previous screen     [PgDn] Next screen
```

The following describes the fields found on the descriptive screen.

Field names	Description
Species	Species encountered (see Appendix B for codes).
Status	Status of turtle when encountered (see Appendix B for codes).
Condition	Condition of turtle when encountered.
Disposition	Disposition of turtle when encountered (see Appendix B for codes).
Curved carapace length	Curved carapace length in mm.
Accuracy	The accuracy of the measurement (M-measured; E-estimated; U-unknown).
Number of old tags	Number of old tags found on the turtle.
Number of new tags	Number of new tags applied.
Description	Comments about the encounter.

Notice that the description field is not highlighted. This field is called a memo field (see Appendix C for keys used to edit memo fields). It's similar to a small text file. To enter data into this field move the cursor to the "No. New Tags:" field then press (ENTER).

```
         View/Edit Driftnet Data - Descriptive Screen          Ver 1.0
┌──────────────────────────────────────────────────────────────────────┐
│  Turtle ID:              License No:    0  Date: 10/15/91              │
│                                                                        │
│  Species:                                                              │
│                                                                        │
│  Status:            Condition (D/A/U):       Disposition:              │
│                                                                        │
│  Curved Carapace Length (mm):            Accuracy (M/E/U):             │
│                                                                        │
│  No. Old Tags:          No. New Tags:                                  │
│                                                                        │
│  Description:                                                          │
│                                                                        │
│                                                                        │
│                                                                        │
│                                                                        │
│                                                                        │
└──────────────────────────────────────────────────────────────────────┘

      [Ctrl-W] Save & Continue     [ESC] Abandon & Continue
```

The cursor should appear under the description field label. New commands are
displayed at the bottom of the screen. When you are through entering
information in the description field, press (Ctrl-W) to save the information
entered or (ESC) to abandon it. Pressing either will advance the cursor to
the tag screen. The use of the Tag editing screen will not be explained in
this section since all other systems uses the same editing procedures (see
section Using The Tag Editor).

3.3.4.3 Editing Driftnet Records

The Edit option works similar to the Add option except it allows you to
modify an existing record instead of adding one. Locate the record you want
to modify, then select (E)dit from the command line (this can be done from any
screen). The fields on the current screens will become highlighted (in this
case the Edit option was select from the main screen).

```
           View/Edit Driftnet Data - Main Screen          Ver 1.0
┌──────────────────────────────────────────────────────────────────────┐
│  Turtle ID:            Gear:           Mesh Size (mm):                 │
│                                                                        │
│  License No.:          Flag:                                           │
│                                                                        │
│  Vessel:                                                               │
│                                                                        │
│  Observer Name:                                                        │
│                                                                        │
│  Observer Nationality:                                                 │
│                                                                        │
│  Date:                 Time Zone:                                      │
│                                                                        │
│  Latitude:     °    '  Longitude:      °    '                          │
│                                                                        │
│  Sea Surface Temp. (°C):                                               │
│                                                                        │
│  Oper. No.:            Sec. No.:                                       │
└──────────────────────────────────────────────────────────────────────┘
```

```
     [Ctrl-W] Save & Exit    [ESC] Abandon & Exit
     [PgUp] Previous screen    [PgDn] Next screen
```

To exit the Edit option press (Ctrl-W) to save the modifications or (ESC) to abandon them. For more information on how to use the editing screens refer to section *Adding Driftnet Records* and *Using The Tag Editor.*

3.3.4.4 Deleting Driftnet Records

The Del function allows you to delete driftnet records from the database. Locate the record you want to delete, then select (D)el from the command line.

```
                    View/Edit Driftnet Data - Main Screen          Ver 1.0
┌─────────────────────────────────────────────────────────────────────────┐
│   Turtle ID:                  Gear: LG        Mesh Size (mm): 171         │
│                                                                           │
│   License No.:    13          Flag: J                                     │
│                                                                           │
│   Vessel:                                                                 │
│                                                                           │
│   Observer Name:                                                          │
│                                                                           │
│   Observer Nationality: U                                                 │
│                                                                           │
│   Date: 02/17/91             Time Zone:  0                                │
│                                                                           │
│   Latitude: 28°57'N          Longitude: 173°36'E                          │
│                                                                           │
│   Sea Surface Temp. (°C):    20.0                                         │
│                                                                           │
│   Oper. No.:  5              Sec. No.:  5                                 │
│                                                                           │
└─────────────────────────────────────────────────────────────────────────┘

             Are you sure you want to delete this record (Y/N):
```

Important: When you delete a driftnet record, none of the tag records are deleted in the tag database. If you want to delete the tag records, you must delete them using the tag editor before you delete the driftnet record (see section *Using The Tag Editor*).

3.3.4.5 Viewing Other Databases From The Driftnet View/Edit

The View function allows you to retrieve information for a particular turtle from other databases (i.e. the stranded, near shore, or nesting databases). The turtle must be identified, in other words it must have a turtle id. Locate the turtle you want to retrieve information for and select (V)iew from the command line.

```
              View/Edit Driftnet Data - Main Screen          Ver 1.0
    ┌──────────────────────────────────────────────────────────────────┐
    │  Turtle ID: 6790          Gear: LG       Mesh Size (mm): 165       │
    │                                                                    │
    │  License No.:  39         Flag: J                                  │
    │                                                                    │
    │  Vessel:                                                           │
    │                                                                    │
    │  Observer Name:                                                    │
    │                                                                    │
    │  Observer Nationality: U                                           │
    │                                                                    │
    │  Date: 10/17/91           Time Zone:  0                            │
    │                                                                    │
    │  Latitude: 32° 0'N        Longitude: 177°41'E                      │
    │                                                                    │
    │  Sea Surface Temp. (°C):  17.7                                     │
    │                                                                    │
    │  Oper. No.:  3            Sec. No.:  2                             │
    └──────────────────────────────────────────────────────────────────┘

              View stranded, tagging or nesting data (S/T/N):
                            [ESC] To Return
```

Select the database you want information retrieved from or press (ESC) to
return to the driftnet view/edit command line. We will select (T)agging from
the prompt to view information in the near shore database.

```
               Near Shore Data - Main Screen                 Ver 1.0
    ┌──────────────────────────────────────────────────────────────────┐
    │  Turtle ID: 6790        Date: 06/15/90      Time(24hr):   0        │
    │                                                                    │
    │  Island captured: OAHU      Study site:                           │
    │                                                                    │
    │  Location: Kaneohe Bay; Mark Reef        Species: CM   Sex: U      │
    │                                                                    │
    │  Method of capture: HAND                 Weight:   0.0             │
    │                                                                    │
    │  Straight carapace length:  55.8    Straight carapace width:  37.8 │
    │                                                                    │
    │  Curved carapace length:  59.5      Curved carapace width:  40.1   │
    │                                                                    │
    │  Notch carapace length:  55.5       Plastron length:  37.3         │
    │                                                                    │
    │  Width of the head:   0.0           Width of right front flipper:  0.0 │
    │                                                                    │
    │  Total tail length:   0.0           Vent length:   0.0             │
    └──────────────────────────────────────────────────────────────────┘

                  [↑] UpRec                    [↓] DnRec

        [PgUp] View Prev screen   [PgDn] View Next screen    [ESC] To Return
```

If a record(s) is found, it will be displayed. Use the (PgUp) and (PgDn) keys
to view the various near shore screens, and the (Up) and (down) arrow keys to
view other records found in the database. Press (ESC) to return to the
driftnet view/edit command line.

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3.3.4.6 Selecting A Driftnet Index

The driftnet database has three different indexes (an index determines the order of the records in the database) which may be used. To change the current index select (I)ndex from the command line.

```
              View/Edit Driftnet Data - Main Screen          Ver 1.0
┌──────────────────────────────────────────────────────────────────┐
│  Turtle ID:              Gear: LG        Mesh Size (mm): 171       │
│                                                                    │
│  License No.:   13       Flag: J                                   │
│                                                                    │
│  Vessel:                                                           │
│                   ┌──────────────────────────────────────┐        │
│  Observer Name:   │     Current Index By License & Date   │        │
│                   ├──────────────────────────────────────┤        │
│  Observer Natio   │                                       │        │
│                   │   • By Turtle ID & Date               │        │
│  Date: 02/17/91   │   • By Date & Turtle ID               │        │
│                   └──────────────────────────────────────┘        │
│  Latitude: 28°5                                                    │
│                                                                    │
│  Sea Surface Temp. (°C):   20.0                                    │
│                                                                    │
│  Oper. No.:  5           Sec. No.:  5                              │
└──────────────────────────────────────────────────────────────────┘

        <ENTER> To Select Option   [ESC] Exit & Keep Current Index
```

The current index is displayed at the top of the menu. Use the (up) and (down) arrow keys to move the bar selector and (ENTER) to select the index. Press (ESC) if you wish to leave the current index and return to the command line.

3.3.4.7 Searching The Driftnet Database

The Find option on the command line allows you to search the driftnet database. There are three different fields you may use as the search key. The three fields are vessel license, tag number and date. The result of a search is determined upon these conditions: if an exact match is found, then the record is displayed; if an exact match is not found, then the first record with a key greater than the search key will be displayed; if a match is not found and there are no records with a key greater than the search key, then the search will fail and Find will prompt you for another key. Pressing (ESC) will exit the Find option.

Select the (F)ind option from the command line.

```
                    View/Edit Driftnet Data - Main Screen          Ver 1.0
  ┌────────────────────────────────────────────────────────────────────────┐
  │ Turtle ID:                  Gear: LG        Mesh Size (mm): 171          │
  │                                                                          │
  │ License No.:   13           Flag: J                                      │
  │                                                                          │
  │ Vessel:                                                                  │
  │                                                                          │
  │ Observer Name:                                                           │
  │                          ┌──────────────────────────────┐               │
  │ Observer Nationality:    │                              │               │
  │                          │  • Search by Tag number       │               │
  │ Date: 02/17/91           │  • Search by Date             │               │
  │                          └──────────────────────────────┘               │
  │ Latitude: 28°57'N                                                        │
  │                                                                          │
  │ Sea Surface Temp. (°C):   20.0                                           │
  │                                                                          │
  │ Oper. No.:  5               Sec. No.:  5                                 │
  └────────────────────────────────────────────────────────────────────────┘
```

<ENTER> To Select Search Type   [ESC] To Abandon

Use the (up) and (down) arrow keys to move the bar selector and (ENTER) to
select the search key or (ESC) to abandon and return to the command line.

To search for records by license, select the "Search by License" option from
the menu.

```
                    View/Edit Driftnet Data - Main Screen          Ver 1.0
  ┌────────────────────────────────────────────────────────────────────────┐
  │ Turtle ID:                  Gear: LG        Mesh Size (mm): 171          │
  │                                                                          │
  │ License No.:   13           Flag: J                                      │
  │                                                                          │
  │ Vessel:                                                                  │
  │                                                                          │
  │ Observer Name:                                                           │
  │                                                                          │
  │ Observer Nationality: U                                                  │
  │                                                                          │
  │ Date: 02/17/91              Time Zone:  0                                │
  │                                                                          │
  │ Latitude: 28°57'N           Longitude: 173°36'E                          │
  │                                                                          │
  │ Sea Surface Temp. (°C):   20.0                                           │
  │                                                                          │
  │ Oper. No.:  5               Sec. No.:  5                                 │
  └────────────────────────────────────────────────────────────────────────┘
```

        License No.:
        [ESC] To Quit

Enter the license number of the record(s) you want to locate.

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To search for a record by tag number, select the "Search by Tag number" option from the menu.

```
              View/Edit Driftnet Data - Main Screen          Ver 1.0
  ┌──────────────────────────────────────────────────────────────────┐
  │ Turtle ID:              Gear: LG      Mesh Size (mm): 171          │
  │                                                                    │
  │ License No.:   13       Flag: J                                    │
  │                                                                    │
  │ Vessel:                                                            │
  │                                                                    │
  │ Observer Name:                                                     │
  │                                                                    │
  │ Observer Nationality: U                                           │
  │                                                                    │
  │ Date: 02/17/91          Time Zone:  0                              │
  │                                                                    │
  │ Latitude: 28°57'N       Longitude: 173°36'E                       │
  │                                                                    │
  │ Sea Surface Temp. (°C):    20.0                                    │
  │                                                                    │
  │ Oper. No.:  5           Sec. No.:  5                               │
  └──────────────────────────────────────────────────────────────────┘

              Tag Number:
              [ESC] To Quit
```

The Find option will prompt you for a tag number. You may enter any one of the tag numbers attributed to a turtle whose record(s) you are trying to locate. Find will first search the tag database for the tag number. If the tag number is found, the turtle ID of that record is used as the search key. If the tag number is not found, then the tag number is used as the search key.

To search for records by date, select the "Search by Date" option from the menu.

```
              View/Edit Driftnet Data - Main Screen          Ver 1.0
  ┌──────────────────────────────────────────────────────────────────┐
  │ Turtle ID:              Gear: LG      Mesh Size (mm): 171          │
  │                                                                    │
  │ License No.:   13       Flag: J                                    │
  │                                                                    │
  │ Vessel:                                                            │
  │                                                                    │
  │ Observer Name:                                                     │
  │                                                                    │
  │ Observer Nationality: U                                           │
  │                                                                    │
  │ Date: 02/17/91          Time Zone:  0                              │
  │                                                                    │
  │ Latitude: 28°57'N       Longitude: 173°36'E                       │
  │                                                                    │
  │ Sea Surface Temp. (°C):    20.0                                    │
  │                                                                    │
  │ Oper. No.:  5           Sec. No.:  5                               │
  └──────────────────────────────────────────────────────────────────┘

              Date:
              [ESC] To Quit
```

The system's date is the search key by default. Enter the date of the record you're trying to locate.

3.3.5 Using The Tag Editor

The tag editor is used when adding or editing records in MTDMS databases. It allows you to enter turtle identifications, add, modify or delete tag records in the tag database. For the following examples, the tag editor will be used from the stranded data processing system. Exact procedures are used when the tag editor is invoked from any of the other data processing systems.

NOTE: If you abandon (ESC) the current record that's being added or modified in the database, all changes made to the tag database (i.e. modifications, additions, or deletions) are abandoned as well.

3.3.5.1 Entering Turtle Identifications

To enter a turtle identification, select (A)dd or (E)dit from the command line in View/edit (see sections *Adding Stranded Records* and *Editing Stranded Records*). In this case the Add option will be used. Press the (PgDn) key until you reach the Tag Screen as shown below.

```
                    View/Edit Stranded Data - Tag Screen          Ver 1.0

    Turtle ID:                    Date:

    Tag no.:        Date:           Tag Type:      Tag Position:

    Tag no.:        Date:           Tag Type:      Tag Position:

    Tag no.:        Date:           Tag Type:      Tag Position:

    Tag no.:        Date:           Tag Type:      Tag Position:

     ag no.:        Date:           Tag Type:      Tag Position:

    Tag no.:        Date:           Tag Type:      Tag Position:

    Tag no.:        Date:           Tag Type:      Tag Position:

    Tag no.:        Date:           Tag Type:      Tag Position:

              For a recovered turtle enter one of the recovered tag numbers
           [Ctrl-W] Save & Add Another      [ESC] Abandon & Exit
                         [PgUp] Previous screen
```

At the bottom of your screen are your commands. The same commands apply as would on any other screen while in the Add mode of View/edit. Enter in a turtle id by typing any series of alphanumeric characters up to a maximum of eight characters (its advised that you use one of its tag numbers as the turtle id).

Important: If you are adding in a new record for a recovered turtle that's been previously entered into the system, type any one of the recovered tag numbers as the turtle ID. The tag editor will automatically retrieve its ID and tag records.

The turtle identification is used as the "link" field. All MTDMS data files have a turtle identification field (see section *Data Files*). MTDMS uses the turtle identification field to retrieve information among the data files.

3.3.5.2 Adding and Editing Tag Records

After you've entered a turtle id, the tag editor allows you to add, modify, and delete tag records. For this example, a recovered tag number was entered as the turtle id and the tag editor displayed the following turtle id and tag records.

```
            View/Edit Stranded Data - Tag Screen        Ver 1.0
  ┌──────────────────────────────────────────────────────────────────┐
  │  Turtle ID: 3966          Date: 06/19/90                          │
  │                                                                    │
  │ →Tag no.: 3966     Date: 06/19/90   Tag Type:     Tag Position: LFL│
  │                                                                    │
  │  Tag no.: 3967     Date: 06/19/90   Tag Type:     Tag Position: RFL│
  │                                                                    │
  │  Tag no.:          Date:  /  /      Tag Type:     Tag Position:    │
  │                                                                    │
  │  Tag no.:          Date:            Tag Type:     Tag Position:    │
  │                                                                    │
  │  Tag no.:          Date:            Tag Type:     Tag Position:    │
  │                                                                    │
  │  Tag no.:          Date:            Tag Type:     Tag Position:    │
  │                                                                    │
  │  Tag no.:          Date:            Tag Type:     Tag Position:    │
  │                                                                    │
  │  Tag no.:          Date:            Tag Type:     Tag Position:    │
  └──────────────────────────────────────────────────────────────────┘
         <Enter> Edit tag    [C] Change turtle id    [D] Delete tag
           [Ctrl-W] Save & Add Another    [ESC] Abandon & Exit
                      [PgUp] Previous screen
```

The arrow next to the first tag record indicates that it is the current record. Use the (up) and (down) arrows keys to select the record you wish to modify. At the bottom of your screen are your commands. The third to the last row lists the tag editor commands. The two last rows are the View/edit commands. The View/edit commands apply as would on any other screen while in the Add or Edit mode (in this example we are in the Add mode).

To edit a tag record, get in the tag edit mode by moving the arrow to the record you wish to edit and press (ENTER).

```
          View/Edit Stranded Data - Tag Screen          Ver 1.0

   Turtle ID: 3964           Date: 07/25/90

   Tag no.: ░░░░░    Date: ░░░░░    Tag Type: ░░░    Tag Position: ░░░

   Tag no.: 3965    Date: 07/25/90    Tag Type:         Tag Position:

   Tag no.:         Date:  /  /      Tag Type:         Tag Position:

   Tag no.:         Date:            Tag Type:         Tag Position:

   Tag no.:         Date:            Tag Type:         Tag Position:

   Tag no.:         Date:            Tag Type:         Tag Position:

   Tag no.:         Date:            Tag Type:         Tag Position:

   Tag no.:         Date:            Tag Type:         Tag Position:


     [CTRL-W] Save & Edit Next Tag    [ESC] Abandon & Exit Tag Edit
```

The corresponding fields of the current tag record is highlighted. Press
(CTRL-W) to save the modifications of the current tag record and advance the
pointer to the next tag record or press (ESC) to exit the tag edit mode (see
Appendix C for keys used to edit fields).

Note: Pressing (ESC) without advancing the pointer will abandon the
modifications made to the current tag record.

Only appropriate codes should be entered for fields Tag Type and Tag Position
(see Appendix B for codes). You may get help by entering ? as the code for
either of the fields. For this example we will list the tag positions.

```
          View/Edit Stranded Data - Tag Screen          Ver 1.0

   Turtle ID: 3964             Date: 10/09/91

   Tag no.: ░░░░░                                          : ░░░
           ┌────────────────────────────────────────────┐
   Tag no.: 3965 │ First proximal scale on right flipper       │ :
           │ Second proximal scale on right flipper      │
   Tag no.:     │ Third proximal scale on right flipper       │ :
           │ Fourth proximal scale on right flipper      │
   Tag no.:     │ Fifth proximal scale on right flipper       │ :
           │ Between first and second scale on right flipper │
   Tag no.:     │ Between second and third scale on right flipper │ :
           │ Between third and fourth scale on right flipper │
   Tag no.:     │ Between fourth and fifth scale on right flipper │ :
           │ Right hind flipper                          │
   Tag no.:     └────────────────────────────────────────────┘ :

   Tag no.:        Date:          Tag Type:        Tag Position:


        <ENTER> To select option    [ESC] to Abandon
```

Use the (up) and (down) arrow keys to move the bar selector and (ENTER) to
select an option or (ESC) to abandon the menu. Both procedures will return
you to the edit screen.

To Add new tag records, move the arrow to a blank tag record and press (ENTER)
(if you're not in the tag edit mode) or keep pressing (CTRL-W) (if you're in
the tag edit mode) until you reach a blank record. Key in the new record and
press (CTRL-W) followed by (ESC) to exit.

3.3.5.3 Changing The Turtle ID

To change the turtle id press (C) (if your in the tag edit mode you must
exit the mode).

```
                    View/Edit Stranded Data - Tag Screen         Ver 1.0

   Turtle ID: ▓▓▓▓▓▓         Date: 07/25/90

   Tag no.: 3964      Date: 07/25/90   Tag Type:        Tag Position:

   Tag no.: 3965      Date: 07/25/90   Tag Type:        Tag Position:

   Tag no.:           Date:  /  /      Tag Type:        Tag Position:

   Tag no.:           Date:            Tag Type:        Tag Position:

   Tag no.:           Date:            Tag Type:        Tag Position:

   Tag no.:           Date:            Tag Type:        Tag Position:

   Tag no.:           Date:            Tag Type:        Tag Position:

   Tag no.:           Date:            Tag Type:        Tag Position:


        For a recovered turtle enter one of the recovered tag numbers
          [Ctrl-W] Save & Add Another      [ESC] Abandon & Exit
                       [PgUp] Previous screen
```

Key in a new turtle id. Changing the turtle id will NOT update the current
tag records with the new id. The new id is assigned to the current record
that's being modified or added, in this case the new stranded record.

If you wish to assign a new turtle id to a set of tag records, make sure you
delete all tag records with the original turtle id. Failing to do so will
leave the tag database with two sets of identical tag records having different
turtle identifications. This may cause errors when accessing information
using one of the duplicated tag numbers.

3.3.5.4 Deleting Tag Records

To delete tag records you must not be in the tag edit mode. Move the
arrow to the record you wish to delete and press (D). The current record will
be deleted from your screen. Deleted tag records are permanently removed from
the tag database when the current record being modified or added is saved.

3.4 Creating Reports

This section will describe the use of all reports generated by MTDMS. Before you begin printing reports, make sure your printer is on (if your on a network link to a printer). Also, select the appropriate printer driver (see section *Printer Selection*). MTDMS supports the Hewlitt-Packard Laserjet II and Epson FX series printers and all true compatibles.

All reports generated by MTDMS allows you to add headings and footnotes. There are ten lines saved for headings and five lines saved for footnotes. Headings are automatically centered during printing.

3.4.1 Stranded Reports

The stranded data processing system generates 7 summaries from the stranded database. The seven summaries are Monthly Strandings With Tumors, Annual Strandings By Island, Annual Strandings By Species, Annual Strandings By Months, Annual Percent Strandings By Incident, Annual Percent Strandings By Size-Class, and Summary of Stranded Data. To generate stranded reports, get to the Stranded Data Reports menu by selecting Stranded data (1) from the main menu and Stranded reports (2) from the Stranded Data Processing System menu.

Note: Pressing (ESC) during any screen will exit the reporting routine and return you to the Stranded Data Reports menu, except when printing begins.

3.4.1.1 Monthly Strandings With Tumors

This report will summarize turtles stranded with tumors for a selected species, year and up to five islands. Sums included on the report are monthly sums by island for strandings and strandings with tumors, annual sums by island for strandings, strandings with tumors and strandings examined (turtles examined for tumors by a qualified person) and annual sums overall islands for strandings, strandings with tumors and strandings examined. Percentages included are annual by island for strandings examined with tumors and annual overall islands for strandings examined with tumors. A turtle stranded is considered to have tumors if 'Y' was entered in the field 'Tumors found' of the Tumor Screen. A 'Y' or 'N' entered in the 'Tumors found' field will indicate that the turtle was examined (see Report 1 in Appendix A).

Select Monthly strandings with tumors (1) from the Stranded Data Reports menu. Enter the year you wish to summarize.

```
┌─────────────────────────────────────────────────┐
│       REPORT FOR MONTHLY STRANDINGS WITH TUMORS  │
└─────────────────────────────────────────────────┘
```

Selected Printer: HP LaserJet II

Select the number of islands for the report
the number must be greater than 0 and less than 6: ▒

[ESC] to abandon report

Enter the number of islands you want on the report, this number may be no less than one and no more than five. For this example we will select five.

```
┌─────────────────────────────────────────────────┐
│       REPORT FOR MONTHLY STRANDINGS WITH TUMORS  │
└─────────────────────────────────────────────────┘
```

Selected Items:

```
┌───────────────────────┐
│▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒│
│ Maui                   │
│ Kahoolawe              │
│ Lanai                  │
│ Molokai                │
│ Oahu                   │
│ Kauai                  │
│ Niihau                 │
│ Kaula                  │
│ Nihoa                  │
│ Necker Island          │
│ French Frigate Shoals  │
│ Little Gin             │
│ Gin                    │
└───────────────────────┘
```

Select 5 item(s) from the list or [ESC] to abandon report

Select, from the menu, the island(s) you want to summarize. Use the (up) and (down) arrow keys to move the bar selector and the (ENTER) key to select the current option. To view islands not shown in the current window, move the bar selector to the bottom of the window and press the (down) arrow key to allow the window to scroll.

```
┌────────────────────────────────────────────────┐
│  REPORT FOR MONTHLY STRANDINGS WITH TUMORS       │
└────────────────────────────────────────────────┘

                              Selected Items:

   ┌─────────────────────────┐
   │░░░░░░░░░░░░░░░░░░░░░░░░░░│
   │ Hawksbill Turtle        │
   │ Loggerhead Turtle       │
   │ Kemp's Ridley Turtle    │
   │ Olive Ridley Turtle     │
   │ Leatherback Turtle      │
   │ No Entry                │
   │                         │
   │                         │
   │                         │
   │                         │
   │                         │
   │                         │
   │                         │
   └─────────────────────────┘
```

         Select 1 item(s) from the list or [ESC] to abandon report

Next, select a species from the menu like you did for the island(s).

The follow screen allows you to add headings you want printed on the report.
Press (CTRL-W) when you are through entering the headings. Enter footnotes
you want printed on the report. Pressing (CTRL-W) will begin printing the
report.

3.4.1.2 Annual Strandings By Island

      This report will summarize annual strandings for all species by islands.
You can select up to ten islands and the years included on the report (see
Report 2 in Appendix A).

      Select Annual strandings by island (2) from the Stranded Data Reports
menu. Enter the beginning and ending years for the report.

```
┌─────────────────────────────────────────────────────────────┐
│ REPORT FOR ANNUAL STRANDINGS BY ISLAND FOR ALL SPECIES       │
└─────────────────────────────────────────────────────────────┘
```

Selected Printer: HP LaserJet II

Select the number of islands for the report
the number must be greater than 0 and less than 10:

[ESC] to abandon report

Enter the number of islands you want to summarize. This number must be no
less than one and no more than nine.

```
┌─────────────────────────────────────────────────────────────┐
│ REPORT FOR ANNUAL STRANDINGS BY ISLAND FOR ALL SPECIES       │
└─────────────────────────────────────────────────────────────┘
```

Selected Items:

```
┌──────────────────────────┐
│░░░░░░░░░░░░░░░░░░░░░░░░░░░░│
│Maui                      │
│Kahoolawe                 │
│Lanai                     │
│Molokai                   │
│Oahu                      │
│Kauai                     │
│Niihau                    │
│Kaula                     │
│Nihoa                     │
│Necker Island             │
│French Frigate Shoals     │
│Little Gin                │
│Gin                       │
└──────────────────────────┘
```

Select 9 item(s) from the list or [ESC] to abandon report

Select islands from the menu using the (up) and (down) arrow keys and (ENTER)
to select the current option. To view islands not shown on the current
window, move the bar selector to the bottom of the window and press the (down)
arrow key to allow the window to scroll.

The next screen allows you to enter headings you want printed on the report.
Press (CTRL-W) when you are through entering the headings. Enter footnotes
you want printed on the report and press (CTRL-W) to begin printing.

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3.4.1.3 Annual Strandings By Species

This report will summarize annual strandings by species. Species included are chelonia mydas (green turtle), lepidochelys olivacea (olive ridley), Eretmochelys imbricata (hawksbill) and dermochelys coriacea (leatherback). The user selects the years included on the report (see Report 3 in Appendix A).

Select Annual strandings by species (3) from the Stranded Data Reports menu. Enter the beginning and ending years for the report. Enter headings you want printed on the report. Press (CTRL-W) when you are through entering the headings. Enter footnotes you want printed on the report and press (CTRL-W) to begin printing.

3.4.1.4 Annual Strandings By Months

This report will summarize annual strandings by months. All species are included in the report. The user selects the years included on the report (see Report 4 in Appendix A).

Select Annual strandings by months (4) from the Stranded Data Reports menu. Enter the beginning and ending years for the report. Enter headings you want to be printed on the report. Press (CTRL-W) when you are through entering the headings. Enter footnotes you want printed on the report and press (CTRL-W) to begin printing.

3.4.1.5 Annual Percent Strandings By Incident

This report will calculate annual stranding percentages by incident type. The percentages include strandings found dead, with tumors, dead with tumors, induced by humans, dead and induced by humans, accidentally entangled or hooked, accidentally entangled or hooked and dead, and debris found in guts. The fields used to determine the incident type are fields 'Dead or Alive', 'Entangled or Hooked', 'Induced by humans', 'Debris in guts', and 'Tumors found'. These field must be coded properly to derive an accurate report. The user selects the years included on the report (see Report 5 in Appendix A).

Select Annual percent strandings by incident (5) from the Stranded Data Reports menu. Enter the beginning and ending years for the report. Enter headings you want to be printed on the report. Press (CTRL-W) when you are through entering the headings. Enter footnotes you want printed on the report and press (CTRL-W) to begin printing.

3.4.1.6 Annual Percent Strandings By Size-Class

This report will calculate annual percentages for strandings by size-class. The size-classes included are 35 to 65 cm, greater than 65 to 81 cm, greater than 81 cm, and an unknown size-class (this class includes turtles with measurements less than 35 cm and measurements not recorded). The size-class is determined by the straight carapace measurement. The user selects the years included on the report (see Report 6 in Appendix A).

Select Annual percent strandings by size-class (6) from the Stranded Data Reports menu. Enter the beginning and ending years for the report. Enter headings you want to be printed on the report. Press (CTRL-W) when you are through entering the headings. Enter footnotes you want printed on the report and press (CTRL-W) to begin printing.

3.4.1.7 Summary of Stranded Data

This report will print all the records in the stranded database for a selected period. Fields included on the report are the date of strandings, tag numbers of the stranded turtle, location of the strandings, species, sex, carapace measurement (depending on the measurement recorded the precedence is straight, curved then plastron length), tumor ranking, description and necropsy report (combined under the headings Condition and circumstances), and the contact (see Report 7 in Appendix A).

Select Summary of stranded data (7) from the Stranded Data Reports menu. Enter the beginning and ending dates for the report.

```
           ┌─────────────────────────────┐
           │   SUMMARY OF STRANDED DATA   │
           └─────────────────────────────┘

              Enter headings for report

    --Stranded, injured and diseased marine turtles reported during 1991




                  National Marine Fisheries Service
                         2570 Dole Street
                     Honolulu Hawaii 96822-22396




          [CTRL-W] to continue or [ESC] to abandon report
```

Type in the headings you want to be printed on the report. Notice that a default heading appears on the screen. You may select to leave the heading or delete it. Press (CTRL-W) when you are through entering the headings. Enter

footnotes you want printed on the report and press (CTRL-W) to begin printing.

3.4.2 Near Shore Reports

The near shore data processing system generates 6 summaries from the near shore database. The six reports are Summary of Tagged Turtles, Summary of Recovered Turtles, Summary of Growth Rates, Summary of Growth Rates by Size-class, Summary of Near Shore Data, and Historical Summary. To generate near shore reports, get to the Near Shore Data Reports menu by selecting Tagging near shore data (2) from the Marine Turtle Data Management System menu and Near shore reports (2) from the Near Shore Data Processing System menu.

Note: Pressing (ESC) during any screen will exit the reporting routine and return you to the Near Shore Reports menu, except when printing begins.

3.4.2.1 Summary of Tagged Turtles

This report displays a summary of newly tagged turtles for a selected period. All records having dates within the selected period, 'Y' entered in the 'Tags Applied' field and 'N' entered in the 'Recovered' field are printed on this report (see Report 8 in Appendix A).

Select Summary of tagged turtles (1) from the Near Shore Data Reports menu. Enter the beginning and ending dates for the report. Next, select to summarize by island or study site. For this example we selected to summarize by island.

```
┌──────────────────────────────────────┐
│  SUMMARY OF TAGGED MARINE TURTLES     │
└──────────────────────────────────────┘

                          Selected Items:
 ┌────────────────────────┐
 │░░░░░░░░░░░░░░░░░░░░░░░░░│
 │ Maui                   │
 │ Kahoolawe              │
 │ Lanai                  │
 │ Molokai                │
 │ Oahu                   │
 │ Kauai                  │
 │ Niihau                 │
 │ Kaula                  │
 │ Nihoa                  │
 │ Necker Island          │
 │ French Frigate Shoals  │
 │ Little Gin             │
 │ Gin                    │
 └────────────────────────┘


     Select 1 item(s) from the list or [ESC] to abandon report
```

Select an islands from the menu using the (up) and (down) arrow keys and (ENTER) to select the current option. To view islands not shown on the current window, move the bar selector to the bottom of the window and press the (down) arrow key to allow the window to scroll. Enter headings you want

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printed on the report. Press (CTRL-W) when you are through entering the
headings. Enter footnotes you want printed on the report and press (CTRL-W)
to begin printing.

3.4.2.2 Summary of Recovered Turtles

This report displays a summary of recovered turtles for a selected
period. All records having dates within the selected period and 'Y' entered
in the 'Recovered' field, of the descriptive screen, is printed on this
report. An annual interval and growth rate is calculated for each recovered
turtle. All of the MTDMS databases are used to determine its original
encounter when calculating the annual interval and growth rate (see report 9
in Appendix A).

Select Summary of recovered turtles (2) from the Near Shore Data Reports
menu. Enter the beginning and ending dates for the report. Next, select to
summarize by island or study site. For this example we selected to summarize
by island.

```
          ┌─────────────────────────────────────────┐
          │    SUMMARY OF RECOVERED MARINE TURTLES   │
          └─────────────────────────────────────────┘

                                         Selected Items:
          ┌────────────────────────────┐
          │░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░│
          │░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░│
          │ Maui                       │
          │ Kahoolawe                  │
          │ Lanai                      │
          │ Molokai                    │
          │ Oahu                       │
          │ Kauai                      │
          │ Niihau                     │
          │ Kaula                      │
          │ Nihoa                      │
          │ Necker Island              │
          │ French Frigate Shoals      │
          │ Little Gin                 │
          │ Gin                        │
          └────────────────────────────┘
```

         Select 1 item(s) from the list or [ESC] to abandon report

Select an island from the menu using the (up) and (down) arrow keys and
(ENTER) to select the current option. To view islands not shown on the
current window, move the bar selector to the bottom of the window and press
the (down) arrow key to allow the window to scroll.

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```
┌─────────────────────────────────────────┐
│      SUMMARY OF RECOVERED MARINE TURTLES │
└─────────────────────────────────────────┘

    ┌──────────────────────────────────────┐
    │░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░│
    │ Straight carapace width              │
    │ Curved carapace length               │
    │ Curved carapace width                │
    │ Notch length                         │
    │ Plastron length                      │
    │ Head width                           │
    │ Width of right front flipper         │
    │ Plastron to distal tail length       │
    │ Ventral to distal tail length        │
    │ Weight                               │
    └──────────────────────────────────────┘
           Select a measurement type:
```

[ESC] to abandon report

Select a measurement type like you did for the island. Enter headings you
want printed on the report. Press (CTRL-W) when you are through entering the
headings. Enter footnotes you want printed on the report and press (CTRL-W)
to begin printing.

3.4.2.3 Summary of Growth Rates

     This report calculates growth rates for straight, curved, and weight
measurements of recovered turtles for a selected period. You may select
either annual or monthly calculations for growth rates. Included in this
report are all records having dates within the selected period and 'Y' entered
in the 'Recovered' field of the descriptive screen. All of the MTDMS
databases are used to determine its original encounter when calculating the
growth rates and interval (see Report 10 in Appendix A).

     Select Summary of growth rates (3) from the Near Shore Data Reports
menu. Enter the beginning and ending dates for the report. Next, select to
summarize by island or study site. For this example we selected to summarize
by island.

```
┌─────────────────────────────────────────────────────┐
│  GROWTH RATE SUMMARY FOR RECOVERED MARINE TURTLES    │
└─────────────────────────────────────────────────────┘
```

                                        Selected Items:

```
┌──────────────────────────┐
│░░░░░░░░░░░░░░░░░░░░░░░░░░░░│
│Maui                      │
│Kahoolawe                 │
│Lanai                     │
│Molokai                   │
│Oahu                      │
│Kauai                     │
│Niihau                    │
│Kaula                     │
│Nihoa                     │
│Necker Island             │
│French Frigate Shoals     │
│Little Gin                │
│Gin                       │
└──────────────────────────┘
```

           Select 1 item(s) from the list or [ESC] to abandon report

Select an islands from the menu using the (up) and (down) arrow keys and
(ENTER) to select the current option. To view islands not shown on the
current window, move the bar selector to the bottom of the window and press
the (down) arrow key to allow the window to scroll.

```
┌─────────────────────────────────────────────────────┐
│  GROWTH RATE SUMMARY FOR RECOVERED MARINE TURTLES    │
└─────────────────────────────────────────────────────┘
```

                    Annual or Monthly summary (A/M): ▒

                        [ESC] to abandon report

Select either a (A)nnual or (M)onthly report. Enter headings you want printed
on the report. Press (CTRL-W) when you are through entering the headings.
Enter footnotes you want printed on the report and press (CTRL-W) to begin
printing.

3.4.2.4 Summary of Growth Rates By Size-Class

        This report calculates growth rates by size-class for a selected period.
You may select either annual or monthly growth rates, the measurement type,
the beginning interval, and the increment size. The size-class of a turtle is
determined by taking the average of it original and recovered measurement.
Included in this report are all records having dates within the selected
period and 'Y' entered in the 'Recovered' field of the descriptive screen.
All of the MTDMS databases are used to determine its original encounter when
calculating the growth rates (see Report 11 in Appendix A).

        Select Summary of growth rates by size-class (4) from the Near Shore
Data Reports menu. Enter the beginning and ending dates for the report.
Next, select to summarize by island or study site. For this example we
selected to summarize by island.

```
┌──────────────────────────────────────────────────────────────────────┐
│  GROWTH RATE SUMMARY BY SIZE-CLASS FOR RECOVERED MARINE TURTLES        │
└──────────────────────────────────────────────────────────────────────┘
```

                                                Selected Items:
```
┌─────────────────────────┐
│                         │
│ Maui                    │
│ Kahoolawe               │
│ Lanai                   │
│ Molokai                 │
│ Oahu                    │
│ Kauai                   │
│ Niihau                  │
│ Kaula                   │
│ Nihoa                   │
│ Necker Island           │
│ French Frigate Shoals   │
│ Little Gin              │
│ Gin                     │
└─────────────────────────┘
```

            Select 1 item(s) from the list or [ESC] to abandon report

Select an island from the menu using the (up) and (down) arrow keys and
(ENTER) to select the current option. To view islands not shown on the
current window, move the bar selector to the bottom of the window and press
the (down) arrow key to allow the window to scroll.

```
┌─────────────────────────────────────────────────────────────┐
│  GROWTH RATE SUMMARY BY SIZE-CLASS FOR RECOVERED MARINE TURTLES │
└─────────────────────────────────────────────────────────────┘
```

```
        ┌─────────────────────────────────────────┐
        │░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░│
        │ Straight carapace width                 │
        │ Curved carapace length                  │
        │ Curved carapace width                   │
        │ Notch length                            │
        │ Plastron length                         │
        │ Head width                              │
        │ Width of right front flipper            │
        │ Plastron to distal tail length          │
        │ Ventral to distal tail length           │
        │ Weight                                  │
        └─────────────────────────────────────────┘
              Select a measurement type:
```

[ESC] to abandon report

Select the measurement type like you did for the island. Next, select either
a (A)nnual or (M)onthly report.

```
┌─────────────────────────────────────────────────────────────┐
│  GROWTH RATE SUMMARY BY SIZE-CLASS FOR RECOVERED MARINE TURTLES │
└─────────────────────────────────────────────────────────────┘
```

Enter the beginning size-class interval: ░░░░░░

[ESC] to abandon report

Now, select a beginning size-class interval. There will be ten size-class
interval for a report starting with the interval entered here.

```
┌─────────────────────────────────────────────────────────────────┐
│ GROWTH RATE SUMMARY BY SIZE-CLASS FOR RECOVERED MARINE TURTLES    │
└─────────────────────────────────────────────────────────────────┘
```

Enter the increment size for each interval: ░░░░

[ESC] to abandon report

The increment size will determine each subsequent interval from the beginning interval. The increment size must be greater than 0. Enter headings you want printed on the report. Press (CTRL-W) when you are through entering the headings. Enter footnotes you want printed on the report and press (CTRL-W) to begin printing.

3.4.2.5 Summary of Near Shore Data

This report will print all the records in the near shore database for a select period. Fields included on the report are tag numbers, straight carapace length, notch carapace length, straight carapace width, curved carapace length, curved carapace width, tumor ranking, and comments and samples report (combined under the heading "Comments") (see Report 12 in Appendix A).

Select Summary of near shore data (5) from the Near Shore Data Reports menu. Enter the beginning and ending dates for the report. Next, select to summarize by island or study site. For this example we selected to summarize by island.

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```
┌─────────────────────────────┐
│ SUMMARY OF NEAR SHORE DATA  │
└─────────────────────────────┘
```

Selected Items:

```
┌──────────────────────────────┐
│░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░│
│Maui                          │
│Kahoolawe                     │
│Lanai                         │
│Molokai                       │
│Oahu                          │
│Kauai                         │
│Niihau                        │
│Kaula                         │
│Nihoa                         │
│Necker Island                 │
│French Frigate Shoals         │
│Little Gin                    │
│Gin                           │
└──────────────────────────────┘
```

Select 1 item(s) from the list or [ESC] to abandon report

Select an islands from the menu using the (up) and (down) arrow keys and (ENTER) to select the current option. To view islands not shown on the current window, move the bar selector to the bottom of the window and press the (down) arrow key to allow the window to scroll. Enter headings you want printed on the report. Press (CTRL-W) when you are through entering the headings. Enter footnotes you want printed on the report and press (CTRL-W) to begin printing.
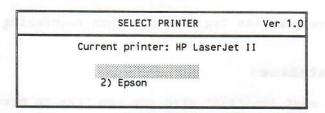
3.4.2.6 Historical Summary

This report will print information from all MTDMS databases for a selected turtle. The report is divided into two section. The first section displays all tag information. This includes tag numbers, date tagged, tag type, and tag positions. The second section displays the turtles activity. This includes the date encountered, type of encounter (i.e. stranded, near shore etc.), location encountered, its tumor score, nesting activity (if applies), measurement, monthly and annual intervals, and monthly and annual growth-rates (the intervals and growth-rates are calculated from both the original and latest encounters) (see Report 13 in Appendix A).

Select Historical summary (6) from the Near Shore Data Reports menu.

```
┌─────────────────────────────────────────────────────────┐
│  HISTORICAL INFORMATION FOR A RECOVERED MARINE TURTLE    │
└─────────────────────────────────────────────────────────┘

              Selected Printer: HP LaserJet II


       Enter tag number of turtle to report: ▒▒▒▒▒▒▒▒▒




                 [ESC] to abandon report
```

Enter a tag number of the turtle you wish to report on.

```
┌─────────────────────────────────────────────────────────┐
│  HISTORICAL INFORMATION FOR A RECOVERED MARINE TURTLE    │
└─────────────────────────────────────────────────────────┘

              Selected Printer: HP LaserJet II

        ┌──────────────────────────────────────┐
        │ ▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒           │
        │ Straight carapace width              │
        │ Curved carapace length               │
        │ Curved carapace width                │
        │ Notch length                         │
        │ Plastron length                      │
        │ Head width                           │
        │ Width of right front flipper         │
        │ Plastron to distal tail length       │
        │ Ventral to distal tail length        │
        │ Weight                               │
        └──────────────────────────────────────┘

             Select a measurement type:




                 [ESC] to abandon report
```

Select a measurement type from the menu using the (up) and (down) arrow keys
and (ENTER) to select the current option. Enter headings you want printed on
the report. Press (CTRL-W) when you are through entering the headings. Enter
footnotes you want printed on the report and press (CTRL-W) to begin printing.

3.4.3 Nesting Reports

The nesting data processing system generates two summaries from the nesting database. The two reports are Summary of Nesting Activity, and Summary of Nesting Data. To generate nesting reports, get to the Nesting Data Reports menu by selecting Nesting data (3) from the Marine Turtle Database Management System menu and Nesting reports (2) from the Nesting Data Processing System menu.

Note: Pressing (ESC) during any screen will exit the reporting routine and return you to the Nesting Reports menu, except when printing begins.

3.4.3.1 Summary of Nesting Activities

This report summarizes the nesting activities of turtles during a nesting season. The report includes all tag numbers, the islands observed, the observation period a turtle was sighted (with the total number of days printed in parenthesis), its curved carapace length, the number of days between nesting, and the number of clutches laid. Only turtles identified (turtles with tag numbers) are summarized and printed on this report (see Report 14 in Appendix A).

Select Summary of nesting activity (1) from the Nesting Data Reports menu. Enter the year you wish to report. Enter headings you want printed on the report. Press (CTRL-W) when you are through entering the headings. Enter footnotes you want printed on the report and press (CTRL-W) to begin printing the report.

3.4.3.2 Summary of Nesting Data

This report will print all the records in the nesting database for a nesting season. Fields included on the report are tag numbers, sex, carapace measurement (depending on the measurement recorded the precedence is straight, curved then plastron length), weight, tumors found, date sighted, island sighted, activity, time up, and time back (see Report 15 in Appendix A).

Select Summary of nesting data (2) from the Nesting Data Reports menu. Enter the year you wish to report. Enter headings you want printed on the report. Press (CTRL-W) when you are through entering the headings. Enter footnotes you want printed on the report and press (CTRL-W) to begin printing the report.

3.5 Utilities

Utilities are functions used to support and enhance the existence of MTDMS. In all, there are six functions. To get to the MTDMS Utilities menu, select Utilities (5) from the Marine Turtle Database Management System menu.

3.5.1 Printer Selection

This utility allows you to print reports using two types of printers, namely the HP LaserJet II and the Epson FX series. By selecting a printer type, the proper codes are sent to the printer to accommodate the needs of different reports using various fonts or type settings.

Note: If you are using MTDMS on a network, this option will not link you to a printer. You must do this before starting up MTDMS.

Select the Select Printer (1) option from the MTDMS Utilities menu.

```
┌──────────────────────────────────────────────┐
│              SELECT PRINTER        Ver 1.0    │
│ ┌──────────────────────────────────────────┐ │
│ │  Current printer: HP LaserJet II          │ │
│ │                                           │ │
│ │  ░░░░░░░░░░░░░░░░░░░░░                      │ │
│ │  2) Epson                                 │ │
│ └──────────────────────────────────────────┘ │
└──────────────────────────────────────────────┘
```

<ENTER> To Select Printer or [ESC] To Exit

The default printer selected is the HP LaserJet II. You may change the current option by using the (up) and (down) arrow keys and pressing (ENTER) to select. If you wish to leave the current option as is press (ESC) to exit.

3.5.2 Reindexing Databases

The reindex function physically removes all records marked for deletion in a database and rebuilds all correlated indexes. Reindex should be used periodically. Doing so will maximize your disk space and improve the performance of MTDMS.

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Select the Reindex database(s) (2) option from the MTDMS Utilities menu.

```
┌─────────────────────────────────────────────────┐
│  REINDEX DATABASES              Ver 1.0          │
│ ┌─────────────────────────────────────────────┐ │
│ │░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░│ │
│ │  2) Reindex Near shore database             │ │
│ │  3) Reindex Nesting database                │ │
│ │  4) Reindex Driftnet database               │ │
│ │  5) Reindex Tag database                     │ │
│ │  6) Reindex all databases                   │ │
│ │  7) Exit                                     │ │
│ └─────────────────────────────────────────────┘ │
└─────────────────────────────────────────────────┘
```

Use the (up) and (down) arrow keys to move the bar selector and the (ENTER) key to select or press the corresponding number of the option. Select the database you want to reindex or option (6) to reindex all. As files become larger this procedure will take longer to complete.

Note: You should reindex the Tag database when reindexing any of the other MTDMS databases.

3.5.3 Backup Databases

Perhaps the most important step you can take to prevent the loss of data is to back up your files. You should backup your files every time you've entered a substantial amount of data into the system. A good way to measure a substantial amount of data is to ask yourself, "would you like to reenter all the information from the last backup to the present time ?". It's also a good idea to use at least two sets of backup diskettes (or what ever type of media you're using to store the backup files) and using each set every other time a backup is performed. Using two sets will decrease the chance of lost data in case one set becomes defective in any way.

Important: Use a media other than the one which stores your original data files. For most systems used, that media would be floppy disks. A higher capacity storage media is needed when any file becomes larger than the storage capacity.

In this example we are assuming you're using floppy diskettes to store your backup files on the A: drive.

Before starting, make sure you have your backup diskette(s) ready and make sure they're formatted properly (see your DOS manual on formatting procedures). Label your backup disks in the order in which they will be used. This will allow you to insert the proper diskettes if you must restore them later.

Select Backup database(s) (3) from the MTDMS Utilities menu.

```
┌──────────────────────────────┐
│  BACKUP MTDMS DATABASE FILES  │
└──────────────────────────────┘
```

Select target drive for back up: ▓

Default path: C:\MTDMS\DATA

Enter Drive or [ESC] To Return

Select the drive where the backups are to be stored, in this case drive (A).

```
┌──────────────────────────────┐
│  BACKUP MTDMS DATABASE FILES  │
└──────────────────────────────┘
```

```
┌─────────────────────┐
│ Path = A:\          │
│ ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓     │
│                     │
│                     │
│                     │
│                     │
│                     │
│                     │
└─────────────────────┘
```

<Enter> To Select Path or [ESC] To Exit

Select a path on the drive using the (up) and (down) arrow keys and (ENTER) to
select the option. In this example only a root directory exists on the
diskette. After selecting a path, press (ENTER) to confirm your selection or
(any other key) to change the current path to the selected path. Once you've
confirmed a selection, the backup procedure will display the number of 5 1/4"
high density diskettes you will need to perform the backup. Press (any key)

to begin the backup procedure or (ESC) to exit. If you selected to proceed insert backup diskette(s) as instructed.

3.5.4 Restore Database

This utility is used to restore damaged or lost data files using your backup files. Restoring files will overwrite all existing data files currently stored on the default drive (see section *Select Path*). Make sure you use the most recent set of backups.

Select Restore database (4) from the MTDMS Utilities menu.

```
┌─────────────────────────────┐
│ RESTORE MTDMS DATABASE FILES │
└─────────────────────────────┘
```

Enter drive with back up files:

Default path: C:\MTDMS\DATA\

Enter Drive or [ESC] To Return

Select the drive where the backups are stored, in this case the backups are on the A: drive.

```
┌─────────────────────────────────┐
│  RESTORE MTDMS DATABASE FILES   │
└─────────────────────────────────┘


        ┌───────────────────┐
        │ Path = A:\         │
        │                    │
        │ ░░░░░░░░░░░░░░░░░   │
        │                    │
        │                    │
        │                    │
        │                    │
        │                    │
        │                    │
        │                    │
        │                    │
        │                    │
        └───────────────────┘
```

<Enter> To Select Path or [ESC] To Exit

Select a path where the backup files are located using the (up) and (down) arrow keys and (ENTER) to select the option. In this example the backup files are in the root directory. After selecting a path, press (ENTER) to confirm your selection or (*any other key*) to change the current path to the selected path. Once you've confirmed a selection, the backup files are restored on to the default drive.

3.5.5 Select Path

This utility is used only if you have your database files stored in a directory other than the current default directory. When a new path is selected, it becomes the default path when ever MTDMS is used.

In this example, we will change the default path from "C:\MTDMS" (which contains the MTDMS system files) to "C:\MTDMS\DATA" (which contains our data files).

Select Set path (4) from the MTDMS Utilities menu and select drive (C).

```
           ┌──────────────┐
           │   SET PATH   │
           └──────────────┘


           ┌─────────────────────┐
           │ Path = C:\           │
           │                      │
           │ C:\                  │
           │ \3OPEN               │
           │ \BIN                 │
           │ \CHART               │
           │ \DBASE               │
           │ \EASYFLOW            │
           │ \HIJAAK              │
           │ \PCTOOLS             │
           │ ░░░░░░░░░░░░░░░░░░░░ │
           │ \SIDEWAYS            │
           │ \SIGMA               │
           └─────────────────────┘
```

<Enter> To Select Path or [ESC] To Exit

Select the \MTDMS directory using the (down) arrow to move the bar cursor and
(ENTER) to select.

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```
┌──────────────┐
│   SET PATH   │
└──────────────┘
```

```
                Path = C:\MTDMS\
```

<Enter> To Select Path or <Any Other Key> To Change Path

Press (*any other key*) except the ENTER key to change the current path to
"C:\MTDMS".

```
┌──────────────┐
│   SET PATH   │
└──────────────┘
```

```
┌─────────────────────┐
│ Path = C:\MTDMS\     │
│                      │
│ C:\_                 │
│ ░░░░░░░░░░░░░░░░░░░░ │
│                      │
│ \MTDMS\DOC           │
│ \MTDMS\SCREENS       │
│ \MTDMS\MTDMSSNAP     │
│                      │
│                      │
│                      │
│                      │
│                      │
└─────────────────────┘
```

<Enter> To Select Path or [ESC] To Exit

Select the "\MTDMS\DATA" directory as the new path and press (ENTER) to
confirm your selection. Your new default path for your data files is now
"C:\MTDMS\DATA".

3.5.6 DbaseIII+ To ASCII

This utility allows you to convert MTDMS database files (which is currently maintained using the DbaseIII+ format) into an ASCII file. All fields are converted except memo fields. The converted stranded, near shore, nesting and driftnet database files will have the names STRND.DAT, NRSHR.DAT, NEST.DAT and DRIFT.DAT respectively (see *Appendix D* for ASCII formats).

Select DbaseIII+ to ASCII (6) from the MTDMS utilities menu.

```
┌──────────────────────────────────────────────────────┐
│  CONVERT DBASEIII+ TO ASCII          Ver 1.0          │
├──────────────────────────────────────────────────────┤
│                                                        │
│              ░░░░░░░░░░░░░░░░░░░░░░░                   │
│              2) Near shore database                    │
│              3) Nesting database                       │
│              4) Driftnet database                      │
│              5) Exit                                   │
│                                                        │
└──────────────────────────────────────────────────────┘
```

Use the (up) and (down) arrow keys to move the bar selector and the (ENTER) key to select or press the corresponding number of the option. Select the database you want to convert or option (5) to return to the MTDMS utilities menu. In this example, we will convert the stranded database and store the converted database on drive A.

```
┌───────────────────────────────────┐
│ │ CONVERT MTDMS DATABASE FILES │ │
└───────────────────────────────────┘




          Select target drive for data file:  ░

          Default path: C:\MTDMS\DATA\
```

Enter Drive or [ESC] To Return

Select the drive where you want the ASCII file to be created, in this case drive (A).

```
┌─────────────────────────────────┐
│   CONVERT MTDMS DATABASE FILES   │
└─────────────────────────────────┘


        ┌──────────────────────────┐
        │ Path = A:\               │
        │ ░░░░░░░░░░░░░░░░░░░░░░░░░ │
        │                          │
        │                          │
        │                          │
        │                          │
        │                          │
        │                          │
        │                          │
        │                          │
        │                          │
        │                          │
        └──────────────────────────┘

     <Enter> To Select Path or [ESC] To Exit
```

Select a path where the ASCII file is to be created using the (up) and (down)
arrow keys and (ENTER) to select the option. In this example the root
directory is selected. After selecting a path, press (ENTER) to confirm your
selection or (*any other key*) to change the current path to the selected path.

```
┌─────────────────────────────────┐
│   CONVERT MTDMS DATABASE FILES   │
└─────────────────────────────────┘


    ┌─────────────────────────────────────────┐
    │    Current Index By Date & Turtle ID     │
    ├─────────────────────────────────────────┤
    │ ░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░ │
    │  • By Turtle ID & Date                   │
    │  • By Island & Date & Turtle ID          │
    │  • By Contact & Date & Turtle ID         │
    │                                          │
    └─────────────────────────────────────────┘

  <ENTER> To Select Option    [ESC] Exit & Keep Current Index
```

Select the order of the records by using the (up) and (down) arrow keys to
move the bar selector and (ENTER) to select the index. The indexes on the
menu will differ with each selected database. The default index is displayed
at the top of the menu. Press (ESC) if you wish to leave the current index.
After you've selected an index the conversion automatically begins.

3.5.7 Append Databases

This utility allows you to append records to the master data sets from databases maintained by a remote MTDMS system. It will append all records from the source database into the target database (this includes all linked tag records in the source tag database). If the database you're appending records to isn't found on the current MTDMS default path, then the database is created.

Note: The source database is the database created and maintained by the remote MTDMS system. The target database is the master data sets found on the current MTDMS default path.

Source tag numbers are checked with target tag numbers for duplicates. If a tag number is found, then the turtle id of the target tag number is used for all source records and tag records appended. If a tag number is not found, then records are appended to the target databases as they were entered. Tag records with duplicate tag numbers are omitted from the target tag database.

Important: Unlike the tag records, all records in the source database is added to the target database regardless of any duplications. Therefore, DO NOT append the same source data set twice to the same target data set. It will produce two sets of the source data in your target data sets.

To append MTDMS data select Append database(s) (7) from the MTDMS utilities menu.

```
┌─────────────────────────────────────────────────┐
│  APPEND MTDMS DATABASES          Ver 1.0         │
├─────────────────────────────────────────────────┤
│                                                   │
│        ████████████████████████                  │
│        2) Near shore database                     │
│        3) Nesting database                        │
│        4) Driftnet database                       │
│        5) Exit                                     │
│                                                   │
└─────────────────────────────────────────────────┘
```

Use the (up) and (down) arrow keys to move the bar selector and the (ENTER) key to select or press the corresponding number of the option. Select the database you want to append or option (5) to return to the MTDMS utilities menu. In this example, we will append records from a stranded database stored on drive A.

```
┌─────────────────────────────┐
│  APPEND MTDMS DATABASE FILES │
└─────────────────────────────┘
```

Select drive for source data file: C

Default path: D:\MTDMSDATA\DRIFTDAT\

Enter Drive or [ESC] To Return

Select the drive where the source databases are located, in this case drive
(A).

```
┌─────────────────────────────┐
│  APPEND MTDMS DATABASE FILES │
└─────────────────────────────┘
```

```
┌───────────────────────┐
│ Path = A:\             │
│                        │
│ ░░░░░░░░░░░░░░░░░░░░░░░ │
│ ▄░                     │
│                        │
│                        │
│                        │
│                        │
│                        │
│                        │
│                        │
└───────────────────────┘
```

<Enter> To Select Path or [ESC] To Exit

Select the path where the source databases are located using the (up) and
(down) arrow keys and (ENTER) to select the option. In this example the root
directory is selected. After selecting a path, press (ENTER) to confirm your
selection or (any other key) to change the current path to the selected path.
After selecting a path, the append procedure will begin processing.

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4. DATABASES

4.1 Database Structures

This section will describe all the database files used by MTDMS. In all there are five data files and nineteen system files. For each database the following information will be presented: the database name, index files used, fields in the database, and the contents (for MTDMS system files only). For each index file the file name and the key fields used as the index string is specified. The following field attributes will be defined as follows: field number, field name, field type, field length, number of decimal places, and a field description. The field types are coded as follows: C-character, D-date, N-numeric, and M-memo.

4.1.1 Data Files

Data files are databases which store information entered by the user. Each processing system has its own data file. Included in this category is the tag database.

4.1.1.1 Stranded Database

This database is used to store the stranded information. It uses four index files and contains 63 fields. Each record has a length of 257 bytes.

Database name: Strnd_TD.DBF

Index files:

File Name	Key String
SD_IDD	TurtleID+DTOS(S_Date)
SD_DID	DTOS(S_Date)+TurtleID
SD_IDID	S_Island+DTOS(S_Date)+TurtleID
SD_CDID	SUBSTR(Contact,1,10)+DTOS(S_Date)+TurtleID

Fields:

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
1	TurtleID	C	8		The ID number used to identify a turtle.
2	S_Date	D	8		Date of the reported strandings.
3	S_Island	C	4		Island where turtle was found stranded (see Appendix B for codes).

Continued

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
4	S_Loc	C	30		Name of beach, harbor, etc. where stranding occurred.
5	Contact	C	50		Name of the person who reported the strandings.
6	S_Species	C	2		Species found stranded (see Appendix B for codes).
7	S_Sex	C	1		Sex of the turtle found stranded (see Appendix B for codes).
8	S_SLength	N	5	1	Straight carapace length.
9	S_SWidth	N	5	1	Straight carapace width.
10	S_CLength	N	5	1	Curved carapace length.
11	S_CWidth	N	5	1	Curved carapace width.
12	S_Notch	N	5	1	Notch carapace length.
13	S_PLLen	N	5	1	Length of the plastron.
14	S_HDWidth	N	5	1	Width of the turtles head.
15	S_RFWidth	N	5	1	Width of right front flipper.
16	S_PTLen	N	5	1	Length of tail from the rear tip of the plastron to the distal tip of the tail.
17	S_VTLen	N	5	1	Length of tail from ventral to distal.
18	S_Weight	N	5	1	Weight of the turtle.
19	Condition	C		1	Condition of the stranded turtle; was the turtle (D)ead or (A)live.
20	Tngl_Hook	C		1	Was the turtle found entangled or hooked (Y/N/U).
21	Hmn_Indce	C		1	Was the turtle injury or condition induced by humans (Y/N/U).

Continued

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
22	Necropsy	C	1		Was a necropsy performed (Y/N).
23	S_Debris	C	1		Was debris found in the guts of the stranded turtle (Y/N/U).
24	S_Tumors	C	1		Were tumors found (Y/N/U)
25	S_TumRnk	N	1		Tumor ranking from 0-4 (i.e. mild to severe).
26	S_LEye1	N		2	Number of size one tumors found around the left eyes.
27	S_LEye2	N		2	Number of size two tumors found around the left eyes.
28	S_LEye3	N		2	Number of size three tumors found around the left eyes.
29	S_LEye4	N		2	Number of size four tumors found around the left eyes.
30	S_REye1	N		2	Number of size one tumors found around the right eyes.
31	S_REye2	N		2	Number of size two tumors found around the right eyes.
32	S_REye3	N		2	Number of size three tumors found around the right eyes.
33	S_REye4	N		2	Number of size four tumors found around the right eyes.
34	S_FF11	N		2	Number of size one tumors found on the front flippers.
35	S_FF12	N		2	Number of size two tumors found on the front flippers.
36	S_FF13	N		2	Number of size three tumors found on the front flippers.
37	S_FF14	N		2	Number of size four tumors found on the front flippers.

Continued

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
38	S_HFl1	N	2		Number of size one tumors found on the hind flippers.
39	S_HFl2	N	2		Number of size two tumors found on the hind flippers.
40	S_HFl3	N	2		Number of size three tumors found on the hind flippers.
41	S_HFl4	N	2		Number of size four tumors found on the hind flippers.
42	S_Neck1	N	2		Number of size one tumors found on the neck.
43	S_Neck2	N	2		Number of size two tumors found on the neck.
44	S_Neck3	N	2		Number of size three tumors found on the neck.
45	S_Neck4	N	2		Number of size four tumors found on the neck.
46	S_Mouth1	N	2		Number of size one tumors found in the mouth.
47	S_Mouth2	N	2		Number of size two tumors found in the mouth.
48	S_Mouth3	N	2		Number of size three tumors found in the mouth.
49	S_Mouth4	N	2		Number of size four tumors found in the mouth.
50	S_Tail1	N	2		Number of size one tumors found on the tail or cloaca.
51	S_Tail2	N	2		Number of size two tumors found on the tail or cloaca.
52	S_Tail3	N	2		Number of size three tumors found on the tail or cloaca.
53	S_Tail4	N	2		Number of size four tumors found on the tail or cloaca.

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Continued

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
54	S_Seam1	N	2		Number of size one tumors found on the seams or scutes.
55	S_Seam2	N	2		Number of size two tumors found on the seams or scutes.
56	S_Seam3	N	2		Number of size three tumors found on the seams or scutes.
57	S_Seam4	N	2		Number of size four tumors found on the seams or scutes.
58	S_Intrn1	N	2		Number of internal size one tumors found.
59	S_Intrn2	N	2		Number of internal size two tumors found.
60	S_Intrn3	N	2		Number of internal size three tumors found.
61	S_Intrn4	N	2		Number of internal size four tumors found.
62	S_Dscript	M	11		Notes about the sightings.
63	Ncpsyrpt	M	10		Necropsy report.

4.1.1.2 Near Shore Database

This database is used to store the near shore information. It uses four index files and contains 62 fields. Each record has a length of 241 bytes.

Database name: NrShr_TD.DBF

Index files:

File Name	Key String
NS_IDD	TurtleID+DTOS(NS_Date)
NS_DID	DTOS(NS_Date)+TurtleID
NS_IDID	NS_Island+DTOS(NS_Date)+TurtleID
NS_SDID	NS_Site+DTOS(NS_Date)+TurtleID

Fields:

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
1	TurtleID	C	8		The ID number used to identify a turtle.
2	NS_Date	D	8		Date the turtle was captured.
3	NS_Site	C	8		Study site (see Appendix B for codes).
4	NS_Island	C	4		Island where turtle was captured (see Appendix B for codes).
5	NS_Time	N	4		Time of capture (24hr).
6	NS_Species	C	2		Species captured (see Appendix B for codes).
7	NS_Sex	C	1		Sex of the turtle captured (see Appendix B for codes).
8	NS_Loc	C	30		The location the turtle was captured. This could be the name of a beach, harbor, etc.
9	Recovery	C	1		Was the turtle a recovery (Y/N).
10	New_Tags	C	1		Were new tags applied (Y/N).
11	NS_Meth	C	25		The method used to capture the turtle.
12	NS_SLength	N	5	1	Straight carapace length.

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Continued

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
13	NS_SWidth	N	5	1	Straight carapace width.
14	NS_CLength	N	5	1	Curved carapace length.
15	NS_CWidth	N	5	1	Curved carapace width.
16	NS_Notch	N	5	1	Notch carapace length.
17	NS_PLLen	N	5	1	Length of the plastron.
18	NS_HDWidth	N	5	1	Width of the turtle head.
19	NS_RFWidth	N	5	1	Width of the right front flipper.
20	NS_PTLen	N	5	1	Length of tail from the rear tip of the plastron to the distal tip of the tail.
21	NS_VTLen	N	5	1	Length of tail from ventral to distal.
22	NS_Weight	N	5	1	The weight of the turtle.
23	NS_Tumors	C	1		Were tumors found.
24	NS_TumRnk	N	1		Tumor ranking from 0-4 (i.e. mild to severe)
25	NS_LEye1	N	2		Number of size one tumors found around the left eyes.
26	NS_LEye2	N	2		Number of size two tumors found around the left eyes.
27	NS_LEye3	N	2		Number of size three tumors found around the left eyes.
28	NS_LEye4	N	2		Number of size four tumors found around the left eyes.
29	NS_REye1	N	2		Number of size one tumors found around the right eyes.
30	NS_REye2	N	2		Number of size two tumors found around the right eyes.

Continued

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
31	NS_REye3	N	2		Number of size three tumors found around the right eyes.
32	NS_REye4	N	2		Number of size four tumors found around the right eyes.
33	NS_FFl1	N	2		Number of size one tumors found on the front flippers.
34	NS_FFl2	N	2		Number of size two tumors found on the front flippers.
35	NS_FFl3	N	2		Number of size three tumors found on the front flippers.
36	NS_FFl4	N	2		Number of size four tumors found on the front flippers.
37	NS_HFL1	N	2		Number of size one tumors found on the hind flippers.
38	NS_HFl2	N	2		Number of size two tumors found on the hind flippers.
39	NS_HFl3	N	2		Number of size three tumors found on the hind flippers.
40	NS_HFl4	N	2		Number of size four tumors found on the hind flippers.
41	NS_Neck1	N	2		Number of size one tumors found on the neck.
42	NS_Neck2	N	2		Number of size two tumors found on the neck.
43	NS_Neck3	N	2		Number of size three tumors found on the neck.
44	NS_Neck4	N	2		Number of size four tumors found on the neck.
45	NS_Mouth1	N	2		Number of size one tumors found in the mouth.
46	NS_Mouth2	N	2		Number of size two tumors found in the mouth.

Continued

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
47	NS_Mouth3	N	2		Number of size three tumors found in the mouth.
48	NS_Mouth4	N	2		Number of size four tumors found in the mouth.
49	NS_Tail1	N	2		Number of size one tumors found on the tail or cloaca.
50	NS_Tail2	N	2		Number of size two tumors found on the tail or cloaca.
51	NS_Tail3	N	2		Number of size three tumors found on the tail or cloaca.
52	NS_Tail4	N	2		Number of size four tumors found on the tail or cloaca.
53	NS_Seam1	N	2		Number of size one tumors found on the seams or scutes.
54	NS_Seam2	N	2		Number of size two tumors found on the seams or scutes.
55	NS_Seam3	N	2		Number of size three tumors found on the seams or scutes.
56	NS_Seam4	N	2		Number of size four tumors found on the seams or scutes.
57	NS_Intrn1	N	2		Number of internal size one tumors found.
58	NS_Intrn2	N	2		Number of internal size two tumors found.
59	NS_Intrn3	N	2		Number of internal size three tumors found.
60	NS_Intrn4	N	2		Number of internal size four tumors found.
61	NS_Dscript	M	10		Notes taken about the captured turtle.
62	NS_Samples	M	10		Notes about the samples taken.

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4.1.1.3 Nesting Database

This database is used to store the nesting information. It uses two index files and contains 57 fields. Each record has a length of 169 bytes.

Database name: Nest_TD.DBF

Index files:

File Name	Key String
NT_IDD	TurtleID+DTOS(NT_Date)
NT_DID	DTOS(NT_Date)+TurtleID

Fields:

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
1	TurtleID	C	8		The ID number used to identify a turtle.
2	NT_Date	D	8		Date the turtle was observed.
3	NT_Island	C	4		Island where turtle was observed (see Appendix B for codes).
4	NT_Timeup	C	4		Time turtle came ashore.
5	NT_Timebk	C	4		Time turtle returned to the sea.
6	NT_Act	C	1		Activity of the turtle when ashore (see Appendix B for codes).
7	NT_Sex	C	1		Sex of the turtle observed (see Appendix B for codes).
8	NT_SLength	N	5	1	Straight carapace length.
9	NT_SWidth	N	5	1	Straight carapace width.
10	NT_CLength	N	5	1	Curved carapace length.
11	NT_CWidth	N	5	1	Curved carapace width.
12	NT_Notch	N	5	1	Notch carapace length.
13	NT_PLLen	N	5	1	Length of the plastron.
14	NT_HDWidth	N	5	1	Width of the turtle head.

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Continued

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
15	NT_RFWidth	N	5	1	Width of the right front flipper.
16	NT_PTLen	N	5	1	Length of tail from the rear tip of the plastron to the distal tip of the tail.
17	NT_VTLen	N	5	1	Length of tail from ventral to distal.
18	NT_Weight	N	5	1	The weight of the turtle.
19	NT_Tumors	C	1		Were tumors found.
20	NT_TumRnk	N	1		Tumor ranking from 0-4 (i.e. mild to severe)
21	NT_LEye1	N	2		Number of size one tumors found around the left eyes.
22	NT_LEye2	N	2		Number of size two tumors found around the left eyes.
23	NT_LEye3	N	2		Number of size three tumors found around the left eyes.
24	NT_LEye4	N	2		Number of size four tumors found around the left eyes.
25	NT_REye1	N	2		Number of size one tumors found around the right eyes.
26	NT_REye2	N	2		Number of size two tumors found around the right eyes.
27	NT_REye3	N	2		Number of size three tumors found around the right eyes.
28	NT_REye4	N	2		Number of size four tumors found around the right eyes.
29	NT_FFl1	N	2		Number of size one tumors found on the front flippers.
30	NT_FFl2	N	2		Number of size two tumors found on the front flippers.

Continued

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
31	NT_FF13	N	2		Number of size three tumors found on the front flippers.
32	NT_FF14	N	2		Number of size four tumors found on the front flippers.
33	NT_HFL1	N	2		Number of size one tumors found on the hind flippers.
34	NT_HF12	N	2		Number of size two tumors found on the hind flippers.
35	NT_HF13	N	2		Number of size three tumors found on the hind flippers.
36	NT_HF14	N	2		Number of size four tumors found on the hind flippers.
37	NT_Neck1	N	2		Number of size one tumors found on the neck.
38	NT_Neck2	N	2		Number of size two tumors found on the neck.
39	NT_Neck3	N	2		Number of size three tumors found on the neck.
40	NT_Neck4	N	2		Number of size four tumors found on the neck.
41	NT_Mouth1	N	2		Number of size one tumors found in the mouth.
42	NT_Mouth2	N	2		Number of size two tumors found in the mouth.
43	NT_Mouth3	N	2		Number of size three tumors found in the mouth.
44	NT_Mouth4	N	2		Number of size four tumors found in the mouth.
45	NT_Tail1	N	2		Number of size one tumors found on the tail or cloaca.
46	NT_Tail2	N	2		Number of size two tumors found on the tail or cloaca.

Continued

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
47	NT_Tail3	N	2		Number of size three tumors found on the tail or cloaca.
48	NT_Tail4	N	2		Number of size four tumors found on the tail or cloaca.
49	NT_Seam1	N	2		Number of size one tumors found on the seams or scutes.
50	NT_Seam2	N	2		Number of size two tumors found on the seams or scutes.
51	NT_Seam3	N	2		Number of size three tumors found on the seams or scutes.
52	NT_Seam4	N	2		Number of size four tumors found on the seams or scutes.
53	NT_Intrn1	N	2		Number of internal size one tumors found.
54	NT_Intrn2	N	2		Number of internal size two tumors found.
55	NT_Intrn3	N	2		Number of internal size three tumors found.
56	NT_Intrn4	N	2		Number of internal size four tumors found.
57	NT_Dscript	M	10		Comments about the observed turtle.

4.1.1.4 Driftnet Database

This database is used to store the driftnet information. It uses three index files and contains 28 fields. Each record has a length of 127 bytes.

Database name: Drift_TD.DBF

Index files:

File Name	Key String
DN_IDD	TurtleID+DTOS(DN_Date)
DN_DID	DTOS(DN_Date)+TurtleID
DN_LD	STR(DN_LicNo,4)+DTOS(NS_Date)

Fields:

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
1	TURTLEID	C	8		The ID number used to identify a turtle.
2	DN_DATE	D	8		Date of capture.
3	DN_FLAG	C	1		The vessel's flag (see Appendix B for codes).
4	DN_VESSEL	C	25		Name of the vessel.
5	DN_LICNO	N	4		License number.
6	DN_OBSNAME	C	25		Name of the observer (see Appendix B for codes).
7	DN_NATL	C	1		Observer's national.
8	DN_GEAR	C	2		Gear type (see Appendix B for codes).
9	DN_MESHSIZ	N	3		Gillnet mesh size.
10	DN_TZONE	N	2		Time zone (relative to GMT).
11	DN_LATDEG	N	2		Latitude degrees.
12	DN_LATMIN	N	2		Latitude minutes.
13	DN_LATHEMI	C	1		Hemisphere (N, S).
14	DN_LOGDEG	N	3		Longitude degrees.
15	DN_LOGMIN	N	2		Longitude minutes.

Continued

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
16	DN_LOGHEMI	C	1		Hemisphere (E, W).
17	DN_SST	N	6	1	Sea surface temperature.
18	DN_OPNO	N	2		Fishing gear operation number.
19	DN_SECNO	N	2		Fishing gear section number.
20	DN_SPECIES	C	3		Species code (see Appendix B for codes).
21	DN_STATUS	C	2		Type of encounter (see Appendix B for codes).
22	DN_COND	C	1		Condition of turtle when encountered (see Appendix B for codes).
23	DN_DISP	C	1		Action taken with turtle (see Appendix B for codes).
24	DN_CLENGTH	N	7	1	Curved carapace length.
25	DN_CLACCY	C	1		Method of length determination (M-measured, E-estimated).
26	DN_OLDTAGS	N	1		Number of old tags present.
27	DN_NEWTAGS	N	1		Number of new tags present.
28	DN_DSCRIPT	M	10		Notes about the encounter.

4.1.1.5 Tag Database

The master identification database used to store all tag information.

Database Name: Tag_TD.DBF

Index files:

File Name	Key String
Tag_ID	TurtleID+TagNo+DTOS(Date)
Tag_TNo	TagNo+DTOS(Date)

Fields:

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
1	TurtleID	C	8		The ID number used to identify a turtle.
2	TagNo	C	8		The tag number.
3	Date	D	8		Date the tag was applied.
4	TagType	C	4		Type of tag applied (see Appendix B for codes).
5	TagPos	C	3		Location the tag was applied (see Appendix B for codes).

4.1.2 System Databases

System databases are files used by the system during its operation. These files must reside in the same directory as the system. If by accident any of these files are lost or corrupted, reinstall MTDMS (*see section Install MTDMS*).

4.1.2.1 Island Codes Database

This database is used to verify island codes entered by the user and to convert island codes when printing reports. Currently, the seven digit island codes aren't being used.

Database Name: Isles_CD.DBF

Index files: None

Fields:

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
1	Isle_Ed	C	4		The four character MTDMS data entry code.
2	Island	C	25		Name of the island.
3	Isle_Cd	C	7		The seven digit island code used by NMFS.

Content:

Record Number	Field ISLE_ED	Field ISLAND	Field ISLE_CD
1	HAWA	Hawaii	1011100
2	MAUI	Maui	1021100
3	KAHO	Kahoolawe	1021200
4	LANA	Lanai	1021300
5	MOLO	Molokai	1021400
6	OAHU	Oahu	1022100
7	KAUA	Kauai	1031100
8	NIIH	Niihau	1032100
9	KAUL	Kaula	1033100
10	NIHO	Nihoa	1051100
11	NECK	Necker Island	1071100
12	FREN	French Frigate Shoals	1082100
13	LITT	Little Gin	1082110
14	GIN	Gin	1082120
15	EAST	East	1082130
16	MULL	Mullet	1082140
17	ROUN	Round	1082150
18	WHAL	Whale-Skate	1082160
19	TRIG	Trig	1082170

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Continued

Record Number	Field ISLE_ED	Field ISLAND	Field ISLE_CD
20	TERN	Tern	1082180
21	SHAR	Shark	1082190
22	GARD	Gardner Pinnacles	1091100
23	MARO	Maro Reef	1111100
24	LAYS	Laysan Island	1121100
25	LISI	Lisianski Island	1142100
26	PEAR	Pearl and Hermes Reef	1171100
27	MIDW	Midway Island	1211100
28	KURE	Kure Island	1231100
29	AUST	Australia	
30		No Entry	0

4.1.2.2 Turtle Codes Database

This database is used to verify species codes entered by the user and to convert species codes when printing reports. Two sets of species codes are used by MTDMS. The first set of codes is the two character MTDMS codes. These codes are used by the stranded, near shore and nesting databases. The second set of species codes is the three digit U.S. driftnet observer codes. These codes are used specifically by the driftnet database.

Database Name: Turts_CD.DBF

Index Files: None

Fields:

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
1	TURT_ED	C	2		The two character MTDMS species code.
2	COM_NM	C	20		The common name for the species.
3	SCI_NM	C	22		The scientific name of the turtle.
4	TURT_CD	C	3		The 3 digit driftnet observer codes.

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Content:

Record Number	Field TURT_ED	Field COM_NM	Field SCI_NM	Field TURT_CD
1	CM	Green Turtle	Chelonia mydas	903
2	EI	Hawksbill Turtle	Eretmochelys imbricata	905
3	CC	Loggerhead Turtle	Caretta caretta	902
4	LK	Kemp's Ridley Turtle	Lepidochelys kempi	0
5	LO	Olive Ridley Turtle	Ledidochelys olivacea	904
6	DC	Leatherback Turtle	Dermochelys coriacea	901
7		Unidentified		900
8		Unknown hard-shelled		906

4.1.2.3 Tag Location Codes Database

This database is used to verify tagging location codes entered by the user.

Database Name: Tag_Loc.DBF

Index files: None

Fields:

Field Number	Field Name	Field Type	Field Length	Field Dec	Field Description
1	TPos_Cd	C	3		The three character MTDMS location code for tag location.
2	Location	C	50		Description of the location code.