

OPERATIONS MANUAL

FOR

PLANT RECORD TRACKING/MAPPING SYSTEM

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SYSTEM OVERVIEW

This IBM based Plant Record Tracking/Mapping System is an integrated micro-computer system developed for the purpose of tracking plant information and mapping plant location for use by horticultural institutions with plant collections. Information such as accession number, family, genus, species, subspecies or variety, location, nativity, source, and plant notes are tracked based on unique accession numbers.

The Plant Record Tracking/Mapping System is a series of data files and procedural files written in dBase III Plus code and AutoCad (Version. 2.5) Lisp Language. Both commercially available programs, dBase III Plus and AutoCad are necessary to run this application program.

This application program requires minimal computer experience and an understanding of plant record-keeping. The goal of this program is to provide an easy to use system that you can start upon immediately, and as your skills increase, you can wean yourself away from the menus, and use the full power of dBase III Plus and AutoCad to massage your data.

START UP

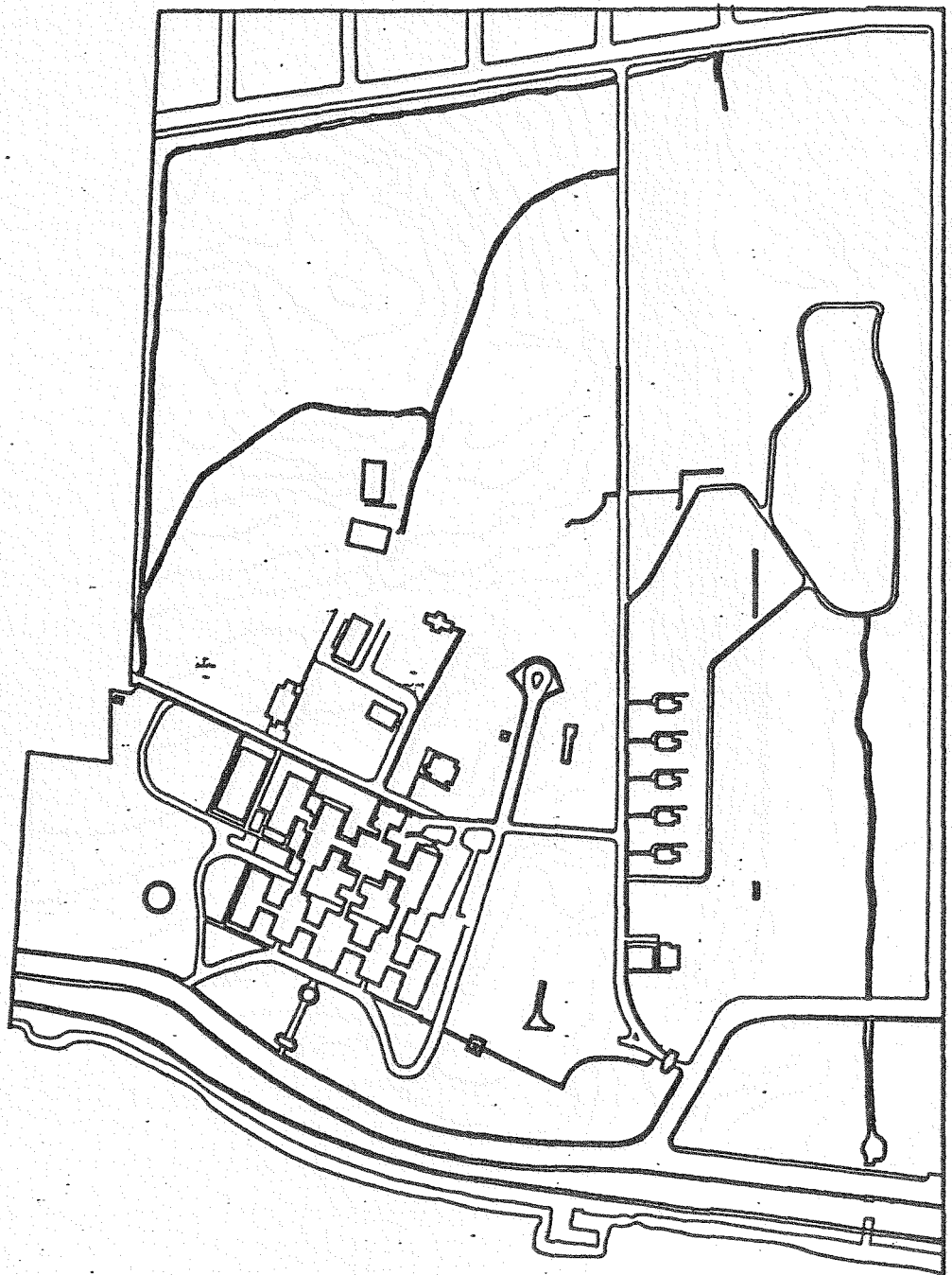
Copy all Plant Record Tracking/Mapping diskettes into a sub-directory titled "Garden". This includes the dBase and AutoCad diskettes. Load in the drawing file of your garden. Enter the Garden sub-directory and type the command "Garden" and the program will start. The main menu will appear with choices that will lead you through all display, print, plot and edit options that give you a basic plant records system.

The mapping section is the only section where a few words are needed to explain procedure. After adding records (in Edit menu) or deleting records, the choice "Update Graphics" must be chosen to update your map. The program automatically changes over to AutoCad, loads your garden map, and brings the quadrant(s) to the screen so that you may use the curser to locate the exact position of the addition or deletion. Hit the return key when the position is found, and the operation is performed and you are prompted for the next addition or deletion if there is one. It is necessary to exit (quit) properly as prompted from all sections of this program.

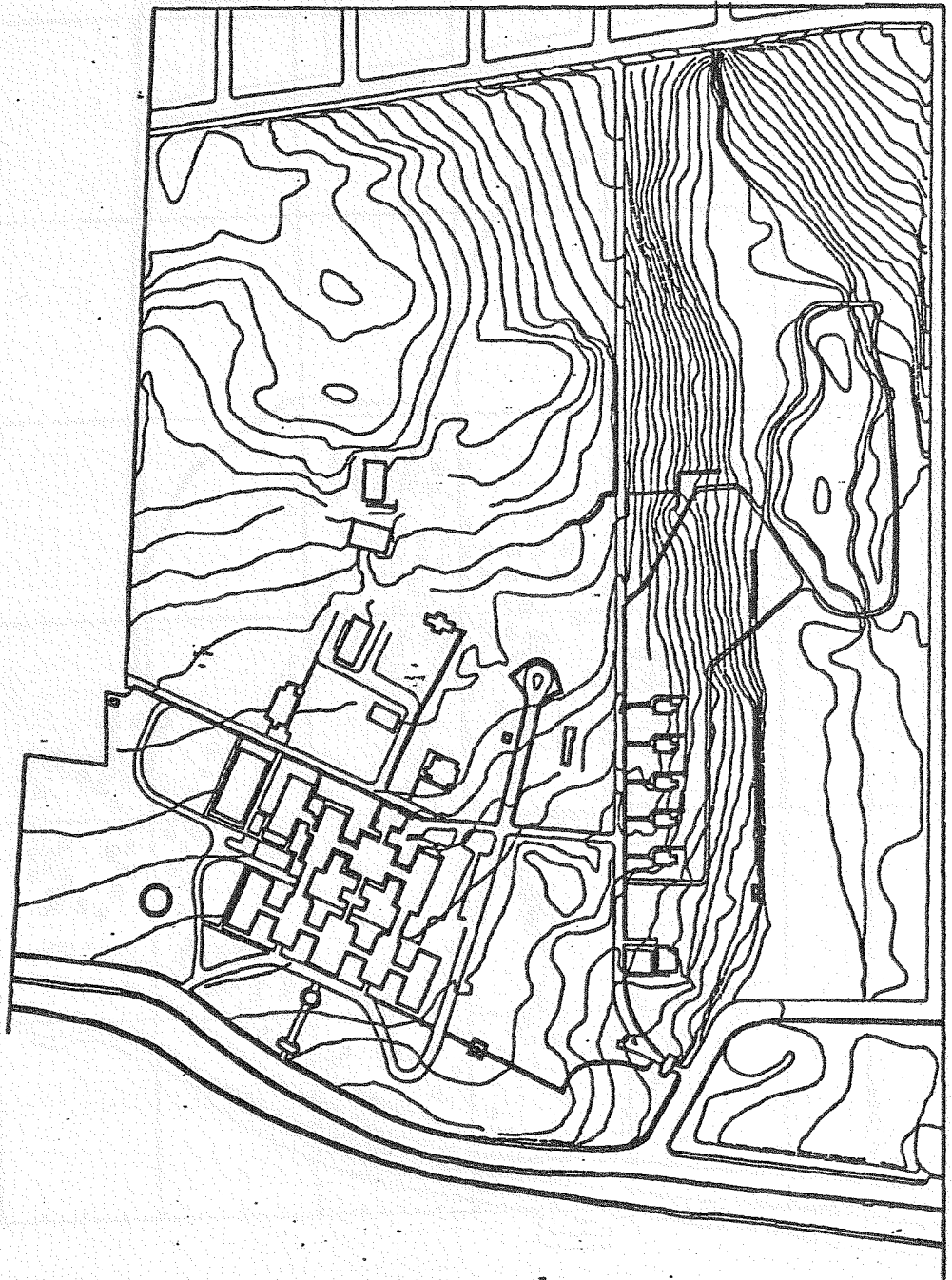
Database structure (fields)

ACCNUM	CHAR - 6
FAMILY	CHAR - 25
GENUS	CHAR - 20
X	CHAR - 1
SPECIES	CHAR - 20
VAR	CHAR - 20
LOCATION	CHAR - 10
NATIVITY	CHAR - 20
SOURCE	CHAR - 30
UPDATE	DATE - 8
NOTES	CHAR - 40
NOTES2	CHAR - 40

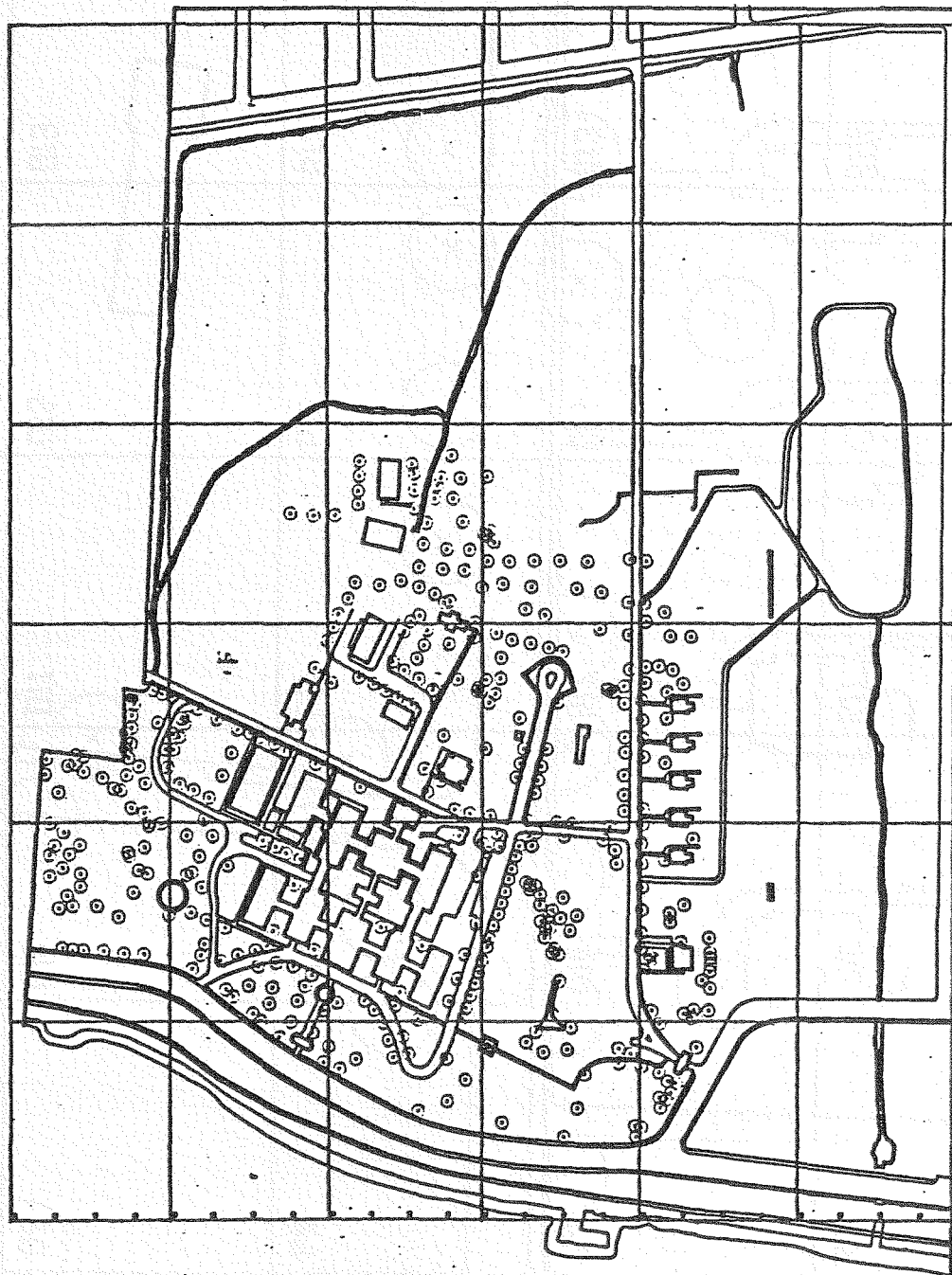
The following maps are examples of this programs mapping capabilities.



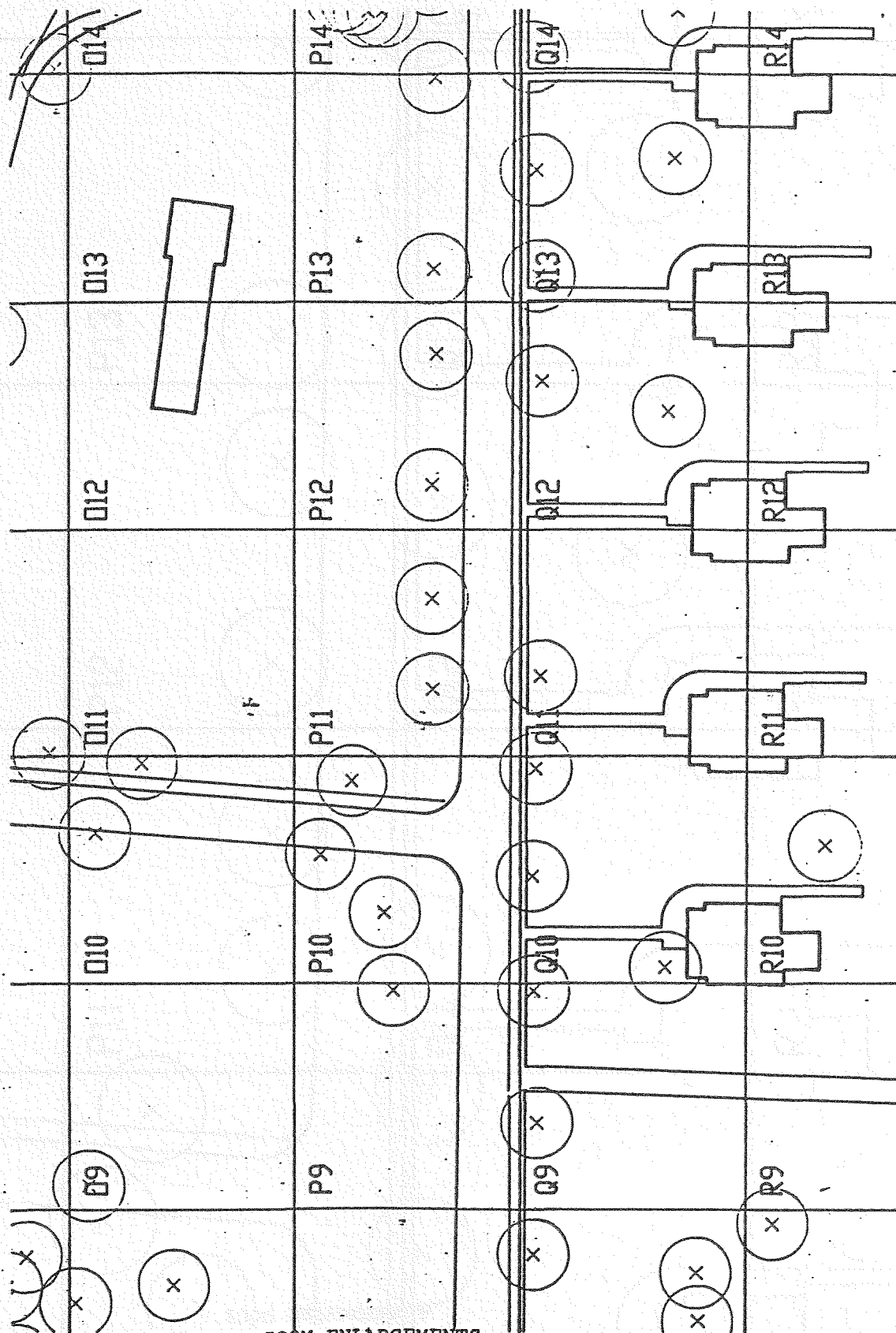
BOUNDARIES AND FACILITIES

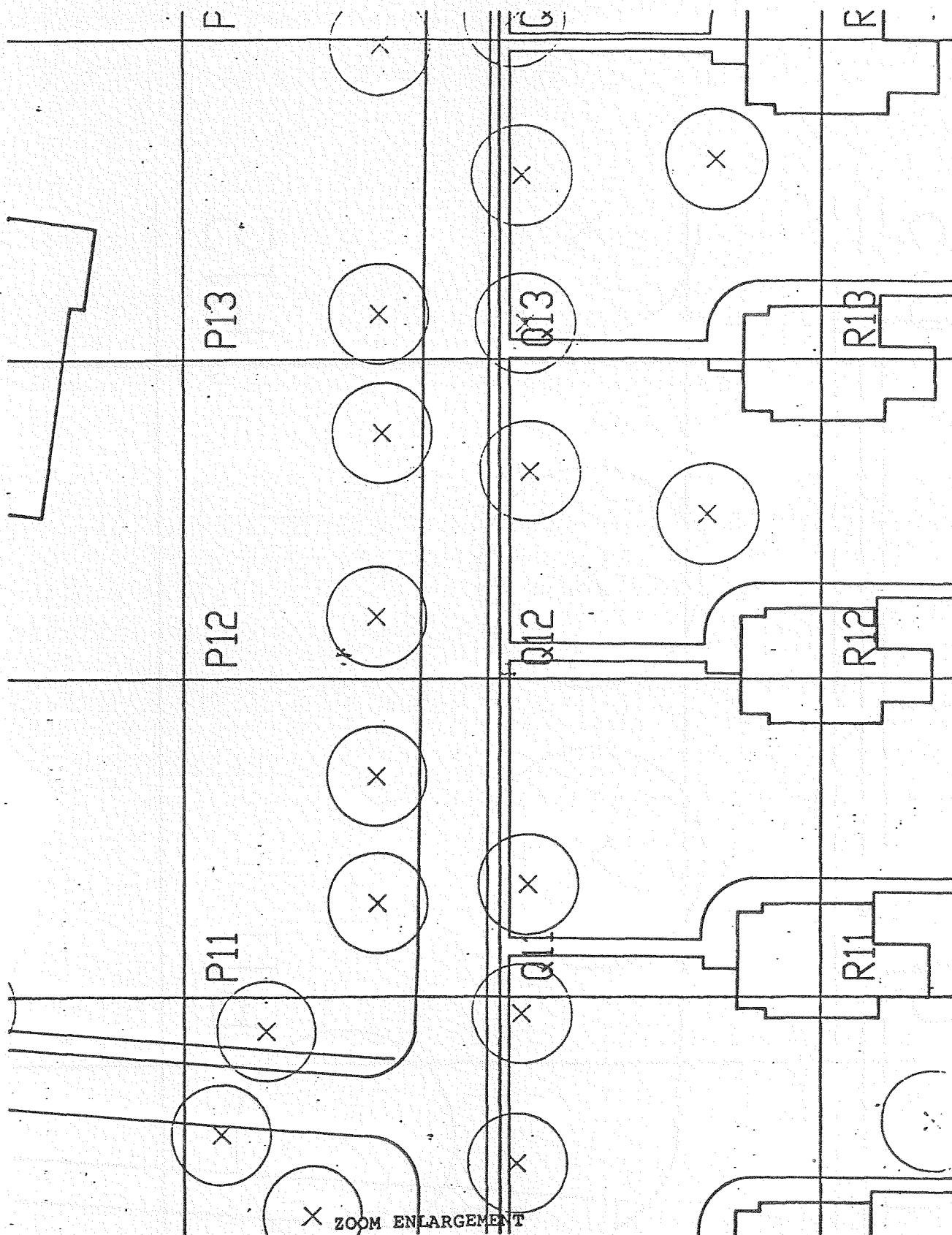


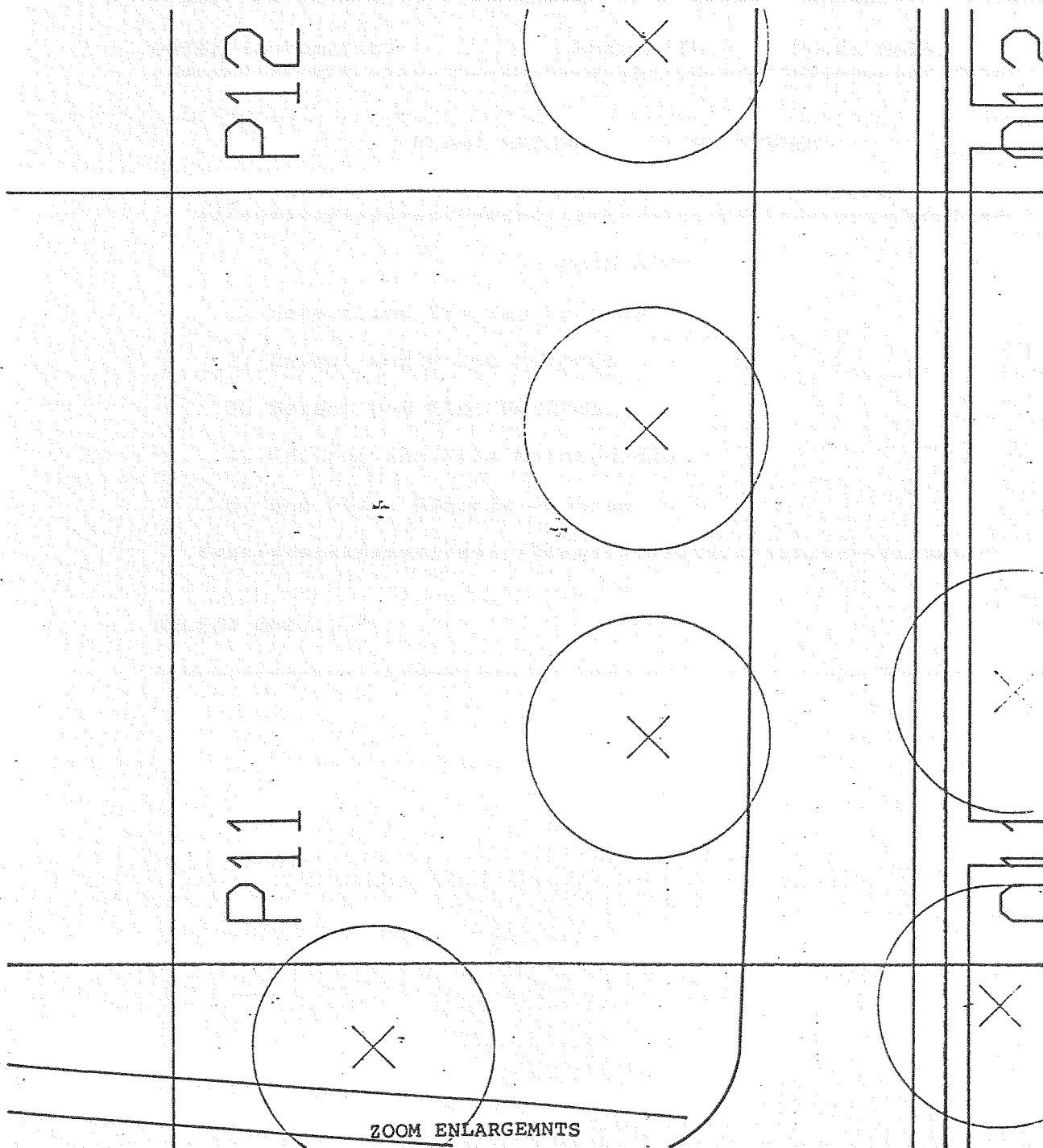
TOPOGRAPHIC LINES



TREE INSERTIONS







PLANT RECORD TRACKING SYSTEM

When the application is 'booted' the following menu will appear on the screen:

DATE: {automatic}

FRG: MAIN

MDLE: MAIN

PLANT RECORD TRACKING SYSTEM

MAIN MENU

1. Select and Display Records
2. Select and Print Records
3. Select and Plot Records
4. Editing and File Maintenance
5. End Plant Records Program

SELECT ONE....

It is not necessary to either read or understand the following pages of this manual. They are provided simply as documentation of the program code and of the interactions of the files should someone be interested.

OVERALL PROGRAM PROCEDURES

Plant records datafile is PLANTREC.DBF

Garden drawing file is GARDEN.DWG

DOS Command

GARDEN.BAT - Batch file which loads Plant Record Tracking/Mapping System

dBase III Plus Code

- 1) MAIN.PRG - Main program initiates the whole application, sets up public memory variables, menus and menu choices.
- 2) INITIAL.PRG - Sets format of titles, subtitles, and menus.
- 3) INITIAL.FMT - Format file which creates how the menu screens will appear.
- 4) DOINDEX.PRG - Reindexes all the index files for the database PLANTREC.DBF. DOINDEX.PRG is called in from several programs.
- 5) DISP.PRG - Main menu selection (1). Executes displays of data chosen based on your selection in the display menu. This includes the following:
 - a) Plant Records by a Specific Range of Accession Numbers (DACCNUM.PRG).
 - b) Plant Records for All Accession Numbers (DACCALL.PRG)
 - c) Plant Records by a Specific Genera (DGENSPEC.PRG).
 - d) Plant Records Grouped by Genera (DGENALL.PRG).
 - e) Plant Records by Specific Location (DLOCSPEC.PRG).
 - f) Plant Records Grouped by Location (DLOCALL.PRG).
 - g) Plant Records by Specific Source (DSRCSPEC.PRG).
 - h) Plant Records Grouped by Source (DSRCALL.PRG).
 - i) Plant Records by Specific Update Date (DUPDATE.PRG).
- 6) PRINT.PRG - Main menu selection (2). Executes reports of data chosen based on your selection in the Print menu. This menu includes the following:
 - a) Plant Records by a Specific Range of Accession Numbers (PACCNUM.PRG).
 - b) Plant Records for All Accession Numbers (PACCALL.PRG)
 - c) Plant Records by a Specific Genera (PGENSPEC.PRG).
 - d) Plant Records Grouped by Genera (PGENALL.PRG).
 - e) Plant Records by Specific Location (PLOCSPEC.PRG).
 - f) Plant Records Grouped by Location (PLOCALL.PRG).
 - g) Plant Records by Specific Source (PSRCSPEC.PRG).
 - h) Plant Records Grouped by Source (PSRCALL.PRG).
 - i) Plant Records by Specific Update Date (PUPDATE.PRG).

7) PLOT.PRG - Main menu selection (3). Executes plots of data chosen based on your selection in the Plot menu. This menu includes the following:

- a) Plot Specific Named View (Quadrant) (PLQUAD.PRG).
- b) Plot Complete Garden (PLOTALL.PRG)

8. AUDIT.PRG - Main menu selection (4). Edit and file maintenance menu. This menu includes the following:

- a) Add Plant Records (ADD.PRG).
- b) Find Specific Accession Number to Edit (ACCEDIT.PRG).
- c) Find Specific Plant Record by Latin Name to Edit (GENEDIT.PRG).
- d) Delete Specific Plant Record by Accession Number (RID.PRG).
- e) Backup Plant Records File (BACKUP.PRG).

Associated Index Files:

ACCNDX.NDX - Indexed on Accesssion Number
GENNDX.NDX - Indexed on Genus and Accession Number
LOCNDX.NDX - Indexed on Location and Accession Number
SCRNDX.NDX - Indexed on Source and Accession Number
UPDNDX.NDX - Indexed on Update date
LATINNDX.NDX - Indexed on Genus & Species & Variety
FAMNDX.NDX - Indexed on Family
NATNDX.NDX - Indexed on Nativity

AutoCad Lisp Code

ACAD.PGP - External Command File

ACAD.LSP - Gathers tree accession numbers and garden location data input into a dBase III Plus data base so that it may be semi-automatically added and deleted to/from the associated garden's graphic data base.

*GARDEN.BAT Batch file to load dBase Main.prg and Acad drawing file
* Copyright (c) David Murbach 1988

```
echo off
cd \garden
:rerun
dbase main
if exist acad.ext goto exit
if exist acad.plt goto plot
if not exist acad.add go to rerun
:add
acad garden garden
del acad.add
goto rerun
:plot
acad garden gardenp
del acad.plt
goto rerun
:exit
cd \
echo on
```

* MAIN.PRG

- * MAIN is the main program for the Plant Records
- * Tracking System Application. It is
- * called from the dBASE command level by
- * typing DO MAIN.
- * Copyright (c) David Murbach 1988

```
ERASE ACAD.EXT
CLEAR
CLOSE DATABASES
CLOSE INDEX
CLOSE FORMAT
CLOSE PROCEDURE
SET TALK OFF
SET BELL OFF
SELECT 1
USE PLANTREC
STORE 'N' TO UPDTE
STORE 'Y' TO DO
PUBLIC CLIENT,PROGRAM,MODULE,CHOICE,VMARKET,VPRODUCT
PUBLIC SUBTITLE,MENU,SELECTION,SELECT2
STORE 'PLANT RECORD TRACKING SYSTEM' TO SUBTITLE
STORE ' ' TO TITLE
DO WHILE .T.
    STORE 'MAIN' TO PROGRAM
    STORE 'PLANT RECORD SYSTEM BY BERGSOHN & MURBACH' TO MENU
    STORE 'MAIN' TO MODULE
    STORE '1. SELECT AND DISPLAY RECORDS' TO CHOICE1
    STORE ' ' TO CHOICE2
    STORE '2. SELECT AND PRINT RECORDS' TO CHOICE3
    STORE ' ' TO CHOICE4
    STORE '3. SELECT AND PLOT RECORDS' TO CHOICE5
    STORE ' ' TO CHOICE6
    STORE '4. EDITING AND FILE MAINTENANCE' TO CHOICE7
    STORE ' ' TO CHOICE8
    STORE '5. END PLANT RECORDS PROGRAM' TO CHOICE9
    STORE ' ' TO CHOICE10
    STORE ' ' TO CHOICE11
    STORE ' ' TO CHOICE12
    STORE ' ' TO CHOICE13
    STORE ' ' TO SELECTION
    STORE ' ' TO SELECT2
    DO INITIAL
    DO CASE
        CASE SELECTION="1"
```

RELEASE

```
CHOICE1,CHOICE2,CHOICE3,CHOICE4,CHOICE5,CHOICE6,CHOICE7,CHOICE8,CHOICE9,C
HOICE10,CHOICE11,CHOICE12,CHOICE13
```

```
STORE 'A. Display Plant Records By A Specific Range of Accession #'s ' TO CHOICE1
STORE 'B. Display ALL Plant Records in Accession Number Order ' TO CHOICE2
STORE 'C. Display Plant Records By Specific Genera ' TO CHOICE3
```

STORE 'D. Display ALL Plant Records Grouped By Genera ' TO CHOICE4
STORE 'E. Display Plant Record(s) By a Specific Location ' TO CHOICE5
STORE 'F. Display ALL Plant Records Grouped by Location ' TO CHOICE6
STORE 'G. Display Plant Record(s) By Specific Source ' TO CHOICE7
STORE 'H. Display ALL Plant Records Grouped By Source ' TO CHOICE8
STORE 'I. Display Plant Record(s) By Specific Update Date ' TO CHOICE9
STORE 'J. Return To Main Menu ' TO CHOICE10
STORE ' ' TO CHOICE11
STORE ' ' TO CHOICE12
STORE ' ' TO CHOICE13
CASE SELECTION="2"

RELEASE

CHOICE1,CHOICE2,CHOICE3,CHOICE4,CHOICE5,CHOICE6,CHOICE7,CHOICE8,CHOICE9,C
HOICE10,CHOICE11,CHOICE12,CHOICE13

STORE 'A. Print Plant Records By A Specific Range of Accession #'s' TO CHOICE1
STORE 'B. Print ALL Plant Records in Accession Number Order ' TO CHOICE2
STORE 'C. Print Plant Records By Specific Genera ' TO CHOICE3
STORE 'D. Print ALL Plant Records Grouped By Genera ' TO CHOICE4
STORE 'E. Print Plant Record(s) By a Specific Location ' TO CHOICE5
STORE 'F. Print ALL Plant Records Grouped by Location ' TO CHOICE6
STORE 'G. Print Plant Record(s) By Specific Source ' TO CHOICE7
STORE 'H. Print ALL Plant Records Grouped By Source ' TO CHOICE8
STORE 'I. Print Plant Record Card By Specific Accession Number ' TO CHOICE9
STORE 'J. Print ALL Plant Record Cards' TO CHOICE10
STORE 'K. Print Plant Record(s) By Specific Update Date ' TO CHOICE11
STORE 'L. Return To Main Menu ' TO CHOICE12
STORE ' ' TO CHOICE13
CASE SELECTION="3"

RELEASE

CHOICE1,CHOICE2,CHOICE3,CHOICE4,CHOICE5,CHOICE6,CHOICE7,CHOICE8,CHOICE9,C
HOICE10,CHOICE11,CHOICE12,CHOICE13

STORE 'A. Plot Specific Named View ' TO CHOICE1
STORE ' ' TO CHOICE2
STORE 'B. Plot Complete Garden ' TO CHOICE3
STORE ' ' TO CHOICE4
STORE 'C. Highlight Plants of a Specific Family ' TO CHOICE5
STORE ' ' TO CHOICE6
STORE 'D. Highlight Plants of a Specific Genus ' TO CHOICE7
STORE ' ' TO CHOICE8
STORE 'E. Highlight Plants of a Specific Nativity' TO CHOICE9
STORE ' ' TO CHOICE10
STORE 'F. Highlight Plants of a Specific Range of Accession #'s' TO CHOICE11
STORE ' ' TO CHOICE12
STORE 'G. Return to Main Menu ' TO CHOICE13
CASE SELECTION="4"

RELEASE

CHOICE1,CHOICE2,CHOICE3,CHOICE4,CHOICE5,CHOICE6,CHOICE7,CHOICE8,CHOICE9,C
HOICE10,CHOICE11,CHOICE12,CHOICE13

STORE 'A. Add Plant Records ' TO CHOICE1
STORE ' ' TO CHOICE2
STORE 'B. Find Specific Accession Number To Edit ' TO CHOICE3

STORE ' ' TO CHOICE4
STORE 'C. Find Specific Plant Record By Latin Name To Edit' TO CHOICE5
STORE ' ' TO CHOICE6
STORE 'D. Delete Specific Plant Record By Accession Number' TO CHOICE7
STORE ' ' TO CHOICE8
STORE 'E. Back Up Plant Records File (Plantréc.dbf) ' TO CHOICE9
STORE ' ' TO CHOICE10
STORE 'F. Update Graphics ' TO CHOICE11
STORE ' ' TO CHOICE12
STORE 'G. Return to Main Menu ' TO CHOICE13
CASE SELECTION="5"
COPY FILE ACAD.SW TO ACAD.EXT

CHOICE1,CHOICE2,CHOICE3,CHOICE4,CHOICE5,CHOICE6,CHOICE7,CHOICE8,CHOICE9,C
HOICE10,CHOICE11,CHOICE12,CHOICE13
CLOSE DATABASE
CLOSE PROCEDURE
CLOSE INDEX
CLOSE FORMAT
CLEAR
QUIT
OTHERWISE

CHOICE1,CHOICE2,CHOICE3,CHOICE4,CHOICE5,CHOICE6,CHOICE7,CHOICE8,CHOICE9,C
HOICE10,CHOICE11,CHOICE12,CHOICE13
CLEAR
ENDCASE
DO CASE

CASE SELECTION='1'
STORE 'DISPLAY' TO MODULE
STORE 'DISPLAY MENU' TO MENU
CASE SELECTION='2'
STORE 'PRINT MENU' TO MENU
STORE 'PRINT MENU' TO MODULE
CASE SELECTION='3'
STORE 'PLOT MENU' TO MENU
STORE 'PLOT MENU' TO MODULE
CASE SELECTION='4'
STORE 'EDIT' TO MODULE
STORE 'EDIT SUBMENU' TO MENU
CASE SELECTION='5'
COPY FILE ACAD.SW TO ACAD.EXT
RELEASE ALL
CLEAR
CLOSE DATABASE
CLOSE PROCEDURE
CLOSE INDEX
CLOSE FORMAT
QUIT
OTHERWISE
CLEAR

```
                                RELEASE
CHOICE1,CHOICE2,CHOICE3,C,CHOICE4,CHOICE5,CHOICE6,CHOICE7,CHOICE8,CHOICE9,
CHOICE10,CHOICE11,CHOICE12
    RELEASE CHOICE13
ENDCASE
IF SELECTION = '1'
    DO INITIAL2
    DO DISP
ENDIF
IF SELECTION = '2'
    DO INITIAL2
    DO PRINT
ENDIF
IF SELECTION = '3'
    DO INITIAL2
    DO PLOT
ENDIF
IF SELECTION = '4'
    DO INITIAL2
    DO AUDIT
ENDIF
RELEASE
SELECTION,SELECT2,CHOICEP1,CHOICE2,CHOICE3,CHOICE4,CHOICE5,CHOICE6,CHOICE
7,CHOICE8,CHOICE9,CHOICE10,CHOICE11,CHOICE12
RELEASE CHOICE13
ENDDO
CLEAR
CLOSE PROCEDURE
CLOSE DATABASES
CLOSE INDEX
CLOSE FORMAT
```

* INITIAL.PRG Sets format of titles, subtitles and menus
* Copyright (c) David Murbach 1988

CLOSE FORMAT
STORE '' TO SELECTION
SET FORMAT TO INITIAL
READ
CLOSE FORMAT
RETURN

* INITIAL.FMT This file formats the screen for the menus
* Copyright (c) David Murbach 1988

@ 1,0 SAY 'DATE:'
@ 1,6 SAY DATE()
@ 1,18 SAY TITLE
@ 1,45 SAY 'PRG:'
@ 1,50 SAY PROGRAM
@ 1,68 SAY MODULE

@ 2, 0 SAY

@ 4,5 SAY '*****'
@ 5,5 SAY '*'
@ 5,70 SAY '*'
@ 6,5 SAY '*'
@ 6,20 SAY MENU
@ 6,70 SAY '*'
@ 7,5 SAY '*'
@ 7,70 SAY '*'
@ 8,5 SAY '*'
@ 8,8 SAY CHOICE1
@ 8,70 SAY '*'
@ 9,5 SAY '*'
@ 9,8 SAY CHOICE2
@ 9,70 SAY '*'
@ 10,5 SAY '*'
@ 10,8 SAY CHOICE3
@ 10,70 SAY '*'
@ 11,5 SAY '*'
@ 11,8 SAY CHOICE4
@ 11,70 SAY '*'
@ 12,5 SAY '*'
@ 12,8 SAY CHOICE5
@ 12,70 SAY '*'
@ 13,5 SAY '*'
@ 13,8 SAY CHOICE6
@ 13,70 SAY '*'
@ 14,5 SAY '*'
@ 14,8 SAY CHOICE7
@ 14,70 SAY '*'
@ 15,5 SAY '*'
@ 15,8 SAY CHOICE8
@ 15,70 SAY '*'
@ 16,5 SAY '*'
@ 16,8 SAY CHOICE9
@ 16,70 SAY '*'
@ 17,5 SAY '*'
@ 17,8 SAY CHOICE10
@ 17,70 SAY '*'
@ 18,5 SAY '*'
@ 18,8 SAY CHOICE11

@ 18,70 SAY '0'
@ 19,5 SAY '0'
@ 19,8 SAY CHOICE12
@ 19,70 SAY '0'
@ 20,5 SAY '0'
@ 20,8 SAY CHOICE13
@ 20,70 SAY '0'
@ 21,5 SAY '0'
@ 21,70 SAY '0'
@ 22,5 SAY '*****'
@ 23,5 SAY ' SELECT ONE.... '
@ 23,30 GET SELECTION

DOINDEX.PRG Reindexes all the index files for Plantrec.dbf
Copyright (c) David Murbach 1988

USE PLANTREC

SET INDEX TO ACCNDX,GENNDX,LOCNDX,SRCNDX,UPDNDX,LATINNDX
REINDEX

* DISP.PRGR

* Executes the different options off the
* Display Menu depending on which choice
* is made

* Copyright (c) David Murbach 1988

SET TALK OFF

@3,0 CLEAR

DO WHILE .T.

DO CASE

CASE UPPER(SELECT2)='A'

DO DACCNUM

CASE UPPER(SELECT2)='B'

DO DACCALL

CASE UPPER(SELECT2)='C'

DO DGENSPEC

CASE UPPER(SELECT2)='D'

DO DGENALL

CASE UPPER(SELECT2)='E'

DO DLOCSPEC

CASE UPPER(SELECT2)='F'

DO DLOCALL

CASE UPPER(SELECT2)='G'

DO DSRCSPEC

CASE UPPER(SELECT2)='H'

DO DSRCALL

CASE UPPER(SELECT2)='I'

DO DUPDATE

OTHERWISE

RETURN

ENDCASE

STORE '' TO SELECT2

CLOSE DATABASES

CLOSE FORMAT

ENDDO

@ 3,0 CLEAR

RETURN

* DACCNUM.PRGM Display for Accession Numbers Range

* Called from DISPLAY.PRGM

* Copyright (c) David Murbach 1988

SET HEADING OFF

SET BELL OFF

SET TALK OFF

SET INTENSITY ON

@ 1,50 SAY 'DACCNUM.PRGM '

@ 3,0 CLEAR

CLOSE DATABASE

STORE 'Y' TO UPDTE

DO WHILE UPPER(UPDTE) <> 'N'

STORE 'Y' TO UPDTE

@ 3,0 CLEAR

@ 5,5 SAY 'This option displays Plant Records by a specific range'

@ 6,5 SAY 'of Accession Numbers. Please enter Y to continue or N'

@ 7,5 SAY 'to return to the Main Menu: ' GET UPDTE

READ

IF UPPER(UPDTE) <> 'Y'

CLOSE DATABASE

RELEASE ALL EXCEPT UPDTE

RETURN

ENDIF

@ 3,0 CLEAR

STORE SPACE(6) TO VACCNUM1

STORE SPACE(6) TO VACCNUM2

@ 3,0 CLEAR

@ 4,1 SAY 'ENTER LOWER ACCESSION NUMBER IN RANGE: ' GET VACCNUM1

@ 5,1 SAY 'ENTER HIGHER ACCESSION NUMBER IN RANGE: ' GET VACCNUM2

READ

CLEAR

DO DOINDEX

SET FILTER TO ACCNUM>=VACCNUM1 .AND. ACCNUM<=VACCNUM2

GOTO TOP

STORE 0 TO LINECNT

? " DATA DISPLAY BY ACCESSION NUMBER ORDER"

? " "

? " ACCNUM LOCATION"

? " LATIN NAME"

?

STORE (LINECNT+5) TO LINECNT

DO WHILE .NOT. EOF()

? ACCNUM+SPACE(3)+LOCATION

SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+TRIM(SUBSP)

STORE (LINECNT + 2) TO LINECNT

SKIP

IF LINECNT >= 22

WAIT

```
@ 0,0 CLEAR
STORE 0 TO LINECNT
? "      DATA DISPLAY BY ACCESSION ORDER"
?
?" ACCNUM  LOCATION"
?"  LATIN NAME      "
?
STORE (LINECNT+5) TO LINECNT
ENDIF
ENDDO
WAIT
ENDDO
RELEASE ALL
@ 0,0 CLEAR
CLOSE DATABASE
RETURN
```

* DACCALL.PRG DISPLAYS all plant records by accession number
* Called from DISPLAY.PRG
* Copyright (c) David Murbach 1988

```
SET HEADING OFF
SET TALK OFF
SET BELL OFF
SET INTENSITY ON
@ 1,50 SAY 'DACCALL '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
STORE 0 TO LINECNT
@ 3,0 CLEAR
@ 5,5 SAY 'This option produces a display of all Plant Records '
@ 6,5 SAY 'sorted by Accession Number. Please enter Y to continue'
@ 7,5 SAY 'or N to return to the Main Menu: ' GET UPDTE
READ
CLEAR
IF UPPER(UPDTE) <> 'Y'
    CLOSE DATABASE
    RELEASE ALL EXCEPT UPDTE
    RETURN
ENDIF
USE PLANTREC INDEX ACCNDX
GOTO TOP
STORE 0 TO LINECNT
@ 0,0 CLEAR
?
? SPACE(10) + 'ALL PLANT RECORDS SORTED BY ACCESSION NUMBER'
?
? "ACCNUM  LOCATION"
? "  LATIN NAME  "
?
STORE (LINECNT + 6) TO LINENCNT
DO WHILE .NOT. EOF()
    ? ACCNUM+SPACE(3)+LOCATION
    ?
    SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+TRIM(SUBSP)
    STORE (LINECNT + 2) TO LINECNT
    SKIP
    IF LINECNT >= 22
        WAIT
        @0,0 CLEAR
        STORE 0 TO LINECNT
        ?
        ? SPACE(10) + 'ALL PLANT RECORDS SORTED BY ACCESSION NUMBER'
        ?
        ? "ACCNUM  LOCATION"
        ? "  LATIN NAME  "
```

?
STORE (LINECNT + 6) TO LINECNT
ENDIF
ENDDO
WAIT
RELEASE ALL
CLOSE DATABASE
RETURN


```

* DGENSPEC.PRG  DISPLAY for Specific Genera
*              Called from DISPLAY.PRG
*              Copyright (c) David Murbach

```

```

*****

```

```

SET HEADING OFF
SET BELL OFF
SET TALK OFF
SET INTENSITY ON
@ 1,50 SAY 'DGENSPEC.PRG '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
DO WHILE UPPER(UPDTE) <> 'N'
  STORE 'Y' TO UPDTE
  @ 3,0 CLEAR
  @ 5,5 SAY 'This option displays Plant Records by a specific genera'
  @ 6,5 SAY 'Please enter Y to continue or N to return to the Main Menu: ' GET UPDTE
  READ
  IF UPPER(UPDTE) <> 'Y'
    CLOSE DATABASE
    RELEASE ALL EXCEPT UPDTE
    RETURN
  ENDIF
  STORE SPACE(20) TO VGENUS
  @ 3,0 CLEAR
  @ 4,1 SAY 'ENTER SPECIFIC GENERA TO PRINT: ' GET VGENUS
  READ
  CLEAR
  USE PLANTREC INDEX GENNDX
  SET FILTER TO GENUS=UPPER(VGENUS)
  GOTO TOP
  @ 0,0 CLEAR
  STORE 0 TO LINECNT
  ?
  ? "          DATA DISPLAY BY GENUS "
  ? "
  ? "ACCNUM  LOCATION"
  ? "  LATIN NAME"
  ? "
  ? "GENUS: " + VGENUS
  ? "
  STORE (LINECNT+8) TO LINECNT
  DO WHILE .NOT. EOF()
    ? ACCNUM+SPACE(4)+LOCATION
    ?
    SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+T
    RIM(SUBSP)
    SKIP
    STORE (LINECNT+2) TO LINECNT
    IF LINECNT >= 22
      WAIT

```

```
@ 0,0 CLEAR
STORE 0 TO LINECNT
?
? SPACE(20) + "DATA DISPLAY BY GENUS"
?
?"ACCNUM LOCATION" -
?"  LATIN NAME      "
?
STORE (LINECNT+6) TO LINECNT
ENDIF
ENDDO
WAIT
ENDDO
RELEASE ALL
@ 0,0 CLEAR
CLOSE DATABASE
RETURN
```

```

* DGENALL.PRG  DISPLAYS all plant record Grouped by Genus
*             Called from DISPLAY.PRG
*             Copyright (c) David Murbach 1988
*****

```

```

SET HEADING OFF
SET TALK OFF
SET BELL OFF
SET INTENSITY ON
@ 1,50 SAY 'DGENALL '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
STORE 0 TO LINECNT
@ 3,0 CLEAR
@ 5,5 SAY 'This option produces a display of all Plant Records '
@ 6,5 SAY 'grouped by Genus. Please enter Y to continue or N'
@ 7,5 SAY 'to return to the Main Menu: ' GET UPDTE
READ
IF UPPER(UPDTE) <> 'Y'
    CLOSE DATABASE
    RELEASE ALL EXCEPT UPDTE
    RETURN
ENDIF
STORE SPACE(25) TO VGENUS
USE PLANTREC INDEX GENNDX,ACCNDX
GOTO TOP
STORE RECCOUNT() TO RECORDS
STORE 0 TO NUMREC
@ 0,0 CLEAR
STORE 0 TO LINECNT
? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC GENUS'
?
? "ACCNUM  LOCATION"
? "  LATIN NAME  "
STORE (LINECNT + 4) TO LINENCNT
DO WHILE .NOT. EOF()
    STORE GENUS TO VGENUS
    ?
    ? "GENUS: " + GENUS
    ?
    STORE (LINECNT+3) TO LINECNT
    DO WHILE GENUS = VGENUS
        ? ACCNUM+SPACE(3)+LOCATION
        ?
        SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+TRIM(SUBSP)
        STORE (LINECNT + 2) TO LINECNT
        STORE (NUMREC + 1) TO NUMREC
        SKIP
        IF LINECNT >= 18
            WAIT

```

```
@ 0,0 CLEAR
STORE 0 TO LINECNT
? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC GENUS'
?
? "ACCNUM  LOCATION"
? "  LATIN NAME"
STORE (LINECNT + 4) TO LINECNT
ENDIF
ENDDO
DO WHILE NUMREC = RECORDS
WAIT
STORE (NUMREC + 1) TO NUMREC
ENDDO
ENDDO
@ 0,0 CLEAR
RELEASE ALL
CLOSE DATABASE
RETURN
```

* DLOCSPEC.PRG DISPLAY for Specific Location
* Called from DISPLAY.PRG
* Copyright (c) David Murbach 1988

```
SET HEADING OFF
SET BELL OFF
SET TALK OFF
SET INTENSITY ON
@ 1,50 SAY 'DLOCSPEC.PRG '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
DO WHILE UPPER(UPDTE) <> 'N'
  STORE 'Y' TO UPDTE
  @ 3,0 CLEAR
  @ 5,5 SAY 'This option displays Plant Records by a specific location'
  @ 6,5 SAY 'Please enter Y to continue or N to return to the Main Menu: ' GET UPDTE
  READ
  IF UPPER(UPDTE) <> 'Y'
    CLOSE DATABASE
    RELEASE ALL EXCEPT UPDTE
    RETURN
  ENDIF
  STORE SPACE(7) TO VLOCATION
  @ 3,0 CLEAR
  @ 4,1 SAY 'ENTER SPECIFIC LOCATION TO PRINT: ' GET VLOCATION
  READ
  CLEAR
  USE PLANTREC INDEX LOCNDX
  SET FILTER TO LOCATION=UPPER(VLOCATION)
  GOTO TOP
  @ 0,0 CLEAR
  STORE 0 TO LINECNT
  ?
  ? "          PLANT RECORDS BY SPECIFIC LOCATION "
  ?
  ? "LOCATION: " + VLOCATION
  ?
  ? "ACCNUM  LATIN NAME "
  ?
  STORE (LINECNT+7) TO LINECNT
  DO WHILE .NOT. EOF()
    ACCNUM+SPACE(1)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+S
    PACE(1)+TRIM(SUBSP)
    STORE (LINECNT + 1) TO LINECNT
    SKIP
    IF LINECNT >= 22
      WAIT
      @ 0,0 CLEAR
      STORE 0 TO LINECNT
```

```
?  
? SPACE(20) + "PLANT RECORDS BY SPECIFIC LOCATION"  
?  
?"LOCATION: " + VLOCATION  
?  
?"ACCNUM  LATIN NAME  "  
?  
STORE (LINECNT+7) TO LINECNT  
ENDIF  
ENDDO  
WAIT  
ENDDO  
RELEASE ALL  
@ 0,0 CLEAR  
CLOSE DATABASE  
RETURN
```

```

* DLOCAL.PRG  DISPLAYS all plant record Grouped by Location
*          Called from DISPLAY.PRG
*          Copyright (c) David Murbach 1988
*****

```

```

SET HEADING OFF
SET TALK OFF
SET BELL OFF
SET INTENSITY ON
@ 1,50 SAY 'DLOCAL '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
STORE 0 TO LINECNT
@ 3,0 CLEAR
@ 5,5 SAY 'This option produces a display of all Plant Records '
@ 6,5 SAY 'grouped by Location. Please enter Y to continue or N'
@ 7,5 SAY 'to return to the Main Menu: ' GET UPDTE
READ
IF UPPER(UPDTE) <> 'Y'
    CLOSE DATABASE
    RELEASE ALL EXCEPT UPDTE
    RETURN
ENDIF
STORE SPACE(20) TO VLOCATION
USE PLANTREC INDEX LOCNDX,ACCNDX
GOTO TOP
STORE RECCOUNT() TO RECORDS
STORE 0 TO NUMREC
@ 0,0 CLEAR
STORE 0 TO LINECNT
?
? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC LOCATION'
?
? "ACCNUM  LATIN NAME"
?
STORE (LINECNT + 5) TO LINENCNT
DO WHILE .NOT. EOF()
    STORE LOCATION TO VLOCATION
    ?
    ? "LOCATION: " + LOCATION
    ?
    STORE (LINECNT+3) TO LINECNT
    DO WHILE LOCATION = VLOCATION
        ACCNUM+SPACE(3)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+S
        PACE(1)+TRIM(SUBSP)
        STORE (LINECNT + 1) TO LINECNT
        STORE (NUMREC + 1) TO NUMREC
        SKIP
        IF LINECNT >= 18
            WAIT

```



```
@ 0,0 CLEAR
STORE 0 TO LINECNT
?
? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC LOCATION'
?
? "ACCNUM  LATIN NAME"
?
STORE (LINECNT + 5) TO LINECNT
ENDIF
ENDDO
DO WHILE NUMREC = RECORDS
WAIT
STORE (NUMREC + 1) TO NUMREC
ENDDO
ENDDO
@ 0,0 CLEAR
RELEASE ALL
CLOSE DATABASE
RETURN
```

* DSRCSPEC.PRG DISPLAY for Specific Source
* Called from DISPLAY.PRG
* Copyright (c) David Murbach 1988

```
SET HEADING OFF
SET BELL OFF
SET TALK OFF
SET INTENSITY ON
@ 1,50 SAY 'DSRCSPEC.PRG '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
DO WHILE UPPER(UPDTE) <> 'N'
  STORE 'Y' TO UPDTE
  @ 3,0 CLEAR
  @ 5,5 SAY 'This option displays Plant Records by a specific source'
  @ 6,5 SAY 'Please enter Y to continue or N to return to the Main Menu: ' GET UPDTE
  READ
  IF UPPER(UPDTE) <> 'Y'
    CLOSE DATABASE
    RELEASE ALL EXCEPT UPDTE
    RETURN
  ENDIF
  @ 3,0 CLEAR
  STORE SPACE(30) TO VSOURCE
  @ 4,1 SAY 'ENTER SPECIFIC SOURCE TO PRINT: ' GET VSOURCE
  READ
  CLEAR
  USE PLANTREC INDEX SRCNDX
  GOTO TOP
  SET FILTER TO SOURCE=UPPER(VSOURCE)
  STORE 0 TO LINECNT
  @ 0,0 CLEAR
  ?"          DATA DISPLAY BY SOURCE "
  ?
  ?" ACCNUM  LOCATION"
  ?"  LATIN NAME "
  ?"      "
  ? "SOURCE: " + VSOURCE
  ?
  STORE (LINECNT+7) TO LINECNT
  DO WHILE .NOT. EOF()
    ? ACCNUM+SPACE(4)+LOCATION
    ?
    SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+TRIM(SUBSP)
    SKIP
    STORE (LINECNT+2) TO LINECNT
    IF LINECNT >= 20
      WAIT
      @ 0,0 CLEAR
```

```
STORE 0 TO LINECNT
?
? SPACE(20) + "DATA DISPLAY BY SOURCE"
?
?"ACCNUM LOCATION"
?"  LATIN NAME
?
?"SOURCE: " + VSOURCE
?
STORE (LINECNT+8) TO LINECNT
ENDIF
ENDDO
WAIT
ENDDO
RELEASE ALL
@ 0,0 CLEAR
CLOSE DATABASE
RETURN
```

* DSRCALL.PRG DISPLAYS all plant record Grouped by Source
* Called from DISPLAY.PRG
* Copyright (c) David Murbach 1988

```
SET HEADING OFF
SET TALK OFF
SET BELL OFF
SET INTENSITY ON
@ 1,50 SAY 'DSRCALL '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
STORE 0 TO LINECNT
@ 3,0 CLEAR
@ 5,5 SAY 'This option produces a display of all Plant Records '
@ 6,5 SAY 'grouped by Source. Please enter Y to continue or N'
@ 7,5 SAY 'to return to the Main Menu: ' GET UPDTE
READ
IF UPPER(UPDTE) <> 'Y'
    CLOSE DATABASE
    RELEASE ALL EXCEPT UPDTE
    RETURN
ENDIF
STORE SPACE(30) TO VSOURCE
USE PLANTREC INDEX SRCNDX,ACCNDX
GOTO TOP
STORE RECCOUNT() TO RECORDS
STORE 0 TO NUMREC
@ 0,0 CLEAR
STORE 0 TO LINECNT
? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC SOURCE'
?
? "ACCNUM    LOCATION"
? "    LATIN NAME    "
STORE (LINECNT + 4) TO LINENCNT
DO WHILE .NOT. EOF()
    STORE SOURCE TO VSOURCE
    ?
    ? "SOURCE: " + SOURCE
    ?
    STORE (LINECNT+3) TO LINECNT
    DO WHILE SOURCE = VSOURCE
        ? ACCNUM+SPACE(3)+LOCATION
        ?
        SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+TRIM(SUBSP)
        STORE (LINECNT + 2) TO LINECNT
        STORE (NUMREC + 1) TO NUMREC
        SKIP
        IF LINECNT >= 18
            WAIT
```

```
@ 0,0 CLEAR
STORE 0 TO LINECNT
? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC SOURCE'
?
? "ACCNUM  LOCATION"
? "  LATIN NAME"
STORE (LINECNT + 4) TO LINECNT
ENDIF
ENDDO
DO WHILE NUMREC = RECORDS
WAIT
STORE (NUMREC + 1) TO NUMREC
ENDDO
ENDDO
@ 0,0 CLEAR
RELEASE ALL
CLOSE DATABASE
RETURN
```

```

* DUPDATE.PRG  Display for Specific Update date
*              Called from DISPLAY.PRG
*              Copyright (c) David Murbach 1988

```

```

*****

```

```

SET HEADING OFF
SET BELL OFF
SET TALK OFF
SET INTENSITY ON
@ 1,50 SAY 'DUPDATE.PRG '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
DO WHILE UPPER(UPDTE) <> 'N'
    SET DEVICE TO SCREEN
    SET PRINT OFF
    STORE 'Y' TO UPDTE
    @ 3,0 CLEAR
    @ 5,5 SAY 'This option displays Plant Records by a specific update date:'
    @ 6,5 SAY 'Please enter Y to continue or N to return to the Main Menu: ' GET UPDTE
    READ
    IF UPPER(UPDTE) <> 'Y'
        CLOSE DATABASE
        RELEASE ALL EXCEPT UPDTE
        SET DEVICE TO SCREEN
        SET PRINT OFF
        RETURN
    ENDIF
    @ 3,0 CLEAR
    STORE CTOD('01/01/00') TO VUPDATE
    @ 3,0 CLEAR
    @ 4,1 SAY 'ENTER UPDATE DATE TO VIEW: ' GET VUPDATE
    READ
    STORE DTOC(VUPDATE) TO VUPCHAR
    USE PLANTREC INDEX UPDNDX,ACCNDX
    GOTO TOP
    @ 0,0 CLEAR
    ? "          DATA DISPLAY BY UPDATE DATE "
    ?
    ? "UPDATE DATE: " + VUPCHAR
    ?
    ? " ACCNUM  LOCATION "
    ? "  LATIN NAME  "
    ? "          "
    DISPLAY          ALL          OFF
ACCNUM+SPACE(4)+LOCATION+SPACE(63)+SPACE(3)+TRIM(GENUS)+SPACE(1)+TRIM(SP
ECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+TRIM(SUBSP) FOR UPDATE=VUPDATE
IF EOF()
    ?
    ?
    WAIT
    SET DEVICE TO SCREEN

```

SET PRINT OFF
@ 0,0 CLEAR
RELEASE ALL EXCEPT UPDTE
RETURN
ENDIF
STORE 'Y' TO UPDTE
ENDDO
RELEASE ALL
@ 0,0 CLEAR
CLOSE DATABASE
RETURN

* PRINT.PRGM Executes the different options off the
* PRINT Menu depending on which choice
* is made
* Copyright (c) David Murbach 1988

SET TALK OFF

@3,0 CLEAR

DO WHILE .T.

DO CASE

 CASE UPPER(SELECT2)='A'

 DO PACCNUM

 CASE UPPER(SELECT2)='B'

 DO PACCALL

 CASE UPPER(SELECT2)='C'

 DO PGENSPEC

 CASE UPPER(SELECT2)='D'

 DO PGENALL

 CASE UPPER(SELECT2)='E'

 DO PLOCSPEC

 CASE UPPER(SELECT2)='F'

 DO PLOCALL

 CASE UPPER(SELECT2)='G'

 DO PSRCSPEC

 CASE UPPER(SELECT2)='H'

 DO PSRCALL

 CASE UPPER(SELECT2)='K'

 DO PUPDATE

 CASE UPPER(SELECT2)='I'

 DO ACCCARD

 CASE UPPER(SELECT2)='J'

 DO ALLCARD

 OTHERWISE

 RETURN

ENDCASE

STORE '' TO SELECT2

CLOSE DATABASES

CLOSE FORMAT

ENDDO

@ 3,0 CLEAR

RETURN

* PACCNUM.PRGM Print for Accession Numbers Range

* Called from PRINT.PRGM

* Copyright (c) David Murbach 1988

SET HEADING OFF

SET BELL OFF

SET TALK OFF

SET INTENSITY ON

@ 1,50 SAY 'PACCNUM.PRGM '

@ 3,0 CLEAR

CLOSE DATABASE

STORE 'Y' TO UPDTE

DO WHILE UPPER(UPDTE) <> 'N'

SET DEVICE TO SCREEN

SET PRINT OFF

STORE 'Y' TO UPDTE

@ 3,0 CLEAR

@ 5,5 SAY 'This option print Plant Records by a specific range'

@ 6,5 SAY 'of Accession Numbers. Please enter Y to continue or N'

@ 7,5 SAY 'to return to the Main Menu: ' GET UPDTE

READ

IF UPPER(UPDTE) <> 'Y'

CLOSE DATABASE

RELEASE ALL EXCEPT UPDTE

SET DEVICE TO SCREEN

SET PRINT OFF

RETURN

ENDIF

@ 3,0 CLEAR

STORE SPACE(6) TO VACCNUM1

STORE SPACE(6) TO VACCNUM2

@ 3,0 CLEAR

@ 4,1 SAY 'ENTER LOWER ACCESSION NUMBER IN RANGE: ' GET VACCNUM1

@ 5,1 SAY 'ENTER HIGHER ACCESSION NUMBER IN RANGE: ' GET VACCNUM2

READ

CLEAR

SET PRINT ON

SET DEVICE TO PRINT

SET MARGIN TO 6

DO DOINDEX

SET FILTER TO ACCNUM>=VACCNUM1 .AND. ACCNUM<=VACCNUM2

GOTO TOP

STORE 0 TO LINECNT

?

? " DATA DISPLAY BY ACCESSION NUMBER ORDER"

? " "

? " ACCNUM LOCATION"

? " LATIN NAME"

?

STORE (LINECNT+6) TO LINECNT

DO WHILE .NOT. EOF()

? ACCNUM+SPACE(3)+LOCATION

SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+TRIM(SUBSP)

STORE (LINECNT + 2) TO LINECNT

SKIP

IF LINECNT >= 54

EJECT

STORE 0 TO LINECNT

?

? " DATA DISPLAY BY ACCESSION ORDER"

?

? " ACCNUM LOCATION"

? " LATIN NAME "

?

STORE (LINECNT+6) TO LINECNT

ENDIF

ENDDO

ENDDO

RELEASE ALL

EJECT

SET PRINT OFF

SET DEVICE TO SCREEN

@ 0,0 CLEAR

CLOSE DATABASE

RETURN

* PACCALL.PRГ PRINTS all plant records by accession number
* Called from PRINT.PRГ
* Copyright (c) David Murbach 1988

SET HEADING OFF

SET TALK OFF

SET BELL OFF

SET INTENSITY ON

@ 1,50 SAY 'PACCALL '

@ 3,0 CLEAR

CLOSE DATABASE

STORE 'Y' TO UPDTE

STORE 0 TO LINECNT

@ 3,0 CLEAR

@ 5,5 SAY 'This option produces a prints of all Plant Records '

@ 6,5 SAY 'sorted by Accession Number. Please enter Y to continue'

@ 7,5 SAY 'or N to return to the Main Menu: ' GET UPDTE

READ

IF UPPER(UPDTE) <> 'Y'

CLOSE DATABASE

RELEASE ALL EXCEPT UPDTE

SET DEVICE TO SCREEN

SET PRINT OFF

RETURN

ENDIF

@ 3,0 CLEAR

USE PLANTREC INDEX ACCNDX

GOTO TOP

SET PRINT ON

SET DEVICE TO PRINT

SET MARGIN TO 6

STORE 0 TO LINECNT

@ 0,0 CLEAR

?

? SPACE(15) + 'ALL PLANT RECORDS SORTED BY ACCESSION NUMBER'

?

? "ACCNUM LOCATION"

? " LATIN NAME "

STORE (LINECNT + 5) TO LINENCNT

DO WHILE .NOT. EOF()

? ACCNUM+SPACE(3)+LOCATION

SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+TRIM(SUBSP)

STORE (LINECNT + 2) TO LINECNT

SKIP

IF LINECNT >= 50

? CHR(12) STORE 0 TO LINECNT

@ 0,0 CLEAR

?

? SPACE(20) + 'ALL PLANT RECORDS SORTED BY ACCESSION NUMBER'

* PGENSPEC.PRG PRINT for Specific Genera
* Called from PRINT.PRG
* Copyright (c) David Murbach 1988

```
SET HEADING OFF
SET BELL OFF
SET TALK OFF
SET INTENSITY ON
@ 1,50 SAY 'PGENSPEC.PRG '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
DO WHILE UPPER(UPDTE) <> 'N'
    SET DEVICE TO SCREEN
    SET PRINT OFF
    STORE 'Y' TO UPDTE
    @ 3,0 CLEAR
    @ 5,5 SAY 'This option prints Plant Records by a specific genera'
    @ 6,5 SAY 'Please enter Y to continue or N to return to the Main Menu: ' GET UPDTE
    READ
    IF UPPER(UPDTE) <> 'Y'
        CLOSE DATABASE
        RELEASE ALL EXCEPT UPDTE
        SET DEVICE TO SCREEN
        SET PRINT OFF
        RETURN
    ENDIF
    STORE SPACE(20) TO VGENUS
    @ 3,0 CLEAR
    @ 4,1 SAY 'ENTER SPECIFIC GENERA TO PRINT: ' GET VGENUS
    READ
    CLEAR
    USE PLANTREC INDEX GENNDX
    SET FILTER TO GENUS=UPPER(VGENUS)
    GOTO TOP
    SET PRINT ON
    SET DEVICE TO PRINT
    SET MARGIN TO 6
    STORE 0 TO LINECNT
    ?
    ? "          DATA DISPLAY BY GENUS "
    ? "
    ? "ACCNUM  LOCATION"
    ? "  LATIN NAME"
    ? "
    ? "GENUS: " + VGENUS
    ? "
    STORE (LINECNT+8) TO LINECNT
    DO WHILE .NOT. EOF()
        ? ACCNUM+SPACE(4)+LOCATION
```

SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+T
RIM(SUBSP)
SKIP
STORE (LINECNT+2) TO LINECNT
IF LINECNT >= 54
EJECT
STORE 0 TO LINECNT
?
? SPACE(20) + "DATA DISPLAY BY GENUS"
?
?"ACCNUM LOCATION"
?" LATIN NAME "
?
STORE (LINECNT+6) TO LINECNT
ENDIF
ENDDO
ENDDO
EJECT
SET PRINT OFF
SET DEVICE TO SCREEN
RELEASE ALL
@ 0,0 CLEAR
CLOSE DATABASE
RETURN

```

* PGENALL.PRG PRINTS all plant record Grouped by Genera
* Called from PRINT.PRG
* Copyright (c) David Murbach 1988

```

```

*****

```

```

SET HEADING OFF
SET TALK OFF
SET BELL OFF
SET INTENSITY ON
@ 1,50 SAY 'PGENALL '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
STORE 0 TO LINECNT
@ 3,0 CLEAR
@ 5,5 SAY 'This option produces a prints of all Plant Records '
@ 6,5 SAY 'grouped by Genera. Please enter Y to continue or N'
@ 7,5 SAY 'to return to the Main Menu: ' GET UPDTE
READ
IF UPPER(UPDTE) <> 'Y'
    CLOSE DATABASE
    RELEASE ALL EXCEPT UPDTE
    SET DEVICE TO SCREEN
    SET PRINT OFF
    RETURN
ENDIF
@ 3,0 CLEAR
STORE SPACE(20) TO VGENUS
USE PLANTREC INDEX GENNDX,ACCNDX
GOTO TOP
SET PRINT ON
SET DEVICE TO PRINT
SET MARGIN TO 6
STORE 0 TO LINECNT
?
? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC GENERA'
?
? "ACCNUM LOCATION"
? " LATIN NAME "
STORE (LINECNT + 5) TO LINENCNT
DO WHILE .NOT. EOF()
    STORE GENUS TO VGENUS
    ?
    ? "GENUS: " + GENUS
    ?
    STORE (LINECNT+3) TO LINECNT
    DO WHILE GENUS = VGENUS
        ? ACCNUM+SPACE(3)+LOCATION
        ?
        SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+T
        RIM(SUBSP)
        STORE (LINECNT + 2) TO LINECNT
    ENDWHILE
ENDWHILE

```

```
SKIP
IF LINECNT >= 50
  ? CHR(12)          STORE 0 TO LINECNT
  ?
  ? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC GENERA'
  ?
  ? "ACCNUM  LOCATION"
  ? "  LATIN NAME  "
  STORE (LINECNT + 5) TO LINECNT
ENDIF
ENDDO
ENDDO
EJECT
SET PRINT OFF
SET DEVICE TO SCREEN
@ 0,0 CLEAR
RELEASE ALL
CLOSE DATABASE
RETURN
```

```
STORE (LINECNT + 1) TO LINECNT
SKIP
IF LINECNT >= 54
  EJECT
  STORE 0 TO LINECNT
  ?
  ? SPACE(20) + "PLANT RECORDS BY SPECIFIC LOCATION"
  ?
  ? "LOCATION: " + VLOCATION
  ?
  ? "ACCNUM  LATIN NAME"
  ?
  STORE (LINECNT+7) TO LINECNT
ENDIF
ENDDO
EJECT
SET DEVICE TO SCREEN
SET PRINT OFF
ENDDO
RELEASE ALL
@ 0,0 CLEAR
CLOSE DATABASE
RETURN
```


* PLOCALL.PRG PRINTS all plant record Grouped by Location
* Called from PRINT.PRG
* Copyright (c) David Murbach 1988

```
SET HEADING OFF
SET TALK OFF
SET BELL OFF
SET INTENSITY ON
@ 1,50 SAY 'PLOCALL '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
STORE 0 TO LINECNT
@ 3,0 CLEAR
@ 5,5 SAY 'This option produces a prints of all Plant Records '
@ 6,5 SAY 'grouped by Location. Please enter Y to continue or N'
@ 7,5 SAY 'to return to the Main Menu: ' GET UPDTE
READ
IF UPPER(UPDTE) <> 'Y'
    CLOSE DATABASE
    RELEASE ALL EXCEPT UPDTE
    SET DEVICE TO SCREEN
    SET PRINT OFF
    RETURN
ENDIF
@ 3,0 CLEAR
STORE SPACE(20) TO VLOCATION
USE PLANTREC INDEX LOCNDX,ACCNDX
GOTO TOP
SET PRINT ON
SET DEVICE TO PRINT
SET MARGIN TO 6
@ 0,0 CLEAR
STORE 0 TO LINECNT
?
? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC LOCATION'
?
? "ACCNUM · LATIN NAME"
STORE (LINECNT + 4) TO LINENCNT
DO WHILE .NOT. EOF()
    STORE LOCATION TO VLOCATION
    ?
    ? "LOCATION: " + LOCATION
    ?
    STORE (LINECNT+3) TO LINECNT
    DO WHILE LOCATION = VLOCATION
        ACCNUM+SPACE(3)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+S
        PAGE(1)+TRIM(SUBSP)
        STORE (LINECNT + 1) TO LINECNT
        SKIP
    ?
    ?
```

```
IF LINECNT >= 50
  ? CHR(12)          STORE 0 TO LINECNT
  ?
  ? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC LOCATION'
  ?
  ? "ACCNUM  LATIN NAME"
  STORE (LINECNT + 4) TO LINECNT
ENDIF
ENDDO
ENDDO
EJECT
SET PRINT OFF
SET DEVICE TO SCREEN
@ 0,0 CLEAR
RELEASE ALL
CLOSE DATABASE
RETURN
```

* PSRCSPEC.PRG PRINT for Specific Source
* Called from PRINT.PRG
* Copyright (c) David Murbach 1988

```
SET HEADING OFF
SET BELL OFF
SET TALK OFF
SET INTENSITY ON
@ 1,50 SAY 'PSRCSPEC.PRG '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
DO WHILE UPPER(UPDTE) <> 'N'
    SET DEVICE TO SCREEN
    SET PRINT OFF
    STORE 'Y' TO UPDTE
    @ 3,0 CLEAR
    @ 5,5 SAY 'This option print Plant Records by a specific source'
    @ 6,5 SAY 'Please enter Y to continue or N to return to the Main Menu:' GET UPDTE
    READ
    IF UPPER(UPDTE) <> 'Y'
        CLOSE DATABASE
        RELEASE ALL EXCEPT UPDTE
        SET DEVICE TO SCREEN
        SET PRINT OFF
        RETURN
    ENDIF
    @ 3,0 CLEAR
    STORE SPACE(30) TO VSOURCE
    @ 4,1 SAY 'ENTER SPECIFIC SOURCE TO PRINT: ' GET VSOURCE
    READ
    USE PLANTREC INDEX SRCNDX
    GOTO TOP
    SET FILTER TO SOURCE=UPPER(VSOURCE)
    SET PRINT ON
    SET DEVICE TO PRINT
    SET MARGIN TO 6
    STORE 0 TO LINECNT
    @ 0,0 CLEAR
    ?"          DATA DISPLAY BY SOURCE "
    ?
    ?" ACCNUM  LOCATION"
    ?"   LATIN NAME "
    ?"      "
    ? "SOURCE: " + VSOURCE
    ?
    STORE (LINECNT+7) TO LINECNT
    DO WHILE .NOT. EOF()
        ? ACCNUM+SPACE(4)+LOCATION
```

SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+TRIM(SUBSP)
SKIP
STORE (LINECNT+2) TO LINECNT
IF LINECNT >= 54
EJECT
STORE 0 TO LINECNT
@ 0,0 CLEAR
? SPACE(20) + "DATA DISPLAY BY SOURCE"
?
?"ACCNUM LOCATION"
?" LATIN NAME "
?
?"SOURCE: " + VSOURCE
?
STORE (LINECNT+7) TO LINECNT
ENDIF
ENDDO
EJECT
ENDDO
SET PRINT OFF
SET DEVICE TO SCREEN
RELEASE ALL
@ 0,0 CLEAR
CLOSE DATABASE
RETURN

* PSRCALL.PRG PRINTS all plant record Grouped by Source
* Called from PRINT.PRG
* Copyright (c) David Murbach 1988

```
SET HEADING OFF
SET TALK OFF
SET BELL OFF
SET INTENSITY ON
@ 1,50 SAY 'PSRCALL '
@ 3,0 CLEAR
CLOSE DATABASE
STORE 'Y' TO UPDTE
STORE 0 TO LINECNT
@ 3,0 CLEAR
@ 5,5 SAY 'This option produces a prints of all Plant Records '
@ 6,5 SAY 'grouped by Source. Please enter Y to continue or N'
@ 7,5 SAY 'to return to the Main Menu: ' GET UPDTE
READ
IF UPPER(UPDTE) <> 'Y'
    CLOSE DATABASE
    RELEASE ALL EXCEPT UPDTE
    SET DEVICE TO SCREEN
    SET PRINT OFF
    RETURN
ENDIF
@ 3,0 CLEAR
STORE SPACE(20) TO VSOURCE
USE PLANTREC INDEX SRCNDX,ACCNDX
GOTO TOP
SET PRINT ON
SET DEVICE TO PRINT
SET MARGIN TO 6
    STORE 0 TO LINECNT
    ?
    ? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC SOURCE'
    ?
    ? "ACCNUM LOCATION"
    ? " LATIN NAME "
    STORE (LINECNT + 5) TO LINENCNT
DO WHILE .NOT. EOF()
    STORE SOURCE TO VSOURCE
    ?
    ? "SOURCE: " + SOURCE
    ?
    STORE (LINECNT+3) TO LINECNT
    DO WHILE SOURCE = VSOURCE
        ? ACCNUM+SPACE(3)+LOCATION
    ?
    SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+T
    RIM(SUBSP)
    STORE (LINECNT + 2) TO LINECNT
```

```
SKIP
IF LINECNT >= 50
  ? CHR(12)          STORE 0 TO LINECNT
  ? " "
  ? SPACE(20) + 'ALL PLANT RECORDS BY SPECIFIC SOURCE'
  ?
  ? "ACCNUM  LOCATION"
  ? "  LATIN NAME  "
  ?
  STORE (LINECNT + 6) TO LINECNT
ENDIF
ENDDO
ENDDO
EJECT
SET PRINT OFF
SET DEVICE TO SCREEN
@ 0,0 CLEAR
RELEASE ALL
CLOSE DATABASE
RETURN
```

* PUPDATE.PRG PRINT for Specific Update date
* Called from PRINT.PRG
* Copyright (c) David Murbach 1988

SET HEADING OFF

SET BELL OFF

SET TALK OFF

SET INTENSITY ON

@ 1,50 SAY 'PUPDATE.PRG '

@ 3,0 CLEAR

CLOSE DATABASE

STORE 'Y' TO UPDTE

DO WHILE UPPER(UPDTE) <> 'N'

SET DEVICE TO SCREEN

SET PRINT OFF

STORE 'Y' TO UPDTE

@ 3,0 CLEAR

@ 5,5 SAY 'This option prints Plant Records by a specific update date:'

@ 6,5 SAY 'Please enter Y to continue or N to return to the Main Menu: ' GET UPDTE

READ

IF UPPER(UPDTE) <> 'Y'

CLOSE DATABASE

RELEASE ALL EXCEPT UPDTE

SET DEVICE TO SCREEN

SET PRINT OFF

RETURN

ENDIF

@ 3,0 CLEAR

STORE CTOD('01/01/00') TO VUPDATE

@ 4,1 SAY 'ENTER UPDATE DATE TO VIEW: ' GET VUPDATE

READ

STORE DTOC(VUPDATE) TO VUPCHAR

USE PLANTREC INDEX UPDNDX,ACCNDX

SET FILTER TO UPDATE = CTOD(VUPCHAR)

GOTO TOP

SET PRINT ON

SET DEVICE TO PRINT

SET MARGIN TO 6

STORE 0 TO LINECNT

@ 0,0 CLEAR

?

? SPACE(15) + "PLANT RECORDS FOR SPECIFIC DATE UPDATED"

?

? "ACCNUM LOCATION"

? " LATIN NAME"

STORE (LINECNT + 5) TO LINECNT

DO WHILE .NOT. EOF()

?

? "DATE UPDATED: " + VUPCHAR

?

STORE (LINECNT + 3) TO LINECNT

```

DO WHILE UPDATE = CTOD(VUPCHAR)
  ? ACCNUM+SPACE(4)+LOCATION
SPACE(4)+TRIM(GENUS)+SPACE(1)+TRIM(SPECIES)+SPACE(1)+TRIM(RANK)+SPACE(1)+T
RIM(SUBSP)
  STORE (LINECNT + 2) TO LINECNT
  SKIP
  IF LINECNT >= 50
    ? CHR(12)
    STORE 0 TO LINECNT
    @ 0,0 CLEAR
    ?
    ? SPACE(15) + "PLANT RECORDS FOR SPECIFIC DATE UPDATED"
    ?
    ? "ACCNUM  LOCATION"
    ? "  LATIN NAME"
    ?
    STORE (LINECNT + 6) TO LINECNT
  ENDIF
  ENDDO
  IF EOF()
    EJECT
    SET DEVICE TO SCREEN
    SET PRINT OFF
    @ 0,0 CLEAR
    RELEASE ALL
    RETURN
  ENDIF
  EJECT
  SET PRINT OFF
  SET DEVICE TO SCREEN
  ENDDO
  RELEASE ALL
  @ 0,0 CLEAR
  CLOSE DATABASE
  RETURN

```


* PLOT.PRQ

Main menu selection (3). Executes plots

*

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SET TALK OFF

@3,0 CLEAR

DO WHILE .T.

DO CASE

CASE UPPER(SELECT2)='A'

DO PLQUAD

CASE UPPER(SELECT2)='B'

DO PLOTALL

CASE UPPER(SELECT2)='C'

DO PLFAMSPEC

CASE UPPER(SELECT2)='D'

DO PLGENSPEC

CASE UPPER(SELECT2)='E'

DO PLNATSPEC

CASE UPPER(SELECT2)='F'

DO PLACCNUM

OTHERWISE

RETURN

ENDCASE

STORE '' TO SELECT2

CLOSE DATABASES

CLOSE FORMAT

ENDDO

@ 3,0 CLEAR

RETURN

```

* PLQUAD.PRGM      Plots for Quadrant Letter and Number
*                  Called from PLOT.PRGM
*                  Copyright (c) David Murbach 1988
*****
SET HEADING OFF
SET BELL OFF
SET TALK OFF
SET INTENSITY ON
@ 1,50 SAY 'PLQUAD.PRGM '
@ 3,0 CLEAR
SET DEVICE TO SCREEN
SET PRINT OFF
clear
@ 3,0 CLEAR
STORE SPACE(4) TO VLETTER
STORE SPACE(4) TO VNUMBER
valid = .f.
do while .not. valid
  @ 3,0 CLEAR
  @ 4,1 SAY 'ENTER QUADRANT LETTER: ' GET VLETTER
  @ 5,1 SAY 'ENTER QUADRANT NUMBER: ' GET VNUMBER
  @ 7,1 Say 'Leave both blank to return to main menu.'
  READ
  mlet = ltrim(rtrim(vletter))
  mnum = ltrim(rtrim(vnumber))
  mview = mlet + mnum
  if mview = ''
    clear all
    return
  else
    @ 10,1 clear
    @ 11,1 clear
    valid = .t.
    if .not. upper(mlet) $ 'ABCD'
      valid = .f.
      @ 10,1 say 'Quadrant letter must be A, B, C or D'
    endif
    if .not. mnum $ '12345'
      valid = .f.
      @ 11,1 say 'Quadrant number must be 1, 2, 3, 4 or 5'
    endif
  endif
enddo
erase gardenp.scr
use treeplot
goto top
xview = '3'
xview = xview + ' garden'
xview = xview + ' v'
xview = xview + ' ' + rtrim(mview)
xview = xview + ' y'

```

```

* PLOTALL.PRG      Plots ALL plant record
*                  Called from PLOT.PRG
*                  Copyright (c) David Murbach 1988
*****
SET HEADING OFF
SET BELL OFF
SET TALK OFF
SET INTENSITY ON
@ 1,50 SAY 'PLOTALL.PRG'
SET DEVICE TO SCREEN
SET PRINT OFF
clear
@ 3,0 CLEAR
STORE 'N' TO ans
valid = .f.
do while .not. valid
    @ 3,0 CLEAR
    @ 4,1 SAY '(Y/N): ' GET ANS
    @ 6,1 Say 'Enter Y to PLOT THE ENTIRE GARDEN'
    @ 7,1 Say 'Enter N to return to main menu.'
    READ
    if upper(ans) = 'N'
        clear all
        return
    else
        @ 10,1 clear
        valid = .t.
        if upper(ans) .not. = 'Y'
            valid = .f.
            @ 10,1 say 'You must enter Y or N.'
        endif
    endif
endif
enddo
erase gardenp.scr
use treeplot
goto top
xview = '3'
xview = xview + ' garden'
xview = xview + ' v'
xview = xview + ' GD'
xview = xview + ' y'
xview = xview + ' n'
xview = xview + ' n'
xview = xview + ' i'
xview = xview + ' 0.00,0.00'
xview = xview + ' max'
xview = xview + ' n'
xview = xview + ' 0.010'
xview = xview + ' n'
xview = xview + ' n'
xview = xview + ' 0.00833'

```

```
xview = xview + ';'
xview = xview + 'y'
xview = xview + ';'
xview = xview + '0'
replace view with xview
copy to gardēnp.ser sdf
close all
copy file acad.sw to acad.pit
clear
quit
```

* AUDIT.PRG

*
*
*
*

Executes the different options off the
Edit and File Maintenance Menu depending
on which choice is made

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SET TALK OFF

@3,0 CLEAR

DO WHILE .T.

DO CASE

CASE UPPER(SELECT2)='A'

DO ADD

CASE UPPER(SELECT2)='B'

DO ACCEDIT

CASE UPPER(SELECT2)='C'

DO GENEDIT

CASE UPPER(SELECT2)='D'

DO RID

CASE UPPER(SELECT2)='E'

DO BACKUP

CASE UPPER(SELECT2)='F'

DO ACADUPDT

OTHERWISE

RETURN

ENDCASE

STORE '' TO SELECT2

CLOSE DATABASES

CLOSE FORMAT

ENDDO

@ 3,0 CLEAR

RETURN


```

SET INDEX TO ACCNDX,GENNDX,LOCNDX,SRCNDX,UPDNDX,LATINNDX
SET INTENSITY ON
STORE SPACE(30) TO VFAMILY
STORE SPACE(25) TO VGENUS
STORE SPACE(30) TO VSPECIES
STORE SPACE(5) TO VRANK
STORE SPACE(30) TO VSUBSP
STORE SPACE(30) TO VCOMNAM
STORE SPACE(30) TO VSOURCE
STORE SPACE(7) TO VLOCATION
STORE SPACE(20) TO VNATIVITY
STORE CTOD('01/01/00') TO VUPDATE
STORE SPACE(40) TO VNOTES
STORE SPACE(40) TO VNOTES2
@1,0 CLEAR
@ 3,20 SAY 'ADDING RECORDS SCREEN'
@ 5,10 SAY ' ENTER ACCESSION NUMBER: '
@ 5,40 SAY VACCNUM
@ 7,10 SAY ' ENTER FAMILY: ' GET VFAMILY
@ 8,10 SAY ' ENTER GENUS: ' GET VGENUS
@ 9,10 SAY ' ENTER SPECIES: ' GET VSPECIES
@10,10 SAY ' ENTER RANK: ' GET VRANK
@11,10 SAY ' ENTER SUBSP: ' GET VSUBSP
@12,10 SAY ' ENTER COMNAM: ' GET VCOMNAM
@14,10 SAY ' ENTER SOURCE: ' GET VSOURCE
@15,10 SAY ' ENTER LOCATION: ' GET VLOCATION
@16,10 SAY ' ENTER NATIVITY: ' GET VNATIVITY
@17,10 SAY ' ENTER UPDATE: ' GET VUPDATE
@18,10 SAY ' ENTER NOTES: ' GET VNOTES
@19,10 SAY '          ' GET VNOTES2
READ
APPEND BLANK
REPLACE ACCNUM WITH VACCNUM
      REPLACE FAMILY WITH UPPER(VFAMILY),GENUS WITH
UPPER(VGENUS),SPECIES WITH UPPER(VSPECIES)
      REPLACE RANK WITH UPPER(VRANK),SUBSP WITH UPPER(VSUBSP),COMNAM
WITH UPPER(VCOMNAM)
      REPLACE LOCATION WITH UPPER(VLOCATION),NATIVITY WITH
UPPER(VNATIVITY),SOURCE WITH UPPER(VSOURCE)
REPLACE UPDATE WITH VUPDATE
REPLACE NOTES WITH VNOTES, NOTES2 WITH VNOTES2
SELECT 2
APPEND BLANK
REPLACE ACCESSION WITH VACCNUM
REPLACE LOCATION WITH UPPER(VLOCATION)
SELECT 1
@21,20 SAY 'ANOTHER RECORD? ' GET UPDTE
READ
ENDDO
@3,0 CLEAR
SET INDEX TO ACCNDX,LOCNDX,GENNDX,SRCNDX,UPDNDX,LATINNDX

```

REINDEX
CLOSE DATABASE
RELEASE ALL
RETURN

* ACCEDIT.PRG This program is used to update or view
* by Accession Number
* Copyright (c) David Murbach 1988

```
@3,0 CLEAR
@1,50 SAY 'ACCEDIT '
SET BELL OFF
SET TALK OFF
STORE 'N' TO UPDTE
@ 3,0 CLEAR
@ 5,5 SAY 'This function allows you to update or view data by '
@ 6,5 SAY 'Accession number in the database PLANTREC'
@ 9,5 SAY ' Please enter Y to continue, or'
@ 10,5 SAY ' N to return to the main menu: ' GET UPDTE
READ
CLOSE DATABASE
DO WHILE UPPER(UPDTE) <> 'N'
    * continue while UPTDE is not equal to 'N'
    * If UPDTE='N', returns to MAIN.prg
    @1,50 SAY 'ACCEDIT '
    @3,0 CLEAR
    STORE SPACE(6) TO VACCNUM
    SET INTENSITY ON
    @ 6,5 SAY 'Please enter Accession Number: ' GET VACCNUM
    READ
    USE PLANTREC INDEX ACCNDX,GENNDX
    GO TOP
    IF VACCNUM=SPACE(6)
        SET DEVICE TO SCREEN
        @ 3,0 CLEAR
        RELEASE ALL
        RETURN
    ENDIF
    LOCATE FOR ACCNUM=UPPER(VACCNUM)
    IF .NOT.EOF()
        @ 3,0 CLEAR
        STORE ACCNUM TO VACCNUM
        STORE FAMILY TO VFAMILY
        STORE GENUS TO VGENUS
        STORE SPECIES TO VSPECIES
        STORE RANK TO VRANK
        STORE SUBSP TO VSUBSP
        STORE COMNAM TO VCOMNAM
        STORE SOURCE TO VSOURCE
        STORE LOCATION TO VLOCATION
        STORE NATIVITY TO VNATIVITY
        STORE UPDATE TO VUPDATE
        STORE NOTES TO VNOTES
        STORE NOTES2 TO VNOTES2
        @ 2,0 CLEAR
        @ 3,10 SAY 'THIS SCREEN IS FOR EDITING RECORD INFORMATION'
```

```

@ 4,10 SAY 'For data you do not have, just hit <RETURN> '
@ 6,10 SAY ' ACCESSION NUMBER: '
@ 6,40 SAY VACCNUM
@ 7,10 SAY ' ENTER FAMILY: ' GET VFAMILY
@ 8,10 SAY ' ENTER GENUS: ' GET VGENUS
@ 9,10 SAY ' ENTER SPECIES: ' GET VSPECIES
@10,10 SAY ' ENTER RANK: ' GET VRANK
@11,10 SAY ' ENTER SUBSP: ' GET VSUBSP
@12,10 SAY ' ENTER COMNAM: ' GET VCOMNAM
@14,10 SAY ' ENTER SOURCE: ' GET VSOURCE
@15,10 SAY ' ENTER LOCATION: ' GET VLOCATION
@16,10 SAY ' ENTER NATIVITY: ' GET VNATIVITY
@17,10 SAY ' ENTER UPDATE: ' GET VUPDATE
@18,10 SAY ' ENTER NOTES: ' GET VNOTES
@19,10 SAY ' GET VNOTES2
READ
WAIT
REPLACE ACCNUM WITH VACCNUM
REPLACE FAMILY WITH UPPER(VFAMILY),GENUS WITH UPPER(VGENUS)
REPLACE SPECIES WITH UPPER(VSPECIES),RANK WITH UPPER(VRANK)
REPLACE SUBSP WITH UPPER(VSUBSP),COMNAM WITH UPPER(VCOMNAM)
REPLACE SOURCE WITH UPPER(VSOURCE),LOCATION WITH
UPPER(VLOCATION)
REPLACE NATIVITY WITH UPPER(VNATIVITY),UPDATE WITH VUPDATE
REPLACE NOTES WITH VNOTES, NOTES2 WITH VNOTES2
ELSE
@14,36 SAY '*****'
@15,36 SAY '* ERROR: *'
@16,36 SAY '* *'
@17,36 SAY '* Did not locate Accession number *'
@18,36 SAY '* Please press <RETURN> to try again...*'
@19,36 SAY '* *'
@20,36 SAY '*****'
WAIT
@14,0 CLEAR
STORE 'Y' TO UPDTE
CLOSE DATABASE
ENDIF
@ 3,0 CLEAR
@ 5,5 SAY 'Another record to edit by Accession number? ' GET UPDTE
READ
ENDDO
CLOSE DATABASE
RELEASE ALL
RETURN

```

* GENEDIT.PRG This program is used to update or view
* data by Latin Name
* Copyright (c) David Murbach 1988

@3,0 CLEAR
@1,50 SAY 'GENEDIT '
SET BELL OFF
SET TALK OFF
STORE 'N' TO UPDTE
@ 3,0 CLEAR
@ 5,5 SAY 'This function allows you to update or view data by '
@ 6,5 SAY 'by Latin name in the database PLANTREC'
@ 9,5 SAY ' Please enter Y to continue, or'
@ 10,5 SAY ' N to return to the main menu: ' GET UPDTE
READ

CLOSE DATABASE
DO WHILE UPPER(UPDTE) <> 'N'
 * continue while UPTDE is not equal to 'N'
 * If UPDTE='N', returns to MAIN.prg

@1,50 SAY 'GENEDIT '
@3,0 CLEAR
STORE SPACE(25) TO VGENUS
STORE SPACE(30) TO VSPECIES
STORE SPACE(5) TO VRANK
STORE SPACE(30) TO VSUBSP
SET INTENSITY ON
@ 1,50 SAY 'GENEDIT.prg'
@ 3,0 CLEAR
@ 6,5 SAY 'Please enter GENUS: ' GET VGENUS
@ 7,5 SAY ' SPECIES: ' GET VSPECIES
@ 8,5 SAY ' RANK: ' GET VRANK
@ 9,5 SAY ' SUBSP: ' GET VSUBSP
READ

USE PLANTREC
** INDEX LATINNDX,ACCNDX
GO TOP
IF VGENUS=SPACE(25)
 SET DEVICE TO SCREEN
 @ 3,0 CLEAR
 RELEASE ALL
 RETURN

ENDIF
LOCATE FOR GENUS=UPPER(VGENUS) .AND. SPECIES=UPPER(VSPECIES) .AND.
RANK=UPPER(VRANK) .AND. SUBSP=UPPER(VSUBSP)
IF .NOT.EOF()
 @ 3,0 CLEAR
 STORE ACCNUM TO VACCNUM
 STORE FAMILY TO VFAMILY
 STORE GENUS TO VGENUS
 STORE SPECIES TO VSPECIES
 STORE RANK TO VRANK

```

STORE SUBSP TO VSUBSP
STORE COMNAM TO VCOMNAM
STORE SOURCE TO VSOURCE
STORE LOCATION TO VLOCATION
STORE NATIVITY TO VNATIVITY
STORE UPDATE TO VUPDATE
STORE NOTES TO VNOTES
STORE NOTES2 TO VNOTES2
@ 2,0 CLEAR
@ 3,10 SAY 'THIS SCREEN IS FOR EDITING RECORD INFORMATION'
@ 4,10 SAY 'For data you do not have, just hit <RETURN> '
@ 6,10 SAY '          GENUS: '
@ 6,40 SAY VGENUS
@ 8,10 SAY 'ENTER ACCESSION NUMBER: ' GET VACCNUM
@ 9,10 SAY '          ENTER FAMILY: ' GET VFAMILY
@10,10 SAY '          ENTER GENUS: ' GET VGENUS
@11,10 SAY '          ENTER SPECIES: ' GET VSPECIES
@12,10 SAY '          ENTER RANK: ' GET VRANK
@13,10 SAY '          ENTER SUBSP: ' GET VSUBSP
@14,10 SAY '          ENTER COMNAM: ' GET COMNAM
@16,10 SAY '          ENTER SOURCE: ' GET VSOURCE
@17,10 SAY '          ENTER LOCATION: ' GET VLOCATION
@18,10 SAY '          ENTER NATIVITY: ' GET VNATIVITY
@19,10 SAY '          ENTER UPDATE: ' GET VUPDATE
@20,10 SAY '          ENTER NOTES: ' GET VNOTES
@21,10 SAY '          ' GET VNOTES2
READ
WAIT
REPLACE ACCNUM WITH VACCNUM
          REPLACE FAMILY WITH UPPER(VFAMILY),GENUS WITH
UPPER(VGENUS),SPECIES WITH UPPER(VSPECIES)
          REPLACE RANK WITH UPPER(VRANK),SUBSP WITH UPPER(VSUBSP),COMNAM
WITH UPPER(COMNAM)
          REPLACE LOCATION WITH UPPER(VLOCATION),NATIVITY WITH
UPPER(VNATIVITY),SOURCE WITH UPPER(VSOURCE)
REPLACE UPDATE WITH VUPDATE
REPLACE NOTES WITH VNOTES, NOTES2 WITH VNOTES2
ELSE
@14,36 SAY '*****'
@15,36 SAY '* ERROR:                                *'
@16,36 SAY '*
*
@17,36 SAY '* Did not locate Latin Name                *'
@18,36 SAY '* Please press <RETURN> to try again...*'
@19,36 SAY '*
*
@20,36 SAY '*****'
WAIT
@14,0 CLEAR
STORE 'Y' TO UPDTE
CLOSE DATABASE
ENDIF
@ 3,0 CLEAR

```

@ 5,5 SAY 'Another record to edit by Latin Name ' GET UPDTE
READ
ENDDO
CLOSE DATABASE
RELEASE ALL
RETURN

```

        DELETE
        PACK
    ENDIF
ELSE
    @14,36 SAY '*****'
    @15,36 SAY '* ERROR:                                     *'
    @16,36 SAY '*
    @17,36 SAY '* Did not locate Accession number          *'
    @18,36 SAY '* Please press <RETURN> to try again... *'
    @19,36 SAY '*
    @20,36 SAY '*****'
    WAIT
    @14,0 CLEAR
ENDIF
ENDIF
@ 3,0 CLEAR
@ 5,5 SAY 'DO YOU WISH TO DELETE ANOTHER RECORD? '
@ 6,5 SAY 'Answer Y or N: ' GET UPDTE
READ
ENDDO
USE PLANTREC
SET INDEX TO ACCNDX,GENNDX,SRCDX,LOCNDX,LATINNDX,UPDNDX
REINDEX
CLOSE DATABASE
RELEASE ALL
RETURN

```

* BACKUP.PRG This program is used to backup the PLANTREC.DBF
* database to a diskette
* Copyright (c) David Murbach 1988

@3,0 CLEAR
@1,50 SAY 'BACKUP '
SET BELL OFF
SET TALK OFF
STORE 'N' TO UPDTE
?
?
TEXT

 This option allows you to BACKUP the plant records
 in database PLANTREC to a diskette in the A: drive

ENDTEXT

@7,9 SAY ' Please enter Y to continue, or'
@8,9 SAY ' N to return to the main menu: ' GET UPDTE
READ
DO WHILE UPPER(UPDTE) <> 'N'

 @3,0 CLEAR
 @ 5,6 SAY 'PLEASE PUT THE DISKETTE TO BACKUP TO IN THE A: DRIVE'
 @ 6,0 SAY ''
 @ 7,0 SAY ''
 CLOSE DATABASE
 WAIT
 COPY FILE PLANTREC.DBF TO A:PLANTREC.DBF
 STORE 'N' TO UPDTE
ENDDO
RELEASE ALL
RETURN

```

* ACADUPDT.PRG
*           Prepares file to pass to acad, runs the
*           batch file then deletes the records.
*           Copyright (c) David Murbach 1988
*****

```

```

SET TALK OFF
@ 0,0 CLEAR
@ 1,50 SAY 'ACADUPDT.PRG'
SET BELL OFF
SET TALK OFF
STORE 'N' TO UPDTE
funccode = ''
addcnt = 0
remcnt = 0
?
?

```

TEXT

This option allows you to enter graphics to update the drawing.
Do you want to process the

```

'A'dds
'D'elates
or
'B'oth
or
'E'xit back to menu

```

ENDTEXT

```

do while funccode = ''
  @13,9 SAY ' Please enter the letter of your choice' get funccode
  READ
  if .not. funccode $ 'AaDdBbEe'
    funccode = ''
    @15,9 say 'You must enter a valid choice (A, D, B or E)'
  endif
enddo

if funccode $ 'Ee'
  return
endif

```

```

USE ADDRECS
addcnt = reccount()
use remrecs
remcnt = reccount()

```

```

@3,0 clear
IF funccode $ 'Aa'.and. addcnt = 0
  TEXT
    No records have been added
  ENDTEXT
  @7,9 SAY ' Press any key to continue.'
  READ

```



```
RETURN
ENDIF
```

```
IF funccode $ 'Dd' .and. remcnt = 0
TEXT
    No records have been deleted
ENDTEXT
@7,9 SAY '    Press any key to continue.'
READ
RETURN
ENDIF
```

```
IF funccode $ 'Bb' .and. addcnt = 0 .and. remcnt = 0
TEXT
    No records have been added or deleted
ENDTEXT
@7,9 SAY '    Press any key to continue.'
READ
RETURN
ENDIF
```

```
if funccode $ 'AaBb' .and. addcnt <> 0
@3,0 CLEAR
ERASE ADDRECS.BAK
ERASE ADDSORT.DBF
ERASE TREEVAL.VAL
CLOSE ALL
USE ADDRECS
COPY TO ADDRECS.BAK
IF RECCOUNT() = 1
    CLOSE ALL
    COPY file ADDRECS.dbf TO ADDSORT.dbf
ELSE
    SORT ON LOCATION TO ADDSORT.DBF
ENDIF
USE ADDRECS
GOTO TOP
DO WHILE .NOT. EOF()
    DELETE
    SKIP 1
ENDDO
PACK
CLOSE ALL
USE ADDSORT.DBF
COPY TO TREEVAL.VAL SDF
CLOSE ALL
endif
```

```
if funccode $ 'DdBb' .and. remcnt <> 0
@3,0 CLEAR
```

```

ERASE remRECS.BAK
ERASE remSORT.DBF
ERASE TREErem.VAL
CLOSE ALL
USE remRECS
COPY TO remRECS.BAK
IF RECCOUNT() = 1
    CLOSE ALL
    COPY file remRECS.dbf TO remSORT.dbf
ELSE
    SORT ON LOCATION TO remSORT.DBF
ENDIF
USE remRECS
GOTO TOP
DO WHILE .NOT. EOF()
    DELETE
    SKIP 1
ENDDO
PACK
CLOSE ALL
USE remSORT.DBF
COPY TO TREErem.VAL SDF
CLOSE ALL
endif
erase treeint.val
use treeint
do case
    case funccode $ 'Bb'
        if addcnt = 0
            vflag = 'REM'
        else
            if remcnt = 0
                vflag = 'ADD'
            else
                vflag = 'BTH'
            endif
        endif
    case funccode $ 'Aa'
        vflag = 'ADD'
    case funccode $ 'Dd'
        vflag = 'REM'
endcase
goto top
replace flag with vflag
copy to treeint.val sdf
close all

COPY FILE ACAD.SW TO ACAD.ADD
quit

```

*ACAD.PGP External Command File
* Copyright (c) David Murbach 1988

SHELL,,125000,*C> ,0

CD,CHDIR,24000,*Enter CURRENT Directory: ,0

ADDBAK,COPY \GARDEN\TREEVAL.VAL \GARDEN\TREEVAL.BAK,24000,,0

REMBAK,COPY \GARDEN\TREEVAL.VAL \GARDEN\TREEREM.BAK,24000,,0

```

*ACAD.LSP          Transfer Tree Insertion Data from dBase to AutoCad
*          Copyright (c) David Murbach 1988
*****
(prompt "\nLoading Computecture\\Murbach Tree Insert Module....")

(defun C:RESTART ()
  (garden)
)

(defun garden ()
  (setvar "menuecho" 3)
  (setvar "cmdecho" 0)
  (setvar "expert" 1)
  (setq lastloc "GD")
  (setq inf (open "\\garden\\treeint.val" "r"))
  (if (= inf nil)
    (progn
      (setvar "menuecho" 1)
      (prompt "\nFile Not Found...")
      (setvar "menuecho" 3)
    )
    (progn
      (setq addordel (read-line inf))
      (close inf)
      (if (= "ADD" addordel)
        (progn
          (addtree)
          (command "addbak")
        )
        (if (= "REM" addordel)
          (progn
            (remtree)
            (command "rembak")
          )
          (if (= "BTH" addordel)
            (progn
              (addtree)
              (remtree)
              (command "addbak")
              (command "rembak")
            )
          )
        )
      )
      (setq endver (getstring "\nRemain in Garden ? <n> "))
      (setq endver (strcase (substr endver 1 1)))
      (if (or (= "" endver) (= "N" endver))
        (command "script" "\\garden\\gardend")(graphscr))
      (command "view" "r" "GD")
    )
  )
)

```

```

(setvar "menuecho" 3)
(command "layer" "s" "tree" "")
(grtext -1 (strcat "Current Location: " lastloc))
(command "insert" "tree" trinpt "6" "" "")
(command "select" "l" "")
(command "layer" "s" "ACCTEXT" "")
(grtext -1 (strcat "Current Location: " lastloc))
(command "text" "m" trinpt 72 0 access)
(command "layer" "s" "tree" "")
(grtext -1 (strcat "Current Location: " lastloc))
(setq verloc "N")
(while (= "N" verloc)(verpos))
(setq record (read-line f))
)

(defun verpos ()
  (setq verloc (getstring "\nIs Tree Location Correct? <y> "))
  (setq verloc (strcase (substr verloc 1 1)))
  (if (= "" verloc)(setq verloc "Y"))
  (if (= "N" verloc)
    (progn
      (setq nwlocpt (getpoint "\nSelect New Tree Location: "))
      (command "move" "l" "p" "" "@" nwlocpt)
    )
  )
)

(defun remtree ()
  (setvar "menuecho" 1)
  (prompt "\nBeginning Tree Removal Process.....")
  (setvar "menuecho" 3)
  (setq f (open "\\garden\\treerem.val" "r"))
  (if (= f nil)
    (progn
      (setvar "menuecho" 1)
      (prompt "\nFile Not Found...")
      (setvar "menuecho" 3)
    )
    (treer))
  (if (/= f nil)
    (progn
      (close f)
      (setvar "menuecho" 1)
      (prompt "\nTree Removal is Complete... ")
      (setvar "menuecho" 3)
      (command "delay" 1500)
    )
  )
)

(defun treer ()

```

```

(setq record (read-line f))
(while (/= record nil)
  (progn
    (setq location (substr record 1 7))
    (setq access (substr record 8 13))
    (if (/= location lastloc)
      (progn
        (slice)
        (setq lastloc location)
        (viewval)
        (command "view" "r" lastloc)
        (grtext -1 (strcat "Current Location: " lastloc))
        (trdelete)
      )
      (trdelete)
    )
  )
)
)
)
)

```

```

(defun trdelete ()
  (grtext -1 (strcat "Current Location: " lastloc))
  (setvar "menuecho" 1)
  (setq treedf (entsel (strcat "\nPlease Select Tree <" access "> For Removal: ")))
  (while (= nil treedf)
    (setq treedfv (getstring "\nTree Not Found, Skip ? <n> "))
    (setq treedfv (strcase (substr treedfv 1 1)))
    (if (= "Y" treedfv)
      (progn
        (setq treedf "skip")
        (setq treedt "skip")
      )
      (setq treedf (entsel "\nPlease Re-Select Tree for Removal: "))
    )
  )
  (if (/= "skip" treedf)(redraw (car treedf) 3))
  (if (/= "skip" treedf)
    (setq treedt (entsel (strcat "\nPlease Select Tree Tag <" access "> For Removal: ")))
  )
  (while (and (/= "skip" treedf)(= nil treedt))
    (setq treedtv (getstring "\nTree Tag Not Found, Skip ? <n> "))
    (setq treedtv (strcase (substr treedtv 1 1)))
    (if (= "Y" treedtv)
      (setq treedt "skip")
      (setq treedt (entsel "\nPlease Re-Select Tree Tag for Removal: "))
    )
  )
  (if (/= "skip" treedt)(redraw (car treedt) 3))
  (if (/= "skip" treedf)(redraw (car treedf) 4))
  (if (/= "skip" treedt)(redraw (car treedt) 4))
  (setq verloc "N")
)

```

```

(while (and (/= "skip" treedt)(= "N" verloc))
  (progn
    (setq verloc (getstring "\nAre Tree and Tag Correct ? <y> "))
    (setq verloc (strcase (substr verloc 1 1)))
    (if (= "N" verloc)
      (progn
        (setvar "menuecho" 1)
        (setq treedf (entsel (strcat "\nPlease Select Tree <" access "> For Removal: ")))
        (redraw (car treedf) 3)
        (if (/= "skip" treedt)
          (setq treedt (entsel "\nPlease Select Tree Tag For Removal: ")))
          (if (/= "skip" treedt)(redraw (car treedt) 3))
          (redraw (car treedf) 4)
          (if (/= "skip" treedt)(redraw (car treedt) 4))
        )
      )
    )
  )
  (if (/= "skip" treedf)(redraw (car treedf) 4))
  (if (/= "skip" treedt)(redraw (car treedt) 4))
  (if (/= "skip" treedf)(command "erase" treedf ""))
  (if (/= "skip" treedt)(command "erase" treedt ""))
  (setq treedf nil)
  (setq treedt nil)
  (setq treedfv nil)
  (setq treedtv nil)
  (setq record (read-line f))
)

```

```

(defun slice ()
  (setq mem 7)
  (while (/= 0 mem)
    (progn
      (setq val (substr location mem 1))
      (if (= " " val)
        (progn
          (setq location (substr location 1 (- mem 1)))
          (setq mem (- mem 1))
        )
      )
      (setq mem 0)
    )
  )
)

```

```

(defun viewval ()
  (setq vval (tblsearch "view" location))
  (while (null vval)
    (setvar "menuecho" 1)
    (setq invprom

```

```

        (strcat "\n <" location "> Invalid Location, Please Re-Select: ")
        (setq locate (getstring invprom))
        (setvar "menuecho" 3)
        (setq lastloc (strcase locate))
        (setq vval (tblsearch "view" lastloc))
    )
)

```

```

(defun *error* (st)
  (princ "Tree Insertion Input Error: ")
  (princ st)
  (terpri)
)

```

```

(defun clean ()
  (setq lastloc nil )
  (setq f nil )
  (setq record nil )
  (setq location nil )
  (setq lastloc nil )
  (setq access nil )
  (setq inprom nil )
  (setq trinput nil )
  (setq ltree nil )
  (setq record nil )
  (setq mem nil )
  (setq val nil )
  (setq locate nil)
)

```