

**DIRECTORY
OF COMPUTER USE IN
PLANT RECORD-KEEPING**

**Compiled by
David Murbach
North American Data Bank Committee**



© American Association of Botanical Gardens and Arboreta
P.O. Box 206
Swarthmore, PA 19081
215-328-9145

INTRODUCTION

In June 1984, the North American Data Bank Committee determined that very little information about the current status of computers and plant record-keeping was available to botanical gardens and arboreta and that a survey should be conducted. During July 1984, a survey was formulated and mailed to 247 botanical gardens, arboreta and horticultural institutions in North America. By the end of October, 144 institutions had responded, a 58% return.

COMPUTERIZED PLANT RECORDKEEPING MANAGEMENT

Of the 144 respondents, 42 (29%) are using computers to assist them with their plant record-keeping, 20 (14%) are planning on computerizing in 1985, and an additional 52 (36%) are planning to computerize within the next five years. 25 (17%) said that they had no plans to computerize.

In replying to a question about how plant records are managed at their institution, respondents replied:

- 10 (7%) - No records kept
- 115 (80%) - Plant records managed manually
- 22 (15%) - The Plant Science Data Center (PSDC) manages records
- 31 (22%) - Plant records kept on computer

Percentages total more than 100 because respondents often managed their plant records by more than one means. In fact:

- 17 managed their records manually and using PSDC.
- 16 managed their records manually and using their own computer.
- 4 managed their records manually, using PSDC and their own computer.

These particular figures give a general rather than a specific indication of the overlapping of record-keeping methods. Some gardens in the process of transferring data from a manual to a computer system listed themselves variously as having only a manual system or only a computer system. Only five gardens surveyed indicated that they had finished entering their plant records into their computers; five more had 95% or more entered. The rest are in some stage between getting started and 95% complete.

INFORMATION NEEDED

Several of the survey questions dealt with the desirability of obtaining information about computerized plant record-keeping. In response to the questions, "Would it be useful to you to:

- a) Have a listing of hardware/software in use at other botanical gardens? [Yes - 103 (72%); No - 10 (7%); Maybe - 23 (16%)]
- b) Receive regularly published information on plant record computerization? [Yes - 106 (74%); No - 9 (6%); Maybe - 23 (16%)]
- c) Attend an AABGA workshop on computerizing plant records? (Yes - 98 (68%); No - 10 (7%); Maybe - 31 (22%))
- d) Have a consultant from AABGA come to your institution to assist with systems analysis and selection of equipment? [Yes - 29 (20%); No - 54 (38%); Maybe - 51 (36%)]

From this group of answers, the responses point to a need for advice and help with computerization of plant records. 98 of the institutions surveyed said that they would send one or more representatives to a workshop for a total potential attendance figure of 185 people.

HARDWARE AND SOFTWARE IN USE

The responding institutions had diverse computer systems; with 66% using microcomputers:

54%	IBM (39% IBM PC or PC-XT)
11%	Apple
3%	Other

The rest were using mini and mainframe computers, often available through a larger associated institution, *i.e.*, a university. (See: Index by Brand of Computer)

A wide range of software is in use:

23%	dBase II & dBase III
18%	PFS/File
4%	Other commercially available software
25%	customized software

(See: Index by Brand Name of Database Software)

CONCLUSIONS

If survey results can be interpreted to represent all horticultural institutions in North America, then it can be expected that within five years, 79% of them will be in some stage of computerizing their plant records. Microcomputers will be the choice of machines.

Institutions need, and will continue to need, outside advice and assistance to computerize smoothly and efficiently. By sharing information about computer systems in use, the North American Data Bank Committee hopes it will help make your experience with computers a positive one.

- David Murbach
December 1984

1 Alpina Research
 3245 S. Juneau
 Seattle, WA 98118

Contact Person: MAJELLA LAROCHELLE, DIRECTOR 206-725-9823
Number of Plant Records: 2,000
Computer Hardware: COMMODORE 64 Terminal:
Floppy Disk Drives-Number: Size:
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 64K
Graphics Capabilities: YES Color: YES
Monitor (CRT) Brand Name: A TELEVISION Model:
Printer-Brand Name:
Modem-Brand Name: Model:
Software: DELPHI'S ORACLE for all data.

=====

2 American Horticultural Society
 Plant Sciences Data Center
 P.O. Box 105
 Mt. Vernon, VA 22121

Contact Person: THOMAS L. GATES, DIRECTOR, PSDC 703-768-5700
Number of Plant Records: 191,730
Computer Hardware: IBM S/36 Terminal: FIVE IBM 3180
Floppy Disk Drives-Number: Size:
Hard Disks-Number: 1 Size: 400 Mb.
Tape Drives-Number: 1 Size: 1600 BPI Amount of RAM:
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: IBM 3262
Modem-Brand Name: Model:
Software:

=====

3 The Arnold Arboretum
 The Arborway
 Jamaica Plain, MA 02130

Contact Person: JENNIFER HICKS, CURATORIAL ASSISTANT 617-524-1718
Number of Plant Records: 15,000
Computer Hardware: ONYX C8002 Terminal: ONE VISUAL 400
Floppy Disk Drives-Number: Size:
Hard Disks-Number: 2 Size: 10 & 20 Mb.
Tape Drives-Number: 1 Size: BUILT IN Amount of RAM:
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: see terminal Model:
Printer-Brand Name: INTEGRAL DATA SYSTEM IDS-460
Modem-Brand Name: RASCAL-VADIC Model: VA3451P
Software: UNIX SYSTEM III OPERATING SYSTEM;
LOGIX DATABASE SYSTEM.

=====

4 Atlanta Botanical Garden
P.O. Box 77246
Atlanta, GA 30357

Contact Person: RENNIE DAVANT, ADMINISTRATIVE ASSISTANT 404-876-5858
Number of Plant Records: 325
Computer Hardware: LANIER Terminal: 210/D/XC
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: LANIER Model:
Printer-Brand Name: LANIER 1600L
Modem-Brand Name: Model:
Software: LANIER DATA MANAGER AND WORD PROCESSOR

=====

5 Berkshire Garden Center
Stockbridge, MA 01262

Contact Person: GORDON A. CLARK, DIRECTOR 413-298-3926
Number of Plant Records: 150
Computer Hardware: IBM PC Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM:
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: AMDEK Model:
Printer-Brand Name: NEC
Modem-Brand Name: Model:
Software: PFS/FILE; PFS/WRITE

=====

6 Bloedel Reserve
7571 NE Dolphin Drive
Bainbridge IS., WA 98110

Contact Person: RICHARD A. BROWN, DIRECTOR 206-842-7631
Number of Plant Records: 2,000
Computer Hardware: IBM PORTABLE & PC-XT Terminal:
Floppy Disk Drives-Number: 1 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: IBM Model: B&W
Printer-Brand Name: OKIDATA 83A
Modem-Brand Name: HAYES Model: 1200 & 300
Software: dBASE III for plant records, photo records, topologic data,
weather data, budget, hydrological records; dGRAPH for
hydrological data; WORDSTAR for word-processing;
customized BASIC programs for weather data.

=====

7 Boyce Thompson Southwestern Arboretum
Box AB
Superior, AZ 85273

Contact Person: Dr. William Feldman, Director 602-689-2811
Number of Plant Records: 350
Computer Hardware: DIGITAL RAINBOW 100+ Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: DEC Model:
Printer-Brand Name: DEC LA100
Modem-Brand Name: Model:
Software: Anticipated purchase of dBASE III; SUPERCALC; WORDSTAR.

=====

8 Brandywine River Museum Wildflower Garden
Brandywine Conservancy
Box 141
Chadd's Ford, PA 19317

Contact Person: F.M. MOOBERRY, HORTICULTURAL COORDINATOR 215-388-7601
Number of Plant Records: 350
Computer Hardware: DIGITAL DECMATE II Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: DIGITAL Model: VR201A
Printer-Brand Name: DIGITAL LQPO2
Modem-Brand Name: Model:
Software: DIGITAL WORD-PROCESSING; THE BASICS; RX50 for list processing, sorting, and math.

=====

9 Brookside Gardens
Maryland-National Capital Park
And Planning Commission
1500 Glenallan Avenue
Wheaton, MD 20902

Contact Person: PHILIP M. NORMANDY, CURATOR 301-949-8231
Number of Plant Records: 10,000
Computer Hardware: HEWLETT-PACKARD 3000 SER. 35 Terminal: One HP 2624A
Floppy Disk Drives-Number: Size:
Hard Disks-Number: 6 Size: 50, 120, 404 Mb.
Tape Drives-Number: 2 Size: 1600, 6250 BPI Amount of RAM:
Graphics Capabilities: YES Color: YES
Monitor (CRT) Brand Name: see terminal Model:
Printer-Brand Name: ANDERSON-JACOBSEN 833
Modem-Brand Name: DATAPHONE Model: 300/1200
Software: AQ for plant records; INSIGHT for propagation records; IMAGE; TDP for word-processing; main programs were custom written.

=====

10 Calgary Zoo, Botanical Gardens and Prehistoric Park
P.O. Box 3036, Station B
Calgary, Canada T2M 4R8

Contact Person: DON PETERKIN, CURATOR OF HORTICULTURE 403-265-9310
Number of Plant Records: 500
Computer Hardware: IBM PC-XT Terminal:
Floppy Disk Drives-Number: 1 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: YES Color: YES
Monitor (CRT) Brand Name: IBM Model: COLOR
Printer-Brand Name: IBM
Modem-Brand Name: Model:
Software: dBASE II was programmed for our application; LOTUS 1-2-3;
MULTIPLAN; EASYWRITER; VISICALC; PEACHTREE ACCOUNTING.

=====

11 Central Park Conservancy
The Arsenal
830 Fifth Avenue
New York, NY 10021

Contact Person: GERALDINE WEINSTEIN, DIRECTOR OF HORTICULTURE 212-360-8193
Number of Plant Records: 24,000
Computer Hardware: IBM PC-XT Terminal:
Floppy Disk Drives-Number: 1 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: IBM Model: MONOCHROME
Printer-Brand Name: DOT MATRIX
Modem-Brand Name: Model:
Software: PFS/FILE for tracking newly planted trees, Dutch Elm Disease
Program, maintenance updating; KEEP-IT and SHOW-IT by MARTIN
MARIETTA for understory shrub performance evaluations.

=====

12 Chicago Botanic Garden
P.O. Box 400
Glencoe, IL 60022

Contact Person: CELESTE RYBICKI, 312-835-5440
Number of Plant Records: 16,000
Computer Hardware: IBM PC-XT Terminal:
Floppy Disk Drives-Number: 1 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: 1 Size: Amount of RAM: 128K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: IBM Model: MONOCHROME
Printer-Brand Name: EPSON LQ1500
Modem-Brand Name: ANTICIPATED Model:
Software: dBASE III for plant records; MBSI for accounting.

=====

13 Cornell Plantations
 One Plantations Road
 Ithaca, NY 14850

Contact Person: MARY HIRSHFELD, CURATOR 607-256-3020
Number of Plant Records: 4,200
Computer Hardware: XEROX 16/8 Terminal: 1 XEROX 16/8
Floppy Disk Drives-Number: 1 Size: 8
Hard Disks-Number: 1 Size:
Tape Drives-Number: Size: Amount of RAM: 128K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: XEROX Model: 16/8
Printer-Brand Name: XEROX 630
Modem-Brand Name: Model:
Software: dBASE II for membership; WORDSTAR for word-processing.

=====

14 Crosby Arboretum
 P. O. Box 190
 Picayune, MS 39466

Contact Person: CHRISTOPHER J. WELLS, SUPERINTENDENT 601-798-6961
Number of Plant Records: UNDETERMINED
Computer Hardware: APPLE III Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: YES Color: NO
Monitor (CRT) Brand Name: BMC Model:
Printer-Brand Name: EPSON RX-80 FT
Modem-Brand Name: HAYES Model: SMARTMODEM
Software: PFS:REPORT; KEYSTROKE; VISICALC III; APPLEWRITER III;
ACCESS III.

=====

15 The Dawes Arboretum
 7770 Jacksontown Road, SE
 Newark, OH 43055

Contact Person: DONALD R. HENDRICKS, DIRECTOR 614-323-2990
Number of Plant Records: 2,000
Computer Hardware: COMPAQ Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: 1 Size: ANTICIPATED
Tape Drives-Number: Size: Amount of RAM: 512
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: C.ITOH DOT MATRIX
Modem-Brand Name: HAYES Model: SMARTMODEM
Software: dBASE III; LOTUS 1-2-3; WORDSTAR.

=====

16 Denver Botanic Gardens, Inc.
909 York Street
Denver, CO 80206

Contact Person: BEVERLY M. NILSEN, BOTANIST-HORTICULTURIST 303-575-3751
Number of Plant Records: 14,500
Computer Hardware: SUPERMICRO MOLECULAR 15-8 Terminal: TWO WYSE WY50
Floppy Disk Drives-Number: 1 Size: 8
Hard Disks-Number: 1 Size: 15 Mb.
Tape Drives-Number: 1 Size: 20 MEG Amount of RAM: 64K/USER
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: MANNESMANN TALLY MT180L
Modem-Brand Name: Model:
Software: OPTIMUM DATA for plant records; SPELLBINDER for
word-processing.

=====

17 Desert Botanical Garden
1201 N. Galvin Parkway
Phoenix, AZ 85008

Contact Person: VICTOR M. GASS, CURATOR OF LIVING COLL. 602-941-1225
Number of Plant Records: 17,350
Computer Hardware: IBM 3081 Terminal: TWO TELLRAY 3311
Floppy Disk Drives-Number: Size:
Hard Disks-Number: 12 Size:
Tape Drives-Number: 4 Size: Amount of RAM:
Graphics Capabilities: YES Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: DIGITAL DECWRITER III
Modem-Brand Name: OMNITECH Model: 701R
Software: All mainframe software customized; SAS STATISTICAL SYSTEM.
Office and membership applications are kept on a WANG 2200 MVP-1
COMPUTER SYSTEM using TOM, THE OFFICE MANAGER software package.

=====

18 Devonian Botanical Garden
University of Alberta
Edmonton, Canada T6G 2E1

Contact Person: GILLIAN FORD, ASSISTANT DIRECTOR 403-987-3054
Number of Plant Records: 5,500
Computer Hardware: AMDAHL Terminal: Two AJS10
Floppy Disk Drives-Number: Size:
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM:
Graphics Capabilities: YES Color: YES
Monitor (CRT) Brand Name: Model:
Printer-Brand Name:
Modem-Brand Name: Model:
Software:

=====

19 The Dow Gardens
 1018 W. Main Street
 Midland, MI 48640

Contact Person: DOUGLAS J. CHAPMAN, HORTICULTURIST-ADMINIST. 517-631-2677
Number of Plant Records: 10,000
Computer Hardware: IBM PC Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: YES Color: YES
Monitor (CRT) Brand Name: IBM Model:
Printer-Brand Name: NEC
Modem-Brand Name: HAYES Model:
Software: PFS; LOTUS 1-2-3; WADSWORTH

=====

20 F.E.A.T. Foundation
 936 Mott Foundation Building
 Flint, MI 48502

Contact Person: DEBRA A. SZAJKO, OFFICE MANAGER 313-239-0341
Number of Plant Records: 0
Computer Hardware: IMS 8000SX Terminal: TWO LEAR SIEGLER ADM 22
Floppy Disk Drives-Number: 1 Size: 8
Hard Disks-Number: 1 Size: 40 Mb.
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: DTC 3802
Modem-Brand Name: PMMI Model:
Software: POLICY MANAGEMENT-SYSTEM for non-profit accounting and
membership records; WORDSTAR for word-processing; CONDOR for
database, mailmerge and spreadsheets.

=====

21 Filoli Center
 Canada Road
 Woodside, CA 94062

Contact Person: DEAN BROWN, PRESIDENT-PICODYNE CORP. 415-854-3088
Number of Plant Records: 2,300
Computer Hardware: ONYX/IBC CADET C8001 Terminal: FOUR
Floppy Disk Drives-Number: Size:
Hard Disks-Number: 1 Size: 85 Mb.
Tape Drives-Number: 1 Size: Amount of RAM: 512K
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: QUME SPRINT 9/11
Modem-Brand Name: U.S. ROBOTICS Model: PASSWORD
Software: OASIS; SCRIPT; CONTROL.

=====

22 Fullerton Arboretum
California State University
At Fullerton
Fullerton, CA 92634

Contact Person: CELIA KUTCHER, CURATOR-TAXONOMIST 714-773-3579
Number of Plant Records: 2,500
Computer Hardware: CDC CYBER 730 Terminal: 1 INTECOLOR 2400
Floppy Disk Drives-Number: Size:
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM:
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: DIGITAL DECWRITER CORRESPONDENT
Modem-Brand Name: Model:
Software: UNIX for operating system and for word-processing. The computer used is a large university mainframe and has many programs and utilities available.

=====

23 Hayes Regional Arboretum
801 Elks Road
Richmond, IN 47374

Contact Person: CHARLES T. GLEAVES, DIRECTOR 317-962-3745
Number of Plant Records: 800
Computer Hardware: IBM PC-XT Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 384K
Graphics Capabilities: YES Color: YES
Monitor (CRT) Brand Name: IBM Model: COLOR
Printer-Brand Name: C.ITOH
Modem-Brand Name: HAYES Model:
Software: PC-DOS for operating system; LOTUS 1-2-3;
EASYWRITER for word-processing; SMARTCOM for communications;
custom in-house BASIC program for native woody plant planting data (height, width, light, soil, longevity, and wildlife value).

=====

24 The Holden Arboretum
9500 Sperry Road
Mentor, OH 44060-8199

Contact Person: PETER W. BRISTOL, HORTICULTURIST 216-946-4400
Number of Plant Records: 6,000
Computer Hardware: APPLE III Terminal:
Floppy Disk Drives-Number: 1 Size: 5.25
Hard Disks-Number: 1 Size: 20 Mb.
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: APPLE Model: II
Printer-Brand Name: OKIDATA 84
Modem-Brand Name: Model:
Software: APPLEWRITER for word-processing; QUICK FILE and KEYSTROKE for data management.

=====

25 Kentucky Botanical Garden
814 1/2 Cherokee Road
Louisville, KY 40204

Contact Person: R. ATWOOD, TECHNICAL CONSULTANT 812-944-6290
Number of Plant Records: 2,200
Computer Hardware: IBM PORTABLE PC Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: Model:
Printer-Brand Name:
Modem-Brand Name: Model:
Software: PFS/FILE; PFS/REPORT.

=====

26 Longwood Gardens
Kennett Square, PA 19348

Contact Person: RONDEL PEIRSON, PLANT DATA COORDINATOR 215-388-6741
Number of Plant Records: 12,000
Computer Hardware: IBM SYSTEM 34 Terminal: Eight IBM 5291 & 5251
Floppy Disk Drives-Number: 1 Size: 8
Hard Disks-Number: 1 Size: 128 Mb.
Tape Drives-Number: Size: Amount of RAM: 64K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: IBM Model:
Printer-Brand Name: IBM 5224
Modem-Brand Name: Model:
Software: Custom programs using RPG II for plant records.
*NOTE*IBM PC-XT'S are being used as 3 of the 8 listed terminals
for the SYSTEM 34. Each has 192K of RAM and one 10 Mb. hard disk.
The IBM PC-XT'S use MULTIMATE for word-processing and METAFILE
for mailing lists and filing.

=====

27 Missouri Botanical Garden
P.O. Box 299
St. Louis, MO 63166-0299

Contact Person: AUDREY L. THOMPSON, PLANT RECORDER 314-577-5107
Number of Plant Records: 25,000
Computer Hardware: ADDS MENTOR 4000 Terminal: 1 ADDS VIEWPOINT
Floppy Disk Drives-Number: Size:
Hard Disks-Number: 1 Size: 150 Mb.
Tape Drives-Number: 1 Size: 9 TRACK-1600BPI Amount of RAM: 256K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: PRINTRONIX 300
Modem-Brand Name: UDS Model: 1200
Software: All programming in-house.

=====

28 Mitchell Park Conservatory
524 S. Layton Boulevard
Milwaukee, WI 53215

Contact Person: WAYNE MAJEROWSKI, HORTICULTURAL DIRECTOR 414-649-9800
Number of Plant Records: 2,000
Computer Hardware: APPLE II PLUS Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: 1 Size: 5 Mb.
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: YES Color: NO
Monitor (CRT) Brand Name: APPLE Model:
Printer-Brand Name: PROWRITER
Modem-Brand Name: HAYES 1200 Model: SMARTMODEM
Software: PFS/FILE and PFS/REPORT for plant records, pesticide info,
slide inventory, and gift shop records; APPLEWRITER WORD-
PROCESSOR used for mailing lists and plant culture information;
VISICALC for budgeting, attendance and revenue information.

=====

29 Mt. Cuba Center
P.O. Box 3570
Greenville, DE 19807

Contact Person: CLAIRE E. SAWYER, ADMINISTRATIVE ASSISTANT 302-239-4244
Number of Plant Records: 1,000
Computer Hardware: IBM SYSTEM 36 Terminal: Two IBM 5291 & 5251
Floppy Disk Drives-Number: 10 Size: 8
Hard Disks-Number: 1 Size: 400 Mb.
Tape Drives-Number: Size: Amount of RAM: 560K
Graphics Capabilities: YES Color: YES
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: IBM 5224
Modem-Brand Name: IBM Model: 3864
Software: IBM RETRIEVAL 36 for database management and for
plant records(planned); IBM TEXT MANAGEMENT for
word-processing; IBM MAPICS for accounting.

=====

30 North Carolina Botanical Garden
Totten Center, 457A
UNC-CH
Chapel Hill, NC 27514

Contact Person: CHARLOTTE JONES-ROE, CURATOR 919-967-2246
Number of Plant Records: 4,000
Computer Hardware: IBM(NOT PURCHASED YET) PC-XT Terminal:
Floppy Disk Drives-Number: 1 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 384K
Graphics Capabilities: YES Color: NO
Monitor (CRT) Brand Name: AMDEK Model: 300A
Printer-Brand Name: EPSON FX100 & DIABLO 630
Modem-Brand Name: DATEK PAL Model: 212
Software: (WILL USE) MICROSOFT WORD for word-processing; dBASE III for
plant records, membership and development; LOTUS 1-2-3 for
financial reports. We hope to customize dBASE III for our uses.

=====

31 North Carolina State University
NCSU Arboretum
Dept. of Horticultural Science
Box 5216
Raleigh, NC 27650

Contact Person: J.C. RAULSTON, PROFESSOR 919-737-3132
Number of Plant Records: 3,000
Computer Hardware: APPLE LISA 2/10 Terminal:
Floppy Disk Drives-Number: 2 Size: 3.5
Hard Disks-Number: 2 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 512K
Graphics Capabilities: YES Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: APPLE IMAGEWRITER
Modem-Brand Name: Model:
Software:

=====

32 Northwest Plant Germplasm Repository
33447 Peoria Road
Corvallis, OR 97333

Contact Person: KIM E. BRAINERD, LABORATORY TECHNICIAN 503-757-4448
Number of Plant Records: 4,500
Computer Hardware: IBM PC AND FRANKLIN ACE Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 512K
Graphics Capabilities: NO Color:
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: EPSON MX100 & NEC 3520
Modem-Brand Name: HAYES 1200 Model: SMARTMODEM
Software: dBASE II for inventory, library files, mailing lists;
WORDSTAR for word-processing; STATPAK for statistical
evaluation.

=====

33 Old Westbury Gardens, Inc.
P.O. Box 430
Old Westbury, NY 11568

Contact Person: LEMUEL HEGWOOD, ASSISTANT DIRECTOR 516-333-0035
Number of Plant Records: 3,700
Computer Hardware: IBM DISPLAYWRITER II Terminal:
Floppy Disk Drives-Number: 2 Size: 8
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: YES Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: IBM
Modem-Brand Name: Model:
Software: REPORT-PAC will be used Fall 1984.

=====

34 Pacific Tropical Botanical Garden
P.O. Box 340
Lawai
Kauai, HI 96765

Contact Person: ROBERT S. BARKEVICH, HORTICULTURIST 808-332-8131
Number of Plant Records: 13,000
Computer Hardware: IBM PC-XT Terminal:
Floppy Disk Drives-Number: 1 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 512K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: IBM Model: MONOCHROME
Printer-Brand Name:
Modem-Brand Name: HAYES 1200 Model: SMARTMODEM
Software: RBASE 4000 WITH CLOUT (ENGLISH-LIKE INTERPRETER) for plant
record-keeping.

=====

35 Rhododendron Species Foundation
P.O. Box 3798
Federal Way, WA 98063-3798

Contact Person: KAREN S. GUNDERSON, EXECUTIVE MANAGER 206-927-6960
Number of Plant Records: 3,144
Computer Hardware: APPLE III Terminal:
Floppy Disk Drives-Number: 1 Size: 5.25
Hard Disks-Number: 2 Size: 5 Mb.
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: YES Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: EPSON 100 & NEC 3510
Modem-Brand Name: Model:
Software: dBASE II for plant records, membership records, mailing
lists, library accessions, bloom history records, plant
distribution order processing, accounts receivable,
publications inventories and invoicing; APPLEWRITER III
for word-processing.

=====

36 San Diego Wild Animal Park
15500 San Pasqual Valley Road
Escondido, CA 92027-9614

Contact Person: JAMES GIBBON, HORTICULTURIST 619-747-8702
Number of Plant Records: 3,500
Computer Hardware: IBM SYSTEM 38 Terminal: TWO IBM 3180 & 5250
Floppy Disk Drives-Number: Size:
Hard Disks-Number: 3 Size: 2 GIGABYTE
Tape Drives-Number: 1 Size: 3411 MOD.3 Amount of RAM: 2.5 Mb.
Graphics Capabilities: YES Color: YES
Monitor (CRT) Brand Name: IBM Model:
Printer-Brand Name: OKIDATA
Modem-Brand Name: Model:
Software: DIAL ACCOUNTING; GAREY PENFIELD PAYROLL; LOTUS 1-2-3;
DISPLAYWRITER II; WORDSTAR. We wrote all our own software for
plant and animal records, membership, necropsy and pathology.

=====

37 Santa Barbara Botanic Garden
1212 Mission Canyon Road
Santa Barbara, CA 93105

Contact Person: CAROL BORNSTEIN, HORTICULTURIST 805-682-4726
Number of Plant Records: 2,193
Computer Hardware: IBM PC Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: Model:
Printer-Brand Name:
Modem-Brand Name: Model:
Software:

38 Arthur Hoyt Scott Horticultural Foundation
Swarthmore College
Swarthmore, PA 19081

Contact Person: ROBERT MCCAGUE HAYS, CURATORIAL INTERN 215-447-7025
Number of Plant Records: 5,000
Computer Hardware: PRIME 750 Terminal: Two ADDS VIEWPOINT 60
Floppy Disk Drives-Number: Size:
Hard Disks-Number: 4 Size: 2(300) & 2(675) Mb.
Tape Drives-Number: 1 Size: TRIPLE DENSITY Amount of RAM: 12 MEG
Graphics Capabilities: YES Color: YES
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: DIABLO 630
Modem-Brand Name: RACAL-VADIC Model: VA345
Software: POWER for membership.
Other printers are PRINTRONIX 600, INEC 7710 and ANADEX.

39 Marie Selby Botanical Gardens
800 S. Palm Avenue
Sarasota, FL 33577

Contact Person: GEORGE LOVING, EXECUTIVE DIRECTOR 813-366-5730
Number of Plant Records: 10,000
Computer Hardware: IBM PC-XT Terminal:
Floppy Disk Drives-Number: 1 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 640K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: DIABLO 1640 & OKIDATA 92
Modem-Brand Name: HAYES Model: MICROMODEM II
Software: LOTUS 1-2-3 for financial reports; MICROSOFT WORD for
word-processing; PC-FILE for membership and probably plant
records.

40 Smithsonian Institution
Office of Horticulture
Room 2401
Arts and Industries Building
Washington, DC 20560

Contact Person: JAMES R. BUCKLER, DIRECTOR 202-357-1926
Number of Plant Records: 21,000
Computer Hardware: NIXDORF 600/55 Terminal: ONE NIXDORF
Floppy Disk Drives-Number: Size:
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 128K
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: NIXDORF Model:
Printer-Brand Name: NIXDORF
Modem-Brand Name: Model:
Software: In-house custom software for plant inventory. Capabilities
include on-line query, add, change and delete.

41 State Arboretum of Utah
University of Utah
Building 436
Salt Lake City, UT 84112

Contact Person: W. RICHARD HILDRETH, DIRECTOR 801-581-5322
Number of Plant Records: 300
Computer Hardware: APPLE MACINTOSH Terminal:
Floppy Disk Drives-Number: 1 Size: 3.5
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 128K
Graphics Capabilities: YES Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: APPLE
Modem-Brand Name: Model:
Software: MACPAINT AND MACWRITE for word-processing, plant records,
membership, plant records.

42 Temple University, Gardens at the Ambler Campus
Dept. of Hort. and Landscape Design
Ambler, PA 19002

Contact Person: R. CHRISTIAN CASH, ASSISTANT PROFESSOR 215-643-1200
Number of Plant Records: UNDETERMINED
Computer Hardware: IBM PC Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM:
Graphics Capabilities: YES Color: YES
Monitor (CRT) Brand Name: Model:
Printer-Brand Name:
Modem-Brand Name: Model:
Software: PFS/FILE; WORDSTAR; LOTUS 1-2-3.

43 Transition Zone Horticultural Institute
P.O. Box 670
Flagstaff, AZ 86001

Contact Person: JEANETTE MILNE, 602-774-1441
Number of Plant Records: 250
Computer Hardware: IBM PC-XT Terminal:
Floppy Disk Drives-Number: 1 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 128K
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: Model:
Printer-Brand Name:
Modem-Brand Name: Model:
Software:

=====
44 USDA Subtropical Horticulture Research Unit
13601 Old Cutler Road
Miami, FL 33158

Contact Person: IRENE DE B. GALVIN, PLANT RECORDS KEEPER 305-238-9321
Number of Plant Records: 30,623
Computer Hardware: WANG 2200 MVP Terminal: 4 WANG 2236 & 2336
Floppy Disk Drives-Number: 2 Size: 8
Hard Disks-Number: 1 Size: 80 Mb.
Tape Drives-Number: Size: Amount of RAM: 128K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: TELETYPE 40 & MATSUBA 80
Modem-Brand Name: ANDERSON-JACOBSEN Model: AJ1233
Software: Also have a WANG 2212 Plotter in addition to printers.
AIMS 3.6 PLUS for database management; CWP II for word-
processing, accounting, client files, labels, manuscripts.
Customized software was developed to interface with AIMS to make
it more detailed and efficient.

=====
45 University of British Columbia Botanical Garden
6501 NW Marine Drive
Vancouver, Canada V6T 1W5

Contact Person: MARIE SHAFLIK, 604-228-4456
Number of Plant Records: 16,000
Computer Hardware: AMDAHL 470 V/8 Terminal:
Floppy Disk Drives-Number: Size:
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM:
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: XEROX 9700
Modem-Brand Name: Model:
Software: Programs developed in-house.
=====

46 University of California-Irvine, Arboretum
School of Biological Sciences
Irvine, CA 92717

Contact Person: HAROLD KOPOWITZ, DIRECTOR 714-856-5833
Number of Plant Records: 4,000
Computer Hardware: IBM PC Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 128K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: IBM Model: MONOCHROME
Printer-Brand Name: EPSON RX-80
Modem-Brand Name: Model:
Software: PFS/REPORT and PFS/FILE for accessions; WORDSTAR for word-
processing.

=====

47 University of California-Los Angeles
Mildred E. Mathias Botanical Garden
Department of Biology
2230 Life Sciences Building
Los Angeles, CA 90024

Contact Person: BARRY A. PRIGGE, ASS'T. MUSEUM SCIENTIST 213-825-2714
Number of Plant Records: 4,000
Computer Hardware: IBM PC Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: EPSON
Modem-Brand Name: Model:
Software: Using an in-house developed program for plant records.

=====

48 University of California-Riverside, Botanic Garden
Riverside, CA 92521

Contact Person: STEVE MORGAN, CURATOR 714-787-4650
Number of Plant Records: 3,000
Computer Hardware: IBM PC Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 512K
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: IBM Model: MONOCHROME
Printer-Brand Name: IBM GRAPHICS II NEC 3550
Modem-Brand Name: Model:
Software: PFS/WRITE for word-processing; PFS/FILE and PFS/REPORT for
plant records, mailing lists and tables.

=====

49 University of Guelph Arboretum
Guelph
Ontario, Canada N1G 2W1

Contact Person: STEVEN ABOND, CURATOR 519-824-4120
Number of Plant Records: 6,500
Computer Hardware: IBM PC Terminal:
Floppy Disk Drives-Number: 2 Size: 5.25
Hard Disks-Number: 1 Size: 20 Mb.
Tape Drives-Number: Size: Amount of RAM: 320K
Graphics Capabilities: YES Color: NO
Monitor (CRT) Brand Name: AMDEK Model: 300A
Printer-Brand Name: C.ITOH 8510A
Modem-Brand Name: Model:
Software: dBASE II for herbarium label processing and inventory;
WORDSTAR for word-processing.

=====

50 University of Michigan, Matthaei Botanical Garden
1800 N Dixboro Road
Ann Arbor, MI 48105

Contact Person: LAURIANNE HANNAN, COLLECTIONS BOTANIST 313-764-1168
Number of Plant Records: 6,400
Computer Hardware: UNIVERSITY MAINFRAME Terminal: One DECWRITER II
Floppy Disk Drives-Number: Size:
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM:
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: Model:
Printer-Brand Name:
Modem-Brand Name: MULTI-TECH SYS Model: FM 300
Software:

=====

51 University of Minnesota Landscape Arboretum
3675 Arboretum Drive
Box 39
Chanhassen, MN 55317

Contact Person: HAROLD PELLET, PROFESSOR 612-443-2460
Number of Plant Records: 6,000
Computer Hardware: IBM MAINFRAME & IBM XT Terminal:
Floppy Disk Drives-Number: 1 Size: 5.25
Hard Disks-Number: 1 Size: 10 Mb.
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: OKIDATA 93
Modem-Brand Name: ASTROCOM Model:
Software: NOMAD for plant records; DBASE II.

=====

52 Utah Botanical Garden
1817 North Main
Farmington, UT 84025

Contact Person: WILLIAM A. VARGA, RESEARCH HORTICULTURIST 801-451-2492
Number of Plant Records: 800
Computer Hardware: APPLE 2-E Terminal:
Floppy Disk Drives-Number: 3 Size: MINI-DISK
Hard Disks-Number: Size:
Tape Drives-Number: Size: Amount of RAM: 64K
Graphics Capabilities: NO Color: NO
Monitor (CRT) Brand Name: VIDEO Model: 100
Printer-Brand Name: EPSON MX 80
Modem-Brand Name: Model:
Software: PFS SERIES.

=====

53 Zoological Society of Philadelphia
34th Street and Girard Avenue
Philadelphia, PA 19104

Contact Person: CHARLES ROGERS, CURATOR OF HORTICULTURE 215-243-1100
Number of Plant Records: UNDETERMINED
Computer Hardware: WANG 2200 MVP Terminal:
Floppy Disk Drives-Number: Size:
Hard Disks-Number: 1 Size: 80 Mb.
Tape Drives-Number: Size: Amount of RAM: 256K
Graphics Capabilities: Color:
Monitor (CRT) Brand Name: WANG Model:
Printer-Brand Name: WANG
Modem-Brand Name: WANG Model:
Software: TOM'S WORD-PROCESSING; ABT DEVELOPMENT SOFTWARE.

=====

54 Zoological Society of San Diego
P.O. Box 551
San Diego, CA 92112-0551

Contact Person: ROBERT WARD, ASSISTANT HORTICULTURIST 619-231-1515
Number of Plant Records: 10,000
Computer Hardware: IBM SYSTEM 38 Terminal: 22 IBM 5251-11
Floppy Disk Drives-Number: 1 Size: 8
Hard Disks-Number: 3 Size: 624 Mb.
Tape Drives-Number: 1 Size: Amount of RAM: 2 MEG
Graphics Capabilities: YES Color: NO
Monitor (CRT) Brand Name: Model:
Printer-Brand Name: IBM GRAPHICS
Modem-Brand Name: AT&T Model:
Software: Software developed in-house in RPG III.

=====

INDEX BY BRAND OF COMPUTER

COMPUTER	INSTITUTION	ENTRY #
Amdahl 470 V/8	Devonian Botanic Garden18 University of British Columbia Botanical Garden..... 15	
ADDS Mentor 4000	Missouri Botanical Garden..... 27	
Apple II E	Utah Botanical Garden.....52	
Apple II Plus	Mitchell Park Conservatory.....28	
Apple III	Crosby Arboretum..... 14 Holden Arboretum, The24 Rhododendron Species Foundation..... 35	
Apple Lisa 2/10	North Carolina State University, Arboretum.....31	
Apple Macintosh	State Arboretum of Utah.....41	
CDC Cyber 730	Fullerton Arboretum.....22	
Commodore 64	Alpina Research..... 1	
Compaq	Dawes Arboretum, The.....15	
Digital Decmate II	Brandywine River Museum, Wildflower Garden..... 8	
Digital Rainbow 100+	Boyce Thompson Southwestern Arboretum..... 7	
Franklin-Ace	Northwest Plant Germplasm Repository.....32	
Hewlett-Packard 3000 Series 35	Brookside Gardens..... 9	
IBM Displaywriter II	Old Westbury Gardens, Inc.....33	
IBM PC Portable	Bloedel Reserve..... 6 Kentucky Botanical Garden.....25	
IBM PC or PC-XT	Berkshire Garden Center..... 5 Bloedel Reserve..... 6 Calgary Zoo, Botanical Gardens and Prehistoric Park 10 Central Park Conservancy.....11 Chicago Botanic Garden12 Dow Gardens, The..... 19 Hayes Regional Arboretum23 Longwood Gardens.....26 North Carolina Botanical Garden.....30 Northwest Plant Germplasm Repository.....32 Pacific Tropical Botanical Garden.....34	

	San Diego Wild Animal Park.....	16
	Santa Barbara Botanic Garden.....	37
	Selby Botanical Gardens, Marie.....	39
	Temple University, Gardens at Ambler.....	42
	Transition Zone Horticultural Institute.....	43
	University of California-Irvine, Arboretum.....	16
	University of California-Los Angeles, Mildred E. Mathias Botanical Garden.....	17
	University of California-Riverside, Botanical Garden.....	48
	University of Guelph, Arboretum.....	49
	University of Minnesota Landscape Arboretum.....	51
IBM System 34	Longwood Gardens.....	26
IBM System 36	American Horticultural Society.....	2
	Mt. Cuba Center.....	29
IBM System 38	San Diego Wild Animal Park.....	36
	Zoological Society of San Diego.....	54
IBM Mainframes	Desert Botanical Garden.....	17
	University of Guelph, Arboretum.....	49
	University of Minnesota Landscape Arboretum.....	51
IMS 800SX	F.E.A.T. Foundation.....	20
Lanier 210/D/XC	Atlanta Botanical Garden.....	4
Nixdorf 600/55	Smithsonian Institution.....	40
Onyx C8001	Filoli Center.....	21
Onyx C8002	Arnold Arboretum, The.....	3
Prime 750	Scott Horticultural Foundation, Arthur Hoyt.....	38
Supermicro Molecular 15-8	Denver Botanic Gardens.....	16
Wang 2200 MVP	USDA Subtropical Horticultural Research Unit.....	44
	Zoological Society of Philadelphia.....	53
Xerox 16/8	Cornell Plantations.....	13

INDEX BY BRAND NAME OF DATABASE SOFTWARE

SOFTWARE	INSTITUTION	ENTRY #
Aims 3.6 Plus	USDA Subtropical Horticultural Research Unit.....	44
Condor	F.E.A.T. Foundation.....	20
dBASE II or III	Bloedel Reserve.....	6
	Boyce Thompson Southwestern Arboretum.....	7
	Calgary Zoo, Botanical Gardens and Prehistoric Park.....	10
	Chicago Botanic Garden.....	12
	Cornell Plantations.....	13
	Dawes Arboretum, The.....	15
	North Carolina Botanical Garden.....	30
	Northwest Plant Germplasm Repository.....	32
	Rhododendron Species Foundation.....	35
	University of Guelph, Arboretum.....	49
University of Minnesota Landscape Arboretum.....	51	
Delphi's Oracle	Alpina Research.....	1
IBM Retrieval 36	Mt. Cuba Center.....	29
Keystroke	Crosby Arboretum.....	14
	Holden Arboretum, The.....	24
Lanier Data Manager	Atlanta Botanical Garden.....	4
Logix Database System	Arnold Arboretum, The.....	3
MacPaint & MacWrite	State Arboretum of Utah.....	41
Nomad	University of Minnesota Landscape Arboretum.....	51
Oasis	Filoli Center.....	21
Optimum Data	Denver Botanic Gardens.....	16
Power	Scott Horticultural Foundation, Arthur Hoyt.....	38
PC-File	Selby Botanical Gardens, Marie.....	39
PFS/File	Berkshire Garden Center.....	5
	Central Park Conservancy.....	11

	Dow Gardens, The.....	19
	Kentucky Botanical Gardens.....	25
	Mitchell Park Conservatory.....	28
	Temple University, Gardens at Ambler Campus.....	42
	University of California-Irvine, Arboretum.....	46
	University of California-Riverside, Botanical Garden.....	48
	Utah Botanical Garden.....	52
Quick File	Holden Arboretum, The.....	24
Rbase 4000	Pacific Tropical Botanical Garden.....	34
RX50	Brandywine River Museum Wildflower Garden.....	8
Custom Software	American Horticultural Society.....	2
	Brookside Gardens.....	9
	Desert Botanical Garden.....	17
	Fullerton Arboretum.....	22
	Hayes Regional Arboretum.....	23
	Longwood Gardens.....	26
	Missouri Botanical Garden.....	27
	San Diego Wild Animal Park.....	36
	Smithsonian Institution.....	40
	University of British Columbia Botanical Garden.....	45
	University of California-Los Angeles Mildred E. Mathias Botanical Garden.....	47
	Zoological Society of San Diego.....	54