

Alien Species Data Sources in the State of Hawaii

Data source key : 11

This info updated 2/6/96

Owner : TNCH/HHP (TNCH-Hawaii Heritage Program)

Owner's data name : Various data at TNCH (per interview with/ Roy Kam)

Contact name : Roy Kam

Contact address : 1116 Smith St. - Suite 201
Honolulu, HI 96817

Phone contact: (808) 537-4508

Content/subject : Various data at The Nature Conservancy of Hawaii

Purpose : stewardship of natural areas & rare species

Data set format : various, including notebooks, Paradox for Windows, Advanced Revelation, spreadsheets, word processing documents, etc.

Distribution policy : Contact data owner

Data source key : 72

This info updated 2/6/96

Owner : Bishop Museum/Natural Sciences

Owner's data name : Hawaii Biological Survey

Contact name : Gordon Nishida

Contact address : 1525 Bernice St.
P.O. Box 19000
Honolulu, HI 96817-0916

Phone contact: (808) 848-4194

Content/subject : "Ongoing natural history inventory of the Hawaiian archipelago, including information on native and non-native flora and fauna, for the wise stewardship of Hawaii's biological resources." (HBS pamphlet) Creation of an electronic checklist of all known Hawaiian plant & animal species. In addition to checklist is a type specimen database derived from the museum's collections, a database of resource materials - a bibliography, a database of species citations in the literature, and specimen level databases. Groups to be covered are as follows: invertebrates, malacology, ichthyology, vertebrate zoology, entomology & botany. In conjunction with this project, "the Bishop Museum will publish Records of the Hawaii Biological Survey which will include short notes and articles pertinent to the biota of the Hawaiian Islands. These include records of range extensions, first records, and others." (L. G. Eldredge 1995.)

Purpose : Bishop Museum was designated Hawaii Biological Survey in 1992 by the Hawaii State Legislature. Created by the Hawaii Biological Survey, this on-line database was made possible through a grant from the McArthur Foundation for public use.

Data set format : Various, including world wide web, internet gopher, FoxPro, herbarium sheets, field notes, etc.

Distribution policy : Contact data owner

Data source key : 79

This info updated 1/29/96

Owner : Bishop Museum/Natural Sciences/Malacology

Owner's data name : Database of Non-Indigenous Land and Freshwater Molluscs in Hawaii, A

Contact name : Rob Cowie

Contact address : P.O. Box 19000
Honolulu, HI 96817

Phone contact: (808) 848-4118

Content/subject : database of the alien species of land and freshwater molluscs (snails and clams) recorded in the Hawaiian Islands

Purpose : "The primary aim of the project is to build a database of the alien species of land and freshwater molluscs (snails and clams) recorded in the Hawaiian Islands. As well as being an accurate nomenclatural list of taxa, this database will include background information on each taxon, including reference to literature reporting the original introduction and spread of the taxon, museum and other collections that hold material vouchering this information, ecology and natural range, and an indication of the possible impact of the taxon on the fragile Hawaiian ecosystems and on Hawaiian agriculture."

Per Rob C.: compile in a single resource information on alien mollusc species, making it readily available to resource managers, agriculture folk, conservationists, etc.

Data set format : will be in PDOXWIN or Access

Distribution policy : Contact data owner

Data source key : 80

This info updated 10/19/95

Owner : Book (publicly available)

Owner's data name : Catalog of the Native Land and Freshwater Molluscs of the Hawaiian Islands

Contact name : Rob Cowie

Contact address : P.O. Box 19000
Honolulu, HI 96817

Phone contact: (808) 848-4118

Content/subject : nomenclatural and bibliographic list of native land and freshwater molluscs of the Hawaiian Islands, with island-by-island distribution and some conservation information

Purpose : to create a current and accurate list of all valid species of native Hawaiian land and freshwater molluscs with island-by-island distribution of each, along with bibliographic information about these organisms

Data set format : book; electronic database of names will be Paradox for Windows v.5 or MS Access v.2 (when it's created)

Distribution policy : Contact data owner

Data source key : 91

This info updated 2/6/96

Owner : Bishop Museum/Natural Sciences/Malacology

Owner's data name : BPBM marine mollusc type database

Contact name : Rob Cowie

Contact address : P.O. Box 19000
Honolulu, HI 96817

Phone contact: (808) 848-4118

Content/subject : species/citation/specimen number of all marine mollusc TYPE SPECIMENS held by
Bernice P. Bishop Museum (100% complete)

Purpose : to make available information RE: BPBM's marine mollusc type specimen holdings to
the systematics community

Data set format : dBase III

Distribution policy : Contact data owner

Data source key : 92

This info updated 2/6/96

Owner : NBS/Haleakala National Park Field Station

Owner's data name : HALELIST/HALEFLOR

Contact name : Lloyd Loope

Contact address : P.O. Box 369
Makawao, HI 96768

Phone contact: (808) 572-9306 ext. 5938 ext. 5936

Content/subject : annotated list of vascular(/flowering) plants of Haleakala National Park

Purpose : to document the flora of Haleakala National Park as a means of improving
management

Data set format : Word for Windows v.2, at the moment; non-updated information (2 years old) in
well-structured relational Paradox for Windows database; current HALEFLOR in Word
to be published in the near future as a CPSU technical report

Distribution policy : Contact data owner

Data source key : 93

This info updated 5/21/96

Owner : NBS/Haleakala National Park Field Station

Owner's data name : NBS/HALE alien species data sets

Contact name : Lloyd Loope

Contact address : P.O. Box 369
Makawao, HI 96768

Phone contact: (808) 572-9306 ext. 5938 ext. 5936

Content/subject : multiple independent data sets RE: alien species, including: Miconia; Cortaderia
(pampas grass); Cyathea cooperi (Australian tree fern); Vespula (yellowjackets);
Linepithema (Iridomyrmex) humile (Argentine ants); Pennisetum setaceum
(fountaingrass), including distribution information for each on East Maui

Purpose : to document distribution of (potentially damaging) alien species which warrant control

Data set format : various: Excel, dBase, Paradox for Windows, field notebooks, etc.

Distribution policy : Contact data owner

Data source key : 94

This info updated 2/6/96

Owner : Bishop Museum/Natural Sciences/Malacology

Owner's data name : Bishop Museum malacology collection

Contact name : Rob Cowie

Contact address : P.O. Box 19000
Honolulu, HI 96817

Phone contact: (808) 848-4118

Content/subject : Museum collection of molluscs predominantly from Hawaii and Pacific Basin islands & associated documentation (labels, ledgers, field notes, maps)

Purpose : taxonomy; systematics; distributional information; type specimens; survey vouchers; date/distribution tracking; conservation/biodiversity uses

Data set format : specimens w/ supporting documentation (ledgers, labels)

Distribution policy : Contact data owner

Data source key : 96

This info updated 5/21/96

Owner : Maui Pineapple Company, Ltd.

Owner's data name : Pu'u Kukui Watershed Management Area database

Contact name : Randy Bartlett

Contact address : 4900 Honoapi'ilani Hwy.
Lahaina, HI 96761-9183

Phone contact: (808) 669-5439

Content/subject : data from Pu'u Kukui Watershed Management Area (West Maui), including: (1) transect data, with native and alien plant data & pig sign data; (2) snare capture data; (3) data on snails (tracking populations of native tree snails and other data about the communities they inhabit); and (4) in the future, the database will include USFWS West Maui forest bird survey information.

Purpose : to assist in determining success of management goals in the area and provide historical reference to the natural resources of the area for research and management needs. Management goals are to: preserve and protect the natural resources of the area, including native (endemic & indigenous) species, and to protect the water resource capacity of the area for use by agriculture (pineapple & sugar), Kapalua resort, and the public (county).

Data set format : originally in Reflex database; now in Approach; to be converted to Paradox for Windows (pigs dataset already converted to PDOXWIN as of interview date)

Distribution policy : Contact data owner

Data source key : 97

This info updated 5/21/96

Owner : U.S. Fish and Wildlife Service

Owner's data name : Endangered & Threatened species database

Contact name : Marie Bruegmann

Contact address : 300 Ala Moana
Honolulu, HI

Phone contact: (808) 541-3441

Content/subject : Database of U.S. official endangered/threatened/candidate/candidate-wanna-be taxa ("T&E species") of Hawaii & supporting documentation. Includes: electronic database of taxa; actual documents supporting official actions & other related documents; general literature. Also: PDOXWIN database of E/T/etc.; species files (for every native species; files for aliens 'hopeful' in future) w/ extensive info on candidate/proposed species, including EVERY reference cited in Federal Register for proposal, final rule, recovery plan; all official actions RE: E/T/etc. spp. since 1990 on disk in WordPerfect, hardcopies only <1990; small set of general literature, unfiled, on aliens, etc. (gray lit. is in files); list of references cited for each listing packages; candidate change forms (all recent status changes, incl. evidence that precipitated the change) in WP & hard copy; species list for Midway & Laysan islands (including aliens).

Purpose : listing & recovery of T&E species; mandate is U.S. federal law (ESA of 1973, etc.)

Data set format : Paradox for Windows; WordPerfect; paper files

Distribution policy : Contact data owner

Data source key : 102

This info updated 2/6/96

Owner : DLNR/DOFAW/NARS (Big Island)

Owner's data name : Big Island NARS data

Contact name : Bill Stormont

Contact address : P.O. Box 4849
Hilo, HI 96720-0849

Phone contact: (808) 933-4221

Content/subject : Transect, circular plot, and belt transect data (native species, weeds, and pig activity) for the Natural Area Reserves (NARs) on the Big Island (Hawaii). Pu'u O Umi and Pu'u Makahala (and eventually will probably add 1 more preserve to the list to do regularly): transect data (weeds: 5x50m plots continuous for 500m, pig activity: 5x10m plots once each 500m); 250m (500m for Pu'u O Umi) circular plots ("intensive") by layer/species: all taxa, 3-year rotation planned (working on 1st year); presence/absence for belt transects, pig & weed, for these 2 NARs every 6 months. Draft management plans (under revision) developed by HHP/TNCH in 1988-89 are available for Pu'u O Umi, Pu'u Makahala, Kipahoe, including raw data from quick biological surveys by transect. Quad-sized maps available for transects for Pu'u O Umi, Pu'u Makahala. Also, page-sized maps of transects available for areas with HHP/TNCH management plans; page-size maps are available for all 8 preserves (not necessarily with transects); weed lists exist for Pu'u Maka'ala & Pu'u O Umi, started with the 1980s TNC mgt. plan weed lists), plan to survey for weeds here every 6 months (on 1st round only now, P'u Maka'ala is complete, plan to start next round in October); they would like to have a database of weeds, the preserves in which they occur (& sighting data), whether or not the weed (or other species) is represented in

their herbarium, and their 'priority' rating for the species. Weed lists are also available for 4 other NARS [Kipahoe, Kahaualea, Laupahoehoe, Manuka]; these are not complete, not up-to-date; based in part on historical info and in part on quick HHP biological survey included in original drafts of management plans; 'verified (actually seen)' vs. 'historical reference only' is indicated in their info for each taxon.

Purpose : track weed & pig presence to develop & implement management strategies for these areas as NARs

Data set format : will soon be in Paradox for Windows, currently (09/95) in field notebooks, some (checklists/etc.) in WordPerfect

Distribution policy : Contact data owner

Data source key : 103

This info updated 10/9/95

Owner : NBS/Hawaii Field Station (formerly USFWS)

Owner's data name : Palila project

Contact name : Thane Pratt

Contact address : P.O. Box 44
Hawaii National Park, HI 96718

Phone contact: (808) 967-7396

Content/subject : A continuing population ecology study project including information about palila life history, habitat, distribution, and limiting factors. Work RE: limiting factors includes data on: small mammal (nest) predation; exotic bird nesting on Mauna Kea; small mammal distributions; small mammals (Banko, Bob Sugihara, et al.; Fancy/Snetsinger); collections of grasses & unfamiliar weeds (including at least one first record for the Big Island); grasses & dynamics of grass communities (Christine Williams); mamane dieback (fungal pathogen?) (Don Gardner); insect fauna (including ant distribution, raising possibly alien parasitoids on native caterpillars feeding on mamane seed) (Paul Banko & Greg Brenner), annual/semi-annual palila count & 'sheepsign' (browsing); mist netting & banding, including aliens (Gerald Lindsey); pox lesions

Purpose : information to aid in recovery of palila populations on the Big Island

Data set format : mostly in dBase

Distribution policy : Contact data owner

Data source key : 104

This info updated 2/6/96

Owner : NBS/Hawaii Volcanoes National Park Field Station

Owner's data name : Special Ecological Area (SEA) projects

Contact name : Linda Pratt

Contact address : P.O. Box 52
Hawaii National Park, HI 96718

Phone contact: (808) 967-8211

Content/subject : Data on some Special Ecological Areas (SEAs) within HAVO. Data is not available on all ecological areas, but the ones for which they do have data are currently being managed or targeted for management, and include distribution & abundance data for alien and rare native plants. Data is from: one unfenced and 4 fenced areas in Ola'a (1992-1994); some veg sampling plots; Mauna Loa, alien plants from 5000' - 6800';

some kipukas; there is "before & after" fencing/pig removal data for Ola'a (7 years' data), also for Koa unit; East Rift project (1992-1993) includes data on alien plants above a barrier fence & some 1988 data prior to the barrier fence; bird data within SEAs; invertebrate data from SEAs (excluding Mauna Loa)

Purpose : to facilitate management of SEAs within HAVO

Data set format : various (dBase, spreadsheets, field notes, some published materials [e.g. CPSU tech reports])

Distribution policy : Contact data owner

Data source key : 105

This info updated 5/21/96

Owner : NBS/Hawaii Volcanoes National Park Field Station

Owner's data name : Rick Warshauer's data

Contact name : Rick Warshauer

Contact address : P.O. Box 44
Hawaii National Park, HI 96718

Phone contact: (808) 967-7396

Content/subject : Lots of historical data from various islands, including: 1980 one-time veg. info from USFWS "bird transects" on East Maui (see also Paul Higashino's data), Molokai & Lanai (1979-80), Kauai (1981), and the Hawaii (Big Island) 1976-77, 1978 [Kona], 1980); all USFWS bird transect data includes pig & weed info; see Jim Jacobi for some of the data which once existed in CP/M &/or old IBM tape format. Kapapala koa management area inside road[?] & perimeter, survey (weed list, 100 spp.), single point in time only (Linda Pratt has an older plant list including weeds). Kilauea forest/Keahou Ranch, IBP in early-mid 70s (Cliff knows about this), plots & complete inventory, published in Island Ecosystems; now there's a current species list in notebooks only, not yet written up ("20 years later"), after impacts of bulldozers, logging trucks, etc. Just started transects in Kulani area. Lots of incidental data, species lists from many areas (Big Island only? which islands?) re: weeds, natives. Current 'naturalization' info RE: Medillina magnifica. Leeward Kohala mountains, arid area, forest reserve, 2500 elevation change, w/ Holly McEldowney, 1981 study of weeds with associated native species. Forest bird survey, 50 notebooks, weed data still in notebook form, coded; also see notebooks of Lani Stemmermann, Jim Jacobi, Paul Higashino. Ron Terry (formerly w/ UH Hilo Geography Dept.) has done many Environmental Impact Statements (EISs), see him for remote sensing, banana poka data over several years, spectral analysis. Transect maps available for many projects. 1993/94 data from Puna district, vegetation component of geothermal EIS studies, 100 short sites (roadsides, etc.) re: introduced plants, ecosystem stability, and geothermal development (Cliff has part of this data); table & map exist; comparable to 10-years-ago data from Lamoureaux & Char. Rick refers also to various data on military land (e.g. Oahu various 1976-77 (e.g. Clidemia info); Big Island: PTA; U.S. Army is now looking at rare natives ["Reimo" - ask JJ]).

Purpose :

Data set format : various: some in old reel tape format, some converted into pc-based format, field notes, etc.

Distribution policy : Contact data owner

Data source key : 106

This info updated 2/6/96

Owner : NBS/Hawaii Field Station (formerly USFWS)

Owner's data name : Various NBS/HFS data (Thane Pratt)

Contact name : Thane Pratt

Contact address : P.O. Box 44
Hawaii National Park, HI 96718

Phone contact: (808) 967-7396

Content/subject : Akiapola'au "weekend" project: incidental akiapola'au (sightings?) on east slope of Mauna Kea (mamane forest); mouflon, rodent, & alien plant data (1989-92).

Data from Mauna Kea bird surveys: also copies of data for 3 surveys on Kauai & 2 on Molokai (5 years apart); Honolulu DOFAW office maintains bird survey information (Paul Conrey).

Maui 1985-86 (start of) forest bird survey data (Cam Kepler); NBS/HFS has the most original data, never written up, 3 papers coming out soon (2 RE: pououli, 1 RE: rats)

Sugihara: recent paper on rat distribution & diet ("Relative abundance and diets of black and Polynesian rats in two Hawaiian rainforests" -Pacific Science)

Cam Kepler data RE: pig damage in Waikamoi; also bird counts in Waikamoi, Hanawi; NBS/HFS has a copy of the data, it's "up for grabs," was never written up; was on an old Apple, converted to ASCII, some problems with conversion; hard copies of data exist.

Hanawi study (Thane Pratt): population ecology of parrotbills & crested honeycreepers: impacts of avian disease (malaria) on crested populations; blood samples from birds; monitoring of mosquito populations; bird ecology; nesting success; nest predation by rats; analyze cat scat; "quick & dirty" weed survey of Frisby meadow & main trails in Hanawi (Linda Pratt); monthly bird counts (so includes seasonal trends), aliens & natives; some banding; molting & breeding status for alien birds; fecal samples from endangered birds (are they eating alien insects?)

Po'ouli project (new [1995], Hanawi): small mammals, native & alien snails

Purpose : management of natural areas

Data set format : various (?)

Distribution policy : Contact data owner

Data source key : 108

This info updated 2/6/96

Owner : NBS/Haleakala National Park Field Station

Owner's data name : Rabbit data

Contact name : Lloyd Loope

Contact address : P.O. Box 369
Makawao, HI 96768

Phone contact: (808) 572-9306 ext. 5938 ext. 5936

Content/subject : Feral rabbit invasion & eradication data, Haleakala National Park (near Hosmer Grove)

Purpose : management of natural areas in Haleakala National Park; documentation of rabbit eradication; public education

Data set format : dBase files, Excel spreadsheets

Distribution policy : Contact data owner

Data source key : 109

This info updated 5/21/96

Owner : NBS/Hawaii Field Station (formerly USFWS)

Owner's data name : Various NBS/HFS data (Paul Banko)

Contact name : Paul Banko

Contact address : P.O. Box 44
Hawaii National Park, HI 96718

Phone contact: (808) 967-7396

Content/subject : alien insect list for west slope of Mauna Kea (palila study area); some weed info (little)
RE: spot fountain grass populations; future project: fire management plan, considering fuel loading by various alien species; ant distribution on Mauna Kea (5 species), geographic & temporal distribution info

Purpose :

Data set format : various (?)

Distribution policy : Contact data owner

Data source key : 111

This info updated 2/6/96

Owner : NBS/Hawaii Field Station (formerly USFWS)

Owner's data name : CJ Ralph's forest bird studies of 1976-82

Contact name : Steve Fancy

Contact address : P.O. Box 44
Hawaii National Park, HI 96718

Phone contact: (808) 967-7396

Content/subject : Approximately 100 data sets from CJ Ralph 1976-82 (Forest Service) RE: forest birds. Including banding, mistnetting data; data on birds. Six study sites (5 on Big Island [Hawaii], 1 on Kauai). Steve Fancy has these files. Includes historical baseline information from 15 years ago on alien birds.

Purpose :

Data set format : ASCII data files

Distribution policy : Contact data owner

Data source key : 112

This info updated 2/6/96

Owner : NBS/Hawaii Field Station (formerly USFWS)

Owner's data name : Palila translocation data (1992-93)

Contact name : Steve Fancy

Contact address : P.O. Box 44
Hawaii National Park, HI 96718

Phone contact: (808) 967-7396

Content/subject : Data to support decision(s) about palila translocation (to east slope of Mauna Kea), including: potential site analysis (food availability?); rat/cat/mongoose trapping data (relative trap capture rates at different areas) in dry forest/mamane forest, including some radiotelemetry data.

Purpose :

Data set format : ASCII & DBASE FILES

Distribution policy : Contact data owner

Data source key : 113

This info updated 2/6/96

Owner : NBS/Hawaii Field Station (formerly USFWS)

Owner's data name : Hawaii forest bird survey (and others)

Contact name : Steve Fancy

Contact address : P.O. Box 44
Hawaii National Park, HI 96718

Phone contact: (808) 967-7396

Content/subject : Hawaii forest bird survey (and other bird survey) data; includes VCP (variable circular plot) data, distribution of alien birds (as well as natives) for all islands, 1976-present.

Purpose :

Data set format : ASCII (PC-based) and D-base files

Distribution policy : Contact data owner

Data source key : 114

This info updated 2/6/96

Owner : NBS/Hawaii Field Station (formerly USFWS)

Owner's data name : Hakalau mist netting & banding

Contact name : Steve Fancy

Contact address : P.O. Box 44
Hawaii National Park, HI 96718

Phone contact: (808) 967-7396

Content/subject : Mist netting & banding of birds at Hakalau. Part I: capture data for aliens; census quarterly at several sites. Part II: Steve Fancy's study RE: manipulation/predator control, with a control site; predator control will start in January of '96

Purpose :

Data set format : dBase and ASCII files

Distribution policy : Contact data owner

Data source key : 117

This info updated 2/6/96

Owner : NBS/Haleakala National Park Field Station

Owner's data name : Misc. data at NBS/HALE (info from Lloyd Loope)

Contact name : Lloyd Loope

Contact address : P.O. Box 369
Makawao, HI 96768

Phone contact: (808) 572-9306 ext. 5938 ext. 5936

Content/subject : Complete annotated invertebrate list of Haleakala National Park (publication scheduled "soon"). Pitfall trapping data in Haleakala National Park, at summit and elsewhere (aeolian ecosystems). Publications lists for Lloyd Loope & Arthur C. Medeiros. Aquatic resource info from within HALE (Kipahulu district), including alien & native prawn capture data, native fish (o'opu) capture data, alien leech data from Oheo. HALE vegetation data from bogs, grasslands, shrublands, dryland forest; silversword bloom counts, silversword plot data; fire plot data; Sisyrrinchium acre (rare native iris) plot data; Dubautia plot data; sandalwood data. Climate data (weather stations from Kula to summit of Haleakala). Leeward E. Maui vegetation data (e.g. Kanaio NARS, Kanaio National Guard Training Area, south slope report).

Purpose : understanding & management of natural areas in Haleakala National Park & East Maui

Data set format : various: Word, Excel, Paradox for Windows, dBase(?), AutoCAD, field notes

Distribution policy : Contact data owner

Data source key : 118

This info updated 2/6/96

Owner : DLNR/DOFAW (Maui)

Owner's data name : Various data at DLNR/DOFAW (Maui); info from Bob Hobdy

Contact name : Bob Hobdy

Contact address : P.O. Box 1015
Wailuku, HI 96793

Phone contact: (808) 243-5283

Content/subject : Files on various weeds, including: banana poka, fairly extensive mapping/distribution, aerial photo w/ TMKs superimposed, early detection but NO FOLLOWUP; Clidemia; Tibouchina herbacea; Miconia (DLNR side of the story, including spraying); Senecio; others. Lots of info "in Bob's head" re: when certain weeds were first found here (e.g. kudzu), where they were, how many; as well as other natural history info. RE: deer, DLNR are "looking for deer," but no maps are available (Omaopio-->Kanaio); annual aerial census ("relatively unbiased, repeatable survey"), population trend info. Annual census in Game Management Area on Lanai (northern half of the island) for axis deer & mouflon; rough population estimates, "double extrapolation" method used to calculate figures. No goat, pig censuses; no maps. Goats, destructive testing on Molokai: 2000 goats on cliffs (n. coast); 2 years, great progress, now lost nearly all headway (because aerial hunting was stopped). Bob's weed specimens are at Bishop

Museum; usually collects when a species is first seen.

Purpose : management of state's land & natural resources; forest preserves, GMAs

Data set format :

Distribution policy : Contact data owner

Data source key : 119

This info updated 2/6/96

Owner : State of Hawaii

Owner's data name : State of Hawaii Geographic Information System Data

Contact name : Craig Tosaka

Contact address : P.O. Box 3540
Honolulu, HI 96811-3540

Phone contact: (808) 587-2846

Content/subject : Coverage, source, location, names, notes, and examples of GIS layers (maintained? owned?) by the State of Hawaii, including: coastal name data; coastline data; contours (100- or 500-foot); geographic place names; index (quad map boundaries); roads; USGS administrative boundaries; agricultural land use maps; development/community plan areas; hydrographic units; land ownership (federal, state, Hawaiian Homelands); land use district boundaries; managed areas; game management areas; well data (recent & early versions); anchialine pools; aquifers; bird habitat ranges (from J. Michael Scott's book); bodysurfing sites; forest bird ranges; hydrography data (streams, rainfall); landcover data; rare and endangered species data (from HHP); slope data; solar radiation; sugarcane lands; threatened and endangered plant species data; wetlands inventory; vegetation data; utilities (transportation [USGS roads, street center lines], railroad networks, miscellaneous utility data, underground injection lines), coastal resource data, bathymetry data, buoy data, tax map data, miscellaneous tax map data; lava flow hazard zones; lava flow zones; overwash zone; miscellaneous DLG data; Hawaii County administration data (federal, state, & county parks; land use pattern allocation guide; special management areas); Barbers Point project; Hamakua project; Kaka'ako project; Waiahole project; USGS digital elevation models (DEMs); USFS digital line graphs (DLGs); USFS digital raster graphics (DRGs); various images (graphics created by users for use on maps).

Purpose :

Data set format : ARC/INFO(?)

Distribution policy : Contact data owner

Data source key : 120

This info updated 1/29/96

Owner : TNCH/HHP (TNCH-Hawaii Heritage Program)

Owner's data name : Various GIS data held by TNCH/HHP

Contact name : Shannon McElvaney

Contact address : 1116 Smith St. - Suite 201
Honolulu, HI 96817

Phone contact: (808) 537-4508

Content/subject : GIS layers that HHP/TNCH has are: rare & endangered plants, animals, natural communities locations (various precisions); boundaries for (rare?) plants, natural communities; currently consolidating animal locations & creating boundaries (bats,

nene, hawks); all federal status (C1-->endangered) species, 100% in electronic GIS format, also sent to state & USFWS; GIS rare plant data filled in on a contract-by-contract basis; any rare species done for a contract is done statewide on paper only, but not on GIS; rare animals are not up-to-date on GIS, but 100% up-to-date on paper maps; natural communities are not up-to-date on GIS, but 100% up-to-date on paper maps; there's a layer with some plant boundaries, some populations represented by dots, some by boundaries; all input to GIS is registered to USFWS quads (following OSP's standards, e.g. everything is zone 4, including Big Island), everything is 1:24k Old Hawaiian/NAD27. In ARC/INFO: from OSP, 100' contours for most islands (Oahu, Molokai, Maui, Lanai[, Kahoolawe?]); from OSP, 500' elevation contours for Big Island & Kauai [& Niihau?]; 200' contours for Big Island from HAVO (Sandy Margriter); 100' contours produced by GeoInsights for half of Oahu and all of Maui; from OSP, managed lands (NARS, preserves (TNC), forest reserves, GMAs (very coarse), national & state parks; TNCH's altered version of GMAs for Oahu (altered from OSP coarse version); from OSP: land use (conservation, ag, urban, other); old coastline from OSP (OSP now has more recent info); from Robyn Myers (from OSP), rain isoheight info; TNCH created first 13 USFWS transects on East Maui, including transects (digitized in at 1:24000); lots of TIGER data (road systems statewide [from 1989? 91? 93?]) (based on DLGs from USGS?), an older version, not up-to-date, OSP has a nicer, better version now; hydrology for entire state (tracts); 'town' boundaries (some particular name for this?); from Colorado State University, Pohakuloa Training Area (military boundaries; vegetation type boundaries; some rare plant point locations [federal status] (more detailed than tiger data; including mprc); end. spp. boundaries (palila, end. plant for Kipuka ...). HHP data: priority conservation zones (prioritized by density of end. spp. & habitat quality/etc.) (biologically significant areas for contracts); more on paper than in GIS; really well-done on GIS for Waiānae region. From Jacobi?? (OSP has it? but OSP has different layers): Jacobi veg information (specific vs. the general layer that OSP has) (1980) from Big Island, Maui (one set of info came from RMyers, from OSP), part of Molokai. OSP has TMKs for Oahu; Ken Schmidt is working on conservation lands. HHP info: military boundary layers (primarily for Oahu); Ka'u boundary info (from contract); proposed Waimea Canyon extension & Kokee/Waimea Canyon state parks (indefinite boundaries; transcribed from hand-drawn maps interpreted to 1:24k). HHP has plans to: update current layers; starting to track some aliens (what to track? is there a need? who needs it? is there contract money available to do it?); 1-2 yr. project: actual transects/survey routes (incl. areas) into GIS; regional (historic sweep, who surveyed what area when?), e.g. Sam did it for East Maui; want to get this kind of stuff into GIS; will group CSU & Jacobi data into HHP guidelines (some done now per contract).

Purpose :

Data set format : mostly ARC/INFO, ArcView 2

Distribution policy : Contact data owner

Data source key : 123

This info updated 5/21/96

Owner : HHP (Hawaii Heritage Program) c/o TNCH

Owner's data name : Hawaii Natural Heritage Program element occurrence records database & Heritage maps (paper)

Contact name : Christa Russell

Contact address : 1116 Smith St. - Suite 201
Honolulu, HI 96817

Phone contact: (808) 537-4508

Content/subject : rare element (plant & animal) occurrence records for the state of Hawaii, including

historical references to recent site visits; locational info varies from general to precise; included are habitat & threat assessments (including, in many cases, checklists of alien species in the vicinity). (See p. 7 of "How to read [HHP data]" pamphlet for more complete description.)

Purpose :

Data set format : Advanced Revelation 3.0 (can be converted to dBase)

Distribution policy : Contact data owner

Data source key : 124

This info updated 2/5/96

Owner : HHP (Hawaii Heritage Program) c/o TNCH

Owner's data name : HHP reports (private contracts)

Contact name : Christa Russell

Contact address : 1116 Smith St. - Suite 201
Honolulu, HI 96817

Phone contact: (808) 537-4508

Content/subject : ~100 reports (each w/ ~2 notebooks of info) RE: biological reconnaissance & database for various privately-contracted projects for private, state, and federal landowners for certain parcels/areas of land in Hawaii. Some actual field observations, some aerial photos, personal communications; some subcontracted (e.g. BPBM: inverts). Includes directly relevant supporting data.**

Purpose : each report created to fulfill a contract with an external entity.

Data set format : notebooks & ARC/INFO

Distribution policy : Contact data owner

Data source key : 125

This info updated 1/29/96

Owner : DLNR/DOFAW (Maui)

Owner's data name : DOFAW Maui County maps

Contact name : Bob Hobdy

Contact address : P.O. Box 1015
Wailuku, HI 96793

Phone contact: (808) 243-5283

Content/subject : Maps: 1:64K topos of Maui County islands with wildlife sanctuaries; seabird sanctuaries; the 'wildlife guys' have GMAs (game management areas); NARS boundaries; forest reserve boundaries; old fire districts; state-owned lands; Hawaiian Homelands (they have these boundaries, but they're not responsible for their maintenance)

Purpose :

Data set format : paper topo maps & paper files w/ maps; also, legal & other (historical) info

Distribution policy : Contact data owner

Data source key : 127

This info updated 2/6/96

Owner : Bishop Museum/Natural Sciences/Botany

Owner's data name : On-Line Database for HI Flowering Plants

Contact name : Walter Appleby

Contact address : 1525 Bernice St.
P.O. Box 19000
Honolulu, HI 96817-0916

Phone contact: (808) 848-4194

Content/subject : Includes a bibliography for flowering plants & ferns (over 4,000 literature entries), a Hawaii flowering plant checklist (over 2,000 entries), and a botanical types database (which includes about 12,500 entries regarding both flowering plants & ferns). The fern species checklist is an on-going project with a projected completion date within 1997. Grass, algae and fungi data are also in the process of being put on-line.

Purpose : Created by the Hawaii Biological Survey, this on-line database was made possible through a grant from the McArthur Foundation for public use.

Data set format : Native information is in dBase files using FoxPro as an interface. There are detailed records on bryophyte, fungi, vascular plant, fern and type specimens collected (87 fields for each entry).

Distribution policy : Contact data owner

Data source key : 129

This info updated 11/24/95

Owner : TNCH (The Nature Conservancy of Hawaii) - Maui

Owner's data name : Axis Deer Files

Contact name : Paul Higashino

Contact address : P.O. Box 1716
Makawao, HI 96768

Phone contact: (808) 572-7849

Content/subject : Various Axis deer records all in hard copy form. Files include results from buck attractant studies conducted from 04/95 thru 10/95, control information (fence construction) and limited life history data from 1950 thru 1959. Radio telemetry project in the works.

Purpose : To control and monitor deer activity on TNC preserves.

Data set format :

Distribution policy : Contact data owner

Data source key : 131

This info updated 2/6/96

Owner : HALE RM (Haleakala N.P. Resources Mgt.)

Owner's data name : Predator Control Trap-line Data

Contact name : Cathleen Hodges

Contact address : P.O. Box 369
Makawao, HI 96768

Phone contact: 572-9306

Content/subject : Frontcountry and backcountry predator control data on rats, cats and mongooses based on trap-line monitoring. Preliminary data on breeding season of predators in the works. Diphacinone bait predator control project in early stages.

Purpose : Predator control.

Data set format : field notebooks, Paradox for DOS

Distribution policy : Contact data owner

Data source key : 132

This info updated 2/6/96

Owner : HALE RM (Haleakala N.P. Resources Mgt.)

Owner's data name : Hawaiian goose (Nene) information

Contact name : Cathleen Hodges

Contact address : P.O. Box 369
Makawao, HI 96768

Phone contact: 572-9306

Content/subject : Information includes: Nene sightings since 1991, annual Nene survey results, and banding information which is recieved from State agencies.

Purpose : Endangered species monitoring.

Data set format : field notebooks, wildlife sighting forms, Paradox for DOS

Distribution policy : Contact data owner

Data source key : 133

This info updated 5/21/96

Owner : NBS (HAVO) Field Station

Owner's data name : Alien Insect (Damselfly, *Drosophila*, *Vespula* & Other) Databases

Contact name : David Foote

Contact address : P.O. Box 52
Hawaii National Park, HI 96718

Phone contact: (808) 967-8211

Content/subject : Information on three species of alien odonates & associated maps (on ARC/INFO) in preparation for CPSU published report. Alien *Drosophila* info on Lotus 123 files, covering results from 500 bait stations within the Park. Also published information on the relative frequency of *Drosophila* in wet mesic forest. Baseline population data on *Vespula* starting 1993. Monthly counts are taken at four different sites within the park

at 80 traps. Poison bait station project in preliminary stages. Data on the frequency of plant hosts on the long-horned beetle from 1993 onward. Natural history information from the 1970s. Ongoing monthly counts of the two-spotted leafhopper since 1993 utilizing sticky traps. Other projects include soil surveys and soil fauna diversity.

Purpose : Alien insect species monitoring and control.

Data set format : Excel spreadsheets

Distribution policy : Contact data owner

Data source key : 134

This info updated 2/6/96

Owner : NBS (HAVO) Field Station

Owner's data name : HAVO Insect Specimen Collection & Herbarium

Contact name : David Foote

Contact address : P.O. Box 52
Hawaii National Park, HI 96718

Phone contact: (808) 967-8211

Content/subject : "The collection consists of about 4,000 pinned specimens and about 150 in alcohol. The material is the result of faunal surveys primarily in National Parks on the Island of Hawaii. It is organized in a specimen-level computer database and the collection is housed at the Hawaii Field Research Center." From The Insect and Spider Collections of the World. 1993. About 1500 entries have been made onto the specimen-level database for the HAVO herbarium. There are currently more than 6,000 insect specimens some dating back to the 1940's.

Purpose :

Data set format : dBase(?)

Distribution policy : Contact data owner

Data source key : 136

This info updated 2/6/96

Owner : HAVO RM

Owner's data name : Nene & Petrel Monitoring Information

Contact name : Darcy Hu

Contact address : P.O. Box 52
Hawaii National Park, HI 96718

Phone contact: (808) 967-8226

Content/subject : Nene information (all on Paradox) includes: records from the Nene reintroduction program, nest searches, banding information. Program data is organized according to the guidelines of "Hunter, J., and J. Black. 1994. The Nene Recovery Initiative: Guide to the State-Wide Database on Hawaiian Geese. The Wildfowl & Wetlands Trust, Slimbridge, Gloucester GL2 7BT, UK." Petrel monitoring projects began in 1993 when 40 burrows were discovered and mapped, some with GPS. A small subset that could be reached on foot are consistently monitored for nest activity. Ongoing project to characterize determinants of dispersal and habitat use in the Park's Nene, particularly in Ainahou. Projects in preliminary stages: study of gosling mortality at Kipuka Nene & effectiveness testing of an aversive compound to decrease Nene presence near roads.

Purpose :

Data set format : Paradox for DOS

Distribution policy : Contact data owner

Data source key : 139

This info updated 2/6/96

Owner : TNCH (The Nature Conservancy of Hawaii) - Maui

Owner's data name : Vegetation Maps of Maui TNC Preserves

Contact name : Patrick Bily

Contact address : P.O. Box 1716
Makawao, HI 96768

Phone contact: (808) 572-7849

Content/subject : Invasive, endangered, and federally listed plant distributions have been converted onto ArcView with GIS coordinates for the West Maui Kapunakea TNC preserve. Other preserves are in the process of conversion. In 1995 an aerial weed survey was taken of the Kapunakea, West Maui preserve. Another brief aerial survey was taken in October of 1995 of the Ko'olau gap in a search for *Miconia*. During that time other weed species such as *Ficus*, *Tibouchina*, and *Psidium cattleianum* were noted incidentally. An aerial survey for gorse in Waikamoi took place in 1989. Other information for the ArcView maps is based on foot patrol data.

Purpose : TNCH Maui preserve management goals.

Data set format : hand-drawn foot patrol maps, aerial photos, ArcView v.2

Distribution policy : Contact data owner

Data source key : 141

This info updated 12/14/95

Owner : TNCH (The Nature Conservancy of Hawaii) - Maui

Owner's data name : Vegetation Monitoring Information

Contact name : Patrick Bily

Contact address : P.O. Box 1716
Makawao, HI 96768

Phone contact: (808) 572-7849

Content/subject : Records of herbicide use and growth of 3,063 miconia plants on several locations between Haiku & Hana, Maui, since July 1995. Maps are available for the eight sites. Information is in hard-copy form. Bi-annual reports on alien plant control projects summarizing the following data: quantity of weed treatment, method of application, ml of herbicide utilized & person days. On-going project on tropical ash treatment & monitoring beginning in April, 1994. Native vegetation recovery project currently conducted in Waikamoi preserve after the removal of ungulates. Activity transects established in this area and monitored every six months for pigs and weeds. Alien mammal activity is known for all preserves. Short-term comparative data and treatment efficacy project on sub-canopy recovery prior to guava removal. TNC Wildland Weeds Management & Research Weed Management Report for: HAWAII CHAPTER : Maui, 09/28/95. Un-published report on the following weed species (see data dictionary for more detailed info) : *Rubus argutus*, *Myrica faya*, *Clidemia hirta*, *Miconia calvescens*, *Ulex europaea* L., *Acacia melanoxylon*, *Juniperus* sp., *Andropogon virginicus*, *Tibouchina herbacea*, *Ficus microcarpa*, *Paspalum*

conjugatum, Passiflora mollissima, Ehrharta stipoides, Fraxinus uhdei, Psidium cattleianum, Passiflora suberosa, Setaria palmifolia, Hedychium gardnerianum, Eucalyptus sp., & Pinus patula.

Purpose : Weed control & management.

Data set format :

Distribution policy : Contact data owner

Data source key : 142

This info updated 2/6/96

Owner : HALE RM (Haleakala N.P. Resources Mgt.)

Owner's data name : Alien Plant Data

Contact name : Stephen Anderson

Contact address : P.O. Box 369
Makawao, HI 96768

Phone contact: 572-9306 ext. 5909

Content/subject : Vegetation files are stored on a Quattro Pro spreadsheet. 1992 Kipahulu vegetation transect series on FWS transects to determine weed distribution in conjunction with elevation. Previous data available on these transects from the late 1970's including pig assessment, botanical & ornithological surveys (stored at HAVO, Jim Jacobi). Surveys resulted in a published work (see references). 1982 alien plant control & herbicide use records for areas within park including rough locational info. 1989-1991 Quattro Pro files on vegetation monitoring in the Pahole area, also hard-copy maps of plots & transects. 1991-1992 information for the West Maui Lihau Natural Area Preserve comparing vegetation community distributions at varying elevations in montane forest. 1983 to present vegetation monitoring of 500m transects developed by HALE RM in Kipahulu. Resulted in a published work (see references).

Purpose : To track alien plant control.

Data set format : Quattro Pro spreadsheets

Distribution policy : Contact data owner

Data source key : 144

This info updated 2/6/96

Owner : DOA (Hawaii State) - plant pest control branch

Owner's data name : Plant Virus Database: Papaya Ring-spot Virus (PRV) & Banana Bunchy-top Virus (BBTV).

Contact name : Wayne Kobayashi

Contact address : 1428 S. King St.
Honolulu, HI 96814

Phone contact: (808) 973-9538

Content/subject : BBTV monitoring data since 1989 on Kona & Oahu in dBase files. Infected sites recorded (both residential & commercial), dates visited, revisiting information (from 1989 thru 1994 farmers' fields were revisited at least once or twice a month). With the help of the Cooperative Extension Service, herbicide testing conducted. PRV information in Quattro Pro 5 for Windows. Monitoring data beginning in 1992 in Puna, Hawaii. Roguing [sic; ***??****] program data from Sept. 92 thru Dec. 92. Hard-copy data only for 1986 Kauai PRV eradication & Maui 1970's PRV eradication.

Hand-drawn maps in most cases of viral spread.

Purpose : Spreadsheet program to track the virus in growers' fields.

Data set format : dBase

Distribution policy : Contact data owner

Data source key : 145

This info updated 2/6/96

Owner : HAVO RM

Owner's data name : Hawks Bill Turtle Monitoring & Predator Control

Contact name : Larry Katahira

Contact address : P.O. Box 52
Hawaii National Park, HI 96718

Phone contact: (808) 967-8226

Content/subject : 1989 baseline information, Hawkbill turtle day-to-day monitoring data & nest site protection efforts are in Lotus 123 files. In 1993, the Park began a predator trapping program (information also on Lotus 123) for mongoose, rats & pigs. Turtle tracking project in the beginning stages with 15 adult turtles tagged & 2 with transmitters. Information on CPSU contract hunting for pigs is only in hard datasheets as far back as 1980. This info is summarized annually in an in-house report.

Purpose : Endangered species monitoring and preservation.

Data set format : Lotus 123

Distribution policy : Contact data owner

Data source key : 146

This info updated 2/6/96

Owner : NBS (HAVO) Field Station

Owner's data name : Cat, Rat & Mongoose & Monitoring Data & Cat, Rat Telemetry

Contact name : Gerald Lindsey

Contact address : P.O. Box 44
Hawaii National Park, HI 96718

Phone contact: (808) 967-7396

Content/subject : Fall 95: Cat telemetry project beginning; maps pending generation in a year's time. Rat recapture studies over 2 year period in dBase files, distribution/abundance results pending publishing. Rats sampled and necropsied on a monthly bases and kept in dBase files.

Purpose : Predator Control

Data set format : dBase, paper files

Distribution policy : Contact data owner

Data source key : 147

This info updated 2/6/96

Owner : NBS (HAVO) Field Station

Owner's data name : Alien Bird Species Data

Contact name : Michael Moore

Contact address : P.O. Box 52
Hawaii National Park, HI 96718

Phone contact: (808) 967-8211

Content/subject : Yearly variable circular plot counts of the Japanese white-eye and leothrix over the last 14 years in Hakalau Wildlife Refuge. 2 years of banding data. Data stored in dBase files. Results in an annual in-house report.

Purpose :

Data set format : dBase

Distribution policy : Contact data owner

Data source key : 148

This info updated 2/6/96

Owner : DOA (Hawaii State) - plant pest control branch

Owner's data name : Knowledge Master Database

Contact name : Ronald Mau

Contact address : 3050 Maile Way
Honolulu, HI 96822

Phone contact: (808) 956-7063

Content/subject : "Produced by the University Extension Service prepared by an interdisciplinary team of entomologists & plant pathologists from the University of Hawaii College of Tropical Agriculture & Human Resources. Work was supported by state & federal funds. This beta-test version was prepared using Hyperwriter for Windows 3.11. Hyper Writer is a product of Ntergaid Inc. of Fairfield, CT." Taken from main menu screen of Knowledge Mast Database, a comprehensive listing of plant pests and their hosts.

Purpose :

Data set format : HyperWriter for Windows

Distribution policy : Contact data owner

Data source key : 149

This info updated 2/6/96

Owner : UH CPSU/RCUH

Owner's data name : Plant Pathogen Database

Contact name : Don Gardner

Contact address : UH Dept. of Botany
St. John Building
3190 Maile Way
Honolulu, HI 96822

Phone contact: (808) 956-3932

Started in 1995, the plant pathogen database on Paradox for Windows v.5 is

Content/subject : estimated to be completed in late 1996. Includes listings of fungal, bacterial, organism, miscellanous and little-known plant pathogens, as well as infected plant symptoms and host plant genera. It is a comprehensive database includes both commercial and non-commercial plants.

Purpose : Allows for prioritization of plant pathogens and assists in the search for pathogen trends.

Data set format : Paradox for Windows (data taken from book, etc.)

Distribution policy : Contact data owner

Data source key : 150

This info updated 12/8/95

Owner : UH CPSU/RCUH

Owner's data name : Alien Species Publications

Contact name : Don Gardner

Contact address : UH Dept. of Botany
St. John Building
3190 Maile Way
Honolulu, HI 96822

Phone contact: (808) 956-3932

Content/subject : Reccomended papers on alien species:

Gerrish, G., L. Stemmerman, and D. E. Gardner. 1992: The Distribution of Rubus Species in the State of Hawaii. No. 85. Cooperative Parks Studies Unit Technical Report. 16 pp.

(??Authors??) 1995: Annotated Bibliography of the Genus Psidium with Emphasis on P. cattleianum (strawberry guava), and P. guajava (common guava) Forest Weeds in Hawaii. No. 95. Cooperative Parks Studies Unit Technical Report.

Gardner, D. E. 1994: The Native Rust Fungi of Hawaii. The Canadian Journal of Botany. 72, 976-989.

Purpose :

Data set format :

Distribution policy : Contact data owner

Data source key : 151

This info updated 2/6/96

Owner : The State of Hawaii & The National Park Service

Owner's data name : Hawaii Stream Assessment: A Preliminary Appraisal of Hawaii's Stream Resources

Contact name : Ann Brasher

Contact address : UH Dept. of Botany
St. John Building
3190 Maile Way
Honolulu, HI 96822

Phone contact: (808) 956-3932

Content/subject : Electronic version of the following published work: The State of Hawaii, and The National Park Service. 1990: Hawaii Stream Assessment: A Preliminary Appraisal of

Hawaii's Stream Resources. Report R84. Hawaii Cooperative Park Service Unit. Honolulu, HI. 294 p. Includes information on perennial stream classification, codes, names; stream monitoring & modifications, gaging, water quality, water supply, dams & diversions, hydroelectric power, channelization; and resource inventory and assessment.

Purpose :

Data set format : dBase/FoxPro(?) & hard copy book

Distribution policy : Contact data owner
