### **NPSpecies Database Dictionary**

Last Updated: 6 December, 1999
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#### INTRODUCTION

The National Park Service (NPS) Service-wide Inventory and Monitoring Program is funding the development of a species database to document the occurrence of vertebrates and vascular plants in national park units with significant natural resources. The Service-wide program has begun to compile existing verifiable information from national databases and institutions, such as museums and herbariums. Funding will be provided to parks to supplement this initial draft compilation of existing information with local records and voucher specimens, and additional funding will be provided for targeted field investigations to begin after data gaps and priorities have been identified by each park.

The initial development of the Species Database was based on the recommendations of the September 1993 Biological Inventory Database Development Workshop held in Chapel Hill, North Carolina. Subsequent advances in database development and internet technology have been incorporated into the currently proposed database structure. Key features of the Species Database will be as follows:

- The goal of high quality, legally and biologically defensible data will be pursued.
- All records will show the source and quality of information.
- Standardized nomenclature and taxonomy will be used based on the interagency Integrated Taxonomic Information System (ITIS) to allow consistency and compatibility of data nationwide and to allow for future changes in taxonomy (see <a href="http://www.itis.usda.gov/plantproj/itis/index.html">http://www.itis.usda.gov/plantproj/itis/index.html</a> for more information on ITIS).
- The database will be easily accessed and used, but will incorporate various levels of security to prevent the release of species' locations that would endanger exploited species.

The master copy of the NPSpecies database will be a web-based Oracle database with different levels of access for different individuals. This database will eventually be linked to the Natural Resource Bibliography. NPSpecies will be a synonomized checklist of vertebrates and vascular plants in each park, with certain categorical information such as federal and state legal status, TNC Global Rank, documentation source, abundance, and whether the species is native, invasive or cultivated (see detailed description of database fieldnames below). The database has tables to contain more detailed information on voucher specimens or documented observations of species such as when and where they were collected, where voucher specimens are stored, etc. The database will allow export of locations and other information from voucher specimens and

observations to Arcview GIS. The Service-wide I&M Program will fund the development of the synonomized checklist and initial population of records in the Vouchers and Observations tables that document the occurrence of species in parks. However, inclusion of additional data from wildlife observation cards, research studies, and other sources is optional and each park will be responsible for populating the database with that type of information.

A Microsoft Access version of NPSpecies is being developed by the Service-wide I&M Program to be distributed to each park. Parks will be able to modify the structure of the database and make various enhancements to suit their specific needs, as long as certain core information can be provided annually to the Service-wide program to update the master, web-based version of the database. Thus, each park has the option of using either the web-based version or the park-distributed version of the database.

The following are several examples of how park managers, interpreters, scientists, and the public may use the database:

- Park managers can get an up-to-date, documented listing of all vertebrates and vascular plants in their park, including information on legal status, whether they are native or exotic, abundance, and other basic information.
- Park interpreters can use the list to update species checklists for the park.
- By clicking on a species name, the database will show which other parks the species occurs in so that distributions of species can be determined. For example, which parks have a particular invasive species?
- The link to the Natural Resource Bibliography will allow parks to take advantage of studies and reports done by other parks on a particular species. This is expected to be a particularly useful and cost-effective feature.
- The link to the Specimen/Observation database will allow parks to identify where voucher specimens are stored, and the coordinates where the specimens were collected.
- Locations of animals and plants in the Specimen/Observation database can be exported to Arcview GIS to produce distribution maps.
- The Specimen/Observation database will contain important historical records for species no longer found in a park.
- The database will allow parks and outside scientists to do analyses of various biodiversity and exotic species issues.
- The database would be an important source of information for a future "State of the Parks" report, and would allow the NPS to report to Congress and the public on the status of species occurring in national parks.

### **DEFINITIONS OF FIELDS AND VALUES**

## **PARK-SPECIES FORM (for data entry)**

Park Code 4-character park code.

Park Administrative Unit Park Administrative Unit - This is an optional field that will allow

some parks to identify whether a species occurs in different units of the park, such as on different islands or in different park units

for park complexes.

**TSN** ITIS Taxonomic Serial Number. All taxonomic information and synonyms will

> be tied to the Integrated Taxonomic Information System through the TSN. Full taxonomic information, such as Scientific name, Common Name, Genus, Family, Order, Class, etc. as well as the taxonomic authority and all common name and scientific name synonyms will be provided with the same database structure used

by ITIS.

**ITIS Recognized Names** The scientific and common (or vernacular) name(s) recognized by

ITIS.

Preferred Local Name(s) The database allows parks to enter a preferred alternate scientific

> name or common name of a species in addition to the accepted ITIS name. When reports are generated (e.g., list of exotic species

in the park), the database will first check to see if there is a preferred local name to include in the report, and otherwise will

use the accepted ITIS name.

**Park Status** Status of each species in each park.

Species' occurrence in park is documented and assumed to be extant. Present Historic

Species' historical occurrence in the park is documented, but recent

investigations indicate that the species is now probably absent.

Park is within species' range and contains appropriate habitat. **Probably Present** 

Documented occurrences of the species in the adjoining region of the park give reason to suspect that it probably occurs within the park. The degree of probability may vary within this category, including species that range

from common to rare

Unconfirmed Included for the park based on weak ("unconfirmed record") or no

evidence, giving minimal indication of the species' occurrence in the park.

Species previously reported to occur within the park, but current evidence False Report

indicates that the report was based on a misidentification, a taxonomic

concept no longer accepted, or some other similar problem of

interpretation.

Park Status Details Additional details for park status; for example if one of the above codes

does not offer a complete description or elaboration is desired.

**Abundance** The current abundance of each species in each park. Park Status as above

must be either "Present" or "Probably Present".

Abundant Animals: May be seen daily, in suitable habitat and season, and counted in

relatively large numbers. Plants: Large number of individuals; wide ecological amplitude or occurring in habitats covering a large portion of

the park.

Common Animals: May be seen daily, in suitable habitat and season, but not in

large numbers. Plants: Large numbers of individuals predictably

occurring in commonly encountered habitats but not those covering a large

portion of the park.

Uncommon Animals: Likely to be seen monthly in appropriate season/habitat. May be

locally common. Plants: Few to moderate numbers of individuals; occurring either sporadically in commonly encountered habitats or in

uncommon habitats.

Rare Animals: Present, but usually seen only a few times each year. Plants:

Few individuals, usually restricted to small areas of rare habitat.

Occasional Occurs in the park at least once every few years, but not necessarily every

year. Applicable to plants only.

Unknown Abundance unknown.

**Abundance Details** Additional details for abundance; for example if one of the above codes

does not offer a complete description or elaboration is desired.

**Residency** Current residency classification for each animal species in each park. Park

Status as above must be either "Present" or "Probably Present".

Breeder Population reproduces in the park.

Resident A significant population is maintained in the park for more than two

months each year, but it is not known to breed there.

Migratory Species that occurs in park approximately two months or less

each year and does not breed there.

Vagrant Park is outside of the species' usual range. Unknown Residency status in park is unknown.

**Residency Details** Additional details for residency; for example if one of the above codes

does not offer a complete description or elaboration is desired.

**Nativity** Nativity classification for each species in each park. Park Status as

defined above must be either "Present" or "Probably Present".

Native The species is native to the park (either endemic or indigenous), or if the

Park Status is "Probably Present" as defined above, the species would be

native to the park if it were eventually confirmed in the park.

Non-Native The species is not native to the park (neither endemic nor indigenous), or

if the Park Status is "Probably Present" as defined above, the species would not be native to the park if it were eventually confirmed in the park. Persistent plant populations (as defined below) that reproduce are also

considered non-native.

Unknown Nativity classification in park is unknown.

**Cultivation** Cultivation classification (if applicable) for each non-native plant species

in each park.

Cultivated A non-native species that is currently cultivated in the park.

Persistent A non-native species that persists in the park (either reproducing or non-

reproducing) from a previous cultivation.

Weedy Yes/No field for plant species only. Plant species are considered "weedy"

or "invasive" if they (a) occur almost exclusively in disturbed habitats, (b) relatively recently occupied natural habitats in competition with native species, or (c) occur across a broad range of ecological conditions.

**Nativity Details** Additional details for origin, for example if one of the above codes does

not offer a complete description.

**Data Source** The source of the status, abundance, residency, nativity, cultivation, and/or

weedy data. For data initially entered by the NPSpecies development/data team, the value will identify the data object (reference, digital file, etc.) submitted by the Park to the I&M office. Parks may update this field as

individual records are updated or verified.

**Comments** General comments regarding this species in this park.

Entered By Name of last person to enter or update the park-species record.

**Entered Date** Date when park-species record was most recently updated.

**Graphic Links** Link to digital photograph or drawing of the species for informational

purposes.

**Changes Log** Explanation of what was changed and why to log the history of changes to

the database. This feature will be activated after the initial database has

been developed and distributed to each park.

# **VOUCHERS AND OBSERVATIONS FORM (for data entry)**

Park Code 4-character Park Code

**Park Administrative Unit** Park Administrative Unit (optional - see PARK-SPECIES FORM).

**TSN** Taxonomic Serial Number linked to ITIS (see PARK-SPECIES FORM).

ITIS Accepted Scientific Name Scientific name accepted by ITIS.

ITIS Accepted Common Name(s) Common, or vernacular name(s) recognized by ITIS.

**Access Level** Security level based on the sensitivity of this particular specimen or

observation record.

Public No access restrictions

NPS Only Restricted to National Park Service Employees

Sensitive Restricted to specified individuals

**Specimen ID** Identification number of voucher specimen (ID number provided by the

repository, as contrasted with the collection number provided by the

collector).

**Specimen Location** Acronym, Name and address of herbarium, museum, or other location

where voucher specimen is stored.

**Documented Name** Latin or common name that was used when the species was collected or

observed (the name on the original record).

**Date** Date of observation or collection.

**Time** Time of observation or collection (24-hour clock).

**Observer** Name of observer or collector.

**Observer Number** Collection number provided by collector, if available. This is a standard

datum cited in botanical studies.

**Location** Concise description of collection site within the park, or location given on

specimen label for historical specimens.

**Latitude** Latitude in decimal degrees.

**Longitude** Longitude in decimal degrees.

UTMX UTM X coordinate (easting).

**UTMY** UTM Y coordinate (northing).

**UTM Zone** UTM Zone of x,y coordinates for observation.

**Datum** Datum for location information (e.g., NAD27, NAD83).

**Location Quality** Accuracy of the location coordinates.

High Location determined by GPS or accurately mapped; coordinates are

probably within 50 m of true location.

Medium Coordinates probably within 500 m of true location.

Low Coordinates probably within 1000 m of true location.

Poor Coordinates are a guess, and represent only a general location for the

specimen or observation.

**Habitat** Description of habitat where observation or collection was made.

**Elevation** Elevation where observation or collection was made.

**Elevation Units** Units for elevation (feet or meters)

**Comments** General comments for this record.

**Data Source** The source of the voucher or observation data. For data initially entered

by the NPSpecies development/data team, the value will identify the data object (reference, digital file, etc.) submitted by the Park to the I&M office. Parks may update this field as individual records are updated or

verified.

**Entered By** Name of last person to enter or update the species record.

**Entered Date** Date when species record was most recently updated.

**Graphic Links** Link to digital photographs for this voucher or observation record.

**Changes Log** Explanation of what was changed and why to log the history of changes to

the database. This will be implemented after the initial database has been

developed and distributed.

# REFERENCES FORM (for data entry)

**NRBib ID** Reference code that links (or will link) this record to the NPS NRBib database.

Citation Citation or description that will facilitate eventual linking to the NPS NRBib

database.

**Access Level** Security level based on the sensitivity of this particular specimen or

observation record.

Public No access restrictions

NPS Only Restricted to National Park Service Employees

Sensitive Restricted to specified individuals

Park Code 4-character Park Code

**Park Administrative Unit** Park Administrative Unit (optional - see PARK-SPECIES FORM).

**TSN** Taxonomic Serial Number linked to ITIS (see PARK-SPECIES FORM).

**Changes Log** Explanation of what was changed and why to log the history of changes to

the database. This will be implemented after the initial database has been

developed and distributed.

#### **SPECIES STATUS FORMS (for viewing)**

**Federal Population** Designated federal population for each listed species. For example, the

Gray Wolf is threatened in Minnesota, experimental in portions of several states, and endangered for all other locations of the contiguous lower 48

states.

**Federal Status** Designated federal status for each listed species.

LE Listed endangered

LE(S/A) Listed endangered (similarity of appearance)

LT Listed threatened

LT(S/A) Listed threatened (similarity of appearance)

LN Listed noxious.

PE Proposed endangered
PT Proposed threatened
PDL Proposed for delisting

C Candidate

XN Experimental non-essential population

**State Status** Legal status for each species listed in each state. Status codes differ by

state.

**TNC Global Rank** The Nature Conservancy global rank for each listed species.

GX Presumed extinct - Believed to be extinct throughout its range.

GH Possibly extinct - Known only from historical occurrences, but further

searching needed.

G1	Critically Imperiled - Typically 5 or fewer occurrences or <1000 individuals or <2000 acres or <10 stream miles.
G2	Imperiled - Typically 6 to 20 occurrences or 1000-3000 individuals or 2000-10000 acres or 10-50 stream miles.
G3	Vulnerable - Very rare and local throughout its range or found only in a restricted range (even if abundant at some locations), or vulnerable to extinction or elimination because of other factors.
G4	Apparently Secure - Uncommon but not rare (although it may be rare in parts of its range, particularly on the periphery), and usually widespread, but possible cause for some concern. Typically more than 100
G5	occurrences and more than 10000 individuals.  Secure - Common, widespread, and abundant. Not vulnerable in most of its range. Typically with considerably more than 100 occurrences and more than 10000 individuals.
GU	Unrankable - Lack of information or conflicting information about status or trends.
G?	Unranked - Global rank not yet assessed.

# **TABLE DESCRIPTIONS AND FIELD STRUCTURES**

Table: tblAbundance_LU	Abundance classification for	each species in each park	•

	Name AbundanceID Abundance AbundanceText	Type Number (Byte) Text Memo	Size	1 50
Table:	tblAdminUnit Administrative units.			
	Name ParkCode AdminUnitID AdminUnit	Type Text Number (Long) Text	Size	4 4 50
Table:	tblAdminUnitStates States in each administrative	e unit.		
	Name ParkCode AdminUnitID StateCode	Type Text Number (Long) Text	Size	4 4 2
Table:	tblCultivation_LU Cultivation classification for ea	ach species in each park.		
	Name CultivationCode Cultivation CultivationText	Type Text Text Memo	Size	1 50 -
Table:	tblFederalPopulationParks Federally listed popu	lations in each park.		
	Name ParkCode TSN PopulationID	Type Text Number (Long) Number (Long)	Size	4 4 4
Table:	tblFederalPopulations Federally listed population	ns.		
	Name TSN PopulationID StatusCode	Type Number (Long) Number (Long) Text	Size	4 4 10
Table:	tblFederalPopulations_LU Population descriptio	n for federally listed speci	es.	
	Name PopulationID PopulationText	Type Number (Long) Memo	Size	4

Table: tblFederalStatus\_LU Status classification for federally listed species.

	Name StatusCode StatusText	Type Text Text	Size	10 50
Table:	tblGlobalRank Globally listed species.			
	Name TSN TncGlobalRank	Type Number (Long) Text	Size	4 10
Table:	tblGlobalRank_LU Global rank classification.			
	Name TNCGlobalRank RankText	Type Text Text	Size	10 20
Table:	tblGraphicLinks Link to graphic files.			
	Name GraphicLinkID ParkCode TSN GraphicLink	Type Number (Long) Text Number (Long) OLE Object	Size	4 4 4
Table:	tblKingdoms ITIS Kingdom classification.			
	Name kingdom_id kingdom_name update_date	Type Number (Integer) Text Date/Time	Size	2 10 8
Table:	tblLocQual_LU Location quality for each vouche	r or observation.		
	Name LocQualID LocQual LocQualText	Type Number (Byte) Text Memo	Size	1 50 -
Table:	tblNativity_LU Nativity classification for each spe	cies in each park.		
	Name NativityID Nativity NativityText	Type Number (Byte) Text Memo	Size	1 10 -
Table:	tbINPSpecies Species occurrence for each park			
	Name ParkCode TSN ParkStatusID StatusDetails AbundanceID	Type Text Number (Long) Number (Byte) Text Number (Byte)	Size	4 4 1 255 1

AbundanceDetails	Text	255
ResidencyID	Number (Byte)	1
ResidencyDetails	Text	255
NativityID	Number (Byte)	1
NativityDetails	Text	255
CultivationCode	Text	1
Weedy	Yes/No	1
Comments	Memo	-
DataSource	Text	255
EnteredBy	Text	50
EnteredDate	Date/Time	8
Table: tbINPSppAdminUnits Species occurren	ce for each administrative unit	in each park.
Name	Туре	Size
ParkCode	Text	4
TSN	Number (Long)	4
AdminUnitID	Number (Long)	4
ParkStatusID	Number (Byte)	1
StatusDetails	Text	255
AbundanceID	Number (Byte)	1
AbundanceDetails	Text	255
ResidencyID	Number (Byte)	1
ResidencyDetails	Text	255
NativityID	Number (Byte)	1
NativityDetails	Text	255
CultivationCode	Text	1
Weedy	Yes/No	1
Comments	Memo	-
DataSource	Text	255
EnteredBy	Text	50
EnteredDate	Date/Time	8
Table: tblNRBib References from NRBib datab	pase.	
Name	Туре	Size
NRBibRecordID	Number (Long)	4
NRBibID	Text	50
Reference	Memo	-
Sensitivity	Number (Byte)	1
Table: tbINRBibLink Species documented for e	each park in each NRBib refere	ence.
Name	Туре	Size

Text

Text

Text

Text

Number (Long)

Number (Long)

4

4

4

50

255

255

Table: tblObservations Observation records for each species in each park.

ParkCode

NRBibID

NRBibRecordID

DocLatinName

DocCommonName

TSN

	Name	Туре	Size	
	ObservationRecordID	Number (Long)		4
	ParkCode	Text		4
	TSN	Number (Long)		4
	ParkAdminUnit	Number (Byte)		1
	ObservationID	Text		50
	DocLatinName	Text		255
	Date	Date/Time		8
	Time	Date/Time		8
	Observer	Text		50
	Location	Text		255
	Latitude	Number (Single)		4
	Longitude	Number (Single)		4
	UtmX	Number (Long)		4
	UtmY	Number (Long)		4
	UtmZone	Number (Long)		4
	Datum	Text		50
	LocQualID	Number (Byte)		1
	Habitat	Text		200
	Elevation	Text		20
	ElevationUnits	Text		50
	Comments	Memo		-
	Sensitivity	Number (Byte)		1
	DataSource	Text		255
	EnteredBy	Text		50
	EnteredDate	Date/Time		8
	GraphicLinkID	Number (Long)		4
Table:	tblParks Information for each park.			
	Name	Type	Size	
	PARKCODE	Text		255
	PARKNAME	Text		255
	ADDRESS1	Text		255
	ADDRESS2	Text		255
	ADDRESS3	Text		255
	CITY	Text		255
	STATE	Text		255
	ZIPCODE	Text		255
	ORGCODE	Text		255
	HQTR_PHONE	Text		255
	SUPTMGR_PHONE	Text		255
	TDD_PHONE	Text		255
	FAX_PHONE	Text		255
	NPS_EMAIL	Text		255
	NPS_AREA	Text		255
	AREA_NAME	Text		255
	CLUS_NAME	Text		255
	COUNTY	Text		255
	HOUR_START	Text		255
	HOUR_END	Text		255
	TIMEZONE	Text		255

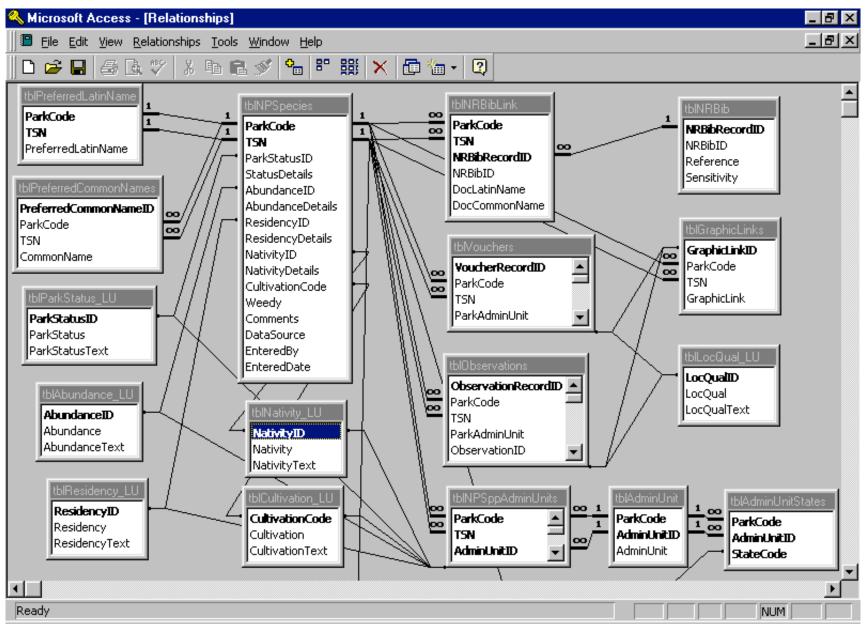
DATEAUTH DATEESTB ADMIN_BY TYPE_CODE TYPE_PARK SUPTMGR supmail name	Text Text Text Text Text Text Text Text		255 255 255 255 255 255 255 50
Table: tblParkState State within the boundaries	es of each park.		
Name	Туре	Size	
ParkCode StateCode	Text Text		4 2
Table: tblParkStatus_LU Park status for each	species in each park.		
Name	Туре	Size	
ParkStatusID	Number (Byte)		1
ParkStatus	Text		50
ParkStatusText	Memo		-
Table: tblPreferredCommonNames Preferred	common names for each specie	es in each p	ark.
Name	Туре	Size	
PreferredCommonNameID	Number (Long)		4
ParkCode	Text		4
TSN CommonName	Number (Long) Text		4 80
Commonwante	TOAL		00
Table: tblPreferredLatinName Preferred latin	name for each species in each p	oark.	
Name	Туре	Size	
ParkCode	Text		4
TSN	Number (Long)		4 255
PreferredLatinName	Text		255
Table: tblResidency_LU Resiency of each sp	ecies in each park.		
Name	Туре	Size	
ResidencyID	Number (Byte)		1
Residency	Text		50
ResidencyText	Memo		-
Table: tblStateName_LU State names.			
Name	Туре	Size	
StateCode	Text		50
StateName	Text		20
Table: tblStateStatus State status classification	ons.		
Name	Туре	Size	
StateCode	Text		2

StateStatus StatusText Comments	Text Text Memo	16 255 -
Table: tblStateStatusSpecies Species with state	e status.	
Name StateCode StateStatus TSN	Type Text Text Number (Long)	Size 2 16 4
Table: tblSynonymLinks ITIS synonyms for spe	cies names.	
Name tsn tsn_accepted update_date	Type Number (Long) Number (Long) Date/Time	Size 4 4 8
Table: tblTaxonAuthors_LU ITIS nomenclature	authorities.	
Name  taxon_author_id  kingdom_id  taxon_author  update_date	Type Number (Long) Number (Integer) Text Date/Time	Size 4 2 100 8
Table: tblTaxonomicUnits ITIS species names.  Name	Туре	Size
tsn FullLatinName unit_ind1 unit_name1 unit_ind2 unit_ind3 unit_name3 unit_ind4 unit_name4 unnamed_taxon_ind usage unaccept_reason credibility_rtng completeness_rtng currency_rating phylo_sort_seq initial_time_stamp parent_tsn taxon_author_id hybrid_author_id kingdom_id rank_id	Number (Long) Text Text Text Text Text Text Text Text	4 157 1 35 1 35 7 35 7 35 1 12 24 40 10 7 2 8 4 4 4

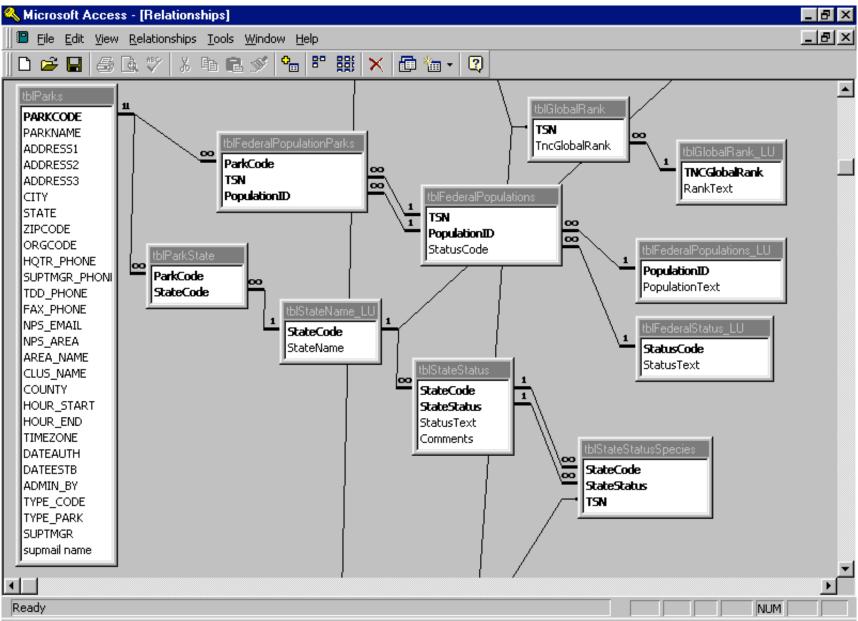
Name	upda	ate_date	Date/Time		8
kingdom_id	Table: tblTax	conomicUnitTypes ITIS rank classification.			
kingdom_id	Nam	e	Type	Size	
rank_name         Text         15           dir_parent_rank_id         Number (Integer)         2           req_parent_rank_id         Number (Integer)         2           update_date         Date/Time         8           Table: tbl/Vernaculars ITIS common names.           Name         Type         Size           tsn         Number (Long)         4           vernacular_name         Text         8           language         Text         15           approved_ind         Text         1           update_date         Date/Time         8           Table: tbl/Vouchers Voucher records for each species in each park.           Name         Type         Size           VoucherRecordID         Number (Long)         4           ParkCode         Text         4           TSN         Number (Long)         4           ParkAdminUnit         Number (Byte)         1           SpecimenID         Text         50           DocLatinName         Text         25           SpecimenLocation         Text         50           Date         Date/Time         8           Time <t< td=""><td>king</td><td>dom id</td><td>•</td><td></td><td>2</td></t<>	king	dom id	•		2
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Table: tblVernaculars ITIS common names.			, ,		
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Name         Type         Size           tsn         Number (Long)         4           vernacular_name         Text         80           language         Text         15           approved_ind         Text         1           update_date         Date/Time         8           Table: tbl/Vouchers Voucher records for each species in each park.           Name         Type         Size           VoucherRecordID         Number (Long)         4           ParkCode         Text         4           ParkCode         Text         4           TSN         Number (Long)         4           ParkAdminUnit         Number (Long)         4           SpecimenID         Text         50           DocLatinName         Text         255           SpecimenLocation         Text         100           Date         Date/Time         8           Time         Date/Time         8           Time         Date/Time         8           Observer         Text         50           Location         Text         50           Location         Text         100	арас				Ü
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vernacular_name         Text         80           language         Text         15           approved_ind         Text         1           update_date         Date/Time         8           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher feet           language         4           Voucher feet           Park Code         Text         4           Text         4           Text         50           DocLatinMame (Byte)         4           Text         50           Doserver Duber (Single)         4           Location         Text         50           Location         Text         50     <	Nam	e	Type	Size	
vernacular_name         Text         80           language         Text         15           approved_ind         Text         1           update_date         Date/Time         8           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher records for each species in each park.           Table: tblVouchers Voucher feet           language         4           Voucher feet           Park Code         Text         4           Text         4           Text         50           DocLatinMame (Byte)         4           Text         50           Doserver Duber (Single)         4           Location         Text         50           Location         Text         50     <	tsn		Number (Long)		4
language	vern	acular name	` •		80
approved_ind update_date         Text Date/Time         1 Date/Time           Table: tbl/ouchers Voucher records for each species in each park.           Name         Type         Size           VoucherRecordID         Number (Long)         4           ParkCode         Text         4           TSN         Number (Long)         4           ParkAdminUnit         Number (Byte)         1           SpecimenID         Text         50           DocLatinName         Text         255           SpecimenLocation         Text         100           Date         Date/Time         8           Time         Date/Time         8           Time         Date/Time         8           Observer         Text         50           ObserverNumber         Text         50           Location         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmZone         Number (Long)         4           LocQualID         Number (Byte)         1 <td></td> <td><del>_</del></td> <td>Text</td> <td></td> <td>15</td>		<del>_</del>	Text		15
Table: tblVouchers Voucher records for each species in each park.  Name Type Size  VoucherRecordID Number (Long) 4 ParkCode Text 4 TSN Number (Long) 4 ParkAdminUnit Number (Byte) 1 SpecimenID Text 50 DocLatinName Text 255 SpecimenLocation Text 100 Date Date/Time 8 Time Date/Time 8 Time Date/Time 8 Observer Text 50 ObserverNumber Text 50 Location Text 100 Latitude Number (Single) 4 Longitude Number (Single) 4 Longitude Number (Long) 4 UtmX Number (Long) 4 UtmY Number (Long) 4 UtmY Number (Long) 4 UtmZone Number (Long) 4 Datum Text 50 LocQualID Number (Long) 4 Datum Text 50 LocQualID Number (Byte) 1 Habitat Text 200 Elevation Text 50 Comments Memo - Sensitivity Number (Byte) 1 DataSource Text 55 EnteredBy Text 55 EnteredDate	_	-	Text		1
Table: tbl/ouchers Voucher records for each species in each park.  Name Type Size  VoucherRecordID Number (Long) 4  ParkCode Text 4  TSN Number (Long) 4  ParkAdminUnit Number (Byte) 1  SpecimenID Text 50  DocLatinName Text 255  SpecimenLocation Text 100  Date Date/Time 8  Time Date/Time 8  Observer Text 50  Costation Text 50  Location		<del>_</del>	Date/Time		8
Name         Type         Size           VoucherRecordID         Number (Long)         4           ParkCode         Text         4           TSN         Number (Long)         4           ParkAdminUnit         Number (Byte)         1           SpecimenID         Text         50           DocLatinName         Text         255           SpecimenLocation         Text         100           Date         Date/Time         8           Time         Date/Time         8           Observer         Text         50           ObserverNumber         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           UtmZone         Number (Long)         4           LocQuallD         Number (Byte)         1           Habitat         Text         20           Elevation Units         Text         20	·	_			
VoucherRecordID         Number (Long)         4           ParkCode         Text         4           TSN         Number (Long)         4           ParkAdminUnit         Number (Byte)         1           SpecimenID         Text         50           DocLatinName         Text         255           SpecimenLocation         Text         100           Date         Date/Time         8           Time         Date/Time         8           Observer         Text         50           ObserverNumber         Text         50           Location         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           LocQualID         Number (Byte)         1           Habitat         Text         20           ElevationUnits         Text         20           ElevationUnits         Text         50	Table: tblVou	uchers Voucher records for each species in	each park.		
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ParkCode         Text         4           TSN         Number (Long)         4           ParkAdminUnit         Number (Byte)         1           SpecimenID         Text         50           DocLatinName         Text         255           SpecimenLocation         Text         100           Date         Date/Time         8           Time         Date/Time         8           Observer         Text         50           ObserverNumber         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Single)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           UtmZone         Number (Byte)         1           LocQuallD         Number (Byte)         1           Habitat         Text         20           ElevationUnits         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensiti	Vouc	cherRecordID	Number (Long)		4
TSN         Number (Long)         4           ParkAdminUnit         Number (Byte)         1           SpecimenID         Text         50           DocLatinName         Text         255           SpecimenLocation         Text         100           Date         Date/Time         8           Time         Date/Time         8           Observer         Text         50           ObserverNumber         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy					
ParkAdminUnit         Number (Byte)         1           SpecimenID         Text         50           DocLatinName         Text         255           SpecimenLocation         Text         100           Date         Date/Time         8           Time         Date/Time         8           Observer         Text         50           ObserverNumber         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         20           Elevation Units         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           Entere					4
SpecimenID         Text         50           DocLatinName         Text         255           SpecimenLocation         Text         100           Date         Date/Time         8           Time         Date/Time         8           Observer         Text         50           ObserverNumber         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         20           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate					1
DocLatinName         Text         255           SpecimenLocation         Text         100           Date         Date/Time         8           Time         Date/Time         8           Observer         Text         50           ObserverNumber         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation Units         Text         20           Elevation Units         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate			, , ,		50
SpecimenLocation         Text         100           Date         Date/Time         8           Time         Date/Time         8           Observer         Text         50           ObserverNumber         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	•		Text		255
Date         Date/Time         8           Time         Date/Time         8           Observer         Text         50           ObserverNumber         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Spec	cimenLocation	Text		100
Time         Date/Time         8           Observer         Text         50           ObserverNumber         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	•		Date/Time		
ObserverNumber         Text         50           Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Time		Date/Time		8
Location         Text         100           Latitude         Number (Single)         4           Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Obse	erver	Text		50
Latitude       Number (Single)       4         Longitude       Number (Single)       4         UtmX       Number (Long)       4         UtmY       Number (Long)       4         UtmZone       Number (Long)       4         Datum       Text       50         LocQualID       Number (Byte)       1         Habitat       Text       200         Elevation       Text       20         ElevationUnits       Text       50         Comments       Memo       -         Sensitivity       Number (Byte)       1         DataSource       Text       255         EnteredBy       Text       50         EnteredDate       Date/Time       8	Obse	erverNumber	Text		50
Longitude         Number (Single)         4           UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Loca	ation	Text		100
UtmX         Number (Long)         4           UtmY         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Latit	ude	Number (Single)		4
UtmY         Number (Long)         4           UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Long	gitude	Number (Single)		4
UtmZone         Number (Long)         4           Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Utm	X	Number (Long)		4
Datum         Text         50           LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Utm'	Υ	Number (Long)		4
LocQualID         Number (Byte)         1           Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Utm	Zone	Number (Long)		4
Habitat         Text         200           Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Datu	ım	Text		50
Elevation         Text         20           ElevationUnits         Text         50           Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Loco	QualID	Number (Byte)		1
ElevationUnitsText50CommentsMemo-SensitivityNumber (Byte)1DataSourceText255EnteredByText50EnteredDateDate/Time8	Habi	tat	Text		200
Comments         Memo         -           Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Elev	ation	Text		20
Sensitivity         Number (Byte)         1           DataSource         Text         255           EnteredBy         Text         50           EnteredDate         Date/Time         8	Elev	ationUnits	Text		50
DataSourceText255EnteredByText50EnteredDateDate/Time8	Com	ments	Memo		-
EnteredByText50EnteredDateDate/Time8	Sens	sitivity	Number (Byte)		1
EnteredDate Date/Time 8	Data	Source	Text		255
	Ente	redBy	Text		50
GraphicLinkID Number (Long) 4	Ente	redDate	Date/Time		8
	Grap	phicLinkID	Number (Long)		4

# **CONVERSION FROM NPFAUNA TO NPSpecies**

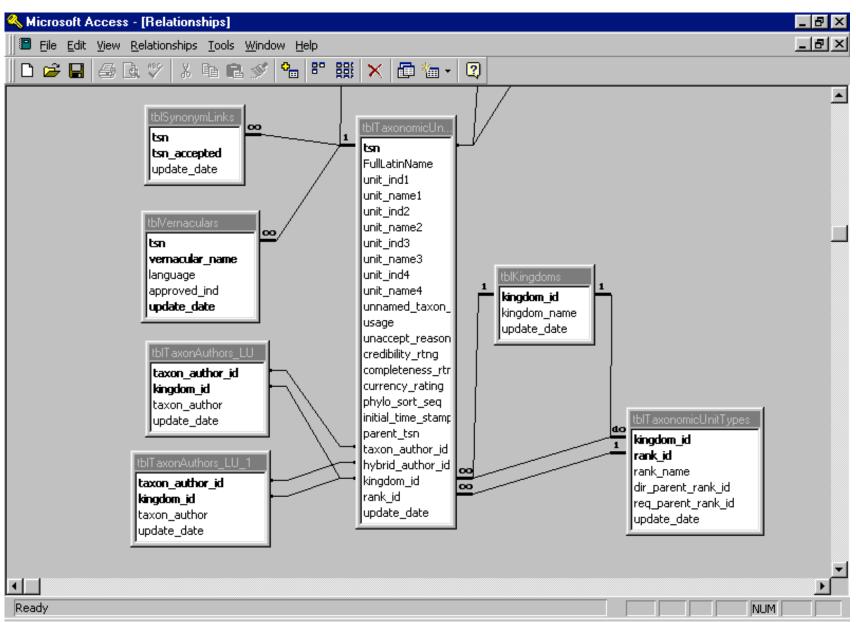
NPFAUNA		NPSpecies			
FIELD NAME   CODE   DESCRIPTION		FIELD NAME	CODE	DESCRIPTION	
Presence	•		ParkStatus	1	
	0	?		40	Unconfirmed
	1	Present in park		10	Present
	2	Probably present		20	Probably Present
	3	Listed but prob absent		40	Unconfirmed
	4	Extinct in park		20	Historic
	5	Accidental/Anomalous		40	Unconfirmed
	6	Park records unreliable		40	Unconfirmed
	7	Other		40	Unconfirmed
	8	No entry		40	Unconfirmed
Origin			Nativity	-	
5 6	0	?	1		BLANK
	1	Known only from park		10	Native
	2	No entry		10	BLANK
	3	Widespread native		10	Native
	4	Human Introduction		20	Non-Native
	5	Natural invasion		20	BLANK
	6	Non-native		20	Non-native
	7	Origin unknown		30	Unknown [add comment]
	8	Other (see comments)		30	Unknown [add comment]
	9	No entry		30	BLANK
Res Status		140 chtry	Residency		BEHIVE
res statas	0	9	residency		BLANK
	1	Perm reproducing		10	Breeder
	1	population		10	Breeder
	2	Occ. Reproducing		10	Breeder
	3	Migratory, vagrant or		60	Unknown [add comment]
		non-reproducing			emme wir faaa comment
	4	Reproducting status		60	Unknown [add comment]
		unknown			
	5	Other(see comments)		60	Unknown [add comment]
	6	No entry			BLANK
Abundance		1	Abundance		
	0	Unknown		50	Unknown
	1	Abundant		10	Abundant
	2	Common		20	Common
	3	Uncommon/rare		50	Unknown [add comment]
	4	Other		50	Unknown [add comment]
	5	No Entry		† · ·	BLANK
Comments			Comments		
		Text	2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		Memo



Relationships among end-user data entry tables and related look-up tables.



Relationships among parks and species status tables.



Relationships among ITIS tables.