Eastern Indigo Snake Studbook Drymarchon couperi

AZA North American Regional Studbook
Second Edition, data current as of
1 September 2010



Fred Antonio, Population Manager fantonio@projectorianne.org

Project Orianne, LTD.

SPMAG Advisor: R. Andrew Odum

Cover photo by Amber Antonio: Drymarchon couperi, Studbook #412, "Angela", wild caught, Marion County, Florida, 2010.

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Introduction

The Association of Zoos and Aquariums (AZA) is a member organization that accredits over 200 North American zoos and aquariums. Animal management, to establish self-sustaining captive populations, is accomplished by the collective management of AZA members and approved private organizations. Species of conservation importance are managed as a single population by holding institutions to help assure the genetic and demographic integrity of the entire population. Population analysis and the resulting management recommendations are based on studbook data compiled for each species. A studbook is an electronic record of the history of a captive population. It includes information on every individual specimen in the population, including pedigrees, dates of birth, transfers to new locations and deaths. These collective histories describe the population's genetic and demographic identity and the general biology of the species. The main purpose of studbooks is for population management, to help managers monitor and maintain demographically stable and genetically diverse populations at the size necessary to meet the conservation and education missions of each species.

The AZA Snake Advisory Group (SAG) identifies which snake species in AZA will be managed by a studbook in their Regional Collection Plan. In this plan the Eastern Indigo Snake is designated to be managed by a Population Management Plan (PMP). As the studbook is updated and revised, each new edition initiates a revised PMP with new transfer and breeding recommendations based on the goals for the captive Eastern Indigo Snake population.

The Eastern Indigo Snake studbook population is managed as two separate populations to achieve two different goals. The first is to make recommendations to produce indigos for exhibits and conservation education programs. This program utilizes "generic" specimens that lack parental lineage back to the wild (no locality data). Breeding recommendations attempt to outbreed by considering available information for each specimen, recognizing that critical information is lacking.

A second Eastern Indigo Snake population is managed genetically strictly for reintroduction and repatriation programs. All specimens in this population are derived from known localities. Recommendations for pairings consider specimen localities matched to specific release sites. This "in situ" aspect of studbook population management requires strict adherence to breeding recommendations as well as on-site husbandry and veterinary protocols associated with the reintroduction programs.

The first edition of the Eastern Indigo Snake Studbook was completed in March 2008, with data current through 1 January 2008. The studbook population at that time was: Living Population, 29.10.4 (43 specimens total) at 28 institutions; Historic Population, 144.109.125 (378 specimens total). This second edition of the Eastern Indigo Snake Studbook with data current to 1 September 2010 is: Living Population 32.25.1 (58) at 28 institutions; Historic Population 159.130.124 (413). This database is a compilation of animals entered into the International Species Information System (ISIS), taxon reports received from over 60 AZA institutions that have held indigos in their collections, and information compiled from International Zoo Yearbooks (published by the Zoological Society of London, 1962 - current). Additional information of significance has been derived from regulatory agencies, university projects, and conservation initiatives.

Acknowledgments

I thank Alan Rost, Registrar, and Greg Lepera, Curator of Reptiles, Jacksonville Zoo and Gardens (JZG) for their initial work on the Indigo Studbook while it was held by JZG (2004-2007). Laurie Bingaman Lackey, International Species Information System (ISIS), for various courtesies, instruction, and associated philosophical discussions. Dino Ferri, Curator of Herpetology (JZG) and Snake Taxon Advisory Group Chair, for his support and encouragement, and Dr. Christopher Jenkins, Project Orianne Director and CEO, for his vision, leadership and multi-disciplinary approach for the conservation of the Eastern Indigo Snake.

Data Field Descriptions

Studbook ID - unique number assigned to each individual snake in the studbook. The studbook number is a permanent number.

Birth Date - date of hatching. There is a birth date recorded for every individual. Please check the next column "Birth Date Est." to judge the accuracy of that date.

Birth Date Est. - Indicated if the Birth Date field is an estimate.

None = No estimation

Day = The day is estimated

Month = The month is estimated

Year = The actual hatch date is within the year of the Birth date field

Sire/Dam - Numbers are the Studbook ID of the parents.

WILD = indicates the snake was wild caught and its parents are unknown wild individuals

UNK = indicates the snake was born in captivity but identification of the parents is not known

MULT = indicates there are several possible parents, but the specific one could not be determined. A parental assumptions note may be found in Specimen Notes

Sex - male, female, unknown (example 2.3.5 = 2 males, 3 females, 5 of unknown sex).

Event - This field documents the movement of individual animals from the first location to the current or last known location. This includes Birth/Hatch, Transfer, Death, Go LTF (Lost to Follow up), Return from LTF, and Release. Unknown indicates that the animal exists or existed, but its location cannot be reliably confirmed.

Location - This field indicates the location where the event took place.

Local ID - This is the ID number assigned by the institution in which the event took place. UNKNOWN indicates that either an ID was not assigned or no information exists to indicate that an ID was assigned.

Date - This field documents the date that the event occurred. Each event has a date associated with it. Also, check the adjacent column (Date Est.) to determine the accuracy of this date.

Date Est. - Indicates if the adjacent Date field is an estimate.

None = No estimate

Day = The day is estimated

Month = The month is estimated

Year = The actual date is within the year of the Event Date filed

House Name - This field indicates the name given to the snake at a specific location. Individuals may be given a different house name each time they move to a different location.

Data Conventions Used in This Studbook

Data entry into the ISIS, Single Population Analysis and Record Keeping System (SPARKS) software program followed the recommendations of the "Guidelines for Data Entry and Maintenance of North American Regional Studbooks". Two additional conventions adopted in this studbook for data entry purposes are as follows:

- 1. When the year of a hatch date was known but not the exact day or month, 1 July of that year was entered as the estimate. This estimate coincides with an average seasonal hatch date for *Drymarchon couperi*.
- 2. If a specimen was derived as a confiscation from a state or federal agency but the time in which that agency held the snake was unknown, an estimate of one month earlier than the transfer date to the receiving zoo was entered as the estimate. This convention was adopted as seldom does a regulatory agency hold confiscated snakes for any length of time.

Living Population by Location of the Eastern Indigo Snake (Drymarchon couperi) as of September 2010

Restricted to:

Dates: As of 13 Sep 2010 Status: Living on 14 Sep 2010

Report ordered by: current/last location (alphabetic)

												======================================
							Location					Event
AUBURN -	Aubu	rn Bo	otan:	ic Gard	dens, Au	burn, Ne	w South Wal	es,	Aust	ralia	a	
398	F	14	Aug	2008	WILD	WILD	AUBURN ORIANNE	14	Aug	2008	A-4	Hatch
							ORIANNE	22	Jan	2010	PO-02	Transfer
							AUBURN	4	May	2010	A-4	Transfer
Totals: (0.1.0	(1)										
BUFFALO -	- Buf	falo	Zoo	logica	l Garden	s, Buffa	lo, New Yor	k,	JSA			
315	M	25	May	1996	UNK	UNK	ALPINE C	25	May	1996	NONE	Hatch
							RANCHO DE	~	Oct	1996	NONE	Transfer
							LITTLEROC	30	Oct	1996	5104	Transfer
							BUFFALO	6	Oct	2000	R0019	Transfer
375	M	28	Jun	2004	284	290	BUFFALO	28	Jun	2004	R04009	Hatch
378	M	29	May	2005	315	290	BUFFALO	29	May	2005	R05010	Hatch
Totals: 3	3.0.0	(3)										
372	F	3	Aug	2003	200	289	HOMOSASSA	3	Aug	2003	HS0331	Hatch
Totals: 0	0.1.0	(1)										
CINCINNAT	Г - C	inci	nnat	i Zoo 8	& Botani	cal Gard	en, Cincinn	ati	, Oh:	io, U	SA	
							EMERYVILL		~	1996	NONE	Hatch
							NASHV ZOO		???	?	822	Transfer
							CINCINNAT					Transfer
337	M	~	Sep	1997	UNK	UNK	EMERYVILL	~	Sep	1997	NONE	Hatch
			-				SCHWARTZ					Transfer
							NASHV ZOO					Transfer
							CINCINNAT					
Totals: 1	1.1.0	(2)										
FORTWORTH	1 - F	ort. I	Wortl	n Zoolo	ogical P	ark. Ft.	Worth, Texa	ıs. 1	JSA			
343	M	~	Jun	2001	UNK	UNK	ELLIOT	~	Jun	2001	UNK	Hatch
							ELLIOT SAMIELLE		~	2002	UNK	Transfer
							FORTWORTH					
Totals: 1	1 0 0	(1)					1 OILI WOILIII		oun	2007	203713	II diibi ci
FT WAYNE	- Fo	rt Wa	avne	Child	ren's Zo	ological	Garde, For	+ W	avne	. Ind	iana. USA	
385				2004	UNK					2004		Hatch
303	Ľ	13	our	2004	OIVIC	OIVIC	FT WAYNE					
Totals: (1 1 0	(1)					T T MUTINE	د ے	Jul	2000	J 0 0 J 3	110110101
		\ _ /										
	_											
CATMONTT	_ 0	nta 1	F0 (7)	11000	Teachire	700 Ca	inesville,	□ 1 ~·	rid-	TTC7		
361	- Sal	ııca 1		2003	WILD	WILD		. TO.		2003	NONE	Capture
201	1*1		~	∠∪∪3	MTTD	MTTD				2003		Transfer
							FL GM FSH					
							GAINSVLL	30	Apr	2006	40712	Transfer

Stud #	Sex	Hato	h Date	Sire	Dam	Location	Da	te	:	Local ID	Event
368	F	3 A	ug 2003	200	289	HOMOSASSA ORL SCI C GAINSVLL	~ 1	Nov	2004	R04002	
Totals:	1.1.0										
	?	(1)	~ 2004	UNK	UNK	Pk), Hersh HERSHEY	21	Feb	2009	A9.01	
HOGLE - 288 Totals:	М	25 A	e Zoo, S lug 1993	Salt Lake 197	208	tah, USA DREHER PA HOGLE					
						Indiana, U PRIVATE INDIANAPL	23				Hatch
382	F	23 J	ul 2006	UNK		PRIVATE INDIANAPL	23	Jul	2006	NONE	Transfer Hatch Transfer
Totals:	1.1.0	(2)									
JACKSON 338 Totals:	М	(1)	~ 1998	WILD	WILD	acksonville UNKNOWN FL GM FSH BUSCH TAM JACKSONVL	~ ~ 9	Jan Dec Dec	2000 2000 2000	NONE 9D35 61106	Capture Transfer Transfer Transfer
	M	olumbi	an Park ~ 2005		ayette, UNK	Indiana, US LAFAY IND		May	2008	880495	Transfer
T.TTTT.FD/	ეC − I.:	i++1_	Pock 700	ological	Cardena	Tittle Roo	ık.	Δrkai	าตอต	Λ DIT	
304	M	1 J	un 1995	280	168	Little Roc LITTLEROC	1	Jun	1995	4779	Hatch
			lay 1996	UNK	UNK	ALPINE C RANCHO DE LITTLEROC	~	Oct	1996	NONE	Hatch Transfer Transfer
Totals:											
388	F	4 J				ouisville, HARBSMEIE LOUISVILL	4	Jul	2003	UNK	Hatch Transfer
Totals:	0.1.0	(1)									
LOWRY - 321	Tampa M	's Low ~ A	ry Park ug 1996	Zoo, Tam UNK	pa, Flor UNK	ida, USA UNKNOWN PRIVATE HOMOSASSA LOWRY	~	Sep	1996		Hatch Transfer Transfer Transfer
344	F		~ 1999	UNK	UNK	HARBSMEIE LOWRY		333.	?	NONE NONE 302307	Hatch Transfer Transfer

Stud #	Sex	Hat	ch D	ate	Sire	.	Dam	Location	Dat	te	1	Local ID	======== Event =========
Totals:													
								ium, Memphi SEIB MEMPHIS	~	Mav	1996	UNK	Hatch Transfer
390 Totals:								SEIB MEMPHIS					Hatch Transfer
METROZOC 335 Totals:	F	~						USA MARTIN CO FL FWCC TCWC METROZOO	~	Dec ~	1999 2000	UNK UNK	
	M	~						hville, Ten EMERYVILL PRIVATE NASHV ZOO	~	Sep ????	1996 ?	NONE	Transfer
NC SM RA 342 Totals:	M	3 (1)	Jul	1998	Ū	NΚ	UNK	nces, Ralei PRIVATE NC SM RAL	3 9	Jul Aug	1998	NONE	Hatch
	M	5 (1)	Jul	1996	Ū	INK	UNK	ucky, USA PRIVATE NEWPORTKY	11	Apr	2003	NONE DC0301	Hatch Transfer
275 Totals:	M 1.0.0	(1)	~	1992	υ	INK	UNK	, Virginia, UNKNOWN USFWS NORFOLK	~ 1	~ Jan Dec	1993 1993	930071	Transfer Transfer
OAKLAND	- Oakl	.and	Zoo,	0ak]	land,	Cali	fornia,		10 ~	Aug Oct	2001 2001	UNK UNK	Hatch Transfer Transfer
ОМАНА -	Omaha'	s He	enry Jul	Door] 2002	ly Zoc U	o, Om INK	aha, Nei UNK	braska, USA PRIVATE OMAHA	13	Jul Aug	2002 2003	NONE 13902	Transfer
		ject	Oria	inne,	LTD.,	Cla	yton, G	eorgia, USA					
383	M	21	May	2005	Ţ	JNK	UNK	CALIFORNI	21	May	2005	UNK	Hatch

Stud #	Sex	Hat	ch I	Date	Sire	Dam	Location	Dat	ce	[:	Local I	D Event	
======	=====	====	====	=====	======	======	NEMZOFF ALLENWOOD ORIANNE	~ 26	Jan Aug	2008 2009 2010	UNK 1662	Transfer	===
384	F	1	May	2007	UNK	UNK	CALIFORNI NEMZOFF ALLENWOOD ORIANNE	~ 26	Jan Aug	2007 2008 2009 2010	UNK 1663	Transfer Transfer	
397	М	13	Aug	2008	WILD	WILD	AUBURN ORIANNE		_	2008 2010			
399	F	21	Aug	2008	WILD	WILD	AUBURN U ORIANNE			2008 2010			
400	F	20	Aug	2008	WILD	WILD	AUBURN U ORIANNE			2008 2010			
401	F	17	Jul	2009	WILD	WILD	AUBURN U ORIANNE			2009 2010			
402	F	27	Jul	2009	WILD	WILD	AUBURN U ORIANNE			2009 2010			
403	М	16	Jul	2009	WILD	WILD	AUBURN U ORIANNE			2009 2010			
404	F	23	Jul	2009	WILD	WILD	AUBURN U ORIANNE			2009 2010			
405	М	3	Aug	2009	WILD	WILD	AUBURN U ORIANNE		_	2009 2010			
406	М	2	Aug	2009	WILD	WILD	AUBURN U ORIANNE		_	2009 2010			
407	F	4	Aug	2009	WILD	WILD	AUBURN U ORIANNE		_	2009 2010			
408	М	11	Aug	2008	UNK	UNK	HARBSMEIE ORIANNE				080101 PO-12		
409	F	~ 1	Jun	2008	UNK	UNK	PALMDALE ORIANNE						
410	М	6	Jul	2009	UNK	UNK	NEW FAIR ORIANNE						
411	F	2	Jul	2009	UNK	UNK	NEW FAIR ORIANNE			2009 2010			
412 Totals:	F 7.10.0) (17	7)	2000	WILD	WILD		19	Apr	2010	NONE		
314 Totals:	M 1.0.0			1995			HARBSMEIE BESSETTE GAINSVLL	20 4	Dec Sep	1995 1998	NONE 40711		

		========
Stud # Sex Hatch Date Sire Dam		
	=======================================	========
SANFORD - Central Florida Zoological Park,	Lake Monroe, Florida, USA	
339 F 10 Aug 2008 UNK UNK		Hatch
	SANFORD 12 Dec 2008 ED044	Transfer
367 F ~ 1 Jul 2003 UNK UNK	HAPROMETE ~ 1 .Tul 2003	Hatch
	SANFORD 9 Sep 2005 7024	Transfer
Totals: 0.2.0 (2)		
CT LOUIC Coint Louis Zoologisal Dawls Ct	Louis Missouri USA	
ST LOUIS - Saint Louis Zoological Park, St 380 M ~ 2006 UNK UNK	LOUIS, MISSOURI, USA	Hatch
380 M ~ 2000 UNK UNK	DIBLIC ~ 2007	Transfer
	PUBLIC ~ 2007 USFWS ~ Feb 2007	Transfer
	DUBUQUE ~ Mar 2007	Transfer
	ST LOUIS 30 Apr 2007 105724	Transfer
Totals: 1.0.0 (1)	51 10010 30 11p1 2007 103721	TEGIIDECE
TALLAHASE - Tallahassee Museum of History		
255 F ~ 1990 UNK UNK		Hatch
	FL GM FSH ~ Jan 1991 NONE	Transfer
	TALLAHASE 1 Nov 1991 11R008	Transfer
Totals: 0.1.0 (1)		
TAMPA AQ - Florida Aquarium, Tampa, Florid	a IISA	
394 M 10 Aug 2008 UNK UNK	M RAND 10 Aug 2008 IINK	Hatch
JJI II 10 Mag 2000 CINK CINK	TAMPA AQ 20 Sep 2008 300242	
Totals: 1.0.0 (1)	TIERRY TO DOP 2000 DOUBLE	110110101
TOLEDO - Toledo Zoological Gardens, Toledo	, Ohio, USA	
362 M 21 Jun 2003 284 290	BUFFALO 21 Jun 2003 R03015	
	TOLEDO 15 Nov 2005 4098	Transfer
Totals: 1.0.0 (1)		
TULSA - Tulsa Zoo & Living Museum, Tulsa,	Oklahoma IISA	
413 F ~ 1996 UNK UNK		Trangfer
	101011 21 1101 2010 10025	TIGHTEL
395 M 5 Sep 2001 UNK UNK	RC 5 Sep 2001 2001RC	Hatch
	WL DISC C ~ Jan 2009 2001RC	Transfer
396 F 30 Aug 2004 UNK UNK	RC 30 Aug 2004 2004RC	Hatch
	WL DISC C ~ Jan 2009 2004RC	Transfer
Totals: 1.1.0 (2)		
TOTALS: 32.25.1 (58)		
28 Institutions		
ZO INSCICUCIONS		

Compiled by: Fred Antonio thru Project Orianne, LTD. Data current thru: 16 Aug 2010 North American regional Printed on 14 Sep 2010 using Sparks v1.56beta

Historical Studbook Population of the Eastern Indigo Snake

Stud	#	Sex	Hatch Date	Sire D	oam	Location	Da	te	Local ID	======================================
	1	М	????	WILD	WILD	UNKNOWN TARPONSPR RACINE	20	???? ???? Apr 1950 Jul 1952	NONE NONE) H5098	Capture Transfer Transfer Death
	2	F	????	WILD	WILD	UNKNOWN TARPONSPR RACINE		???? ???? May 1953 Jul 1953		Capture Transfer Transfer Death
	3	М	????	[Death by:	WILD	UNKNOWN TARPONSPR RACINE		???? ???? Jun 1958 Oct 1959		Capture Transfer Transfer Death
	4	?	1 Apr 1962	[Death by:	WILD	UNKNOWN PUBLIC BATTLE CR	16	Apr 1962 ???? Mar 1978 Feb 1989	NONE 0049	Capture Transfer Transfer Death
				[Death by:	Unkno	wn means]		100 1707		200.011
	5	?	????	WILD	WILD	UNKNOWN PUBLIC NZP-WASH		???? ???? Aug 1964 Dec 1964		Capture Transfer Transfer Death
	6	?	~ 1967	[Death by:	WILD	UNKNOWN PRIVATE JACKSONVL PRIVATE		~ 1967 ???? Oct 1970 Jun 1971	NONE) 470100	Capture Transfer Transfer ltf Transfer
	7	F	????	WILD [Death by:	WILD	UNKNOWN CHASE B OKLAHOMA		???? ???? Apr 1969 Sep 1975		Capture Transfer Transfer Death
	8	F	????	WILD	WILD	UNKNOWN CHASE B OKLAHOMA		???? ???? Apr 1969 Aug 1973		Capture Transfer Transfer Death
	9	М	????	[Death by: WILD [Death by:	WILD	UNKNOWN PUBLIC RACINE		???? ???? Jun 1969 Feb 1970		Capture Transfer Transfer Death
1	0	М	~ 1970	WILD [Death by:	WILD	UNKNOWN PRIVATE JACKSONVL		~ 1970 ???? Apr 1972 Jul 1972	NONE L 471019	Capture Transfer Transfer Death
				inearm by:	OIIXIIO	wii means]				

Stud #	Sex	Hatch Date	Sire D	am	Location	Date	Local ID	
11	М	~ 1970	WILD	===== WILD	UNKNOWN PRIVATE JACKSONVL PRIVATE FLORIDA	~ 1970 ???? 12 Sep 1971 31 Dec 1972 ~ Jan 1973	NONE NONE	Capture Transfer Transfer Transfer Release
12	?	~ 1970	WILD	WILD	UNKNOWN PRIVATE JACKSONVL	~ 1970 ???? 13 Apr 1971 7 May 1971	NONE NONE 471018	Capture Transfer Transfer Death
			[Death by:	Unkno	wn means]	/ May 15/1		Deach
13	F	~ 1971	WILD	WILD	UNKNOWN PUBLIC SEDGWICK	~ 1971 ???? 31 Dec 1973 25 Dec 1974	NONE NONE SR8	Capture Transfer Transfer Death
			[Death by:	Unkno	wn means]			
14	М	~ 1971	WILD	WILD	UNKNOWN PUBLIC SACRAMNTO	~ 1971 ???? 18 Jun 1982 31 Oct 1991	NONE NONE 300056	Capture Transfer Loan to Death
			[Death by:	Unkno	wn means]			
15	F	~ 1971	WILD	WILD	UNKNOWN PRIVATE JACKSONVL GAINSVLL JACKSONVL	~ 1971 ???? 31 Dec 1972 6 Jan 1974 29 Jan 1974 ~ 1978	472121	Capture Transfer Loan to Loan to Loan to Loan to
16	F	~ 1971	WILD	WILD	UNKNOWN PRIVATE JACKSONVL		NONE NONE 472122 472122	Capture Transfer Loan to Ltf Transfer
17	?	~ 1971	WILD	WILD	UNKNOWN PRIVATE JACKSONVL	~ 1971 ???? 6 Jun 1972 20 Jun 1972	NONE NONE 472025	Capture Transfer Transfer Death
			[Death by:	Unkno	wn means]			
18	F	~ 1971	WILD	WILD	UNKNOWN PRIVATE JACKSONVL PRIVATE FLORIDA	~ 1971 ???? 31 Aug 1972 31 Dec 1972 ~ Jan 1973	NONE NONE 472078 NONE NONE	Capture Transfer Transfer Transfer Release
19	?	~ 1971	WILD	WILD	UNKNOWN PRIVATE JACKSONVL FLORIDA	~ 1971 ???? 30 Oct 1974 28 Nov 1974	NONE NONE 474099 NONE	Capture Transfer Transfer Release
20	М	~ Mar 1972	WILD	WILD	UNKNOWN PUBLIC ST LOUIS	~ Mar 1972 ???? 15 Sep 1975 24 Nov 1993	NONE NONE 375010	Capture Transfer Transfer Death
			[Death by:	Unkno	wn means]			
21	F	~ 1972	WILD	WILD	UNKNOWN FRESNO MEMPHIS	~ 1972 ???? 25 Jul 1985 10 Dec 1989	NONE 7440	Capture Transfer Transfer Death

		Hatch Date			Location			Local II	
======		:=======	=======	=====	:=======	===	======	======	========
			[Death by:	Unkno	own means]				
22	F	~ 1972	WILD	WILD	UNKNOWN PRIVATE JACKSONVL		~ 1972 ???? Aug 1973	NONE 3 473076	Capture Transfer Transfer
			[Death by:	Unkno	own means]	17	Aug 197	7	Death
23	F	~ 1973	WILD	WILD	UNKNOWN MIAMI SER CINCINNAT COLUMBUS BUFFALO	1 10	Apr 1974 Jan 1983 Sep 1983	4 <u>374000</u> 1 813007 1 81R49	Capture Transfer Transfer Transfer Loan to
					NY BRONX		Apr 1982 Aug 1985		Loan to Death
			[Death by:	Unkno	own means]	_	1149 150.	,	Deach
24	М	~ 1973	UNK	UNK	FLORIDA PUBLIC CHICAGOBR SEATTLE CHICAGOBR	9 5	~ 1973 ???? Apr 1975 May 1976 Aug 1980 Mar 1980	NONE 18934 3	Hatch Transfer Transfer Transfer Transfer Death
			[Death by:	Unkno	own means]				
25	F	~ 1973	WILD	WILD	UNKNOWN PUBLIC ST LOUIS		~ 1973 ???? Aug 1978 Mar 1979	NONE 3 378032	Capture Transfer Transfer Death
			[Death by:	Unkno	own means]	Ξ,	1141 157.		Deach
26	М	~ 1973	UNK	UNK	UNKNOWN PRIVATE JACKSONVL	17	~ 1973 ???? Aug 1974 ~ 1978	NONE 4 474075	Hatch Transfer Transfer ltf Transfer
27	М	~ 1974	WILD	WILD	UNKNOWN WESTERN SANDIEGOZ PUBLIC		~ 1974 ~ 1979 Mar 1976 Jan 1993	5 NONE 5 000508	Capture Transfer Transfer ltf Transfer
28	М	~ 1974	WILD	WILD	UNKNOWN PHOENIX		~ 1974 Nov 1975 Oct 1987	5 1880	Capture Transfer Death
			[Death by:	Unkno	own means]				
29	М	????	WILD	WILD	UNKNOWN PUBLIC ATLANTA		???? ???? Apr 197! May 199:		Capture Transfer Transfer Death
			[Death by:	Unkno	own means]				
30	М	????	WILD	WILD	UNKNOWN WESTERN OKLAHOMA		???? ???? Jul 197! Feb 1978		Capture Transfer Transfer Death
			[Death by:	Unkno	own means]				
31	F	????	WILD	WILD	UNKNOWN PET DRAGO OKLAHOMA	30	???? ???? Sep 197!	NONE NONE 5 510503	Capture Transfer Transfer

=========				=======================================
Stud # Sex	Hatch Date	Sire Dam	Location Date	Local ID Event

			[Death by:	Unkno	wn means]	20	Aug	1977		Death
32	М	????	WILD	WILD	UNKNOWN PUBLIC			?		Capture Transfer
				1	TOLEDO			1975 1986	753015	Loan to Death
			[Death by:	Unkno	wn means]					
33	М	13 Jul 1974	UNK	UNK	GAINSVLL FL GM FSH					Hatch ltf Transfer
34	F	13 Jul 1974	UNK	UNK	GAINSVLL UNKNOWN					Hatch ltf Transfer
35	F	13 Jul 1974			GAINSVLL					Hatch Death
			[Death by:	Unkno	wn means]					
36	?	13 Jul 1974	UNK	UNK	GAINSVLL AUBURN U	13				Hatch ltf Transfer
37	М	13 Jul 1974	UNK	UNK	GAINSVLL SANFORD					Hatch ltf Transfer
38	F	~ 1975	UNK	UNK	UNKNOWN SANFORD GAINSVLL		~	1976		Transfer
										Transfer ltf Transfer
39	?	1 Apr 1975	UNK	UNK	ATLANTA	1	Apr	1975	757103	
40	М	~ 1975	WILD	WILD	UNKNOWN WESTERN SANDIEGOZ	19	~ Mar	1976	NONE 000506	
			[Death by:	Unkno	wn means]	20	Uaii	1000		Deach
41	F	~ 1975	UNK	UNK	UNKNOWN WESTERN SANDIEGOZ	19	~	1976	NONE NONE 001148	Hatch Transfer Transfer
			[Death by:	Unkno	wn means]	22	Apr	1984		Death
42	М	~ 1975	UNK	UNK	UNKNOWN USFWS HERSHEY		???? Aug	1975 ? 1979 1987	NONE NONE 79134	Hatch Transfer Loan to
			[Death by:	Unkno	wn means]	3	Dec	120/		Death
43	М	~ 1975		WILD	UNKNOWN JACKSON		Jan	1975 1976 1987	NONE 793001	Capture Transfer Death
			[Death by:	Unkno	wn means]	د ۵	1149	± 7 0 1		Deach
44	М	~ 1975	WILD	WILD	UNKNOWN PUBLIC OKLAHOMA	4	????		NONE NONE 568004	Capture Transfer Transfer

Stud #	Sex	Hatch Date	Sire I	====== Dam	Location	Date Local ID Event
======	=====		[Death by:			3 Feb 1978 Death
45	F	~ 1976	WILD	WILD	FLORIDA FL GM FSH GAINSVLL AUBURN U	~ 1977 NONE Capture ~ Jun 1977 Transfer 8 Jul 1977 0017 Transfer 8 Nov 1979 ltf Transfer
46	F	~ 1976	WILD	WILD	FLORIDA FL GM FSH GAINSVLL FLORIDA	~ 1977 NONE Capture ~ Apr 1977 Transfer 23 May 1977 40701 Transfer 25 Aug 1981 NONE Release
47	F	~ 1970	WILD	WILD	UNKNOWN PRIVATE NY BRONX	~ 1976 NONE Capture ~ 1977 Transfer 3 Aug 1977 770271 Transfer 23 Feb 1981 Death
			[Death by:	Unkno	wn means]	
48	М	~ 1976	WILD	WILD	GAINSVLL	~ Feb 1977 NONE Capture ~ Feb 1977 Transfer 8 Mar 1977 40702 Transfer 17 Mar 1983 483007 Loan to 13 Dec 1987 40702 Transfer 22 Dec 1989 Death
			[Death by:	Unkno	wn means]	
49	М	~ 1976	WILD	WILD	UNKNOWN PUBLIC ATLANTA CHATTAHOO	~ 1976 NONE Capture ???? NONE Transfer 1 Apr 1977 757102 Transfer 7 May 1988 NONE Loan to 31 Jan 1993 Death
			[Death by:	Unkno	wn means]	51 Can 1990
50	М	~ 1976	WILD	WILD	UNKNOWN PRIVATE NY BRONX SACRAMNTO	~ 1976 NONE Capture ???? NONE Transfer 3 Aug 1977 770270 Transfer 28 Feb 1985 300233 Transfer 16 Oct 1986 Death
			[Death by:	Unkno	wn means]	
51	F	22 Jul 1976	26	MULT1	JACKSONVL	22 Jul 1976 476067 ltf Hatch
52	F	22 Jul 1976	26	MULT1	JACKSONVL JACKSON	22 Jul 1976 476068 Hatch 14 Dec 1977 Loan to 30 Sep 1979 Death
			[Death by:	Unkno	wn means]	
53	?	~ Sep 1976	UNK	UNK	LITTLEROC	~ Sep 1976 ltf Hatch
54	?	~ Sep 1976	UNK	UNK	LITTLEROC	~ Sep 1976 ltf Hatch
55	?	~ Sep 1976	UNK	UNK	LITTLEROC	~ Sep 1976 ltf Hatch
56	?	~ Sep 1976	UNK	UNK	LITTLEROC	~ Sep 1976 ltf Hatch
57	?	~ Sep 1976	UNK	UNK	LITTLEROC	~ Sep 1976 ltf Hatch
58	?	~ Sep 1976	UNK	UNK	LITTLEROC	~ Sep 1976 ltf Hatch
59	?	~ Sep 1976	UNK	UNK	LITTLEROC	~ Sep 1976 ltf Hatch
60	F	~ 1977	WILD	WILD	UNKNOWN	~ 1977 NONE Capture

=======	=====	=========	========	=====	:=======	:======	====:	======	=========
Stud #	Sex	Hatch Date	Sire Da	am	Location	Date	1	Local ID	Event
======	=====	=======	[Death by:		CINCINNAT COLUMBUS BUFFALO	10 Oct	1978 1980 1981	378008 H82303	Transfer Transfer Transfer Transfer Death
61	F	~ 1977	WILD	WILD	FLORIDA PUBLIC SANFORD	333.	1979	NONE NONE S28151	Capture Transfer Transfer Death
62	М	~ 1977	[Death by: UNK [Death by:	UNK	UNKNOWN PRIVATE AUDUBON	~ ???? 7 Jul 29 Mar	1988	NONE NONE R412	Hatch Transfer Transfer Death
63	F	~ 1977	WILD [Death by:	WILD	UNKNOWN PUBLIC ATLANTA	333.	1978	NONE NONE 787104	Capture Transfer Transfer Death
64	М	~ 1977	WILD	WILD	UNKNOWN ATLANTA			NONE 787101	Capture Transfer Death
65	М	~ 1977	[Death by:	WILD	UNKNOWN PUBLIC HOGLE	???? 24 Mar 26 Feb	1978	NONE NONE 02043	Capture Transfer Transfer Death
			[Death by:	Unkno	own means]	ZO PCD	1000		Deach
66	?	~ 1977	UNK	UNK	LITTLEROC	~	1977		ltf Hatch
67	?	~ 1977	UNK	UNK	LITTLEROC	~	1977		ltf Hatch
68	?	~ 1977	UNK	UNK	LITTLEROC	~	1977		ltf Hatch
69	?	~ 1977	UNK	UNK	LITTLEROC	~	1977		ltf Hatch
70	?	~ 1977	UNK	UNK	LITTLEROC	~	1977		ltf Hatch
71	?	~ 1977	UNK	UNK	LITTLEROC				
			[Death by:	Unkno	own means]	~	1977		Death
72	?	~ 1977	UNK [Death by:		LITTLEROC		1977 1977		Hatch Death
73	?	~ 1977	UNK [Death by:	UNK	LITTLEROC		1977 1977		Hatch Death
74	М	20 Jul 1977	-		TOLEDO BUFFALO	20 Jul 15 Feb 20 Nov	1990		Hatch Loan to Death
			[Death by:	Unkno	own means]	_3 210 V			
75	?	21 Jul 1977	26	16	JACKSONVL	21 Jul	1977	477044	Hatch

======	:=====	======	=====	=======	:=====:	========	:======	=====	======	=========
Stud #	Sex	Hatch I	Date	Sire	Dam	Location	Date	1	Local ID	Event
======	:=====	======	====:	======	:=====	FL GM FSH FLORIDA	2 May ~ May	1978	NONE NONE	Transfer Release
76	?	22 Jul	1977	26	16	JACKSONVL FL GM FSH FLORIDA	22 Jul 2 May ~ May	1978	477045 NONE NONE	Hatch Transfer Release
77	?	22 Jul	1977	26	16	JACKSONVL FL GM FSH FLORIDA	22 Jul 2 May ~ May	1978	477046 NONE NONE	Hatch Transfer Release
78	?	22 Jul	1977	26	16	JACKSONVL FL GM FSH FLORIDA	22 Jul 2 May ~ May	1978	477047 NONE NONE	Hatch Transfer Release
79	?	22 Jul	1977	26	16	JACKSONVL FL GM FSH FLORIDA	22 Jul 2 May ~ May	1978	477048 NONE NONE	Hatch Transfer Release
80	?	22 Jul	1977	26	15	JACKSONVL FL GM FSH FLORIDA	22 Jul 2 May ~ May	1978	477051 NONE NONE	Hatch Transfer Release
81	?	22 Jul	1977	26	15	JACKSONVL FL GM FSH FLORIDA		1978	477052 NONE NONE	Hatch Transfer Release
82	?	23 Jul	1977	26	16	JACKSONVL FL GM FSH FLORIDA	23 Jul 2 May ~ May	1978	477049 NONE NONE	Hatch Transfer Release
83	?	23 Jul	1977	26	16	JACKSONVL FL GM FSH FLORIDA	23 Jul 2 May ~ May	1978	477050 NONE NONE	Hatch Transfer Release
84	M	~	1978	WILD	WILD	FLORIDA FL GM FSH BUSCH TAM FLORIDA	~ Jan 1 Dec 12 Sep	1979	NONE BGT1 NONE	Capture Transfer Transfer Release
85	М	21 Jun	1978	UNK	UNK	TULSA	21 Jun	1978		ltf Hatch
86	F	21 Jun	1978	UNK	UNK	TULSA	21 Jun	1978		ltf Hatch
87	М	~	1978	WILD	WILD	UNKNOWN PUBLIC SEATTLE	???	1983	NONE NONE 111453	Capture Transfer Transfer Death
				[Death by	: Unkno	wn means]				
88	F	~	1978	WILD	WILD	AMERICAS PUBLIC INDIANAPL TOLEDO	??? 17 Aug	1984 1987	NONE NONE 1032 873176	Capture Transfer Transfer Loan to Death
				[Death by	: Unkno	wn means]	_			
89	М	~	1978	WILD	WILD	UNKNOWN JACKSON			NONE 000709	Capture Transfer Death
				[Death by	v: Unknov	wn means]				
90	M	~	1978	WILD	WILD	UNKNOWN	~	1978	NONE	Capture

Stud #	Sex	Hatch Date	! !	Location	Date	Local II	O Event
======	=====			PUBLIC TOLEDO	???? 28 Jun 197 29 Jan 199	NONE 9 793003	Transfer Transfer Death
			[Death by: Unk				
91	?	24 Jul 1978	UNK UN	IK SANFORD	24 Jul 197		
92	?	24 Jul 1978	UNK UN	IK SANFORD	24 Jul 197	8	ltf Hatch
93	?	24 Jul 1978	UNK UN	IK SANFORD	24 Jul 197	8	ltf Hatch
94	?	24 Jul 1978	UNK UN	IK SANFORD	24 Jul 197	8	ltf Hatch
95	?	24 Jul 1978	UNK UN	IK SANFORD	24 Jul 197	8	ltf Hatch
96	?	24 Jul 1978	UNK UN	IK SANFORD	24 Jul 197	8	ltf Hatch
97	?	24 Jul 1978	UNK UN	IK SANFORD	24 Jul 197	8	ltf Hatch
98	?	24 Jul 1978	UNK UN	IK SANFORD	24 Jul 197	8	ltf Hatch
99	?	3 Aug 1978	UNK UN	IK SANFORD	3 Aug 197	8	ltf Hatch
100	?	3 Aug 1978	UNK UN	IK SANFORD	3 Aug 197	8	ltf Hatch
101	?	3 Aug 1978	UNK UN	IK SANFORD	3 Aug 197	8	ltf Hatch
102	?	3 Aug 1978	UNK UN	IK SANFORD	3 Aug 197	8	ltf Hatch
103	?	3 Aug 1978	UNK UN	IK SANFORD	3 Aug 197	8	ltf Hatch
104	?	3 Aug 1978	UNK UN	IK SANFORD	3 Aug 197	8	ltf Hatch
105	?	3 Aug 1978	UNK UN	IK SANFORD	3 Aug 197	8	ltf Hatch
106	?	3 Aug 1978	UNK UN	IK SANFORD	3 Aug 197	8	ltf Hatch
107	М	22 May 1979	UNK UN	K ST LOUIS	22 May 197		Hatch
			[Death by: Unk	nown means]	24 Oct 199	1	Death
108	М	~ 1979	UNK UN	IK UNKNOWN PUBLIC SANDIEGOZ PUBLIC	~ 197 ???? 1 Nov 198 20 Jan 199	NONE 0 080041	Hatch Transfer Transfer ltf Transfer
109	М	~ 1979	UNK UN	U.S.A. PUBLIC SANDIEGOZ	~ 197 ~ 199 20 Jan 199 7 Aug 199	4 NONE 4 194008	Hatch Transfer Transfer Death
			[Death by: Unk	nown means]			
110	?	~ Jul 1979	UNK UN	K LITTLEROC	~ Jul 197	9	ltf Hatch
111	?	~ Jul 1979	UNK UN	IK SANFORD	~ Jul 197	9	ltf Hatch
112	?	~ Jul 1979	UNK UN	IK SANFORD	~ Jul 197	9	ltf Hatch
113	?	~ Jul 1979	UNK UN	IK SANFORD	~ Jul 197	9	ltf Hatch
114	?	~ Jul 1979	UNK UN	IK SANFORD	~ Jul 197	9	ltf Hatch
115	?	~ Jul 1979	UNK UN	IK SANFORD	~ Jul 197	9	ltf Hatch

		======================================								====== D Event
										=========
116	?	~ Jul 1979	UNK	UNK	SANFORD	~	Jul	1979		ltf Hatch
117	?	~ Jul 1979	UNK	UNK	SANFORD	~	Jul	1979		ltf Hatch
118	?	19 Jul 1979	UNK	UNK	SANFORD	19	Jul	1979		ltf Hatch
119	?	19 Jul 1979	UNK	UNK	SANFORD	19	Jul	1979		ltf Hatch
120	?	19 Jul 1979	UNK	UNK	SANFORD	19	Jul	1979		ltf Hatch
121	?	19 Jul 1979	UNK	UNK	SANFORD	19	Jul	1979		ltf Hatch
122	?	19 Jul 1979	UNK	UNK	SANFORD					ltf Hatch
123	?	19 Jul 1979	UNK	UNK	SANFORD					ltf Hatch
124	?	19 Jul 1979	UNK	UNK	SANFORD					ltf Hatch
125	?	19 Jul 1979	UNK	UNK	SANFORD					ltf Hatch
126	F	~ 1980	WILD	WILD	FLORIDA USFWS GAINSVLL	~ 5	Apr Aug	1981 1981	40709	Transfer Transfer
	[Death by: Inf	ection ass	ociate	d Bury Un			1983 fter		Death sy) Protozoan]
127	М	~ Jul 1980	WILD	WILD	UNKNOWN FRESNO NY BRONX	14	Oct	1980 1980 1983	NONE 1880 830285	Transfer
			[Death by:	Unkno	wn means]			1987		Death
128	F	~ 1980	UNK	UNK	UNKNOWN HOGLE SEATTLE	16	????		NONE	Transfer
			[Death by:	Unkno	wn means]	5	Aug	1992		Death
129	F	~ 1980	UNK	UNK	UNKNOWN HOGLE SEATTLE		???? Jul	1981	NONE 111338	Transfer
			[Death by:	Unkno	wn means]	۷	Nov	1989		Deach
130	М	~ 1980	WILD	WILD	FLORIDA SANFORD				NONE S28150	_
			[Death by:	Unkno	wn means]	30	nay	2005		Deach
131	М	~ 1980	UNK	UNK	UNKNOWN USFWS MILWAUKEE		???? Jul	1980 1981 1984	NONE NONE H102	Transfer
			[Death by:	Unkno	wn means]					
132	М	~ 1980	UNK	UNK	UNKNOWN PUBLIC PHOENIX BUFFALO	16	~ Apr	1982	NONE NONE 3336 82R4	Transfer Transfer Loan to
			[Death by:	Unkno	wn means]	3	Jaii	エシフエ		Death

Stud #	Sex	Hatch Date	Sire	am	Location	Dat	ce		Local I	D Event
133	M	~ 198			UNKNOWN PITTSBURG ATLANTA PHILADELP	1 31	~ ???? Oct May	1980 ? 1987	NONE 100139 877103 300576	Transfer Transfer
			[Death by:	Unkno	wn means]		3			
134	F	~ 198	O UNK	UNK	UNKNOWN PITTSBURG ATLANTA PHILADELP	31	~ Oct May	1987	100140 877104 300577	Transfer Transfer
			[Death by:	Unkno	wn means]					
135	F	~ 198			FLORIDA FL GM FSH JACKSONVL	15	Jan Jul	1982 1983 1983 1987		Transfer
			[Death by:	Unkno	wn means]					
136	M	~ 198	0 UNK	UNK	UNKNOWN FL GM FSH JACKSONVL	15	Jan Jul	1980 1983 1983 1985		Transfer
			[Death by:	Eutha	nasia (medi	cal) Ur	nknow	n No ne	ecropsy planned]
137	F	14 Aug 198		47	BUFFALO	2	Oct		800233 81R69	
			[Death by:	Unkno	wn means]					
138	М	14 Aug 198	0 50	47	NY BRONX MEMPHIS	4	Mar	1980 1982 1990		
			[Death by:	Unkno	wn means]					
139	M	14 Aug 198	0 50	47	NY BRONX BUFFALO PITTSBURG	2 2	Oct Nov	1981	100948	Loan to
			[Death by:	Unkno	wn means]	2,	1101	1,,,,		Deach
140	М	14 Aug 198	0 50	47	NY BRONX MEMPHIS	3	Mar	1980 1982 1988		
			[Death by:	Unkno	wn means]					
141	М	14 Aug 198	0 50	47	NY BRONX ATLANTA	21	May		800238 877101	
			[Death by:	Unkno	wn means]					
142	М	14 Aug 198	0 50	47	NY BRONX MEMPHIS	3	Mar		800240	
			[Death by:	Unkno	wn means]					
143	F	~ 198	1 WILD	WILD	FLORIDA FL GM FSH BUSCH TAM	~ 10	May Jun	1982 1982 1982 1989		Transfer
			[Death by:	Unkno	wn means]					

Stud #	Sex	Hatch Date	Sire D	am	Location	Da	te	:	Local II	======== D Event =========
=====:	=====	========	=======	=====	=======	===	====	====	======	========
144	М	~ 1981	WILD	WILD	FLORIDA USFWS			1982 1982		-
					RIO GRAND REDWOOD					Transfer ltf Transfer
145	М	~ 1981	UNK	UNK	UNKNOWN USFWS					Hatch Transfer
			(D. 11.1	1	INDIANAPL			1985 1987		Transfer Death
			[Death by:	Unkno	own means]					
146	F	~ 1981	UNK	UNK	UNKNOWN PUBLIC SANDIEGOZ		~ May	1981 1982 1982 1989	NONE	Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]		0 0.11			200011
147	F	~ 1981	UNK	UNK	UNKNOWN PUBLIC		~	1981 1982	NONE	Hatch Transfer
						17	Oct		382058 300302	Transfer Loan to Death
			[Death by:	Unkno	wn means]	O	rcb	1000		Deach
148	?	~ Aug 1981	UNK	UNK	PITTSBURG	~	_	1981 1995		Hatch Death
			[Death by:	Unkno	own means]					
149	F	~ 1982	WILD	WILD	UNKNOWN BACHMANS		???		NONE NONE	Transfer
					MINNESOTA AUBURN U			1983 1983	3640 NONE	Transfer ltf Transfer
150	?	~ 1982	WILD	WILD	FLORIDA FL GM FSH			1983 1983	NONE	Capture Transfer
					BUSCH TAM	15	Jun	1983	BGT3	Transfer
					FLORIDA	12	Sep	1983	NONE	Release
151	M	~ 1982	WILD	WILD	FLORIDA USDI LAW			1989 1989	NONE 2	Capture Transfer
					JACKSONVL				490174	Loan to
					SILVER SP				930306	Transfer
			[Death by:	Unkno	wn means]	9	Jan	1996		Death
152	М	~ 1982	WILD	WILD	FLORIDA			1989	NONE	Capture
					USDI LAW JACKSONVL			1989 1990	3 490175	Transfer Loan to
					SILVER SP		_	1994 1996	930394	Transfer Death
			[Death by:	Unkno	own means]					
153	М	~ 1982	WILD	WILD	FLORIDA USDI LAW	~	Oct	1989 1989	NONE 4	Capture Transfer
			[Death by:	Unkno	JACKSONVL			1990 1994	490176	Loan to Death
				01117110						
154	М	~ 1982	WILD	WILD	FLORIDA USDI LAW		~ ???	1989 ?	NONE 1	Capture Transfer
					JACKSONVL FL GM FSH		Jan		490173 NONE	Loan to Loan to

												=========
							Location					D Event ========
							JACKSONVL	7	Nov		490173	
					[Death by:	Unkno	wn means]					
155	?	~	Jul	1982	UNK	UNK	GAINSVLL	~	Jul	1982		ltf Hatch
156	?	~	Jul	1982	UNK	UNK	GAINSVLL	~	Jul	1982		ltf Hatch
157	?	~	Jul	1982	UNK	UNK	GAINSVLL	~	Jul	1982		ltf Hatch
158	?	~	Jul	1982	UNK	UNK	GAINSVLL	~	Jul	1982		ltf Hatch
159	?	~	Jul	1982	UNK	UNK	GAINSVLL	~	Jul	1982		ltf Hatch
160	?	~	Jul	1982	UNK	UNK	GAINSVLL	~	Jul	1982		ltf Hatch
161	М	7	Jul	1982	UNK	UNK	ALLENWOOD TULSA	15	Mar		10499	Hatch Loan to Death
					[Death by:	Unkno	wn means]					
162	М	7	Jul	1982	UNK	UNK	ALLENWOOD				4	Hatch Death
					[Death by:	Unkno	wn means]					
163	?	16	Jul	1982	48	126	GAINSVLL UNKNOWN			1982 1982	40704 NONE	Hatch Release
164	?	17	Jul	1982	48	126	GAINSVLL UNKNOWN			1982 1982		Hatch Release
165	?	17	Jul	1982	48	126	GAINSVLL UNKNOWN			1982 1982		Hatch Release
166	?	17	Jul	1982	48	126	GAINSVLL UNKNOWN			1982 1982		Hatch Release
167	?	18	Jul	1982	48	126	GAINSVLL UNKNOWN			1982 1982	40708 NONE	Hatch Release
							UNKNOWN		3			Release
168	F	8	Aug	1982	UNK	UNK	PRIVATE LITTLEROC	24	Feb	1982 1983 1997	1734	Hatch Transfer Death
					[Death by:	Unkno	wn means]					200011
169	?	9	Jun	1983	UNK	UNK	BUFFALO			1983 1983		Hatch Death
					[Death by:	Unkno	wn means]					
170	F	10	Jun	1983	UNK	UNK	PRIVATE PUBLIC REDWOOD	19	~ May	1983 1996 1996	NONE 9054	Hatch Transfer Transfer
					[Death by:	Unkno	wn means]	Τ	гер	2004		Death
171	?		~	1983	UNK	UNK	UNKNOWN PRIVATE SANDIEGOZ EMBERYRCH		???? Nov	1983	NONE 010047	Hatch Transfer Transfer ltf Transfer
172	F		~	1983	UNK	UNK	UNKNOWN USFWS SOUTH NEV		Jan			Hatch Transfer ltf Transfer

Stud #	Sex	Hatch Date	Sire D	am	Location	Da	te	:	Local ID	Event
=====:	=====	========		=====	========	===	====:	====	======	=======
173	F	~ 1983	UNK	UNK	UNKNOWN PUBLIC SEATTLE	8	Jan Feb	1983 1984 1984 1989		Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]					
174	М	~ 1983	UNK	UNK	UNKNOWN PRIVATE NY BRONX	29	Jan Aug	1983 1984 1984 1987		Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]					
175	F	~ 1983	UNK	UNK	UNKNOWN ASPCA NY BRONX	14	Jan Mar	1983 1984 1984 1986		Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]					
176	М	~ 1983	UNK	UNK	COLUMBUS HAMPER D TOLEDO CHICAGOLP TOLEDO	19 8	??? Jun Jun Mar	1984 1991	NONE 843083 R1048 843083	Hatch Transfer Transfer Loan to Transfer Death
			[Death by:	Unkno	own means]					
177	М	~ 1983	UNK	UNK	UNKNOWN ST PAUL SEATTLE ST PAUL	13 3	Jan Dec Sep	1983 1984 1988 1992 1995	NONE 1488 880528 1488	Hatch Transfer Loan to Transfer Death
			[Death by:	Unkno	own means]					
178	М	~ 1983	UNK	UNK	UNKNOWN CHICAGOLP		Mar	1983 1984 1990	NONE R235	Hatch Transfer Death
			[Death by:	Unkno	wn means]					
179	F	~ 1983	UNK	UNK	UNKNOWN PUBLIC ROCHESTER		~ Oct	1983 1988 1988 1992	NONE NONE 103157	Hatch Transfer Transfer Death
			[Death by:	Unkno	own means]					
180	М	~ 1983	UNK	UNK	UNKNOWN PUBLIC ROCHESTER HERSHEY	9	~ Oct Aug	1983 1988 1988 1994 2001	NONE NONE 103158 94.47	Hatch Transfer Transfer Loan to Death
			[Death by:	Unkno	own means]	13	oun	∠ ∪∪1		Deacii
181	F	~ 1983	UNK	UNK	UNKNOWN PUBLIC ROCHESTER		~ Oct	1983 1988 1988 1990	NONE NONE 103159	Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]	23	v			200011
182	F	~ 1983	UNK	UNK	UNKNOWN PUBLIC ROCHESTER HERSHEY		~ Oct	1983 1988 1988 1994	NONE NONE 103160 94.48	Hatch Transfer Transfer Loan to

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Stud #	Sex	Hatch Date	Sire	Dam	Location	Date	Local ID	Event	

			[Death by:	Unkno	wn means]	5 N	ov 1995		Death
183	F	~ 1983	UNK	UNK	UNKNOWN PUBLIC ROCHESTER		~ 1983 ~ 1988 Oct 1988 Mar 1990	NONE NONE 103161	Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]				
184	М	~ 1983	WILD	WILD	FLORIDA PUBLIC SANFORD FL VETMED	1	~ 1984 ~ 1986 Aug 1986 Mar 1989 Mar 1989	NONE	Capture Transfer Transfer Transfer Death
			[Death by:	Unkno	wn means]	J	1101 1707		200011
185	F	~ 1983	UNK	UNK	UNKNOWN PUBLIC HERSHEY		~ 1983 ~ 1988 Sep 1988 Jun 1991	NONE NONE 88.94	Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]				
186	F	~ 1984	WILD	WILD	FLORIDA REPT WRLD JACKSONVL LOWRY	17 7	~ 1984 ???? Nov 1987 Oct 1992 Nov 1994		Capture Transfer Transfer Transfer Death
			[Death by:	Unkno	wn means]	27	1101 1334		Deach
187	М	29 Jun 1984	136	135	JACKSONVL LOWRY	7	Jun 1984 Oct 1992 Apr 2003		Hatch Transfer Death
			[Death by:	Unkno	wn means]				
188	М	29 Jun 1984	136	135	JACKSONVL LOWRY	7	Jun 1984 Oct 1992 Dec 1994		Hatch Transfer Death
			[Death by:	Unkno	wn means]				
189	?	~ 1984	UNK	UNK	UNKNOWN PUBLIC BOSTON MS		~ 1984 ???? May 1985	NONE NONE 189058	Hatch Transfer ltf Transfer
190	M	~ 1984	WILD	WILD	FLORIDA USDI LAW JACKSONVL O'LENO ST		~ 1985 ~ 1989 Jan 1990 Feb 1994	6 490178	Capture Transfer Loan to ltf Loan to
191	F	~ 1984	WILD	WILD	FLORIDA USDI LAW JACKSONVL		~ 1985 ~ 1989 Jan 1990 Jul 2003	NONE 5 490177	Capture Transfer Loan to Death
			[Death by:	Unkno	wn means]				
192	М	~ 1984	UNK	UNK	UNKNOWN KRUEGER E AKRON	21	~ 1984 ???? Apr 1988 Jun 1995	NONE NONE 3018	Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]				
193	F	~ 1984	UNK	UNK	UNKNOWN		~ 1984	NONE	Hatch

Stud #	Sex	Hatch Date	Sire Da	am	Location	Dat	ce		Local ID	
======	=====	=======	[Death by:		PRIVATE NY BRONX ST LOUIS	25 4	???? Aug May	? 1988	NONE 880230 389082	Transfer Transfer Loan to Death
194	F	9 Jul 1984	_	60	BUFFALO PHOENIX	20	Nov	1984 1985 1989	84R135 4685	Hatch Transfer Death
195	F	9 Jul 1984	_		BUFFALO PHOENIX	20	Nov	1984 1985 1989		Hatch Transfer Death
196	F	10 Jul 1984	[Death by:		wn means]	10	Jul		84R134	Hatch Death
197	М	10 Jul 1984	[Death by:		wn means] BUFFALO TOLEDO	10 30	Jul Nov	1984 1985	84R137 854069	Hatch Loan to
			[Death by:	Unkno	BUFFALO DREHER PA wn means]	23	Jun		84R137 0151	Transfer Loan to Death
198	М	10 Jul 1984	132 [Death by:		BUFFALO			1984 1993	84R900	Hatch Death
199	М	~ 1985	UNK	UNK	UNKNOWN HOGLE CHICAGOBR		~ Sep	1986		Hatch Transfer Transfer Death
200	М	~ Jan 1985	[Death by:	Unkno WILD	UNKNOWN PRIVATE	26	Aug	1985 1985 1990		Capture Transfer Transfer
201	F	~ 1985	[Death by:	Unkno UNK			Mar	2005		Death
-			[Death by:		PITTSBURG		Feb		100993	Transfer Death
202	F	~ 1985	UNK [Death by:		UNKNOWN PITTSBURG /Unknown B	5	Feb Oct	2006	100994	Hatch Transfer Death cropsy)]
203	F	~ 1985) UNK	UNK	UNKNOWN TC REPTIL TULSA		???? Aug	1985	NONE NONE 7346	Hatch Transfer Loan to
204	F	~ 1985	[Death by:	Unkno UNK	wn means] UNKNOWN PUBLIC	16	_	1993 1985 ?	NONE NONE	Death Hatch Transfer

		Hatch Date	' '		Location	'	Local II	D Event =======
=====	=====	-======	-======	=====		14 Sep 1988 18 Dec 199	3 103156	Transfer Death
			[Death by:	Unkno	own means]			
205	F	~ 1985	UNK	UNK	UNKNOWN PUBLIC ROCHESTER CHICAGOLP STATEN IS	~ 198 ???? 14 Oct 198 13 Nov 198 1 Sep 199 27 May 199	NONE 88 103162 89 R880 95 011210	Hatch Transfer Transfer Loan to Loan to Death
			[Death by:	Unkno	own means]	2, 110, 15,	•	Deach
206	F	~ 1996	UNK		UNKNOWN SCHWARTZ NASHV ZOO	~ 199 ~ Apr 199 9 May 199 8 Apr 200	7 624	Transfer
			[Death by:	Unkno	own means,			
207	?	~ 1985	UNK	UNK	LITTLEROC	~ 198	35	ltf Hatch
208	F	9 Jul 1985	64	63	ATLANTA DREHER PA	9 Jul 198 16 Sep 198 9 Dec 199	0150	Hatch Loan to Death
			[Death by:	Unkno	own means]			
209	М	10 Jul 1985	64	63	ATLANTA AUBURN U	10 Jul 198 18 Jan 198		Hatch ltf Transfer
210	М	10 Jul 1985	64	63	ATLANTA AUBURN U	10 Jul 198 18 Jan 198		Hatch ltf Transfer
211	F	11 Jul 1985	64	63	ATLANTA AUBURN U	11 Jul 198 18 Jan 198		Hatch ltf Transfer
212	F	6 Aug 1985	UNK	UNK	BUFFALO NY BRONX ATLANTA	6 Aug 198 9 Aug 198 29 Oct 198 21 May 198	85 850406 85 850406 87 877102	Hatch Ownership Transfer Loan to
			[Death by:	Unkno	own means]	27 Mar 199	00	Death
213	?	6 Aug 1985	UNK	UNK	BUFFALO	6 Aug 198 4 Sep 198		Hatch
			[Death by:	Unkno	own means]	4 Sep 196		Death
214	F	8 Aug 1985	UNK	UNK	BUFFALO PITTSBURG PHILADELP	8 Aug 198 2 Nov 199 19 Apr 199 19 Aug 199	94 100949 96 301154	Hatch Loan to Transfer Death
			[Death by:	Unkno	own means]	1103 177	•	200011
215	F	16 Jun 1986	UNK	UNK	PITTSBURG JOHN BALL PITTSBURG	16 Jun 198 29 Aug 198 2 Nov 198 21 Apr 200	37 300273 39 100992	Hatch Transfer Loan to Death
			[Death by:	Unkno	own means]	_		
216	М	~ 1986	UNK	UNK	UNKNOWN PUBLIC CHICAGOLP PUBLIC CHICAGOLP	~ 198 ~ Jan 198 5 Jul 198 27 Jun 198 8 Feb 199	NONER351NONE	Hatch Transfer Transfer Transfer Transfer

======	======	========	=======	=====	=======	:===	====:		======	========
Stud #		Hatch Date		am	Location				Local ID	'
======	=====:	=======		=====	=======	:===	====:	=====	=======	========
					PUBLIC	2	May	1991	NONE	Transfer
					CHICAGOLP	25	Feb	1993	R351	Transfer
				•		3	Mar	1993		Death
			[Death by:	Unkno	wn means]					
217	F	~ 1986	UNK	UNK	UNKNOWN		~	1986	NONE	Hatch
			_		NY POLICE		????		NONE	Transfer
					NY BRONX				870219	Transfer
					PITTSBURG			1988		Loan to
			[Death by:	IInkno	wn meangl	4	Jan	1989	'	Death
			[Beach Dy	01111110	wir mearing					
218	M	~ 1986	UNK	UNK	UNKNOWN			1986		Hatch
					PUBLIC			1987		Transfer
					LITTLEROC		_	1987 1992		Transfer Death
			[Death by:	Unkno	wn meansl	4	Uali	1332	•	Death
				0111110	mir mearing,					
219	M	~ 1987	WILD	WILD	FLORIDA			1987		Capture
					FL GM FSH			1987		Transfer
					BUSCH TAM			1988 1996		Transfer Death
			[Death by:	Unkno	wn meansl	12	мау	1990	'	Deach
220	M	~ 1987	WILD	WILD	FLORIDA			1987		Capture
					FL GM FSH			1987		Transfer
					BUSCH TAM			1988 1992		Transfer Death
			[Death by:	Unkno	wn means]	10	ыср	1772		Deach
			-							
221	F	~ 1987	WILD	WILD	FLORIDA			1987		Capture
					FL GM FSH	0	????		NONE	Transfer
					LAKEBUENA			1991	210102	Transfer Death
			[Death by:	Unkno	wn means]		1 0.0	1000		Deach
222	M	~ 1987	WILD	WILD	FLORIDA	•		1987		Capture
					METROZOO		_	1989	н00534	Transfer Death
			[Death by:	Unkno	wn meansl	_	Uali	1222		Death
223	F	~ 1987	UNK	UNK	UNKNOWN			1987		Hatch
					TC REPTIL		_	1987		Transfer
					TULSA		_	1987 1993		Loan to Death
			[Death by:	Unkno	wn means]	۱ ت		100	•	DCUCII
			-		-					
224	M	~ 1987	UNK	UNK	UNKNOWN			1987		Hatch
					PRIVATE	26	????		NONE	Transfer Transfer
					BRIDGEPRT		_	1988 1995		Death
			[Death by:	Unkno	wn means]	-0	5 411			_ 30.011
			-							_
225	F	~ 1987	UNK	UNK	UNKNOWN			1987		Hatch
					USFWS NY BRONX			1991	NONE 910285	Transfer Transfer
					MI DIONY			1997		Death
			[Death by:	Unkno	wn means]	_				
22.5	_	4 - 3 - 60=	4.00		D			100-	00000	
226	F	4 Jul 1987	139	UNK	BUFFALO PITTSBURG				87R132 100950	Hatch Loan to
					DAUGGIII				100950	Ownership
					PHILADELP		_		301155	Transfer

======	=====	========	=======	=====		=====	=====	======	========
Stud #		Hatch Date			Location			Local ID	
======	=====	========	[Death by:				1999		Death
227	М	15 Aug 1987		UNK	REPT WRLD JACKSONVL			487045	Hatch Transfer Death
			[Death by:	Unkno	own means]				
228	М	~ Jan 1988	WILD	WILD	GEORGIA GA DNR ATLANTA	??' 2 Maj		NONE 897100	Capture Transfer Transfer Death
			[Death by:	Unkno	own means]				
229	F	~ 1988	WILD	WILD	FLORIDA FL GM FSH METROZOO	??' 4 Jai		NONE H00479	Capture Transfer Transfer Death
			[Death by:	Unkno	own means]				
230	М	~ 1988	UNK	UNK	UNKNOWN PUBLIC LOUISVILL	??' 17 Jai		NONE 300239	Hatch Transfer Transfer Death
			[Death by:	Unkno	own means]				
231	М	~ 1988	UNK	UNK	UNKNOWN PUBLIC LOUISVILL	??' 17 Jai	n 1989	NONE 300240	Hatch Transfer Transfer
			[Death by:	Other	:/Unknown [2006 Necro		Death ned later]
222	_	11 7-1 1000	_						
232	F	11 Jul 1988	187	186	JACKSONVL FLORIDA		1988 1989	488028 NONE	Hatch Release
233	М	11 Jul 1988	187	186	JACKSONVL FLORIDA		l 1988 n 1989	488029 NONE	Hatch Release
234	F	11 Jul 1988	187	186	JACKSONVL FLORIDA			488030 NONE	Hatch Release
235	F	11 Jul 1988	187	186	JACKSONVL FLORIDA		l 1988 n 1989	488031 NONE	Hatch Release
236	F	11 Jul 1988	187	186	JACKSONVL FLORIDA		l 1988 n 1989	488032 NONE	Hatch Release
237	М	11 Jul 1988	187	186	JACKSONVL FLORIDA		l 1988 n 1989	488033 NONE	Hatch Release
238	F	11 Jul 1988	187	186	JACKSONVL		l 1988 o 1990	488034	Hatch Death
			[Death by:	Unkno	own means]				-
239	М	14 Jul 1988	UNK	UNK	MONTROSE PUBLIC HERSHEY	14 Jul ~20 Jul 28 Jul 23 Nov	l 1988 l 1988	NONE 88.83	Hatch Transfer Transfer Death
			[Death by:	Unkno	own means]				
240	?	1 Aug 1988	64	63	ATLANTA AUBURN U		-	887102 NONE	Hatch ltf Transfer

=======	=====	========		=======	.=======	=======	====		=========
Stud #	Sex	Hatch Dat	e Sire	Dam	Location	Date	[:	Local II	
241	?		88 64		ATLANTA		1988	887103	
			[Death	by: Unkno	own means]	3 Dec	1900		Deach
242	?	1 Aug 19	88 64	63	ATLANTA AUBURN U	1 Aug 18 Jan			Hatch ltf Transfer
243	M	1 Aug 19	88 64	63	ATLANTA	1 Aug 5 Sep		887105	Hatch Death
			[Death	by: Unkno	own means]				
244	?	1 Aug 19	88 64	63	ATLANTA AUBURN U	1 Aug 18 Jan			Hatch ltf Transfer
245	?	1 Aug 19	88 64	63	ATLANTA AUBURN			887107 NONE	Hatch ltf Transfer
246	?	1 Aug 19	88 64	63	ATLANTA AUBURN U	1 Aug 18 Jan			Hatch ltf Transfer
247	?	1 Aug 19	88 64	63	ATLANTA	1 Aug 2 Jan		887109	Hatch Death
			[Death	by: Unkno	own means]				
248	М	30 Dec 19	88 UNK	. UNK	MADEJ J PUBLIC HOUSTON	30 Dec ???? 16 Oct 16 Dec	1993	NONE	Hatch Transfer Transfer Death
			[Death	by: Unkno	own means]	10 200			200011
249	М	~ 19	89 UNK	UNK.	UNKNOWN USFWS STATEN IS BRONX REP NY BRONX	???? 24 Jun 17 Dec	1990 1997 1997	NONE 011058 NONE 970190	Transfer
			[Death	by: Unkno	own means]	10 1149	2001		Deach
250	М	~ 19	89 UNK	UNK	UNKNOWN PUBLIC ST LOUIS	~ Jan	1990	NONE 390047	Hatch Transfer Transfer Death
			[Death	by: Unkno	own means]				
251	М	~ 19	89 UNK	UNK.	UNKNOWN USFWS STATEN IS REPT WRLD	~ ???? 7 Jul 22 Apr	1990	NONE 011061	Hatch Transfer Transfer ltf Transfer
252	М	~ 19	89 UNK	UNK	UNKNOWN FL GM FSH TALLAHASE	???? 7 Sep	1990	NONE 11R004	Hatch Transfer Transfer
			[Death	by: Unkno	own means]	14 Sep	2000		Death
253	?	30 Jun 19	90 188	186	JACKSONVL FL GM FSH	30 Jun 14 Aug			Hatch ltf Transfer
254	?	30 Jun 19	90 188	186	JACKSONVL	30 Jun	1990	490143	Hatch
			[Death	by: Unkno	own means]	12 Jul	1990		Death
255	F	~ 19	90 UNK	UNK	UNKNOWN	~	1990	NONE	Hatch

		======================================			======= Location		====== Local ID	======================================
'						'		=========
					FL GM FSH TALLAHASE	~ Jan 1991 1 Nov 1991	_	Transfer Transfer
256	М	~ 1990	UNK		UNKNOWN PUBLIC NY BRONX	~ 1990 ~ Jan 1991 9 Sep 1991 22 Feb 1998	NONE	Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]			
257	М	~ 1990	UNK	UNK	UNKNOWN PUBLIC NY BRONX	~ 1990 ~ Jan 1991 9 Nov 1991 15 Aug 1992		Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]			
258	F	~ 1990	WILD	WILD	FLORIDA PRIVATE COLUMBIA	~ 1990 ???? 20 Feb 1992 16 Nov 1996	NONE NONE 753	Capture Transfer Transfer Death
			[Death by:	Unkno	wn means;			
259	М	26 Jun 1991		186	FL GM FSH CHICAGOBR	26 Jun 1991 14 Aug 1991 15 Nov 1991 8 Jan 2001	NONE	Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]			
260	?	27 Jun 1991	188	186	JACKSONVL FL GM FSH	27 Jun 1991 14 Aug 1991		Hatch ltf Transfer
261	?	27 Jun 1991	188	186	JACKSONVL FL GM FSH	27 Jun 1991 14 Aug 1991		Hatch ltf Transfer
262	?	29 Jun 1991	188	186	JACKSONVL FL GM FSH	29 Jun 1991 14 Aug 1991		Hatch ltf Transfer
263	?	~ 1991	UNK	UNK	UNKNOWN USFWS PANAMACT	~ 1991 ~ Jan 1992 9 Oct 1992 30 Sep 1993		Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]	_		
264	F	~ 1991	UNK	UNK	UNKNOWN USFWS FL NY BRONX	~ 1991 ~ Jan 1992 14 Oct 1992 18 Feb 1993	NONE NONE 920241	Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]			
265	М	~ 1991	UNK	UNK	UNKNOWN USFWS FL NY BRONX	~ 1991 ~ Jan 1992 14 Oct 1992 23 Mar 1996	NONE	Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]			
266	?	~ 1991	UNK	UNK	UNKNOWN FL GM FSH METROZOO FL GM FSH	~ 1991 ???? 22 May 2003 15 Jul 2003		Hatch Transfer Transfer ltf Transfer
267	M	~ 1991	UNK	UNK	UNKNOWN NM GM&FSH TULSA	~ 1991 ~ 1992 17 Jan 1992	NONE 309014 10455	Hatch Transfer Transfer

Stud #	Sex	Hatch Date	Sire D	am	Location	Date	Local ID	Event
======	===	========	[Death by:			22 Mar		Death
268	М	11 Jul 1991	218	168	LITTLEROC PUBLIC LITTLEROC	11 Jul 5 Apr 2 Aug 22 Mar	1995 NONE 1995 4049	Hatch Transfer Transfer Death
			[Death by:	Unkno	own means]			
269	F	11 Jul 1991			LITTLEROC	11 Jul 21 Mar		Hatch Death
			[Death by:	UHKHC	own means,			
270	F	3 Mar 1992	UNK	UNK	PRIVATE SAN FRAN	3 Mar 14 Feb 1 May	2000 300001	Hatch Transfer Death
			[Death by:	Unkno	own means]			
271	F	~ 1992	UNK	UNK	UNKNOWN GA DNR ATLANTA	~ Jan	1993 937109	Hatch Transfer Loan to Death
			[Death by:	Unkno	own means]			
272	F	~ 1992	UNK	UNK	UNKNOWN USFWS MONTGOMRY	~ ~ Jan 16 Jul 3 Feb	1993 1293	Hatch Transfer Transfer Death
			[Death by:	Unkno	own means]			
273	М	~ 1992	UNK	UNK	PRIVATE BIRMINGHM	~ 17 Nov 28 Feb		Hatch Transfer Death
			[Death by:	Unkno	own means]			
274	F	~ 1992	UNK	UNK	PRIVATE BIRMINGHM	~ 17 Nov 26 Feb		Hatch Transfer Death
			[Death by:	Unkno	own means]			
275	М	~ 1992	UNK	UNK	UNKNOWN USFWS NORFOLK	~ Jan	1992 NONE 1993 NONE 1993 930071	Hatch Transfer Loan to
276	М	1 Jul 1992	UNK	UNK	PRIVATE PUBLIC ATLANTA	1 Jul ~ Sep 1 Oct 27 Feb	1992 N1 1992 927123	Hatch Transfer Loan to Death
			[Death by:	Unkno	own means]	27 100	2001	Deach
277	F	~ 1992	WILD	WILD	PRIVATE PUBLIC ATLANTA WL DISC C BUFFALO	~ Sep 1 Oct 14 Nov	1992 927124 2006 2009 R09050	Hatch Transfer Loan to Transfer Transfer Death
			[Death by:	Unkno	own means]		· = •	
278	F	~ 1992	UNK	UNK	UNKNOWN FL GM FSH BUSCH TAM	~ ~ Jan 3 Mar 10 Feb	1993 60642	Hatch Transfer Transfer Death
			[Death by:	Unkno	own means]	10 100	2300	20011

Stud #	Sex	Hatch Date	Sire D	am	Location	
======	=====	========	=======	=====	=======	
279	F	~ 1992	UNK	UNK		~ 1992 NONE Hatch ~ Jan 1993 796A Transfer 15 Jul 1993 60643 Transfer
			[Death by:	IInkno		29 Jul 2005 Death
			[Death by:	OHMHO	wir mearis;	
280	М	1 May 1993	UNK	UNK	PUBLIC	1 May 1993 4473 Hatch ???? NONE Transfer 14 Dec 1993 4473 Loan to 19 Nov 1998 NONE ltf Transfer
281	F	21 Jun 1993	UNK	UNK	PUBLIC	21 Jun 1993 NONE Hatch ~ Oct 1993 NONE Transfer
						18 Oct 1993 93.126 Transfer 26 Jul 2003 Death
			[Death by:	Unkno	wn means]	
282	М	~ Jul 1993	UNK	UNK	PUBLIC	~ Jul 1993 Hatch
			[Death by:	Unkno	wn means]	17 Apr 2007 Deach
283	?	~ 1993	UNK	UNK	UNKNOWN PRIVATE BREVARD	~ 1993 NONE Hatch ~ 1994 Transfer 26 May 1994 940057 Transfer 28 Sep 1995 Death
			[Death by:	Unkno	wn means]	Zo Bep 1999 Deach
284	М	~ 1993	UNK	UNK	TOLEDO	~ 1993 NONE Hatch ~ Jan 1995 NONE Transfer 1 Sep 1995 953097 Transfer 14 Nov 2000 R0023 Loan to
			[Death by:	Unkno	wn means]	25 Jul 2008 Death
285	F	24 Aug 1993				24 Aug 1993 9391 Hatch 19 Jun 1994 NONE ltf Transfer
286	М	25 Aug 1993	197	208	BUFFALO	25 Aug 1993 9392 Hatch 25 Aug 1993 93R94 Ownership 1 Sep 2000 9392 Ownership
			[Death by:	Unkno	wn means]	3 May 2003 Death
287	?	25 Aug 1993	197	208		25 Aug 1993 9393 Hatch 23 Feb 1994 ltf Transfer
288	M	25 Aug 1993	197	208	BUFFALO	25 Aug 1993 9394 Hatch 25 Aug 1993 93R95 Ownership 3 Feb 1995 950010 Loan to
289	F	26 Aug 1993	197	208	BUFFALO DREHER PA	26 Aug 1993 9396 Hatch 26 Aug 1993 93R96 Ownership 19 Jun 1994 9396 Ownership 20 Jun 1994 HS9416 Transfer
			[Death by:	Old a	ge Unknown	24 Mar 2006 Death Generalized Circulatory, seconda
290	F	26 Aug 1993	197	208		26 Aug 1993 9395 Hatch 3 Sep 2000 R0015 Transfer
			[Death by:	Unkno	wn means]	27 Aug 2007 Death

	Sex	Hatch Date	Sire D	am	Location	Dat	:e	[:	Local ID	Event
======			· 	=====		====	====	====	======	=========
201	2	26 712 1002	107	200	DDEILED DA	26	7~	1002	0207	IIa+ab
291	3	26 Aug 1993	197	208	DREHER PA					ltf Transfer
					OKEEHEELE	21	I. CD	1994		iti ilansiei
292	М	27 Aug 1993	197	208	DREHER PA	27	Aug	1993	9398	Hatch
					BUFFALO				93R97	
					AUDUBON	29	Nov	1994	R1292	Loan to
						26	Mar	2007		Death
			[Death by:	Unkno	own means]					
293	M	13 Oct 1993	256	225	NY BRONX	12	Oat	1002	930268	Hatch
273	1-1	13 000 1993	250	225	PRIVATE			1993		Loan to
					11(1,41111			2007		Death
			[Death by:	Unkno	own means]					
294	F	13 Oct 1993	256	225	NY BRONX				930269	Hatch
					PRIVATE				NONE	Loan to
			[Dooth b	TToo less o		30	Jun	2007		Death
			[Death by:	Unkno	own means]					
295	F	13 Oct 1993	256	225	NY BRONX	1.3	Oct	1993	930270	Hatch
275	-	10 000 1000	230	220	111 21101111			2000	750270	Death
			[Death by:	Unkno	own means]		-			
296	M	13 Oct 1993	256	225	NY BRONX				930271	
			[D 1]] .	1	1	25	Jun	2005		Death
			[Death by:	Unkno	own means]					
297	М	13 Oct 1993	256	225	NY BRONX	13	Oct	1993	930272	Hatch
27,		13 000 1333	230	223	IVI DICOIVII			1997		Death
			[Death by:	Unkno	own means]					
298	M	~ 1994	UNK	UNK	UNKNOWN			1994	NONE	Hatch
					EVERETTAC		????			Transfer
					SEATTLE				950058	
					BL HILLS				950058	
					ви штицэ		_	2006		Death
			[Death by:	Unkno	own means]		0 0.11	2000		200011
			-							
299	F	~ 1994	UNK	UNK	UNKNOWN		~	1994	NONE	Hatch
					PRIVATE		????		NONE	Transfer
					NY BRONX				960192	Transfer
			[Death bir	0+h0-	c/Unknown U			2008	nav nlas	Death
			inearii by.	ocner	- \ OIIVIIOMII U	\11VII(MII I	AECT O	bea bran	med rater]
300	М	~ 1994	UNK	UNK	PRIVATE		~	1994	NONE	Hatch
					PUBLIC	~		1996	NONE	Transfer
					NY BRONX				960190	Transfer
								2005		Death
			[Death by:	Eutha	anasia (medi	.cal)	Ur	nknow	n No nec	ropsy planned]
301	F	~ 1994	UNK	דואזע	PRIVATE			1994	NONE	Hatch
201	T.	·- 1554	OIM	OIM	PUBLIC		????		NONE	Transfer
					NY BRONX	19			960193	Transfer
					5			2006		Death
			[Death by:	Other	c/Unknown U		_		psy plan	
302	F	1 Oct 1994	UNK	UNK		1		1994		Hatch
-					EMERYVILL	_	333		NONE	Transfer
						U	H'AD	1995	9038	Transfer
-					REDWOOD					
					BUFFALO	13	Jul	2000		Loan to Death

======	=====	:===:	:	====:		======	=======	====	====	=====	======	:=======
						Dam	Location					Event
======	=====	:===:	====	====:	======	======	=======	====	====	====	======	=======================================
303	М		~	1995	WILD	WILD	FLORIDA FL VETMED SANFORD	10	Jan Jan	1996	NONE 114936 966601	Capture Transfer Transfer
	[Deat	h by	y: O1	ther/1	Jnknown	Unknown	Necropsy		_	2005 later	Unknown	Death n after necropsy]
304	M	1	Jun	1995	280	168	LITTLEROC	! 1	Jun	1995	4779	Hatch
305	М	1	Jun	1995	280	168	LITTLEROC	! 1	Jun	1995	4780	Hatch
							DISNEY AK		_	1998 1998	980759	Loan to Death
					[Death b	y: Unkno	wn means]	,	Aug	1000		Deach
306	М	2	Jun	1995	280	168	LITTLEROC PUBLIC			1995 1996	4786 NONE	Hatch ltf Transfer
307	М	2	Jun	1995	280	168	LITTLEROC PUBLIC			1995 1996	4787 NONE	Hatch ltf Transfer
308	М		~	1995	UNK	UNK	PRIVATE PUBLIC NY BRONX		~ Nov	1995 1996 1996 1997	NONE NONE 960191	Hatch Transfer Transfer Death
					[Death b	y: Unkno	wn means]					200011
309	М	4	Jul	1995	265	225	NY BRONX			1995 1999	950133	Hatch Death
					[Death b	y: Unkno	wn means]					
310	М	4	Jul	1995	265	225	NY BRONX PRIVATE	1	Apr	1997	950134 0945	Hatch Transfer
					[Death b	y: Unkno	wn means]	21	Jun	1998		Death
311	М	4	Jul	1995	265	225	NY BRONX			1995 2007	950135	Hatch Death
					[Death b	y: Other	/Unknown				psy plan	nned later]
312	F	4	Jul	1995	265	225	NY BRONX				950136	Hatch
					[Death b	y: Unkno	wn means]	24	Oct	2004		Death
313	F	4	Jul	1995	265	225	NY BRONX			1995 2008	950137	Hatch Death
					[Death b	y: Other	/Unknown				psy plan	nned later]
314	М	9	Jul	1995	UNK	UNK	HARBSMEIE BESSETTE GAINSVLL ORLANDOSC	20 4	Dec Sep	1995 1995 1998 2008	NONE NONE 40711 R08004	Hatch Transfer Transfer Transfer
315	М	25	May	1996	UNK	UNK	ALPINE C RANCHO DE LITTLEROC BUFFALO	. ~ ! 30	Oct Oct	1996 1996 1996 2000	NONE NONE 5104 R0019	Hatch Transfer Transfer Loan to
316	F	25	May	1996	UNK	UNK	ALPINE C RANCHO DE LITTLEROC	30	Oct Oct	1996 1996 1996 2003	NONE NONE 5105	Hatch Transfer Transfer Death
					[D+1- 1	TT1-						

[Death by: Unknown means]

		Hatch Date			Location			Local ID	=================== Event
======			========	=====	=======	====	======	=======	===========
317	F	25 May 1996	UNK	UNK	ALPINE C	25	May 199	6 NONE	Hatch
317	Ľ	23 May 1990	ONK	OIVIC	RANCHO DE		Oct 199		Transfer
					LITTLEROC		Oct 199		Transfer
318	M	~ 1996	WILD	WILD	FLORIDA		~ 199		Capture
					PUBLIC		????	NONE	Transfer
					METROZOO	28	Nov 200	0 R00037	Transfer
319	F	~ 1996	UNK	UNK	EMERYVILL		~ 199	6 NONE	Hatch
			-	_	NASHV ZOO		????	822	Transfer
					CINCINNAT	19		8 398066	Loan to
320	M	5 Jul 1996	UNK	UNK			Jul 199		Hatch
					NEWPORTKY	11	Apr 200	3 DC0301	Loan to
321	М	~ Aug 1996	UNK	UNK	UNKNOWN	~	Aug 199	6	Hatch
			-	_	PRIVATE			6	Transfer
					HOMOSASSA				Transfer
					LOWRY			8 303371	Transfer
322	M	~ Sep 1996	UNK	UNK	EMERYVILL	~	Sep 199	6 NONE	Hatch
					PRIVATE		3333	NONE	Transfer
					NASHV ZOO	19	Sep 199	8 708	Loan to
202	3.4	g 100 <i>C</i>	TINTE	T T N T T Z	EMEDSZIII		C 100	CNONE	II.a.t. a.b.
323	М	~ Sep 1996	UNK	UNK	EMERYVILL SCHWARTZ	~	Sep 199	6 NONE NONE	Hatch Transfer
					NASHV ZOO	10	Sep 199		Loan to
					CINCINNAT		_	8 398067	Loan to
					CINCINNAI		Nov 200		Death
			[Death by:	Unkno	own means]				
									_
324	M	8 Jun 1997	154	191	JACKSONVL			7 497050	Hatch
			[Death by:	IInkno	own meansl	13	May 200	3	Death
				0111111	own means,				
325	M	8 Jun 1997	154	191	JACKSONVL	8	Jun 199	7 497051	Hatch
					SANFORD	11	Nov 200	1 ED0111	Loan to
					JACKSONVL	16	Dec 200	5 497051	Transfer
					BUSCH TAM			8 63987	Transfer
		[D 1]]	0+1 /77 1	_			Nov 200		Death
		[Death by:	Otner/Unkn	own (Jnknown Cai	raiov	rascular	Unknown a	after necropsy
326	F	8 Jun 1997	154	191	JACKSONVL	8	Jun 199	7 497052	Hatch
	_						Jul 199		Death
			[Death by:	Unkno	own means]				
200	_	0 - 1005	154				- 100		
327	F	8 Jun 1997	154	191				7 497053	Hatch
					TAMPA AQ			9 300151	Loan to
					JACKSONVL		Mar 200 Dec 200	6 497053	Transfer
			[Death by:	Other	r/Unknown (Death
			[Death by:	Ochici	L / OIIKIIOWII	JIINIIC	WII NCCI	орау ріаш	ica faccij
328	F	8 Jun 1997	154	191	JACKSONVL	8	Jun 199	7 497054	Hatch
						12	Jan 200	4	Death
			[Death by:	Unkno	own means]				
329	2	9 Jun 1997	154	101	ͳλΟυσοντι	0	Tun 100	7 /07055	Uat ch
349	3	J JUII 199/	T24	191	JACKSONVL		Jun 199 Jun 199	7 497055 7	Hatch Death
			[Death by:	Unkno	own meansl	ر ک	J ULL 199	,	DCGCII
330	?	9 Jun 1997	154	191	JACKSONVL			7 497056	Hatch
					_	9	Jun 199	7	Death
			[Death by:	Unkno	own means]				

======		:======:		======	.=======		====		======	
		Hatch Date								D Event
======		:======:	=======	======	:=======		====	=====	======	=========
331	?	9 Jun 199'	7 154	191	JACKSONVL	9	Jun	1997	497057	Hatch
								1997		Death
			[Death b	y: Unkno	own means]					
			_							_
332	F	~ 199'	7 UNK	UNK				1997		Hatch
					DELMAR NY BRONX	_	???		NONE 980009	
					NI BRONA			2004		Death
			[Death b	v: Unkno	own means]	10	mag	2001		Deach
				_						
333	M	~ 199'	7 UNK	UNK	CALI		~	1997	NONE	Hatch
					PUBLIC		333	?	NONE	
					MONTGOMRY			2000		
					PUBLIC	28	Mar	2000	NONE	ltf Transfer
334	М	17 Jul 199	7 200	289	HOMOGAGGA	17	T., 1	1007	HS9707	Hatch
334	IVI	17 JUL 199	/ 200	209	HOMOSASSA RANBOWDEP			1997		ltf Transfer
					KANBOWDEF	U	Dec	1997	NONE	ici ilansiei
335	F	~ Aug 1999	9 WILD	WILD	MARTIN CO	~	Aug	1999	NONE	Hatch
					FL FWCC			1999		Transfer
					TCWC		~	2000	UNK	Transfer
					METROZOO	15	Apr	2010	10R022	Transfer
	_									· •
336	F	20 Jul 199'	7 200	289	HOMOSASSA			1997 1997	HS9708	Hatch
			[Death h	w: Infec	stion aggodi					Death psy planned]
			[Death D	y· IIIICC	cion associ	Lacci	а Б	ary IV	O IICCIO	psy pranned;
337	M	~ Sep 199'	7 UNK	UNK	EMERYVILL	~	Sep	1997	NONE	Hatch
					SCHWARTZ		355		NONE	Transfer
					NASHV ZOO	19	Sep	1998	710	Loan to
					CINCINNAT	19	Nov	1998	398068	Loan to
220		100					_	0000		~ .
338	М	~ 199	8 WILD	WILD	UNKNOWN			2000 2000		Capture Transfer
					FL GM FSH BUSCH TAM			2000		
					JACKSONVL				408334	
					OTICIOCIVE	Ū	1101	2000	100551	TTAILDICI
339	F	10 Aug 200	3 UNK	UNK	HARBSMEIE	10	Aug	2008	CH0801	Hatch
					SANFORD	12	Dec	2008	ED044	Transfer
			_							_
340	3	~ 1998	3 UNK	UNK	UNKNOWN			1998		Hatch
					HOARD	22	???		NONE	Transfer
					LOWRY FLORIDA		_	1999	302120 NONE	
					FHORIDA	27	110 0	エフフフ	NONE	Release
341	F	~ 1998	B UNK	UNK	PRIVATE		~	1998	NONE	Hatch
					MONTGOMRY	14		2000		
						22	Jul	2002		Death
			[Death b	y: Unkno	own means]					
2.40		2 - 3 100				_		1000		
342	М	3 Jul 199	3 UNK	UNK	PRIVATE			1998		
					NC SM RAL	9	Aug	2003	A37102	Transfer
343	М	~ Jun 2001	l UNK	UNK	ELLIOT	~	Jun	2001	UNK	Hatch
3.5		2 322 200	32.20	02.20	SAMIELLE			2002		
					FORTWORTH	22			205715	
344	F	~ 1999	9 UNK	UNK	HARBSMEIE			1999		Hatch
					I ONDI		???		NONE	
					LOWRY	4	Aug	2000	302307	Transfer
345	?	~ 1999	9 WILD	WILD	UNKNOWN		~	1999	NONE	Capture
										<u> </u>

		Hatch Date	•							Event
======	====	=======	=======	=====	NATURWLD	30	???? Nov	?	HS0177	Transfer Transfer Release
346	F	????	WILD	WILD	UNKNOWN PRIVATE MEMPHIS	5	???? Sep		NONE NONE 20130	Capture Transfer Transfer Death
			[Death by:	Unkno	wn means]	~	Uali	2005		Deach
347	М	~ 2000	UNK	UNK	UNKNOWN PUBLIC CHICAGOBR	23	~ Apr	2001 2001	673	Hatch Transfer Transfer Death
			[Death by:	Eutha	nasia (med:					n (after necrop
348	F	~ 2000	UNK	UNK	UNKNOWN PUBLIC CHICAGOBR	23	~ Apr	2001	674	Hatch Transfer Transfer Death
			[Death by:	Unkno	wn means]					
349	М	~ 2000	WILD	WILD	FLORIDA PUBLIC SANFORD	~ 1 10	Jan Jan	2008 2008 2008 2010	NONE NONE 7137	Capture Transfer Transfer Death
			[Death by:	Unkno	wn means]		0 011	2020		200.011
350	?	????	WILD		FLORIDA LOWRY	26	Sep	2000 2001 2001	302485	Capture Transfer Death
			[Death by:	Unkno	wn means]					
351	?	~ 1 Aug 2000	200	289	HOMOSASSA RANBOWDEP					Hatch ltf Transfer
352	?	~ 1 Aug 2000	200	289	HOMOSASSA NATURE					Hatch ltf Transfer
353	?	23 May 2002	315	302	BUFFALO			2002 2002	R02054	Hatch Death
			[Death by:	Unkno	wn means]		11412			
354	?	23 May 2002			BUFFALO			2002 2002	R02055	Hatch Death
			[Death by:							
355	?	23 May 2002	284 [Death by:		BUFFALO wn meansl			2002	R02056	Hatch Death
356	?	23 May 2002			BUFFALO	23	May	2002	R02057	Hatch
			[Death by:	Unkno	wn means]		_	2002		Death
357	?	23 May 2002	284	290	BUFFALO		_	2002 2002	R02058	Hatch Death
			[Death by:	Unkno	wn means]	23				200022
358	?	23 May 2002			BUFFALO		_	2002 2002	R02059	Hatch Death
			[Death by:	Unkno	wn means]					

				======================================		======== Location				====== Local ID	======== Event
======	=====	=======	====:	========	=====	=======	===:	====	====	======	=========
359	?	23 May	2002	284	290	BUFFALO		_	2002 2002	R02060	Hatch Death
				[Death by:	Unkno	wn means]	23	нау	2002		Deach
360	М	10 7,1	2002	UNK	TINTE		1 2	T., 1	2002	MONTE	Hatch
300	М	13 Jul	2002	UNK	OINK	PRIVATE OMAHA			2002		Transfer
261			0000						0000	170170	a
361	М	~	2003	WILD	MTTD	UNKNOWN FL GM FSH			2003 2006		Capture Transfer
						GAINSVLL	30		2006		Transfer
362	М	21 Jun	2003	284	200	BUFFALO	21	Tun	2003	R03015	Hatch
302	1-1	ZI UUII	2005	204	200	TOLEDO			2005		Transfer
262	2.6	01 7	2002	204	200	DIJERATO	0.1	T	2002	D02016	TT - b l-
363	М	21 Jun	2003	284	290	BUFFALO			2003	R03016	Hatch Death
				[Death by:	Eutha	nasia (medio					n (after necropsy)]
364	?	21 Jun	2003	284	290	BUFFALO	21	Jun	2003	R03017	Hatch
501	•	ZI Guii	2005	201	200	BOTTMEO			2003		Death
				[Death by:	Unkno	wn means]					
365	?	21 Jun	2003	284	290	BUFFALO				R03018	Hatch
				[Death by:	IInkno	wn meangl	21	Jun	2003		Death
				[Beach By	OIIIIIO	wir mearib;					
266	0	01 7	2002	204	200	DIJERATO	0.1	T	2002	D02010	TT - b l-
366	?	21 Jun	2003	284	290	BUFFALO			2003	R03019	Hatch Death
				[Death by:	Unkno	wn means]					
367	F	~ 1 Jul	2003	UNK	IINK	HARBSMEIE /	~ 1	.T11]	2003		Hatch
307	-	1 041	2003	OTVIC	01111	SANFORD			2005		Transfer
368	F	3 Aug	2002	200	200	HOMOSASSA	2	7,110	2002	HS0327	Hatch
300	Г	3 Aug	2003	200	209	ORL SCI C		_			
						GAINSVLL	18	Nov	2008	40713	Transfer
369	?	3 Aug	2003	200	289	HOMOSASSA	3	Aua	2003	HS0328	Hatch
								_			ltf Transfer
370	2	3 Aug	2003	200	289	HOMOSASSA	3	Διια	2003	HGU330	Hatch
370	•	3 Aug	2003	200	209			_			ltf Transfer
271	0	2 7	2002	200	200	HOMOGR GGR	2	7	2002	*********	TT - b l-
371	?	3 Aug	2003	200	289	HOMOSASSA BUSCHWS	21	Oct	2003	HS0330	ltf Transfer
372	F	3 Aug	2003	200	289	HOMOSASSA CHINSEGUT					Hatch Transfer
						CITINDEGOT	12	Uan	2005		Transici
373	?	3 Aug	2003	200	289	HOMOSASSA					
				[Death by:	Other	/Unknown Bı			2008 nown		Death ecropsy)]
				_			_				
374	?	3 Aug	2003	200	289	HOMOSASSA		_	2003		Hatch Death
				[Death by:	Unkno	wn means]					
375	М	28 .Tiin	2004	284	290	BUFFALO	28	Jun	2004	R04000	Hatch
ر _ا ر	1-1										
376	M	28 May	2005	315	290	BUFFALO			2005 2009		Hatch Death
				[Death by:	Eutha	nasia (medio					n (after necropsy)]

				======================================						====== Local ID	======= Event
======	=====	======	=====	=======		========	====		====:	======	=========
377	M	28 May	2005	315	290	BUFFALO			2005 2009	R05011	Hatch Death
				[Death by:	Eutha	nasia (medi					n (after necropsy)]
378	М	29 May	2005	315	290	BUFFALO	29	May	2005	R05010	Hatch
379	M	~	2005	WILD	WILD	UNKNOWN		~	2006	NONE	Capture
						HOMOSASSA					
				[Death by:	IInkno	wn meansl	1	Mar	2009		Death
				[Beach D]	01111110	wir mearib]					
380	M	~	2006	UNK	UNK	UNKNOWN					Hatch
						PUBLIC USFWS	~	~ Feb	2007		Transfer Transfer
						DUBUQUE	~	Mar	2007		Transfer
						ST LOUIS	30	Apr	2007	105724	Transfer
381	M	23 Jul	2006	UNK	IINK	PRIVATE	23	.T11]	2006	NONE	Hatch
301	1.1	25 041	2000	OIVIC	OIVIC	INDIANAPL				_	Transfer
200	_	00 - 1	0006						0005		1
382	F	23 Jul	2006	UNK	UNK	PRIVATE INDIANAPL			2006	NONE 207047	Hatch Transfer
						111017111111111111111111111111111111111	21	пау	2007	207017	Transfer
383	M	21 May	2005	UNK	UNK	CALIFORNI			2005		Hatch
						NEMZOFF ALLENWOOD			2008 2009		Transfer Transfer
						ORIANNE		_	2010	16	Transfer
										_*	
384	F	1 May	2007	UNK	UNK	CALIFORNI			2007 2008		Hatch
						NEMZOFF ALLENWOOD			2008		Transfer Transfer
						ORIANNE			2010	17	Transfer
205	_	15 - 1	0004						0004		1
385	F	~15 Jul	2004	UNK	UNK	UNKNOWN FT WAYNE			2004 2008		Hatch Transfer
						11 1111111	23	our	2000	50055	Transfer
386	?	~	2004	UNK	UNK	HERSHEY	21	Feb	2009	A9.01	Transfer
387	M	~	2005	UNK	UNK	LAFAY IND	10	May	2008	880495	Transfer
388	F	4 Jul	2003	UNK	UNK	HARBSMEIE	4	Jul	2003	UNK	Hatch
						LOUISVILL	25	May	2005	301959	Transfer
389	M	~ May	1996	UNK	UNK	SEIB	~	Mav	1996	UNK	Hatch
307	1.1	ray	1000	OIVIC	OIVIC	MEMPHIS		_	2008	22631	Transfer
200			1006						1006		1
390	M	~ May	1996	UNK	UNK	SEIB MEMPHIS		_	1996 2008	UNK 22632	Hatch Transfer
						1121111112	3	000	2000	22032	Transfer
391	M	10 Aug	2001	UNK	UNK	ALBURY		_	2001		Hatch
						HARTSHORN OAKLAND			2001 2009	UNK 2541	Transfer Transfer
						OTHELIMO	2.2	000	2005	2311	Transfer
392	F	~ Aug	2001	UNK	UNK	EMERYVILL			2001	UNK	Hatch
						HARTSHORN OAKLAND			2002 2009	UNK 2542	Transfer Transfer
						OAKLIAND			2009	4544	Death
				[Death by:	Other	/Unknown U				psy plan	
202	2	7~	2002	TTATIZ	TINTE	т саргтег		70 20 20	2002	TTNTIZ	Hat ah
393	?	~ Apr	∠002	UNK	UNK	T.CARLISL PUBLIC	~		2002 2003	UNK UNK	Hatch Transfer
						TAMPA AQ	18			300240	Transfer
						PUBLIC	20	Sep	2008	UNK	ltf Transfer

Stud #	Sex	Hat	ch I	Date	Sire	Dam	Location	Dat	ce]	Local ID	ı
	=====	====	====	=====	======	======	=======	===:		====:	======	========
394	М	10	Aug	2008	UNK	UNK	M.RAND TAMPA AQ		_		UNK 300242	Hatch Transfer
395	М	5	Sep	2001	UNK	UNK	RC WL DISC C				2001RC	Hatch Transfer
396	F	30	Aug	2004	UNK	UNK	RC	30	Aug	2004	2004RC	Hatch
397	М	12	λυα	2008	WILD	MIID	WL DISC C AUBURN			2009		Transfer Hatch
357	rı	13	Aug	2000	WILD	WILD	ORIANNE		_	2010		Transfer
398	F	14	Aug	2008	WILD	WILD	AUBURN ORIANNE AUBURN	22	Jan	2008 2010 2010	A-4 PO-02 A-4	Hatch Transfer Transfer
399	F	21	Aug	2008	WILD	WILD	AUBURN U ORIANNE			2008	B-9 PO-03	Hatch Transfer
400	F	20	Aug	2008	WILD	WILD	AUBURN U	20	Aug	2008	C-3	Hatch
401	F	17	T., 1	2009	WILD	MIID	ORIANNE AUBURN U			2010		Transfer Hatch
401	Г	17	oui	2009	WILD	WILD	ORIANNE			2010	PO-05	Transfer
402	F	27	Jul	2009	WILD	WILD	AUBURN U ORIANNE			2009 2010		Hatch Transfer
403	М	16	Jul	2009	WILD	WILD	AUBURN U ORIANNE			2009 2010	F-4 PO-07	Hatch Transfer
404	F	23	Jul	2009	WILD	WILD	AUBURN U ORIANNE			2009 2010	G-3 PO-08	Hatch Transfer
405	М	3	Aug	2009	WILD	WILD	AUBURN U ORIANNE		_	2009 2010		Hatch Transfer
406	М	2	Aug	2009	WILD	WILD	AUBURN U ORIANNE				I-3 PO-10	Hatch Transfer
407	F	4	Aug	2009	WILD	WILD	AUBURN U ORIANNE			2009 2010		Hatch Transfer
408	М	11	Aug	2008	UNK	UNK	HARBSMEIE ORIANNE			2008 2010	080101 PO-12	Hatch Transfer
409	F	~ 1	Jun	2008	UNK	UNK	PALMDALE ORIANNE			2008 2010	2AS1F2 PO-13	Hatch Transfer
410	М	6	Jul	2009	UNK	UNK	NEW FAIR ORIANNE			2009 2010	UNK PO-14	Hatch Transfer
411	F	2	Jul	2009	UNK	UNK	NEW FAIR	2	Jul	2009	UNK	Hatch
412	F		~	2000	WILD	WILD	ORIANNE MARION CO			2010	PO-15 NONE	Transfer Capture
112				2000	***************************************	итпр	FL FWCC ORIANNE	19	Apr	2010 2010 2010	NONE	Transfer Transfer
413	F			1996	UNK	UNK	TULSA			2010		Transfer

TOTALS: 159.130.124 (413)

Location Glossary for the Eastern Indigo Snake Studbook by ISIS Mnemonic

AKRON Akron Zoological Park

500 Edgewood Ave., Akron, Ohio, USA, 44307-2199

330.375.2550x7233 fax: (330)375-2575 mdstuder@akronzoo.org

ALBURY Fred Albury, private breeder, California, USA

ALLENWOOD Clyde Peeling's Reptiland

18628 US Route 15, Allenwood, Pennsylvania, USA, 17810 (570)538-1869 fax: (570)538-1714 chad@reptiland.com

ALPINE C

AMERICAS AMERICAN REGION

ASPCA American Society for Prevention of

Cruelty to Animals, USA

ATLANTA Zoo Atlanta

800 Cherokee Ave. SE, Atlanta, Georgia, USA, 30315-1440 404.624.5926 fax: 404.624.5841 dforde@zooatlanta.org

AUBURN Auburn Botanic Gardens

Chiswick Rd., Auburn, New South Wales, Australia, 2144

AUBURN U Auburn University

Auburn, Alabama, USA

AUDUBON Audubon Zoo

6500 Magazine St., New Orleans, Louisiana, USA, 70178-4327 504.212.5368 fax: 504.212.5471 lrobledo@auduboninstitute.org

BACHMANS

BATTLE CR Binder Park Zoo

7400 Division Dr., Battle Creek, Michigan, USA, 49014-9500 (269)979-1351 fax: (269)979-8834 registrar@binderparkzoo.org

BESSETTE Ophiological Services (Eugene Bessette)

13916 SW Archer Road, Archer, Florida, USA, 32618

(352)495-3075

BIRMINGHM Birmingham Zoo

2630 Cahaba Rd., Birmingham, Alabama, USA, 35223

(205)879-0409 fax: (205)879-9426 lcost@birminghamzoo.com

BL HILLS Reptile Gardens

Box 620, Rapid City, South Dakota, USA, 55709

+1.800.335.0275

BOSTON MS Museum of Science - Live Animal Center

Science Park, Boston, Massachusetts, USA, 02114-1099 (617)589-0333 fax: (617)589-0389 lstevens@mos.org

BREVARD Brevard Zoo

8225 N. Wickham Rd., Melbourne, Florida, USA, 32940-7924 (321)254-9453x17 fax: (321)259-5966 msmurl@brevardzoo.org

BRIDGEPRT Connecticut's Beardsley Zoo

1875 Noble Ave., Bridgeport, Connecticut, USA, 06610 203.332.4249 fax: (203)394-6577 ltomas@beardsleyzoo.org

BRONX REP Bronx Reptiles

Bronx, New York, USA

BUFFALO Buffalo Zoological Gardens

300 Parkside Ave., Buffalo, New York, USA, 14214-1999

(716)995-6149 fax: (716)837-0738 registrar@buffalozoo.org

BUSCH TAM Busch Gardens Tampa Bay

3605 Bougainvillea Ave., Tampa, Florida, USA, 33612

813.987.5544 fax: (813)987-5548 raina.collins@buschgardens.com

BUSCHWS

CALI Fundacion Zoologica de Cali

Carrera 2a.Oeste Callel4 esquina, Cali, Valle, Colombia, 4265

572 892 7474x118 fax: 572 892 7474x105 adrigiron@zoologicodecali.com.co

CALIFORNI CALIFORNIA

Usa, North America

CHASE B Charles (Bill) P. Chase Co. Inc.

7330 NW 66th St, Miami, Florida, USA, 33166

CHATTAHOO Chattahoochee Nature Center

9135 Willeo Rd., Roswell, Georgia, USA, 30075

(770)992-2056

CHICAGOBR Chicago Zoological Park

3300 Golf Rd., Brookfield, Illinois, USA, 60513

708.688.8460 fax: (708)485-3140 debbie.johnson@czs.org

CHICAGOLP Lincoln Park Zoological Gardens

PO Box 14903, Chicago, Illinois, USA, 60614-0903

(312)742-3992 fax: (312)742-7220 robbsantymire@lpzoo.org

CHINSEGUT Chinsegut Nature Center

23212 Lake Lindsey Road, Brooksville, Florida, USA, 43601

(352) 754-6727

CINCINNAT Cincinnati Zoo & Botanical Garden

3400 Vine St., Cincinnati, Ohio, USA, 45220-1399

(513)569-8225 fax: (513)569-8214 mary.noell@cincinnatizoo.org

COLUMBIA Riverbanks Zoo and Garden

500 Wildlife Parkway, Columbia, South Carolina, USA, 29202-1060

803.779.8717x1245 fax: 803.253.6381 susanreno@riverbanks.org

COLUMBUS Columbus Zoo and Aquarium

PO Box 400, Powell, Ohio, USA, 43065-0400

614.635.3429 shelly.roach@columbuszoo.org

DELMAR Delmar Research Labs

N.Y. State Dept Environ Cons, Delmar, New York, USA

DISNEY AK Disney's Animal Kingdom

1200 N. Savannah Circle E., Lake Buena Vista, Florida, USA, 32830-1000

407.939.6237 fax: 407.939.6240 lynn.mcduffie@disney.com

DREHER PA Palm Beach Zoo at Dreher Park

1301 Summit Blvd., West Palm Beach, Florida, USA, 33405-3098

561.533.0887x215 fax: (561)585-6085/561.54 gweng329@aol.com

DUBUQUE

ELLIOT Chuck Elliot, private breeder, California, USA

EMBERYRCH Embery Pillsbury Ranch

13036 Willow Rd., Lakeside, California, USA, 92040

(619)443-2503

EMERYVILL East Bay Vivarium

1827-C 5th Street Perkeley Californ

1827-C 5th Street, Berkeley, California, USA, 94710

510.841.1400

EVERETTAC _____

FL FWCC Florida Fish & Wildlife Conservation C

Division of Habitat & Species Cons., Tallahassee, Florida, USA, 32301

850.488.6251

FL GM FSH FL Game/Freshwater Fish Commission

620 South Meridian Street, Tallahassee, Florida, USA, 32399-1600

(904)488-3831

FL VETMED U. of FL-College of Vet. Med. School

College of Veterinary Sciences, Gainesville, Florida, USA, 32610

(352)392-4700

FLORIDA Florida, North America, USA

FORTWORTH Fort Worth Zoological Park

1989 Colonial Pkwy., Ft Worth, Texas, USA, 76110-6640

817.759.7126 fax: 817.759.7127 records@fortworthzoo.org

FRESNO Fresno Chaffee Zoo

894 W Belmont Ave., Fresno, California, USA, 93728-2891

559.498.5912 fax: 559.264.9226 lcover@fresnochaffeezoo.com

FT WAYNE Fort Wayne Children's Zoological Garden

3411 Sherman Blvd., Fort Wayne, Indiana, USA, 46808-1594

260.427.6851 registrar@kidszoo.org

GA DNR Georgia DNR Endangered Wildlife Program

116 Rum Creek Drive, Forsyth, Georgia, USA, 31029

GAINSVLL Santa Fe College Teaching Zoo

3000 NW 83rd St., Gainesville, Florida, USA, 32606

352.395.5605 fax: 352.395.7365 kathy.russell@sfcollege.edu

GEORGIA Georgia, North America, USA

HAMPER D Don Hamper

Columbus, Ohio, USA

HARBSMEIE Reptile Shack (Curt Harbsmeier)

3632 US Highway 92 E #6, Lakeland, Florida, USA, 33801-9690

(863)606-0223

HARTSHORN _____

HERSHEY ZooAmerica (No. American Wildlife Pk.)

100 West Hersheypark Dr., Hershey, Pennsylvania, USA, 17033

(717)534-3862 fax: (717)534-3151 dsnyder@hersheypa.com

HOARD _____

HOGLE Utah's Hogle Zoo

Utah Zoological Society, Salt Lake City, Utah, USA, 84108

801.584.1740 animalrecords@hoglezoo.org

HOMOSASSA Homosassa Springs Wildlife State Park

4150 South Suncoast Blvd, Homosassa, Florida, USA, 34446

352.628.1508 fax: (352)628-1251 susan.lowe@dep.state.fl.us

HOUSTON Houston Zoo, Inc.

1513 N MacGregor, Houston, Texas, USA, 77030-1603

713.533.6618 fax: 713.533.6802 twebster@houstonzoo.org

INDIANAPL Indianapolis Zoo

PO Box 22309, Indianapolis, Indiana, USA, 46222-0309 (317)630-2071 fax: 317.630.5154 hgreen@indyzoo.com

JACKSON Jackson Zoological Park

> 2918 W. Capitol St., Jackson, Mississippi, USA, 39209 (601)352-2590 fax: (601)352-2594 dlwetzel@jacksonzoo.org

JACKSONVL Jacksonville Zoo and Gardens

370 Zoo Parkway, Jacksonville, Florida, USA, 32218-5769

(904)757-4463x131 fax: (904)757-4315 rosta@jacksonvillezoo.org

JOHN BALL John Ball Zoological Garden

1300 W. Fulton St., Grand Rapids, Michigan, USA, 49504-6100 (616)336-4316 fax: (616)336-3907 joan.ryskamp@kentcountymi.gov

KRUEGER E

LAFAY IND Columbian Park Zoo

1915 Scott St., Lafayette, Indiana, USA, 47904

765.807.1544 fax: 765.807.1547 pebner@city.lafayette.in.us

LAKEBUENA Discovery Island Zool Pk (extinct)

1200 N. Savannah Circle E., Bay Lake, Florida, USA, 32830-1000

(407)824-2875

LITTLEROC Little Rock Zoological Gardens

One Jonesboro Dr, Little Rock, Arkansas, USA, 72205

501.666.2406x104 fax: 501.666.7040 mshaw@littlerock.org

LOUISVILL Louisville Zoological Garden

1100 Trevilian Way (40213), Louisville, Kentucky, USA, 40233-7250

(502)451-0440x332 fax: (502)451-2196 elaine.huddleston@louisvilleky.gov

LOWRY Tampa's Lowry Park Zoo

1101 W Sleigh Ave, Tampa, Florida, USA, 33604-5958

(813)935-8552x222 fax: 813.930.2331 animal.registrar@lowryparkzoo.com

M.RAND

MADEJ J

MARINELND Marineland Mallorca

Garcilaso de la Vega no 9, 9-07181 Calviá-e, Mallorca, Spain

34.650.965704 gfernandez@aspro-ocio.es

MARION CO Florida, USA

MARTIN CO Florida, USA

MEMPHIS Memphis Zoological Garden & Aquarium

2000 Prentiss Place, Memphis, Tennessee, USA, 38112

901.333.6706 chesch@memphiszoo.org

METROZOO Miami Metrozoo

(One Zoo Boulevard), Miami, Florida, USA, 33177-1402

305.251.0400 x84915 fax: 305.378.6381 rrogers@miamidade.gov

MIAMI SER Miami Serpentarium Lab (Bill Haast)

34879 Washington Loop Road, Punta Gorda, Florida, USA

(813)639-8888

MILWAUKEE Milwaukee County Zoological Gardens

10001 W Bluemound Rd, Milwaukee, Wisconsin, USA, 53226-4384

414.256.5448 fax: 414.256.5450 linda.bachers@milwcnty.com

MINNESOTA Minnesota Zoological Garden 13000 Zoo Blvd., Apple Valley, Minnesota, USA, 55124-8199 952.431.9271 fax: 952.431.9367 lkokkel@mail.mnzoo.state.mn.us MONTGOMRY Montgomery Zoo P.O. Box 3313, Montgomery, Alabama, USA, 36110-0313 (334)240-4911 fax: (334)240-4916 chonaker@montgomeryal.gov MONTROSE NASHV ZOO Nashville Zoo at Grassmere 3777 Nolensville Rd., Nashville, Tennessee, USA, 37211 615.627.3052 fax: (615)832-5443 ppellett@nashvillezoo.org NATURE NATURWLD NC SM RAL NC State Museum of Natural Sciences 11 West Jones St., Raleigh, North Carolina, USA, 27601-1029 (919)733-7450 fax: (919)733-1573 jesse.perry@ncmail.net NEMZOFF NEW FATR NEWPORTKY Newport Aquarium One Aquarium Way, Newport, Kentucky, USA, 41071 859.815.1436 fax: (859)261-5888 cbolser@newportaquarium.com NM GM&FSH New Mexico Dept of Game and Fish Santa Fe, New Mexico, USA NORFOLK Virginia Zoological Park 3500 Granby St., Norfolk, Virginia, USA, 23504 757.441-5227 x 282 fax: 757.624-9939 james.hall@norfolk.gov NY BRONX Bronx Zoo/Wildlife Conservation Society 2300 Southern Blvd., Bronx, New York, USA, 10460-1099 718.220.8711 fax: (718)220-7114 arockmore@wcs.org NY POLICE NYPD, New York, New York, USA NZP-WASH Smithsonian National Zoological Park 3001 Connecticut Avenue NW, Washington, District Of Columbia, USA, 20008-2537 202.633.3244 fax: 202.633.8727 murphym@si.edu O'LENO ST O'Leno State Park 410 S.E. O'Leno Park Road, High Springs, FL, USA, 32643 (386) 454-1853 OAKLAND Oakland Zoo P.O. Box 5238, Oakland, California, USA, 94605 (510)632-9525x167 fax: (510)636-9619 genny@oaklandzoo.org OKEEHEELE OKLAHOMA Oklahoma City Zoological Park 2101 NE 50th St., Oklahoma City, Oklahoma, USA, 73111-7199 (405)425-0274 fax: (405)425-0220 dwhitton@okczoo.com **OMAHA** Omaha's Henry Doorly Zoo

OMAHA Omaha's Henry Doorly Zoo 3701 South 10th St., Omaha, Nebraska, USA, 68107-2200 402.738.2085 fax: (402)733-4415 registrar@omahazoo.com

ORIANNE Project Orianne, LTD.
579 Highway 441 South, Clayton, Georgia, USA, 30525
(706) 212-0112

ORL SCI C Orlando Science Center, Orlando, Florida, USA

ORLANDOSC Orlando Science Center, Orlando, Florida, USA Robert Bruce, private breeder, Palmdale, California, USA PALMDALE PANAMACT ZooWorld Zoological Botanical Conserv. 9008 Front Beach Rd., Panama City Beach, Florida, USA, 32407 (850)230-4839 fax: (850)230-8500 zooworld@knology.net PET DRAGO Pet Dragon Minneapolis, Minnesota, USA PHILADELP The Philadelphia Zoo 3400 W Girard Ave., Philadelphia, Pennsylvania, USA, 19104 215.243.5214 fax: 215.243.0219 bahner.beth@phillyzoo.org PHOENTX Phoenix Zoo 455 N Galvin Pky, Phoenix, Arizona, USA, 85008-3431 (602)273-1341x7612 fax: (602)273-7078 gbickert@thephxzoo.com PITTSBURG Pittsburgh Zoo & PPG Aquarium One Wild Place, Pittsburgh, Pennsylvania, USA, 15206-1178 412.365.2581 fax: (412)365-2583 hterrell@pittsburghzoo.org PRIVATE Private Collection - person unknown PUBLIC General Public RACINE Racine Zoological Gardens 2131 N Main St., Racine, Wisconsin, USA, 53402-4795 262.636.9423 fax: 262.636.9307 agottfreid@racinezoo.org Rainbow Springs State Park RANBOWDEP 19158 S.W. 81st Place Road, Dunnellon, Florida, USA, 34432 (352) 465-8555 RANCHO DE RC REDWOOD Six Flags Discovery Kingdom 1001 Fairgrounds Drive, Vallejo, California, USA, 94589-4001 707.556.5253 fax: 707.556.5261 kwasson@sftp.com REPT WRLD Reptile World Serpentarium 5705 E. Bronson Hwy, St. Cloud, Florida, USA (407)892-6905 RIO GRAND Albuquerque Biological Park 903 Tenth St. SW, Albuquerque, New Mexico, USA, 87102-4098 (505)764-6231 fax: (505)764-6281 kklammer@cabq.gov ROCHESTER Seneca Park Zoo 2222 St Paul St., Rochester, New York, USA, 14621-1096 585.266.8222 fax: 585.336.2517 gcaulkins@monroecounty.gov

SACRAMNTO Sacramento Zoo 3930 W Land Park Dr., Sacramento, California, USA, 95822-1123 916.808.7381 fax: 916.264.5887 jschnormeier@cityofsacramento.org

SAMIFILE

San Francisco Zoological Gardens SAN FRAN 1 Zoo Rd., San Francisco, California, USA, 94132-1098 415.753.7119 fax: (415)681-2039 tpeterson@sfzoo.org SANDIEGOZ San Diego Zoo

PO Box 120551, San Diego, California, USA, 92112-0551

(619)685-3250 fax: 619.232.4117 tgiezendan@sandiegozoo.org

SANFORD Central Florida Zoological Park

P.O. Box 470309, Lake Monroe, Florida, USA, 32747-0309

(407)323-4450x140 fax: (407)321-0900 bonnieb@centralfloridazoo.org

SCHWARTZ Albert Schwartz Collection

Miami, Florida, USA

SEATTLE Woodland Park Zoological Gardens

601 N. 59th St., Seattle, Washington, USA, 98103-5858

206.548.2513 wendy.wienker@zoo.org

SEDGWICK Sedgwick County Zoo

5555 Zoo Blvd., Wichita, Kansas, USA, 67212-1698

(316)266-8203 fax: (316)942-3781 akinser@scz.org

SEIB _____

SILVER SP Silver Springs Park

5656 E Silver Springs Blvd, Silver Springs, Florida, USA, 34488

(352)236-2121 fax: (352)236-1732 timfrisch@silversprings.com

SOUTH NEV Southern Nevada Zoological Park

1775 N Rancho Dr., Las Vegas, Nevada, USA, 89106

(702)647-4685 nvzoolv@aol.com

ST LOUIS Saint Louis Zoological Park

1 Government Dr., St. Louis, Missouri, USA, 63110-1395

314.646.4572 haliday@stlzoo.org

ST PAUL St. Paul's Como Zoo

1225 Estabrook Drive, St Paul, Minnesota, USA, 55103

(651)487-8208 fax: (651)487-8209 joanne.kelly@ci.stpaul.mn.us

STATEN IS Staten Island Zoo

614 Broadway, Staten Island, New York, USA, 10310

(718)442-3101x18 fax: (718)981-8711 dbirds4@aol.com

T.CARLISL Tony Carlisle, private breeder, Missouri, USA

TALLAHASE Tallahassee Museum of History and

Natural Science, Tallahassee, Florida, USA, 32310

850.575.8685 fax: 850.574.8243 animals@tallahasseemuseum.org

TAMPA AQ Florida Aquarium

701 Channelside Drive, Tampa, Florida, USA, 33602

(813)367-4039 fax: (813)209-2067 llongo@flaquarium.org

TARPONSPR Tarpon Zoo (Trudie Jerkins)

Box 847, Tarpon Springs, Florida, USA

TC REPTIL Twin Cities Reptiles (Bruce Delles)

2363 University Ave. W., St. Paul, Minnesota, USA, 55114

651.647.4479

TCWC Treasure Coast Wildlife Center

8626 SW Citrus Blvd., Palm City, Florida, USA

(772) 286-6200

TCWH Treasure Coast Wildlife (Hospital) Center

8626 SW Citrus Blvd., Palm City, Florida, USA

(772) 286-6200

TOLEDO Toledo Zoological Gardens
PO Box 140130, Toledo, Ohio, USA, 43614-0801
419.389.6403 x3088 fax: (419)385-8670 gfavata@toledozoo.org

TREAS CST Treasure Coast 2800 SE Bridge Road, Hope Sound, Florida, USA, 33455 (407)546-8282

TULSA Tulsa Zoo & Living Museum
5701 E 36th St N, Tulsa, Oklahoma, USA, 74115
918.669.6225 fax: (918)669-6260 garylunsford@cityoftulsa.org

U.S.A. UNITED STATES OF AMERICA
North America, American Region, USA

UNKNOWN Unknown Location

USDI LAW USDI Fish and Wildlife Service Lawrence, New York, USA

USFWS US Fish and Wildlife Service USA

USFWS FL U.S. Fish & Wildlife Service 6620 Southpoint Dr. S., Jacksonville, Florida, USA, 32216-0912 (904)232-2580

WESTERN Western Zoological Supply Monrovia, California, USA

WL DISC C

YORKHAVEN Wildlife Rehab Center & Otter Habitat 515 Sipe Road, York Haven, Pennsylvania, USA, 17370 (717)938-4040

Total number of institutions: 148

Species Account

The following brief species account of the Eastern Indigo Snake (*Drymarchon couperi*) is presented for zoo staff education and for use in zoo signage and graphics. For more detailed information on husbandry and captive management, please see the "Animal Care Manual for the Eastern Indigo Snake". Animal Care Manuals are posted on the AZA website. The pathway currently is: AZA.org \rightarrow Log in \rightarrow on the Home Page go to Animal Care and Management \rightarrow Animal Care Manuals (in drop down box) \rightarrow Download Animal Care Manuals (in side bar) \rightarrow see list of completed ACMs.

Taxonomy

The indigo snake, Drymarchon corias, has historically been considered a monotypic species with 8 to 12 subspecies (McCranie, 1980). Collins (1991) encouraged the adoption of elevating the eastern indigo snake, Drymarchon corais couperi, to full species level (Drymarchon couperi), but definitive supportive data was lacking. Recently this trend of recognizing subspecies as separate species is a paradigm shift from historical concepts and recognizes that groups of populations formerly regarded as subspecies in reality represent divergent and independently evolving lineages, which should be given taxonomic recognition at the species level (Wuster, et al., 2001). Eastern indigo snake populations of Drymarchon couperi are isolated (Moler, 1992) from their nearest relative, Drymarchon m. erebennus, by approximately 620 miles (1,000 km).

In this publication, *Drymarchon couperi* has been adopted but all authors reviewing the taxonomy of *Drymarchon* agree that further work needs to be done on this wide-ranging and polytypic species complex. The following (Wuster, et al., 2001) is the most recent suggested taxonomic revision:

- Drymarchon corais, S.A., east of the Andes (Yellow-tailed cribo)
- Drymarchon caudomaculatus, Venezuela (Spotted-tailed cribo)
- Drymarchon margaritae, Isla Margarita, Venezuela (Margarita Island cribo)
- Drymarchon melanurus melanurus, S.A. west of Andes (Black-tailed cribo)
- Drymarchon m. unicolor, Nicaragua to Mexico (Unicolored cribo)
- Drymarchon m. rubidus, Guatemala to Mexico (Red-tailed cribo)
- Drymarchon m. orizabensis, Mexico (Orizaba cribo)
- Drymarchon m. erebennus, Mexico to Texas (Texas indigo snake)
- Drymarchon couperi, SE U.S.= Florida, Georgia (Eastern indigo snake)

The eastern indigo snake (*Drymarchon couperi*) has a number of common names: indigo, blue indigo, black snake, gopher snake, blue gopher snake, and blue bull snake.

Regulatory listings

The eastern indigo snake formerly ranged across southern Mississippi, Alabama, Georgia, South Carolina and throughout Florida (Speake, 1993), including at least 10 Florida Keys (USFWS, 1998). They are believed to be extirpated from Mississippi, Alabama, and South Carolina, although their existence the later state cannot be confirmed.

Drymarchon couperi was federally listed as Threatened in 1978, under the Endangered Species Act of 1973. USFWS (1982) published a recovery plan and D. couperi was included in a USFWS regional south Florida multispecies recovery plan (USFWS, 1998). The Natural Heritage Program global rank is G3 (species "vulnerable" to extinction or elimination). State rankings (Tuberville, 2003) are as follows:

<u>State</u>	State Rank	State Legal Protection
MS	S1 critically imperiled	Protected

AL	S1 critically imperiled	Protected
GA	S3 vulnerable	Threatened
SC	Status unknown	Endangered
FL	S3 vulnerable	Threatened

Threats to Indigos

Recent population trend data for *Drymarchon couperi* are lacking for both Georgia and Florida, the only two states in which they are currently found. The primary threats to indigo populations are habitat loss, fragmentation and degradation. Florida in particular is experiencing an increasing loss of undeveloped and unfragmented habitat due to expanding human needs in housing, community development and agricultural expansion (principally citrus). Even low density residential housing is a potential threat by snakes being killed by property owners and domestic pets (USFWS, 1998).

Predators of *Drymarchon couperi* include feral hogs, domestic/feral dogs and cats, coyote, bobcat, fox, raccoon, diurnal birds of prey, wading birds, alligators and fire ants (eggs and hatchlings). Prior to federal protection, the over collection of indigos for the pet trade has also been cited. Today road fatalities, all-terrain vehicles, the practice of gassing gopher tortoise burrows for the collection of eastern diamondback rattlesnakes (primarily associated with "rattlesnake roundups" in Georgia and Alabama), the application of pesticides and bioaccumulation of toxins in prey animals are additional pressures on wild populations.

A unique recent impact may be arising in what have been considered strong populations of *Drymarchon couperi* in south Florida. In Everglades National Park (Brien, et al., 2007) the invasive *Python m. bivittatus* (clutch size up to 100 eggs) may have competitive affects on the two largest native snake species, *Drymarchon couperi* (average clutch size 8-9 eggs) and *Crotalus adamanteus* (average litter size 13-15). Resource competition for prey and refugia needs further study to determine potential deleterious effects.

Habitat Preferences

Drymarchon couperi can be found in a wide variety of habitats depending on the region in which it is found. Habitats include xeric uplands, pine flatwoods, mixed hardwood forests, wet prairies, agricultural fields, coastal dunes and mangrove swamps. Intact sandhills are commonly used in the winter with contiguous wetlands and other poorly drained habitats that are important for foraging during the spring, summer and fall. Wildlife corridors are important in linking these seasonal used habitats (Hallam, et al., 1998).

Upland environments require prescribed fires, burned every 3 to 5 years, to maintained sandhill-scrub habitats. Fire impedes plant succession and revitalizes the habitats required for gopher tortoises and indigo snakes (Stevenson, 2006). This kind of land management practice is particularly important above the frost line where gopher tortoise burrows provide almost all of the winter refugia for Drymarchon couperi. Stevenson (pers. comm.) observed site fidelity in Drymarchon couperi that overwintered in gopher tortoise burrows in Georgia. In the cooler months, Drymarchon couperi bask in the vicinity of the gopher tortoise burrows they are using as refugia. Basking occurs between the temperatures of 15.5 and 22.2°C, but as low as 7.2°C (Stevenson, pers. comm.). Seasonal shifts in the use of gopher tortoise burrows and other microhabitat features (Hyslop, et al, 2009) may be a limiting factor in the northern range of D. couperi. Additionally, other members of the large snake guild in the southeast that are commensual in gopher tortoise burrows include the eastern coachwhip (Masticophis f. flagellum) and eastern diamondback rattlesnake (Crotalus adamanteus).

Gopher tortoise burrows and small mammal burrows (rodent, armadillo) are also important retreat sites particularly during ecdysis (Dodd and Barichivich, 2007). Additional refugia used throughout

the year include stump holes, hollow logs, root channels, limestone solution holes, and land crab burrows, depending on locale.

Home range

The Drymarchon couperi has one of the largest home ranges of any snake in North America. They appear to have a larger home range in the northern part of the range than in more southern areas. In a Georgia study (Hyslop, et al., 2006) females had a home range of 100 ha (247 ac) and males 500 ha (1,235 ac), the Gulf Hammock region of north Florida (Moler, 1985) a home range of 23-281 ha was reported, and 185 ha for a male in Putnam County, north central Florida (Dodd and Barichivich, 2007). These differences in home range size may be associated with population densities, mating opportunities, prey abundance, and the distance traveled between winter refugia and seasonal foraging areas. One Georgia specimen (Stevenson and Hyslop, 2010) made a long-distance interpopulation linear movement of 22.2 km (13.8 mi) or more possibly 27 km (16.8 mi) if the snake traveled through suitable habitat corridors.

In consideration of life history data, conservation strategies for *Drymarchon couperi* pivot on protecting large, contiguous sections of unfragmented habitat (Dodd and Barichivich, 2007). Unlike most game animals, the more edges in relation to the protected habitat, the less likely that populations of large snakes can be maintained due to exposure to hazards (see section on threats). Minimum preserve size (USFWS, 1998) has been estimated at 10,000 acres (4,000 ha) but larger areas will increase the probability of sustaining significant indigo populations over time.

Feeding behavior

Drymarchon couperi is a robust and domineering species that overpowers its prey by using its strong jaws while pinning the prey item to the substrate with a body coil, sometimes swallowing the prey alive. It is a dietary generalist that opportunistic feeds on a wide range of vertebrate species including fish, frogs, toads, small alligators, hatchling aquatic turtles, gopher tortoises, lizards, snakes (including venomous species), reptile eggs, birds, and small mammals (Moler, 1992). They are also cannibalistic (pers. obs.). An incidence of carrion feeding (Smith and Antonio, 2007) on a decapitated shark head has also been recorded in a Florida beach dune habitat. A recent compilation of prey records for D. couperi (Stevenson, et al., 2010) documented 48 different prey species of which 85% were anurans, gopher tortoises, snakes, and rodents.

In captivity Drymarchon couperi are usually maintained on rodent prey items. Neonates in the wild feed almost exclusively on invertebrates, fish, amphibians, and small reptiles, and may not recognize "pinkie" and "fuzzy" mice as a prey item. Scenting freshly-killed small mice with fish scent ("sardine slurry"), frog scent, or a dab of egg yolk, may induce a feeding response. Feeding appropriately-sized frogs (Hyla, Rana) or fish (minnows) with mice in the same feeding session can also establish the scent of rodent as part of their prey repertoire.

Young indigos have a high metabolic rate and should be fed once or twice a week. The size of the food item should increase as the snake grows. Although snakes have the impressive ability to swallow large prey items, it is preferable to offer moderate-size food items more often than a large food item that may require a prolonged period for digestion.

Wild-caught adult indigos may also not recognize laboratory rats as a potential prey item and may require scenting (Moler, pers. comm.). Dead rodents should be offered nose up so the snake can locate the snout (keying in on saliva) to initiate consumption head first. Scenting the snouts of rodents with fish is usually rewarding. Normally, following 2 or 3 sessions of scenting, adults will readily consume unscented rodents.

Reproduction

Drymarchon couperi has been characterized as a "late-maturing colubrid snake" (Parker and Plummer, 1987). These traits include high adult survivorship, high longevity, low to medium fecundity, small annual clutches, low juvenile survivorship, male-biased sexual size dimorphism, high ratio of mature to immature individuals in the population, and a significant proportion of the population that is older than 4 years old.

Drymarchon couperi can be easily sexed by caudal probing. In males, probing into the hemipenal pocket can extend at least to the 8th subcaudal scale. Females probe only into a blind pocket, associated with the anal gland that may extend 2-3 subcaudal scales. Visual sex determination based on tail morphometrics is also apparent as males have a longer tail and a broadened basal tail portion that houses the hemipenis. A distinct bulge at the base of the tail that extends distally about 2 inches (500 mm) is usually easily discernable. The tail of the female is relatively shorter and tapers fairly symmetrically, although a distinct circular bulge may be present in females associated with the presence of active anal glands. Additionally adult males longer than 1,200 mm snout-vent length usually possess weak keels on 3 to 5 middorsal scale rows.

Sexual maturity in *Drymarchon couperi* is reached in 3 to 5 years of age with a total length approaching 6 feet. Captive-raised individuals fed weekly may grow faster and reach sexual maturity sooner than their wild counterparts. In southeast Georgia, males do not attempt to breed until 2-3 years old, and females at 3-4 years old (Stevenson, pers. comm.). Survivorship in one study (Hyslop et al., 2009a) suggests lower survival for larger individuals possibly due to greater resource needs of larger individuals necessitating larger and more frequent movements. This was an unexpected result as predation pressures on small snakes would seem greater then on large individuals. *Drymarchon couperi* is a long-lived colubrid and a few individuals have live over 25 years in captivity.

Drymarchon couperi is a winter-active colubrid that emerges from rufugia during suitable temperatures to bask and breed. The height of the mating season is November through January, but breeding can occur from October through March. A decrease in photoperiod may play an important role in captive breeding. In facilities where snakes are not exposed to natural temperate light cycles, artificial light reduction beginning in October, reducing the light cycle to 10 hours a day (Alessandrini, 2002) may be beneficial in replication natural biological rhythms.

A standard ambient temperature of 80°F is maintained throughout the year in most zoo reptile facilities. This average temperature is suitable for a wide variety of temperate and tropical species, with additional basking sites offered to species with higher preferred optimal thermal requirements. Artificial hibernation of temperate colubrids and viperids to induce gonadal development is a technique that has been used in zoos since the 1970s. This winter cooling down period usually lasts approximately three months and is accomplished in a separate temperature-controlled room or a walk-in cooler. Temperatures are generally lowered one degree a day to reach a specific target temperature of 50 to 55°F. If this technique is used for reproductively cycling Drymarchon couperi, a temperature of 50°F for 8 to 10 weeks should be adequate. When maintained at this lower temperature, D. couperi continue to drink so fresh water in a water bowl should be provided at all times as indigos can suffer from cutaneous water loss during these times. A hide box containing moist sphagnum moss may be helpful during this period. Caution must be taken to make sure this environment clean and not too wet which can result in skin lesions. Monitoring the health status of snakes during "hibernation" in essential in avoiding health issues that commonly arise during this time.

Introducing male and female *Drymarchon couperi* for breeding in captivity requires timing and vigilant observation. Large enclosures (minimum size 6x2x2 feet high) are required to maintain indigos, particularly mature males which tend to be more active. Standard zoo methods are used that include introducing the female to the male's enclosure following female ecdysis. A freshly shed skin from the female can also be placed in the male's enclosure prior to introducing the female to induce olfactory excitement in the male.

Male combat (Stevenson, 2003) has been observed in free-ranging *D. couperi* and is also a tool used for initiating courtship behavior in captivity (Alessandrini, 2002). The standard practice in zoos

is to introduce two males and allow male-male combat to develop. Once one of the males has achieved dominance (usually by dorsal positioning, pressing the other to the substrate) over the subordinate snake, the subordinate individual is removed and a female is then introduced to the dominant male. Often combat behavior is displaced by courtship behavior directed towards the female, which often results in successful copulation. A male may bite the neck and anterior region of the female in an attempt induce submission for copulatory positioning. Biting in this context usually does not result in serious lesions. Bite wounds on necks (Allen and Neill, 1952) have also been seen in free-ranging D. couperi. However in captive snakes, where there is not the opportunity for a subordinate to flee, care must be taken to not allow biting to progress to the point where significant wounds result, particularly in male-male combat episodes. Death feigning (Stevenson, 2010a), a defensive mechanism, has been documented for D. couperi in the field but this behavior has not been noted as a subordinate behavioral act in captivity.

Successful copulation may last from 10 minutes to as long as 12 hours (Alessandrini, 2002). Successive introductions and mating may be helpful in insuring fertilization. However if the female is not receptive and becomes frantic in her attempts to flee, she should be removed from the male. The keeper should always be aware that inappropriate social interactions in *D. couperi* can result in serious bite wounds and cannibalism.

Nesting sites for free-ranging *Drymarchon couperi* include gopher tortoise burrows and stump holes (Smith, 1987; Newberry et al., 2009). In captivity a nest box containing moist sphagnum moss or equivalent should be provided as an oviposition site. Females have the ability to retain live sperm for prolonged periods, possibly over 4 years (Carson, 1945), for later release and egg fertilization.

Clutches of 5 to 12 eggs are oviposited April through July with hatching about 90 days later, but eggs can incubate up to 110 days (Alessandrini, 2002). Incubation temperatures in captivity approximate 78-80 °F. Higher incubation temperatures may result in caudal deformities (pers. ob.). Eggs can be set up in containers using moist vermiculite, sphagnum moss, paper towels, or other appropriate incubation mediums. Neonates may take 1 to 3 days to emerge from the egg following piping. Neonates measure 17-24 inches (430-610 mm) total length at hatching and may have some light-colored speckling in their pattern.

Growth and longevity

The eastern indigo snake is the largest snake in North America. The record length (Conant and Collins, 1991) of 103.5 inches (2,629 mm) translates into a massive snake, with males over 6 feet in total length attaining a mid-body diameter of over 2 inches (50 mm). Growth rates are influenced by food intake, environmental temperatures, physical activity and sex (males growing larger than females). Growth rates are expected to be greater in the southern part of the range correlating with a prolonged annual activity period than individuals in the northern part of the range. Captive-hatched Drymarchon couperi have reached 6 feet in total length in their third year (Kathy Russell, pers. comm.) under optimal conditions in captivity. Monthly maximum growth rates for free-ranging Drymarchon couperi in southeast Georgia (Stevenson, et al., 2009) are 35.7 mm for males and 22.1 mm for females, with age classes and size as follows:

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2nd winter (1.5 yrs): males 960-1200 mm SVL; females 960-1150 mm SVL.

3rd winter (2.5 yrs): males 1350-1500 mm SVL; females 1250-1350 mm SVL.

4th winter (3.5 yrs): males 1500-1650 mm SVL; females 1350-1450 mm SVL

5-7 years old: 1800 SVL for males; 1500 SVL for females.
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Male Drymarchon couperi grow larger than females (Stevenson, et al., 2008). Factors contributing to male size bias may include a faster growth rate, greater longevity, hormonal influences triggered by male-male combat, differences in mortality factors associated with activity patterns, or a sampling bias. Females have energetic costs (vitellogenesis) associated with reproduction, may have

higher predation rates due to their smaller size, and possibly a higher overwinter mortality due to the costs associated with reproduction. Generally survival improves with size.

Ecdysis occurs frequently in indigo snakes with young growing specimens shedding monthly and older specimens shedding 4 to 8 times annually. Observation on captive specimens show that indigos have one of the highest rates of ecdysis observed (pers. ob.).

The Eastern Indigo Snake as conservation education ambassadors

Historically Drymarchon couperi has been used as an impressive show animal in county fairs, roadside zoos, reptile shows, nature centers, and zoological parks due to its large size and tame behavior once it becomes accustomed to handling. This large, impressive, shiny black snake has been the first snake touched by many children and adults alike. Many Florida residents and tourists (especially during the 1940s - 1960s at Ross Allen's Reptile Institute at Silver Springs) had their first encounter touching a live snake when an indigo was offered or even draped around their neck for a souvenir photo. Often touted as a "good snake" due to its reputation of consuming rattlesnakes, the indigo has long held a special place in the memories of those fortunate enough and brave enough to have experienced a first-hand encounter.

During education encounters, many aspects of the "indigo story" can be themed to support almost any biological or environmental lesson. Equating animals and environments, particularly connecting to the gopher tortoise as a "keystone" species, can help students visualize wildlife communities as exciting and dynamic places. On a larger scale, education emphasizing the remarkable attributes and the uniqueness and beauty of sandhill habitats may result in the public becoming a little more "snake friendly" (Stevenson, 2006) while appreciating the uniqueness of this disappearing environment. Considering their impressive appearance, relative easy maintenance in captivity, and generally docile behavior, the Eastern Indigo Snake is an ideal candidate for use in conservation education programs.

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