

Annual Report on the Research and Management of Florida Panthers: 2009-2010



Florida Fish and Wildlife Conservation Commission

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The compilation of this report was the result of the combined efforts of multiple FWC staff members currently working on the Florida Panther Project in order to meet the reporting requirements of the U.S. Fish and Wildlife Service pursuant to Endangered Species Collection Permit TE051553-3. Further analyses of these data will be conducted and results published in the scientific literature by the FWC and collaborators. Persons interested in obtaining the most current data should contact the FWC at:

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Executive Summary

This report, prepared by the Florida Fish and Wildlife Conservation Commission (FWC), highlights information collected on the Florida panther (*Puma concolor coryi*) during the last fiscal year (1 July 2009 through 30 June 2010). In some cases, data (e.g., diagnostic or genetic test results) are presented from samples collected in prior fiscal years due to lag times involved with processing samples. Historic data are included as appendices. Panther research and management is a cooperative effort, and we acknowledge the involvement of other agencies, particularly Big Cypress National Preserve (BCNP) and Everglades National Park (EVER) of the National Park Service (NPS). BCNP and EVER have located radiocollared panthers by plane within their respective park boundaries for 21 and 24 years respectively, and resulting data have been incorporated into a telemetry database and are used with permission in this report. No panthers were equipped with functioning radiocollars during the reporting period in EVER. However, population status within the Park was monitored by trail cameras throughout the fiscal year. Beginning in 2003, BCNP was permitted by the U. S. Fish and Wildlife Service (USFWS) and FWC to conduct panther capture activities. These activities have been occurring within BCNP boundaries south of I-75. BCNP assembled their own capture team and have captured previously uncollared panthers, replaced radiocollars due to expected battery failure, marked neonatal kittens at den sites, and recovered carcasses. While some data (e.g., biomedical, demographic) of panthers handled by BCNP are contained herein for completeness of datasets, more specific information may be found in the BCNP annual report compiled by BCNP staff.

During 45 field days, FWC staff captured 10 Florida panthers. These included 6 previously uncollared panthers and 4 previously radiocollared panthers whose GPS collars had been released via manually triggered or preprogrammed release mechanisms.

Telemetry data were collected on 34 radiocollared Florida panthers in southern Florida during the reporting period by FWC and BCNP staff. Ten panther dens were sampled by FWC and BCNP staff during the study period resulting in the documentation of 26 (17♂, 9♀) neonate kittens. Two additional

dens (3 kittens of unknown sex) were documented but kittens were not handled. Kittens handled at their natal dens were permanently marked with subcutaneous transponder chips and tissue samples were collected for genetic analyses. A total of 182 panthers have been radiocollared since 1981 and 306 neonate kittens have been handled at dens since 1992. Twenty-eight free-ranging panthers died during the reporting period including: six (4♂, 2♀) radiocollared panthers, 21 (13♂, 8♀) uncollared panthers, and one additional uncollared panther (UCFP128) whose death is still under investigation by FWC and USFWS investigators. Causes of mortality included vehicular trauma (11♂, 9♀), intraspecific aggression (3♂, 1♀), and undetermined (2♂, 1♀). Parts of one vehicle-killed panther were poached posthumously (UCFP132). Additionally, one captive panther (FP204) was euthanized due to failing health. Human-panther conflicts included 11 confirmed depredation events and 3 encounters.

Introduction

Florida panthers are endangered by a combination of small population size, isolation, and loss of habitat (Kautz et al. 2006; USFWS 2008). Loss and fragmentation of wilderness and unregulated killing in the southeastern United States over the past two centuries have reduced the species to the point where only 1 population exists on approximately 10,000 km² (2.5 million acres) of habitat in south Florida (Kautz et al. 2006). Recent minimum population counts have estimated the presence of around 100-120 adult and subadult panthers (McBride et al. 2008). Small population size and geographic isolation increase the chance for extinction of Florida panthers due to demographic instability inherent in small numbers and erosion of genetic diversity from restricted gene flow and inbreeding. Genetic diversity is the basis for production of fit individuals as well as providing population plasticity in order to respond to changing environmental and habitat conditions (Frankham et al. 2002). The role of social and genetic factors has only recently been examined as modern techniques from field biology and molecular genetics have become available. A unique opportunity exists to implement conservation and management strategies for Florida panthers and evaluate results that will benefit panthers as well as other imperiled species.

Natural exchange of genetic material occurred historically among the Florida panther population in the southeastern United States and contiguous populations of *P. c. cougar* to the north, *P. c. hipolestes* to the northwest, and *P. c. stanleyana* to the west (Young and Goldman 1946). Genetic exchange between populations ceased as the Southeast was settled. Florida panthers steadily declined in abundance and distribution (Alvarez 1993), likely a result of persecution and reduced prey populations (but see Alvarez 1993, pp. 35-61, for competing theories on the decline of panthers). Gene flow is reliant upon individuals that immigrate and breed, but habitat fragmentation generally disrupts dispersal. Dispersal and immigration serve as a natural mechanism for mixing the gene pool and help minimize inbreeding within populations. Elevated levels of inbreeding can result in inbreeding depression, which can have varied implications on populations including: loss of genetic variation, declining health,

reduced survivability, decreased fecundity, and an increased risk of extinction (Frankham et al. 2002, Crnokrak and Roff 1999, Laikre et al. 1996). The additive effects of these interrelated factors, perceived as an inward spiral or vortex (Gilpin and Soule 1986), have become a cornerstone of conservation biology.

Varied threats to populations are known to result from the loss of genetic variation (Lacy 1997, Lande 1988). The loss of genetic diversity, especially in small and isolated populations with low fecundity (e.g., panthers), is theorized to have the ability to result in extinctions via several intertwined pathways (e.g., the loss of evolutionary potential, epidemiological correlates with diversity in the major histocompatibility complex; Frankham et al. 2002). The complex interplay of social, demographic, genetic, and health factors dictated that a timely and aggressive program be implemented to address the multitude of problems faced by Florida panthers by the early 1990s. A plan for genetic introgression and management of the Florida panther was developed in September 1994 (Seal 1994) and implemented in 1995 with the release of 8 female Texas puma initially captured by Roy McBride. Five of the 8 Texas pumas produced litters with resident male panthers and a minimum of 20 F₁ kittens were born in Florida (Land et al. 2004). None of the original Texas females remain in the wild today.

Assessment of the genetic introgression project is an ongoing objective of FWC and our collaborators at BCNP, EVER and the National Cancer Institute (NCI). Introgression should theoretically alleviate the potential threats associated with inbreeding depression and loss of genetic variation. Regardless of the results, knowledge gained from the genetic introgression project will undoubtedly have ramifications on the implementation of future management strategies for panthers and potentially far reaching implications to varied conservation projects.

FWC's current panther research and management priorities include, but are not limited to: assessments of adult and kitten survival; collection of resource selection and movement data via GPS technology; travel patterns of panthers along the urban-wildland interface; evaluating the utility of new GPS collar technology; a collaborative project with the University of Florida to develop a population viability model for panthers; a compilation of female reproductive histories; minimizing loss of existing

panther habitat; addressing human-caused mortality factors; securing additional habitat in the panther dispersal zone; and reducing human-panther conflicts.

Our overall research goal is to complement historical data sets with ongoing, objective driven research to provide the information necessary to manage and conserve panthers. The melding of information on demographics, genetics, biomedical, and land management challenges should ultimately assist in the development of effective management plans to promote the long-term survival and recovery of the panther in Florida.

Acknowledgements

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We would like to acknowledge the following individuals and agencies for their assistance provided to this project: Roy McBride, Rocky McBride, Rowdy McBride, Cougar McBride, Caleb McBride (Livestock Protection Company), and Dr. Emmett Blankenship. We would also like to extend our appreciation to the staffs at BCNP, Big Cypress Seminole Indian Reservation (BCSIR), Collier Seminole State Park (CSSP), Corkscrew Regional Ecosystem Watershed (CREW), Corkscrew Swamp Sanctuary (CSS), EVER, Florida Panther National Wildlife Refuge (FPNWR), Fakahatchee Strand Preserve State Park (FSPSP), Lee County Port Authority (LCPA), Lee County Solid Waste Department, Picayune Strand State Forest (PSSF), and Okaloacoochee Slough State Forest (OSSF) for their continued cooperation and support of our research and management efforts. Finally, we thank Dr. Scott Terrell (Disney's Animal Kingdom) for assistance with panther necropsies, Dr. Michael Warren (CA Pound

Laboratory) for the forensic examination of UCFP132, and Dr. Phillip Kaufman (University of Florida) for identification of ticks removed from Florida panthers.

Study Area

The study area encompassed most of interior southern Florida south of Orlando and extending to southern EVER. The area includes large blocks of low-lying public lands such as CREW, EVER, BCNP, FSPSP, PSSF, and the FPNWR. Significant private lands, primarily used for cattle and crop production, lie on higher terrain to the north of public lands and constitute some of the most important habitat for Florida panthers. The overall study area was divided into 3 agency monitoring areas (AMA) for purposes of conducting aerial relocations and capture/recovery efforts. The FWC AMA was statewide excluding BCNP south of I-75 and EVER. The BCNP AMA encompassed the area within the BCNP boundary south of I-75. The EVER AMA encompassed the area within the EVER boundary.

Methods

Monitoring

FWC staff was responsible for capturing and fitting panthers with radiocollars, handling neonates at dens, recovering carcasses from the field and roadside within the FWC and EVER AMA, and obtaining aerial relocations (i.e., pinpointing panthers fitted with radio-transmitters from aircraft) three times per week within the FWC AMA. BCNP staff was responsible for these same activities within the BCNP AMA. The EVER AMA is currently being monitored for the presence of panthers via trail cameras deployed by Roy McBride (Livestock Protection Company, Alpine, Texas) at varied locations throughout the Park. Responsibility of conducting aerial relocations was coordinated between agencies for those panthers whose home ranges overlap AMAs.

Capture

Free-ranging Florida panthers were captured using trained hounds and houndsmen provided by Livestock Protection Company. Panthers were either treed or bayed on the ground and were then darted

with a 3 ml compressed-air dart fired from a CO₂-powered rifle. Panthers were immobilized with a combination of ketamine HCl (10 mg/kg; Congaree Veterinary Pharmacy, Cayce, South Carolina) and xylazine HCl (1 mg/kg; Congaree Veterinary Pharmacy). Following immobilization, treed panthers were lowered to the ground by a rope or caught with a net; in some cases, a portable cushion (McCown, 1990) was used to further mitigate the impact of a fall. Propofol (PropoFlo™, Abbott Laboratories, Abbott Park, Illinois) was administered intravenously (IV) either as a bolus or continuous drip to maintain anesthesia. Midazolam HCl (0.03 mg/kg) was administered intramuscularly (IM) or IV to supplement anesthesia in some panthers. Panthers were left to recover in a shaded area away from water. In some cases, xylazine HCl was reversed with yohimbine HCl (Yobine®, Lloyd Inc., Shenandoah, Iowa) at ¼ its recommended dose.

Physical Examination

Vital signs (temperature, heart rate, respiration rate, and capillary refill time) and depth of anesthesia were monitored and recorded. A sterile petrolatum ophthalmic ointment (Puralube®, Pharmaderm, Melville, New York) was applied to the eyes for lubrication. All animals underwent a physical examination to assess general health and physical condition. For each panther handled, the skin over the medial saphenous vein was shaved, prepped, and an IV catheter (Abbocath®-T, Abbott Ireland, Sligo, Republic of Ireland) aseptically placed. Sterile isotonic fluids were administered either subcutaneously (SQ) or IV.

Live-capture Sample Collection

Approximately 70-140 ml of blood (depending on body weight) were collected from the medial saphenous or cephalic veins using a butterfly catheter (19 or 21 ga), luer adapter/hub, and Vacutainer® tubes (approximately 50 ml in serum separator, 40 ml in EDTA, 9 ml in Na Heparin, and 9 ml in ACD tubes; Becton Dickinson, Franklin Lakes, New Jersey). From uncollared panthers, a 4 mm skin biopsy was aseptically collected from the external pinnae and saved in biopsy transport media. A triple antibiotic ointment was applied to each biopsy site. Defects were closed with surgical glue (Vetbond™, 3M

Animal Care Products, St. Paul, Minnesota). Hair clipped from blood collection sites and ventral abdomen was saved in plastic whirl-pacs; plucked hair for DNA analyses was stored in paper coin envelopes. Other samples, such as bacterial cultures, skin scrapings, and diagnostic biopsies were taken if indicated. Blood smears were made in the field from fresh whole blood. Panthers were implanted with a SQ transponder identification chip (Trovan®, Douglas, United Kingdom), ear-tattooed, measured, and weighed.

Vaccination and Treatment

Depending on vaccine history and titers at previous capture, panthers >6 months old were vaccinated SQ against feline viral rhinotracheitis (FVR), feline calicivirus (FCV), feline panleukopenia (FPV) (Fel-O-Vax® PCT [FDAH], 1 ml, lower left leg), and rabies (Rabvac™ 3 [FDAH], 1 ml, lower right leg). Free-ranging panthers were also vaccinated against feline leukemia virus (FeLV, Fel-O-Vax® Lv-K [FDAH], 1ml SQ or Feline Leukemia Vaccine – Live Canarypox Vector (Merial [Athens, Georgia], 0.25 ml intradermal) in the lower left leg. Depending on body condition, captured panthers were dewormed with ivermectin (0.1 mg/kg, Ivomec®, Merial Limited, Iselin, New Jersey) and praziquantel (3.75 mg/kg, CestaJect™, Phoenix Pharmaceutical, Inc., St. Joseph, Missouri) administered SQ in the lateral aspect of right thigh. Penicillin G procaine/benzathine (USVet®, Hanford Pharmaceuticals, Syracuse, New York) was administered IM at 22,000 to 44,000 U/kg.

Neonatal Kittens

Neonatal kittens <6 weeks-of-age were handled according to Land et al. (1998) and marked with a SQ transponder identification chip. Pyrantel pamoate (0.1 mg/lb, Anthelban V; Phoenix Pharmaceutical, Inc., St. Joseph, Missouri) was administered orally, and blood was collected from the jugular vein for CBC and serum chemistry if indicated. A 2 mm biopsy sample was collected from the distal end of each ear. A triple antibiotic ointment was applied to each biopsy collection site. Ear biopsy tissue samples were stored in biopsy transport media.

Radiocollaring

Captured adult and subadult panthers were fitted with a VHF (Advanced Telemetry Solutions, Inc., Isanti, Minnesota) or VHF/GPS (Televilt [Followit], Lindesberg, Sweden; Lotek Wireless, New Market, Ontario, Canada; Telemetry Solutions, Concord, California) radiocollar and monitored three times weekly (M, W, F) from a Cessna 172 fixed-wing aircraft (aerial relocations). Locations collected by FWC were recorded in Universal Transverse Mercator coordinate system using customized software that incorporates positional information from digital orthophotographic quarterquads (geodetic referenced to North American Datum 83) loaded onto a Tablet PC linked to a hand-held GPS unit. Mating and denning behavior, aggressive encounters among panthers, movements and home range shifts, dispersal, survival, recruitment, displacements and replacements of individuals, and other social and ecological interactions were interpreted from radiotelemetry data, field investigations, genetics analyses, or a combination of these data sets.

Necropsy

All Florida panthers found dead due to infectious disease or unknown causes were completely necropsied by board-certified pathologists at the Veterinary Medical Teaching Hospital ([VMTH] University of Florida, College of Veterinary Medicine, Gainesville, Florida) or Disney's Animal Kingdom (Celebration, Florida). Two panthers were necropsied at the U.S. Fish and Wildlife Service National Forensic Laboratory (Ashland, Oregon). Panthers dying of known traumatic events were necropsied by the FWC veterinarian at the Wildlife Research Laboratory (FWC, Gainesville, Florida).

When carcass condition allowed, tissues samples were collected at necropsy from all major organs. Fluids collected included heart blood, venous blood, thoracic blood, aqueous humor, and urine. Blood samples were centrifuged at 2000 rpm for 10 minutes and the supernatant decanted. Representative tissues from fresh (unfrozen) and some previously frozen panthers were placed in 10% neutral buffered formalin. Fixed tissues were embedded in paraffin, sectioned at 5 to 6 μm , and stained with hematoxylin and eosin. All tissues from live-captured and necropsied panthers not immediately analyzed were archived at -20° to -70°C .

Diagnostics

Whole blood in EDTA, serum, and diagnostic samples were shipped overnight to Antech Diagnostics (Farmingdale, New York) for a complete blood count (CBC), serum chemistry profile, and appropriate diagnostic procedures (culture, histopathology). Tissue biopsies were shipped overnight to the Laboratory of Viral Carcinogenesis (National Cancer Institute [NCI], Frederick, Maryland) for tissue culture and genetic analyses (O'Brien et al. 1990).

Reciprocal antibody titers and/or presence of antigen in serum were determined for feline leukemia virus (FeLV, ELISA antigen), feline immunodeficiency virus/puma lentivirus (FIV/PLV; Western Blot, Kinetics ELISA, and peptide ELISA), feline rhinotracheitis virus (FVR, serum neutralization [SN]), feline calicivirus (FCV, SN), canine distemper virus (CDV, SN), and feline panleukopenia virus (FPL, SN) at the New York State Diagnostic Laboratory (Cornell University, Ithaca, New York). FeLV antibody optical densities were determined by ELISA (Hansen Veterinary Immunology, Dixon, California). EDTA whole blood from panthers was tested for FeLV and FIV in the field using a rapid immunoassay (SNAP Combo, IDEXX Laboratories, Westbrook, Maine). Panthers were also tested for FeLV at necropsy using thoracic, venous, or heart blood. Necropsied panthers were tested for rabies by direct fluorescent antibody test at the Jacksonville Central Laboratory (Jacksonville, Florida). Viral isolation and real-time and conventional PCR for canine distemper virus, pseudorabies virus, Flaviviruses, and Alphaviruses was performed at the Southeastern Cooperative Wildlife Disease Study (Athens, Georgia) on brain, heart, and other tissues collected from panthers dying of unknown causes.

Results and Discussion

2009-2010 Panther Capture Season

Radiocollared Panthers

Telemetry data were collected on 34 radiocollared Florida panthers in southern Florida during the reporting period by FWC and BCNP staff (Figure 1). Ten panthers were added to the radiocollared

population monitored by FWC during the 2009-2010 capture season; two subsequently died from intraspecific aggression (FP144, FP172) and one via roadkill (FP174) within 2-7 months after capture. Four panthers had previously been radiocollared with GPS collars that had released as scheduled via preprogrammed break-away mechanisms or were remotely triggered. Two GPS collars were deployed on panthers (FP174 and FP177) however FP174 was struck and killed by a vehicle 49 days post-capture. Two ATS VHF radiocollars (FP173, FP148) were equipped with GPS “pods” from Telemetry Solutions, which are self contained GPS units that mount directly to the VHF collar, to test their functionality and durability.

Three Televilt Tellus GSM GPS collars deployed during the 2008-2009 capture season (FP137, FP165, and FP167) failed during this fiscal year 5-10 months after deployment. GPS functionality initially failed on all units between 5-8 months post deployment and VHF failure followed 9-10 months post deployment. None of the collars were recovered because the VHF beacon failed before the preprogrammed break-away mechanism had released.

Minimum convex polygon home ranges for panthers monitored by FWC are depicted in Figures 2-3. A complete historical compilation of data associated with the 182 panthers radiocollared since 1981 can be found in Appendix I.

Capture Results

Capture efforts targeted five study areas: 1) Corkscrew Regional Ecosystem Watershed (CREW), which included Corkscrew Swamp Sanctuary (CSS), Lee County Port Authority mitigation property (LCPA), and Panther Island Mitigation Bank (PIMB); 2) Big Cypress National Preserve (BCNP) Addition Lands Unit (north of I-75); 3) BCNP Bear Island Unit; 4) Okaloacoochee Slough State Forest (OSSF), and 5) Picayune Strand State Forest (PSSF). Florida panthers were targeted in these areas to continue demographic and epidemiological monitoring and to assess movement patterns, potential corridor use, and habitat selection along the urban-wildland interface, particularly at the northern and western extents of the current breeding range.

Capture efforts commenced on 4 November 2009 and continued through 10 February 2010. Forty-five field days were divided between the 5 study areas (Figure 4). A total of 10 Florida panthers were captured by FWC staff including six previously uncollared panthers (FP172, FP173, FP174, FP176, FP177 and FP178). Four panthers (FP110, FP144, FP148, and FP156) that had previously been radiocollared and whose GPS collars had released were recaptured while searching in target areas (Table 1).

The prioritized deployment of GPS radiocollars from 2005-2009 resulted in fewer panthers collared for long-term demographic monitoring due to GPS radiocollar malfunctions and battery limitations. Because of the importance of long-term monitoring, an emphasis was placed on deploying very high frequency (VHF) radiocollars during the 2009-2010 capture season. VHF collars were placed on 8 of 10 panthers captured. Two different brands (Televilt, Lotek) of GPS-GSM (global system for mobile communications) radiocollars were deployed to continue testing functionality and durability of these collars that transmit location data using cellular phone towers. Additionally, two GPS “pods” from Telemetry Solutions, which are self contained GPS units that mount directly to VHF collars, were deployed to test their function and durability. The advantage of these pods is that contact with the collared panther will not be lost when the GPS pod battery is exhausted, allowing for future recovery of the unit and continued monitoring of the individual panther.

Biomedical Summaries of Florida Panthers Handled in 2009-2010

No significant capture-related injuries occurred this capture season. All panthers captured by FWC for radiocollaring were in fair to excellent condition and no panthers tested positive for FeLV. Atrial septal defects were observed in 3 panthers necropsied this FY and ranged in diameter from 1 to 5 mm.

Captive Florida Panthers

FP204 (19 year-old female) was euthanized 28 July 2009 at White Oak Conservation Center (Yulee, FL) due to cancer (transitional cell carcinoma). Other panthers currently in captivity include:

FP79 (14 year old male) at Homosassa Springs State Wildlife Park, K255 (3 year-old female) at the Lowry Park Zoo (Tampa, FL), and K180 and K181 (5.5 year-old female siblings) at the Jacksonville Zoo (Jacksonville, FL).

Reproduction

FWC and NPS staff handled 26 kittens (17 males and 9 females) from 10 females at 10 dens from 1 July 2009 to 30 June 2010 (Table 2). Mean litter size for these dens was 2.6 (SE = 0.16, $n = 10$, range = 2- 3). Kittens were not handled at the dens of FP113 and FP158. The den of FP113 was never located, but a litter was confirmed via a trail camera photograph of her and a 4 month old kitten on 28 July 2009. FP158 denned during April of 2010 in the Picayune Strand State Forest. Two kittens were observed at this den on 27 April 2010, but they were not handled. A historical compilation of data collected by FWC and NPS on Florida panther kittens handled at dens (1992-2010) and known dens of radiocollared females (1985-2010) can be found in Appendix II and III, respectively.

Florida Panther Mortality

A total of 28 free-ranging panthers died during the reporting period including: six (4♂, 2♀) radiocollared panthers, 21 (13♂, 8♀) uncollared panthers, and one uncollared panther (UCFP128) whose death is under investigation by FWC and USFWS Law Enforcement (Table 3). Causes of mortality included vehicular trauma (11♂, 9♀), intraspecific aggression (3♂, 1♀) and undetermined (2♂, 1♀). The skeletal remains of male UCFP138 were recovered in January 2010 but a definitive year of death could not be determined. One captive panther, female FP204 was euthanized due to debilitating health conditions. A historical compilation of all recorded panther mortalities can be found in Appendix IV.

Human-Panther Conflicts

Human-panther interactions are handled following protocols established in the Interagency Florida Panther Response Plan (USFWS 2008). Confirmed interactions, particularly depredation conflicts, are expected to continue as humans continue to encroach upon areas occupied by panthers and the current panther population is sustained or increases (Figure 5). Interactions documented during the

past fiscal year included depredations and encounters. A depredation event is classified as when domestic livestock or pets are preyed upon by a panther (USFWS 2008). Eleven of sixteen depredation events reported between 1 July 2009 and 30 June 2010 were verified to be caused by panthers. One depredation was determined to be caused by a bobcat and other events were unverified because they were not reported in a timely manner or were second-hand reports. Animals preyed upon by panthers included goats, chickens, and a 36 kg calf. A maternal female was responsible for 4 of the 11 depredation events. An encounter is classified as an unexpected direct meeting between a human and a panther where the panther displays nonthreatening behavior (USFWS 2008). Three interactions qualified as encounters this fiscal year. Panthers were encountered by a jogger on public land, laborers in an orange grove, and motorists on a rural road.

Genetics and Current Research

Assessment of the genetic introgression experiment that was initiated in 1995 with the release of 8 female Texas pumas will be completed by the fall of 2010 and a manuscript will be submitted to a peer reviewed journal. The headline manuscript, as well as subsequent compilations, will focus on tracking differences between pre and post-introgression cohorts of panthers. Topics will include, but are not limited to: 1) an overall assessment of genetic introgression; 2) delineation of pedigrees; 3) the impact of genetic covariates on varied demographic and physiological parameters. DNA from tissue samples collected from panthers handled during the 2009-2010 fiscal year have been sent to our collaborators at the National Cancer Institute in Frederick, Maryland for processing.

The FWC is currently involved in several collaborative projects focusing on issues related to Florida panther conservation and management. Among these are studies that will produce estimates of demographic parameters (e.g., adult and kitten survival, cause-specific mortality, fecundity), a population viability analysis, testing novel methods of estimating home ranges using GPS data, and a scientific review to establish trail camera survey designs to monitor panthers. The FWC is nearing completion of a study that compares habitat selection results derived from GPS data collected from panthers across the

diel period with results from historic habitat selection studies. We have initiated studies assessing movement rates and distances traveled by panthers using data collected at rapid fix rates with GPS collars and the use of resource selection functions as predictors of where suitable panther habitat is located in South Florida.

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* Authors in bold represent current FWC panther staff.

Table 1. Florida panther captures during the 2009-2010 Florida Fish and Wildlife Conservation Commission capture season (4 November 2009 – 10 February 2010).

Panther ID	Sex	Capture Date	Capture Location^a	Age (yrs)	Wt (lbs)	Collar type - brand, model	Capture comments
FP144	M	11/5/2009	NBCNP (Add Lands)	6	119	VHF - ATS	Previously collared w/ATS GPS (failed 4/16/2007). Old collar released and not recovered.
FP172	F	11/19/2009	NBCNP (Add Lands)	5	68	VHF - ATS	Initial collaring.
FP173	M	1/20/2010	PIMB	4	136	VHF - ATS w/TS GPS pod	Initial collaring.
FP174	M	1/26/2010	PSSF	4	150	GPS - Lotek GSM	Initial collaring. Cryptorchid.
FP156	M	1/27/2010	PSSF	4-5	116	VHF - ATS	Previously collared w/Televilt GPS that was remotely released and recovered 6/30/2008.
FP148	F	1/28/2010	PSSF	4-5	90	VHF - ATS w/TS GPS pod	Previously collared w/ATS GPS. Collar released as scheduled and recovered 2/14/2007.
FP110	F	2/3/2010	OSSF	9	109	VHF - ATS	Previously collared w/ Lotek GPS that released as scheduled and recovered 3/27/2008. Systolic heart murmur.
FP176	M	2/8/2010	OSSF	3-4	138	VHF - ATS	Initial collaring.
FP177	M	2/9/2010	NBCNP (Bear Island)	3	122	GPS - Televilt	Initial collaring.
FP178	F	2/10/2010	NBCNP (Bear Island)	2	84	VHF - ATS	Initial collaring. Abscess on lower left mandible.

^aNBCNP= Big Cypress National Preserve north of Interstate 75; OSSF=Okaloacoochee Slough State Forest; PIMB=Panther Island Mitigation Bank; PSSF=Picayune Strand State Forest.

Table 2. Neonate kittens handled at Florida panther dens by the Florida Fish and Wildlife Conservation Commission and the National Park Service from 1 July 2009 to 30 June 2010.

FP Dam	Kitten ID	Sex	Den location ^a	Date handled	Estimated age in days	Actual weight (grams)
FP153	K281	M	SBCNP	7/8/2009	30	1588
	K282	M	SBCNP	7/8/2009	30	1644
FP168	K283	M	CREW	7/21/2009	7	550
	K284	M	CREW	7/21/2009	7	610
FP170	K285	M	PSSF	7/28/2009	22	1380
	K286	M	PSSF	7/28/2009	22	1420
	K287	F	PSSF	7/28/2009	22	1400
FP113 ^b			FPNWR	7/28/2009		
FP172	K288	M	NBCNP	2/20/2010	15	1250
	K289	M	NBCNP	2/20/2010	15	1425
	K290	M	NBCNP	2/20/2010	15	1350
FP145	K291	F	SBCNP	2/25/2010	28	1873
	K292	M	SBCNP	2/25/2010	28	1844
	K293	F	SBCNP	2/25/2010	28	2043
FP162	K294	M	SBCNP	3/23/2010	14	1532
	K295	F	SBCNP	3/23/2010	14	1447
	K296	F	SBCNP	3/23/2010	14	1277
FP148	K297	F	PSSF	4/13/2010	14	1100
	K298	F	PSSF	4/13/2010	14	1200
	K299	M	PSSF	4/13/2010	14	1250
FP158 ^c			PSSF	4/27/2010		
FP161	K300	M	SBCNP	5/26/2010	16	1191
	K301	F	SBCNP	5/26/2010	16	1077
	K302	F	SBCNP	5/26/2010	16	1106
FP102	K303	M	SBCNP	6/6/2010	21	1503
	K304	M	SBCNP	6/6/2010	21	1531
FP178	K305	M	NBCNP	6/22/2010	14-17	1320
	K306	M	NBCNP	6/22/2010	14-17	1360

^a CREW = Corkscrew Regional Ecosystem Watershed; FPNWR = Florida Panther National Wildlife Refuge; NBCNP = Big Cypress National Preserve north of Interstate 75; PSSF = Picayune Strand State Forest/Wildlife Management Area; SBCNP = Big Cypress National Preserve South of Interstate 75.

^b Den of FP113 was never located. She was photographed via trail camera with a 4 month old kitten on 28 July 2009 on FPNWR.

^c 2 kittens were observed at this den but they were not marked.

Table 3. Verified free-ranging Florida panther mortalities recorded between 1 July 2009 and 30 June 2010. Data collected by FWC and BCNP staff. Causes of death include hit-by-car (HBC), intraspecific aggression (ISA), natural (NAT), and unknown (UNK). The presence of atrial septal defects (ASD) and other biomedical and morphometric data are also noted. Ages are in years or months (mo). Some characteristics were not determined (nd) or not applicable (NA) to specific panthers.

Panther ID	Sex	Date deceased	Cause	Location ^a	Age ^b (yr)	Weight (lbs.)	Kinked tail	Cowlick	ASD	Splenic cleft	Testes	Rabies FA ^c	Significant necropsy results
UCFP124	M	8/5/2009	HBC	I-75, Collier Co.	1.5-2	100 (est)	Yes	Yes	Yes	Yes	nd	nt	ASD was 2 mm in diameter. Carcass severely mutilated.
UCFP125	F	9/6/2009	HBC	I-75, Collier Co.	2	67	No	No	No	Yes	NA	nt	No significant findings at necropsy.
UCFP126	M	9/15/2009	UNK	Camp Keais Rd, Collier Co.	2	120	No	No	nd	nd	2	nt	Necropsied by USFWS, Ashland, OR.
FP166	M	10/5/2009	ISA	BCSIR	5-6	106	No	No	No	No	2	nt	No evidence of old injuries from HBC last year.
UCFP127	F	10/7/2009	UNK	Turner River, US41, Collier Co.	3-4	63	No	No	No	No	NA	nt	Cause of death was blunt trauma, possibly due to HBC. Found in Turner River approximately 1/3 mi south of US41.
UCFP128	†	†	†	†	†	†	†	†	†	†	†	†	Necropsied by USFWS, Ashland, OR.
UCFP129	M	10/19/2009	HBC	CR846	4 mo	21.5	No	No	No	No	0	nt	Testes retained in inguinal canals.
UCFP130	F	10/21/2009	HBC	CR846	3-4	68	No	No	No	Yes	NA	nt	May be the mother of UCFP129.
UCFP131	M	11/1/2009	HBC	CR833, BCSIR	3-4 mo	15.5	No	Yes	nd	nd	nd	nt	Severe autolysis.
UCFP132	M	11/19/2009	HBC	Florida Turnpike, Osceola Co.	Adult	130 (est)	No	Yes	nd	nd	nd	nt	Head had been removed postmortem. Carcass severely mutilated.
UCFP133	M	12/17/2009	HBC	I-75, Collier Co.	3	104	No	No	nd	Yes	2	nt	Right atrium ruptured – unable to assess for ASD.
UCFP134	M	12/23/2009	HBC	Corkscrew Rd	3	148	No	Yes	No	Yes	1	nt	May be “white-tipped tail” panther seen on trail cameras near fish farm.
UCFP135	F	12/29/2009	HBC	SR29, Collier Co.	4	80	No	No	No	Yes	NA	nt	No significant findings at necropsy.

Panther ID	Sex	Date deceased	Cause	Location ^a	Age ^b (yr)	Weight (lbs.)	Kinked tail	Cowlick	ASD	Splenic cleft	Testes	Rabies FA ^c	Significant necropsy results
UCFP136	F	12/31/09	HBC	County Barn Rd, Collier Co.	3-4 mo	27	No	Yes	No	Yes	NA	nt	No significant findings.
UCFP137	M	1/16/2010	ISA	South of Corkscrew Rd	2.5	NA	No	No	No	nd	nd	nt	Carcass severely scavenged/decomposed.
UCFP138	M	UNK	UNK	Rookery Bay NERR	UNK	UNK	UNK	UNK	UNK	UNK	UNK	NA	Skeletal remains only. Date of death undetermined.
UCFP139	F	3/12/2010	HBC	Corkscrew Rd	3	66	No	No	No	nd	NA	u	No significant findings.
FP174	M	3/16/2010	HBC	I-75	4-5	158	Yes	No	Yes	Yes	1	u	ASD was 1 mm in diameter. Radiocollared 1/26/10.
FP172	F	3/22/2010	ISA	NBCNP	5	75	No	No	No	Yes	NA	u	Skull crushed.
UCFP140	M	4/15/2010	HBC	I-75, Lee Co.	1.5-2	105 (est)	No	NA	nd	nd	2	nt	Carcass in poor condition.
UCFP141	F	4/29/2010	HBC	Church Rd, Hendry Co.	6 mo	32	No	No	No	Yes	NA	nt	No significant findings.
UCFP142	F	5/4/2010	HBC	Golden Gate Blvd, Collier Co.	8 mo	44	No	No	No	No	NA	nt	Two insignificant splenic clefts (0.5 cm) are present.
FP169	M	5/21/2010	HBC	US41, Collier Co.	5-6	99	No	No	No	nd	2	u	Healed coccygeal (tail) fracture present.
FP158	F	5/22/2010	HBC	US41, Collier Co.	5	74	Yes	Yes	No	Yes	NA	N	No significant findings.
UCFP143	M	5/23/2010	HBC	US41, Collier Co.	6-8 mo	55	No	No	Yes	Yes	2	nd	3 by 5 mm atrial septal defect present.
UCFP144	M	5/31/2010	HBC	CR833	1	80	No	Yes	No	NA	nd	nt	Poor carcass condition (mutilated, autolyzed).
FP144	M	6/19/2010	ISA	NBCNP	6	104	No	No	No	NA	nd	nt	Severely decomposed and submerged in water.
UCFP145	M	6/24/2010	HBC	SR29, Collier Co.	16-18 mo	83	Yes	Yes	No	No	2	N	Possible healed liver fractures (clefts) present.

^a BCSIR = Big Cypress Seminole Indian Reservation; NBCNP = Big Cypress National Preserve north of Interstate 75; NERR = National Estuarine Research Reserve.

^b Ages of panthers followed by * were of known age due to initial handling and marking at the natal den.

^c FA= Direct Fluorescent antibody test; u = tested but tissue condition was unsatisfactory for definitive diagnosis, nt = not tested, N = negative.

† = Information withheld, under investigation.

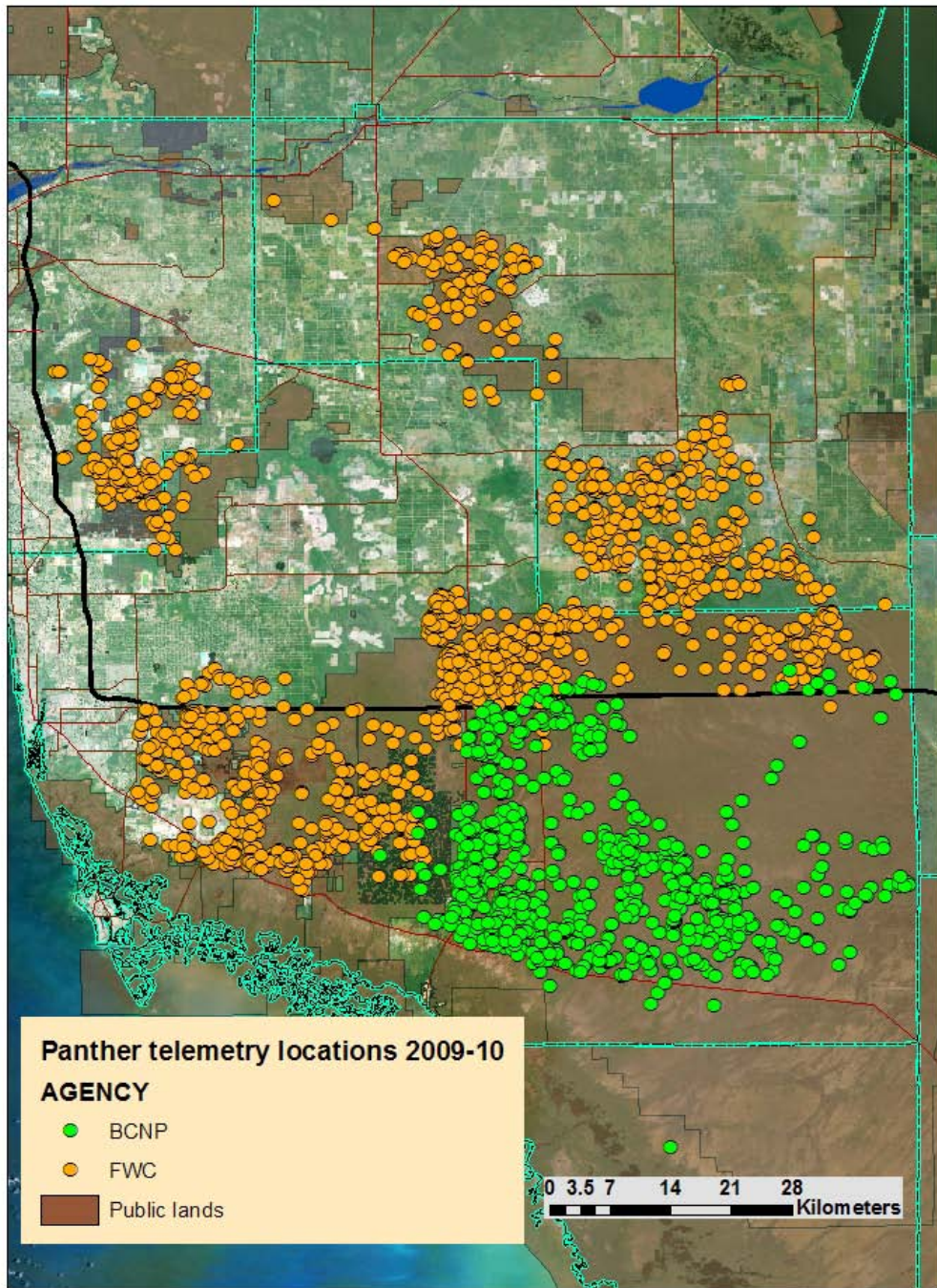


Figure 1. Locations of all radiocollared Florida panthers in southern Florida from 1 July 2009 to 30 June 2010. Data collected by FWC and NPS.

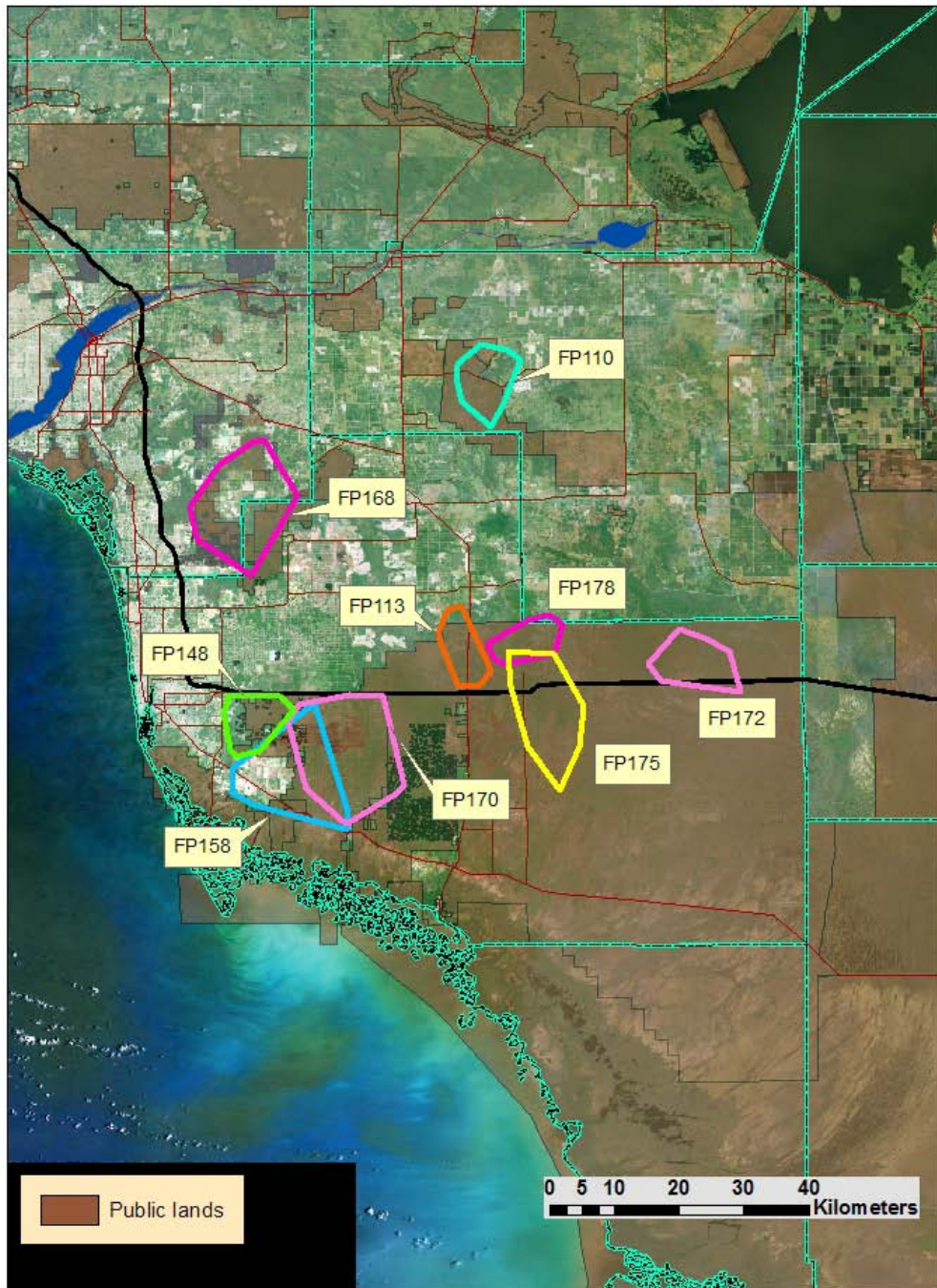


Figure 2. Depiction of the 100% minimum convex polygon home ranges for adult female Florida panthers monitored by FWC from 1 July 2009 to 30 June 2010.

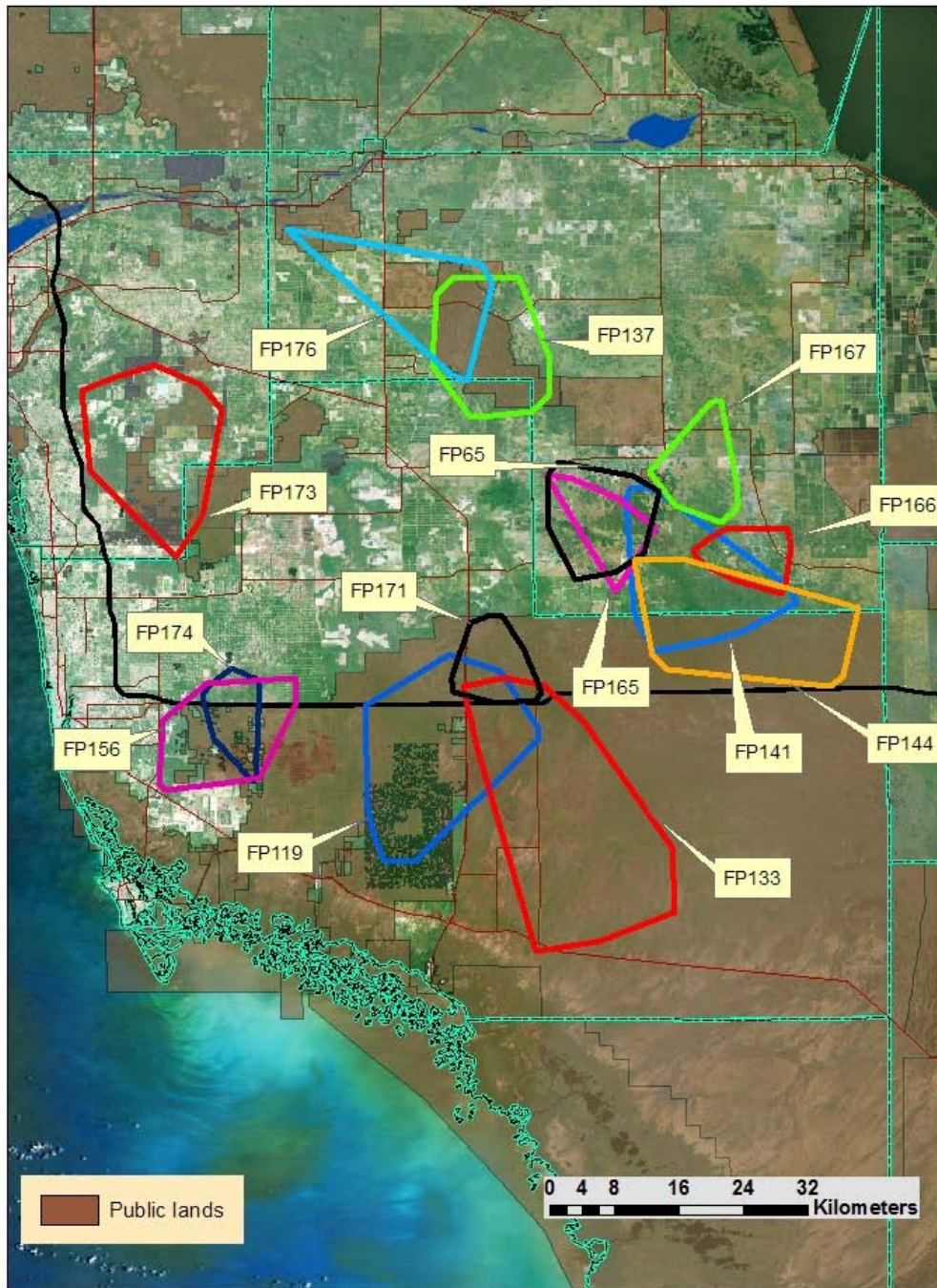


Figure 3. Depiction of the 100% minimum convex polygon home ranges for adult male Florida panthers monitored by FWC from 1 July 2009 to 30 June 2010.

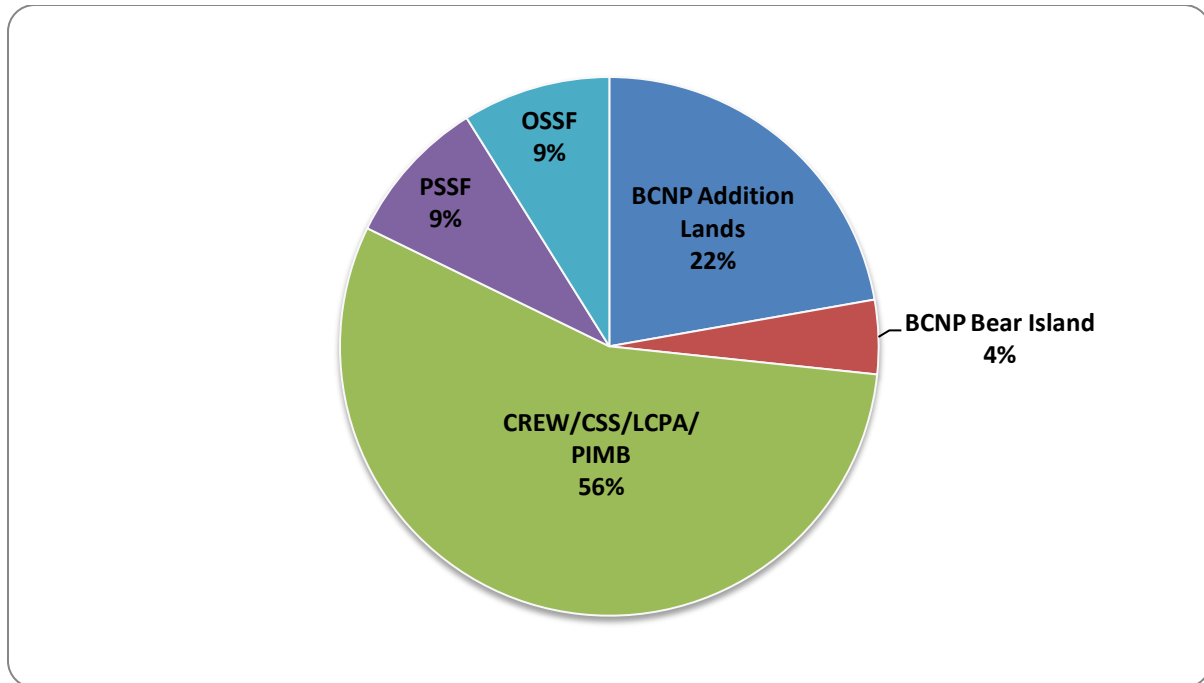


Figure 4. Percentage of 45 field days devoted to specific study areas during the 2009-2010 Florida Fish and Wildlife Conservation Commission capture season. Study area acronyms are defined in the text.

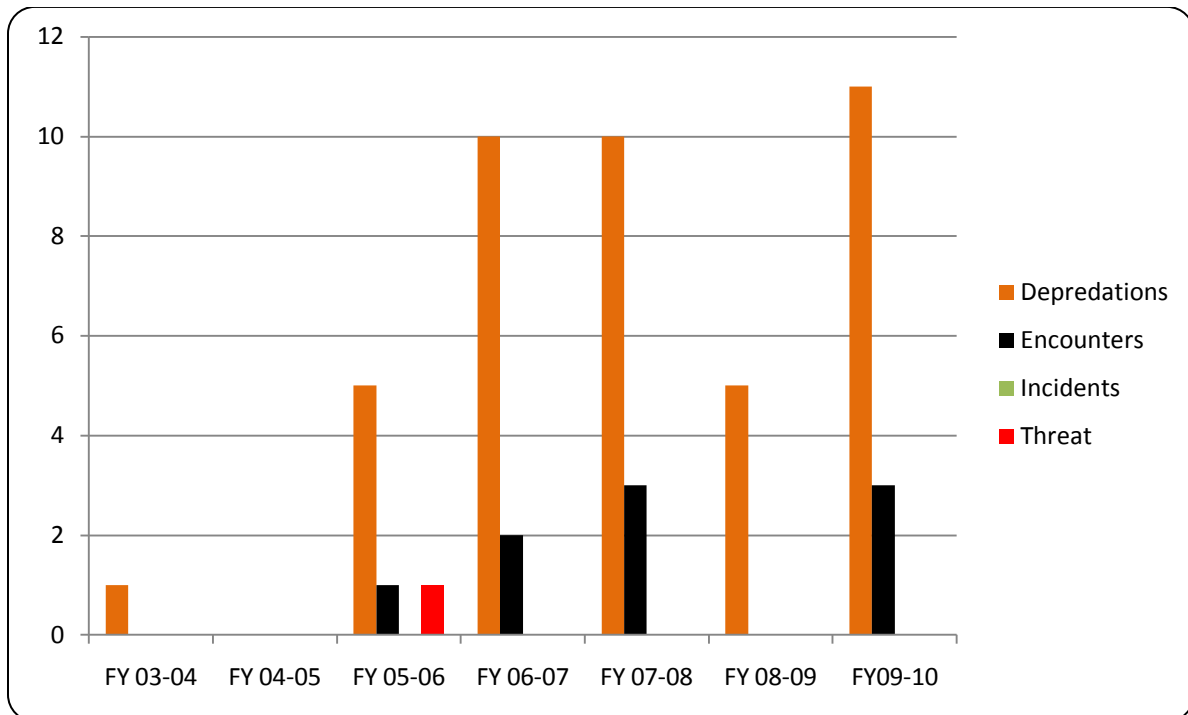


Figure 5. Confirmed human-panther interactions from Fiscal Year 2003-04 through 2009-10. Definitions of conflict categories can be found in the Appendix C of the USFWS Environmental Assessment for the [“Interagency Florida Panther Response Plan”](#).

Appendix I. List of radiocollared Florida panthers and Texas pumas in southern Florida from 10 February 1981 to 30 June 2010. Data includes panthers captured by FWC and BCNP staff.

Panther ID ^a	Sex	Capture date	Estimated age at first capture	Birth date	Dam	Purported sire	Use area ^b	Death date	Cause of death ^c
FP01	M	10 Feb 1981	10	-	-	-	FSPSP	14 Dec 1983	Vehicle (SR 84 mm 18)
FP02	M	20 Feb 1981	10	-	-	-	FSPSP	27 Nov 1984	Intraspecific aggression
FP03	F	23 Jan 1982	9	-	-	-	FSPSP	17 Jan 1983	Capture
FP04	M	27 Jan 1982	7-8	-	-	-	FSPSP	18 Apr 1985	Vehicle (SR 84 mm17)
FP05	F	23 Feb 1982	7-8	-	-	-	FPNWR	23 Nov 1982	Unknown
FP06	M	27 Feb 1982	6-8	-	-	-	SBCNP	16 Apr 1982	Unknown
FP07	M	02 Mar 1982	6-7	-	-	-	SBCNP, FSPSP	26 Oct 1985	Vehicle (SR 29 C. prison)
FP08	F	25 Mar 1984	9-10	-	-	-	FSPSP	20 Aug 1988	Liver failure, old age
FP09	F	26 Jan 1985	3-4	-	-	-	FSPSP	♦	-
FP10	M	15 Jan 1986	5 mo.	Aug 1985	FP09	-	GG Estates, FSPSP	27 Jan 1987	Intraspecific aggression
FP11	F	21 Jan 1986	4-5	-	-	-	NBCNP, Private (Price's)	25 Feb 2001	Intraspecific aggression
FP12	M	28 Jan 1986	5	-	-	-	NBCNP, FPNWR, FSPSP	8 Nov 1994	Intraspecific aggression
FP13	M	27 Feb 1986	4-5	-	-	-	NBCNP, Private (Alico)	14 Dec 1987	Vehicle (SR 29 Sunniland)
FP14	F	07 Dec 1986	5-6	-	-	-	EVER	21 Jun 1991	Unknown
FP15	F	13 Dec 1986	5-6	-	-	-	EVER	10 Jun 1988	Intraspecific aggression
FP16	M	12 Jan 1987	12-14 mo.	-	FP14	-	EVER, SBCNP	3 Jan 2000	Unknown
FP17	M	20 Jan 1987	6-7	-	-	-	SBCNP, NBCNP	20 Jul 1990	Unknown
FP18	F	22 Jan 1987	7-8	-	-	-	Private (Gum Swamp, Scofields), BCSIR	1 Oct 1990	Intraspecific aggression
FP19	F	09 Feb 1987	9 mo.	May 1986	FP11	FP12	NBCNP, Private (Prices), FPNWR	2 Dec 1997	Aortic aneurysm
FP20	M	10 Mar 1987	3-4	-	-	-	Private (Alico), NBCNP	24 Aug 1988	Heart defect

Panther ID^a	Sex	Capture date	Estimated age at first capture	Birth date	Dam	Purported sire	Use area^b	Death date	Cause of death^c
FP21	F	16 Mar 1987	12-14 mo.	-	FP14	-	EVER, White Oak	26 Dec 1997	Vehicle/Captivity/Old age
FP22	F	18 Mar 1987	5-6 mo.	-	FP15	-	EVER	20 Jul 1991	Infection
FP23	F	18 Mar 1987	5-6 mo.	-	FP15	-	EVER, SBCNP	25-26 Nov 2000	Unknown
FP24	M	30 Jan 1988	3-4	-	-	-	Highlands Co.	22 Aug 1988	Unknown
FP25	M	16 Feb 1988	4-5	-	-	-	FPNWR	26 Aug 1988	Intraspecific aggression
FP26	M	01 Mar 1988	5-6	-	-	-	BCSIR, NBCNP	8 Jul 1994	Intraspecific aggression
FP27	F	11 Apr 1988	2-3	-	-	-	EVER	23 Jul 1989	Unknown
FP28	M	29 Nov 1988	1.5	-	-	-	Private (Ft. Myers, Lake Hicpochee, Gum Swamp), NBCNP	25 Sep 1992	Intraspecific aggression
FP29	M	03 Jan 1989	6.5 mo.	May 1988	FP11	FP20	NBCNP, Private (Gum Swamp)	27 May 1992	Pseudorabies
FP30	M	06 Jan 1989	9 mo.	Mar 1988	FP19	FP13	NBCNP, Private (Prices), FPNWR, FSPSP	29 Jan 1990	Intraspecific aggression
FP31	F	12 Jan 1989	7-9	-	-	-	FPNWR	3 Mar 1994	Vehicle (SR 29 Sunniland)
FP32	F	03 Feb 1989	2-2.5	-	-	-	FPNWR	12 Sep 2002	Unknown
FP33	M	05 Mar 1989	1.5-2	-	-	-	SBCNP (Loop Rd.), Private (Gum Swamp)	23 Nov 1989	Rabies
FP34	M	08 Jan 1990	10 mo.	Mar 1989	FP31	FP12	FPNWR, BCSIR, Private (Gum Swamp)	15 Nov 1993	Esophageal puncture
FP35	M	15 Jan 1990	10 mo.	Mar 1989	FP31	FP12	Private (Regency Farms)	24 Jan 1990	Bacterial infection from capture
FP36	F	27 Jan 1990	4-5	-	-	-	NBCNP	10 Oct 1998	Unknown natural causes
FP37	M	30 Jan 1990	3-4	-	-	-	FSPSP, FPNWR, NBCNP	26 Nov 1990	Vehicle (SR 29 Miles City)
FP38	F	08 Feb 1990	4.5	-	-	-	SBCNP, EWMA	4 Aug 1994	Pleuritis in chest
FP39	M	19 Feb 1990	3-4	-	-	-	EVER	18 May 1990	Pyothorax
FP40	F	26 Feb 1990	1.5-2	-	-	-	NBCNP	1 Feb 1998	Intraspecific aggression
FP41	F	28 Feb 1990	1.5-2	-	-	-	NBCNP, BCSIR	22 Sep 1990	Intraspecific aggression
FP42	M	06 Mar 1990	11 mo.	May 1989	FP14	FP16	EVER, SBCNP	22 Jun 1995	Unknown
FP43	M	01 May 1990	9.5 mo.	Jul 1989	FP19	FP12	FPNWR, NBCNP	31 Oct 1991	Intraspecific aggression

Panther ID^a	Sex	Capture date	Estimated age at first capture	Birth date	Dam	Purported sire	Use area^b	Death date	Cause of death^c
FP44	M	30 Apr 1991	6 mo.	Nov 1990	FP40	FP26	NBCNP, Naples, EVER, SBCNP	6 Jul 1993	Intraspecific aggression
FP45	M	08 May 1991	6 mo.	Nov 1990	FP19	FP12	FPNWR, NBCNP, BCSIR	2 Aug 1998	Intraspecific aggression
FP46	M	30 Jan 1992	2-2.5	-	-	-	NBCNP, Private (Gum Swamp), OSSF	3 Feb 1999	Intraspecific aggression
FP47	M	21 Feb 1992	6 mo.	Jul 1991	FP11	FP12	NBCNP, Belle Meade, FSPSP	19 Feb 1993	Intraspecific aggression
FP48	F	24 Feb 1992	4 mo.	Oct 1991	FP31	FP12	NBCNP	23 Oct 2006	Unknown
FP49	F	25 Feb 1992	2	-	-	-	NBCNP	3 Jan 2002	Intraspecific aggression
FP50	M	04 Mar 1992	8 mo.	May 1991	FP36	FP26	NBCNP, Private (Alico, Devils Garden)	6 Dec 1993	Vehicle (CR 846 5 mi E of Immokalee)
FP51	M	26 Mar 1992	3	-	-	-	FSPSP, FPNWR	17 Jul 1998	Vehicle (SR 29)
FP52	F	05 May 1992	6 mo.	Oct 1991	FP31	FP12	FPNWR, Private (Sadie Cypress)	14 Jan 1995	Vehicle (CR 846 & Dupree Rd)
FP53	M	10 Feb 1993	10 mo.	Apr 1992	FP19	FP12	FPNWR	26 Feb 1993	Intraspecific aggression
FP54	M	10 Feb 1993	10 mo.	Mar 1992	FP40	-	FSPSP, FPNWR	◆	-
FP55	F	25 Jan 1994	1.1 yrs.	Dec 1992	FP23	FP42	SBCNP	12 July 2004	Intraspecific aggression
FP56	F	03 Feb 1994	2-3	-	-	-	NBCNP	◆	-
FP57	F	31 Jan 1995	3	-	-	-	FPNWR, FSPSP	◆	-
FP58	M	08 Feb 1995	8 mo.	Apr 1994	FP56	-	NBCNP, FPNWR, FSPSP	30 Mar 1997	Intraspecific aggression
FP59	M	04 Jan 1996	6 mo.	Jun 1995	FP48	-	NBCNP, FPNWR, FSPSP	22 Nov 2004	Intraspecific aggression
FP60	M	06 Mar 1996	5 mo.	Oct 1995	FP40	-	NBCNP, FSPSP, FPNWR, SBCNP	14 Dec 2008	Euthanasia (Removed from wild 6/29/2004)
TX101	F	05 Apr 1995	-	-	-	-	BCSIR	29 Mar 2000	Unknown
TX102	F	05 Apr 1995	-	-	-	-	E. Hendry County	22 Sep 1995	Vehicle (CR833 5 mi. N BCSIR)
TX103	F	04 May 1995	-	-	-	-	SBCNP	19 Aug 1999	Metabolic complications from pregnancy
TX104	F	24 Mar 1995	-	-	-	-	FSPSP, Belle Meade	18 Apr 1998	Gunshot
TX105	F	05 Jul 1995	-	-	-	-	EVER	-	Removed from wild 1/27/2003
TX106	F	09 Apr 1995	-	-	-	-	PSSF, FPNWR, FSPSP	-	Removed from wild 1/8/2003

Panther ID^a	Sex	Capture date	Estimated age at first capture	Birth date	Dam	Purported sire	Use area^b	Death date	Cause of death^c
TX107	F	04 May 1995	-	-	-	-	SBCNP	18 Jan 2001	Pneumonia
TX108	F	26 Jul 1995	-	-	-	-	EVER	-	Removed from wild 11/18/2002
FP61	F	04 Mar 1997	8 mo.	Jul 1996	TX108	FP16	EVER	◆	-
FP62	M	18 Mar 1997	6.5 mo.	Sep 1996	FP48	-	Catfish Creek, Polk Co.	◆	-
FP63	M	13 Apr 1997	2	-	-	-	BCSIR, NBCNP, Private Lands	15 Jan 2000	Vehicle / Drowning
FP64	M	24 May 1997	8 mo.	Sep 1996	FP48	-	CREW (Corkscrew Marsh)	26 Mar 1999	Intraspecific aggression
FP65	M	19 Nov 1997	11 mo.	Dec 1996	TX101	FP45	OSSF, Private (Collier Enterprise)	-	-
FP66	F	09 Dec 1997	1	Dec 1996	TX101	FP45	Belle Meade, FPNWR, Private Lands	◆	-
FP67	F	19 Jan 1998	8 mo.	Jun 1997	FP56	FP45	BCSIR, Private Lands	15 Jan 2003	Intraspecific aggression (FP65)
FP68	M	23 Jan 1998	4.5	-	-	-	NBCNP	1 Mar 2000	Unknown (possible ISA)
FP69	F	05 Feb 1998	9 mo.	May 1997	FP40	FP45	NBCNP	12 Sep 2005	Unknown
FP70	F	25 Feb 1998	10 mo.	May 1997	TX107	-	SBCNP	14 Jan 2006	Vehicle
FP71	F	05 Mar 1998	10 mo.	May 1997	TX107	-	SBCNP	◆	-
FP72	M	24 Apr 1998	2.5	-	-	-	BCSIR	23 Dec 1998	Intraspecific aggression
FP73	F	12 Nov 1998	3	Sep 1995	TX101	-	BCSIR	27 June 2003	Unknown
FP74	M	12 Nov 1998	1.5	-	FP73	-	Fisheating Creek, Glades and Highlands Co.	8 Sep 1999	Vehicle (SR 27 north of Palmdale)
FP75	F	11 Jan 1999	7 mo.	Jun 1998	FP48	FP68	NBCNP	◆	-
FP76	M	13 Jan 1999	22 mo.	-	-	-	FPNWR, SBCNP	13 Nov 1999	Intraspecific aggression (FP54)
FP77	F	22 Jan 1999	1.5-2	-	-	-	NBCNP, BCSIR	12 July 2003	Unknown
FP78	F	16 Feb 1999	2.0	-	-	-	FPNWR	17 Oct 2002	Intraspecific aggression
FP79	M	03 Mar 1999	3.5	Sep 1995	TX101	-	SBCNP	-	Removed from wild 2/21/2006
FP80	F	14 Jan 2000	4.0	-	-	-	BCSIR	10 Feb 2000	Vehicle (BCSIR)
FP81	M	14 Jan 2000	4.0	-	-	-	BCSIR, Hendry Co. Private Lands	◆	-

Panther ID^a	Sex	Capture date	Estimated age at first capture	Birth date	Dam	Purported sire	Use area^b	Death date	Cause of death^c
FP82	F	25 Jan 2000	3.0	-	-	-	OSSF	9 May 2003	Unknown (possible ISA)
FP83	F	08 Feb 2000	8 mo.	Jun 1999	TX106	FP54	FSPSP	♦	-
FP84	M	11 Feb 2000	1.0	-	FP73	-	Dispersed from BCSIR to Fisheating Creek	20 Apr 2000	Unknown
FP85	M	17 Feb 2000	10-11 mo.	Mar 1999	FP61	FP16	EVER	1 Mar 2004	Unknown
FP86	F	21 Feb 2000	8 mo.	Jun 1999	FP71	FP79	SBCNP	7 Nov 2003	Spinal trauma
FP87	F	28 Feb 2000	10 mo.	Apr 1999	FP55	FP79	SBCNP	19 Jun 2003	Intraspecific aggression
FP88	F	02 Mar 2000	9 mo.	Jun 1999	FP70	FP79	SBCNP	♦	-
FP89	M	02 Mar 2000	2.5	-	-	-	SBCNP	9 Nov 2000	Intraspecific aggression
FP90	M	08 Mar 2000	9 mo.	Jun 1999	FP71	FP79	SBCNP	26 April 2001	Vehicle (US27 Terrytown)
FP91	F	17 Mar 2000	9 mo.	Jun 1999	FP70	FP79	SBCNP	12 Dec 2003	Intraspecific aggression
FP92	M	06 Apr 2000	10 mo.	Jun 1999	FP70	FP79	SBCNP, Belle Meade, CREW	Sep 2001	Unknown
FP93	F	10 Apr 2000	14 mo.	Feb 1999	TX107	FP79	SBCNP	♦	-
FP94	F	01 May 2000	10 mo.	Jul 1999	TX105	FP16	EVER	♦	-
FP95	F	07 Nov 2000	2.8 yrs.	Jan 1998	TX108	FP16	EVER	♦	-
FP96	M	07 Jan 2001	9 mo.	Apr 2000	FP78	FP59	FPNWR	17 Jan 2002	Intraspecific aggression
FP97	M	19 Jan 2001	11 mo.	-	FP105	-	FPNWR	2 Dec 2001	Intraspecific aggression
FP98	M	25 Jan 2001	3	-	-	-	NBCNP, Hendry Co. Private Lands	1 July 2002	Vehicle (SR29 N of Pistol Pond)
FP99	M	26 Jan 2001	11 mo.	-	FP105	-	FPNWR	28 Nov 2002	Vehicle (CR846 Collier fairgrounds)
FP100	M	31 Jan 2001	4	-	-	-	NBCNP, BCSIR	25 Jan 2007	Unknown
FP101	F	5 Feb 2001	2	-	-	-	NBCNP, BCSIR	♦	-
FP102	F	20 Feb 2001	3	Feb 1998	FP55	-	SBCNP	-	-
FP103	F	13 Mar 2001	8 mo.	Aug 2000	FP102	-	SBCNP	8 Aug 2007	Intraspecific aggression
FP104	M	2 Apr 2001	6-7 mo.	-	FP70	FP79	SBCNP	9 Mar 2006	Unknown

Panther ID^a	Sex	Capture date	Estimated age at first capture	Birth date	Dam	Purported sire	Use area^b	Death date	Cause of death^c
FP105	F	12 Apr 2001	6	-	-	-	FPNWR	15 Jan 2002	Unknown
FP106	F	12 Apr 2001	13 mo.	-	FP105	-	FPNWR	20 Feb 2003	Vehicle (SR29 Sunniland)
FP107	F	01 Nov 2001	19 mo.	Apr 2000	FP78	FP59	FPNWR	4 Aug 2008	Unknown
FP108	M	03 Nov 2001	11 mo.	Jan 2001	FP87	FP79	SBCNP	16 Nov 2002	Intraspecific aggression
FP109	M	10 Feb 2002	10+	-	-	-	OSSF	~23 Feb 2003	Intraspecific aggression
FP110	F	13 Feb 2002	13 mo.	Dec 2000	FP82	FP65	OSSF	-	-
FP111	M	14 Feb 2002	10	-	-	-	OSSF	4 Sep 2002	Intraspecific aggression
FP112	F	25 Feb 2002	3-4	-	-	-	NBCNP	11 Sep 2002	Intraspecific aggression
FP113	F	23 Oct 2002	6 mo.	Apr 2002	FP78	FP59	FPNWR	-	-
FP114	M	23 Oct 2002	6 mo.	Apr 2002	FP78	FP59	FPNWR	17 Oct 2003	Intraspecific aggression
FP115	F	26 Nov 2002	4-5	-	-	-	OSSF	17 May 2003	Pneumonia (FeLV)
FP116	F	20 Jan 2003	7 mo.	Jun 2002	FP67	-	Hendry Co. Private Lands	10 Jan 2007	Intraspecific aggression
FP117	M	25 Feb 2003	11 mo.	-	-	-	BCSIR	28 Jul 2004	Unknown
FP118	F	5 Mar 2003	11 mo.	-	-	-	BCSIR	3 Apr 2003	Unknown
FP119	M	2 Apr 2003	1	Apr 2002	FP93	FP79	NBCNP, FPNWR	-	-
FP120	F	8 Apr 2003	3	-	-	-	SBCNP	7 May 2005	Vehicle (US 41 Turner River)
FP121	F	2 Dec 2003	2.5	-	-	-	BCSIR	♦	-
FP122	F	30 Jan 2004	2-2.5	-	-	-	OSSF	13 Feb 2004	Pneumonia (FeLV)
FP123	M	2 Feb 2004	3.5	-	-	-	OSSF	15 Mar 2004	Intraspecific aggression
FP124	F	13 Feb 2004	3-4	-	-	-	SBCNP	♦	-
FP125	M	13 Feb 2004	8 mo.	-	FP124	-	SBCNP, EVER	♦	Collar found, final fate unknown
FP126	M	13 Feb 2004	8 mo.	-	FP124	-	SBCNP, OSSF	1 Jan 2005	Intraspecific aggression
FP127	M	16 Feb 2004	2	-	-	-	SBCNP	14 Mar 2008	Intraspecific aggression

Panther ID^a	Sex	Capture date	Estimated age at first capture	Birth date	Dam	Purported sire	Use area^b	Death date	Cause of death^c
FP128	F	18 Feb 2004	3.7	Jun 2000	FP77	-	BCSIR, NBCNP	27 Sept 2007	Unknown
FP129	F	20 Feb 2004	3	Jan 2001	FP87	FP79	SBCNP	22 Mar 2006	Intraspecific aggression
FP130	M	4 Mar 2004	9.5 mo.	May 2003	FP110	-	OSSF	21 Mar 2007	Vehicle (I-4 Reedy Creek)
FP131	M	10 Mar 2004	5	-	-	-	FPNWR	16 Apr 2008	Pneumonia
FP132	M	17 Mar 2004	3	-	-	-	OSSF, DIRWMA	22 Jul 2004	Feline leukemia
FP133	M	18 Nov 2004	4.5	-	-	-	NBCNP, SBCNP	-	-
FP134	M	14 Dec 2004	2.5	-	-	-	NBCNP	29 Jan 2007	Intraspecific aggression
FP135	M	17 Dec 2004	1.7	Apr 2003	FP101	FP65	FPNWR, Private Lands	27 Oct 2006	Intraspecific aggression/Euthanized
FP136	F	13 Jan 2005	3.5	-	-	-	SBCNP	13 Jun 2005	Spinal fracture
FP137	M	25 Jan 2005	2.5	-	-	-	OSSF, Private Lands, DIRWMA, SWWMA	♦	-
FP138	M	31 Jan 2005	4	-	-	-	SBCNP, BCSIR, NBCNP	12 May 2008	Unknown
FP139	M	31 Mar 2005	2.9	May 2002	FP75	FP100	OSSF, Private Lands	♦	-
FP140	F	14 Nov 2005	3.5	-	-	-	FPNWR	7 Jun 2009	Intraspecific aggression
FP141	M	30 Nov 2005	3.5	-	-	-	BCSIR, NBCNP	-	-
FP142	F	14 Dec 2005	2.5	-	-	-	EVER	♦	-
FP143	M	9 Jan 2006	1.5	-	-	-	BCSIR, Private Lands	♦	-
FP144	M	8 Feb 2006	2	-	-	-	NBCNP	21 Jun 2010	Intraspecific aggression
FP145	F	16 Feb 2006	1.7	-	-	-	SBCNP	-	-
FP146	M	27 Feb 2006	3	-	-	-	PSSF	♦	-
FP147	M	3 Mar 2006	11 mos.	Mar 2005	FP129	-	SBCNP, FSPSP, PSSF, RBNER	♦	-
FP148	F	24 Mar 2006	2.5	-	-	-	PSSF	-	-
FP149	F	17 Jan 2007	2	-	-	-	PSSF	♦	-
FP150	F	8 Feb 2007	3.6	Jul 2003	FP93	FP60	SBCNP	♦	-

Panther ID^a	Sex	Capture date	Estimated age at first capture	Birth date	Dam	Purported sire	Use area^b	Death date	Cause of death^c
FP151	F	10 Feb 2007	4.9	Apr 2002	FP93	FP79	SBCNP	♦	-
FP152	M	16 Feb 2007	4-5	-	-	-	SBCNP	22 Oct 2008	Intraspecific aggression
FP153	F	19 Feb 2007	6	-	-	-	SBCNP	♦	-
FP154	M	21 Feb 2007	3	-	-	-	FPNWR	♦	-
FP155	M	29 Nov 2007	2.5	-	-	-	OSSF, Private Lands	8 Sept 2008	Unknown
FP156	M	7 Dec 2007	2.5	-	-	-	PSSF, North Belle Meade	-	-
FP157	M	19 Dec 2007	3	-	-	-	LCPA, CREW (Flint Pen)	9 Apr 2008	Intraspecific aggression
FP158	F	21 Jan 2008	2.5	-	-	-	PSSF, CSSP, RBNERR	22 May 2010	Vehicle
FP159	M	29 Jan 2008	5-6	-	-	-	CREW (Flint Pen, Bird Rookery), CSS	♦	-
FP160	F	5 Feb 2008	5	-	-	-	CREW (Corkscrew Marsh), CSS	♦	-
FP161	F	10 Feb 2008	3 yr 8 mo.	May 2004	FP70	-	SBCNP	-	-
FP162	F	18 Feb 2008	3	-	-	-	SBCNP	-	-
FP163	M	21 Feb 2008	1	Feb 2007	FP93	-	SBCNP	♦	-
FP164	M	24 Feb 2008	2	-	-	-	SBCNP	30 Jun 2008	Unknown
FP165	M	24 Nov 2008	1	-	-	-	OSSF, DIRWMA, Private Lands	♦	-
FP166	M	30 Jan 2009	4-5	-	-	-	BCSIR, Private Lands	5 Oct 2009	Intraspecific aggression
FP167	M	6 Feb 2009	2.5	-	-	-	BCSIR, Private Lands	♦	-
FP168	F	9 Feb 2009	7	-	-	-	CREW (Flint Pen), LCPA	-	-
FP169	M	25 Feb 2009	4-5	-	-	-	SBCNP	21 May 2010	Vehicle
FP170	F	26 Feb 2009	2.5	-	-	-	PSSF, FSPSP	-	-
FP171	M	27 Feb 2009	2-3	-	-	-	SBCNP, NBCNP	-	-
FP172	F	19 Nov 2009	5	-	-	-	NBCNP	22 Mar 2010	Intraspecific aggression
FP173	M	20 Jan 2010	4	-	-	-	CREW, PIMB, LCPA	-	-

Panther ID^a	Sex	Capture date	Estimated age at first capture	Birth date	Dam	Purported sire	Use area^b	Death date	Cause of death^c
FP174	M	26 Jan 2010	4	-	-	-	PSSF	16 Mar 2010	Vehicle
FP175	F	7 Feb 2010	2.5	2 Jul 2007	FP150	-	SBCNP	-	-
FP176	M	8 Feb 2010	3-4	-	-	-	OSSF, SOTW	-	-
FP177	M	9 Feb 2010	3	18 Mar 2007	FP113	FP119	NBCNP	-	-
FP178	F	10 Feb 2010	2	-	-	-	NBCNP	-	-
FP179	M	14 Feb 2010	5	-	-	-	SBCNP	♦	-
FP180	F	21 Feb 2010	2	13 Feb 2008	FP151	-	SBCNP	-	-
FP181	M	28 Feb 2010	9	3 Mar 2001	TX106	FP60	SBCNP, FSPSP, PSSF	-	-
FP182	F	1 Mar 2010	1	10 Feb 2009	FP161	-	SBCNP	-	-

^aFP denotes panthers captured for radiocollaring. TX denotes female Texas pumas released in 1995 as part of the genetic introgression project.

^bBCSIR = Big Cypress Seminole Indian Reservation; CREW = Corkscrew Regional Ecosystem Watershed; CSS = Corkscrew Swamp Sanctuary; CSSP = Collier Seminole State Park; DIRWMA = Dinner Island Ranch Wildlife Management Area; EVER = Everglades National Park; EWMA; Everglades Wildlife Management Area; FPNWR = Florida Panther National Wildlife Refuge; FSPSP = Fakahatchee Strand Preserve State Park; LCPA = Lee County Port Authority Mitigation Area; NBCNP = Big Cypress National Preserve north of Interstate 75; OSSF = Okaloacoochee Slough State Forest; PIMB=Panther Island Mitigation Bank; PSSF = Picayune Strand State Forest/Wildlife Management Area; RBNER = Rookery Bay National Estuarine Research Reserve; SBCNP = Big Cypress National Preserve south of Interstate 75; SWWMA = Spirit of the Wild Wildlife Management Area.

^cISA = Intraspecific aggression

♦ Telemetry collar either failed or was released (via timed or remote release mechanisms) prior to the death of the animal.

Appendix II. List of Florida panther kittens handled at natal dens in southern Florida by FWC and BCNP staff from 7 April 1992 through 30 June 2010. Litters are sorted chronologically.

Kitten ID	Dam ID	Date marked	Sex	Transponder ID	Estimated age in days	Purported field sire	Date collared	Eventual panther ID
K1	FP40	4/7/1992	M	None	14-21	FP28	2/10/1993	FP54
K2	FP40	4/7/1992	M	None	14-21	FP28		
K3	FP40	6/18/1993	M	None	21	FP26		
K4	FP40	6/18/1993	F	None	21	FP26		
K5	FP40	6/18/1993	F	None	21	FP26		
K6	FP48	10/30/1993	M	None	8	FP12		
K7	FP48	10/30/1993	F	None	8	FP12		
K8	FP48	10/30/1993	F	None	8	FP12		
K9	FP56	4/21/1994	M	None	14	Unknown		
K10	FP56	4/21/1994	F	None	14	Unknown		
K11	FP56	4/21/1994	M	None	14	Unknown		
K12	FP19	5/17/1994	F	None	14-17	FP51		
K13	FP19	5/17/1994	F	None	14-17	FP51		
K14	FP55	4/8/1995	F	None	12	FP42		
K15	FP55	4/8/1995	F	None	12	FP42		
K16	FP48	6/20/1995	M	12A4640	12	Unknown	1/7/1996	FP59
K17	FP48	6/20/1995	F	129FE45	12	Unknown		
K18	TX101	10/10/1995	F	F82665	21	Unknown	11/12/1998	FP73
K19	TX101	10/10/1995	M	F79CB9	21	Unknown	3/3/1999	FP79
K20	FP56	10/31/1995	M	762141	14	FP45		
K21	FP56	10/31/1995	M	632448	14	FP45		
K22	FP56	10/31/1995	M	F6642F	14	FP45		
K23	TX106	12/1/1995	F	11DFD74	21	FP51		
K24	FP36	2/6/1996	F	12AB55F	14	FP45		
K25	FP36	2/6/1996	M	1147C9B	14	FP45		

Kitten ID	Dam ID	Date marked	Sex	Transponder ID	Estimated age in days	Purported field sire	Date collared	Eventual panther ID
K26	FP36	2/6/1996	M	11DF0DA	14	FP45		
UCFP44 ^a	FP36	2/6/1996	U	none	Unknown	Unknown		
UCFP24	FP32	3/18/1996	F	dead not marked	10-14	Unknown		
K27	FP19	4/17/1996	F	114DAFE (11363DC)	24	FP54/FP51		
K28	FP19	4/17/1996	F	11EOD50	24	FP54/FP51		
K29	FP56	8/14/1996	U	11EAB72T	14	FP45		
K30	FP56	8/14/1996	U	1142876	14	FP45		
K31	FP48	9/18/1996	M	7037C2	14-17	Unknown	3/18/1997	FP62
K32	FP48	9/18/1996	M	11EA2EC	14-17	Unknown	5/24/1997	FP64
K33	FP48	9/18/1996	M	6FFD52	14-17	Unknown		UCFP50
K34	TX105	10/4/1996	F	11EAO30T	30-35	FP16		
K35	TX101	12/21/1996	M	12AFFBF	4	FP45	11/19/1997	FP65
K36	TX101	12/21/1996	F	142581A	4	FP45	12/9/1997	FP66
K37	FP40	5/14/1997	M	1146911	21	FP45		
unmarked1 ^b	FP40	2/5/1998	F	none	270	Unknown	2/5/1998	FP69
K38	TX107	6/4/1997	F	1311B3B	30+	Unknown	3/5/1998	FP71
K39	TX107	6/4/1997	F	771B4D	30+	Unknown	2/25/1998	FP70
K40	FP56	6/17/1997	M	1412E16	25-28	FP45		
K41	FP56	6/17/1997	F	14259BF	25-28	FP45		
K42	FP56	6/17/1997	F	1425A07	25-28	FP45	1/19/1998	FP67
K43	FP56	6/17/1997	M	12C2B93	25-28	FP45		
K44	FP55	10/2/1997	M	12A9E4AT	25-30	Unknown		
K45	TX108	2/11/1998	F	1D1DFDOT	21	FP16	11/7/2000	FP95
K46	TX108	2/11/1998	M	143E96ET	21	FP16		
K47	TX106	2/17/1998	M	1D3E32OT	7-10	FP54		
K48	FP55	2/25/1998	F	121134F	14	Unknown	2/20/2001	FP102
K49	FP55	2/25/1998	F	1D2B3AET	14	Unknown		
K50	FP55	2/25/1998	M	12A94A6T	14	Unknown		
K51	FP48	6/27/1998	M	1D2A504T	28	Unknown		

Kitten ID	Dam ID	Date marked	Sex	Transponder ID	Estimated age in days	Purported field sire	Date collared	Eventual panther ID
unmarked3 ^c	FP48	1/11/1999	F	00013C2DC7T	7 months	Unknown	1/11/1999	FP75
K52	FP66	10/2/1998	M	1D21638T	12	FP72		
K53	FP66	10/2/1998	F	1C49E48T	12	FP72		
K54	FP66	10/2/1998	M	1D2CBC3T	12	FP72		
K55	FP49	2/23/1999	M	1211046	25	Unknown		
K56	TX107	3/11/1999	F	1327679T	21+	FP79		
K57	TX107	3/11/1999	M	14245FOT	21+	FP79		
K58	TX107	3/11/1999	F	12A9FE5T	21+	FP79	4/10/2000	FP93
K59	FP61	4/6/1999	M	1EFF6EFT	14	FP16	2/17/2000	FP85
K60	FP55	5/10/1999	F	1EFFA75T	24-26	FP79	2/28/2000	FP87
K61	FP55	5/10/1999	M	1EFF978T	24-26	FP79		
K62	TX106	6/18/1999	F	114C9D7T	14	FP54/FP60		
K63	TX106	6/18/1999	F	12AFC11T	14	FP54/FP60	2/8/2000	FP83
K64	FP70	6/23/1999	F	1E2EB33T	10-12	FP79	3/2/2000	FP88
K65	FP70	6/23/1999	M	703A4AT	10-12	FP79	4/6/2000	FP92
K66	FP70	6/23/1999	F	1EFF55T	10-12	FP79	3/17/2000	FP91
K67	FP71	7/4/1999	M	1E2EBFET	17	FP79	3/8/2000	FP90
K68	FP71	7/4/1999	F	20509A9T	17	FP79	2/21/2000	FP86
K69	FP71	7/4/1999	M	1E2F6B7T	17	FP79		
K70	FP71	7/4/1999	F	1E2DF2BT	17	FP79		
K71	FP69	8/1/1999	M	1E2F276T	7	Unknown		
K72	FP69	8/1/1999	F	1F07255T	7	Unknown		
K73	FP69	8/1/1999	F	1F014C2T	7	Unknown		
K74	FP48	10/25/1999	F	1EFF38T	14-17	FP63,FP68		
K75	FP48	10/25/1999	F	1F01BEDT	14-17	FP63,FP68		
K76	FP66	12/24/1999	M	1D2C5F6T	14	FP60		
K77	FP66	12/24/1999	F	1F00067T	14	FP60		
K78	FP66	12/24/1999	F	1E2F2D6T	14	FP60		
K79	FP78	4/26/2000	F	1D1CDD8T	10-14	FP59	11/1/2001	FP107

Kitten ID	Dam ID	Date marked	Sex	Transponder ID	Estimated age in days	Purported field sire	Date collared	Eventual panther ID
K80	FP78	4/26/2000	M	1F07DD7T	10-14	FP59	1/7/2001	FP96
K81	FP77	6/27/2000	M	1D3B75CT	28	Unknown		
K82	FP77	6/27/2000	F	1433F77T	28	Unknown	2/18/2004	FP128
K83	FP77	6/27/2000	M	1D3A078T	28	Unknown		
K84	FP67	8/19/2000	M	143F34DT	12	Unknown		
K85	FP67	8/19/2000	F	1E2E834T	12	Unknown		
K86	FP82	1/3/2001	F	1E2F17ET	14	FP65	2/13/2002	FP110
K87	FP82	1/3/2001	F	1E2EFB7T	14	FP65		
K88	FP82	1/3/2001	M	1F00D57T	14	FP65		
K89	FP87	2/7/2001	F	20501C5T	14-21	FP79	2/20/2004	FP129
K90	FP87	2/7/2001	M	1E2F06B	14-21	FP79	11/3/2001	FP108
K91	FP87	2/7/2001	M	1F071F4T	14-21	FP79		
K92	TX106	3/17/2001	F	600DBE9	14-16	FP60		
K93	TX106	3/17/2001	M	600CCC4	14-16	FP60	2/28/2010	FP181
K94	FP88	5/25/2001	M	1E2EB3DT	21	Unknown		
K95	FP88	5/25/2001	F	1EFF463T	21	Unknown		
K96	FP88	5/25/2001	M	1F00576T	21	Unknown		
K97	FP88	5/25/2001	F	204F878T	21	Unknown		
K98	FP67	5/26/2001	F	11D5AFD	21	Unknown		UCFP49
K99	FP67	5/26/2001	M	1248B13T	21	Unknown		
K100	FP67	5/26/2001	M	600EFAF	21	Unknown		
K101	FP67	5/26/2001	M	600E363	21	Unknown		
K102	FP75	6/15/2001	M	600E58A	10-12	FP59		
K103	FP75	6/15/2001	M	6000FA1	10-12	FP59		
K104	FP55	6/28/2001	M	1EFFFC5T	17	Unknown		
K105	FP102	7/12/2001	M	1E2DFA4T	21	FP79		
K106	FP102	7/12/2001	M	600E036	21	FP79		
K107	FP49	8/27/2001	M	000600F828	21	Unknown		
K108	FP77	8/30/2001	M	000600F0EA	30	Unknown		

Kitten ID	Dam ID	Date marked	Sex	Transponder ID	Estimated age in days	Purported field sire	Date collared	Eventual panther ID
K109	FP73	3/3/2002	M	000600FD77	7	Unknown		
K110	FP73	3/3/2002	M	0001E2D9E2T	7	Unknown		
K111	FP73	3/3/2002	F	000600A2C9	7	Unknown		
K112	FP95	4/21/2002	F	0001E2E9D3T	25	FP85		
unmarked2 ^d	FP95	not marked	U	none	Unknown	FP85		
K113	FP93	4/23/2002	F	0001EFF813T	18	FP79	2/10/2007	FP151
K114	FP93	4/23/2002	F	000600CC53	18	FP79		
K115	FP93	4/23/2002	M	0001F071E4T	18	FP79	4/2/2003	FP119
K116	FP93	4/23/2002	F	0001F01C76T	18	FP79		
K117	FP78	4/30/2002	F	000600CDB3	21	FP59		
K118	FP78	4/30/2002	F	000600DB01	21	FP59		
K119	FP78	4/30/2002	F	000600E3E3	21	FP59	10/23/2002	FP113
K120	FP78	4/30/2002	M	0001F01D1CT	21	FP59	10/23/2002	FP114
K121	FP101	5/9/2002	M	000204F9EAT	10	Unknown		
K122	FP101	5/9/2002	F	0001E2D6FDT	10	Unknown		
K123	FP83	5/12/2002	M	000631AED6	28	Unknown		
K124	FP106	5/27/2002	F	0001F003A0T	10	Unknown		
K125	FP106	5/27/2002	M	0001D2CBC4T	10	Unknown		
K126	FP106	5/27/2002	M	0001E2E8F6T	10	Unknown		
K127	FP55	5/30/2002	F	000600EAD2	10	FP79		
K128	FP75	6/6/2002	M	000600E84B	10	FP100/FP98		
K129	FP75	6/6/2002	M	00060101BC	10	FP100/FP98	3/31/2005	FP139
K130	FP112	6/15/2002	M	0001EFF497T	7	FP100/FP98		
K131	FP112	6/15/2002	M	000600E4CE	7	FP100/FP98		
K132	FP67	6/18/2002	F	000600D0F1	10	Unknown	1/20/2003	FP116
K133	FP67	6/18/2002	M	000600EBA8	10	Unknown		
K134	FP67	6/18/2002	M	000600E776	10	Unknown		
K135	FP107	7/7/2002	M	0006010509	9-10	Unknown		
K136	FP107	7/7/2002	F	000600F465	9-10	Unknown		

Kitten ID	Dam ID	Date marked	Sex	Transponder ID	Estimated age in days	Purported field sire	Date collared	Eventual panther ID
K137	FP102	7/19/2002	F	0006318229	15	FP79		
K138	FP102	7/19/2002	M	000630E287	15	FP79		
K139	FP61	9/27/2002	F	000204FBC3T	10	Unknown		
K140	FP61	9/27/2002	M	000600D0D4	10	Unknown		
K141	FP61	9/27/2002	M	000600F2F8	10	Unknown		
K142	FP61	9/27/2002	F	0001D29A56T	10	Unknown		
K143	FP87	3/25/2003	F	000600DD57	15	FP79		
K144	FP87	3/25/2003	M	ID not recorded	15	FP79		
K145	FP87	3/25/2003	F	ID not recorded	15	FP79		
K146	FP101	4/19/2003	F	00062EDF9D	10	FP65/FP100		
K147	FP101	4/19/2003	M	0006328F81	10	FP65/FP100	12/17/2004	FP135
K148	FP101	4/19/2003	F	00062E2A15	10	FP65/FP100		
K149	FP110	6/3/2003	F	000600F8DE	6-10	Unknown		
K150	FP110	6/3/2003	M	000600CCD1	6-10	Unknown	3/4/2004	FP130
K151	FP110	6/3/2003	F	000600C049	6-10	Unknown		
K152	FP93	8/5/2003	F	000600037C	21	FP60	2/8/2007	FP150
K153	FP93	8/5/2003	M	0005FFE2D6	21	FP60		
K154	FP93	8/5/2003	M	0006000B2A	21	FP60		
K155	FP120	2/7/2004	F	0005FFE0A	14	Unknown		
K156	FP120	2/7/2004	M	0005FFE0DA	14	Unknown		
K157	FP75	3/21/2004	M	0006327AC0	23	Unknown		
K158	FP75	3/21/2004	M	000632781C	23	Unknown		
K159	FP75	3/21/2004	F	00062EE361	23	Unknown		
K160	FP116	5/1/2004	F	0006479F70	14	FP65		
K161	FP116	5/1/2004	F	000647D7A6	14	FP65		
K162	FP116	5/1/2004	M	0006485640	14	FP65		
K163	FP107	5/21/2004	M	0006327255	7	Unknown		
K164	FP107	5/21/2004	M	0006326E04	7	Unknown		
K165	FP107	5/21/2004	F	000632227C	7	Unknown		

Kitten ID	Dam ID	Date marked	Sex	Transponder ID	Estimated age in days	Purported field sire	Date collared	Eventual panther ID
K166	FP107	5/21/2004	F	000647A475	7	Unknown		
K167	FP70	6/6/2004	F	00064DBAB1	12	Unknown		
K168	FP70	6/6/2004	M	00064DAB32	12	Unknown		
K169	FP70	6/6/2004	F	00064D7C86	12	Unknown	2/10/2008	FP161
K170	FP102	8/5/2004	F	00064DEB7D	15	FP79		
K171	FP102	8/5/2004	M	00064DDEEA	15	FP79		
K172	FP102	8/5/2004	F	00064D918C	15	FP79		
K173	FP121	9/1/2004	F	0006000738	14	Unknown		
UCFP67	FP113	9/2/2004	F	dead not marked	< 7	Unknown		
K174	FP124	9/29/2004	M	000647D79D	21+	Unknown		
K175	FP124	2/10/2005	M	0005FFF5E1	14	Unknown		
K176	FP124	2/10/2005	M	00064D67F9	14	Unknown		
K177	FP124	2/10/2005	F	0006000D6B	14	Unknown		
K178	FP110	3/7/2005	M	000601E07A	12	Unknown		
K179	FP110	3/7/2005	F	00064DD051	12	Unknown		
K180	FP107	3/15/2005	F	000600E4BB	14	FP119/FP131		
K181	FP107	3/15/2005	F	000600F978	14	FP119/FP131		
K182	FP129	4/6/2005	F	0006482822	10	Unknown		
K183	FP129	4/6/2005	M	00064DE502	10	Unknown	3/3/2006	FP147
K184	FP129	4/6/2005	M	00064D7610	10	Unknown		
K185	FP113	4/20/2005	M	000647B5F9	15	FP131/FP133		
K186	FP113	4/20/2005	F	000647AEBB	15	FP131/FP133		
K187	FP116	6/19/2005	M	00064D6A85	22	Unknown		
K188	FP116	6/19/2005	F	000647AEEE6	22	Unknown		
K189	FP116	6/19/2005	M	000647BC03	22	Unknown		
K190	FP128	7/21/2005	M	64D816A	24	Unknown		
K191	FP128	7/21/2005	M	647C7FE	24	Unknown		
K192	FP75	8/7/2005	M	000647CDE9	7	FP135		
K193	FP75	8/7/2005	F	00064DB63B	7	FP135		

Kitten ID	Dam ID	Date marked	Sex	Transponder ID	Estimated age in days	Purported field sire	Date collared	Eventual panther ID
K194	FP75	8/7/2005	F	00064DAC56	7	FP135		
K195	FP75	8/7/2005	M	000600E8A6	7	FP135		
K196	FP110	11/1/2005	M	00063DE442	21	Unknown		
K197	FP110	11/1/2005	M	00063DA510	21	Unknown		
K198	FP110	11/1/2005	M	00064339FD	21	Unknown		
K199	FP110	11/1/2005	F	000643666C	21	Unknown		
K200	FP107	2/17/2006	F	0006009668	6	FP131		
K201	FP107	2/17/2006	M	000600F274	6	FP131		
K202	FP121	3/5/2006	F	000600DAB4	14	Unknown		
K203	FP121	3/5/2006	M	000600B508	14	Unknown		
K204	FP121	3/5/2006	M	0006483B07	14	Unknown		
K205	FP94	6/22/2006	F	00064DA2F2	18	Unknown		
K206	FP94	6/22/2006	M	00063D8B9D	18	Unknown		
K207	FP94	6/22/2006	F	00063DD7D8	18	Unknown		
K208	FP145	6/23/2006	F	000647B5DA	12	FP138		
K209	FP145	6/23/2006	F	00064ECCA4	12	FP138		
K210	FP145	6/23/2006	F	000672579C	12	FP138		
K211	FP93	7/1/2006	F	0064068FF	18	FP133		
K212	FP93	7/1/2006	F	00647879D	18	FP133		
K213	FP93	7/1/2006	F	0064D988C	18	FP133		
K214	FP95	7/3/2006	F	00064D852D	10	Unknown		
K215	FP95	7/3/2006	F	00064D5EDC	10	Unknown		
K216	FP95	7/3/2006	M	000647C887	10	Unknown		
K217	FP102	7/12/2006	M	000672358E	18	FP138		
K218	FP102	7/12/2006	M	000671CA33	18	FP138		
K219	FP140	11/15/2006	F	006435A2B	9-11	FP119		
K220	FP140	11/15/2006	M	0006436824	9-11	FP119		
K221	FP148	1/18/2007	F	000647D2EE	21	FP146		
K222	FP148	1/18/2007	M	00064DC433	21	FP146		

Kitten ID	Dam ID	Date marked	Sex	Transponder ID	Estimated age in days	Purported field sire	Date collared	Eventual panther ID
K223	FP148	1/18/2007	F	00064E23C	21	FP146		
K224	FP124	2/17/2007	M	64EED68	9	Unknown		
K225	FP124	2/17/2007	M	64E00C9	9	Unknown		
K226	FP93	3/8/2007	M	6712488	16	Unknown		
K227	FP93	3/8/2007	M	64DF113	16	Unknown	2/21/2008	FP163
K228	FP93	3/8/2007	F	64EO84F	16	Unknown		
K229	FP110	3/20/2007	F	0006327849	10-12	FP137		
K230	FP110	3/20/2007	M	00063DD906	10-12	FP137		
K231	FP110	3/20/2007	F	00063DC6F3	10-12	FP137		
K232	FP110	3/20/2007	M	00063218EB	10-12	FP137		
K233	FP113	3/25/2007	F	00063DC1F0	7	FP119		
K234	FP113	3/25/2007	M	00063DC585	7	FP119		
K235	FP113	3/25/2007	M	0006439AB7	7	FP119	2/9/2010	FP177
K236	FP103	4/4/2007	F	0006722801	24	FP127		
K237	FP103	4/4/2007	F	00067142C6	24	FP127		
K238	FP103	4/4/2007	M	000671D047	24	FP127		
K239	FP149	4/13/2007	F	00063DCBCC	11-13	Unknown		
K240	FP149	4/13/2007	F	000631A816	11-13	Unknown		
K241	FP151	4/21/2007	M	67245C4	16	Unknown		
K242	FP151	4/21/2007	F	67216AA	16	Unknown		
K243	FP151	4/21/2007	F	64E6E50	16	Unknown		
K244	FP145	4/26/2007	M	6718E19	16	FP133		
K245	FP145	4/26/2007	M	6718AEE	16	FP133		
K246	FP145	4/26/2007	F	6722453	16	FP133		
K247	FP107	4/27/2007	F	0006437F96	10-12	Unknown		
K248	FP107	4/27/2007	M	0006435576	10-12	Unknown		
K249	FP107	4/27/2007	F	dead not marked	10-12	Unknown		
K250	FP128	5/12/2007	M	0006435419	10-12	Unknown		
K251	FP128	5/12/2007	M	0006434A69	10-12	Unknown		

Kitten ID	Dam ID	Date marked	Sex	Transponder ID	Estimated age in days	Purported field sire	Date collared	Eventual panther ID
K252	FP128	5/12/2007	F	0006433EFA	10-12	Unknown		
K253	FP150	7/20/2007	M	6726F07	18	Unknown		
K254	FP150	7/20/2007	F	671F6F3	18	Unknown	2/7/2010	FP175
K255	FP150	7/20/2007	F	67231E8	18	Unknown		
K256	FP150	7/20/2007	F	671E895	18	Unknown		
K257	FP110	8/10/2007	M	0006439E20	13-15	Unknown		
K258	FP110	8/10/2007	M	000643422C	13-15	Unknown		
K259	FP151	8/27/2007	M	dead not marked	17-20	Unknown		
K260	FP151	8/27/2007	U	dead not marked	17-20	Unknown		
K261	FP107	9/25/2007	M	000643530F	10-14	Unknown		
K262	FP107	9/25/2007	M	0006435247	10-14	Unknown		
K263	FP107	9/25/2007	M	00063DC5C2	10-14	Unknown		
K264	FP151	3/4/2008	F	6957DE2	21	Unknown	2/21/2010	FP180
K265	FP151	3/4/2008	M	695B244	21	Unknown		
K266	FP140	5/2/2008	M	00063DF3C8	7	FP154		
K267	FP140	5/2/2008	M	00063DEAA1	7	FP154		
K268	FP162	5/23/2008	F	dead not marked	14	FP138		
K269	FP162	5/23/2008	M	dead not marked	14	FP138		
K270	FP158	6/7/2008	F	6435FEC	14-17	FP146		
K271	FP158	6/7/2008	M	6435381	14-17	FP146		
K272	FP158	6/7/2008	M	642652B	14-17	FP146		
K273	FP158	6/7/2008	M	643824C	14-17	FP146		
K274	FP153	7/20/2008	F	695849E	14	Unknown		
K275	FP153	7/20/2008	M	695ACE5	14	Unknown		
K276	FP153	7/20/2008	M	6958EAA	14	Unknown		
K277	FP161	2/25/2009	M	698B098	16	Unknown		
K278	FP161	2/25/2009	M	69581FC	16	Unknown		
K279	FP161	2/25/2009	F	6959939	16	Unknown	3/1/2010	FP182
K280	FP162	5/7/2009	F	695AOB3	25-27	Unknown		

Kitten ID	Dam ID	Date marked	Sex	Transponder ID	Estimated age in days	Purported field sire	Date collared	Eventual panther ID
K281	FP153	7/8/2009	M	671F728	30	Unknown		
K282	FP153	7/8/2009	M	6958DCD	30	Unknown		
K283	FP168	7/21/2009	M	0006483E5C	7	Unknown		
K284	FP169	7/21/2009	M	0006434DB7	7	Unknown		
K285	FP170	7/28/2009	M	00063DF972	22	Unknown		
K286	FP170	7/28/2009	M	00063DE7FC	22	Unknown		
K287	FP170	7/28/2009	F	000600E52E	22	Unknown		
K288	FP172	2/20/2010	M	00063DDEB6	15	Unknown		
K289	FP172	2/20/2010	M	0006435874	15	Unknown		
K290	FP172	2/20/2010	M	0006436050	15	Unknown		
K291	FP145	2/25/2010	F	00069577CI	28	Unknown		
K292	FP145	2/25/2010	M	000695BO19	28	Unknown		
K293	FP145	2/25/2010	F	00067214F1	28	Unknown		
K294	FP162	3/23/2010	M	6957879	14	FP133		
K295	FP162	3/23/2010	F	695A869	14	FP133		
K296	FP162	3/23/2010	F	695A5CF	14	FP133		
K297	FP148	4/13/2010	F	00063DFB49	14	Unknown		
K298	FP148	4/13/2010	F	0006436575	14	Unknown		
K299	FP148	4/13/2010	M	0006435550	14	Unknown		
K300	FP161	5/26/2010	M	000695AD83	16	Unknown		
K301	FP161	5/26/2010	F	0006723CE4	16	Unknown		
K302	FP161	5/26/2010	F	000695B151	16	Unknown		
K303	FP102	6/6/2010	M	0006958363	21	Unknown		
K304	FP102	6/6/2010	M	000695A272	21	Unknown		
K305	FP178	6/22/2010	M	0006434D2E	14-17	Unknown		
K306	FP178	6/22/2010	M	000643461A	14-17	Unknown		

^a The remains of a sibling to K24-26 were found at the den site. Condition of the carcass made sex identification impossible.

^b This kitten was not observed or marked at the den, but was captured at the carcass of the dam on 2/5/1998. Eventually released into the wild as FP69.

^c This kitten was not observed or marked at the den, but was captured near FP48 and collared as FP75 on 1/11/1999. Reunited with FP48 the following day.

^d FP95 was observed with 2 kittens from the air on 1/2, 3/31, and 4/1/2003, verifying that at least 1 littermate of K112 was not recorded on 4/21/2002.

Appendix III. List of all known dens of radiocollared female Florida panthers and Texas pumas in southern Florida from June 1985 to June 2010. Kitten numbers preceded with “K” indicate natal den was visited. Samples are ordered by female ID and secondarily by year.

Data collected by FWC and BCNP.

Panther ID	Den date	Location^a	Habitat	Minimum number of kittens at den	Kittens handled	Purported field sire
FP009	Jun-1985	S Golden Gate Estates	Unknown	1	FP10♂ den not visited	Unknown
FP009	Jun-1987	FSPSP	Hardwood hammock	1	den not visited	FP12
FP009	May-1989	FSPSP	Mixed swamp	Unknown	den not visited	Unknown
FP009	Jul-1990	FSPSP	Mixed swamp	2	FP202♂, FP203♂ den not visited	FP37
FP009	Jun-1993	FSPSP	Hardwood hammock	Unknown	den not visited	FP51
FP011	May-1986	BCNP - Bear Island	Pine/palmetto	3	FP19♀ den not visited	FP12
FP011	May-1988	BCNP - Bear Island	Pine/palmetto	1	FP29♂ den not visited	FP20
FP011	Apr-1990	BCNP - Bear Island	Palmetto/oaks	1	♀(roadkill) den not visited	FP12
FP011	Jul-1991	Price's	Unknown	1	FP47♂ den not visited	FP12
FP011	Mar-1993	BCNP - Bear Island	Unknown	Unknown	den not visited	FP12
FP014	Apr-1989	Long Pine Key	Pine/palmetto	2	FP42♂, den not visited	FP16
FP014	Mar-1991	Long Pine Key	Pine/palmetto	Unknown	den not visited	FP16
FP015	May-1988	Long Pine Key	Vines/ferns	Unknown	den not visited	FP16
FP019	Mar-1988	Price's	Pine/palmetto	4	FP30♂ den not visited	FP13
FP019	Jul-1989	FPNWR	Palmetto, myrtle	1	FP43♂ den not visited	FP12
FP019	Nov-1990	Rock Spring Island	Pine/palmetto	2	FP205♀, FP45♂ den not visited	FP12
FP019	Mar-1992	NE Hog Pond	Pine/palmetto	2	UCFP21♀, FP53♂ den not visited	FP12
FP019	May-1994	FPNWR	Mixed swamp	2	K12♀, K13♀	FP51
FP019	Mar-1996	Barfield's	Cypress swamp	2	K27♀, K28♀	FP54, FP51
FP023	Aug-1992	Raccoon Point	Pine/palmetto	2	FP209♀, FP210♂	FP42
FP023	Dec-1992	Raccoon Point	Pine/palmetto	1	FP55♀ den not visited	FP42
FP031	Mar-1989	Catherine Island	Pine/palmetto	3	FP34♂, FP35♂ den not visited	FP12
FP031	Jul-1990	Regency Farms	Palmetto/myrtle	2	FP201♂, FP204♀ den not visited	FP12
FP031	Sep-1991	Barfield's	Palmetto	2	FP48♀, FP52♀ den not visited	FP12
FP032	Mar-1989	Catherine Island	Pine/palmetto	Unknown	den not visited	Unknown
FP032	May-1992	FPNWR	Palmetto	1	FP208♀	FP12
FP032	Mar-1996	FPNWR	Pine/palmetto	1	UCFP24 (Dead ♀)	Unknown
FP036	Mar-1990	BCSIR	Pine/palmetto	Unknown	den not visited	Unknown
FP036	May-1991	BCNP - Addition Lands	Palmetto	2	FP207♂, FP50♂ den not visited	FP26

Panther ID	Den date	Location ^a	Habitat	Minimum number of		Purported field sire
				kittens at den	Kittens handled	
FP036	Oct-1993	N of BCSIR	Pine/palmetto	1	den not visited	FP26, FP34
FP036	Jun-1995	Canoe Lake Strand	Mixed swamp	Unknown	den not visited	FP45
FP036	Jan-1996	Wilson Cypress	Hardwood hammock	4	K24♀,K25♂,K26♂,UCFP44	FP45
FP040	Nov-1990	Baker's Grade	Hardwood/Schinus	2	FP206♀, FP44♂ den not visited	FP26
FP040	Mar-1992	Baker's Grade	Pine/palmetto	2	FP54♂, K02♂	FP28
FP040	May-1993	Baker's Grade	Cypress, cabbage	3	K03♂,K04♀,K05♀	FP26
FP040	Apr-1997	BCNP - Addition Lands	Pine/palmetto	2	FP69♀, K37♂	FP45
FP040	Sept-1995 ^b	Unknown	Unknown	1	FP60♂, ♀ tracks, den not visited	Unknown
FP048	Oct-1993	BCNP - Bear Island	Palmetto	3	K06♂,K07♀,K08♀	FP12
FP048	Jun-1995	Dozier Hammock	Palmetto	2	FP59♂,K17♀	Unknown
FP048	Sep-1996	NE Doctor's Hammock	Pine/palmetto	3	FP62♂,FP64♂,UCFP50♂	Unknown
FP048	Jun-1998	BCNP - Bear Island	Pine/palmetto	2	K51♂, FP75♀	FP68 or FP45
FP048	Oct-1999	BCNP - Bear Island	Pine/palmetto	2	K74♀, K75♀(abandoned)	FP63 or FP68
FP049	Jan-1999	BCNP - Addition Lands	Unknown	1	K55♂	Unknown
FP049	Jul-2001	BCNP - Addition Lands	Unknown	1	K107♂	Unknown
FP052	Jul-1993	Sadie Cypress	Palmetto	2	1♂ (roadkill) den not visited	FP46
FP052	Jul-1994	Sadie Cypress	Hardwood hammock	Unknown	den not visited	Unknown
FP055	Apr-1995	BCNP	Pine/palmetto	2	K14♀,K15♀	FP42
FP055	Sep-1997	BCNP - N Burns Lake	Palmetto	1	K44♂	Unknown
FP055	Feb-1998	BCNP - N Monument Lake	Palmetto	3	FP102♀,K49♀,K50♂	Unknown
FP055	Apr-1999	BCNP	Palmetto	2	FP87♀, K61♂	Unknown
FP055	Jun-2001	BCNP - NE Airplane Prairie	Palmetto	1	K104♂	FP79
FP055	May-2002	BCNP	Pine/palmetto	1	K127♀	FP79
FP055	Sep-2003	BCNP	Pine/cabbage	Unknown	den not visited	Unknown
FP056	Apr-1994	Baker's Grade	Pine/palmetto	3	K09♂,K10♀,K11♂	Unknown
FP056	Oct-1995	North BCSIR	Sawgrass marsh	3	K20♂,K21♂,K22♂	FP45
FP056	Jul-1996	North BCSIR	Fern bed	2	K29♀?,K30♀	FP45
FP056	May-1997	Bakers Grade	Unknown	4	K40♂,K41♀,K43♂, FP67♀	FP45
FP057	Jun-1998	FSPSP	Palmetto	Unknown	den not visited	FP54
FP061	Mar-1999	Long Pine Key	Pine/palm	1	FP85♂	FP16
FP061	Sep-2002	EVER - East	Sawgrass marsh	4	K139♀, K140♂, K141♂, K142♀	Unknown
FP066	Sep-1998	Belle Meade	Palmetto	3	K52♂,K53♀,K54♂	FP72
FP066	Dec-1999	Private lands	Hardwood hammock	3	K76♂,K77♀,K78♀	FP60
FP067	Aug-2000	Private lands	Pine/palmetto	2	K84♂, K85♀	Unknown

Panther ID	Den date	Location ^a	Habitat	Minimum number of		Purported field sire
				kittens at den	Kittens handled	
FP067	May-2001	Private lands	Hardwood hammock	4	K98♀,K99♂,K100♂, K101♂	Unknown
FP067	Jun-2002	Private lands	Brazilian pepper	3	FP116♀, K133♂, K134♂	Unknown
FP069	Jul-1999	BCNP - NE of Baker's Camp	Hardwood hammock	3	K71♂,K72♀,K73♀	Unknown
FP070	Jun-1999	BCNP - NE of Monument Lake	Pine/palmetto	3	FP88♀, FP92♂, FP91♀	FP79
FP070	May-2004	BCNP - Turner River Unit	Palmetto/vines	3	K167♀ ,K168♂ ,K169♀	Unknown
FP071	Jun-1999	BCNP	Mixed swamp	4	FP90♂, FP86♀, K69♂, K70♀	FP79
FP073	Aug-1997 ^c	BCSIR	Unknown	1	FP74♂ den not visited	Unknown
FP073	Feb-1999	BCSIR	Pine/palmetto	1?	FP84♂ den not visited	Unknown
FP073	Feb-2002	BCNP - Addition Lands	Pine/palmetto	3	K109♂, K110♂, K111♀	Unknown
FP075	Apr-2000	Private lands	Hardwood hammock	Unknown	den not visited	Unknown
FP075	Jun-2001	BCNP - Bear Island	Pine/palmetto	2	K102♂,K103♂	FP59
FP075	May-2002	BCNP - Bear Island	Pine/palmetto	2	K128♂, K129♂	FP98, FP100
FP075	Mar-2004	BCNP - Bear Island	Pine/palmetto	3	K157♂, K158♂, K159♀	Unknown
FP075	Aug-2005	BCNP - Bear Island	Hardwood hammock	4	K192♂, K193♀, K194♀, K195♂	FP135
FP077	May-2000	BCNP - Addition Lands	Palmetto/vines	3	K81♂,K82♀,K83♂	Unknown
FP077	Aug-2001	BCNP - Addition Lands	Pine/palmetto	1	K108♂	Unknown
FP078	Apr-2000	FPNWR	Palmetto/oak	2	FP107♀, FP96♂	FP59
FP078	Apr-2002	FPNWR	Palmetto	4	K117♀, K118♀, K119♀, K120♂	FP59
FP082	Dec-2000	OSSF	Unknown	3	K86♀,K87♀,K88♂	FP65
FP083	Apr-2002	FSPSP	Pine/palmetto	1	K123♂	Unknown
FP083	Jun-2004	FSPSP	Pine/palmetto	Unknown	den not visited	Unknown
FP087	Jan-2001	BCNP	Pine/palmetto	3	K89♀,FP108♂,K91♂	FP79
FP087	Mar-2003	BCNP - N of Oasis	Pine/palmetto	3	K143♀, K144♂, K145♀	FP79
FP088	May-2001	BCNP - Loop Unit	Cypress/ferns	4	K94♂,K95♀,K96♂, K97♀	Unknown
FP093	Apr-2002	BCNP - Turner River Unit	Pine/palmetto	4	K113♀, K114♀, FP119♂, K116♀	FP79
FP093	Jul-2003	BCNP - Turner River Unit	Hardwood hammock	3	K152♀, K153♂ ,K154♂	FP60
FP093	Jun-2006	BCNP - Turner River Unit	Tropical hardwood	3	K211♀, K212♀, K213♀	FP133
FP093	Feb-2007	BCNP - Turner River Unit	Pine/palmetto	3	K226♂, K227♂ ,K228♀	Unknown
FP094	Jun-2006	EVER - CIA hammock	Hardwood hammock	3	K205♀, K206♂, K207♀	Unknown
FP095	Mar-2002	EVER - Long Pine Key	Pine/palmetto	1	K112♀	FP85
FP095	Jun-2006	EVER - Long Pine Key	Hardwood/palmetto	3	K214♀, K215♀, K216♂	Unknown
FP101	Apr-2002	BCSIR	Pine/palmetto	2	K121♂, K122♀	Unknown
FP101	Apr-2003	Private lands	Pine/palmetto	3	K146♀, K147♂, K148♀	FP65/FP100
FP102	Jun-2001	BCNP - Monument Lake	Pine/palmetto	2	K105♂,K106♂	FP79

Panther ID	Den date	Location ^a	Habitat	Minimum number of		Purported field sire
				kittens at den	Kittens handled	
FP102	Jul-2002	BCNP - Monument Lake	Hardwood hammock	2	K137♀, K138♂	FP79
FP102	Jul-2004	BCNP - Burns Lake	Hardwood hammock	3	K170♀, K171♂, K172♀	FP79
FP102	Jun-2006	BCNP - Turner River Unit	Hardwood hammock	2	K217♂, K218♂	FP138
FP102	Jun-2010	SBCNP	Pine/palmetto	2	K303♂, K304♂	Unknown
FP103	Apr-2007	BCNP - Corn Dance	Hardwood hammock	3	K236♀, K237♀, K238♂	FP127
FP106	May-2002	FPNWR	Hardwood hammock	3	K124♀, K125♂, K126♂	Unknown
FP107	Jun-2002	FPNWR	Hardwood hammock	2	K135♂, K136♀	Unknown
FP107	May-2004	FPNWR	Hardwood hammock	4	K163♂, K164♂, K165♀, K166♀	Unknown
FP107	Mar-2005	FPNWR	Hardwood hammock	2	K180♀, K181♀	FP119, FP131
FP107	Feb-2006	FPNWR	Pine/palmetto	2	K200♀, K201♂	FP131
FP107	Apr-2007	FPNWR - Rock Island	Pine/palmetto	3	K247♀, K248♂, K249♀	Unknown
FP107	Sep-2007	FPNWR	Pine/palmetto	3	K261♂, K262♂, K263♂	Unknown
FP110	May-2003	OSSF	Pine/palmetto	3	K149♀, K150♂, K151♀	Unknown
FP110	Feb-2005	OSSF	Pine/palmetto	2	K178♂, K179♀	Unknown
FP110	Nov-2005	OSSF	Hardwood hammock	4	K196♂, K197♂, K198♂, K199♀	Unknown
FP110	Mar-2007	OSSF	Pine/palmetto	4	K229♀, K230♂, K231♀, K232♂	FP137
FP110	Aug-2007	OSSF	Hardwood hammock	2	K257♂, K258♂	Unknown
FP110	Nov-2007	OSSF-Dog Island	Palmetto	Unknown	den not visited	Unknown
FP112	Jun-2002	BCNP - Bear Island	Pine/palmetto	2	K130♂, K131♂	FP98, FP100
FP113	Aug-2004	FPNWR	Pine/palmetto	Unknown	UCFP67	Unknown
FP113	Apr-2005	FPNWR	Pine/palmetto	2	K185♂, K186♀	FP131, FP133
FP113	Mar-2007	FPNWR	Hardwood hammock	3	K233♀, K234♂, K235♂	FP119
FP113	Apr-2009 ^d	FPNWR	Unknown	1	den not visited	Unknown
FP116	Apr-2004	Hendry Co. Gum Swamp	Hardwood hammock	3	K160♀, K161♀, K162♂	FP65
FP116	May-2005	BCNP- Addition Lands	Pine/palmetto	3	K187♂, K188♀, K189♂	Unknown
FP120	Jan-2004	BCNP - Turner River Unit	Pine/palmetto	2	K155♀, K156♂	Unknown
FP121	Aug-2004	BCSIR	Pine/palmetto	1	K173♀	Unknown
FP121	Feb-2006	BCSIR	Pine/palmetto	3	K202♀, K203♂, K204♂	Unknown
FP124	Sep-2004	BCNP - Stairsteps	Pine/palmetto	1	K174♂	Unknown
FP124	Jan-2005	BCNP - Pincrest	Pine/palmetto	3	K175♂, K176♂, K177♀	Unknown
FP124	Feb-2007	BCNP - Stairsteps	Cypress/hardwood	2	K224♂, K225♂	Unknown
FP128	Jun-2005	BCSIR	Pine/palmetto	2	K190♂, K191♂	Unknown
FP128	May-2007	Stirelli property - Add Lands	Palmetto/fern	3	K250♂, K252♂, K252♀	Unknown
FP129	Apr-2005	BCNP- Corn Dance	Unknown	3	K182♀, K183♂, K184♂	Unknown

Panther ID	Den date	Location ^a	Habitat	Minimum number of		Purported field sire
				kittens at den	Kittens handled	
FP140	Nov-2006	FPNWR	Hardwood hammock	2	K219♀, K220♂	FP119
FP140	May-2008	FPNWR	Cypress/ferns	2	K266♂, K267♂	FP154
FP145	Jun-2006	BCNP -Deep Lake	Pine/palmetto	3	K208♀, K209♀, K210♀	FP138
FP145	Apr-2007	BCNP - Deep Lake	Hardwood hammock	3	K244♂, K245♂, K246♀	FP133
FP145	Feb-2010	SBCNP	Palmetto	3	K291♀, K292♂, K293♀	Unknown
FP148	Jan-2007	Belle Meade-PSSF	Palmetto	3	K221♀, K222♂, K223♀	FP146
FP148	Apr-2010	Belle Meade-PSSF	Pine/palmetto	3	K297♀, K298♀, K299♂	Unknown
FP149	Apr-2007	PSSF	Bracken fern	2	K239♀, K240♀	Unknown
FP150	Jul-2007	SBCNP	Palmetto	4	K253♂, K254♀, K255♀, K256♀	Unknown
FP151	Apr-2007	BCNP- Turner River	Palmetto	3	K241♂, K242♀, K243♀	Unknown
FP151	Aug-2007	SBCNP	Palmetto	2	K259♂, K260 unknown sex	Unknown
FP151	Mar-2008	BCNP-Turner River	Palmetto	2	K264♀, K265♂	Unknown
FP153	Jul-2008	BCNP-Turner River	Palmetto	3	K274♀, K275♂, K276♂	Unknown
FP153	Jul-2009	SBCNP	Hardwood hammock	2	K281♂, K282♂	Unknown
FP158	Jun-2008	CSSP	Pepper/climbing fern	4	K270♀, K271♂, K272♂, K273♂	FP146
FP158	Apr-2010 ^c	PSSF	Pine/palmetto	2	kittens not handled	Unknown
FP160	Oct-2008	Jack-n-The-Box Ranch, CREW	Hardwood hammock	Unknown	den not visited	Unknown
FP161	Feb-2009	SBCNP	Palmetto	3	K277♂, K278♂, K279♀	Unknown
FP161	May-2010	SBCNP	Pine/palmetto	3	K300♂, K301♀, K302♀	Unknown
FP162	May-2008	BCNP-Turner River	Hardwood hammock	2	K268♀, K269♂ (both dead)	FP138
FP162	Apr-2009	SBCNP	Hardwood hammock	1	K280♀	Unknown
FP162	Mar-2010	SBCNP	Hardwood hammock	3	K294♂, K295♀, K296♀	FP133
FP168	Jul-2009	CREW-Flint Pen	Pine/palmetto/fern	2	K283♂, K284♂	Unknown
FP170	Jul-2009	PSSF	Cabbage Palm/shrub	3	K285♂, K286♂, K287♀	Unknown
FP172	Feb-2010	BCNP- Addition Lands	Palmetto	3	K288♂, K289♂, K290♂	Unknown
FP178	Jun-2010	NBCNP	Palmetto/fern	2	K305♂, K306♂	Unknown
TX101	Sep-1995	BCSIR	Pine/palmetto	2	FP73♀, FP79♂	Unknown
TX101	Dec-1996	BCSIR	Palmetto/oak	2	FP65♂, FP66♀	FP45
TX105	Aug-1996	EVER - Long Pine Key	Tropical hardwood	1	K34♀	FP16
TX105	Jul-1999	EVER - Long Pine Key	Brazilian pepper	1	FP94F1 ♀ den not visited	FP16
TX106	Nov-1995	S Golden Gate Estates	Cypress/mixed	1	K23♀	FP51
TX106	Feb-1998	N Golden Gate Estates	Vines/cabbage	1	K47♂	FP54, FP59
TX106	Jun-1999	PSSF	Cabbage	2	K62♀, FP83♀	FP54
TX106	Mar-2001	FPNWR	Pine/palmetto	2	K92♀, K93♂	FP60

Panther ID	Den date	Location^a	Habitat	Minimum number of kittens at den	Kittens handled	Purported field sire
TX107	Apr-1997	BCNP - N of Oasis	Pine/palmetto	2	FP70♀,FP71♀	Unknown
TX107	Feb-1999	BCNP - N of Buckskin Prairie	Pine/palmetto	3	K56♀,K57♂d, FP93♀	FP79
TX108	Jun-1996	EVER - Long Pine Key	Tropical hardwood	1	FP61♀ den not visited	FP16
TX108	Jan-1998	EVER - Long Pine Key	Tropical hardwood	2	FP95♀,K46♂	FP16

^aBCNP = Big Cypress National Preserve; BCSIR = Big Cypress Seminole Indian Reservation; CREW = Corkscrew Regional Ecosystem Watershed; CSSP = Collier-Seminole State Park; EVER = Everglades National Park; FPNWR = Florida Panther National Wildlife Refuge; FSPSP = Fakahatchee Strand Preserve State Park; NBCNP = Big Cypress National Preserve north of Interstate 75; OSSF = Okaloacoochee Slough State Forest; PSSF = Picayune Strand State Forest/Wildlife Management Area; SBCNP = Big Cypress National Preserve south of Interstate 75.

^bFP40 had lost her collar when her kitten FP60 was captured at 6 months of age on 3/6/96. Den is assumed to have dated to September 1995.

^cFP73 was marked as a kitten then captured with her 15month old kitten FP74 on 11/12/98. Den is assumed to have dated to August 1997.

^dFP113 den in April 2009 was not documented by FWC during routine monitoring. A 4 month old kitten was photographed with FP113 on 28 July 2009 via trail camera on FPNWR.

^eFP158 den in April 2010 was visited by FWC, but kittens were not sampled or marked. This litter subsequently failed with the death of FP158 on 22 May 2010.

Appendix IV. Florida panther and Texas puma mortalities and injuries sorted by year through 30 June 2010. Data collected by FWC and BCNP. Ages are estimated unless panthers were handled as kittens at natal dens. Age values are in years unless noted otherwise.

Date	Panther ID	Sex	Age	Location ^a	Cause
Circa 1940s	UCFP01	U	Unknown	Immokalee, Collier County	Preserved skin, skull and bones
1954	UCFP47	U	Unknown	Rocky Lake, Hendry County	Taxidermy pelt from hunted specimen
2/13/1972	UCFP28	M	2 to 3	SR 25 south of Moore Haven	Vehicle
3/8/1978	UCFP02	M	2 to 3	L-28, Dade County	Shooting
2/1/1979	UCFP03	M	Unknown	US 41, Gannet Strand	Unknown
12/23/1979	UCFP04-(G80-4)	F	1.5 to 2.5	SR 29 just north of SR 84	Vehicle
2/7/1980	UCFP05-(G80-15)	M	1.5 to 2.5	SR 29 near Sunniland	Vehicle
4/19/1981	UCFP06-(G81-19)	F	2 to 3	SR 29 near Copeland	Vehicle
4/16/1982	FP06	M	6 to 7	Northeast BCNP	Unknown
1/17/1983	FP03	F	9+	FSPSP	Capture
3/18/1983	UCFP09-(G83-22)	M	2 to 3	US 27 Palmdale	Vehicle
5/22/1983	UCFP10	F	Adult	L-8 canal near Canal Point, Palm Beach County	Shooting
11/18/1983	FP05	F	8 to 9	Fakahatchee Conservation Club	Unknown
12/1/1983	UCFP08	M	3 to 6	Seminole Indian Reservation, Hendry County	Shooting
12/14/1983	FP01	M	12 to 14	SR 84; MM18	Vehicle
10/27/1984	FP02	M	14+	FSPSP	Intraspecific aggression
10/30/1984	UCFP11	F	2 to 3	Corbett WMA, Palm Bch. Co. (Elmer Brooker)	Shooting
11/2/1984	BIG GUY	M	2 to 4	US 41	Vehicle - Injured
11/12/1984	UCFP12-(G84-26)	F	8 to 10	SR 84; MM16	Vehicle
1/8/1985	UCFP13-(G85-BNZ)	F	1.5 to 2	SR 84; MM16	Vehicle
3/23/1985	UCFP14	F	2 to 3	Collier Seminole State Park; Collier Co.	Shooting (skeleton)
4/18/1985	FP04	M	12+	SR 84; MM17	Vehicle
5/12/1985	NONE	F	Unknown	CR 951; 2 miles N of US 41	Vehicle
10/26/1985	FP07	M	10	SR 29; 4 miles S of SR 84	Vehicle
1/1/1986	FP09	F	4 to 5	Golden Gate Estates, S of SR 84	Shooting (not fatal)
11/15/1986	UCFP15	F	4 to 5	SR 84; MM16.5	Vehicle
1/27/1987	FP10	M	16 to 20 mos.	Mud Lake Strand	Intraspecific aggression- by adult male panther
6/17/1987	FP20	M	3 to 4	CR 858; 0.8 miles E of SR 29	Vehicle - Injured
12/14/1987	FP13	M	6 to 8	SR 29 Sunniland	Vehicle
12/19/1987	UCFP17	M	~10	Crane Swamp, Framton WMA, Volusia Co.	Unknown- only skeletal remains found
6/10/1988	FP15	F	7 to 8	EVER	Intraspecific aggression

Date	Panther ID	Sex	Age	Location ^a	Cause
7/23/1988	FP21	F	2.5	1 mile east of US1 on Palm Drive	Vehicle - injured
8/20/1988	FP08	F	13 to 15	Gainesville	Liver failure (old age)
8/22/1988	FP24	M	3 to 5	Glades Co. near Palmdale	Unknown
8/24/1988	FP20	M	4 to 5	Bear Island	Congenital heart defect
8/26/1988	FP25	M	4 to 5	FPNWR	Intraspecific aggression- bacterial infection from fight
11/29/1988	FP28	M	1.5 to 2	Near Daniels Road, Ft. Myers Airport	Vehicle - injured
1/25/1989	UCFP18-(RK-850)	M	3	CR 850 1.5 miles south of SR 82	Vehicle
7/23/1989	FP27	M	3 to 4	EVER	Unknown
11/25/1989	FP33	M	3	2 miles NW of Hendry Prison	Rabies
1/24/1990	FP35	M	10 mos.	Gainesville	Capture-related abandonment (infection)
1/29/1990	FP30	M	22 mos.	FSPSP	Intraspecific aggression- killed by FP37
6/18/1990	UCFP19-(RK-846)	M	10 mos.	CR 835 (846) 1 mile E of CR 833	Vehicle
6/18/1990	FP39	M	3 to 4	EVER	Pyothorax
7/23/1990	FP17	M	9	Addition lands near Tangerine Camp	Unknown
9/26/1990	FP41	F	2	Hendry Co. W of BCSIR	Intraspecific aggression- killed by FP28
10/3/1990	FP18	F	9	Hendry Co. So. of CR 846 near Rock Lake	Intraspecific aggression- killed by FP28
11/26/1990	FP37	M	4 to 5	SR 29; 0.5 miles N of I-75	Vehicle
2/4/1991	UCFP20-(FP11's kitten)	F	9 mos.	SR 29 Pistol Pond Bridge	Vehicle
6/20/1991	FP14	F	10 to 11	EVER	Unknown
7/20/1991	FP22	F	5	EVER	Infection
11/1/1991	FP43	M	2	BCSIR, Hendry Co.	Intraspecific aggression- killed by FP26
4/7/1992	NONE	M	Unknown	Alico Rd.	Vehicle
5/27/1992	FP29	M	4	Hendry Co., Gum Swamp	Pseudorabies
9/25/1992	FP28	M	5.5	BCSIR, Hendry Co.	Intraspecific aggression- possibly killed by FP26
11/9/1992	UCFP21-(FP19's kitten)	F	7 mos.	SR 29 Sunniland	Vehicle
2/19/1993	FP47	M	18 mos.	FSPSP	Intraspecific aggression- killed by male FP51
2/26/1993	FP53	M	11 mos.	Private lands N of FPNWR	Intraspecific aggression-killed, eaten by uncollared male
7/6/1993	FP44	M	2.5	Raccoon Pt. SBCNP	Intraspecific aggression-killed by FP42
8/9/1993	UCFP22	M	2 to 3	Daniels Rd.; 1 mile east of I-75	Vehicle
11/15/1993	FP34	M	5	SE Hendry Co. L28	Bacterial infection from lacerated esophagus
12/6/1993	FP50	M	2.5	CR 846; 5 miles east of Immokalee	Vehicle
2/28/1994	UCFP23-(FP52's kitten)	M	8 mos.	3 miles north of County Line Road	Vehicle
3/3/1994	FP31	F	12 to 14	SR 29 Sunniland	Vehicle
7/8/1994	FP26	M	11 to 12	4 miles E. Hendry Prison	Intraspecific aggression- killed by FP46; punctured skull
8/4/1994	FP38	F	9	Conservation Area 3A	Pleuritis related to chest puncture

Date	Panther ID	Sex	Age	Location ^a	Cause
11/8/1994	FP12	M	13 to 14	Private lands, Hendry County	Intraspecific aggression- infected bite wounds from FP46
1/14/1995	FP52	F	3.3	CR 846 near Dupree Rd.	Vehicle
6/22/1995	FP42	M	6	Turner River Unit	Unknown
9/21/1995	TX102	F	4	CR 833 just N of CR 835 (846)	Vehicle
3/18/1996	UCFP24	F	1.5 to 2 week	FPNWR	Unknown (dehydrated)
4/24/1996	UCFP29	M	3 to 5	5.5 miles E of SR 29 on CR 832	Vehicle
5/2/1996	UCFP30	F	1	US 41 @ Turner River	Vehicle
3/30/1997	FP58	M	3	Sadie Cypress	Intraspecific aggression- septicemia from bite wounds
7/13/1997	UCFP31	U	Unknown	CR 846; 1.5 miles W CR 858	Vehicle
12/2/1997	FP19	F	11.5	FPNWR (Merry Christmas)	Ruptured aorta
12/26/1997	FP21	F	11 to 12	White Oak	Euthanasia
2/2/1998	FP40	F	10	Bear Island - E Harrell Strand	Intraspecific aggression- died of infected bite wounds
2/14/1998	FP64	M	1.5	SR 29 at clear-cut, FPNWR	Intraspecific aggression
4/18/1998	TX104	F	6 to 7	S of Sabal Palm Road in citrus grove	Shooting
6/13/1998	UCFP25	F	2	CR 846; 3 miles E CR 858	Vehicle
7/17/1998	FP51	M	9	SR 29 @ Bear Island Grade	Vehicle
8/2/1998	FP45	M	7.5	BCSIR, Hendry Co.	Intraspecific aggression
9/17/1998	UCFP26	M	3 to 5	US 41	Vehicle
10/10/1998	FP36	F	14+	NBCNP; E. of L28 interceptor canal	Unknown (likely natural)
12/23/1998	FP72	M	3 to 4	BCSIR, Hendry Co.	Intraspecific aggression- killed by uncollared male
2/3/1999	FP46	M	9 to 9.5	Private land S. CR 846, Hendry Co	Intraspecific aggression
3/26/1999	FP64	M	2.5	Audubon's Corkscrew Sanctuary	Intraspecific aggression- killed by uncollared male
7/8/1999	UCFP27	F	2	Farm road E of Hendry Prison	Vehicle
8/19/1999	TX103	F	Unknown	SBCNP, S. Lostman's Pines 1mi. N of EVER bound	Metabolic complications associated with pregnancy
9/8/1999	FP74	M	2.5	US 27 near Venus	Vehicle
10/29/1999	UCFP33	M	11 mos.	CR 833; 2 miles N BCSIR	Vehicle
11/13/1999	FP76	M	2.5 to 3	FSPSP; 1.9 miles W of SR 29 off of Lancaster Grade	Intraspecific aggression- killed by FP54
1/3/2000	FP16	M	14	NE boundary of EVER	Unknown
2/10/2000	FP80	F	4 to 5	West of Swamp Safari, BCSIR	Vehicle
2/28/2000	K76-(FP66's kitten)	M	3 mos.	1 mile W SR 29 on CR 858	Vehicle
3/1/2000	FP68	M	5 to 7	NBCNP W of Tangerine tram	Unknown
3/23/2000	UCFP34	M	1.5 to 2	CR846; 2 miles E of County Line Rd	Vehicle
3/29/2000	TX101	F	Unknown	BCSIR; 1/4 mile W of Game Pen, 3/4 mile S of canal	Unknown
4/20/2000	FP84	M	14 mos.	Fisheating Crk. WMA, N. of creek, 5 mi W of US 27	Unknown
6/23/2000	UCFP35	M	1.5 to 2	CR846; 2 miles east of Immokalee	Vehicle

Date	Panther ID	Sex	Age	Location ^a	Cause
8/13/2000	UCFP36	F	1.7	CR 846; East of Immokalee near power lines	Vehicle
11/10/2000	FP89	M	3.5	SBCNP, 2 miles NW of Mud Lake	Intraspecific aggression- killed by FP79
12/1/2000	FP23	F	14	SBCNP 2 miles E of Turkey Foot	Unknown
12/29/2000	UCFP37	F	5	4.5 miles E SR29 on CR846	Vehicle
1/18/2001	TX107	F	8 to 9	SBCNP; 11 Mile Rd.	Unknown
2/27/2001	FP11	F	19 to 20	200 yds. S of CR 846, 1 mile E of Dupree Rd.	Intraspecific aggression
4/14/2001	UCFP38	F	2	CR 833 1 mile N BCSIR, Hendry Co.	Vehicle
4/26/2001	FP90	M	1.9	US 27; 2.5 miles N of Terrytown	Vehicle
5/7/2001	UCFP39	F	10 mos.	SR 29; 1/2 mile N of Jerome	Vehicle
5/7/2001	UCFP40	M	10 mos.	SR 29; 1/2 mile N of Jerome	Vehicle
5/22/2001	UCFP41	M	2 to 3	SR 29; Sunniland, near Mine Rd.	Vehicle
6/14/2001	UCFP42	F	3 to 4	CR846; 1 mile E of Powerline	Vehicle
8/17/2001	UCFP43	M	2 to 3	CR846; 1 mile east of Powerline	Vehicle
9/1/2001	FP92	M	2.2	N Flint Pen Strand, CREW	Unknown
12/2/2001	FP97	M	2	E of Gopher Ridge Grove N of Immokalee	Intraspecific aggression
1/3/2002	FP49	F	12	NBCNP Addition Lands	Intraspecific aggression- killed by uncollared male
1/15/2002	FP96	M	1.75	N end Big Corkscrew Island	Intraspecific aggression
1/16/2002	FP105	F	~7	FPNWR, SW corner of clear-cut	Unknown
4/5/2002	UCFP45	M	3	3.4 miles N of Palmdale, Glades County	Vehicle
4/10/2002	UCFP46	M	6 mos.	1/2 mile N of Deep Lake, Collier County	Vehicle
7/1/2002	FP98	M	4 to 5	1 km north of Pistol Pond on SR 29	Vehicle
9/5/2002	FP111	M	9 to 10	OSSF, N of CR832	Intraspecific aggression
9/11/2002	FP112	F	4	NBCNP - Bear Island	Intraspecific aggression
9/12/2002	FP32	F	15	FPNWR - Rock Island	Malnutrition (old-age)
10/16/2002	FP78	F	6	FPNWR - Fire Tower	Intraspecific aggression
11/10/2002	UCFP48	F	8 to 9 mos.	CR846; 5-6 miles east of Immokalee	Vehicle
11/16/2002	FP108	M	22 mos.	SBCNP Raccoon Pt.	Traumatic Neck Injury
11/25/2002	UCFP49 (K98)	F	19 mos.	CR846; 3-4 miles east of Immokalee	Vehicle
11/28/2002	FP99	M	33 mos.	CR846; 1/4 mile N of Collier County Fairgrounds	Vehicle
1/15/2003	FP67	F	5.5	Hendry County; Gum Slough	Intraspecific aggression- killed by FP65
1/26/2003	UCFP50 (K33)	M	6.3	CR846; 3.4 miles E Everglades Boulevard	Vehicle
02/20/2003	FP106	F	3	SR29 at Sunniland Mine entrance	Vehicle
2/22/2003	FP109	M	10+	OSSF north of CR832	Intraspecific aggression
3/10/2003	UCFP51	M	1.5 to 2.0	I-4; 0.25 miles E of I-75, near Tampa	Vehicle
3/20/2003	UCFP52	M	2 to 3	CR833; 2 miles S CR832, Hendry County	Vehicle

Date	Panther ID	Sex	Age	Location ^a	Cause
4/4/2003	FP118	F	1	BCSIR; Game Pen	Unknown
5/10/2003	FP82	F	6	OSSF	Intraspecific aggression
6/13/2003	UCFP55	M	1 to 1.5	BCSIR Safari Pen	Unknown
6/14/2003	UCFP56	M	1 to 1.5	BCSIR Safari Pen	Unknown
6/16/2003	UCFP57	F	4 to 6	BCSIR Safari Pen	Unknown
5/17/2003	FP115	F	4 to 5	OSSF - Sick Island	FeLV
5/25/2003	UCFP53	F	2 to 3	SR29; 1.4 miles N CR858, Collier County	Vehicle
6/3/2003	UCFP54	M	8 to 10 mos.	SR29; 1.7 miles N CR858, Collier County	Vehicle
6/19/2003	FP87	F	4	SBCNP; 7 miles NNE of Oasis	Intraspecific aggression
6/28/2003	FP73	F	7.8	BCSIR; Game Pen	Unknown
6/30/2003	UCFP58	F	~1	CR846; 3/4 mile E of Everglades Boulevard	Vehicle
7/12/2003	FP77	F	6	BCSIR Game Pen	Unknown
10/17/2003	FP114	M	1.5	FPNWR; S of Oil Pad Rd. SR29	Intraspecific aggression
11/2/2003	UCFP59	M	3 to 4 mos.	CR 858; 1.2 miles west of SR 29	Vehicle
11/7/2003	FP86	F	4.5	University of Florida, Gainesville	Euthanasia
12/9/2003	UCFP60	M	~2 to 3	US41; ~ 1 mile east of CR92	Vehicle
12/12/2003	FP91	F	4.5	SBCNP; Turner River Unit	Intraspecific aggression
12/25/2003	UCFP61	F	~2 to 3	CR833; 1.7 miles N CR846 intersection	Vehicle
1/11/2004	UCFP62	F	~7 to 8 mos.	US41 near 40 Mile Bend	Vehicle
2/13/2004	FP122	F	2 to 3	OSSF; NW Wild Cow Island	FeLV
2/26/2004	UCFP63	M	~3.5	I-75; eastbound lane, MM99	Vehicle
3/1/2004	FP85	M	5	EVER	Unknown
3/3/2004	UCFP64	U	Unknown	SR66; ~0.75 miles W of SR635	Vehicle collision; DNA sample collected from bumper
4/6/2004	UCFP65	M	~2	SR29; 200 yards N of Bear Island Grade	Vehicle
6/27/2004	UCFP66	M	~3	I-75; 0.5 miles W of Everglades Boulevard, MM93	Vehicle
7/7/2004	FP55	F	~11.5	SBCNP	Intraspecific aggression
7/11/2004	FP120	F	~4	US41, ~750 m W of Turner River Road	Vehicle – Injured
7/22/2004	FP132	M	3 to 3.5	OSSF	FeLV
7/28/2004	FP117	M	27 mos.	0.75 miles S of CR832, E. of Wild Cow Grade	Unknown
8/2/2004	K156	M	6 mos.	US41 at Turner River Road	Vehicle
8/17/2004	K94	M	3.3	I-75; eastbound lane near MM98	Vehicle
9/2/2004	UCFP67	F	< 7 days	FPNWR; Ridge Road	Trauma/lacerations
9/30/2004	UCFP68	F	3 to 6	SBCNP; N of Oasis Ranger Station	Unknown
10/25/2004	UCFP69	F	2	SR 29; 2.5 miles N of CR 858	Vehicle
11/22/2004	FP59	M	9.4	Just east of Ford Test Track, Collier County	Intraspecific aggression

Date	Panther ID	Sex	Age	Location ^a	Cause
12/1/2004	UCFP70	F	1	SR 29 at Owl Hammock Curve	Vehicle
12/6/2004	K128	M	2.5	CR 832; 1 mile east of RR grade	Vehicle
1/1/2005	FP126	M	1.6	1/2 mile S CR 846; Sadie Cypress	Intraspecific aggression
2/4/2005	UCFP71	M	2 to 3	US 41; just east of 11 Mile Road	Vehicle
2/25/2005	UCFP72	M	2	SR 29 near Jerome	Vehicle
4/7/2005	UCFP73	M	7 mos.	CR951 S of Rattlesnake Hammock Road	Vehicle
5/7/2005	FP120	F	5	US41 near Turner River	Vehicle
6/4/2005	UCFP74	M	3	I-95; St. John's/Flagler County line	Vehicle
6/14/2005	FP136	F	4	2 miles NE Burns Lake, SBCNP	Spinal trauma
6/19/2005	UCFP75	M	2	SR 29 at Owl Hammock Curve	Vehicle
8/29/2005	K153	M	2.1	CR951, 1.2 miles south of Davis Blvd.	Vehicle
9/12/2005	FP69	F	8.3	NBCNP – Addition Lands	Septicemia, underlying cause unknown
9/18/2005	UCFP76	M	1	US 41; 1.4 M east of CR 951	Vehicle
12/2/2005	K49	F	7.8	SR 29; 1 mile N Wagon Wheel Road	Vehicle
1/14/2006	FP70	F	8.6	US 41 near Turner River	Vehicle
1/15/2006	UCFP77	F	2 to 3	BCSIR; west of Swamp Safari	Intraspecific aggression
1/25/2006	UCFP78	M	9 mos.	CR846; 1 mile W of CR858	Vehicle
1/26/2006	UCFP79	F	2	CR846; near Collier County Fairgrounds	Vehicle
2/2/2006	UCFP80	F	2	Card Sound Road, Dade County	Vehicle
2/27/2006	UCFP81	M	2	I-75; Ft. Myers, between exits 137-138	Vehicle
2/27/2006	UCFP82	U	Unknown	0.2 M west of SR 29, Hendry County	Unknown - skeletal remains
3/9/2006	FP104	M	5.5	SBCNP	Septicemia, underlying cause unknown
3/11/2006	UCFP83	M	3	1 M south of Corkscrew Rd., Flint Pen Strand	Intraspecific aggression
3/22/2006	FP129	F	5	SBCNP	Unknown
4/6/2006	K203	M	1 mo.	BCSIR	Unknown
4/14/2006	UCFP84	M	3 to 4	I-4, SW of Orlando	Vehicle
6/5/2006	UCFP85	M	3 to 4	CR 832; 3 miles east of OK Slough SF	Vehicle
7/6/2006	UCFP86	U	Unknown	SR29 0.6 mi south of Sunniland	Vehicle - carcass not found (possibly consumed by a gator)
8/24/2006	UCFP87	M	3	Corkscrew Rd. near Alico, Lee County	Vehicle
10/27/2006	FP135	M	3.5	University of Florida, Vet School	Intraspecific aggression/euthanasia
10/23/2006	FP48	F	15	Sunniland, Collier County	Unknown
11/26/2006	UCFP88	F	2	US 41 between Manatee Rd and CR951	Vehicle
12/12/2006	UCFP89	M	3-5	County Line Road, Collier/Hendry	Vehicle
1/10/2007	FP116	F	4.5	Williams Ranch, Hendry County	Intraspecific aggression
1/24/2007	UCFP90	F	4-6 mos.	CR 832 1mile W of Forestry tower	Vehicle

Date	Panther ID	Sex	Age	Location ^a	Cause
1/25/2007	FP100	M	10	Micosukee Res N of I-75	Unknown
1/29/2007	FP134	M	5.5	Addition Lands W of L-28, S of pipeline	Intraspecific aggression
3/9/2007	UCFP91	M	5 mos.	CR 832 west of Keri tower, OSSF	Vehicle
3/21/2007	FP130	M	4	I-4 near Osceola, Orange county line	Vehicle
3/29/2007	UCFP92	M	1.5	US 41 1.2 mi W of SR 29	Vehicle
3/30/2007	UCFP93	M	2	I-75 .5 mi N Corkscrew Road, Lee County	Vehicle
4/3/2007	UCFP94	M	2 to 3	I-75 2 mi E of toll booth MM98, Collier County	Vehicle
4/18/2007	UCFP95	M	2 to 3	Walk-in-Water road, Polk County	Vehicle
4/27/2007	K249	F	10-12 days	FPNWR Unit12	Septicemia
5/3/2007	K247	F	16-18 days	FPNWR Unit12	Complications related to dermatophytosis
5/3/2007	K248	M	16-18 days	FPNWR Unit12	Unknown
5/9/2007	UCFP96	F	3	US1 1/2 mile south of Card Sound Rd., Dade Co.	Vehicle
5/14/2007	UCFP97	F	4-5	Corkscrew Rd. near Alico, Lee County	Vehicle
6/11/2007	UCFP98	M	20-24 mos.	SR29 at Jerome wildlife crossing	Vehicle
6/14/2007	UCFP99	M	12-15 mos.	0.7 miles west of Sunshine Blvd on SR82	Vehicle
6/23/2007	UCFP100	M	2-3	SR 29 3 mi S of Immokalee	Vehicle
6/23/2007	K199	F	20 mos.	CR832 0.6 mi W of Forestry tower	Vehicle
6/26/2007	UCFP101	M	4	US41, 1 mile east of Krome Ave	Vehicle
8/2/2007	FP103	F	7	SBCNP	Intraspecific aggression
8/27/207	K259	M	3 wks	SBCNP	Suspected black bear predation at den
8/27/2007	K260	Unk	3 wks	SBCNP	Suspected black bear predation at den
9/12/2007	UCFP102	M	2	I-75, 1.5 miles east of SR29	Vehicle
9/27/2007	FP128	F	7.5	BCSIR Game pen	Unknown
3/9/2008	UCFP103	M	2 to 3	Pine Ridge Rd, half way between CR951, Logan	Vehicle
3/14/2008	FP127	M	5	NBCNP -Addition Lands	Intraspecific aggression
4/12/2008	UCFP104	F	1 to 2	SR 29 2.6 km north of US 41	Vehicle
4/9/2008	FP157	M	3	CREW	Intraspecific aggression
4/16/2008	FP131	M	9	Horse Trial grounds, N of CR 858, W of SR 29	Pneumonia
4/23/2008	UCFP105	F	5 to 6	0.24 miles west of Jane's Scenic, N side of Mud Tram	Unknown or Accidental
5/4/2008	UCFP106	M	2	4736 Leonard Boulevard, Lehigh Acres, Lee Co.	Vehicle
5/12/2008	FP138	M	7	5.5 km north of Monument Lake Camp. S BCNP	Unknown
5/22/2008	UCFP107	F	2 to 3	2.4km south of US41 on CR951, moving east to west	Vehicle
5/23/2008	K268	F	2 weeks	SBCNP	Consumed (possible intraspecific aggression)
5/23/2008	K269	M	2 weeks	SBCNP	Consumed (possible intraspecific aggression)
6/30/2008	FP164	M	2.5	SBCNP	Unknown

Date	Panther ID	Sex	Age	Location ^a	Cause
7/28/2008	UCFP108	F	3 to 4	Immokalee Rd 1.7 mile E of Oil Grade Rd	Vehicle
8/6/2008	FP107	F	8	FPNWR	Unknown
9/15/2008	FP155	M	3	Lee Hendry Landfill, Hendry Co.	Unknown
9/15/2008	UCFP109	M	8	Private Property- 2 mi E of Corkscrew Sanctuary	Unknown
9/29/2008	UCFP110	F	2-3 mos.	EVER	Vehicle
10/22/2008	FP152	M	5-6	SBCNP	Intraspecific aggression
10/24/2008	UCFP111	F	6-8 mos.	2.4km N of Oil Well Rd on SR29	Vehicle
11/4/2008	UCFP112	M	3	SR80 east of CR833	Vehicle
11/16/2008	UCFP123	M	3-4	Troupe County, Georgia	Shooting
11/26/2008	UCFP113	M	4 to 5	Alico Road, Lee County	Vehicle
11/28/2008	UCFP114	F	4	CR858, 1 mi E of Camp Keais Rd	Vehicle
1/11/2009	UCFP115	M	4	CR832, E of OK Slough SF	Vehicle
1/17/2009	K253	M	18 mos.	Eastbound exit ramp, I-75/SR29	Vehicle
1/20/2009	UCFP116	F	4 to 5	SR 29 3 mi S of Immokalee	Vehicle
2/2/2009	UCFP117	M	3	Seminole Indian Reservation	Intraspecific aggression
3/25/2009	UCFP118	M	1.5	Treeline Ave (between Alico/Daniels)	Vehicle
4/9/2009	UCFP119	F	2 to 3	US41 Turner River	Vehicle
4/21/2009	UCFP120	F	2	Big Cypress Mitigation Bank	Shooting
5/14/2009	UCFP121	M	2	SR29 ~4 mi S I-75	Vehicle
5/25/2009	UCFP122	M	2	Immokalee Rd near Camp Kaeis Rd	Vehicle
6/12/2009	FP140	F	7	FPNWR, SE of Hog Pond	Intraspecific aggression
7/28/2009	FP204	F	19	Captive, White Oak	Euthanasia
8/5/2009	UCFP124	M	1.5	I-75, mile marker 90	Vehicle
9/6/2009	UCFP125	F	2	I-75, mile marker 96.5	Vehicle
9/15/2009	UCFP126	M	2	East of Ave Maria, Ranch 1 Orange Gr.	Unknown
10/5/2009	FP166	M	5-6	Seminole Indian Res.; N. of Safari Pen	Intraspecific aggression
10/9/2009	UCFP127	F	3-4	Turner River, 600m S. of US41	Unknown
N/A	UCFP128	N/A	N/A	N/A	Under investigation
10/19/2009	UCFP129	M	3-4 mos.	CR 846 2 miles E of Immokalee	Vehicle
10/21/2009	UCFP130	F	3-4	CR 846 2 miles E of Immokalee	Vehicle
11/1/2009	UCFP131	F	3-4 mos.	CR 833 N boundary of BCSIR	Vehicle
11/19/2009	UCFP132	M	3-4	FL Turnpike S of Yeehaw Junction	Vehicle (head removed posthumously)
12/17/2009	UCFP133	M	3-4	I-75 1/2 mi W Snake Road	Vehicle
12/23/2009	UCFP134	M	3	Corkscrew Rd near CREW Gate 5	Vehicle
12/29/2009	UCFP135	F	4	2 miles N of Jerome on SR29	Vehicle
12/31/2009	UCFP136	F	3-4 mos.	County Barn Rd, 0.3 mi S of Davis Blvd	Vehicle

Date	Panther ID	Sex	Age	Location ^a	Cause
1/16/2010	UCFP137	M	2.5	1 mi S Corkscrew Rd, near Bella Terra	Intraspecific aggression
1/29/2010	UCFP138	M	6-8	N of Shell Island Rd, Rookery Bay	Unknown -skeletal remains; date of death unknown
3/12/2010	UCFP139	F	3	Corkscrew Rd, CREW Marsh Trailhead 1	Vehicle
3/16/2010	FP174	M	4-5	I-75 eastbound, mile marker 95	Vehicle
3/22/2010	FP172	F	5	BCNP Addition Lands	Intraspecific aggression
4/15/2010	UCFP140	M	1.5-2	I-75, mile marker 117, Lee County	Vehicle
4/29/2010	UCFP141	F	6 mos.	Church Rd near Hendry Co landfill	Vehicle
5/4/2010	UCFP142	F	8 mos.	Golden Gate Blvd (between 5th-7th St NW)	Vehicle
5/21/2010	FP169	M	5-6	US 41, 4km W of Monroe Station	Vehicle
5/22/2010	FP158	F	5	US 41, 1km east of SR92	Vehicle
5/23/2010	UCFP143	M	7-8 mos.	US 41, 2.2km east of CR951	Vehicle
5/31/2010	UCFP144	M	12-14 mos.	CR833, 0.7km north of CR832	Vehicle
6/21/2010	FP144	M	6	BCNP Addlands north of I75	Intraspecific aggression
6/24/2010	UCFP145	M	16-18 mos.	SR29, 3.7km south of Farm Workers Village	Vehicle

^a BCSIR = Big Cypress Seminole Indian Reservation; CREW = Corkscrew Regional Ecosystem Watershed; EVER = Everglades National Park; FPNWR = Florida Panther National Wildlife Refuge; FSPSP = Fakahatchee Strand Preserve State Park; NBCNP = Big Cypress National Preserve north of Interstate 75; OSSF = Okaloacoochee Slough State Forest; PSSF = Picayune Strand State Forest/Wildlife Management Area.; SBCNP = Big Cypress National Preserve south of Interstate 75.

Florida Panther Research and Management Trust Fund

Florida Panther License Plate Annual Use Fee

The Florida Panther specialty license plate is one of many options available to Florida residents when registering vehicles & trailers for street use. Section 320.08056(4)(e), Florida Statutes sets the specialty plate annual use fee collected for the Florida panther license plate to be \$25. The law goes on to specify how the annual use fee is to be distributed in section 320.08058(5)(b), Florida Statutes:

1. **Eighty-five percent must be deposited in the Florida Panther Research and Management Trust Fund (FPRMTF) in the Fish and Wildlife Conservation Commission to be used for education and programs to protect the endangered Florida panther.**
2. Fifteen percent, but no less than \$300,000, must be deposited in the Florida Communities Trust Fund to be used pursuant to the Florida Communities Trust Act. The Legislature further specifies funds deposited in the Florida Panther Research and Management Trust Fund be spent only for the following purposes (s. 372.672(2), F.S.):
 - a. To manage and protect existing Florida panther populations by increasing panther food sources where food is a limiting factor, determining conflicts between public use and panther survival, maintaining sufficient genetic variability in existing populations, and undertaking management and enforcement activities that protect panther habitat.
 - b. To educate the public concerning the value of the panther and the necessity for panther management.
 - c. To reestablish Florida panthers into areas of suitable habitat, where feasible, by assessing the necessity of a captive breeding program for purposes of reintroduction of the panthers into the suitable habitat; selecting potential sites for reintroduction and investigating associated human sociological aspects; and assessing the potential for panther habitat acquisition.

Research and Management Objectives Funded Via the FPRMTF

Division of Habitat and Species Conservation and Fish and Wildlife Research Institute

Funds deposited in the Florida Panther Research and Management Trust Fund (FPRMTF) are appropriated by the Legislature to support a number of ongoing panther projects within the FWC's Division of Habitat & Species Conservation (HSC) and within the Fish and Wildlife Research Institute (FWRI). HSC and FWRI have positions dedicated to panther work, and these staffs work cooperatively as an integrated team. The following projects currently receive monies from the trust fund:

Florida Panther Genetic Restoration and Management - Restore historical levels of genetic diversity by imitating natural population processes, and develop a long-term management plan for maintaining a healthy population of Florida panthers. In the spring of 1995, the FWC released eight female puma (*Puma concolor*) from Texas into areas occupied by Florida panthers in order to offset the potential deleterious effects of inbreeding and to diversify the panther population's genetic composition. None of these female Texas puma remain in the population today, but FWC continues to monitor the effects of this genetic infusion and its impact on the panther population.

- Take genetic samples from all panthers encountered (live capture, recovery of panther carcasses, kittens handled at dens) for on-going assessments of the panther population genetic structure;
- Work closely with our partners at the National Cancer Institute to process and analyze results of genetic work;
- Track occurrence of cryptorchidism, kinked tails, atrial septal defects, and male reproductive fitness measures as measures of genetic restoration success;
- Monitor demographic parameters such as survivorship, mortality, and fecundity.

Florida Panther Biomedical Research and Management – The objectives of Biomedical Research and Management are to monitor for and manage infectious, toxic, genetic, and other disease threats of population significance, and to provide for the emergency treatment and care of individual free-ranging panthers at capture. Biomedical Research and Management also coordinates with cooperating institutions to rehabilitate injured and orphaned panthers as well as care for panthers permanently in captivity.

- Provide high quality veterinary medical care during capture and immobilization of free-ranging Florida panthers;
- Research, monitor, and evaluate the health of free-ranging panthers and provide medical care when indicated;
- Collect biomedical data to assist with the evaluation of the genetic restoration program;
- Oversee the care of panthers held in captivity;
- Act as liaison with other resource agencies, universities, and private individuals involved with panther biomedical research;

- Make recommendations concerning appropriate management strategies that may ensure the health and survival of the Florida panther;
- Conduct or coordinate necropsies of dead panthers.

Florida Panther Research and Management - FWC is committed to using the best scientific information available to advance Florida panther conservation. Following are current FWC activities that will help advance that knowledge base, identify gaps in the knowledge base that need to be addressed, or to apply that knowledge to deal with management issues:

- Initiate analyses that will incorporate current and historical data to quantify demographic parameters (e.g., survival, mortality, reproduction) of panthers pre and post genetic restoration;
- Complete an assessment of the genetic introgression project and delineate the need for implementing similar management initiatives in the future;
- Continue to assess current innovations in GPS radiocollar technology to determine battery life, dependability, and durability of varied brands. Additionally, determine the utility and reliability of remote data download of GPS data from collars in order to obtain "realtime" data that may reduce our dependency on aerial telemetry data collection;
- Continue a collaborative study with the University of Florida to complete a population viability analysis for panthers using current and historic data;
- Conduct a research prioritization process using recommendations we received from a Florida Panther Scientific Review Team commissioned by FWC and the United States Fish and Wildlife Service (USFWS) in 2002;
- Collaborate on a study to develop novel methods of estimating home ranges using voluminous location datasets collected with GPS collars;
- Initiate a collaborative project to complete a scientific review of camera survey designs used to monitor panthers.
- Initiate a study assessing movement rates and distances traveled by panthers using GPS data collected at rapid fix rates;
- Assess the use of resource selection functions with GPS radiocollar data to predict where suitable panther habitat is located north of the Caloosahatchee River;
- Commence the process of having panther genetic samples analyzed within FWC at the FWRI facility in St. Petersburg. This laboratory is capable of completing species identification, sex identification, sequencing analysis, and individual identification via microsatellite genotyping;
- Investigate reported human-panther interactions following guidelines contained in the Florida Panther Response Plan;
- Assist Office of Planning and Policy Coordination and/or Habitat Conservation Scientific Services by incorporating panther technical expertise into FWC's project review processes;
- Provide panther data, technical expertise and other pertinent information to the public, media outlets, consulting firms, NGO's, Native American Tribes and local, state, and federal agencies as requested.

Protected Species Coordination - Coordinate the protected species program and serve as the Commission's principle representative in protected and endangered species matters. This includes administering the Section 6 Cooperative Agreement and the required reporting of emergency handlings of panthers.

Wildlife Disease Risk Assessment - Collect and analyze biomedical data to ascertain population risk when disease, parasites, or environmental contaminants are suspected of causing mortality, morbidity, or low production in wildlife populations in Florida, and to make recommendations on actions to alleviate the problem or for further research.

Wildlife Research Laboratory Operations - Administer a portion of the operations of the Wildlife Research Laboratory in Gainesville that support panther staff.

FPRMTF Allocations to Administrative Overhead

A share of administrative overhead is assessed the Florida Panther Research and Management Trust Fund to support agency central administrative activities such as: executive direction, budgeting, purchasing, property management, accounting, information technology support and central services. An additional service charge assessment is required by statute which transfers 7.3% of the license plate annual use fee to General Revenue for statewide governmental services.

FPRMTF Allocations to the Florida Communities Trust

The Florida Communities Trust (FCT) is a non-regulatory agency housed within the Department of Community Affairs. It was established to assist local governments in bringing local comprehensive plans to compliance and implementing the goals, objectives, and policies of the conservation, recreation and open space, and coastal elements of local comprehensive plans. It also assists local governments in conserving natural resources and resolving land use conflicts (s. 380.502, F.S.).

The Florida Communities Trust was originally funded through its own license plate annual use fee. In 1990, the FCT license plate statute was amended to become the Florida Panther license plate. Fifteen percent of the fee was retained for the FCT to continue funding for its operations. Inquiries for further information of FCT funding and accomplishments may be directed to the Department of Community Affairs at 850/922-2207.

FPRMTF: FUNDING INFORMATION AS OF 30 JUNE 2010

Beginning Balance July 1, 2009	<u>\$1,756,492</u>
Fiscal Year 2009-2010 Actual Revenue	
Panther License Plate Annual Use Fees	\$ 1,380,141
Interest Earnings	45,579
Miscellaneous	650
Total Actual Revenue	<u>\$ 1,426,370</u>
Fiscal Year 2009-2010 Appropriations	
Panther Management	\$565,525
Panther Research	337,472
OEB	20,000
Administration Overhead	91,579
Service Charge to General Revenue	115,704
Reversions	(126,007)
Total Appropriations Spent	<u>\$1,004,273</u>
Projected Fund Balance June 30, 2010	<u>\$2,178,589</u>

September 2, 2010
 Office of Finance & Budget
 Florida Fish and Wildlife Conservation Commission