

**Florida Fish and Wildlife Conservation Commission
Division of Wildlife**

**Black Bear Status Report
October 12, 2000**

Natural History and Background

The Florida black bear (*Ursus americanus floridanus*) is one of three subspecies of American black bear recognized in the southeastern United States. Although these subspecies are nearly indistinguishable in the field, they may be differentiated by slight variations in several skull measurements. The Florida black bear is generally characterized by its highly arched forehead and its long, narrow braincase. As with all American black bears, Florida black bears are large, powerful mammals with a shy, secretive demeanor. Adult males normally weigh 250 - 450 lbs., and adult females normally weigh 125 - 250 lbs. Both sexes have soft, black hair, often with blonde chest markings; small, round ears; short tails; stout, curved claws; and large canine teeth. Black bears are omnivores that mostly eat vegetation, nuts, berries, and insects, but also consume some meat. In Florida, black bears are dependent upon saw palmetto plants and oak trees for a significant portion of their diet. They may predate upon animals such as armadillos and hogs, but, overall, these food sources make up a small percentage of their diet.

Historically, black bears ranged throughout the Southeast, with the Florida subspecies inhabiting all of Florida, including the upper keys and portions of southern Georgia, Alabama, and Mississippi (Figure 1). This widespread distribution has been severely reduced and fragmented by human activity. Large scale resource extraction in the form of logging and land clearing in the early 1900's along with unregulated hunting, which occurred up to the mid 1900's, had the greatest negative impacts. Bear populations in Florida reached their low point at this time with only several hundred individuals estimated statewide. Florida's bear population has since rebounded because of judicious management efforts and maturation of second growth forests across the state. More recently, however, development associated with Florida's burgeoning human population has begun to directly compete for space with the wide-ranging black bear.

Current Status

Black bears are protected as a threatened species throughout Florida except those in Baker and Columbia counties and Apalachicola National Forest and those held in captivity under permit. Bears in Baker and Columbia counties and Apalachicola National Forest were hunted until seasons were closed in winter 1993-1994. The United States Fish and Wildlife

Service has reviewed the status of the Florida black bear and, after initially indicating that federal listing was warranted but precluded by higher priority species, concluded that they do not merit federal listing as a threatened or endangered species.

The primary range of bears in Florida has been restricted to six core (Apalachicola, Big Cypress, Eglin, Ocala, Osceola, and St. Johns) and two remnant (Chassahowitzka and Glades/Highlands) populations (Figure 2). These populations range in abundance from a few dozen to several hundred bears and vary significantly in distribution, habitats occupied, and threats to existence. Dispersing bears may be found virtually anywhere in the state, and low numbers of bears inhabit lands surrounding the core populations and in some large undeveloped areas like the Big Bend. Because of their fragmented distribution, the individual populations are more vulnerable to impacts than a single large population of similar total size would be. Although not under the jurisdiction of FWC, populations of Florida black bears in neighboring states, such as at Okefenokee Swamp in south Georgia and Mobile Bay in Alabama, must be considered when evaluating the status of the Florida subspecies. The Osceola bear population is continuous with the larger Okefenokee bear population in southern Georgia, and bear populations in the western panhandle may play an important role in maintenance of small bear populations in Alabama.

Currently, there is no accurate, scientifically generated estimate of the number of black bears in Florida. In 1998, FWC staff estimated the statewide bear population to be between 1,282 and 1,888 bears based on density estimates from past studies and estimates of occupied range. Results from more recent studies and consistently increasing trends in bear roadkill, nuisance complaints, sightings, and sign indicate that bear abundance and distribution is increasing in many bear populations, particularly in Ocala and Apalachicola National Forest and surrounding areas.

Strategic habitat conservation areas for the Florida black bear (i.e., lands that would need to be protected to meet minimum habitat conservation goals for the Florida black Bear) were proposed in the 1994 report *Closing the Gaps in Florida's Wildlife Habitat Conservation System (Closing the Gaps)* based on 1985-1989 Landsat Thematic Mapper imagery. Office of Environmental Services staff is currently working on an update to that analysis. The first step in that process is to measure changes in land cover classes on a county-by-county basis between 1986-1987 imagery and 1996 -1997 imagery, the most recent imagery available. We expect that analysis to be completed in March 2001. The results will subsequently be applied to a bear habitat model to determine changes in bear habitat over the ten year period. Results should be available by July 2001.

As bears are inhabitants of forested lands, trends in forested acres in Florida can provide a crude indication of trends in bear habitat. Randy Kautz, a senior scientist in our Office of Environmental Services, in his 1998 *Florida Scientist* paper entitled "Land use and cover trends in Florida, 1936-1995" identified the loss of approximately 269,000 acres of forested lands between 1987 and 1995. This acreage converts to an average loss rate of 0.2 percent per year. Based on these data, loss of bear habitat (as represented by forest cover trends) has occurred over the past several years, but at a relatively slow rate, especially compared to previous loss rates that have averaged as high as one percent per year.

Also, when *Closing the Gaps* was published in 1994, 6.6 million acres in Florida were in conservation lands. That figure has grown to 8.3 million acres now. Of the 1.6 million acres included in the strategic habitat conservation areas for the Florida black bear in the *Closing the Gaps* report, 455,345 acres have since been acquired by the State, leaving 72 percent unprotected.

As for future trends, it seems inevitable that, with 700 new residents moving to Florida per day, bear habitat will continue to decline in Florida. A "population viability analysis" (projections of future population levels based on assumed survivorship, mortality, and reproduction) recently conducted by Dr. David S. Maehr (draft report, 2000), however, suggests that the subspecies of the Florida black bear may be able to increase over the next 20 years despite habitat loss rates of one to three percent per year.

The annual number of recorded vehicle/bear collisions has steadily risen from two in 1976, when records were first kept, to 75 in 1997, 90 in 1998, and 81 in 1999 (Figure 3). Similarly, the annual number of reported human/bear conflicts has risen from one in 1978 to 359 in 1997, 450 in 1998, and 389 in 1999 (Figure 4). Moreover, if current trends continue, calendar year 2000 will set new records for both roadkill and human/bear conflicts. As Florida's human population continues to grow and encroach upon the remaining bear habitat, and as black bear populations expand from historic lows, human/bear conflicts will continue to grow in number and intensity. Although no attacks on humans by bears have been documented in Florida, there have been numerous cases of bears in buildings, bears attacking livestock and pets, and other serious conflicts (Figure 5). Given these factors, the FWC faces a considerable challenge in attempting to balance the need to protect and preserve bear populations with the demand to ensure the safety and well being of Floridians.

Management Efforts

Since 1993, bear management efforts have been directed at mobilizing resources to address bear conservation needs; coordinating with other agencies, organizations, and individuals on bear management issues; responding to the increasing number of human/bear conflicts; and gathering baseline data on Florida's bear population. In 1996, the FWC received legislative authorization to establish a dedicated bear management position and subsequently created the Bear Management Section (BMS) under the Division of Wildlife (DOW) in 1997. The BMS consists of two FTE's, which have worked to develop and coordinate the FWC's bear management efforts and provide technical guidance to the agency on bear issues.

The BMS has actively pursued external funding and assistance to address gaps in available information on Florida's black bear. Toward this end, the BMS has acquired \$150,000 in funding from the Florida Department of Transportation (FDOT) and the United States Forest Service (USFS) to investigate the habitat use and movements of black bears relative to roads in Ocala National Forest. During the first year and a half of this study, the BMS has captured over 100 individual bears, gathered over 3,000 locations on radio-instrumented bears, documented over 500 bear crossings of major roads, and collected over 1,200 hair samples for estimation of population abundance. Scientific estimates generated from analysis of a small portion of these hair samples suggest that a minimum of 500 bears inhabit Ocala National Forest, a dramatic increase over previous estimates for this area. Results from the Ocala Bear Study have been so positive that the FDOT and USFS have indicated that they will extend funding for another two years. The BMS also contracted to have habitat management guidelines for bears in Florida researched and developed in 1999. These guidelines are currently being reviewed for incorporation into a brochure to be made available to interested landowners and managers.

The FWC has coordinated its bear conservation efforts with other agencies and user groups and has incorporated public input into bear management issues when appropriate. DOW and Office of Environmental Services staff have worked with the FDOT to identify and prioritize problem bear roadkill areas across the state, resulting in conservation efforts that include targeted signage, fencing, wildlife underpass structures, and bridge extensions. BMS staff have cooperated with bear stakeholder groups such as the Florida Beekeepers Association, Florida Forestry Association, Florida Bear Hunters Association, and Habitat for Bears Campaign to address bear management needs. Moreover, the BMS sponsored focus groups, a telephone survey, and a three-day workshop in 1998 to solicit input from numerous groups on issues surrounding human/bear conflicts. Recently, the BMS has convened the Florida Bear Conservation Working Group, which has been tasked with drafting a conservation strategy that will ensure the long-term perpetuation of bears in Florida.

BMS staff have worked closely with the over 35 DOW biologists across all five regions who are responsible for responding to public questions, disposing of road kills, and handling human/bear conflicts. These personnel have implemented FWC's nuisance bear and roadkill policies well, but have had to divert more and more of their time from other assigned duties to do so. To help alleviate this burden and to increase efficiency, the DOW is seeking to privatize its response to nuisance bear situations. Staff has proposed a pilot program to consist of instituting protocols and standards for selecting contractors, developing a network of certified nuisance agents to implement the agency's nuisance bear response protocol, and ground testing of implementation within a confined geographic area. Funding for this effort, and others, has been requested from the Conserve Wildlife Tag Fund overseen by the Wildlife Foundation of Florida. Other efforts directed at abating human/bear conflicts include printing of a brochure entitled "Living with the Florida Black Bear" by the BMS, development of a black bear curriculum guide for grade school teachers by the Office of Informational Services, and agency sponsorship of the Umatilla Bear Festival in 1999 and 2000.

Two recent developments have greatly increased the BMS's ability to proactively manage bear populations in Florida. The hard work and support of FWC staff at all levels over the past year led to the legislative authorization of two additional FTE's for the BMS. These positions will be established and filled soon and will be responsible for implementing monitoring efforts for two core bear populations, initiating a pilot local bear stakeholder working group, and developing the pilot human/bear conflict response program, among other assigned duties. Authorization for acquisition of these new personnel enabled the BMS to apply for a major grant in the form of a Federal Highway Administration Transportation Enhancement Project. This grant, funded in the amount of \$404,000 over three years, was awarded to the BMS for support of a statewide bear population-monitoring program. This program will be based on methodologies derived from the Ocala Bear Study and will estimate bear abundance at the six core populations across the state. Fieldwork will begin in May, 2001 and will include delineation of local bear distributions as well as abundance estimation, which will provide data with which to assess the impacts of transportation related mortality on these populations. This project also will provide population estimates and distribution maps essential for managing bear populations in Florida to meet the public's needs.

Future Direction

Multidimensional challenges such as statewide bear management require innovative solutions. The DOW envisions a multilateral partnership of agencies, organizations, and individuals working toward the common goal of implementing a statewide bear conservation

strategy. Convening of the Florida Bear Conservation Working Group to develop the conservation strategy is the first step in this process. To facilitate implementation of the strategy, the BMS will sponsor local bear working groups for the core bear populations as staffing allows. The function of these working groups will be to foster education; expedite cooperation among the public, organizations, and other agencies involved in bear conservation; identify and address local problems and conservation opportunities; and coordinate management efforts at the local level. Current partnerships with the FDOT and the USFS have yielded substantial funding to improve our baseline knowledge of statewide bear populations. Other potential partnering opportunities are being pursued with the FDOT, the U. S. Department of Defense, the Florida Department of Forestry, and the Wildlife Foundation of Florida, among others. The DOW also is optimistic about the availability of funds from the Conserve Wildlife Tag Fund to support implementation of current and upcoming projects. Once established, these projects would not only produce effective bear management, but also would provide significantly greater capability to seek additional external resources with which to address current and future bear conservation issues.

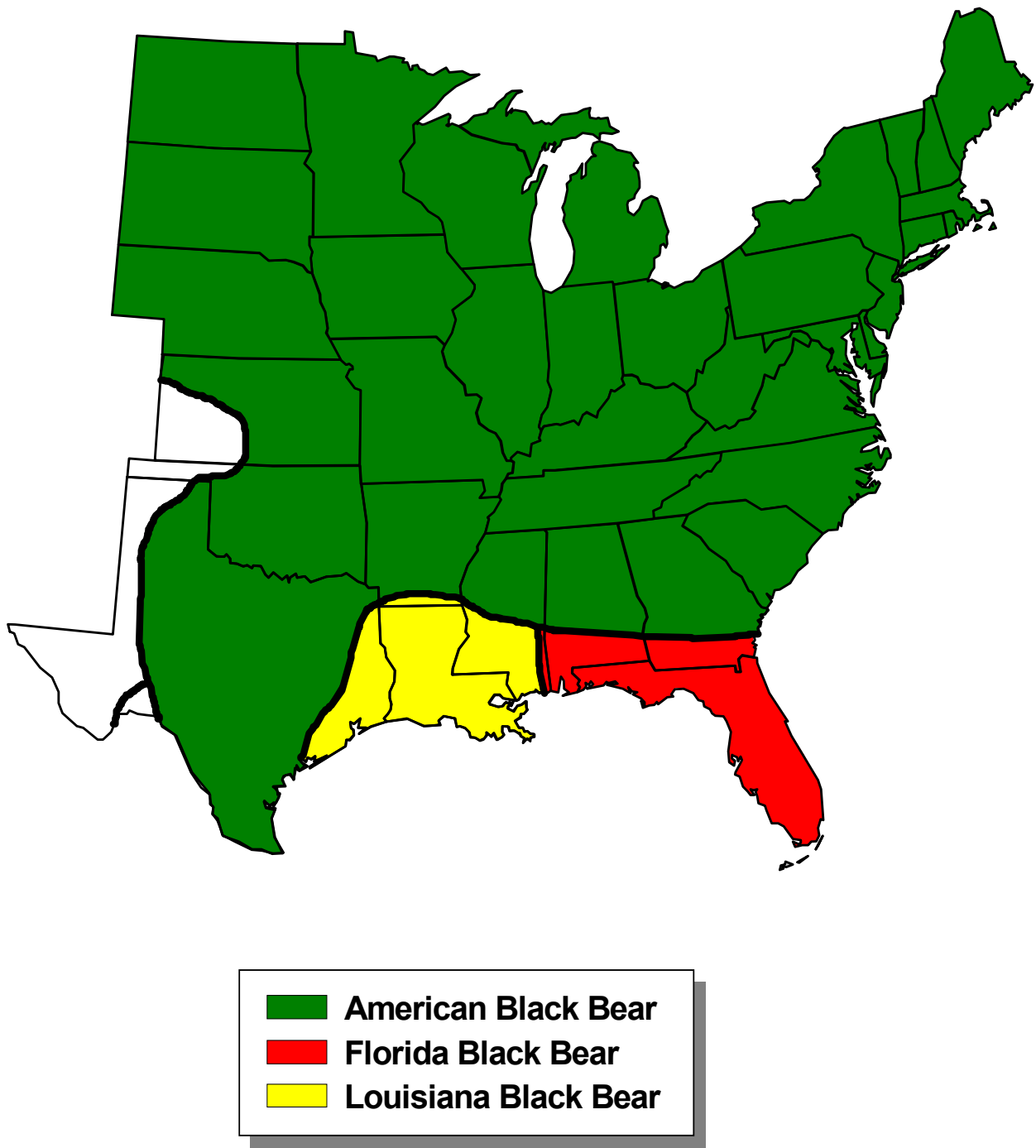


Figure 1. Subspecies ranges of black bears in the southeastern United States (from Hall 1981).

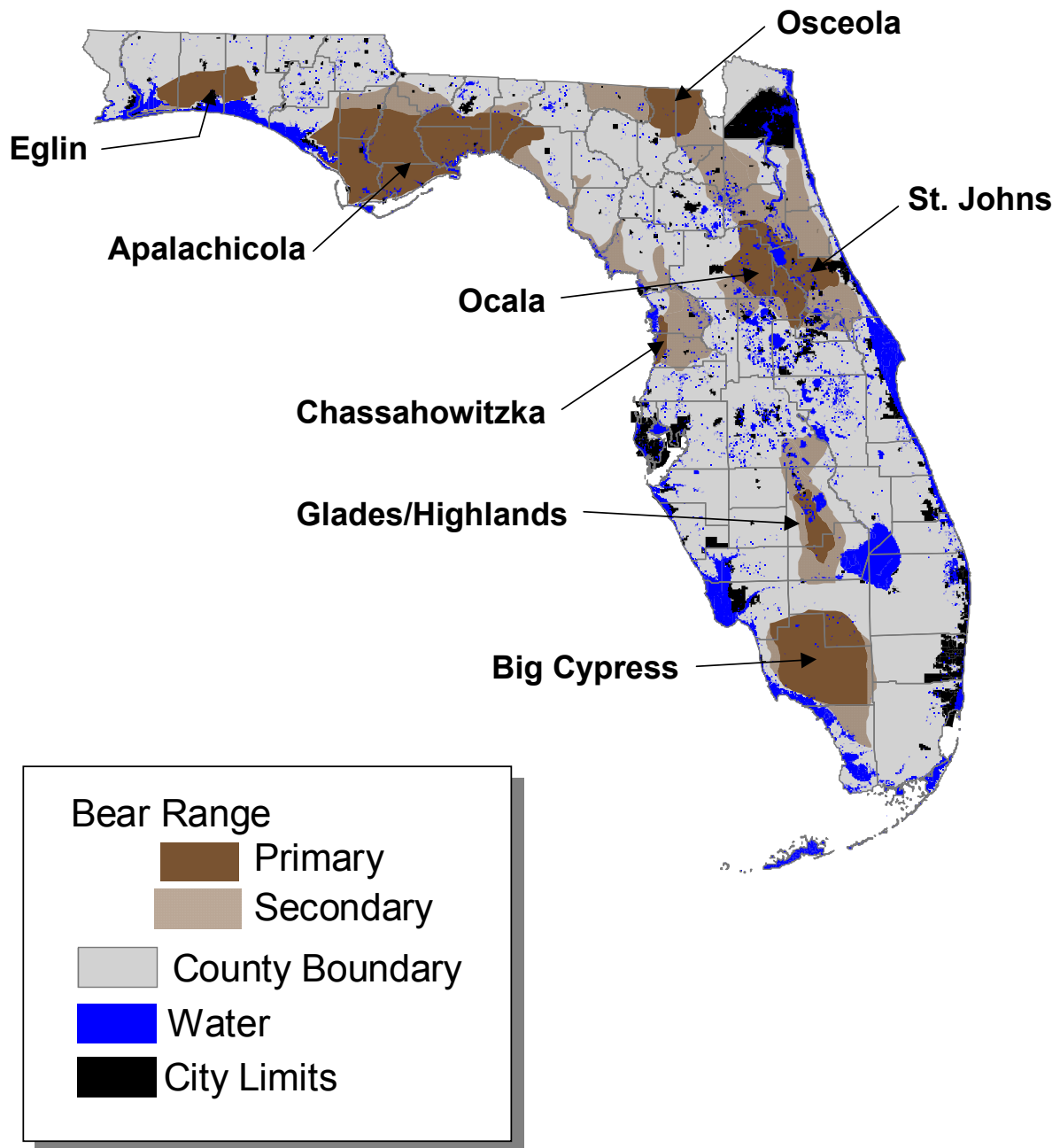


Figure 2. Range of black bear populations extant in Florida.

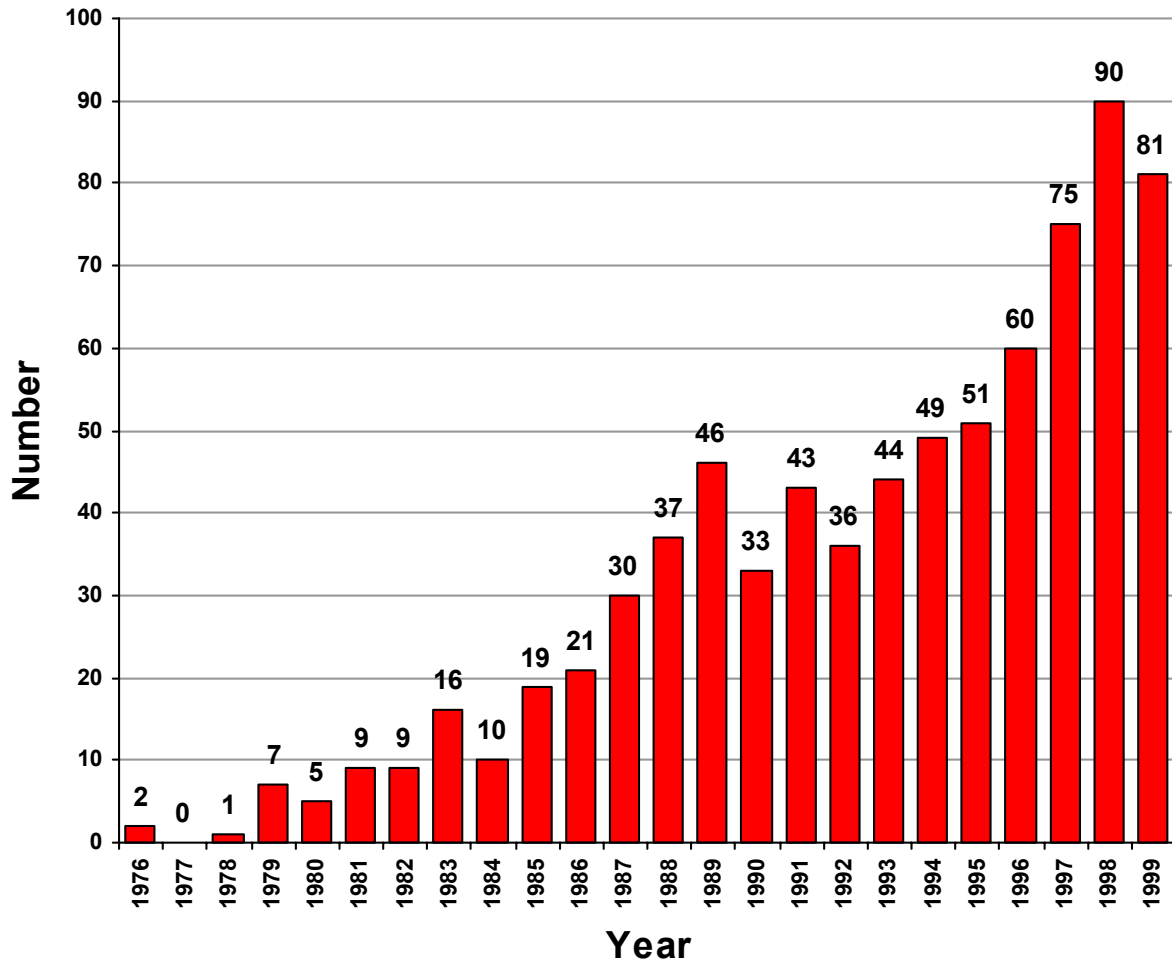


Figure 3. Trend in transportation related bear deaths in Florida.

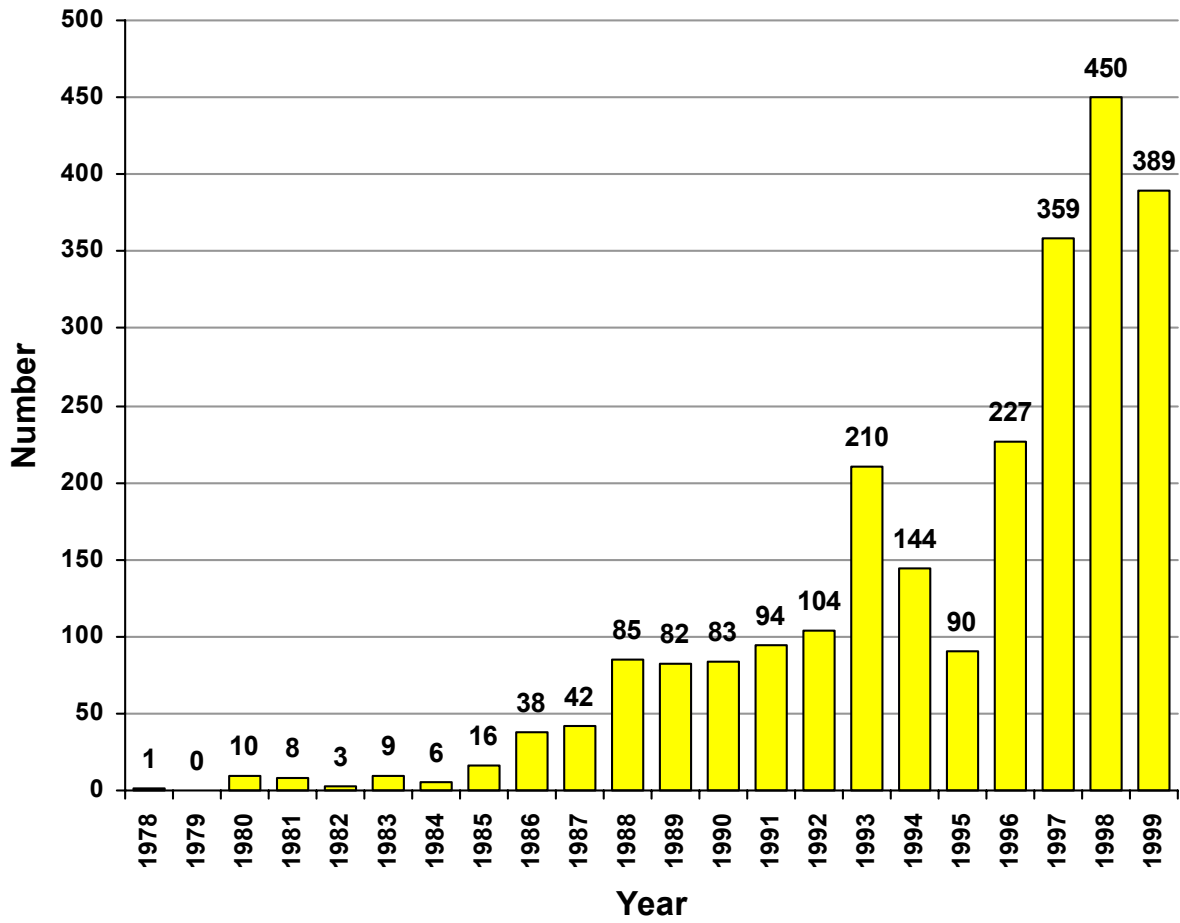


Figure 4. Trend in reported human/bear conflicts in Florida.

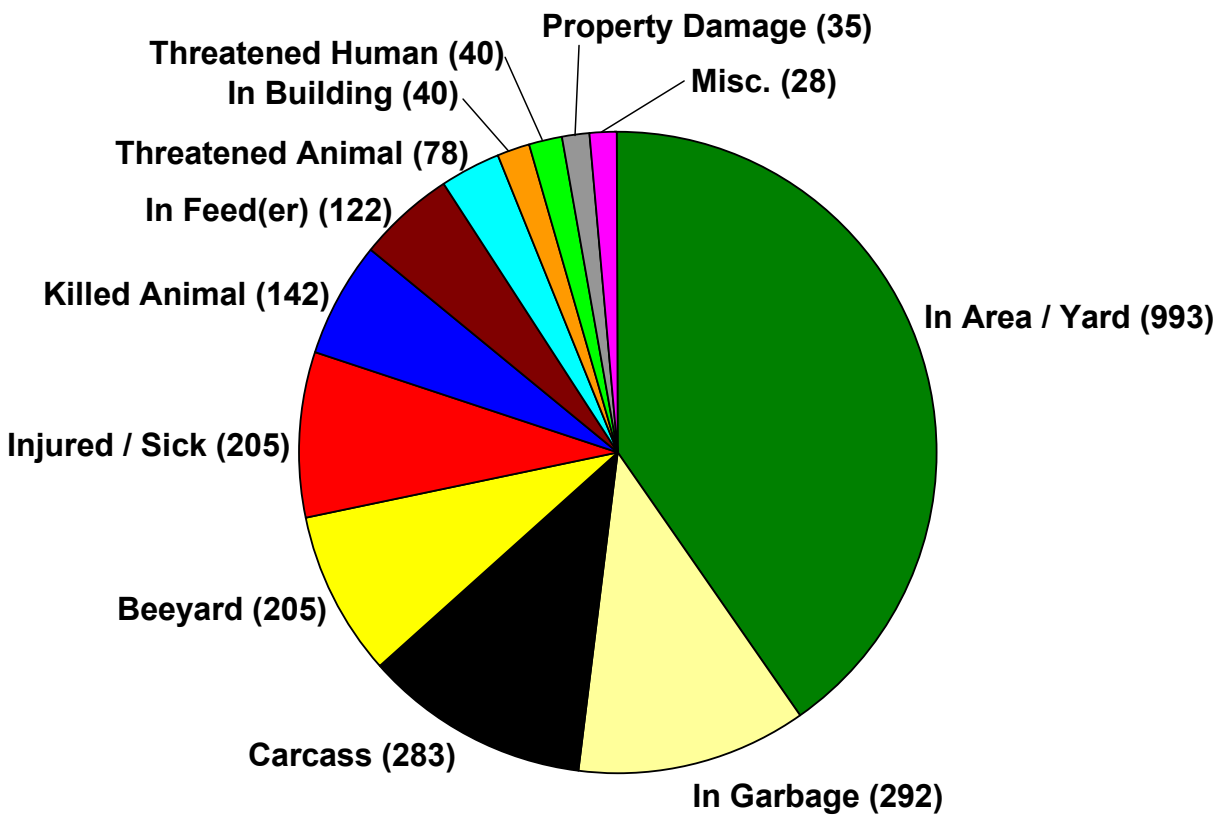


Figure 5. Types of reported human/bear conflicts in Florida from 1978 to 1999 (number of each type in parentheses; total = 2,463).