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Fates of Wild Hogs Released into Occupied Florida Panther Home Ranges

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Florida panthers (*Felis concolor coryi*) may be nutritionally stressed in the southern limits of their range in southwest Florida (Roelke et al. 1986). Panthers using the Fakahatchee Strand north of Alligator Alley (S. R. 84), the Bear Island Unit of the Big Cypress National Preserve, and private ranches to the north are in better physical condition than individuals found south of Alligator Alley. Food habits studies indicate panthers found north of Alligator Alley derive most of their diet from large prey such as wild hog (*Sus scrofa*) and white-tailed deer (*Odocoileus virginianus*), while panthers living south of this highway derive most of their intake from raccoon (*Procyon lotor*) and nine-banded armadillos (*Dasyppus novemcinctus*) (Roelke et al. 1986). We examined the feasibility of wild hog introductions as a means of artificially augmenting the panther prey base south of Alligator Alley.

Six pseudorabies-free, castrated hogs, were released 27 March 1987 in the Fakahatchee Strand State Preserve within 1 km of a radio-collared adult female panther, and six hogs were released 28 March in the privately-owned Golden Gate area south of Alligator Alley within 200 m of a radio-collared female panther and her 8-month-old male kitten. Radios were monitored every other day through January 1988 in conjunction with panther telemetry flights. When a radio transmitted a "mortality" signal (Telonics, Inc., Mesa, Arizona), the exact location was determined and a ground search conducted the same day. The condition of the carcass, predator tracks and other field sign were used to determine the cause of death.

Predators were implicated in the deaths of five hogs. These included two black bears (*Ursus americanus*), one American alligator (*Alligator mississippiensis*), one panther and one unknown predator. In the latter instance the hog was eviscerated and partly covered, but no tracks or other sign were found. It is possible the kill was made by a panther as would be indicated by the partly covered carcass (Shaw 1979), however, it also is possible that a bobcat (*Lynx rufus*) or bear was responsible. Hunting apparently caused the deaths of three hogs as evidenced by knife marks on the radio collar. The fates of two hogs are unknown due to collar and transmitter failure. Two other collars were found attached to hog carcasses with no signs indicating cause of death. The single panther kill occurred 117 days after the releases and was preceded by the deaths of at least eight hogs. All hogs were recovered within 4 km of their release sites, and no unusual movements were noted.

Although all hogs were released within home ranges of two adult female panthers and one subadult panther, and radio locations of hogs and these panthers often were close, the only confirmed kill found was by a radio-collared adult male nearly four months after the releases. These female panthers had relatively enormous home ranges (160-350 km²) (Maehr 1988) in relation to the small areas used by released hogs. Therefore, the opportunities for taking released hogs may have been infrequent due to these panther's large movements. Additionally, in light of a decline in soil quality and hydrologic conditions south of Alligator Alley (Leighty et al. 1954) the ability for the released hogs to survive may have been compromised, and may explain the lack of a resident hog population in this area.

The low number of released hogs makes any definitive conclusions impossible. That a panther did kill one of the hogs suggests that very large scale releases may increase the panther prey base. However, the biological consequences and economic costs of large releases of hogs in this area makes this a debatable management alternative. It is possible that environmental stresses may have compromised the health of collared hogs and made them more vulnerable to predators such as bears, bobcats, and alligators. The patterns of mortality revealed by this study demonstrate that predators other than panthers may be a considerable mortality factor when hogs are available in the study area.

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Least Bittern Nesting on Mangrove Keys in Florida Bay

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The Least Bittern (*Ixobrychus exilis*) is found throughout much of the western hemisphere (AOU 1983). It is usually associated with a variety of freshwater habitats and to a lesser extent, salt marshes (Palmer 1962). In southern Florida the Least Bittern is a common resident of the Everglades freshwater marshes, nesting primarily in sawgrass (*Mariscus jamaicensis*) and the cattail (*Typha* spp.) (Kushlan 1973). As an exception, Howell (1932) reported a Least Bittern nest in a mangrove at Indian Rocks, Pinellas County, in Florida. Most sightings of the Least Bittern in the Florida Keys have been during the fall or winter months (Bowman 1978), suggesting migrating or wintering birds. Summer sightings in the Keys were presumed to be non-breeders or the result of environmentally-induced dispersion (Robertson 1962). Robertson (1971) reported a Least Bittern on Big Crane Key in Florida Bay on 19 August 1971 and referred to an "elusive population that inhabits mangrove islands of Florida Bay." Here we report the first observations of Least Bittern nesting on mangrove keys in Florida Bay.

During the summers of 1985 and 1986 we observed Least Bitterns on Middle Butternut Key, in the northeast corner of Florida Bay (25° 4' 70" N, 80° 32' 02" W). On 29 May 1987 we flushed an adult Least Bittern from a small red mangrove (*Rhizophora mangle*) clump