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Coyote Distribution in Florida

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In the 1960s, coyotes (*Canis latrans*) extended their range into the southern states east of the Mississippi River (Gipson 1978). This expansion has been in part natural, but also has been directly influenced by humans, who have imported coyotes from other states and released them in the southeast to be chased with hounds (Hill et al. 1987). In 1981, Brady and Campell (1983) determined the distribution of coyotes in Florida. More recently, increasing reports of coyote sightings and suspected coyote depredations on livestock and watermelon crops suggest that coyotes have become more numerous and widespread in Florida.

In 1988, we conducted a mail survey to determine the current distribution of coyotes in Florida. Surveys were sent to 428 employees of the Florida Game and Fresh Water Fish Commission. A map was provided for survey recipients to mark specific locations where coyotes or coyote sign had been observed since 1983. Respondents also were asked to shade counties or parts of counties where they had a general knowledge of coyote occurrence.

Of the 428 surveys mailed, 262 (61%) were returned, representing all areas of the state. Based on reports of coyote sightings, sign, or vocalizations, the current distribution of coyotes in Florida was depicted (Fig. 1).

Brady and Campell (1983) documented the presence of coyotes in 18 of Florida's 67 counties. On the distribution map they presented, coyotes occurred in the western panhandle and in scattered locations along the Central Highland Ridge from Hamilton to Orange counties. In the current survey, coyotes were reported present in 48 counties. Coyotes now occur throughout most of Florida, and appear to be well established across the panhandle and into north-central Florida. Although there are scattered reports of coyotes throughout the central peninsula to as far south as Broward and Collier counties, it does not appear that coyotes are firmly established in the central and southern portion of the state.

Although there were slight differences in survey methods between the current survey and that conducted in 1981 (Brady and Campell 1983), it appears that coyotes have greatly

expanded their range in Florida. It is expected that coyotes will continue to expand their distribution in Florida. Although there are rumors that coyotes continue to be illegally imported and released, we suspect that further range expansion will result primarily through the dispersal of coyotes born within the state.

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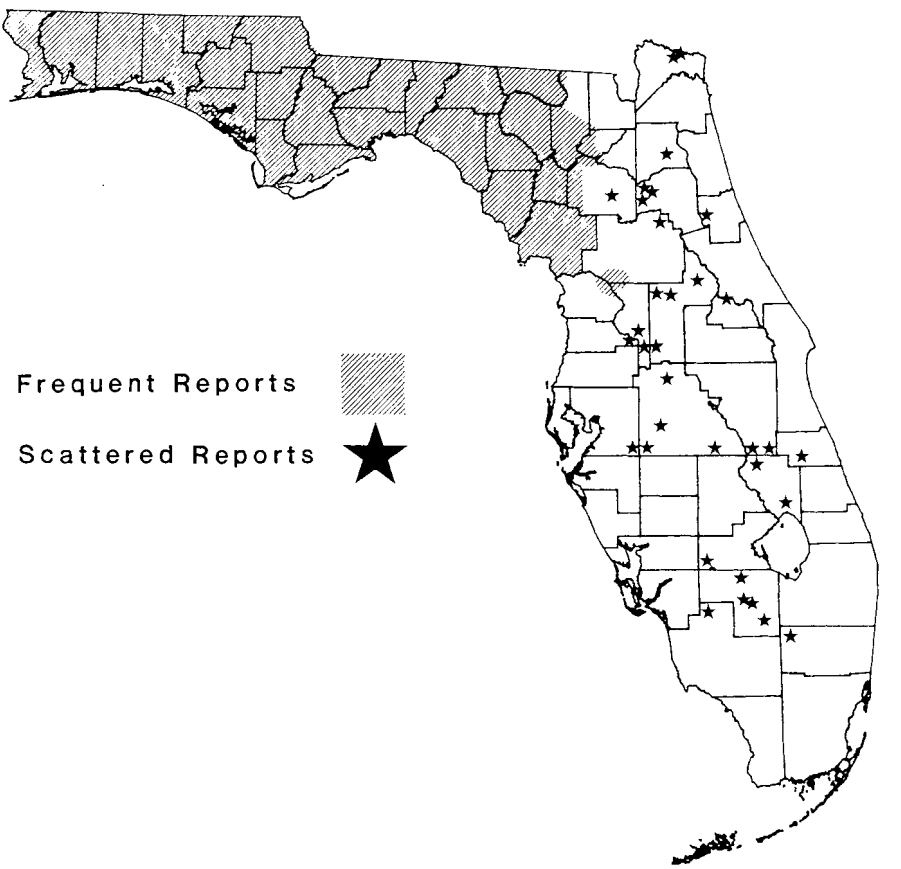

Figure 1. Distribution of coyotes in Florida based on a 1988 mail survey.

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A Case of Competition Between European Starlings and West Indian Woodpeckers on Abaco, Bahamas

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Competition between European Starlings (*Sturnus vulgaris*) and other cavity-nesting species has been well documented in North America (e.g. Wood 1924, Shelley 1935, Howell 1943, Polder 1963, Zeleny 1969, Ingold 1989). Cruz (1977) reports competition between starlings and Jamaican Woodpeckers (*Melanerpes radiolatus*), but I have found no published accounts of starlings competing with woodpeckers in the Bahamas. Bond (1985) lists the starling as wintering in the Bahamas (14 October-18 March).

I here report competition between the West Indian Woodpecker (*M. superciliaris*) and European Starling on Abaco, Bahamas. This also documents European Starlings breeding on the island. I observed nesting West Indian Woodpeckers from 10 May to 4 August 1988, and 13 May to 25 June 1989. No starlings were observed during the 1988 field season.

On 14 May 1989, at Bahama Palm Shores, Abaco, I first observed a European Starling while watching a male West Indian Woodpecker pull nest material out of a cavity within the eaves of a house. This cavity was successfully used as a nest by woodpeckers in 1988 when no starlings were observed. The starling approached the cavity and chased the woodpecker away. There was no physical contact, the woodpecker was simply displaced. The starling then joined another starling, presumably its mate, in a nearby tree.

On 31 May the starlings had established a nest and were incubating in the woodpecker cavity. There also was a pair of woodpeckers in the area. The banded female woodpecker drummed on the house above the cavity and gave territorial cells while a starling was in the cavity. The male woodpecker was nearby. When the starling came out of the cavity, the starling pair chased away the woodpecker pair. The starling pair then returned and one went into the cavity. On 1 June the male woodpecker was in the area but no interaction was observed. The starlings were still incubating.

The woodpecker nest site within the house was unusual and may reflect a general scarcity of large dead trees suitable for nest sites. However, such a site is typical for the more anthropophilic starling (e.g. Kessel 1957, Zeleny 1969). In June 1989 I also found several starlings at Casuarina Point, another small community on Abaco, approximately 9 km from Bahama Palm Shores. My studies of West Indian Woodpeckers on Abaco suggest that the limited availability of suitable nest sites in the forest is forcing the West Indian