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### Range Expansion of Beavers in Florida

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In the 1500s beavers (*Castor canadensis*) were common from the arctic tundra south to Mexico and Florida. In Florida, evidence of beavers has been found in Indian middens as far south as Seminole, Volusia and Brevard counties (Johns 1958). Beavers were known

to be common in the panhandle and northern peninsula of Florida through the mid-1800s (Chapman 1894, Harper 1927, Johns 1958). Unregulated trapping and agricultural development led to the extirpation of the species from most of its range by about 1900 (Bangs 1898, Seton 1900, Harper 1927). Beavers were absent or very rare in the southeastern United States (including Florida) from 1895 to 1940 (Bangs 1898, Sherman 1936).

As protection and management were afforded the species, populations began a slow recovery in the 1940s. Johns (1958) estimated that populations in west Florida rebounded in the mid-1940s, coinciding with the reintroduction of beavers in southern Alabama. There also were some local reintroductions in Florida (Salyer 1946, Schultz 1954, Speake 1955).

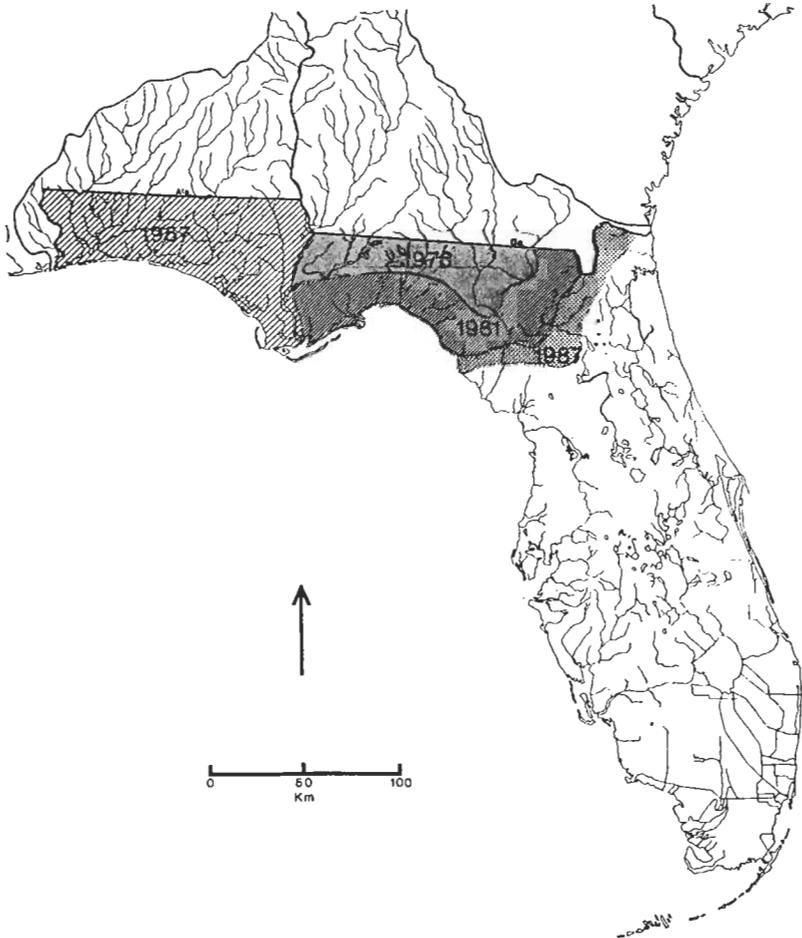


Figure 1. Range of beaver in north Florida from 1957 to 1987. The 1957 range is based on Johns (1958); 1976 range is based on Evers (1976); 1981 range is based on results of unpublished mail questionnaire; and 1987 range is based on results of current mail questionnaire.

Restoration programs and existing remnant populations in Florida combined to firmly re-establish beavers in Florida from the Apalachicola River westward (Fig. 1). By 1976 beavers had expanded their known range eastward; they were found in the Lake Talquin area of the Ochlockonee River system, and in the upper Suwannee and Withlacoochee rivers (Evers 1976; see Fig. 1).

In 1981 I conducted a limited mail survey of 18 park rangers, foresters, and state and federal biologists to update the status of beavers in Florida. During the interim between Evers' (1976) study and my 1981 mail survey, beavers moved down the Suwannee and into the Santa Fe and Ichetucknee rivers, a linear distance of 80 km in 5 years. Results of the mail survey also indicated a southward movement of beavers down the Ochlockonee River from Lake Talquin to the Sopchoppy River during that same period (Fig. 1).

To further update the range expansion of beavers, I conducted another mail survey in May 1987. Questionnaires were sent to 102 field personnel of various state and federal agencies. Responses were received from 66 individuals covering an area from Escambia to Okeechobee counties. Results of the 1987 survey indicated that beavers were widely distributed throughout the panhandle. Beavers also were common in the Suwannee, Santa Fe and St. Mary's river systems of north-central Florida. At the eastern and southern edge of their range, populations appeared to be more fragmented, but sightings were reported on the Middle Prong of the St. Mary's River, Little St. Mary's River, Olustee Creek, Swift Creek, New River, Falling Creek, Ocean Pond, Robinson Branch and the upper Nassau River. Beavers also were reported on Prairie Creek Near Gainesville, presently their southern limit of distribution in the United States.

Beavers are gradually reoccupying their historic range in north-central Florida. Whether they have reached the southern limit of their distribution has yet to be determined. Purposeful reintroductions into suitable unoccupied habitat have been unnecessary since the initial restoration programs of the 1940s. In fact, beavers have reoccupied the panhandle to such an extent that they are frequently a nuisance animal to landowners. However, if the isolation of more southerly river systems is determined to be a barrier to continued expansion, local reintroductions into the Oklawaha, Waccasassa, Withlacoochee and tributaries of the St. John's would most likely be successful.

I thank the many biologists, foresters, park rangers and extension agents who responded to the survey questionnaires. S. Humphrey, C. Woods, J. Brady, M. Duda, S. Bates and D. Secor provided advice and assistance. Support for the 1987 mail survey was provided by the Nongame Wildlife Program of the Florida Game and Fresh Water Fish Commission.

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## REVIEW

Florida Field Naturalist 17(3): 75-76, 1989.

**On watching birds.**—Lawrence Kilham. 1988. Chelsea Green Publishing Co., Chelsea, Vermont. ISBN 0-930031-14-8. 187 pp., 7 double-page pencil drawings by Joan Waltermire. \$17.95.—Some books are entertaining, some are informational, a few are inspirational but not many change the reader's life. For me, "On Watching Birds" is in the latter category.

I have casually observed bird behavior over the years but I have never done it with diligence, nor with a folding chair, as Lawrence Kilham has. He believes that a comfortable chair (I guess it could be a Morris chair if you have a truck to transport it) is important because it has a settling effect and makes you sit still. Also, it makes you content to stay in one place and watch, especially at those times when nothing much is happening.

The idea of doing my bird observations in place becomes more attractive the older I get. What really excites me, however, is the opportunity to become really well-acquainted with a bird and even to discover facets of its behavior that are not known to science. Dr. Kilham has done just that. The author is a virologist who has been a careful student of bird behavior for some 40 years. His books include "Life Histories of the Woodpeckers of Eastern North America" and "The American Crow and the Common Raven." Dr. Kilham and his wife reside in Lyme, New Hampshire.

"On Watching Birds" is not just another book about how to become a better birder. It is an introduction to the fascinating and time-demanding avocation of bird behavior watching. As Dr. Kilham practices it, behavior-watching is not a sometime thing. He tells of going out at dawn so as to be at his observation point before a pair of Pileated Woodpeckers started their day's activities. As the sun hung low over Georgia's Sapelo Island, the author noted that the female flew off into a distant pine grove and soon was making *cuk* sounds. The male swung into his nearby roost hole for the night, then gave a burst of drumming. "Thus, with a flourish," he added, "the pair kept in touch at the last of the day, as they had gotten in touch at sunrise."

It can be freely predicted that Dr. Kilham's nicely crafted volume will not appeal to those frenetic bird listers who consider that they have to cover at least 300 miles a field trip day to remain in good standing in their exclusive fraternity.

The rest of us, however, may be inspired to take a pen, notebook, binoculars and folding chair into our backyard or some woodland, pond or field that is a highly favorable place for behavior watching. A spot that offers a clear view of a nest is particularly good. Much remains to be discovered about even our commonest birds.

Dr. Kilham makes extensive rough notes in the field, including details of foraging, flying, courtship, territory, nesting, preening, etc. At home, he rewrites and indexes his notes, as well as, checking books and periodicals to see how his observations compare with those of others.

One Kilham brainstorm I can hardly wait to duplicate: he wired sections of fallen logs (decayed but not too much so) to fence posts in his yard. Before long, four Downy Woodpeckers investigated them and eventually set about excavating for roost sites.

Dr. Kilham devotes eight pages of his chapter on south Florida to observations of Sandhill Cranes not far from the Archbold Biological Station. During times when cranes were absent, the writer came to appreciate the strange appeal of the Florida scrub. He enjoyed just "being alive in a beautiful place" and gaining a "wonderful sense of the peacefulness of nature." That's a bonus for behavior-watching in one place.