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## BREEDING RANGE EXPANSIONS OF THE INDIGO BUNTING, PAINTED BUNTING, AND BLUE GROSBEAK IN FLORIDA WITH NEW RECORDS FOR SEMINOLE COUNTY

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**Abstract.**—A summary is presented of the southward breeding range expansions of the Indigo Bunting (*Passerina cyanea*), Painted Bunting (*P. ciris*), and Blue Grosbeak (*Guiraca caerulea*) into peninsular Florida. Recent unpublished observations made on these birds in Seminole County during the breeding season are discussed.

In the first half of this century, there were few breeding records of the Indigo Bunting (*Passerina cyanea*) and Blue Grosbeak (*Guiraca caerulea*) in Florida. Proportionally, more breeding records existed for the Painted Bunting (*P. ciris*), but these were mainly from limited areas of the northeast and midwest coasts of the peninsula. Since the 1950's, these cardinalines have increased as breeding birds in north and north-central Florida and have undergone a southward expansion of their breeding ranges into peninsular Florida (Figs. 1-3). The range expansions of the Indigo Bunting and Blue Grosbeak have been especially rapid and rather dramatic. In this paper we summarize and discuss these range expansions of the three cardinalines.

### RESULTS AND DISCUSSION

**Indigo Bunting.**—At the time Howell (1932) wrote *Florida Bird Life*, breeding records for the Indigo Bunting in Florida were few: Weston observed a singing male at Pensacola in June 1917; Bailey recorded a nest with young at Gainesville in 1925; and Byrd reported one [nest?] in Jacksonville in 1912. Thigpen had a nest with four young near Chattahoochee in Gadsen County in 1935 (Mason 1936) and Hallman found

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two nests, each with young, in Jackson County in 1944 and 1947 (Hallman's journal; WFVZ 79753) (Fig. 1).

Monroe (*in* Weston 1965) found on 2 August 1958 a female and one juvenile near Barrineau Park, Escambia County. Weston (1965) regarded the Indigo Bunting as rare in summer and breeding sparingly in northwest Florida.

By 1947, the Indigo Bunting had appeared in Leon County, being abundant in north Leon County, but less common in the eastern and central parts (Stevenson 1947). By the 1950's and early 1960's, the species had become common in Franklin and Wakulla counties, where a decade earlier the species was absent in summer (Robertson 1962).

Grimes (1951) believed that the Indigo Bunting did not breed in Duval County, and stated that the species bred commonly only in the northern tier of counties from Suwannee and Hamilton westward, and probably nowhere else in Florida. One bunting was observed at Jacksonville in May of 1950 (Grimes 1951) and a singing male at Jacksonville Beach in August of 1964 (Stevenson 1964). By 1965, Indigo Buntings had invaded north Duval County (Ogden and Stevenson 1965) (Fig. 2). Grimes (1953) cited replacement of pine flatwoods by fields and pastures during the previous 20 years as the major reason for the recent invasion.

Throughout the 1960's Indigo Buntings were reported from St. Johns, Putnam, and Marion counties (Robertson 1962, Stevenson 1966). Johnston (1965) summarized observations of breeding Indigo Buntings at Gainesville and other locales in northcentral Florida to 1964. In the summer of that year, he found nests and juveniles in southwest Gilchrist County as well as singing males in Dixie and Levy counties (Stevenson 1964). Ogden (1972), citing 65 Indigo Buntings in 72 party-hours on 3 June 1972, remarked that the species was definitely increasing in Alachua County.

Records of both potential and confirmed breeding sites continued to increase throughout the 1970's (Fig. 1). Brevard County had its first breeding record of the Indigo Bunting near Scottsmoor-Aurantia during the summer of 1973: eleven singing males and a pair feeding young were recorded (Ogden 1973, Cruickshank 1980). On 10 June 1980, Barber found a pair feeding young at Scottsmoor (Cruickshank 1980). H. and R. B. Stevenson (*in* Paul 1982) stated that the species had established itself in neglected orange groves at Scottsmoor.

The southernmost nesting record of the Indigo Bunting to date occurred near Lake Hancock in Polk County where two adults with young were found in 1968 (Edscorn 1969). Subsequent records of singing males in that county have been published (Kale 1971, 1974, 1975; Ogden 1975; Paul 1982, 1983). Singing males were recorded at various localities in Hillsborough, Pasco, Osceola, Palm Beach, Collier, and Monroe counties through the 1960's and 1970's.

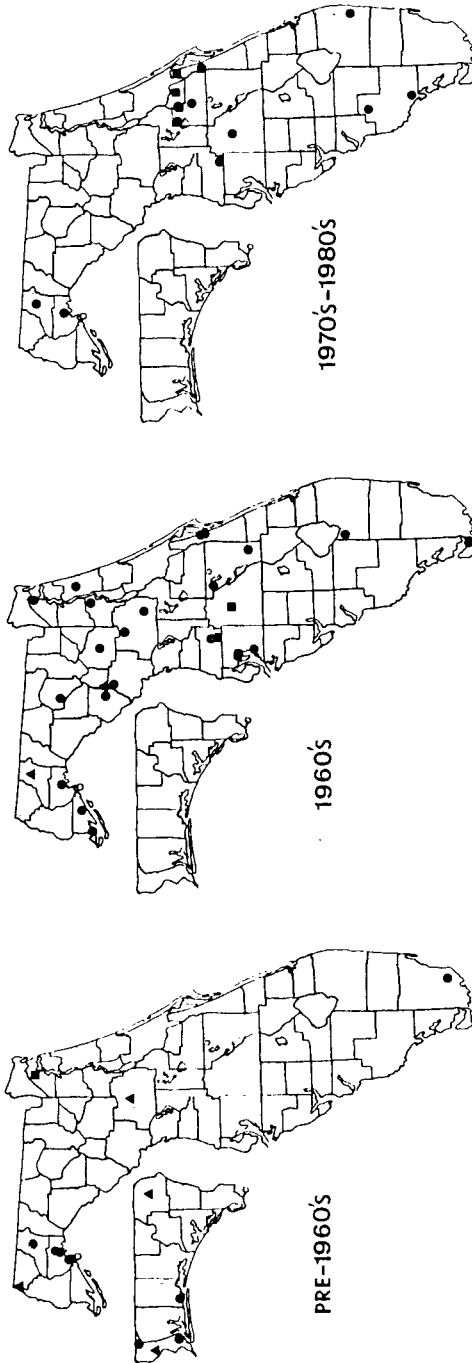


Figure 1. Distribution records of the Indigo Bunting in Florida prior to 1960, in the 1960's, and in the 1970's and 1980's. Circle = singing birds, presence of females, and sightings other than nest, eggs, and young; triangle = nest, eggs, and young; square = all sightings plus nest, eggs, or young at same locality.

Prior to 1972 summer records of the Indigo Bunting in Orange and Seminole counties were nonexistent. Since that year singing males of the species have been observed at Zellwood (Ogden 1972, Edscorn 1980) and near Orlando (Langridge 1987).

On 11 and 18 July 1981, the first summer record for the Indigo Bunting in Seminole County was recorded by Freeman and others when five singing males were found at the Lower Wekiva State Preserve (Paul 1981) (Fig. 1). During the summer of 1987, both female and singing male Indigo Buntings were observed at several locations in Seminole County from 30 May to 15 August. The unpublished localities and number of birds involved were as follows: 0.3 mi (0.5 km) N junction of Geneva Heights and Old Geneva roads, 1 singing male (SM) and 1 female (F); 0.1 mi (0.2 km) N junction of Geneva Heights and Old Geneva roads, 1 SM; 0.8 mi (1.3 km) N junction Geneva Heights and Old Geneva roads, 1 SM; and 0.5 mi (0.8 km) W junction of Chapman road and SR 434, 11 SM and 2 F.

Several persons observed the buntings in the Geneva area. The buntings were in freeze-damaged, abandoned citrus groves profusely overgrown with tall vegetation. The birds on Chapman road were in celery fields and along irrigation ditches that had become overgrown with ragweeds (*Ambrosia* sp.) and other tall, weedy vegetation. On 1 July 1987 Stevenson first heard the birds singing and informed Anderson of their presence. Soon, thereafter, Anderson and Taylor made three surveys of the area. The most thorough survey, using playback tapes of the bunting, was made on 19 July when the 11 singing males and 2 females were located. Then on 15 August we observed a male and a juvenile Indigo Bunting.

On 7 May 1988 Anderson, Kershner, and Taylor found five singing male and three female Indigo Buntings 1.5 miles NE of Oviedo, Seminole County. Most birds were in or alongside an abandoned field overgrown with ragweeds, dog fennel (*Eupatorium capillifolium*), and other weedy plants. Several times the male buntings fed females. On 4 June 1988 Taylor and two graduate students, Chicardi and Lesman, found an Indigo Bunting nest near the above area in an unkept, commercial nursery containing a field of unpruned ornamental *Ligustrum* plants and tall weeds. The incubating female flew from the nest with four eggs. This nest is the first breeding record for the Indigo Bunting in Seminole County. In addition to this nest, at least five male Indigo Bunting males were singing in the area.

Painted Bunting.—Howell (1932) stated that the Painted Bunting bred commonly in northeastern Florida, near the coast (Fig. 2). The species was reported in the breeding season at Amelia Island, Jacksonville, Mayport, Bulow, New Smyrna Beach, Orange Park, and Oak Hill. On the west coast, the Painted was a local and rare breeder; Howell (1932) gave breeding records from Tarpon Springs and Punta Rassa.

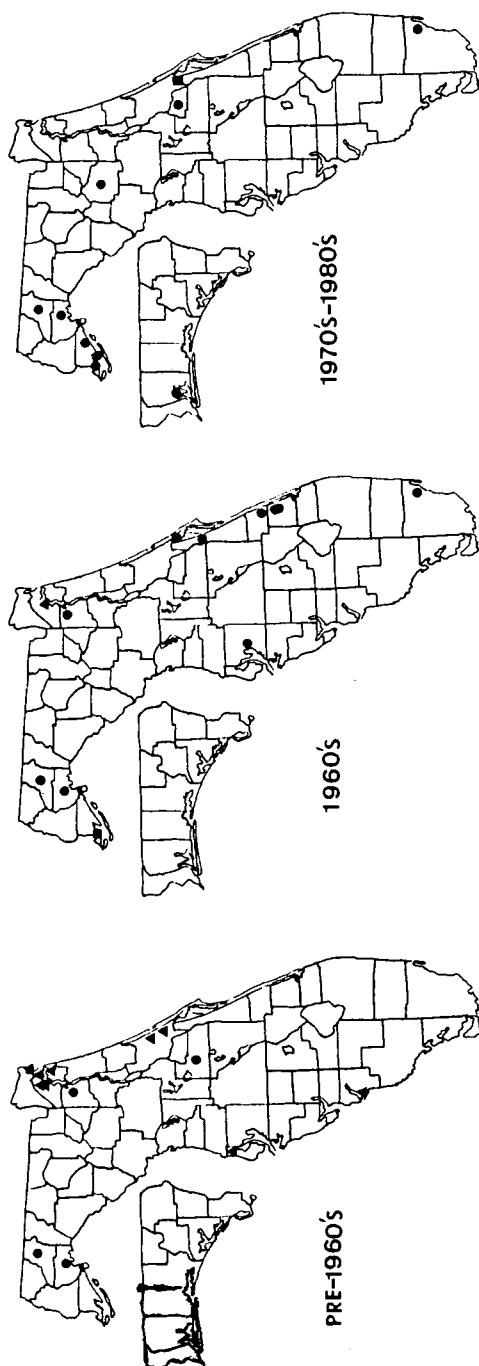


Figure 2. Distribution records of the Painted Bunting in Florida prior to 1960, in the 1960's, and in the 1970's and 1980's. Symbols are the same as in Fig. 1.

Weston (1965) wrote that the absence of the Painted Bunting in the breeding season was one of the inexplicable features of the central part of the Gulf Coast of northwest Florida. By 1974 singing males were found in Santa Rosa County (Kennedy 1974; Jackson 1980, 1982).

Beginning in the 1960's singing males were recorded by Stevenson and others near Tallahassee in Leon County (Robertson 1962, 1968; Stevenson 1966, 1968; Ogden 1969; Paul 1985) (Fig. 2). Two singing males were observed on 8 July 1966 at Apalachicola by Ogden and Chapman (Stewart 1966) and on 3 August an immature from that area was collected by Stevenson (TTRS 2973). In 1975 singing Painted Buntings were found at Carrabelle by Stevenson (1975) and in 1981 and 1984 singing males were observed at Eastpoint by Stevenson and Stoutamire (Paul 1981, 1984) (Fig. 2).

The first nesting record of the Painted Bunting in Duval County occurred at Jacksonville when a nest with two young and one addled egg was found on 5 June 1930 (Grimes 1931). At Ortega, another nest with three eggs was found on 16 May 1931 by Shannon (Grimes 1932). In 1933 and 1934 W. Shannon found two nests with eggs at Eastport (Shannon's notes).

In 1959 and 1967, Painteds were found at Doctor's Inlet in Clay County (UF 4788, Stevenson 1967) and in 1987 both male and female buntings were recorded in rural Alachua County by Robinson (Paul 1987).

On 27 and 29 June 1960 and on 16 June 1961, one silent male, one female, and a singing male were located at Rockledge and Shiloh, Brevard County (Stevenson 1960, Robertson 1961). It was not until 4 and 17 June 1973 that a Painted Bunting nest with two eggs, in addition to seven singing males, were found by Barber at Scottsmeer, Brevard County (Ogden 1973, Cruickshank 1980). H. and R. B. Stevenson (*in* Paul 1982) located nine singing birds and stated that the species, along with the Indigo and Blue Grosbeak, had established themselves in neglected orange groves near Scottsmeer.

Mason (1950) reported Davidson's observation of a singing male Painted at Lake Rowena in Orlando from May to July. Mason regarded the Painted as a rare summer resident in central Florida.

One singing male Painted Bunting was observed 0.3 mi N junction of Geneva Heights and Old Geneva roads from 30 May to 4 July 1987, and another male was found on 15 August, 0.5 mi W junction of Chapman Road and SR 434. These males were in a neglected citrus grove and a weedy field.

Blue Grosbeak.—Early breeding records for the Blue Grosbeak were given by Howell (1932) from Tallahassee, Waukeelah, and Tarpon Springs (Fig. 3). In 1944, 1946, and 1947, R. Hallman found three nests with eggs

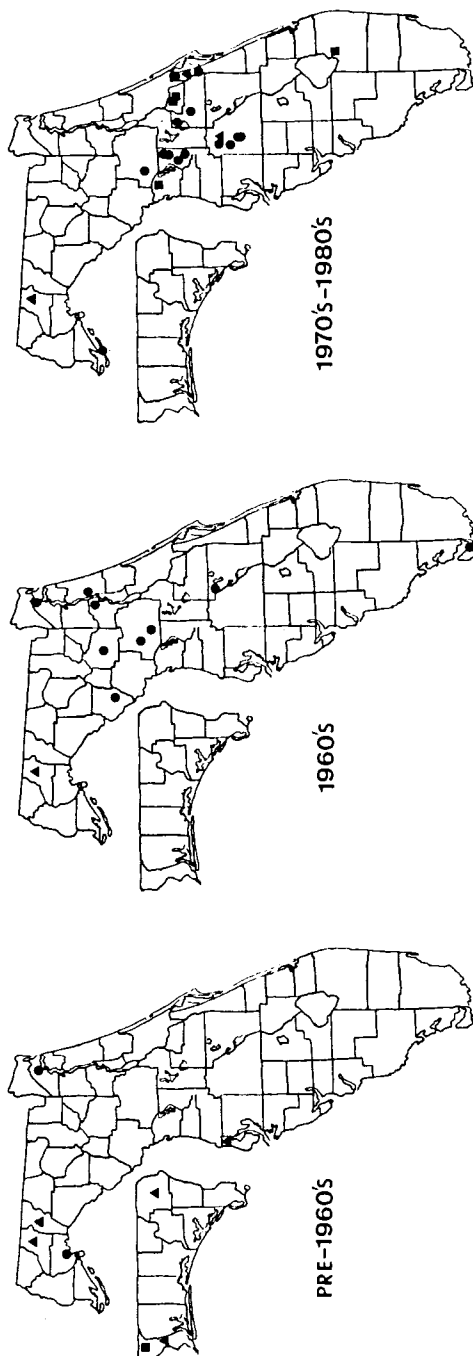


Figure 3. Distribution records of the Blue Grosbeak in Florida prior to 1960, in the 1960's, and in the 1970's and 1980's. Symbols are the same as in Fig. 1.

in Jackson County (WFVZ 79752, Hallman's journal, DEL 9000). Weston (1965) regarded the Blue Grosbeak as rare in summer in northwest Florida even though adults with juveniles were observed in 1956 and 1958 in Escambia County.

In 1956 the species was found in summer for the first time in Wakulla County; two individuals were near the entrance of St. Mark's Refuge on 2 June and one male in full song was near Panacea on 21 July (Stevenson 1956). A male with young was collected near Tallahassee by Stevenson on 2 August 1969 (FSU 7004) (Fig. 3).

Grimes (1953) regarded the Blue Grosbeak as rare in Duval County in summer, citing a male observed near Jacksonville from 27 June to 4 July 1952. In 1973, Ogden (1973) reported that the species had increased in numbers in Duval County.

Ogden (1972), citing 28 Blue Grosbeaks in 72 party-hours on 3 June 1972, remarked that the species was definitely increasing in Alachua County. In the summer of 1973, Barber found a juvenile and two pairs of Blue Grosbeaks near Mims, which established the first breeding record for Brevard County (Ogden 1973). Another nesting pair was found near Mims on 23 May 1982 (Paul 1982).

Other sightings of the grosbeak have occurred at various localities of St. Johns, Putnam, Dixie, Marion, Citrus, Sumter, and Osceola counties (Stevenson 1964, 1966, 1968; Ogden and Stevenson 1965; Ogden 1973; Paul 1981, 1982, 1984, 1986).

The most southern nesting of the Blue Grosbeak to date occurred at Belle Glade, Palm Beach County, when a nest with eggs and young was found in 1973 (Genung 1976) (Fig. 3). On 26 May 1987, Cooper and Hartshaw found a pair feeding nestlings at the southern edge of the Green Swamp in Polk County (Paul 1987). Singing grosbeaks have been recorded in the Bartow-Lakeland area from 1971 into the 1980's (Ogden 1971, 1979; Kale 1975; Edscorn 1980; Paul 1982).

Summer records for the Blue Grosbeak in Orange and Seminole counties were rare prior to 1980. On 23 June 1972 Anderson, Taylor, and other observers found a pair of Blue Grosbeaks in a field alongside SR 436 near McCoy Road in Orlando (Anderson 1972). A search for the nest was unsuccessful. More recently, two males and a female were recorded at Zellwood (Paul 1984, 1985).

During the summer of 1987, both female and singing male Blue Grosbeaks were observed at several locations in Seminole County, including near Geneva, Oviedo, and Sanford. Just north and east of the latter site, LaClaire and Clough found two singing males from May through August and a male and a female with a juvenile on 26 June (Langridge 1987; LaClaire, pers. comm.). From 27 June to 27 July two pairs and one singing male were found near Geneva. On 12 July an empty Blue Grosbeak's

nest, with a snake skin, was found in a small sweetgum (*Liquidambar styraciflua*) growing alongside an irrigation ditch off Chapman Road. The nest was collected on 19 July and placed in the nest collection of the University of Central Florida. In addition to the nest, four singing males were recorded in the area. These nests establish the first two breeding records for the Blue Grosbeak in Seminole County.

On 7 May 1988 two pairs of Blue Grosbeaks were found 1.5 miles NE of Oviedo. At one end of an abandoned field in a small groundsel (*Baccharis halimifolia*) an abandoned Blue Grosbeak's nest was found with one intact egg and fragments of another egg. This nest also contained a snake skin. In a freeze-damaged orange grove off of Orange Avenue on the southwest side of Lake Jessup, Gary Minor (pers. comm.) found on 17 June 1988 a pair of grosbeaks with one fledgling and one nestling. On 29 June the adults and one young were again observed in the same area.

It is clear that the recent breeding range expansions in Seminole County and other Florida counties, of all three species, but especially the Indigo Bunting and Blue Grosbeak, are correlated with the availability of freeze-damaged citrus groves and neglected fields that have become overgrown with ragweeds and other tall, weedy vegetation. Further increases will probably occur in the future as long as these groves and fields remain in their present undeveloped condition.

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