

# STATUS OF SNOW BUNTINGS WINTERING IN THE SOUTHEAST

MICOU M. BROWNE

The winter range of the Snow Bunting (*Plectrophenax nivalis*) in the eastern United States is described in the fifth edition of the AOU Check-list (1957) as south to "... southern Indiana (Bloomington), Ohio, Pennsylvania, Maryland, Virginia, and on the Atlantic coast casually to Georgia." No records are mentioned from Florida or from inland portions of the Carolinas and Georgia. In reviewing the status of Snow Buntings wintering in the southeast, I examined all known records through the winter of 1974-75 (Table 1). The great majority of the approximately 120 reported sightings occurred during the last 20 years.

## WINTER HABITAT

In winter the Snow Bunting often occupies the harsh environment of snow-covered grasslands. It is able to gather food by gleaning seeds exposed by the wind. Martin, Zim, and Nelson (1951) report that the winter diet of 408 birds in the northeast consisted of such plants species of bristleglass, ragweed, pigweed, sandgrass, goosefoot, oats, beachgrass, and other grasses.

In the Carolinas, Georgia, and Florida the Snow Bunting winters in two widely separated and ecologically distinct habitats. On the east coast it frequents short-grass areas and open beach dunes, habitats similar to those occupied farther north. In the mountains of North Carolina it winters on grassy balds above 5000 feet in elevation. See Wells (1967) for full descriptions of these habitats.

## NORTH CAROLINA

Pearson et al. (1942) state that, with the exception of two records from White Lake and Clarkton in Bladen County, all sightings of Snow Buntings in North Carolina have been "from the immediate neighborhood of the sea or the adjacent salt-water sounds." Subsequent records from Moore, Cumberland, Chatham, Surry, Orange, Polk, Madison, Mitchell, and Avery Counties leave no doubt, however, that the Snow Bunting is more than an accidental visitor to the inland portions of the state.

*Coast.* The Snow Bunting was first recorded in North Carolina on the basis of three birds collected at Pea Island on 14 February 1901 (Bishop 1901). From then until the mid-1930s there were only a few scattered records of single birds, including an exhausted individual seen and captured 4 miles offshore on 16 November 1923 (Coles 1924). The first recorded major flight of Snow Buntings into coastal North Carolina occurred when two flocks totaling at least 150 birds were seen at Kitty Hawk on 25 January 1937 (Cottam 1937). Large numbers of Snow Buntings also visited North Carolina in the winters of 1939-40, 1969-70, and 1974-75 (Table 1). To date, no major flock has been seen on the Carolina coast south of Cape Lookout, but the presence of 1 to 18 Snow Buntings in the Cape Fear area during several recent winters (Table 1) suggests that the species may be relatively common there.

*Coastal Plain and Piedmont.* Snow Buntings tend to occur more frequently in the Sandhills than in other inland sections of the coastal plain and piedmont (Fig. 1). The only large inland flock was seen at Pinehurst on 3 February 1940 during a winter season that also brought many Snow Buntings to Pea Island and Beaufort (Table 1). The five piedmont records are from Elkin, Pittsboro, Chapel Hill, Kerr Lake, and Lake Gaston. The Elkin sighting of 2 April 1953 is open to question because the observers stated that the bird "appeared to be a Snow Bunting" (Chamberlain 1954). This expression of doubt would make the record unacceptable were it not for the well-documented sighting of the species at Pittsboro on 25 and 29 April 1953 (Hearne 1953). The only other April record for the state is one bird seen at Fayetteville 20-27 April 1963 (Shaw 1963). Perhaps these spring records in central North Carolina represent coastal winter visitors headed north. A Chapel Hill

Table 1. Snow Bunting records for North and South Carolina, 1900-1975.

	Winter	North Carolina coast and sounds	North Carolina coastal plain and piedmont	North Carolina mountains	South Carolina
60	1900-01	3, Pea Is., 14 Feb.	—	—	—
	1917-18	1, Oriental, 26 Jan.	—	—	—
	1923-24	1, offshore, 16 Nov.	—	—	—
	1926-27	—	—	—	1, Mt. Pleasant, 14-15 Nov.
	1930-31	—	—	—	3, Charleston, 12 Nov. 8, Morris Is., 21 Dec.
	1934-35	1, Lake Mattamuskeet, 2 Dec. and 7 Jan.	1, White Lake, 23 Jan., and later	—	—
	1936-37	150, Kitty Hawk, 25 Jan.	—	—	1, Sullivan's Is., 21 and 25 June
	1937-38	4, Hatteras Is., 14 Jan.	—	—	—
	1938-39	4, Pea Is., 28 Nov.	—	—	—
	1939-40	6, Atlantic, 23 and 25 Nov. 30, Pea Is., 27 Nov. several, Pea Is., 8 Jan. 75, Beaufort, 11 Dec.	20+, Pinehurst, 3 Feb. 2, Clarkton, 4 Feb.	—	—
1943-44	—	1, Southern Pines, 27 Feb.	—	—	
1952-53	—	1, Elkin, 2 Apr. 4, Pittsboro, 25 and 29 Apr.	—	—	
1953-54	—	—	1, Big Bald, 29 Nov.-14 Feb. 3, Tryon, 24 Mar.	—	
Chat	1954-55	—	—	1-3, Big Bald, 7 Nov.-22 Feb. 10-14, Round Bald, 20 Nov.- 26 Feb. 1, Grassy Ridge Bald, 1 Jan.	1, Charleston, 17 Dec.-14 Jan.
	1955-56	—	—	1, Round Bald, 10 Dec.-22 Jan.	—
	1956-57	—	—	1-2, Big Bald, 17 Nov.-17 Feb. 1-2, Round Bald, 18 Nov.	—

1957-58	—	—	1, Round Bald, 28 Nov. 2, Big Bald, 22 Dec. 8, Spence Bald, 22 Dec.	1, John's Is., 14 Jan.
1958-59	1, Topsail Beach, 31 Oct.	—	—	—
1959-60	6, Long Beach, 21 Dec.	—	1, Round Bald, 27 Dec.	—
1960-61	6, Long Beach, 21 Dec. flock, Bodie Is., 26 Jan.	—	1, Round Bald, 11 Dec.	—
1961-62	20, near Avon, 25 Nov.	—	—	—
1962-63	—	1, Fayetteville, 20-27 Apr.	2, Round Bald, 2 Dec.	—
1964-65	5, Ocracoke, 10 Nov.	—	1, Bradley Gap, 14 Mar.	—
1965-66	1, Pea Is., 28 Dec. 1, Wilmington, 30 Dec.	—	—	—
1966-67	1, Pea Is., 1 Jan.	4, Kerr Lake, 28 Dec.	—	1, Summerville, 24 Nov.-3 Dec.
1967-68	24, Emerald Is., 4 Feb.	—	—	6, Murrell's Inlet, 24 Nov.
1969-70	1, Ocracoke, 2 Nov. 30, Pea Is., 3 Nov. 30, Oregon Inlet, 4 Nov. 18, Wrightsville Beach, 5 Nov. 25, Beaufort, 13 Dec. 20, Ft. Macon, 21 Dec. 12, Ocracoke, 28 Feb.	—	—	—
1970-71	3, Oregon Inlet, 30 Dec. 1, Sunset Beach, 27 Feb.	—	—	—
1971-72	2, Wrightsville Beach, 17 Nov.	—	—	2, Murrell's Inlet, 29 Dec.
1972-73	—	—	—	1, Charleston, 25 Feb.
1973-74	1, Cedar Is., 10 Nov. 1, Wrightsville Beach, 15 Nov. 2, Hatteras Is., 18 Nov. 2, Pea Is., 22 Nov. 4, Radio Is., Morehead, 27 Dec.	1, Gaston, 1 Dec.	—	—
1974-75	30, Ocracoke, 30 Nov.	1, Chapel Hill, 23 Oct.	—	1, McClellanville, 23 Oct.-early Nov.

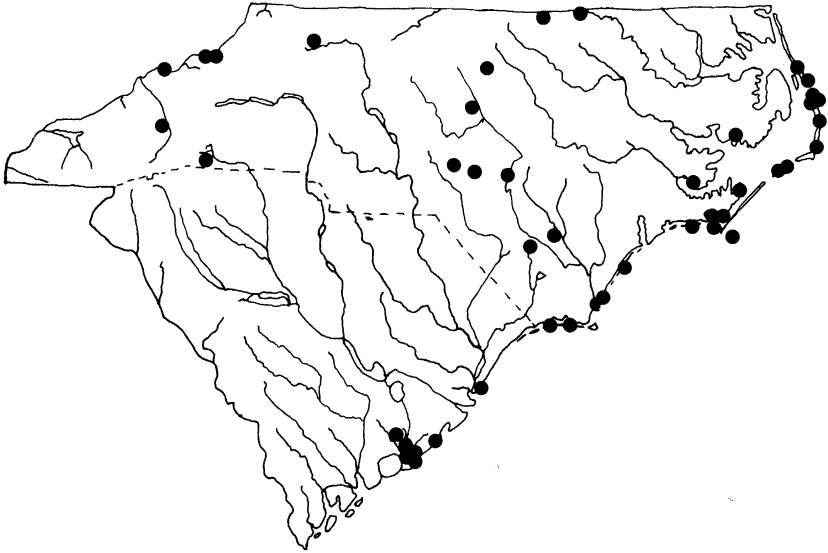


Fig. 1. Map of Snow Bunting localities in North and South Carolina.

record of 23 October 1974 is the earliest fall record for the state and should be considered a transient (Teulings 1975).

**Mountains.** Almost all Snow Bunting records for the North Carolina mountains are from two peaks, Big Bald and Round Bald. Big Bald Mountain (5500 feet) is located on the line between Unicoi County, Tennessee, and Madison County, N.C. Fred W. Behrend noted the Snow Bunting from the North Carolina side of this mountain on 11 occasions between 1953 and 1957, having found the species present in four out of the five consecutive winters (Table 1). Round Bald Mountain (5800 feet) is on the line between Carter County, Tenn., and Mitchell County, N.C. Behrend recorded the Snow Bunting there 18 times between 1954 and 1962, during seven of the nine consecutive winters (Table 1). Behrend (pers. com.) considers the buntings to be regular winter residents of Big Bald and Round Bald.

The only Snow Bunting record for the Great Smoky Mountains National Park is that of a flock of eight birds found on 22 December 1957 at Spence Field Bald (Stupka 1963). Spence Field Bald, one of the largest and finest Canadian zone heath balds in the southern Appalachians, lies astride the North Carolina-Tennessee line just west of Thunderhead.

Mrs. C.E. Demick saw three Snow Buntings at Tryon, Polk County, N.C., on 24 March 1954 (Chamberlain 1954). To my knowledge, this is the southernmost sighting of the species in the Appalachian Mountains. A record of 100 Snow Buntings reported from Asheville on 28 December 1946 (Shaftesbury 1947) is not included in Table 1 or on the maps because sufficient details are lacking.

#### SOUTH CAROLINA

The Snow Bunting appears to be a casual winter visitor in the coastal region of South Carolina. The bird was first noted in the state on 14 November 1926 when Alexander Sprunt Jr. saw one 15 miles N of Mt. Pleasant, Charleston County. He returned the following day and collected the bird for the Charleston Museum (Sprunt 1927). One of the six additional records for the Charleston area deserves special comment. On 21 June 1937,

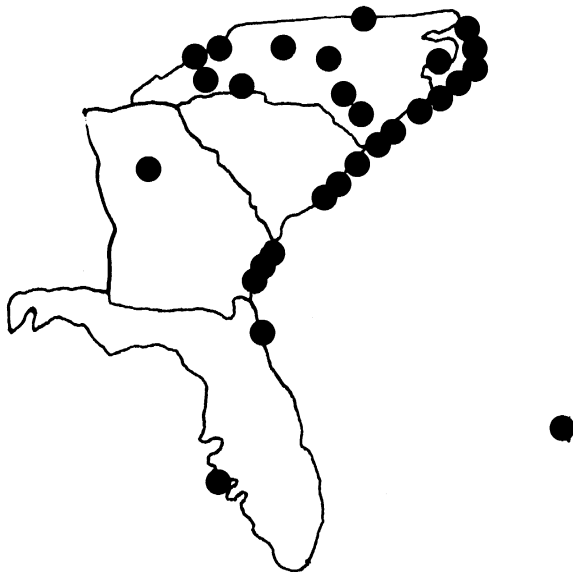


Fig. 2. Map of Snow Bunting localities in the Southeast.

Edward von S. Dingle and his wife saw a male Snow Bunting in breeding plumage at the north end of Sullivan's Island. The same bird was seen again on 25 June, and recognizable photographs were taken (Dingle 1938).

The only inland South Carolina record for the Snow Bunting is a single bird found approximately 30 miles from the coast, slightly NW of Charleston, at Summerville, Dorchester County, on 24 November 1966. The bird remained at least 10 days and was seen by several reliable observers (Sprunt and Chamberlain 1970).

On 24 November 1967, I saw six Snow Buntings at the northern shore of Murrell's Inlet, Horry County; but I could not locate the birds again the following day. Participants in the first Christmas Bird Count for the Litchfield-Pawley's Island area found two Snow Buntings at Murrell's Inlet on 29 December 1971 (Cruickshank 1972).

At least 24 individual Snow Buntings have been found in South Carolina from 1926 to the present; three were taken as scientific specimens. One bird was seen regularly at the same location near Charleston from mid-December 1954 through mid-January 1955, indicating that the South Carolina sightings represent winter residents rather than vagrants.

#### GEORGIA

Except for one inland occurrence (DeKalb County), all the Georgia records of the Snow Bunting are from the coast (Columbia, Chatham, and Liberty Counties). Burleigh (1958) mentions all but the most recent sighting. The first specimens taken were recorded in 1864 (Liberty County) and February 1891 (Columbia County). Both specimens were lost, the latter having been destroyed in a fire at the University of Georgia. There are three additional coastal records: three birds on 28 January 1927, Groovetown, Columbia County; a male, 24 December 1932, Oysterbed Island, near the mouth of the Savannah River, Chatham County; and an adult female, 28 December 1952, Tybee Island, Chatham County. Four individuals were observed and photographed on the top of Stone Mountain, DeKalb County, 15-27 November 1969. The birds were observed on "barren rock

Table 2. Number of observations per month.

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Total
N.C. coast	1	17	9	7	4	—	—	38
S.C. coast	1	5	4	2	1	—	—	13
Ga. coast	—	1	2	1	1	—	—	5
Fla. east coast	—	3	1	—	—	—	—	4
Fla. gulf coast	—	—	1*	1*	1*	—	—	3
Total	2	26	17	11	7	0	0	63
Percent	3.2%	41.3%	27.0%	17.5%	11.0%	0	0	100%
N.C. piedmont	1	—	2	1	3	—	4	11
N.C. mountain	—	6	10	6	4	2	—	28
Ga. piedmont	—	1	—	—	—	—	—	1
Total	1	7	12	7	7	2	4	40
Percent	2.5%	17.5%	30.0%	17.5%	17.5%	5.0%	10.0%	100%
Grand total	3	33	29	18	14	2	4	103
Percent	2.9%	32.0%	28.2%	17.5%	13.6%	2.0%	3.8%	100%

\*same bird

dotted with a few shallow pools and small pockets of grass, no more than a few feet wide" and apparently "found food both in the grass and on the rock" (Fink 1969). This represents the southernmost inland record for the East.

#### FLORIDA

The Snow Bunting has been found in only two locations in Florida. A very unusual site is on the lower Gulf Coast at Venice, Sarasota County, where a bird remained from 23 December 1973 through 25 February 1974 and was attaining breeding plumage when last seen (Stevenson 1974). The other four records are all from sand dunes at the mouth of the Saint John's River in northeastern Florida (Duval County). Two birds were collected from a flock of nine on 29 November 1969 (Stevenson 1970); one bird was found 23 November 1972 (Stevenson 1973); two were seen from 22 November through December 1973 (Edscorn 1974); and one was observed from November 1973 until 12 February 1974 at Fort George Island (Stevenson 1974).

It is interesting to note that the Snow Bunting has been recorded once from the Bahamas, where a specimen was collected in December (Paulson 1966).

#### MIGRATION

In autumn, Snow Buntings have been recorded in North Carolina on the upper coast as early as 2 November, in the piedmont on 23 October, and in the mountains on 7 November. Mid-November is the period of peak observed occurrence at most localities (Tables 1 and 2). Ninety-two percent of all sightings have occurred from November through February.

Most of these birds apparently leave the beach sand-dune and mountain-bald wintering grounds in late February. March records from Tryon and Bradley Gap as well as April records from Elkin, Pittsboro, and Fayetteville probably represent spring migrants. The status of the Snow Bunting in the Sandhills is not clear. Birds found here in February may represent local winter residents, very early spring migrants, or a premigratory inland movement of birds that wintered along the coast. Inland Snow Bunting sightings other than those on mountain balds apparently occur almost exclusively along major rivers or their tributaries. Tryon and Bradley Gap lie near the headwaters of tributaries to the Santee-Cooper river system that reaches the sea near Charleston. Elkin is at the head of the Yadkin-Pee Dee system that joins the Waccamaw River near Murrell's Inlet. Fayetteville and Pittsboro are in the Cape Fear basin above Wilmington. These geographic relationships suggest that spring migrants frequently follow river basins northward.

## DISCUSSION

Snow Buntings are known to have visited some part of the Carolinas in every winter but two during the 23 seasons from 1943-44 through 1974-75 (Table 1). They are less regular further south. Though often scarce, they can be considered regular winter visitors from November through February along the North Carolina coast south to the vicinity of Cape Lookout. Table 1 shows published records of the species from Bodie Island to Cape Lookout for seven of the last eleven winters for which data are given. From Cape Lookout southward the records are irregular, with single birds predominating. Birds found in central North Carolina in April probably are spring migrants, although a few birds apparently winter from time to time in the Sandhills and around large lakes such as White and Kerr.

In the southern Appalachians, Snow Buntings appear to be fairly regular winter residents from mid-November to late February on certain grassy balds above 5000 feet in elevation. The inaccessibility of these high balds and the harsh winter weather at elevations above 5000 feet undoubtedly account for the scarcity of records. Extensive winter field work on the high balds probably would reveal Snow Buntings to be present in larger numbers and at more localities in the southern Appalachians than presently indicated.

Table 1 suggests that Snow Buntings are scarce or absent in the mountains when they are relatively abundant on the coast. The species has not been recorded in the mountains when a major flock (20 or more birds) occurred on the Carolina coast. The unusually large coastal influx during the winter of 1969-70, for example, does not appear to have been accompanied by a similar influx in the mountains. Conversely, during the two winters having the largest number of montane records (1954-55, 1957-58) no reports came from the North Carolina coast, and only single birds were found around Charleston, S.C. Unfortunately, there are not enough data to determine whether this can be attributed to the behavior of the birds or to the inconsistency of field work. The absence of published records does not necessarily mean that the birds were not present. The alternating pattern does suggest that the coastal and montane winter populations come from entirely separate geographic areas and migrate in response to unrelated population pressures, or perhaps, to food shortages within the more northerly portions of their winter range. The fact that there are regular wintering populations on the coast of the Northeastern States and in the Ohio Valley plus the scarcity of records in central Carolinas suggests that the fall movement of the birds that winter on the coast is southward along the coast while the fall movement of the mountain population is southward through the Ohio Valley. The records for Georgia and Florida are sparse as would be expected at or near the southern limit of the winter range.

## ACKNOWLEDGMENTS

Most of the mountain records were supplied by the late Fred Behrend of Elizabethton, Tennessee. An outstanding naturalist, Mr. Behrend suffered a stroke while hiking alone on 12 June 1976 and died two months later at age 80. His friends in Carolina Bird Club can find a biographical sketch in *The Migrant* 47:72-73.

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*North Carolina State Museum of Natural History, P.O. Box 27647, Raleigh, N.C. 27611, 9 November 1976.*

## Mid-Winter Bird Count At the South Carolina State Parks

HARRY E. LeGRAND JR.

In 1977 the South Carolina Division of State Parks, under the direction of John Reid Clonts and Brian E. Cassie, sponsored its first Mid-Winter Bird Count. The objective of the count was to census winter bird populations in a number of state parks selected to provide the greatest geographical diversity. Seven parks were censused on 29 January, and seven others were censused on 5 February.

The following parks were censused on Saturday, 29 January (numbers in parentheses are the numbers of observers, species, and individuals, respectively, on each count): Aiken (5, 47, 496); Cheraw (3, 27, 327); Croft (2, 37, 473); Hickory Knob (6, 41, 411); Hunting Island (10, 94, 5144); Oconee (7, 34, 432); and Santee (6, 54, 734). Those censused on Saturday, 5 February, were: Huntington Beach (8, 91, 4022); Kings Mountain (5, 36, 288); Lynchess River (9, 53, 4218); Rivers Bridge (4, 37, 326); Sadlers Creek (5, 33, 432); Sesquicentennial (5, 35, 1462); and Table Rock (5, 28, 107).

The total number of species seen was 143, and the total number of individuals was 18,872. Seventy-seven field observers participated. Because of space limitations the count cannot be published in full.

The weather for the count was generally clear, cold, and windy (gusts up to 30 knots) on each day. However, the winter of 1976-77 in South Carolina was perhaps the coldest in recorded history, and the two weeks preceding the count were severely cold. The weather had a definite negative effect on bird populations, presumably causing much mortality, especially among small insect-feeding birds. Even though there were no previous park counts with which to base any comparisons, it was obvious to most observers on the counts that practically all warblers, wrens, and especially the kinglets were in greatly reduced numbers as compared with those of normal winters. The scarcity of such species was even more noticeable because these birds winter primarily in wooded habitats, and many state parks contain only forests (little or no open