Reappraisal of the Status of Gulls in the Carolinas

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One can hardly journey to the coast without encountering large numbers of gulls. Yet, as prominent and widespread as they are, the status of gulls in the Carolinas is still not well understood. In part, this relates to identification difficulties and often misleading descriptions in the field guides. At least some of the status changes in gulls occurring in the Carolinas are not the result of observer bias. In North America, there has been a widespread increase in gull populations (Conover, 1983; Spear, 1987; Tove and Fischer, 1988), in some cases resulting in the regular occurrence of species that previously occurred only as vagrants (Tove and Fischer, op.cit.). Potter, Parnell and Teulings (1980) indicated that five species of gull (Herring, *Larus argentatus*; Great Black-backed, *L. marinus*; Ring-billed, *L. delawarensis*; Laughing, *L. atricilla*; and Bonaparte's, *L. philadelphia*) occur regularly in the Carolinas. These species constitute the "basic five" that are widespread and generally common along our coastline, for at least a portion of the year. In addition, the Black-legged Kittiwake (*Rissa tri-dactyla*) has been listed as uncommon to fairly common October through March in the offshore waters of North Carolina (Potter, et al., 1980; Lee, 1986). Another ten species have been reported that were considered to be rare or accidental (Potter, et al., 1980; Lee and Potter, 1986).

The purpose of this paper is to review the records of these ten rarer species and update their status in the Carolinas. In addition, I have presented a table of relative seasonal abundance for all gull species, based on the available records and impressions of several knowledgeable field observers. However, the results presented should be taken only as approximations as studies that yield quantifiable data require long-term, systematic censusing, which has yet to be done in the Carolinas.

METHODS

Most of the data were gathered from the seasonal reports in *The Chat* ("Briefs for the Files") and *American Birds*. Because usable reports appeared in virtually every issue of these journals since 1970 and numerous issues before, I have elected to list citations only for records discussed in the text. These data were supplemented with unpublished sight records made by Derb Carter, John Fussell, Harry LeGrand and myself, primarily dealing with the more common species. Although I have attempted to critically review as many of the published reports as possible, not all could be evaluated and some that were included may be incorrect. Of the published reports that were sufficiently detailed to be evaluated, I found three that I consider to be misidentifications. These have been discussed under their respective headings.

For several species, I calculated a relative abundance (compared to Herring Gull) based on Christmas Bird Counts at Cape Hatteras 1981–1982, 1984–1987 (hereafter CBC relative abundance). I excluded 1983 from the survey because abnormally large numbers of gulls made thorough

sorting impossible, resulting in distorted proportions. In preparing this paper, several individuals of the rarer species were observed. Although the main data base for the paper ends with the year 1987, I have included records after that date in cases where observations are significant. In some cases, species documentations were warranted and have been presented as an appendix.

SPECIES ACCOUNTS

During the past twenty years, there have been significant changes in the known status of gulls in the Carolinas. Five previously unreported species have been described and four others have been found to occur regularly (Table 1).

Table 1. Approximate number of individuals for nine species of "rare" gulls reported from the Carolinas (by ten year increments).

	SPAN OF YEARS					
SPECIES	BEFORE 1938	1938 1947	1948 1957	1958 1967	1968 1977	1978 1987
Franklin's			1		2	6
Little					12	59+
Common Black-headed				1	11	19
Common/Mew						1/1
Thayer's	3					
Iceland		1		1	7	45+
Lesser Black-backed					8	128+
Glaucous	4	1	1	5	16	59+
Sabine's					2	4

Franklin's Gull (*Larus pipixcan*)

There are nine records of this western species from the Carolinas, five in North Carolina. Of those, eight have occurred within the past twenty years (Table 1). In addition, Carter observed an adult at Cape Hatteras Point on 29 October 1988 (*Am. Birds* 43:301, pers. comm.). The records suggest that the species occurs as a migrant in spring (March through May) and fall (September, October), apparently with equal seasonal distribution (Table 2). Four of the records are from inland locations, two at lakes and two in agricultural fields. This is consistent with the normal distribution of this species (pers. obs.). In fact, the fondness this species has for agricultural fields in the West makes it the most likely "rare" gull to occur in that setting in the future. When occurring inland in the

Carolinas, Franklin's Gulls have not been associated with other species. However, observations from the coast (Carter and Fussell, pers. comm.) suggest that they occur in the company of Laughing Gulls.

Table 2. Monthly distribution through 1987 for nine gull species occurring in North and South Carolina. Individuals occurring more than one month, are listed in the month of longest occurrence or month of first occurrence when no month predominated.

	MONTH											
SPECIES	1	2	3	4	5	6	7	8	9	10	11	12
Franklin's			2	2	1				1	3		
Little	1	6	42+	13	1			1		2		5
Com. Blk-headed	4	3	5	1				1		3	2	12
Common/Mew												1/1
Thayer's [a]	1	3	1									2
Iceland	13	10	9	5						2		15
Lesser Blk-backed	21+	20+	25+	4				1	3	10	8	44+
Glaucous	13	17	11	4	7	1		2	1	1	4	32
Sabine's [b]			1		2				6	2		

[a] Includes 4 individuals seen during the 1988/89 winter near Morehead City, N.C.

[b] Includes 3 individuals seen in September and 1 in October 1988 from North Carolina's Outer Banks.

Little Gull (*Larus minutus*)

Unknown from the Carolinas prior to 1971 (Carter and Parnell, 1974), this species has been found to be quite regular in recent years in North Carolina with records of at least 71 individuals through 1987. Almost without exception, they have been found in close association with flocks of Bonaparte's Gulls. Based on observations by Fussell and myself from 1982 to present, from Morehead City to the Virginia line, Little Gulls occur at a rate of 1 per 1,500 Bonaparte's Gulls.

The dates of occurrence range from 20 August (*Chat* 43:99) to 21 May (*Chat* 49:109). However, they are most numerous from late February through early April (Table 2), when huge flocks of Bonaparte's Gulls are massing for their northward migration While the vast majority of records are from the Outer Banks, considerable scrutiny of Bonaparte's flocks from south of Ocracoke, N.C. is needed to establish the prevalence of this species further south. However, as the species has been recorded only once from South Carolina, it may be that their normal range does not

extend that far. All but one of the records of this species are from the coast. The single inland report (Lynch, 1972) probably refers to an immature Black Tern (*Chlidonias niger*) and should be discounted (Lynch, pers. comm.).

Common Black-headed Gull (*Larus ridibundus*)

There are twenty records of this species from North Carolina and eleven from South Carolina, all occurring since 1967 (Table 1). The dates of occurrence are from 10 August (Cox, 1968) to 23 April (Wright, 1973) with the principal occurrence from December through March. Unlike Little Gull, the data do not indicate a particular locale where this species can be found predictably. Although this species has generally been found with groups of Ring-billed Gulls, that association may relate more to the abundance of Ring-billed Gulls in winter than any biological affinity between the two.

Common/Mew Gull (*Larus canus canus/L. c. brachyrhynchus*)

I make the distinction of Common Gull from Europe and Mew Gull from western North America because the two forms are distinguishable in the field (Lauro and Spencer, 1980), and the distributional origin of these birds and implications for occurrence in the Carolinas is significantly different. Both forms have been reported once each from Cape Hatteras, N.C. Lewis, Tove and LeGrand (1981) reported an adult "Mew" (=Common) Gull at Cape Hatteras Point on 31 December 1980 and Lewis (1984) reported a first winter Mew Gull at Hatteras Inlet on 27 December 1983. Of 23 records of Common/Mew Gulls from eastern North America (reported in *American Birds/Audubon Field Notes*), only seven have been identified to geographic form. Of those, five refer to Common Gull and two to Mew Gull, suggesting that Common Gull may be a little more likely than Mew Gull to reoccur in the Carolinas .

Thayer's Gull (*Larus thayeri*)

There are four reports of this species in the Carolinas through 1987 of which one is suspect (Tove, 1985). The remaining three are all from Cape Hatteras, N.C. An additional four individuals were seen December through February 1988-89 in Carteret County, N.C. (see Appendix). Of these seven individuals, the first was a bird in first winter plumage that occurred 27 December 1983 in conjunction with an enormous concentration of gulls in Hatteras Inlet (Tove, 1985). The next two included an adult found by John Fussell and John Wright on 18 January 1987 and a first winter bird photographed by Fussell on 1 March 1987. I observed different immatures of this species on 17 December 1988 about 4 km "offshore" from Morehead City and on 3 February 1989 at the Carteret Couty Landfill near Newport. Two adults were present at the Carteret County Landfill for at least the first week of February 1989 (Fussell and Carter, pers. comm.). In addition, two adult birds that were either this species or Iceland Gull were seen at Cape Hatteras Point on 27 December 1984 (*Am. Birds* 39:553) and 3 March 1987 (*Am. Birds* 41:418). An October 1971 report (Carlson, 1973) based entirely on the presence of a dark eye, probably referred to a subadult Herring Gull (Tove, 1985).

Iceland Gull (*Larus glaucoides*)

In spite of some 24 previous records, Fussell, Tove and LeGrand (1982) provided the first photographic documentation of this species (six individuals). Since then, there have been at least 31 additional records. Of the at least 54 records, only seven are from South Carolina. Based on CBC relative abundance, Iceland Gulls occur at a rate of approximately 1 per 8,500 Herring Gulls.

Iceland Gulls have been recorded in the Carolinas from 15 October (*Chat* 51:112) to 21 April (*Chat* 47:109), with the majority of records during winter. Although early winter appears to be the peak of occurrence, this may be an artifact of coverage in relation to the Christmas Bird Counts. Based on the field experience of myself and others, I suspect that more uniform censusing would reveal this species to be most common from mid-January through early March.

While the majority of records are from the coast, the species has occurred inland. In North Carolina, the most inland records are of single birds at Elizabeth City on 23 January 1983 (*Chat* 47:79) and on the Chowan river 4 April 1983 (*Chat* 47:109). In South Carolina, one was observed at Clemson from 3 to 9 February 1976 (LeGrand, 1978; & pers. comm.).

Lesser Black-backed Gull (*Larus fuscus*)

Lewis (1980) discussed the status of this species in the Carolinas but at the time of his reporting, there were only a dozen or so documented reports and the vast majority of sightings were of single birds. Since 1980, multiple sightings of Lesser Black-backed Gulls, particularly in the vicinity of Cape Hatteras, N.C. have increased (Fig. 1). To date, the greatest concentration recorded in the Carolinas occurred during the last week of December 1983 when a Menhaden (*Brevoortia tyrannus*) kill concentrated some 650,000 gulls in Hatteras Inlet. On 26, 27 and 29 December several observers and I sorted through the birds. Although 15 Lesser Black-backed Gulls were reported on the Cape Hatteras Christmas Bird Count (*Am. Birds* 38:559), I estimated that at least 22 individuals were present.

Of at least 136 records, eight are from South Carolina and in North Carolina, only 21 are from south of Ocracoke. Although the vast majority of sightings are from the coast, Lesser Black-backed Gulls have occurred inland, at least in association with estuarine waters. To date, the most inland sighting was of a bird at the Swanquarter, N.C. ferry slip, 31 December 1987 (R. Davis, pers.comm.).

The dates of occurrence are from 12 August (Marsh, 1986) to 26 April (*Am. Birds* 41:418), with a concentration of records from December through March (Table 2). Based on CBC relative abundance, Lesser Black-backed Gulls occur at a rate of approximately 1 per 1,700 Herring Gulls.

There are three recognized subspecies of Lesser Black-backed Gull, the most obvious plumage distinction being the mantle color in adults (Grant, 1982). The majority of birds appear to be the distinctly lighter mantled *L. f. graellsii* of Great Britain. Occasionally, very dark mantled individuals have been observed which may be either *L. f. intermedius* of Scandinavia or *L. f. fuscus* of northeastern Europe (Barth, 1973).

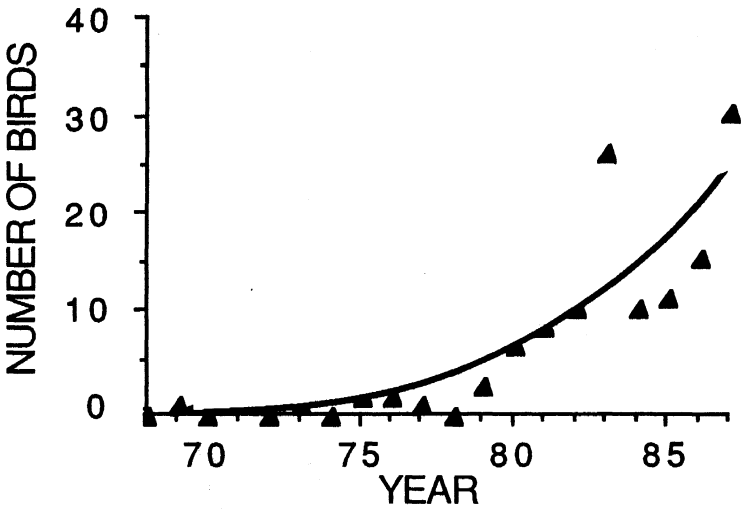

Figure 1. Annual totals for 136 Lesser Black-backed Gulls reported from North and South Carolina, 1969 through 1987 are represented by the solid triangles. The curved line represents the regression line of best fit (R=.88). Assuming the trend illustrated by these data continues for the next twenty years, it predicts that Lesser Black-backed Gulls will achieve CODE 4 ("fairly common") status within that time span.

Glaucous Gull (*Larus hyperboreus*)

Fussell, et al. (1982) reported that since the 1970's the number of sightings of this species increased significantly. To date, there are at least 93 records of this species, of which 12 are from South Carolina. While Glaucous Gulls have been reported from as early as 1 August (*Chat* 46:57) to as late as 6 June (*Chat* 42:17), their peak occurrence is from December through February (Table 2). Based on CBC relative abundance, Glaucous Gulls occur at a rate of approximately 1 per 4,600 Herring Gulls.

As in the case of other species, Glaucous Gulls are not limited to the coast. Individuals have been observed inland in North Carolina from Roanoke Rapids Lake (*Am. Birds* 26:749-750), Hurdle's Cut ferry landing on the Pamlico River (LeGrand, pers. comm.) and Oriental (R. Davis, pers. comm.). In addition, there are sightings from neighboring inland states (e.g., Tennessee, *Am Birds* 39:167). When occurring inland, this species has been found in close association with large bodies of water.

Sabine's Gull (*Xema sabini*)

There are seven records of this pelagic species (through 1987), six of which are from North Carolina (Table 1). With the exception of a single individual at Winston-Salem, N.C. (Culbertson, 1977), all records are from the coast with three observations from onshore and three from offshore.

during fall 1988 (see Appendix). With 22 other observers, I saw three immatures on 18 September about 40 km SE of Oregon Inlet and one immature bird was seen at Cape Hatteras Point 7-8 October (R. Davis and B. Lewis, pers. comm.). The data suggest two narrow windows of occurrence: May and September through early October. This is consistent with sightings elsewhere along the East Coast (*Am. Birds* regional reports, New York to Florida, 1976-1986).

Sabine's Gull and Black-legged Kittiwake are the only two species that occur in the Carolinas that have strongly pelagic habits. Because the coverage offshore is far less than along the coast, future work may reveal Sabine's Gull to occur more regularly offshore than the data now indicate.

Ivory Gull (*Pagophila eburnea*)

Although a single report of a "probable" Ivory Gull exists from North Carolina (Lee, 1980), I perceive problems associated with this report that raise doubts as to its validity. Seen poorly, the bird was described as being "small (Laughing Gull/Kittiwake size class)" with a bill that was "small, short and slender" (op. cit.). Ivory Gulls are slightly smaller but stockier than Ring-billed Gulls and have rather stout bills (measurements published in Cramp and Simmons, 1983; personal examination of specimens). Curiously, although the bill was described, the face was reportedly not seen. The contrast of a blackish face encircling the bill against a snow white head and body should have been obvious. Another problem was the lack of consideration of plumage aberrations in more common species, particularly leucism which can mimic the immature Ivory Gull plumage. Although a much more thorough study should be required to even place this species on North Carolina's Provisional list, this report has been listed as a sight record in the AOU checklist (1983:226).

STATUSES

Within the last decade, significant changes in the status of gulls in the Carolinas have occurred. Of these, the most dramatic include Lesser Black-backed, Little, Iceland, Glaucous and Common Black-headed. In each case, a species that was previously known only as a rarity, now occurs predictably and in the case of the Lesser Black-backed and Little Gulls, in substantial numbers.

To represent the status of gulls in the Carolinas, I have numerically redefined the traditional occurrence terms "abundant", "very common", "common", "fairly common", "uncommon", "very uncommon", "rare", "very rare", and "accidental". For CODES 1-6 ("abundant" to "very uncommon") the values represent the number of individuals expected in a single day on at least 80% of trips to a single locale. In addition, I consider a species as "regular" if it occurs with an abundance code of 6 or better.

CODE 1 ("abundant")—should see over 2,500 individuals per day.
CODE 2 ("very common")—should see 500 to 2,500 individuals per day.
CODE 3 ("common")—should see 100 to 500 individuals per day.
CODE 4 ("fairly common")—should see 20 to 100 individuals per day.
CODE 5 ("uncommon")—should see 4 to 20 individuals per day.
CODE 6 ("very uncommon")—should see 1 to 3 individuals per day.

CODE 7 ("rare")—occurs at a rate of 1 to 5 individuals per season for at least 8 of 10 years.

CODE 8 ("very rare")—occurs at a seasonal rate of not more than 8 individuals in 10 years for that season.

CODE 9 ("accidental")—occurs at a seasonal rate of not more than 2 individuals in 10 years for that season.

I have assigned abundance codes to each of the 15 species by season and state (Table 3). For each species, the status listed refers to that expected from its location of greatest abundance and under appropriate search conditions. This is particularly true for North Carolina where huge gull concentrations occur locally around Cape Hatteras and sporadically elsewhere. For example, Lesser Black-backed Gull is listed as CODE 5 (uncommon) during the winter in North Carolina, but this refers strictly to the Cape Hatteras area. Elsewhere along the coast, it is far less common. Iceland and Glaucous gulls are much more numerous from Nags Head to Morehead City than farther south. Little Gulls are found in association with the large flocks of Bonaparte's Gulls that occur along the Outer Banks.

DISCUSSION

Within the last ten years, a new picture of the status of gulls in the Carolinas has emerged. In addition to the "basic five" coastal gulls and offshore Kittiwake, at least two species, Lesser Black-backed and Little gulls warrant inclusion with the list of regulars from North Carolina. Both of these occur in substantial numbers each year, at least along the Outer Banks, and can be reliably found in winter. Iceland and Glaucous gulls also occur annually but in smaller numbers and generally require some effort to locate. In South Carolina, only the "basic five" and Kittiwake occur regularly. However, if the present population trend exhibited by the Lesser Black-backed Gull in North Carolina continues, it may not be long before that species occurs regularly in South Carolina as well.

These changes may relate, in part, to a long established pattern of increasing populations of gulls in the Carolinas and elsewhere. For example, prior to the mid-1930's, the Great Black-backed Gull was extremely rare, with only four records from North Carolina and one from South Carolina (Pearson, Brimley and Brimley, 1959; Sprunt and Chamberlain, 1970). In North Carolina, from 1933 onward, the species rapidly increased in abundance (Pearson, et al., 1959) to its present state as a fairly common to very common permanent resident. The data imply clearly that the Lesser Black-backed Gull is following a similar course and that Little, Common Black-headed, Iceland and Glaucous gulls may not be far behind. On the other hand, some of the apparent status changes may also relate to improved observer coverage. In recent yars, gull-watching seems to have emerged as a specialty subset of birding. In Utah, Tove and Fischer (1988) reported that improved observations in that state led to increased awareness of rarities but not overall numbers. In the case of some speceis (e.g., Little, Thayer's, Common/Mew) a similar scenario may exist in the Carolinas. However, other species, particularly the Lesser Black-backed Gull, appear to be undergoing true population explosion or range expansion and may become much more common in the future.

Table 3. Average relative abundace codes of seasonal occurrence for gull species in the Carolinas. The assigned codes are based on typical counts from the best observation areas and viewing conditions of each state and assume a full day of observation.

(state)	North Carolina				South Carolina			
SPECIES (season)[a]	Wi	Sp	Su	Fa	Wi	Sp	Su	Fa
Laughing	3[b]	2	2	1	3[b]	2	2	2
Franklin's		8		8		8		8
Little	6	5[c]		8		9		
Com. Black-headed	7	8	9	8	8	8		8
Bonaparte's	3	2[c]	7	5	4	4		5
Mew/Common	9							
Ring-billed	1	1[c]	4	2	2	3	4	3
Herring	1	2	3	2	3	4	5	4
Thayer's	8							
Iceland	7	7		8	8	8		9
Lesser Black-backed	5	6[c]		7	7	8	9	8
Glaucous	7	7	9	8	7	8		
Great Black-backed	2	3	4	3	5	5	7	5
Black-legged Kittiwake	5	6		6	6	7		7
Sabine's		8		8[d]				9

Numerical Codes: 1=abundant, 2= very common, 3=common, 4=fairly common, 5=uncommon, 6=very uncommon, 7=rare, 8=very rare, 9=accidental.

[a] Wi=Winter (December-February), Sp=Spring (March-May), Su=Summer (June-August), Fa=Fall (Septmeber-November).

[b] Numbers fluctuate greatly; abundant in early winter to very scarce in mid-winter.

[c] Numbers are substantially lower after mid-April.

[d] May underestimate current status by 1 or 2 numerical code levels.

In summary, North and South Carolina, with their extensive coastline, host substantial, year-round populations of gulls. Of 16 reported, the single report of Ivory Gull represents a probable misidentification. Of the 15 remaining species, ten occur regularly in North Carolina and six in South Carolina. Another one or two may also prove to be regular. The remainder are rarities which occur with variable frequency, most reliably in the vicinity of Cape Hatteras, North Carolina. In future years, the number of records and documented species from the Carolinas will undoubtedly grow. As they do, a more refined picture of our regional ornithology should emerge.

ACKNOWLEGEMENTS

I thank John Fussell and Harry LeGrand for their comments and insight in their reviews of this paper. Thanks are also extended to Derb Carter, Richard Davis, Merrill Lynch and John Wright for sharing their field experiences and some unpublished sightings with me.

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APPENDIX

During Fall 1988 and Winter 1988/89 four immature Sabine's and four Thayer's Gulls were observed in North Carolina. Because these sightings significantly altered the status of these species as indicated by the study period data, I feel that specific documentation is warranted.

Sabine's Gull

On 18 September 1988, 23 observers, including Harry LeGrand and myself, observed three immature Sabine's Gulls about 40 km SE of Oregon Inlet. On 7-8 October 1988, Ricky Davis, Jim Parnell, and Bob Lewis observed an immature on the pond at Cape Hatteras Point. The following description is collective but represents field marks seen on each individual.

All four birds were small, bouyant-flying brown and white gulls that exhibited a striking upper wing pattern. This pattern consisted of a brownish back and wings and bold white triangular wedge formed by the inner primaries and secondaries. The blackish-brown outer primaries and primary coverts were notably darker than the secondary coverts and back. The tail on each bird was notably notched and accented by a black terminal bar. Although there are six previous records of Sabine's Gull from North Carolina, all of those were single individual sightings of adults.

During the 1988/89 winter two immature and two adult Thayer's Gulls were observed near Morehead City, N.C. Not only do these four sightings double the number of reported Thayer's Gulls from the state, they also represent a "range extension" as far as the distribution of this species in the Carolinas is concerned.

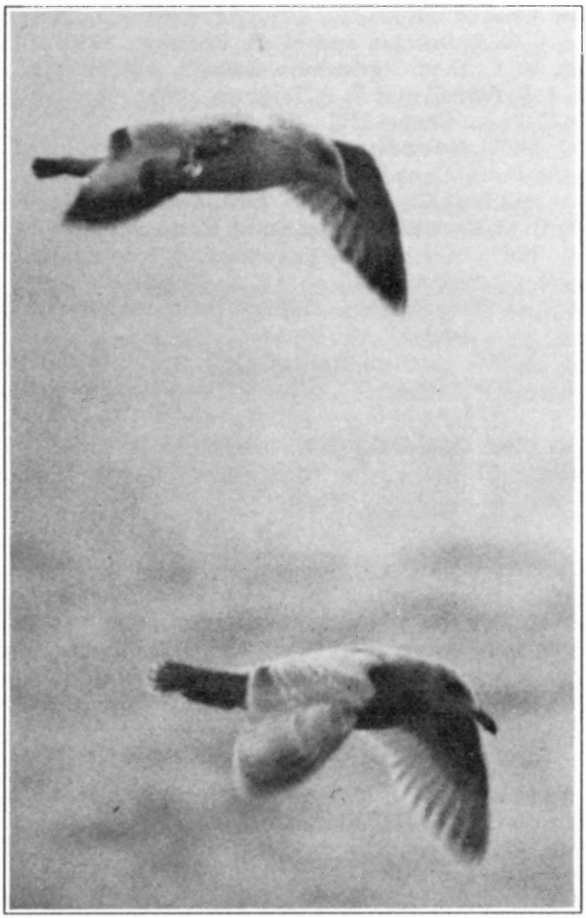

Figure 2. First winter Thayer's Gull with an immature Herring Gull at Cape Hatteras, N.C., on 1 March 1987. Note the Thayer's Gull's paler and uniform body color, smaller size, slightly darker outer primaries and "punched-in-eye" look. Photo by John Fussell.

On 17 December and on 3 February, I observed single immature Thayer's Gulls. The first occurred about 4 km "offshore" from Beaufort Inlet as it fed on a bread and oil chum behind the boat. The second,

observed by Harry LeGrand, Derb Carter, Ricky Davis and I, was at the Carteret County Landfill. Although the former was a paler individual (comparable to Fussell's bird of 1 March 1987, Fig. 2) and only seen in flight, the following description accounts for both. The birds were uniformly light tan-brown gulls slightly smaller and more delicately proportioned than Herring Gull. There was very little contrast on the upper wing, particularly between the primaries and wing coverts. When perched (3 February bird), the folded primaries exhibited a bold white outlining to each feather. In flight from above, the darkest aspect of the bird was the brown (not blackish) tail. From below, the underwings, especially the primaries, were white with a narrow grayish border on the primary tips.

From the end of January through at least the first week of February 1989, two different adult Thayer's Gulls were also reported from the Carteret County Landfill. The first was seen by John Fussell (pers. comm.) and the second by Derb Carter (pers. comm.). The birds were identifiably different individuals because the former had a heavily streaked head and eye-patch while the latter had very little head streaking. Both birds were described as being smaller and notably daintier-billed than nearby Herring Gulls. Although the birds were in full adult plumage, the eyes were dark brown. Both observers reported that when perched, the folded primaries were not appreciable lighter than those of Herring Gull. In flight from above, the outer primaries were paler and with a much less extensive dark wedge than Herring Gull. From below, the wings, including the primaries, were white.