

First specimen of Least Tern from New Brunswick

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THE LEAST TERN (*STERNA ANTILLARUM*), has been "blue-listed" in North America for over 10 years (*i.e.*, a species suffering non-cyclic population declines; Tate 1981, Tate and Tate 1982), and is considered an endangered species in a number of North American states. Once a common breeding bird along the Atlantic Coast from Massachusetts southward, the species was nearly extirpated in the northeast by nineteenth century feather hunters. Bent (1921) reports that on islands off the coast of Virginia, professional collectors for the millinery trade killed as many as 12,000 birds in a day and up to 100,000 in a season. With protection there was some recovery of the population in the late 1930s and early 1940s. Since then there has been a steady decline in the North American population as the disturbance and development of nesting beaches has increased (Fisk 1975; Downing 1980; Schulenberg and Ptacek 1984).

In Canada, *Sterna antillarum* has been reported from Saskatchewan, Ontario, Quebec, Newfoundland, Nova Scotia and New Brunswick. It is only in the latter two provinces, however, that the Least Tern has been recorded with any frequency or reliability, being considered accidental or casual in Nova Scotia (Tufts 1973, Peterson 1980) and, until the specimen reported here, hypothetical in New Brunswick (Squires 1976). Canadian records for the Least Tern are now represented by 25 reports over the last 153 years. These records involve at least 31 birds and include two adult specimens in museum collections while four (five?) others are no longer extant. An immature bird was also picked up dead on Sable Island, Nova Scotia, July 1, 1985, and will be deposited in the National Museum of Canada or the Nova Scotia Museum collection (A.R. Lock, Can. Wildlife Ser., *pers. comm.*). The reliability of these reports varies considerably, however (Table 1). Here I report on the first New Brunswick specimen and examine

Tropical storms and the timing of autumn migration control the frequency of Canadian occurrences.

hypothetical (possible or probable sightings that remain unconfirmed owing to the lack of a specimen or acceptable photograph), and confirmed records for the Least Tern in Canada with their associated weather patterns.

Jones (1885) and Downs (1888) mention a specimen of *Sterna antillarum* that was taken at Polly Bog (now Alton), Nova Scotia, September 11, 1879. Although the whereabouts of this specimen is now unknown, the record is generally accepted (Godfrey 1966; Tufts 1973) as Harry Piers, Nova Scotia Museum Curator, reported seeing the taxidermied bird (Tufts 1973). Tufts (1973) also reports that a specimen was taken at Barrington, Shelbourne County, Nova Scotia, August 28, 1924. On the authority of Piers he states that the specimen was mounted and later acquired by the Nova Scotia Museum. There is no Barrington Least Tern specimen in the Nova Scotia Museum, however, and there is no indication from any source that Piers ever acquired two mounted Least Terns. Although it is not impossible that the specimen was lost, it seems more likely that Tufts is in error (Fred Scott, *pers. comm.*) and the record is based on observation only.

Boardman (1903) reported the Least Tern as accidental at Grand Manan, New Brunswick, and as very rare in midsummer on the St. Croix River and the Passamaquoddy (Boardman, *vide Baird et al.* 1984). Pettingill (1939) considered the Grand Manan report of Boardman (1903) as hypothetical. Although Squires (1952) initially reported the Least Tern as acci-

dental in New Brunswick, apparently accepting the Boardman reports, he later reduced the status of the species to hypothetical in the province (Squires 1976).

Ontario records based on at least two specimens (Thompson 1890; McIlwraith 1894), the whereabouts of which are unknown, have long been considered doubtful and are not mentioned by Godfrey (1966) or Speirs (1985). Additionally, Beardslee and Mitchell (1965), reported a well-observed Least Tern at Erie Beach (Bertie Township), Ontario, June 26, 1958. The Erie Beach record, along with its associated weather data, and the fact that two of the early Ontario records involve birds in the hand, have prompted me to consider the early Ontario records as at least possible and I have listed them as hypothetical.

There is strong evidence that the records of Audubon for the north shore of the Gulf of St. Lawrence in Quebec, (which Audubon called "Labrador"), and Newfoundland are erroneous (Todd 1963). Peters and Burleigh (1951) cite the Newfoundland record of Reeks (1869) as hypothetical and state that there are no acceptable records for Least Tern in that province.

Although the single Saskatchewan record for Regina May 26, 1957, remains unconfirmed, records from central North Dakota (mentioned in Nero and Houston 1963) lend credence to this sighting. It is also worth noting that an examination of airflow patterns over North America suggests that May through June is the only period during which a Saskatchewan sighting of Least Tern would be probable.

With the exception of the Saskatchewan record and probably the Erie Beach, Ontario sighting, all of the Canadian records are presumably birds from the east coast population. The Saskatchewan bird is undoubtedly from the interior population. The Erie Beach record is associated with a low pressure system that developed just west of Lake Michi-

gan on June 24, and moved from the southwest into the Great Lakes region on June 25, strongly suggesting that this bird originated from the interior of the continent.

The New Brunswick specimen, representing only the second coastal Canadian spring record, was picked up dead April 11, 1984, in the Saints Rest Marsh Area of Saint John (45° 13' N Lat., 66° 0' W Long.), a site dominated by a large salt and brackish water marsh. The bird is a male (sexed by gonadal inspection), in breeding plumage and weighing 41.7g. Measurements are as follows: total length 217 mm, wing 157 mm, tail 91 mm, exposed culmen 28.8 mm, tarsus 15.1 mm. The specimen has been deposited in the collection of the New Brunswick Museum as a skin and partial skeleton (NBM 5063).

MCLAREN (1981) SUGGESTED THAT navigational error is responsible for the high incidence of vagrant landbirds on Nova Scotia islands. Although he notes that geographical and meteorological factors may also be important, he remarks that few landbird vagrants have appeared on Nova Scotia islands after the

passage of intense storms. By contrast, it is well known that hurricanes displace seabirds and Squires (1976) correctly reported that the few New Brunswick records for the Least Tern had been associated with hurricanes (Bond 1948; Palmer 1949).

Nevertheless, examination of weather patterns for the week preceding the records in Table 1 reveals that most of the reports of Least Tern in Canada have been associated with storms of less intensity than hurricane force. In fact, there have been relatively few direct or indirect hits by hurricanes on the northeast coast of North America since 1900 (Herbert and Taylor 1970). Only the New Brunswick sightings of September 1, 1944, and September 17, 1960, are known to have been associated with hurricanes. All other late summer dates for which weather data are available, (N = 10) involve systems of moderate (*i.e.*, tropical storms) or even weak intensity moving up from the south. The most common feature of these systems is that because of their track or trailing troughs of low pressure they tend to produce moderate but prolonged (two or three days) southerly flows of air. Of the two spring dates the

May, 1980, event was very similar to the late summer events, with disorganized low pressure systems causing a prolonged southerly flow.

In April, 1984, a very deep low approached the Fundy region from almost due south and remained near Sable Island for several days leaving the area in a moderate northeasterly flow. Temperatures, which previously had been balmy, dropped suddenly to below freezing and it would seem probable that the New Brunswick specimen perished from starvation and exposure.

It appears, therefore, that the presence of the Least Tern in Canada is a function of the frequency with which low pressure systems of moderate or greater intensity sweep northward during late summer and early autumn months. It is not surprising that most of the Canadian records for Least Tern have occurred in late August and September as the incidence of tropical storms, as well as hurricanes, moving up the east coast of North America is highest during this period (Herbert and Taylor 1970). Herbert and Taylor (1970) note that for the United States as a whole, September has had more major hurricanes than all other months combined

Table 1. Records of the Least Tern in Canada.

Date	Location, Age, Number	Source	Status
1. June 1838	North shore Gulf of St. Lawrence, Que. ["Labrador"] (many breeding)	Audubon (1838) in Todd (1963)	probably erroneous
2. August 1833	Newfoundland ("parties")	Audubon (1838) in Todd (1963)	probably erroneous
3. September 10, 1867	Cow Head, Nfld. (1)	Reeks (1869) in Peters and Burleigh (1951)	hypothetical ^B
4. September 5, 1889	Toronto, Ont. (1)	Thompson (1890)	hypothetical
5. October circa 1890	Hamilton, Ont. (1 imm.)	McIlwraith (1894)	hypothetical
6. Late 19th Century	Lake Erie, Ont.	in McIlwraith (1894)	hypothetical
7. Late 19th Century	Toronto, Ont.	in McIlwraith (1894)	hypothetical
8. Late 19th Century	St. Croix-Passamaquoddy, N.B.	Baird, Brewer and Ridgeway (1884)	hypothetical
9. Late 19th Century	Grand Manan, N.B.	Boardman (1903)	hypothetical
10. Late 19th Century	Polly Bog (Alton)	Downs (1888) in Tufts (1973)	acceptable ^B
11. Circa 1903	Quebec, P.Q.	Dionne (1906)	hypothetical
12. August 16, 1908 ^A	Sable Island, N.S. (several)	Bouteillier (1909)	hypothetical
13. August 28, 1924 ^A	Barrington, N.S. (1)	Tufts (1973)	hypothetical
14. September 15, 1944 ^A	Grand Manan, N.B. (many)	Bond (1948), Palmer (1949)	hypothetical
15. May 26, 1957 ^A	Regina, Sask. (1)	Nero and Houston (1963)	hypothetical
16. June 26, 1958 ^A	Erie Beach, Ont. (1)	Beardslee and Mitchell (1965)	hypothetical
17. September 17, 1960 ^A	Point Lepreau, N.B. (1)	Squires (1976)	hypothetical
18. August 13-15, 1970 ^A	Grand Desert, N.S. (3 ad.)	Dobson (1970), Tufts (1973)	confirmed (NMC 57642) ^B
19. August 26, 1970 ^A	Big Island, N.S. (2)	Dobson (1970)	hypothetical
20. May 9, 1980 ^A	Brier Is., N.S. (1)	Brown (1980)	hypothetical
21. July 10, 1983 ^A	Caribou Is., N.S. (1 ad.)	Brown (1984)	hypothetical
22. September 1-7, 1983 ^A	Seal Island, N.S. (1 imm.)	Brown (1984)	hypothetical
23. April 11, 1984 ^A	Saint John, N.B. (1 ad.)	this note	confirmed (NBM 5063) ^B
24. September 11, 1984 ^A	Sable Island, N.S. (2-1 ad., 1 imm.)	Brown (1985)	hypothetical
25. July 1, 1985 ^C	Sable Island, N.S. (1 imm.)	Brown (1986)	confirmed (spec. to NMC or NSM)

^AWeather data available.

^BSpecimen collected; if extant, collection and catalogue number is given; NSM = Nova Scotia Museum, NMC = National Museum of Canada, NBM = New Brunswick Museum. If known, number of birds involved in observation is given in parentheses after location, where reported age of birds is given; ad. = adult, imm. = immature

^CRecord added in proof. Weather data not checked.

