

Elegant Tern (*Thalasseus elegans*): New to Ontario

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Introduction

Following in the wing beats of the unbelievably rare Brown Booby (*Sula leucogaster*) observed one month earlier in the Buffalo, New York/Fort Erie, Ontario area was the similarly unexpected sighting of an Elegant Tern (*Thalasseus elegans*) in the region. On 20 November 2013, western New York and Ontario birders were astonished, perhaps flabbergasted, with the discovery of this exceptionally rare Sterninae on the Niagara River at the southern tip of Grand Island, NY. The next day, 21 November, the Elegant Tern re-located to Squaw Island Park in Buffalo, where it was seen until the evening of 23 November. During that time, it was viewed by hundreds of observers from across New York and Ontario. On 24 November, the fourth and final day of its occurrence, it was only seen on two brief visits to the Niagara River shoreline in Fort Erie, Ontario.





Figure 1. Elegant Tern first found off Beaver Island State Park, Grand Island, NY, on 20 November 2013.

Photo. James M. Pawlicki.

Occurrence in western New York

At 1250h on 20 November 2013, Victoria Rothman of Youngstown, New York was bird-watching along the New York side of the Niagara River at Beaver Island State Park on Grand Island, Erie County. Weather conditions at the time were sunny with light east winds and temperatures around 4.5°C. While observing a flock of gulls sitting in the rocky shallows just offshore, she discovered a medium-sized tern with a bright orange bill that she identified as either an Elegant or Royal Tern (*Thalasseus maximus*). Knowing the great rarity of the bird regardless of species, she made a cell phone call to James Pawlicki. After describing field marks over the phone, it became evident that certain features, notably the small body size and thin bill, suggested that it was an Elegant Tern rather than Royal Tern, despite the latter being arguably the more likely of the two species to occur in the region.



Figure 2. Elegant Tern with Bonaparte's Gulls and Common Tern on the concrete pier, Squaw Island Park, Buffalo, NY, on 21 November 2013.

Photo. James M. Pawlicki.

Within a half hour, Pawlicki had joined Rothman at the park, and found the tern standing on a small rock next to several Bonaparte's Gulls (*Chroicocephalus philadelphia*) and Ring-billed Gulls (*Larus delawarensis*). Having regularly seen both Elegant Tern and Royal Tern along the coast of California, he was amazed to see that the bird did appear to be an Elegant Tern, being about the size of the Bonaparte's Gulls, with a thin, bright orange bill, long shaggy crest, and extensive black feathering across the face. During the first few minutes of observation, Pawlicki obtained several distant photographs before it took flight with a small flock of Bonaparte's Gulls (Figure 1).

Closely reviewing the photos, Pawlicki and Rothman concluded that the features of the bird were consistent with an immature Elegant Tern, and proceeded to notify others about the sighting. Unfortunately, by the time several people arrived on site, the bird was no longer present, and it was not seen again until an hour and half later when it briefly flew over the rocky shallows and then continued to fly out of sight over the Niagara River.

The next morning, on 21 November, the Elegant Tern was not observed at Beaver Island State Park on Grand Island despite searching by birders. Later that morning, while checking other areas of the upper Niagara River, Willie D'Anna encountered Dennis and Susan Gralak and was shown photographs on their digital camera of what they thought might have been the Elegant Tern. They had taken photos from

Squaw Island Park at 1445h on the previous day, 20 November, as the bird flew over the Black Rock Canal. D'Anna confirmed that the photos were of the Elegant Tern, and this meant that on the afternoon of 20 November, when the tern was not being seen at Beaver Island State Park, it had flown approximately 3.5 kilometres southeast to the Black Rock Canal in Buffalo before briefly returning to Beaver Island State Park.

Around 1015h that morning, after arriving at the north end of Squaw Island Park, D'Anna re-found the Elegant Tern. He and others watched as it stood with several dozen Bonaparte's Gulls and up to seven Common Terns (*Sterna hirundo*) near the end of the concrete pier located at the far north end of the island (Figure 2).

Here the tern allowed for a very close and detailed study, while perched, in-flight, and bathing in the water (Figure 3). At Squaw Island, many observers took close photographs, including Pawlicki who obtained many in-flight photos (Figure 4).

Observers at Squaw Island noted that the tern would often forage loosely with Bonaparte's Gulls in the calmer waters of the Black Rock Canal for several minutes at a time, and usually close to the canal locks where it was seen plunge diving and successfully catching and consuming minnows, purportedly Emerald Shiners (*Notropis atherinoides*). On several occasions, it was observed to surface with up to four minnows at once, and then proceeded to fly up, drop the fish, and re-catch one in mid-air before swallowing it.



Figure 3. Elegant Tern bathing in Black Rock Canal, Squaw Island Park, Buffalo, NY, on 22 November 2013.
Photo: Alan Wormington.

Description and Ageing

The Elegant Tern appeared about the same size as nearby Bonaparte's Gulls with slightly paler gray upperparts. The underparts were all white. The primaries appeared blackish-gray, contrasting with the pale gray wings and mantle. The forehead was white and a small area of thick black streaking was present on the forecrown, which then merged into a solid black rear crown and face patch that completely encompassed the dark eyes. In relaxed position, a fairly long, shaggy black crest drooped beyond the rear crown and onto the white nape. The bill

was bright orange at the base, gradually becoming paler yellow-orange towards the tip; it was fairly thin and spike-like with a very slight downward curvature throughout its length. On close examination of the bill, two small blackish markings extended out towards the nares at the base of the upper mandible. The short legs and feet were blackish.

In flight, the wings appeared long and pointed, and the tail was slightly notched. The upperwings were pale gray with a weak grayish carpal bar at the leading edges of the wings. The outer primaries and coverts were blackish-gray,



Figure 4. Elegant Tern over Black Rock Canal from Squaw Island Park, Buffalo, NY, on 21 November 2013. *Photo: James M. Pawlicki.*

contrasting with pale gray inner primaries. At certain angles, it was apparent that the outermost primary (primary 10) on the right wing was broken off about halfway down the feather shaft (Figure 5).

Blackish-gray secondaries with narrow white tips formed a dark secondary bar along the trailing edges of the wings. The white central tail feathers, rump, and uppertail coverts contrasted with the pale gray mantle, while the outer tail feathers were dusky gray with blackish-gray tips that appeared quite worn. Upon closer scrutiny, some of these feathers showed limited whitish tips and edges. The underwings appeared whitish with a broad blackish trailing edge at the wing-tips.

Referencing Olsen and Larsson (1995), Pyle (2008) and Shoch and Howell (2013), the Elegant Tern was determined to be in its first-winter plumage at approximately six to eight months of age based on its mix of juve-

nile and first-basic (formative) plumage. The blackish-gray primaries, secondaries, and outer retrices indicate juvenile feathers, while the pale gray mantle and inner primaries indicate new first-basic feathers moulted during the late summer and early fall months.

Elimination of similar species

Features that readily separated the bird from a first-winter Royal Tern were the much smaller body size, thinner spike-like bill, long shaggy crest, and extensive black face patch completely encompassing the eyes (Olsen and Larsson 1995, Sibley 2000).

The Mediterranean race of Lesser Crested Tern (*Thalasseus bengalensis emigrata*) of the northern and western African coasts is similar to Elegant Tern in size, plumage, and bare parts colouration, and although there are no records from North America, the species occurs rarely

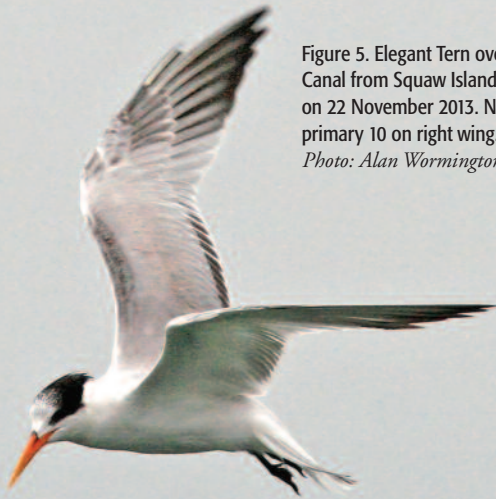


Figure 5. Elegant Tern over Black Rock Canal from Squaw Island Park, Buffalo, NY, on 22 November 2013. Note broken off primary 10 on right wing.

Photo: Alan Wormington.



Figure 6. Elegant Tern over Black Rock Canal from Squaw Island Park, Buffalo, NY.

Figure 7. Note white tips on worn juvenile outer rectrices 4 and 5 on underside of tail. 23 November 2013.

Photos: David Beadle.

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in Europe (AOU 1998, Shoch and Howell 2013). Lesser Crested Tern has a blunter, thicker bill, slightly darker gray upperparts with a gray rump and central tail, and in immature and non-breeding plumages, shows a prominent white crescent below and behind the eye. In first-winter plumage, it shows uniform dark tips to the outer three rectrices, while in Elegant Tern the tips to rectrix four and five are white (Olsen and Larsson 1995). Although there was noticeable wear on the outer tail feathers, the remnants of these whitish tips were visible in close photographs of the spread tail (Figures 6 and 7).

The South American subspecies of Sandwich Tern (*Thalasseus sandvicensis eurygnatha*), known as ‘Cayenne’ Tern, is very similar to Elegant Tern in size, shape, structure, and plumage. Compared to Elegant Tern, first-winter ‘Cayenne’ Tern differs most notably in having a dull yellow bill often with variable dark markings, a noticeable white crescent below and behind the eye, a shorter crest, and finer black streaking across the crown (Olsen and Larsson 1995, Shoch and Howell 2013).

Shoch and Howell (2013) state that it may not be possible to fully discount hybrid origin in the identification of any orange-billed *Thalasseus* tern. A small number of hybrid pairings between

Elegant and Sandwich Terns, Lesser Crested and Sandwich Terns, and (indeterminate) orange-billed *Thalasseus* terns and Sandwich Terns have been documented at tern colonies in North America and Europe over the last 25 years. No descriptions of known hybrid adults currently exist, and in the case of two known Lesser Crested x ‘Eurasian’ Sandwich Tern (nominate *T. s. sandvicensis*) juveniles banded in the United Kingdom and observed in their first fall, both individuals exhibited at least one character shown by each parent species (Steele and McGuigan 1989, Jiguet 1997). This would seem to support the assumption that hybrid *Thalasseus* terns are unlikely to exhibit all characters of either parent, but without genetic analysis, this remains difficult to ascertain. Despite this, the authors feel that, in accordance with the current literature, the features of the Niagara tern described above are entirely consistent across the spectrum with Elegant Tern, and in combination fully represent the species.

Occurrence in Ontario

The Elegant Tern was observed on the New York side of the Niagara River from the time it was first found on 20 November, and spent all of 21-23 November in the vicinity of the concrete pier at the north end of Squaw Island in Buffalo.



Figure 8.
Map of Niagara River along the United States-Canada border at Buffalo, NY, and Fort Erie, ON.

Red Arrow 1: Beaver Island State Park at the southern tip of Grand Island where the Elegant Tern was initially found on 20 November 2013.

Red Arrow 2: Tip of the concrete pier at the north end of Squaw Island and adjacent to the Black Rock Canal, Squaw Island Park, Buffalo, NY, where the Elegant Tern remained from 21-23 November 2013.

Red Arrow 3: The Niagara River shoreline in Fort Erie, ON, where the Elegant Tern was observed on 24 November 2013.

Given that on the afternoon of 20 November the tern had made two flights between Beaver Island State Park on Grand Island and Squaw Island in Buffalo, there is a very distinct possibility that it had entered Ontario air space while doing so, but regrettably no observations of the bird were made during these flights (Figure 8). On 21 November, viewing from Fort Erie, several Ontario birders were convinced that they saw the Elegant Tern flying with a group of Bonaparte's Gulls in a flight of considerable distance downstream and across the Niagara River, which they believe reliably put it over Ontario waters. While standing on the concrete Squaw Island Pier in Buffalo on 22 November, another group of Ontario

birders observed the tern fly out into the Niagara River. They were confident that the bird had crossed the international border located approximately 170 metres west of the pier and into Ontario waters. While both of these events may well have placed the Elegant Tern within Ontario, its unequivocal occurrence in the province did not take place until the afternoon of 24 November when Dave Fidler and Peter Middleton found the tern on the shore of the Niagara River in Fort Erie, approximately two kilometers due south of the concrete pier located at the north end of Squaw Island. The observers were ecstatic when

at 1437h they discovered the bird resting among numerous Ring-billed Gulls and several Herring Gulls (*Larus argentatus*) on a small rocky outcrop along the shoreline (Figure 9) directly opposite St. Paul's Anglican Church, Fort Erie, Niagara (Figure 10).

The news spread quickly with an immediate alert forwarded to ONT-BIRDS, the Ontario Field Ornithologists internet birding listserv, while texts and cellular calls were made to many birders. Unfortunately, the tern remained for only some 10-12 minutes before flying off the point with numerous gulls (Dave Fidler, pers. comm.).



Figure 9. Elegant Tern at bottom foreground on rocky outcrop of Niagara River shoreline, Fort Erie, ON, on 24 November 2013. Photo: Peter Middleton.

Figure 10. The red arrow pinpoints the rocky outcrop shoreline location in Fort Erie, ON, where the Elegant Tern was observed on 24 November 2013.





Figure 11. Elegant Tern with Ring-billed Gulls on rocky outcrop of Niagara River shoreline, Fort Erie, ON, on 24 November 2013. Note long shaggy black crest. *Photo: Jean Iron.*

At 1535h, Luc Fazio, along with his son Xavier, re-located the bird after it unexpectedly returned to the exact rocky outcrop where it had been seen earlier that afternoon (Figure 10). With the tern only 25-30 meters distant, some 15-20 lucky birders were able to study the bird's plumage and structure in detail as it stood in Ontario (Figure 11).

At around 1600h, it once again left the rocky outcrop and flew towards the New York side of the Niagara River (Luc Fazio, pers. comm.). Following this observation, the Elegant Tern (Figure 12) was not seen again on either side of

the Niagara River. The temperature was -7°C and it was a mostly cloudy afternoon with mild winds at 13 km/h from the northwest.

These two separate Ontario observations of the bird as it stood on the Niagara River shoreline in Fort Erie were well documented and included excellent photographs for the Ontario Bird Records Committee (OBRC). The accounts and photographs left no doubt that this was the same Elegant Tern (Figure 13) that had been observed on the New York side of the Niagara River during the previous three days.

Figure 12. Elegant Tern over Black Rock Canal from Squaw Island Park, Buffalo, NY, on 22 November 2013. *Photo: Tom Hince.*



Figure 13. Elegant Tern over Black Rock Canal from Squaw Island Park, Buffalo, NY, on 23 November 2013. *Photo: David Beadle.*



Range and Natural History

The Elegant Tern is commonly found along the Pacific coast between southern California and Central America. It was originally described by William Gambel (Gambel 1848, Grinnell 1919), while the first well-founded sighting of Elegant Tern to North America was that by James Graham Cooper (1868). He states that “The first specimens I have seen from this State were shot by Mr. Lorquin in San Francisco Bay and are in fine plumage.” It is to be inferred that two or more examples were encountered, but no dates or further facts are given (Grinnell 1919). Another known historical record of Elegant Tern is that of a specimen collected on 25 July 1889 from Corpus Christie, Texas (BMNH No. 91-10-20-92), (Oberholser 1974, AOU 1983, Shoch and Howell 2013).

Compared to most other tern species, the Elegant Tern has been little studied, and most work has been concentrated at two California colonies (Shaffner 1982). The Elegant Tern has a very restricted breeding range with only five known nesting colonies along the coasts of southern California and Baja California, Mexico (Shaffner 1982, Burness *et al.* 1999, Lefevre and Burness 2000). Such limited distribution makes the species highly vulnerable and a species of special concern (Burness *et al.* 1999). The largest of these colonies, on Isla Rasa in the Gulf of California, contains 22,500 breeding pairs representing between 90-95% of the world population (Velarde and Anderson 1994, del Hoyo *et al.* 1996). Within the species’ native range, an Elegant Tern bred with a lone ‘American’

Sandwich Tern (*T. s. acufflavida*) at Bolsa Chica Ecological Reserve in Orange County, California in 1995 and in 1997 (Collins 1997).

After breeding, Elegant Terns disperse north and south along the Pacific coast. Dispersal patterns appear related to oceanographic conditions, particularly El Niño Southern Oscillation events which affect the fluctuation of the bird’s key prey, the Northern Anchovy (*Engraulis mordax*) as well as other fish populations (Shaffner 1982, Velarde and Anderson 1994). In El Niño years, after nesting, they move north in large numbers along the California coast between June and September (Roberson 1985, Small 1994) with exceptional records as far north as British Columbia. By November, numbers begin to decrease at these northern latitudes (Small 1994) with most of the population wintering along the Pacific Coast between Nayarit, Mexico and Chile (Devillers and Terschuren 1977, Howell and Webb 1995). There are no known records of the species from Alaska.

The Elegant Tern is not considered to be a highly pelagic species, but is still essentially a Pacific coastal species. Away from the immediate coast, the species is reported with some regularity at the Salton Sea (McCaskie 1987). According to all maps, the tern’s winter range closely follows the coasts. Shaffner (1982) suggests that the Elegant Tern is primarily marine littoral or estuarine, and is rarely found in freshwater. Therefore observing one at an inland body of freshwater such as the Niagara River, located over 3,500 kilometers from the nearest location within its native range, is amazing. Even



Figure 14. Elegant Tern plunge-diving over Black Rock Canal from Squaw Island Park, Buffalo, NY, on 22 November 2013. *Photo: Tom Hince.*

more unbelievable is the fact that this particular individual accomplished this feat in only six to eight months after hatching. Foraging depends on location and season, and varies from offshore to nearshore in shallow lagoons and harbours. Migrant birds generally feed in harbours, estuaries, salt-ponds and lagoons while non-breeders commonly feed in lagoons and bays avoiding rough waters (del Hoyo *et al.* 1996). Its main food is schools of fish of five species and, very rarely, crustaceans (Shaffner 1986).

It hovers over water and plunge dives (Figure 14) for its food, primarily anchovies, with the other four major prey species being: sardines (*Clupeidae*), silversides (*Atherinidae*), gobies (*Gobiidae*), and mackerels (*Scombridae*).

While the freshwater fish species found on the Niagara River may have been a significant dietary change for the Elegant Tern, the colder November air and water temperatures likely provided an even greater challenge to the survival of this Pacific coast species.



Figure 15. Elegant Tern over Black Rock Canal from Squaw Island Park, Buffalo, NY, 22 November 2013.
Photo: Alan Wormington.

Extralimital Occurrences

In 1983 and 1992, unprecedented late summer invasions of Elegant Terns occurred in the Pacific Northwest that were attributed to the warm waters of El Niño. Small flocks were reported in British Columbia as indicated below in those two years and five subsequent years (Toochin *et al.* 2014). Currently, these British Columbia records represent all previously documented occurrences of this species in Canada.

British Columbia

21-22 August 1983. Adults (7), photographed, 112th Street, Boundary Bay, Delta, BC (Hunn and Mattocks 1984, Campbell 1990) and on 23 August 1983, same seven birds at Blackie Spit, White Rock, Surrey, BC (Campbell 1990).

22 August 1983. Adults (7), photographed, Wings tour to Esquimalt Lagoon, Colwood, BC (Anonymous 1983a, Toochin and Fennerman 2008) and on 23 August 1983, five adult birds seen and photographed at Esquimalt Lagoon, Colwood, BC (Campbell 1990).

23-24 August 1983. Adults (4-7), photographed, west end of Beecher Street, Crescent Beach, White Rock, Surrey, BC (Toochin 2012a).

1 September 1983. Adults (2), Active Pass, Victoria side, BC (Campbell 1990).

2 September 1983. Adult, Clover Point, Victoria, BC (Campbell 1990).

4 September 1983. Adults (2), photographed, Esquimalt Lagoon, Colwood, BC (Campbell 1990).

25 September 1983. Adults (2), Cadboro Bay, Victoria, BC (Anonymous 1983b, Campbell 1990).

25 October 1983. Adults (2), near the R.V.Y. Club, Victoria, BC (Anonymous 1984, Toochin and Fennerman 2008).

18 July 1992. Adult, at foot of 112th Street, Boundary Bay, Delta, BC (Siddle 1992, Davidson 1993, Dorsey 1996, Toochin 2012a).

18-25 July 1992. Adults (1-2), Roberts Bank Coal Port Jetty, Delta, BC (Siddle 1992, Davidson 1993, Dorsey 1996, Toochin 2012a).

19 July 1992. Adults (10), Clover Point, Victoria, BC (Toochin and Fennerman 2008).

25 July 1992. Adults (25), photographed, Tofino, BC (Toochin and Fennerman 2008).

25 July 1992. Adult, Clover Point, Victoria, BC (Siddle 1992, Toochin and Fennerman 2008).

2 August 1992. Adults (5), Deep Bay north of Parksville-Qualicum, BC (Siddle 1993, Toochin and Fennerman 2008).

8 August 1992. Adult, Clover Point, Victoria, BC (Bain and Holder 1992, Toochin and Fennerman 2008).

8 August 1992. Adult, Island View Beach near Victoria, BC (Bain and Holder 1992, Toochn and Fennerman 2008).

12-13 September 1992. Adults (1-6), photographed, Clover Point, Victoria, BC (Bain and Holder 1992, Toochn and Fennerman 2008).

19 September 1992. Adults (2), Sidney Island south of Sydney, BC (Siddle 1993, Toochn and Fennerman 2008).

21 September 1992. Adult, Active Pass, Victoria side, BC (Toochn and Fennerman 2008).

23 September 1992. Adult, Tsawwassen Ferry Jetty, Tsawwassen, BC (Toochn 2012a).

25 July 1993. Adult. Clover Point, Victoria, BC (Bain and Holder 1993, Toochn and Fennerman 2008).

5 September 1997. Adult, photographed, Clover Point, Victoria, BC (Toochn and Fennerman 2008).

4 October 1997. Adult, Jordan River, BC (Toochn 2012b).

20 August 1999. Adult, Cottam Point, Parksville, BC (James Bradley, pers. comm.).

24 May 2008. Adult, Jordan River, BC (Cecile 2008a, Toochn and Fennerman 2008, Toochn 2012b).

29 June- 1 July 2008. Adult, photographed, Esquimalt Lagoon, Colwood, BC (Toochn and Fennerman 2008).

20 July 2008. Adult, 10 Mile Point, Saanich, BC (Cecile 2008b, Toochn and Fennerman 2008).

1-3 November 2012. Adult, photographed, Cattle Point, Victoria, BC (message # 21974 BCVIBIRDS), (Toochn *et al.* 2014)

At present, there is still much more to be learned about the true range of Elegant Tern. For instance, recent records indicate that, on occasion, it ranges beyond the Pacific coast to which it was previously thought restricted. Burness *et al.* (1999) suggest that this tern species is a complete medium to long distance migrant. It is known to occasionally wander overland and also beyond its known southerly range limits. Up to 2001, there were only two accepted records of Elegant Tern on the Atlantic side of North America (http://www.oocities.org/steve_extra/elegant_main2.html). Kwatter (2001) suggests that at the beginning of this century there was a relatively limited pattern of vagrancy established for this species. However, particularly in the last 10 years, Elegant Tern has demonstrated an increasing record of expanded vagrancy. Extralimital occurrences of Elegant Terns away from the Pacific coast to along the Gulf and Atlantic coasts, particularly Florida, are well documented. Here are the pertinent details:

Virginia

10-20 June 1985. Adult, photographed, Chincoteague National Wildlife Refuge, Chincoteague, Accomack County, VA (Wilds 1985, Veit 1985).

5-16 September 2001. Chincoteague National Wildlife Refuge, Chincoteague, Accomack County, VA (Rottenborn and Brinkley 2007).

4 August 2004. Photographed, the Causeway, Chincoteague, Accomack County, VA (Heath 2006).

Florida

3-4 October 1999. First state record, adult, photographed, Honeymoon Island State Park, Dunedin, Pinellas County, FL (Bowman 2004).

2-12 December 2000 and 20-26 April 2001. Adult, photographed at various beaches and coastal waters of Ft. De Soto Park, Pinellas County, FL. The committee after reviewing the submitted descriptions concluded these two observations were likely of the same individual (Bowman 2004).

23 May 2002. Adult, photographed at Apollo Beach, Hillsborough County, FL (Bowman 2004). The bird appeared to be nesting with a Sandwich Tern (Paul *et al.* 2003).

October 1999 - May 2004. Perhaps a single adult male and its suspected hybrid progeny account for all reports and records of Elegant Tern in Pinellas, Hillsborough, and Manatee Counties over this five year period (Greenlaw, Bowman and Pranty 2014). Kwater (2001) reviews the history of these sightings with all published photographs located at http://home.earthlink.net/~bonniedabird/elegant_tern.htm. Accessed online on 23 June 2014.

24 May 2012. Adult, photographed, Colony Beach and Tennis Resort, North Lido Beach south of Longboat Key, Sarasota, Sarasota County, FL (Greenlaw 2012).

25-27 April 2013. Adult, photographed, Bowman's Beach, Sanibel Island, Lee County, FL (Greenlaw 2013).

22 October 2012. Photographed, gulfside beach opposite 948 Beach Road, Siesta Key, Sarasota County, FL (Greenlaw 2013).

23 May 2014. Audubon Florida Coastal Islands Sanctuary, Hillsborough County, FL. Unpublished, pending records committee adjudication.

27-28 October, 2014. Adult or second year, photographed and video taken of a possible hybrid Elegant Tern x Sandwich Tern. Siesta Key Beach, Sarasota County, Florida. Unpublished, pending records committee adjudication. See: https://www.youtube.com/watch?v=Y95pXk9-8P8&list=UUxPduJvYi6mM_3qAY-H9oDA.

Massachusetts

4-18 August 2002. Immature, South Beach, Chatham, Barnstable County, MA (Garvey and Iliff 2013).

23 July 2011. Adult, photographed, Sandy Point, Plum Island, Essex County, MA (Garvey and Iliff 2012).

Alabama

25 May 2011. Adult, photographed, Dauphin Island, AL (McConnell 2011, Kittle *et al.* 2011).

New Jersey

5 August-14 September 2012. Photographed, Sandy Hook, Monmouth County, NJ (Boyle *et al.* 2013).

New York

3 July 2013. Cupsogue Beach County Park, Westhampton, Suffolk County, NY. Unpublished, pending records committee adjudication (Willie D'Anna, pers. comm.).

The Elegant Tern is virtually unknown from inland California except at the Salton Sink where one or two are encountered most years (Guy McCaskie, pers. comm.). The Salton Sink is a geographic sink within the Salton Trough in the Coachella and Imperial valleys of southeastern California. Drainage to the sink collects in the Salton Sea which occupies the lowest area of the sink. Flocks of up to 10 individuals have been recorded but normally only stay for a day or two. Keep in mind, Elegant Terns nest in the Gulf of California to as far north as the area around the mouth of the Colorado River, or less than 160 kilometres south of the Salton Sink (Guy McCaskie, pers. comm.). Although it is impossible to say for certain, we believe that an Elegant Tern (Figure 15) ending up in the eastern Great Lakes could easily have reached this location by way of the Atlantic coast, although a bird wandering to the Gulf coast and then moving north and east through the interior of the continent under the influence of strong weather systems would seem equally plausible.

Inland Occurrences in North America

Excluding the observations from the Salton Sink in California and the sightings below from Arizona, it becomes immediately apparent how extremely rare and wide spread extralimital inland Elegant Tern occurrences are in North America.

Arizona

30 May 1988. Painted Rock Dam, west of Gila Bend, Maricopa, County, AZ (Stejskal and Williams 1988).

May/July 1990. Two birds, Tucson, Pima County, AZ (Stejskal and Rosenberg 1990).

18-29 July 2001. Photographed, Avra Valley Waste Water Treatment Plant, Avra Valley, Pima County, AZ (Rosenberg and Jones 2001). Found deceased 31 July 2001, specimen at University of Arizona.

21 July 2001. Whitewater Draw Wildlife Area, McNeal, Cochise County, AZ (Rosenberg and Jones 2001).

7 June 2009. Tucson, Pima County, AZ (abc.azfoABCReports_Public_View_list.aspx.org/ABCVote/).

7 June 2009. Lakeside, Navajo County, AZ (abc.azfoABCReports_Public_View_list.aspx.org/ABCVote/).

7-8 June 2009. Lake Patagona, Patagonia, Santa Cruz County, AZ (abc.azfoABCReports_Public_View_list.aspx.org/ABCVote/).

28 May 2010. Lake Havasu City, Mohave County, AZ (abc.azfoABCReports_Public_View_list.aspx.org/ABCVote/).

31 May 2010. Agua Fria River, north of Phoenix, Maricopa County AZ (abc.azfoABCReports_Public_View_list.aspx.org/ABCVote/).

31 May 2010. Glendale, Maricopa County, AZ (abc.azfoABCReports_Public_View_list.aspx.org/ABCVote/).

19 June 2011. San Ignacio Golf Club, Green Valley, Pima County, AZ (abc.azfoABCReports_Public_View_list.aspx.org/ABCVote/).

23-25 May 2014. Adult, photographed, Patagonia Lake State Park, Patagonia, Santa Cruz County, AZ. and 4-7 June 2014 at the north pond, Reid Park, Tucson, Pima County, AZ. Unpublished, pending records committee adjudication. These two observations are likely of the same individual.

New Mexico

7-8 May 2001. Adult, photographed, Burn Lake, Las Cruces, Dona Ana County, NM (Williams III 2001a).

18 July 2001. Adult, photographed, B-Square Ranch, Farmington, San Juan County, NM (Williams III 2001b).

2 May 2010. Adult, photographed, Bosque del Apache National Wildlife Refuge, Socorro, Socorro County, NM (Williams III 2010a).

2 June 2010. Adult, photographed, Morgan Lake, San Juan County, NM (Williams III 2010b).

23 September 2013. Adult photographed, B-Square Ranch, Farmington, San Juan County, NM (Sartor O. Williams III, pers. comm.).

Texas

25 July 1889. Specimen (BMNH No. 91-10-20-92), Corpus Christi, Nueces County, TX (Oberholser 1974, AOU 1983, Lockwood and Freeman 2014).

23 December 1985. Photographed, Lake Balmorhea, Balmorhea, Reeves County, TX (Williams 1985, Lockwood and Freeman 2014).

4-18 November 2001. Two birds, photographed, East Beach, Galveston Island, Galveston, Galveston County, TX (Lockwood and Freeman 2014).

14 September 2013. Adult, photographed, Bolivar Flats, Galveston, Galveston County, TX. Unpublished, pending records committee adjudication (Mark Lockwood, pers. comm.).

1 November 2014. Adult, photographed, Bolivar Flats, Galveston, Galveston County, TX. Unpublished, pending records committee adjudication (Mark Lockwood, pers. comm.).

Minnesota

28 June 2007. Photographed, Little Pelican Island, Leech Lake, Walker, Cass County, MN (Mortensen 2008).

Figure 16. Elegant Tern over Black Rock Canal from Squaw Island Park, Buffalo, NY, on 22 November 2013. Photo: James M. Pawlicki.



It is of interest to note that in addition to the above sightings away from the Pacific coast, the Elegant Tern has been recorded several times in the Old World. Vagrants are reported in Europe from Belgium, Denmark, England, Germany, France, the Netherlands, Northern Ireland, Portugal and Spain (AOU 1998, Burness *et al.* 1999, Kwater 2001, Shoch and Howell 2013). In addition, one or more Elegant Terns have bred with ‘Eurasian’ Sandwich Terns in France from 1974 to 1985 (Olsen and Larsson 1995). Two additional records are also known from South Africa and Argentina (Kwater 2001).

The estimated world population of Elegant Tern is 51,000 - 90,000 individuals (Kushlan *et al.* 2002). This species is considered Near Threatened as it has a restricted breeding range, with more than 90% of the breeding population being restricted to a single island. It is also subject to large population fluctuations in response to climatic effects, and could be

negatively affected by climate change, human intrusions and overfishing (Bird-life International 2014). The bird’s life-span is unknown, presumably similar to other related species: long lived, with high survivorship between breeding seasons (Burness *et al.* 1999).

This Elegant Tern (Figure 16) represents a first record for Ontario (Holden 2014) and for the Great Lakes, and also becomes the first occurrence of this species in Canada away from British Columbia. In addition, it also represents the second record of the species in New York State. The New York State Avian Records Committee (NYSARC) will shortly review and adjudicate on the first record, a 1st or 2nd summer individual present 3-7 July 2013 at Cupsogue Beach County Park in Westhampton, Suffolk County, New York (Willie D’Anna, pers. comm.). This record of the bird’s occurrence in Buffalo will soon be circulated for review by the NYSARC as well.

It is interesting to note that on 17 November 2013, Jerry Talkington reported a Royal Tern flying northeast along the Lake Erie shoreline past Sunset Park in Willoughby, Lake County, Ohio. Just three days later the Elegant Tern was found by Victoria Rothman at Beaver Island State Park. After seeing the photographs of the Elegant Tern on the Niagara River, Talkington (pers. comm.) is convinced this was the same immature orange-billed tern that flew past him at Sunset Park in Ohio. Given the extreme rarity of an orange-billed tern on Lake Erie in November, one would have to reasonably believe this was indeed the same individual that later appeared on the Niagara River.

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Literature Cited

- American Ornithologists' Union.** 1983. Checklist of North American Birds. 6th Edition. American Ornithologists' Union, Washington, D.C.
- American Ornithologists' Union.** 1998. Checklist of North American Birds. 7th Edition. American Ornithologists' Union, Washington, D.C.
- Anonymous.** 1983a. Bird observations, August 1983. *Victoria Naturalist* 40(3):44.
- Anonymous.** 1983b. Bird observations, September 1983. *Victoria Naturalist* 40(3):45.
- Anonymous.** 1984. Bird observations, October 1983. *Victoria Naturalist* 40(4):60-61.
- Bain, M. and P. Holder.** 1992. Cross Canada Round-up: August and September 1992 - British Columbia. *Birders Journal* 1:329-331.
- Bain, M. and P. Holder.** 1993. Cross Canada Round-up: June and July 1993 - British Columbia. *Birders Journal* 2:176-177.
- BirdLife International.** 2014. Species fact-sheet: *Thalasseus elegans*. Retrieved online from <http://www.birdlife.org> on 06/06/2014.
- Bowman, R.** 2004. Fourteenth report of the Florida Ornithological Society Records Committee for 2001-2002. *Florida Field Naturalist* 32(1):7-33.
- Boyle, B., T. Boyle, P. Guris and T. Reid.** 2013. New Jersey Bird Records Committee Annual Report 2013. Retrieved online from <http://www.njbrc.net>.

- Burness, G.P., K. Lefevre and C.T. Collins.** 1999. Elegant Tern (*Sterna elegans*), In The Birds of North America, No. 404 (A. Poole and F. Gill, Eds.) The Birds of North America Inc., Philadelphia, PA.
- Campbell, R.W.** 1990. BC Wildlife winter report 1989-1990. British Columbia Naturalist 28(2):10-12.
- Cecile, D.** 2008a. Spring season - British Columbia. North American Birds 62:93-95.
- Cecile, D.** 2008b. Summer season - British Columbia. North American Birds 62:605-606.
- Collins, C.T.** 1997. Hybridization of a Sandwich Tern and an Elegant Tern in California. Western Birds 28:169-173.
- Cooper, J.G.** 1868. Some recent additions to the fauna of California. Proceedings of the California Academy of Sciences 4:3-13.
- Davidson, G.S.** 1993. BC Field Ornithological Records Committee Annual Report for 1992. British Columbia Birds 3:18-19.
- del Hoyo, J., A. Elliott and J. Sargatal.** 1996. Handbook of the Birds of the World, Volume 3: Hoatzin to Auks. Lynx Edicions, Barcelona, Spain.
- Dorsey, J.** 1996. Vancouver Rare Bird Records Committee Report for 1992 and 1993. Vancouver Natural History Society Discovery 25:66-70.
- Devillers, P. and J.A. Terschuren.** 1977. Some distributional records of Migrant North American Charadriiformes in coastal South America. Le Gerfaut 67:107-125.
- Gambel, W.** 1848. Contributions to American ornithology. Proceedings of the Academy of Natural Sciences of Philadelphia 4:126-129.
- Garvey, M.P. and M.J. Iliff.** 2012. Sixteenth Report of the Massachusetts Avian Records Committee. Retrieved online from <http://www.maavianrecords.com/home/annual-reports/report-/16>.
- Garvey, M.P. and M.J. Iliff.** 2013. Bird Observer 39(3):133-153.
- Greenlaw, J.S.** 2012. Florida Ornithological Society Records Committee, Annual Board Report for 2012. Retrieved online www.fosbirds.org/records_committee_reports.
- Greenlaw, J.S.** 2013. Florida Ornithological Society Records Committee, Annual Board Report for 2013. Retrieved online www.fosbirds.org/records_committee_reports.
- Greenlaw, J. S., B. Pranty, and R. Bowman** (2014). The Robertson and Woolfenden Florida bird species: An annotated list. Special Publication 8. Florida Ornithological Society, Gainesville, FL, USA.
- Grinnell, Joseph.** 1919. Notes on the Elegant Tern as a Bird of California. Condor 21(6):230-234.
- Heath, S.A.** 2006. Annual Report of the Virginia Avian Records Committee. Raven 77(1):56-61.
- Holden, B.R.** 2014. Ontario Bird Records Committee Report for 2013. Ontario Birds 32(2):54-81.
- Howell, S.N.G. and S. Webb.** 1995. A guide to the birds of Mexico and northern Central America. Oxford University Press. New York.
- Hunn, E.S. and P.W. Mattocks.** 1984. The fall migration - northern Pacific coast region. American Birds 38:236-240.
- Jiguët, F.** 1997. Appearance of a first-autumn hybrid Lesser Crested x Sandwich Tern. Birding World 10:427-428.
- Kittle, P., G. Jackson and R. Duncan.** 2011. Spring sightings (March-May 2011). Alabama Birdlife 57:39-50.
- Kushlan, J.A. Steincamp, M.J. Parsons, K.C. Capp, J. Cruz, M.A. Coulter, M. Davidson, I. Dickson, L. Edelson, N. Ellio, R. Erwin, M. Hatch, S. Kress, S. Milko, R. S. Miller and S. Mills.** 2002. Waterbird conservation for the Americas. U.S. Fish & Wildlife Service National Publications. Clearinghouse, Shepherdstown, WV, U.S.A.

- Kwater, E.** 2001. First record of Elegant Tern in Florida, Florida Field Naturalist 29(3):90-94.
- Lefevre, K.** and **G.P. Burness.** 2000. A closer look: Elegant Tern. *Birding* 32:146-153.
- Lockwood, M.W.** and **B. Freeman.** 2014. The TOS Handbook of Texas Birds, second edition. Texas A&M University Press, College Station, Texas.
- McCaskie, G.** 1987. The nesting season: Southern Pacific region. *American Birds* 41:1486-1489.
- McConnell, S.W.** 2011. The spring migration: Alabama and Mississippi region. *North American Birds* 65:457-461.
- Mortensen, S.** 2008. Minnesota's First Elegant Tern. *Loon* 80(1):14-15.
- Oberholser, H.C.** 1974. *The Bird Life of Texas.* University of Texas Press, Austin, Texas.
- Olsen, K.M.** and **H. Larsson.** 1995. Terns of Europe and North America. Princeton University Press, Princeton, New Jersey.
- Paul, R.T., A.F. Paul, B. Pranty, A.B. Hodgson** and **D.J. Powell.** 2003. Probable hybridization between Elegant Tern and Sandwich Tern in west-central Florida. *North American Birds* 57(2):280-282.
- Pyle, P.** 2008. Identification Guide to North American Birds, Part II, Anatidae to Alcidae. Slater Creek Press, Point Reyes Station, California.
- Roberson, D.** 1985. Monterey birds. Monterey Peninsula Audubon Society, Carmel, California.
- Rosenberg, G.H.** and **R.M. Jones.** 2001. The Nesting Season, *North American Birds* 55(4):465.
- Rottenborn, S.C.** and **E.S. Brinkley.** 2007. Virginia's Birdlife: An Annotated Checklist. 4th edition. Virginia Society of Ornithology.
- Shaffner, F.C.** 1982. Aspects of the reproductive ecology of the Elegant Tern at San Diego Bay. Masters Thesis: San Diego University, San Diego, California.
- Shaffner, F.C.** 1986. Trends in Elegant Tern and northern anchovy populations in California. *Condor* 88:347-354.
- Shoch, D.T.** and **S.N.G. Howell.** 2013. Occurrence and identification of vagrant "orange-billed terns" in eastern North America. *North American Birds* 67(2):188-209.
- Sibley, D.A.** 2000. National Audubon Society. *The Sibley Guide to Birds.* Alfred A. Knopf, New York.
- Siddle, C.** 1992. The summer season - British Columbia/Yukon region. *American Birds* 46:1167-1170.
- Siddle, C.** 1993. The autumn migration - British Columbia/Yukon region. *American Birds* 47:136-139.
- Small, A.** 1994. California birds: their status and distribution. Ibis Publishing Company, Vista, California.
- Steele, J.** and **C. McGuigan.** 1989. Plumage features of a hybrid juvenile Lesser Crested x Sandwich Tern. *Birding World* 2:391-392.
- Stejskal, D.** and **G.H. Rosenberg.** 1990. The nesting season: Southwest Region, Arizona. *American Birds* 44:1164-1167.
- Stejskal, D.** and **J. Witzeman.** 1988. The spring season: Southwest Region, Arizona. *American Birds* 42:469-472.
- Toochin, R.** 2012a. Checklist of the Rare Birds of the Vancouver Area: Casual and Accidental Records. Revised edition. Retrieved online from <http://www.geog.ubc.ca/biodiversity/efauna/documents/BirdsRareVancouver%20X.pdf>.

Toochin, R. 2012b. Rare birds of the Juan de Fuca Strait checklist area (British Columbia). Revised edition. Retrieved online from <http://www.geog.ubc.ca/biodiversity/efauna/documents/BirdsRareJuandeFucaXZA.pdf>.

Toochin, R. and **J. Fennerman.** 2008. British Columbia rare bird records. Retrieved online from <http://www.geog.ubc.ca/biodiversity/efauna/documents/BC RareBirdsList> November 2008.pdf.

Toochin, R., J. Fenneman and **P. Levesque.** 2014. British Columbia Rare Bird List: Casual and Accidental records. 3rd Edition. *In* Klinkenberg, Brian, editor, 2013. E-Fauna BC: Electronic Atlas of the Fauna of British Columbia [www.efauna.bc.ca]. Lab for Advanced Spatial Analysis, Department of Geography, University of British Columbia, Vancouver, British Columbia. [Date accessed: 26 April 2014].

Veit, R.R. 1985. The changing seasons. *American Birds* 39:879-884.

Velarde, E. and **D.W. Anderson.** 1994. Conservation and management of seabird islands in the Gulf of California: setbacks and success. *In* Nettleship, D.N., Burger, J., Gochfeld, M. (ed.), *Seabirds on islands: threats, case studies and action plans*, pp. 229-243. Birdlife International, Cambridge, UK.

Wilds, C. 1985. Elegant Tern at Chinco-teague National Wildlife Refuge. *Raven* 56:38-39.

Williams, F. 1985. The winter season: Southern Great Plains Region. *American Birds* 40(2):298.

Williams III, S.O. 2001a. Spring Migration, *North American Birds* 55(3):337.

Williams III, S.O. 2001b. The Nesting Season, *North American Birds* 55(4):468.

Williams III, S.O. 2010a. Spring Migration, *North American Birds* 64(3):470-471.

Williams III, S.O. 2010b. The Nesting Season, *North American Birds* 64(4): 625-626.

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