
BIRDS

THE IDENTITY OF SASKATCHEWAN'S FIRST MAGNIFICENT FRIGATEBIRD (*Fregata magnificens* Mathews) CONFIRMED

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On Sunday afternoon, 18 July 2010 a cottage owner at Leslie Beach, Fishing Lake, Saskatchewan saw what she thought was a frigatebird "harassing fishermen trying to steal their fish. Apparently the fishermen needed to hold sticks above their head as the bird repeatedly swooped at them. That evening she said the bird roosted in some dead trees near the road". She told Stan Shadick and May Haga "she had identified the bird as a frigatebird but rejected that idea when she looked at its range map in a bird book!" (Saskbirds #19217 Shadick).¹ On Tuesday afternoon 20 July Jackie and Ron Simpson saw a large unfamiliar bird perched atop a light standard at Leslie Beach and managed to take several photographs (Photo 1). They never saw the bird fly (Saskbirds #19214 Luterbach, Saskbirds #19217 Shadick).¹ A careful search for the bird in the area by Shadick and Haga on 23 July was unsuccessful.

Subsequently there was an unsubstantiated report of a single

frigatebird in Saskatoon along the river on 22 August, and perhaps south of the city two weeks earlier by K. Kirchmeier (Saskbirds #19324 Shadick).¹ Then on 5 Sept at 1445hr Gordon and Reta Taylor watched what they believed was a female Magnificent Frigatebird flying east over the Last Mountain Lake National Wildlife Area until it disappeared from view (Saskbirds #19371 Taylor).¹

Frigatebirds or Man of War birds are large, highly aerial seabirds, five species being found around tropical oceans of the world. The normal range of the Magnificent Frigatebird (*Fregata magnificens*) includes coastal waters of Mexico and southern Florida and thus is the species most likely to stray north along the coasts to southern Canada and even more rarely into the continental interior. These vagrants are often discovered after powerful tropical storms have apparently taken them off course. To complicate matters, two other species of frigatebird have been recorded as ultra rarities in the Great Plains of North



Photo 1 - Unidentified frigatebird perched atop a light standard at Leslie Beach, Fishing Lake SK, 20 July, 2010 - Jackie and Ron Simpson.

America. The Lesser Frigatebird (*F. ariel*) has occurred once in Wyoming 11 July, 2003 and once in Michigan 18 Sept, 2005. And the Great Frigatebird (*F. minor*) has occurred once in Oklahoma on 3 Nov, 1975. Both of these species' normal range is centred in the southern Pacific and Indian Oceans.^{2,3}

The two other species of

frigatebird have more restricted ranges and have not been recorded in North America. The Christmas Frigatebird (*F. andrewsi*) of the Indian Ocean is critically endangered. The Ascension Frigatebird (*F. aquila*) of the tropical Atlantic Ocean has wandered to Great Britain: one specimen initially being misidentified as a Magnificent (<http://en.wikipedia.org/wiki/>

Ascension_Frigatebird).

Which then of the three widespread species was the Fishing Lake bird – Great, Lesser or Magnificent?

The identification problem:

Identifying species of frigatebirds has been called one of the most difficult challenges for seabird observers. Frigatebirds are very long lived reaching sexual maturity at 10 years of age. They go through as many as 8 recognizable plumage stages each often confusingly similar to those of different species at comparable ages.³ As a result, many frigatebirds cannot be identified to species with certainty. However, Howell et al³ provide insightful guidance on identifying frigatebirds, which I followed in examining the Fishing Lake bird photo.

Determining age and sex of the bird:

By careful examination of our bird's plumage its age and sex could be determined relatively easily. This is an important starting point according to Howell et al.³ Adult males and females have different plumages; males of all 3 species are almost entirely black and some are difficult to separate. Fortunately for us, our bird with a combination of extensive white and

black feathering could be either a female or sub adult. Our bird has a black head, throat and belly with the black feathering extending anteriorly to a point in the lower white chest. This is typical of both adult female Magnificent and Lesser frigatebirds.

Adult female Great Frigatebirds have a pale gray-white throat and can be eliminated from our search. Both Christmas and Ascension frigatebirds are eliminated from our investigation because their adult female plumages do not match our bird.

Continuing to look at plumage for clues to separate the two remaining species, the best characteristic, different patterns of white in the underwing, cannot be seen in this photo. Adult female Lessers have a white collar extending around the back of the neck but this too is not visible in the photo. There is even evidence of iridescence, shared by adults of both species, visible on one of the primaries in the left wing. The brown feathering on the upper wing, the ulnar bar, is found in both species and does not help identify our bird.

We are left with Lesser and Magnificent frigatebirds as candidates for further study.

Determining size of the bird:



Adult frigatebird on post (July 2010) - Jackie and Ron Simpson



Adult frigatebird on post (July 2010), note white plumage - Jackie and Ron Simpson

At this stage, the bird's behaviour aids us. Frigatebirds do not readily rest on the water because their feathers are not strongly waterproofed. Instead they habitually perch on high objects - tree branches, wires, towers, boat rigging, and masts. Fortunately our bird was photographed on a manmade perch, a metal light standard, which could perhaps provide an accurate size reference for comparison with the bird.

After investigation I found the light standard was manufactured a short distance west of the Fishing Lakes, at Humboldt, by Commercial Industrial Manufacturing Ltd where Kevin Ulrich was able to give me the exact dimensions of their standard. The pole tapers from an octagonal shape to round before entering the light housing. At the point the pipe enters the housing it has a diameter of 60mm (2 3/8 inches), just to the right of the perched bird in the photo (Photo 2).

I contacted Michel Gosselin, Collection Manager (Birds), Canadian Museum of Nature, Ottawa who kindly offered his experience taking measurements from the Saskatchewan photo of the female frigatebird (Photo 2). By using the known 60mm measurement as a 'reference ruler' the length of two body parts

on the bird could be derived. He **estimated the female's left wing chord to be 642 mm and culmen to be 112 mm in length.** Gosselin stated, "...these are certainly minimum figures because the bird is behind the pole and certainly not perfectly perpendicular to the camera". These measurements could then be compared to those published for Lesser and Magnificent frigatebirds.

Adult female Lesser Frigatebird from the South Pacific: wing chord 547 mm (534-562 mm); and bill (presumably culmen) 88 mm (87-90.5 mm).⁴ Adult female Magnificent Frigatebird: wing chord 628-674 mm (mean 650 mm)⁵; and exposed culmen (upper mandible) 109.2-130mm (mean 121mm)⁵, and 113-133mm.⁶

After comparing the three sets of measurements, it is evident that the estimates for the Saskatchewan frigatebird are significantly larger than those of Lesser Frigatebird, eliminating it as a candidate. Instead, the estimates of the wing chord and culmen fall *within* the expected range of measurements for an adult female Magnificent Frigatebird, according to Palmer.⁵

Conclusion

By using a combination of plumage characteristics and measurements taken from the Simpson's

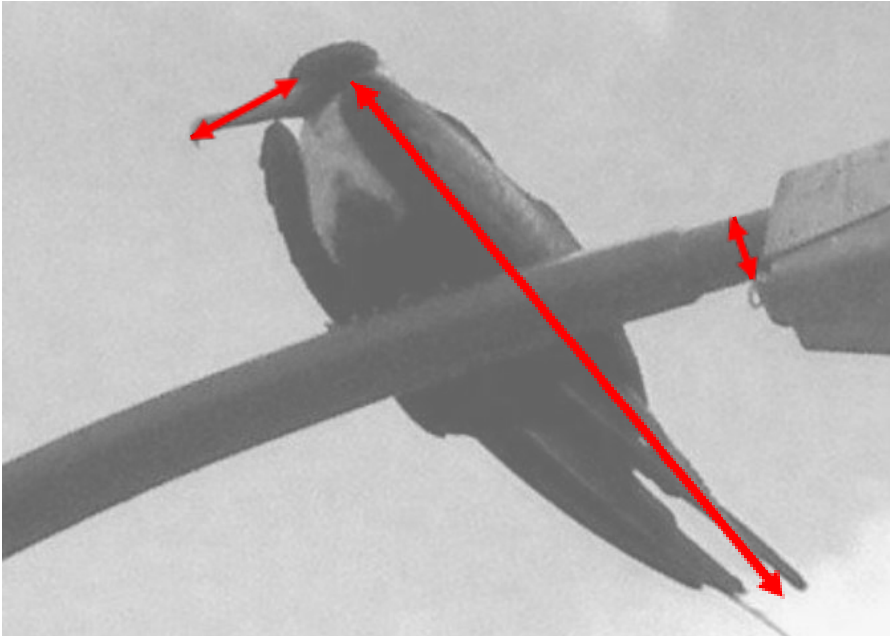
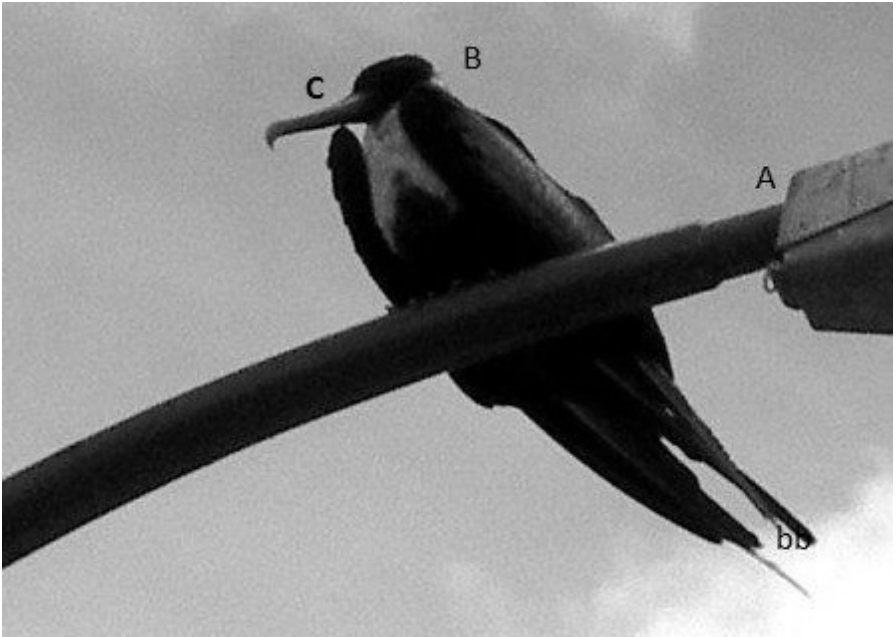


PHOTO 2 - Frigatebird with arrows marking 3 measurement points: pole diameter closest to the light housing (A); wing chord from wrist bend (B) to tip of longest visible primary feather (BB); culmen or upper mandible (C). - Jackie and Ron Simpson (photo), M. Gosselin (measurements).

photograph, and with help and a little good luck, the first occurrence of a vagrant Magnificent Frigatebird in Saskatchewan was confirmed. And it is possible that the bird remained in the province after it was first recorded on 18-20 July, visiting more than one location before being last seen on 5 September.

Magnificent Frigatebird is the only species of frigatebird that has been recorded in Canada. There are a few previous records of vagrants to waters off Newfoundland and Nova Scotia, Quebec's St Lawrence River, Ontario's Great Lakes and waters off British Columbia. The Saskatchewan bird is the first found in the Prairie Provinces.

Two cyclones, Hurricane Alex (25 June - 2 July) followed by a second smaller tropical depression (8 - 9 July) passed over NW Gulf of Mexico, bringing heavy rain and winds to southern Texas (<http://www.srh.noaa.gov/crp/?n=riograndeflood>). These strong weather systems preceded the appearance of the frigatebird in Saskatchewan.

Acknowledgements

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1. Saskbirds web forum: <https://groups.yahoo.com/neo/groups/Saskbirds/info>; see individual numbered posts with originator's name.
2. Dunn JL, Alderfer J (2011) Field guide to the birds of North America. National Geographic Society, 6th edition.
3. Howell SNG, Lewington I, Russell W (2014) Rare birds of North America. Princeton University Press.
4. Marchant S, Higgins PJ (eds) (1990) Handbook of Australian, New Zealand and Antarctic birds. Oxford University Press, Melbourne.
5. Palmer RS (1962) Handbook of North American birds. Vol.1: Loons through Flamingos. Yale University Press.
6. Pyle P (2008) Identification guide to North American birds. Part II, Anatidae to Alcidae. Slate Creek Press, Point Reyes Station, California.

