

RED-BILLED TROPICBIRD*Phaethon aethereus*15 October 1998
Time: 0815-0818South Marsh Island 147
Phillips 66 oil platform
28° 13' 39.946" N Lat; 92° 00' 59.801" W Long
Gulf of Mexico, Vermilion Parish, Louisiana
79 miles from nearest land
Water depth: 235 feetFor submission to:Louisiana Bird Records Committee
Donna Dittman, Secretary
Museum of Natural Science
119 Foster Hall
Louisiana State University
Baton Rouge, LA 70803-3216DETAILSWEATHER:

Partly cloudy. E winds, actual speed unavailable (inaccurate readings of easterly winds result from interference with platform structures). Beaufort scale 4, suggesting winds of 11-16 knots (13-18 mph). Wind history -- Yesterday ENE and steady at 6-10 knots (7-12 mph), moving to E this morning, and progressing to SSE by this evening.

OBSERVER:Stacy Jon Peterson, Migration over the Gulf Project observer, Fall 1998
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This report was composed the day of the sighting, using information from the video record as well as tape recorded thoughts made two hours post sighting. It has since undergone various revisions for organization and clarity until the date of printing--28 December 1998.

OBSERVATION:

At 0815 on Thursday, 15 October, I was sitting on the W side of the platform 104' above water level performing the day's first flight census for LSU's "Migration over the Gulf" project. I noticed a seabird approach the NW corner of the platform just above helipad level (approx. 135' el.). My first impression of the bird viewed without binoculars as it approached was a winter plumage Royal Tern (*Sterna maxima*). The white body, reddish bill, and white crown highlighted by a black eye stripe that appeared to circle around the nape of the neck were plainly

visible. When viewed with binoculars (B & L 10X42 Elite), however, the bird was clearly a tropicbird. This bird had a stubby bill and long white tail streamers, perhaps as long as the bird itself.

As the bird approached and hovered near the NW corner of the helipad, I observed it for a few seconds from approx. 45' below. The outer primaries on the upper wing were extensively dark extending up to, and covering, the primary coverts. The under wing was pale. The upper back and neck was moderately barred dark instead of being clean white, giving the brief impression of a shaggy, winter plumage Royal Tern at that angle. The rest of the bird was largely white.

As the bird swung away I rushed up to the next deck for my video camera (Sony Handycam, model CCD-TR917). I was able to film this bird for several seconds as it made another more distant approach from the west. It then circled counter-clockwise swooping low to the water before gaining altitude and eventually vanishing to the SSW. After I lost sight of the bird in the video I was able to refind it with binoculars. I watched it circle a couple more times at distance invisible to the naked eye before it vanished in the distance.

The video is largely colorless, owing to lighting conditions and distance. Fortunately it does clearly illustrate the presence of extensive black on the primaries and primary coverts, which is perhaps the most striking feature (other than the long tail) on this bird and certainly the most distinct feature at a distance. The long tail streamers, pale crown, and black line through the face, though present and discernible, are not as stunning in the video. Using Snappy Video Snapshot software (PLAY, Inc.) I was able to isolate and preserve a number of useful frames showing these field marks to some degree -- plus a couple frames from distant views which show the dusky back (indicative of barring). The dark webbing of the feet are also visible against the base of the white under tail.

DISCUSSION:

Today's bird was clearly one of the three species of tropicbird (*Phaethon sp.*). Royal Tern, adult jaegers, and any other seabird for that matter were eliminated by the combination of stubby reddish bill, white body, extensive black primaries, and long white tail streamers. The South Pacific-roaming Red-tailed Tropicbird (*P. rubricauda*) is eliminated rather quickly due to the presence of extensively dark primaries, barring on the back, and white tail streamers on today's bird. That leaves us with two options, both of which I'd argue might be expected in these waters -- White-tailed Tropicbird (*P. lepturus*) by our proximity to the Dry Tortugas, FL where they are seemingly annual, and Red-billed Tropicbird by its previous record of appearance in this area. According to Harrison (1983 & 1987), White-tailed Tropicbird can be eliminated by the same combination of features that eliminated Red-tailed. However, due in part to the variability of bill color in White-tailed Tropicbird, its closer "regular" proximity to our territory, and the unexpected status of any tropicbird in Louisiana waters, it is probably a good idea to go into more detail.

The presence of long white tail streamers suggests an age beyond immature in any species -- simply an adult. Harrison (1983) states that faint gray mottling on nape and hind neck is consistent with adult Red-billed Tropicbird, and illustrates an adult with the dark nuchal bar almost connecting at the nape. NGS and Harrison differ in bill color description for immature Red-billed. NGS shows a red bill on the immature and states that it "varies from yellow to reddish," while Harrison states and shows the immature's bill is "yellowish." When they reach maturity is another matter. Red-tailed Tropicbirds reach breeding maturity in about 4 years (Russell, in press), so it is assumed that Red-billed Tropicbirds are similar. Further complicating this for me is the fact that I have been unable to determine when morphological maturity is reached. Is a third year bird (sub adult) morphologically distinct from a breeding adult? Even considering the conundrum that these questions involve, I feel very comfortable in aging this bird very close to mature adult plumage, considering all the characteristics observed.

Focusing our comparisons on adult tropicbirds, and assuming it is possible to see an adult reddish billed White-tailed Tropicbird (which does occur -- NGS 1987 and Harrison 1983) in the Gulf of Mexico, allows us to more easily isolate the identity of the bird seen today. Both White-tailed and Red-billed Tropicbirds show dark in the primaries, but this dark patch is proportionately less extensive in White-tailed Tropicbird. In this species the dark is restricted to the outer primaries. In the Red-billed Tropicbird the dark patch even covers the primary coverts



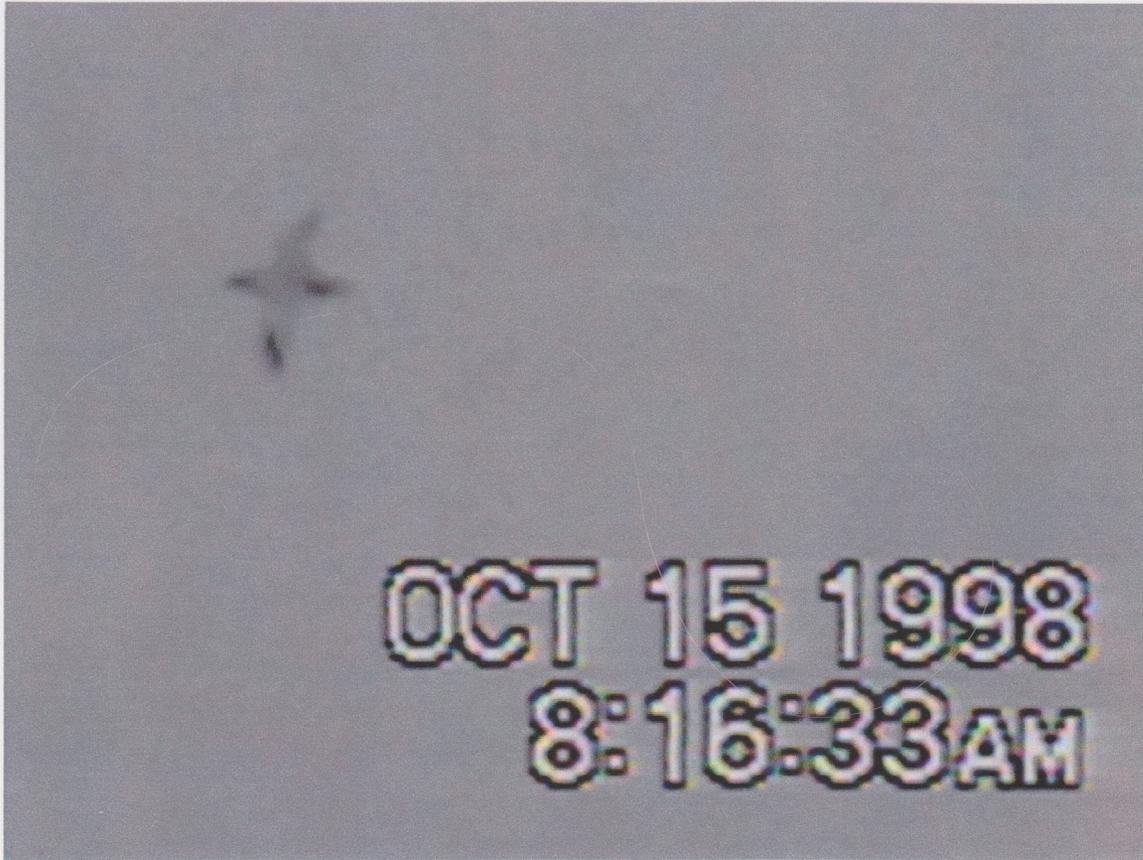
The above picture is a frame when the bird was closest to me (during the video session). Note the pale crown, dark eye line extending to a dark patch on the nape, and the long tail streamers. These streamers appeared significantly longer in real life and from other angles, and were of course white. The bird is looking down toward the lower right corner in this picture.



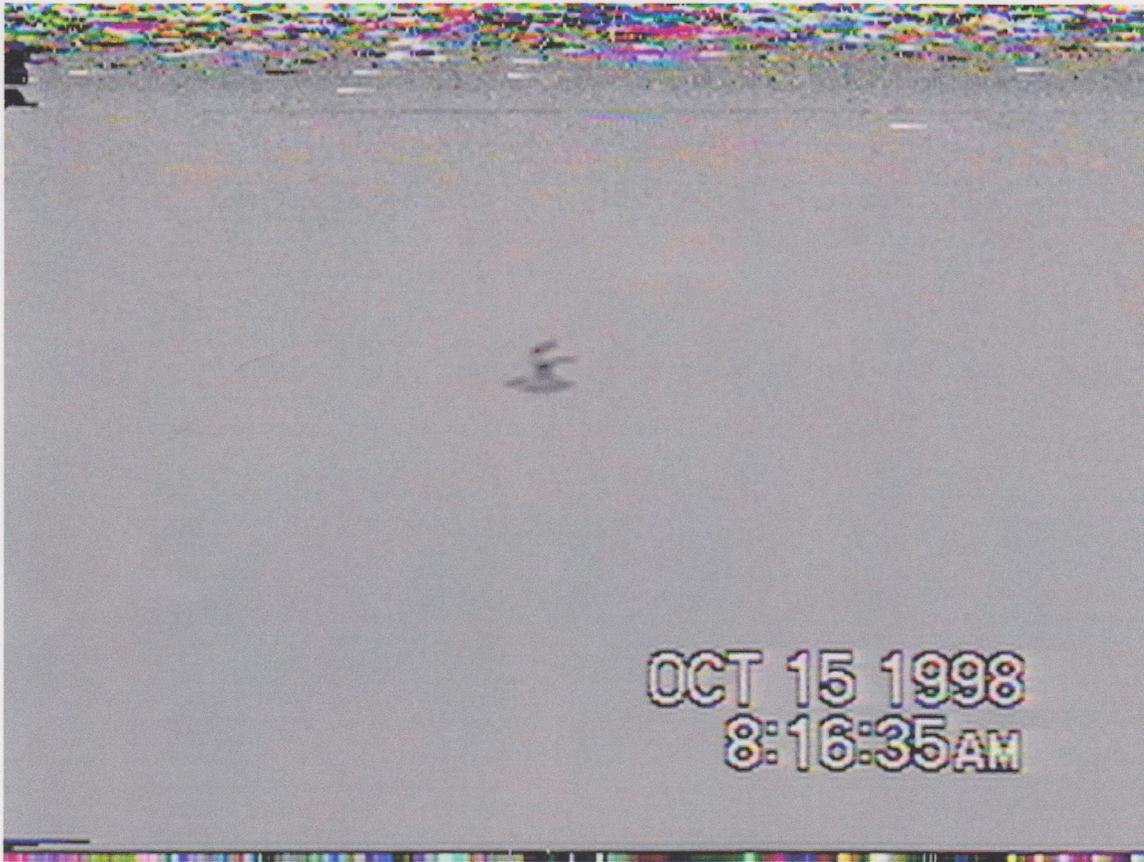
One can get a little better idea of the length of the tail, which is visible as a faint line behind the bird in this photo. The bird is traveling away from us and banking left.



Further evidence of a barred back supporting Red-billed Tropicbird. The bird is flying left to right. Note the dark primaries, white upper wing, gray back (supportive of barring), and white tail. If this were White-tailed Tropicbird, the back should show white just like the upper wing, and tail, and the diagonal black bars on the upper wing should stand out. Also note the elongated appearance of the dark primary patch. White-tailed should show a more squared patch instead of the rectangle seen here and in the other frames. The tail streamers are visible as a very faint white line curving slightly up behind the bird.



This is a frame where the bird was almost at its farthest distance from me, but it is perhaps the best shot of the bird's back and upper wing. This photo was significantly enlarged electronically. It shows the back and upper wings which lack the black bars of White-tailed Tropicbird. Since the dark primary patches are clearly visible, one would expect dark diagonal wing bars against a white background to be distinct as well. The bird is traveling right to left.



This distant shot shows some of the bulk of the bird in powered flight against the wind. This photo was not enlarged, but was digitally lightened.

forming a longer bar instead of a block on the wing tip. Furthermore, the remaining upper wing of an adult White-tailed Tropicbird is white with a black diagonal bar extending from the tip of the inner secondaries to the carpal joint of each wing. The video obtained of today's bird definitely does NOT show this dark bar across the upper wing. Instead, while the white on the upper wing and the extensively dark primaries do show up well, the back and rest of the upper wing, when visible, is depicted as grayish -- consistent with barring in a distant view. Furthermore, the presence of a white crown set off by dark line around eye circling around the nape on a bird with a barred back is only possible with Red-billed Tropicbird. Even immature White-tailed Tropicbirds lack this extensive nuchal bar.

The video shows this bird soaring as well as powered flight into and with the wind. I would characterize the flight as strong and forceful. As the smallest tropicbird, White-tailed Tropicbird is supposed to show a more delicate body structure and more graceful flight with faster wing beats. Perhaps someone with more comparative tropicbird experience could review the video and comment on this aspect.

The origin of this adult Red-billed Tropicbird is an interesting question. According to Harrison (1983) the nearest breeding grounds are for the race *P. a. aethereus* which breeds in the Fernando Noronha, Ascension, and St. Helena Islands in the tropical Atlantic. Another race, *P. a. mesonauta*, breeds in the Virgin Islands in the Caribbean as well as the Cape Verde Islands and the islands off Senegal. It is interesting to note that Hurricane Georges passed close to those areas before entering the Gulf of Mexico and making landfall in Biloxi, MS in late September. Whether or not this bird was driven by that storm is probably indeterminable.

I have limited experience with tropicbirds -- my previous sightings have all been of Red-billed (one immature off Cape Hatteras, NC with Brian Patteson, et. al., 27 August 1995 - and - an amazing five of assorted ages off Los Angeles, CA with Kimball Garrett, Arnold Small, et. al., 31 August 1996). I understand that White-tailed Tropicbird's published range more closely incorporates the Gulf of Mexico than does Red-billed's range (Harrison 1983). Without previous knowledge, I believed the former to be the expected species. A "White-tailed Tropicbird" comment is even made in the video, until I realized that the black on the wings was too extensive and other field marks didn't add up... My current understanding is that in actuality, Red-billed is currently on the LA state list (3 previously accepted records), while White-tailed is absent.

RESOURCES:

Field Guide to the Birds of North America. 1987. National Geographic Society. Washington, DC.

Harrison, P. 1987. Seabirds of the World: A Photographic Guide. Princeton University Press. Princeton, NJ.

Harrison, P. 1983. Seabirds: An Identification Guide. Houghton. Boston.

Russell, R.W. In press. Comparative demography and life-history tactics of seabirds: implications for conservation and marine monitoring. In: Ecology and Conservation of Long-lived Marine Animals (edited by J.A. Musick, to be published by the American Fisheries Society).

ILLUSTRATIONS:

The photos on the next few pages are selected stills from the video taken of the bird. Some pictures are enlarged segments of the original frame. In addition, because most of the film was backlit and underexposed, the stills were digitally enhanced to lighten the picture or increase contrast to facilitate viewing, using Snappy Video Snapshot software; PLAY, Inc. They are printed using HP DeskJet 722C color printer.