Caribbean Colombia: Pelagic Bird observations in 2014 and 2015

Caribe de Colombia: observaciones de aves pelágicos entre 2014 y 2015

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Abstract
Two large areas of Caribbean Colombia, covering over 20,000 sq km combined, were surveyed during June to August 2014 and again during December 2014 to February 2015. The distances from the coast of mainland Colombia ranged from 40 km to 250 km. Two observers were employed on shifts during all daylight hours for a total of 81 days, with a third observer on call. The total numbers of birds seen were low, but included sightings of species not previously confirmed from Carribbean waters off mainland Caribbean Colombian. These included the first confirmed national record of Band-rumped Storm Petrel *Oceanodroma castro* for the country, new records of White-tailed Tropicbird *Phaethon lepturus* and first confirmed Caribbean records of Red-footed Booby *Sula sula*. An unusual pink-breasted plumage of Audubon's Shearwater *Puffinus lherminieri* was observed, which may be due to stain or pollutant staining.

Keywords Pelagic, Colombia, Atlantic, new records.

Resumen
Dos largas areas del Caribe colombiano que cubren cerca de 20,000 kilometros cuadrados fueron evaluados durante junio y agosto del 2014 y nuevamente en diciembre 2014 a febrero 2015. La distancia a la costa fue entre 40 km y 150 km. Dos observadores durante 81 días efectuaron observaciones durante el dia, con un tercer observador de guardia. El número total de aves observadas fue bajo, pero incluyó registros interesantes de especies no confirmadas previamente en aguas del Caribe colombiano. Estos incluyen el primer registro confirmado del paíño de Madeira (*Oceanodroma castro*), nuevos registros del rabijunco común (*Phaethon lepturus*) y primeros registros confirmados del Caribe del piquero patirrojo (*Sula sula*). Se observó un plumaje de color rosa de pecho inusual de Pardela de Audubon (*Puffinus lherminieri*) que al parecer se debería por manchas de contaminantes.

Parablas clave pelagico, Colombia, Atlántico, nuevos registros

Introduction

Our knowledge of the pelagic birdlife of Colombia's Caribbean is limited at present (although see Naranjo 1994, Estela 1994, Estela *et al*. 1994 and other publications cited below). The region is not a significant fishery and is away from major shipping routes: the Panama Canal traffic mostly moves well north of the Colombian shelf. As a result, the area has been subject to few studies, none of them particularly intensive. Now, the offshore Oil & Gas industry has started investigations into deep waters off Colombia. As a result, an opportunity has arisen to make extended observations during preliminary work that may involve bathymetric and environmental base line surveys.

Methods

From late June 2014 until early August 2014 and from mid-December 2014 to the middle of February 2015, we carried out continuous daylight observations of all marine mammals and bird life in various locations in the Colombian Caribbean. The observations did not include migration periods. As a result, very few non-marine species were seen. The areas surveyed are shown in Figure 1. Water depths varied from 2,200 m to 3,800 m in the north area and from 600 to 3,000 m in the southern area. Much of the surveyed area was between 50 km and 100 km offshore, and all of it was within the 200 nautical mile recommendation for acceptable continental national records in South America (Remsen *et al*. 2015) and all observation points fall within Colombian national waters.

There was no fishing activity observed. No enticements such as 'chumming' were used to attract birds to the vessel, in order to ensure we had an unbiased sample of seabird presence and movements.

A northern study area, off Santa Marta, was surveyed in three periods, 11 July 2014 to 2 August 2014, 19 to 22 December 2014 and 18 January to 10 February 2015. In this northern area, the weather was consistently windy; 64% of the July/August survey period had winds at or greater than Beaufort force 8, gale or above. The winds were north east to easterly. Although sea conditions were poor, with wave heights often over 3 m and up to 6 m on occasions, visibility was good and there was very little rain. During the worst of the weather, very few birds were seen. Indeed, during a 4-day period in mid-July, no birds were seen at all. The short survey in December in the northern area was cut short by heavy seas. Early January 2015 had very poor weather in the Colombian Caribbean with more gale force winds and choppy seas (see also Donegan & Huertas 2015 in relation to the similar situation on San Andrés Island). The weather was only marginally better in late January with the last two days of the survey in February being the only days with

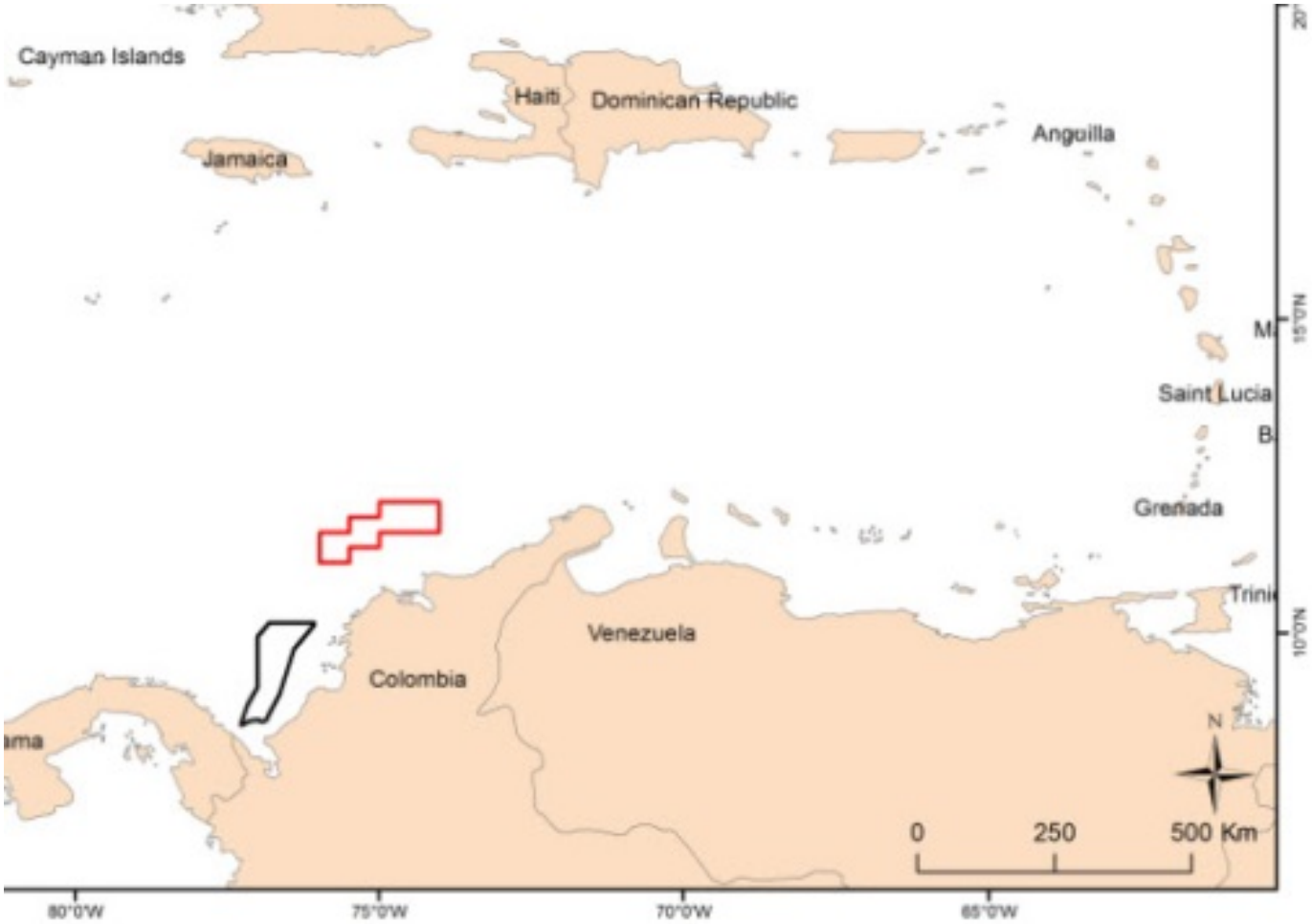

Figure 1. Observation Areas. The northern area (north of Santa Marta, marked red) had 51 days' observation. The southern area (west of Cartagena, marked black) had 40 days' observation.

slight seas in the northern area. Again, in January, several days passed without a bird being seen.

A southern study area, to the west of Cartagena, had better sea conditions during both periods of observation from 26 June 2014 to 9 July 2014 and 25 December 2014 to 17 January 2015 and both periods had a longer species list and greater numbers of birds observed than the northern area.

Results

The numbers of birds seen were low. In both the boreal summer and winter periods, up to four continuous days resulted in no observations at all. The most regularly seen species were boobies Sulidae, particularly, Masked Booby *Sula dactylatra* (Plate 1) and Brown Booby *Sula leucogaster* (Plate 2). However, their distributions were very different (Table 1; Figs. 2-3). Brown Boobies were common in the southern area both in July and January but much rarer in the northern area. The opposite was true of Masked Boobies. In the western area, 51 individual Brown Boobies were seen, with a greater density in the southern section of it, but only a single Masked Booby was seen. In the northern area, just five individual Brown Boobies were observed but twenty individual Masked Boobies were seen at seven widely spread locations.

The only other species reaching double figures of observations during the 81 days of observation was the Magnificent Frigatebird *Fregata magnificens*, which is an abundant species on Colombia's coasts and sometimes drifts further out to sea, but these were observed only in the southern area, where seven were seen.


Plate 1. Masked Boobies regularly used the ship's updraft to wait for fish to surface and often stayed with the vessel for several hours (Javier Alarcón, 12 January 2015).

Plate 2. Brown Boobies were the commonest sightings, but far rarer in the north than the south (Javier Alarcón, 27 December 2014).

In addition to these three commoner species, Red-footed Boobies *Sula sula* were seen on two days during January in the southern area and one each in July and January in the northern area (Plates 7-8). Two were brown phase and two were white phase. No white-tailed brown phase birds were observed. Red-footed Boobies would stay on the boat for longer periods than any other species, resting and preening whilst perched on masts. One bird seen in the northern area stayed around the vessel from early 29 January 2015 until nightfall on 30 January 2015. Relevant coordinates for these observations and distances from the shore in each case are set out in Table 1. Red-footed Booby is known from various sight records in Colombia and has been considered to occur broadly in the Carribean region, but the species was only recently 'confirmed' for the country based on birds photographed on Malpelo in the Pacific (López-Victoria & Estela 2007; see Donegan *et al*. 2010). This species has been recorded previously on San Andrés Island (McNish 2003) but these records represent the first confirmed records of this species for the Colombian continental Caribbean region.

Table 1: Red-footed Booby *Sula sula* observations.

Date	No. of individuals	Coordinates	Distance from shore
2/8/14	1	11^{0}50.55'N, 75^{0}33.10'W	56 km
15/1/15	1	09^{0}40.85'N, 76^{0}50.15'W	89 km
16/1/15	1	09^{0}14.91'N, 76^{0}58.42'W	68 km
29/1/15	1	12^{0}03.36'N, 75^{0}17.86'W	236 km

A White-tailed Tropicbird *Phaethon lepturus* stayed with the vessel for 15 minutes on 7 February 2015 in the northern area (11^{0}38.95'N, 75^{0}38.27'W, 43 km from shore) using the ship's updraft to hover over the bridge. It arrived just after 14.00 hrs and in the bright sunny weather it looked a beautiful pure white bird with translucent wings. The dark primaries and covert marks were visible through the wings from underneath. The bird showed no barring when the upper-wing was seen as it left us and it appeared to be a fully adult bird. The bill was a bright orange. The streamers were quite long but not the extreme length that the observers had seen before in this species. The assumption is that it was an adult but not in full breeding plumage. No photograph was taken. There are only previously sight records of this species for Colombia (Hilty & Brown 1986; Salaman *et al*. 2010) of which this is another example, albeit one by multiple observers experienced with the species.

Two Band-rumped Storm Petrels *Oceanodroma castro* were observed on 28 June 2014 at *c*.13:05 in the southern study area. They were photographed 300 m from the boat (Plates 3,4) but seen closer, at 10^{0}03.24'N, 76^{0}24.39'W, 77 km distance from shore.

Plate 3 Two Band-rumped Storm Petrels (Paola López, 28 June 2014). Original shot and close-up.

The relatively direct flight often with slightly bowed wings and including long glides immediately suggested Band-rumped Storm Petrels. The narrow bright white rump band, square ended tail, with no feet visible beyond the tail plus the greyish covert bar that did not quite reach the leading edges of the wings confirmed the identification. The wings were either too dark or rather long for Elliot's Storm-Petrel *Oceanites gracilis*, Wilson's Storm-Petrel *Oceanites oceanicus* or Leach's Petrel *Oceanodroma leucorhoa* and the tail too square-ended (Harrison 1983). Two photographs (Plates 3-4) were obtained of the two birds, which in our view are sufficient to confirm the identification without doubt. This species has been reported previously based on 1983 sight records in the Pacific region of Colombia (Hilty & Brown 1986) but there are, to our knowledge, no previous confirmed national records.

Plate 4. One of the same two Band-rumped Storm Petrels as in Plate 3, showing the wing covert bar well (Paola López). Original shot and close-up.

Other notable observations included Black-capped Petrels *Pterodroma hasitata* during both the winter and summer observation periods in the southern area. Dates and coordinates for Black-capped Petrels observations were 26 June 2014 ($10^0$27.83'N, $76^0$18.27'W), a flock of four on 28 June 2014 ($10^0$09.28'N, $76^0$20.41'W) and singletons on 6 January 2015 ($09^0$30.92'N, $76^0$54.90'W) and 26 January 2015 ($12^0$21.95'N, $74^0$04.03'W).

Audubon's Shearwaters *Puffinus lherminieri* were also seen in the southern area in the summer period, with 6 individuals observed on 30 June 2014 and one each on 6 and 7 July 2014. None were seen during the winter months. At least three individuals showing pink underparts like the individual in Plate 5 were observed in June. The assumption is these were individuals from the subspecies breeding in offshore Panama (*loyemilleri*) or Providencia Island in the Caribbean. The pink coloration was not an artifact of photography. It may be from soil staining in the burrow or could have been caused by pollutants, although it looks remarkably neat for staining. This unusual plumage feature should be investigated further. If caused by soil-staining, then these birds must breed during this period.

Plate 5. Audubon's Shearwater *(Puffinus lherminieri*) (Paola López, 30 June 2014).

Table 2: Audubon's Shearwaters *Puffinus lherminieri* observations.

Date	No. of individuals	Coordinates	Distance from shore
30/6/14	2	$09^0$03.55'N, $76^0$52.66'W	46 km
30/6/14	4	$09^0$02.51'N, $76^0$51.11'W	44 km
6/7/14	1	$09^0$54.45'N, $76^0$55.41'W	114 km
7/7/14	1	$10^0$15.61'N, $76^0$56.32'W	139 km

Two large shearwaters were seen in both July and January in the northern area on 24 July 2014 at $12^0$05.58'N, $75^0$19.12'W and 21 December 2014 at $12^0$02.08'N, 74° 03' 50".W", but they were too distant to be identified. They looked too pale for Sooty Shearwater *Puffinus griseus*. Cory's Shearwater *Calonectris diomedea* was suspected and this species has been recorded recently in the Caribbean from a salvaged specimen (Ruiz-Guerra & Cifuentes-Sarmiento 2010; see Donegan *et al*. 2011).

Plate 6. A Brown Noddy welcomed us to the northern area on the but was the only individual seen in the 81 days of observation (Israel Ribeiro, 19 December 2012).

Terns were seen occasionally throughout the survey but were never common. Four species were positively identified. They were Brown Noddy *Anous stolidus* on 19 December 2014 in the northern Area ($12^0$00.84'N, $74^0$19.12'W) when a single bird rested on the vessel (Plate 6). A flock of 8 Black Noddies *Anous minutus americanus* were seen on 1 July 2014 close to the boat in the southern area ($09^0$23.28'N, $76^0$58.86'W). Two Forster's Terns *Sterna forsteri* in non-breeding plumage were seen on 4 July 2014 in the southern area ($08^0$59.63'N, $77^0$07.75'W). A single Royal Tern *Thalasseus maximus* was seen in the northern area ($12^0$22.67' $74^0$48.10') on 30 July 2014. On four occasions, large feeding flocks of mixed terns were seen, often accompanied by boobies, and, in the southern area, Magnificent Frigatebird. These feeding flocks were pale terns i.e. not noddies, and up to 20 in number. They were seen on the 12 and 20 July in the northern area and the 3 and 4 January in the southern area. The 4 January flock included birds of different sizes. Royal Tern, 'Commic' Tern *Sterna spp.* and Sandwich Tern *Thalasseus sandwichensis* were likely all involved. Royal Terns, Common Terns, and Sandwich Terns were seen commonly within 10-20 miles of the shore, but were otherwise absent and rare in deep water.

The only gull species identified was Laughing Gull *Leucophaeus atricilla* on 1 and 6 January 2015 in the southern area and on 27 January 2015 in the northern area. Several distant gulls seen on three occasions were consistent with Laughing Gull, but they were too distant to identify positively.

In the southern area, Pomarine Skuas/Jeagers *Stercorarius pomarinus* (Plates 9 & 10), were seen three times on 9, 12 and 16 January 2015. The pale phase bird shown in Plate 10 travelled with the boat and was seen very closely. Dark phase birds were more distant, at 200-300m (Plate 9). There are very few records of this species in Colombia (though see Estela *et al*. 2004, Salaman *et al*. 2008).

Only 8 observations of non-pelagic species were made and 5 of these were all on 1 August 2014. Herons and Hirundines dominated these observations. The Purple Martin was perhaps unexpected compared to other congeners. It was a bright, shiny male. The dates of these observations suggest that passage was just starting when we left the area in early August.

Table 3: non-pelagic species recorded.

Species	**Date**	**W/N area**	**Coordinates**
Great Egret *Ardea alba*	05/07/14	W	$09^0$19.24N, $77^0$07.75'W
Great Blue Heron *Ardea herodias*	01/08/14	N	$12^0$20.21'N, $74^0$36.01'W
Osprey *Pandion haliaetus*	01/08/14	N	$12^0$20.21'N $74^0$33.07'W
Black-necked Stilt *Himanotopus mexicanus*	08/07/14	W	$09^0$59.94'N $76^0$28.63'W
Brown-chested Martin *Progne tapera* (Plate 11)	31/12/14	W	$09^0$28.19'N $76^0$36.15'W
Purple Martin *Progne subis*	01/08/14	N	$12^0$20.20'N, $74^0$25.14'W
Hirundinidae sp., Likely *Stelgidopteryx* sp.	01/08/14	N	$12^0$20.23'N, $74^0$44.36'W
Barn Swallow *Hirundo rustica*	01/08/14	N	$12^0$19.98'N, $75^0$00.35'W

Table 4 Three commonest species, numbers of days and numbers of individuals observed

Area	**August**	**Observation Days**	**Brown Booby Days/Individuals**	**Masked Booby Days/Individuals**	**Magnificent Frigatebird Days/Individuals**
W	June/July	16	13/51	1/1	7/13
N	July/August	28	3/4	7/7	0
W	December/ January	24	18/21	3/4	5/8
N	December/ January/February	23	4/5	14/20	0

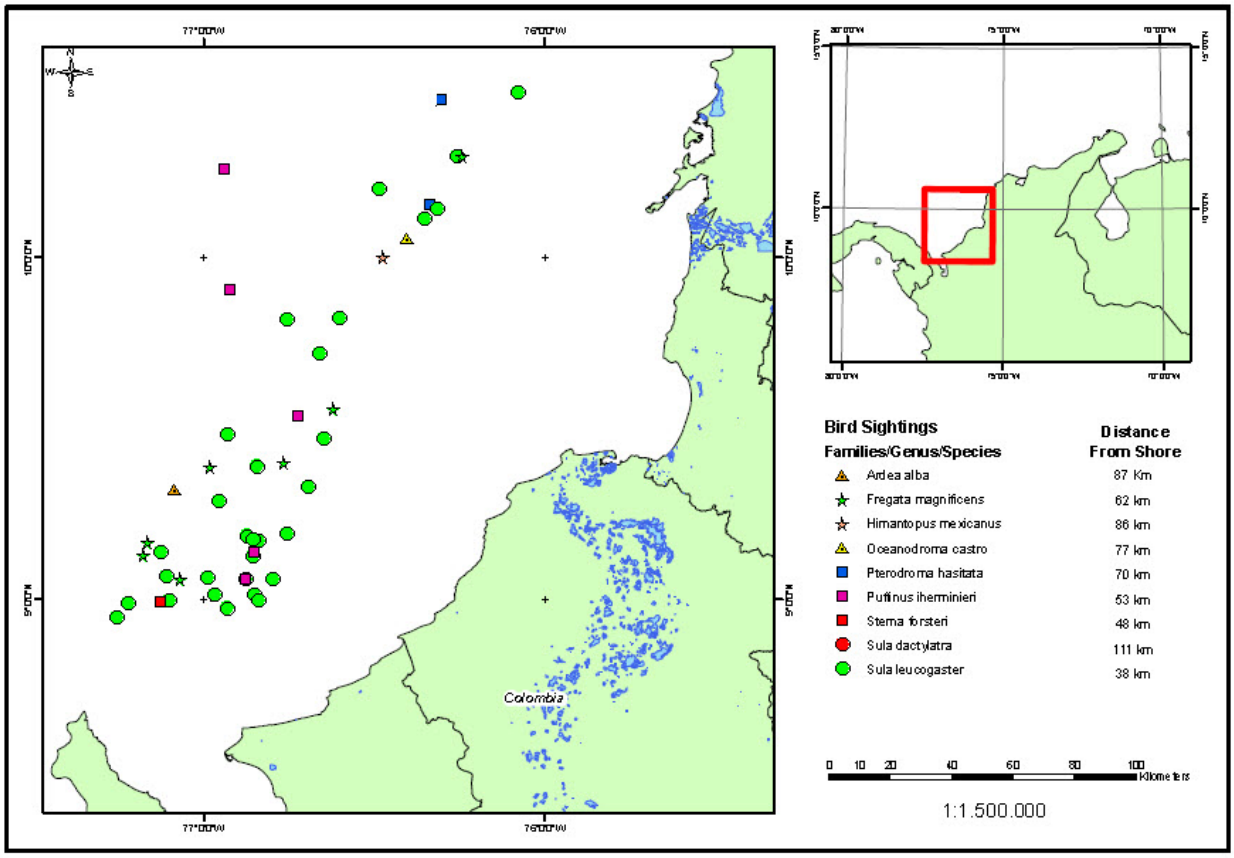

Figure 2. Western Area sightings during June 26th to July 12th. Minimum distance from shore for the observation of each species is listed.

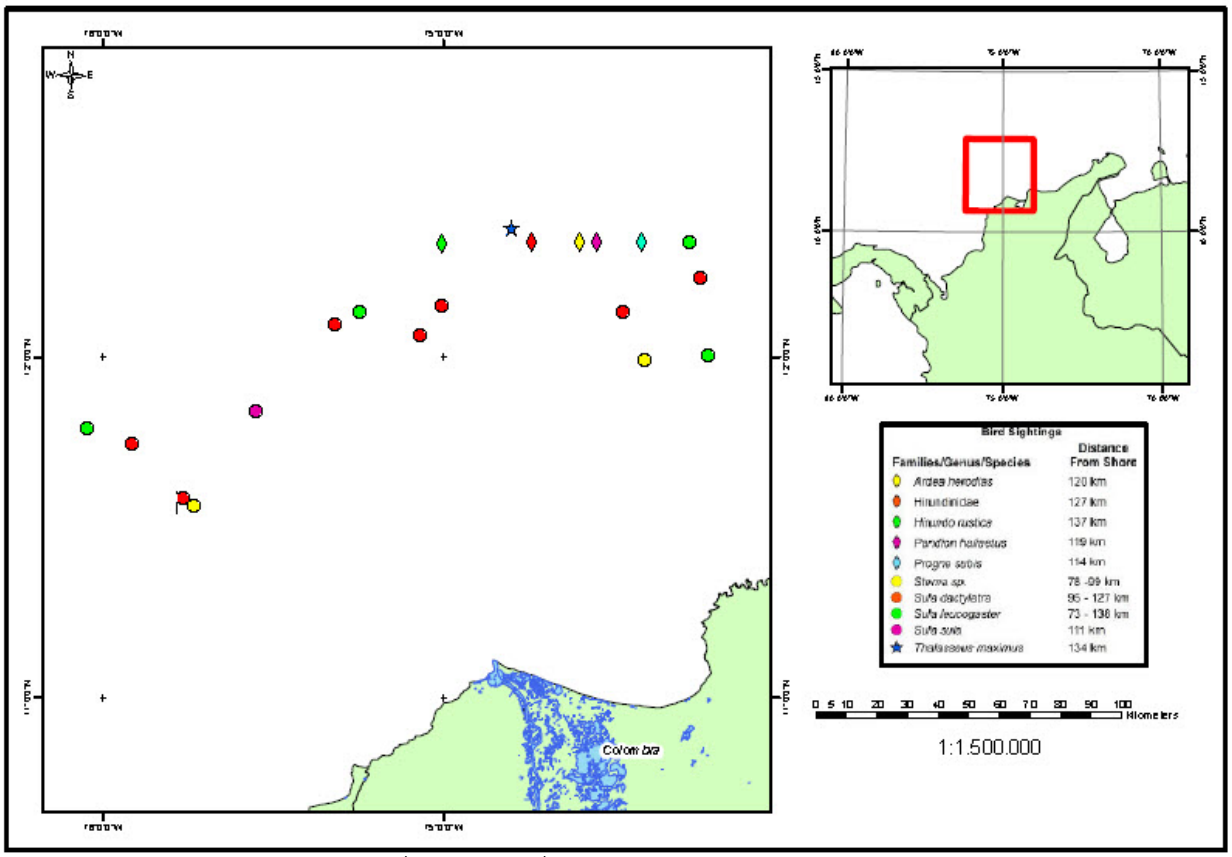

Figure 3. Northern Area sightings during July 11th to August 2nd Minimum distance from shore for the observation of each species is listed (with a range for Brown and Masked Boobies).

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Plate 7. Red-footed Boobies were not common, only 4 were observed but when seen they usually stayed for a long time (Israel Ribeiro, 16 January 2015).

Plate 8. Two brown phase and two white phase Red footed Boobies were seen (Paola López).

Plate 9. A distant Dark morph Pomarine Skua on (Israel Ribeiro, 9 January 2015).

Plate 10. A much closer view of a pale phase Pomarine Skua (Javier Alarcón, 12 January 2015).

Plate 11. Herons and Hirundines dominated the non-pelagics and during January only this Brown-chested Martin was seen out of habitat (Israel Ribeiro, 31 December 2014).