

Phaethon aethereus (Red-billed Tropicbird or Boatswain Bird)

Family: Phaethontidae (Tropicbirds)

Order: Pelecaniformes (Pelicans and Allied Waterbirds)

Class: Aves (Birds)



Fig. 1. Red-billed tropicbird, *Phaethon aethereus*.

[http://neotropical.birds.cornell.edu/portal/species/overview?p_p_spp=106716, downloaded 6 November 2014]

TRAITS. The red-billed tropicbird, also referred to as the boatswain bird or booby, is deemed the rarest of the three tropicbird species (Restall et al., 2007). The bird is characteristically built for flying and can be distinguished by the mottled black patterning across its feathered white back, along with its crimson (deep red), slightly downward-curving beak, its black wing tips and its two elongated central tail feathers that can measure up to 50cm in length, which is almost half the length of the bird's body (Fig. 1). *P. aethereus* also bears a black stripe through the eyes and shortened feet that are positioned posteriorly on the body (Hoyo et al., 1992). Their plumage is waterproof thus allowing for indefinite periods of gliding over the ocean (Perrins, 2003). Seabirds are monomorphic (all of similar appearance) and so sexual dimorphism may be deemed limited. Males and females are similar, however, males are typically larger than females and possess longer bills and larger wing chords (Nunes et al., 2013). The voice of the bird often takes the form of a shrilling scream that can be long and repetitive in nature.

ECOLOGY. The red-billed tropicbird is widely distributed and can be found in the warm waters of tropical regions throughout the Atlantic Ocean, Red Sea, Eastern Pacific Ocean, the Caribbean Sea, the Arabian Gulf and the Indian Ocean (Blake, 1977). Several distinct breeding populations

occur within the Galapagos, West Indian and Cape Verde Islands. *P. aethereus* is a pelagic bird, in that it spends the majority of its time on the open sea water and ventures to the land only for breeding purposes (Fig. 2). These birds do not usually flock but can be encountered in small groups in nesting areas (ffrench, 2004). Nesting is apparent on Isla de Plata (Ecuador), on St. Giles and Little Tobago off the eastern coast of Tobago and can be described as a Trinidadian vagrant (Restall 2007). On these islands nesting occurs with the end of the year in December, and extends through April (ffrench, 2004).

ACTIVITY. *P. aethereus* is a diurnal creature (active during the day). This facilitates efficient foraging over the open seas and flight away from nesting grounds. They are pelagic and so they are mostly witnessed in flight above open water. Birds can be seen flying at a distance of 15 m above the water, as a unit, in close formation while gliding with their tails downwards and their wings outstretched (ffrench, 2012). Migratory activity is not distinct but movement can take place in a trans-equatorial manner (Perrins, 2003).

FORAGING BEHAVIOUR. The red-billed tropicbird beats its wings in a rapid manner, in efforts to sustain its strong, energetic flight high above the open waters. The bird is a superb swimmer and is often seen floating over the water with its tail protruding upwards (Hilty and Brown, 1986). It forages alone and can be seen hovering prior to plunge-diving in order to obtain its prey at the surface. Its diet encompasses mainly fish and squid as well as flying fish which it catches in the air (ffrench, 2012). The jagged edges on its beak as well as its closed wing technique, facilitates the capture of these slippery food items. The bird is not commonly seen on the shore due to the fact that its short, paddled-shaped feet are set too far back on its body. This creates awkward movement on land, where the birds are seen utilizing their wings in order to push their bodies forward while gliding on their stomachs.

COMMUNICATION. Its high pitched screams can be heard while the birds are in flight or nesting. Its sound characteristically a “kee-kee-krrt” sound in flight and a sharpened “keek” on rare occasions (ffrench, 2012). Their method of calling reflects that of ship’s boatswain (bosun) and for this reason they commonly referred to as “Boatswainbirds”.

SEXUAL AND PARENTAL BEHAVIOUR. *P. aethereus* is monogamous and alterations in breeding pairs are assumed to be due to the death of one of the partners. Breeding is apparent on a year-round basis and the birds gather 4-6 weeks before periods of nesting in order to scrutinize appropriate sites and locate safe nesting areas for the upbringing of their young. Courtship begins with a long, high pitched shriek and involves the couple engaging in flight together. At times one partner can be seen hovering over the other and taking on an orientation that allows for contact with the tip of its tail-streamer. After the acrobatically synchronized, courtship flight the pair distance themselves from the flock and flies to their nesting ground where copulation commences. The nests are scrapes on the ground and can be constructed by both members of the pair but on most occasions it is built solely by the male who reoccupies a nesting site and awaits the return of his mate. The male loosens the substrate on the ground with his bill and constructs the nest with his sharp-clawed feet (Perrins, 2003). Breeding sites are selected near to cliff crevices or rocks that are in close proximity to the shoreline (Fig. 3). The female lays one white egg, blotched with red-brown colour. The egg is incubated by both parents for a period of 42-44 days during which the nesting area is defended. The mates take turns foraging, for period of about 13 days per partner

and when they return the young birds take the bill of the adult into their gape (opened mouth) (Perrins, 2003).

JUVENILE BEHAVIOUR. The egg hatches and the offspring usually fledges after 70-85 days. Following the point at which the young bird's wing muscles are fully developed the parents abandon the nest. The young birds gain no flight practice and are seldom accompanied by their parents. The immature birds take flight 3 months after hatching and are distinguished by the appearance of a distinct black crest, yellow bill, black-tipped tail and the absence of elongated central tail streamers (Restall, 2007). The young birds adjust to independence as they are unassisted. The juveniles return to the nesting ground upon achieving sexual maturity. Birds of this species commence breeding when they are around 2-5 years old during which time they become faithfully partnered.

AGONISTIC BEHAVIOUR. Though *P. aethereus* is not known for displaying territorial acts they often compete for nesting sites and can be viewed stabbing and interlocking bills. They also emit screeching sounds to alert conspecifics and attain dominance (Perrins, 2003).

ANTIPREDATOR BEHAVIOUR. *P. aethereus* are adapted for flying and manage to evade predators by means of intricate flight patterns, although they are assaulted and injured by marauding frigatebirds which pounce on their food supply (Ffrench, 2012).

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Fig. 2. The highly pelagic red-billed tropicbird.

[<http://birdsguide.blogspot.com/2013/02/tropicbird.html>, downloaded 6 November 2014]



Fig. 3. Red-billed tropicbird characteristically nesting in a rocky place.

[<http://oxford-consultants.tripod.com/Galapagos.htm>, downloaded 6 November 2014]

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