

PALM BEACH DOLPHIN PROJECT FACT SHEET

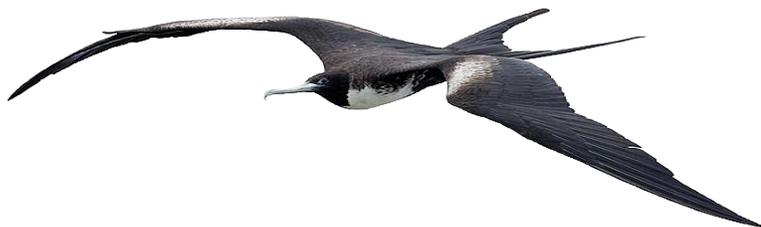


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MAGNIFICENT FRIGATEBIRD

Fregata magnificens

CLASS: Aves
ORDER: Suliformes
FAMILY: Fregatidae
GENUS: Fregata
SPECIES: magnificens



A long-winged, fork-tailed bird of tropical oceans, the Magnificent Frigatebird is an agile flier that snatches food off the surface of the ocean and steals food from other birds. It breeds mostly south of the United States, but wanders northward along the coasts during nonbreeding season.

Physical Appearance: Frigate birds are the only seabirds where the male and female look strikingly different. All have predominantly black plumage, long, deeply forked tails and long hooked bills. Females have white underbellies and males have a distinctive red throat pouch, which they inflate during the breeding season to attract females. Their wings are long and pointed and can span up to 2.3 meters (7.5 ft), the largest wing area to body weight ratio of any bird. These birds are about 35-45 inches ((89 to 114 cm) in length, and weight between 35 and 67 oz (1000-1900 g). The bones of frigate birds are markedly pneumatic (filled with air), making them very light and contribute only 5% to total body weight. The pectoral girdle (shoulder joint) is strong as its bones are fused.

Habitat: Frigate birds are found across all tropical oceans. Breeding habitats include mangrove cays on coral reefs, and deciduous trees and bushes on dry islands. Feeding range while breeding includes shallow water within lagoons, coral reefs, and deep ocean out of sight of land. Ranges along coasts and offshore islands and out at sea.

Food: Frigate birds' feeding habits are pelagic, and they may forage up to 500 km (310 mi) from land. They do not land on the water but snatch prey from the ocean surface using their long, hooked bills. They mainly catch small fish such as flying fish that are driven to the surface by predators such as tuna and mahi mahi, but they will also eat cephalopods, particularly squid. Frigate birds have learned to follow fishing vessels and take fish from holding areas. Conversely tuna fishermen fish in areas where they catch sight of frigate birds due to their association with large marine predators. Frigate birds can prey directly on eggs and young of other seabirds, including boobies, petrels, shearwaters and terns. They rob other seabirds (such as boobies, particularly the red-footed booby, tropic birds, shearwaters, petrels, terns, gulls and even ospreys) of their catch, using their speed and maneuverability to outrun and harass their victims until they regurgitate their stomach contents. They may either assail their targets after they have caught their food or circle high over seabird colonies waiting for parent birds to return laden with food. Although frigate birds are renowned for their kleptoparasitic feeding behavior, stealing is not thought to play a significant part of their diet, and is instead a supplement to food obtained by hunting. A study of great frigate birds stealing from masked boobies estimated that the frigate birds could at most obtain 40% of the food they needed, and on average obtained only 5%. Unlike most other seabirds, frigate birds drink freshwater when they come across it, by swooping down and gulping with their bills.

Nesting: Flat or slightly hollowed platform of sticks and twigs, some lined with finer material such as grass or vines. Placed on flat tops of low bushes or trees. Nests in colonies. A single egg is laid each breeding season. The duration of parental care

is among the longest of any bird species. Male birds abandon their mate and half-grown chick and leave the breeding colony, presumably to molt and return for another breeding attempt with a different mate. The female cares for the young for over a year. This difference in parental care allows the male to breed at least once every year while the female breeds only every other year.

Behavior and Ecology: Having the largest wing-area-to-body-weight ratio of any bird, frigate birds are essentially aerial. This allows them to soar continuously and only rarely flap their wings. One great frigate bird, being tracked by satellite in the Indian Ocean, stayed aloft for two months. They can fly higher than 4,000 meters in freezing conditions. Like swifts they are able to spend the night on the wing, but they will also return to an island to roost on trees or cliffs. Field observations in the Mozambique Channel found that great frigate birds could remain on the wing for up to 12 days while foraging. Highly adept, they use their forked tails for steering during flight and make strong deep wing-beats, though not suited to flying by sustained flapping. Frigate birds bathe and clean themselves in flight by flying low and splashing at the water surface before preening and scratching afterwards. Conversely, frigate birds do not swim, and with their short legs cannot walk well, and they do not take off from the sea easily. The average life span is unknown but in common with seabirds such as the wandering albatross and Leach's storm petrel, frigate birds are long-lived. In 2002, 35 ringed great frigate birds were recovered on Tern Island in the Hawaiian Islands. Of these ten were older than 37 years and one was at least 44 years of age.

Despite having dark plumage in a tropical climate, frigate birds have found ways not to overheat—particularly as they are exposed to full sunlight when on the nest. They ruffle feathers to lift them away from the skin and improve air circulation, and can extend and upturn their wings to expose the hot undersurface to the air and lose heat by evaporation and convection. Frigate birds also place their heads in the shade of their wings, and males frequently flutter their gular pouches

In a spectacular courtship display, male Magnificent Frigate birds sit in varying size groups, throat sacs inflated, clattering their bills, waving their heads back and forth, quivering their wings, and calling to females flying overhead. Frigate birds are skillful hunters. They snatch food from the surface of water while flying past, and chase other birds to force them to disgorge food, which is caught in flight before it hits the water.

THREATS: There is little information on population trends of Magnificent Frigate bird, but they appear to be declining. The North American Waterbird Conservation Plan estimates a continental breeding population of 106,000 to 174,000 birds, rates the species a 13 out of 20 on the Continental Concern Score, making it a Species of High Concern. Declines are mainly due to human destruction of habitat for housing and resorts, disturbance in breeding colonies. Introduced predators on islands and over-fishing are also potential problems. Frigates are considered umbrella species, i.e. these birds represent an entire ecosystem. As frigate birds rely on large marine predators such as tuna for their prey, overfishing threatens to significantly impact on food availability and jeopardize whole populations. As frigate birds nest in large dense colonies in small areas, they are vulnerable to local disasters that could wipe out the rare species or significantly impact the widespread ones.

BIBLIOGRAPHY: For further details about frigate birds you may want to consult the following literature:

- Magnificent Frigate bird (*Fregata magnificens*). In *The Birds of North America*, No. 601 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- *Tropic Birds and Frigate birds*. Princeton University Press.
- *Audubon's Birds of America*. Macmillan Company.

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*There is no seam between the doings of wild animals and human affairs.
We can't go on losing them and not loose part of ourselves.*

Kenneth S. Norris