

*HALOCYPTENA MICROSOMA* COUES

## LEAST PETREL

*Halocyptena microsoma* Coues, Proc. Acad. Nat. Sci. Phila., 1864, 79 (San José del Cabo, Baja California, México).—Bancroft, 1927 b, 191 (San Esteban Island).—Mathews, 1934, 188 (San Esteban Island).—van Rossem and Hachisuka, 1937 a, 325 (San Esteban Island; Tiburon Island; Guaymas).

Summer visitant, breeding abundantly on many of the smaller islands and outlying rocks almost throughout the Gulf. As in the case of the Black Petrel, though, there are no actual breeding records for islands lying properly within Sonora waters. Between April 17 and 21, 1925, in the vicinity of Guaymas, San Estéban and Tiburón Islands, a tremendous migration flight was in progress and some of the resting rafts certainly contained several hundred individuals. No data relative to dates of departure are available.

## ORDER PELECANIFORMES TOTIPALMATE SWIMMERS

## Family PHAËTHONTIDAE Tropic Birds

*PHAËTHON AETHEREUS MESONAUTA* PETERS

## RED-BILLED TROPIC-BIRD

*Phaëthon aethereus mesonauta* Peters, Occ. Papers Boston Soc. Nat. Hist., 5, April 15, 1930, 261 (Swan Key, Almirante Bay, Panamá).—van Rossem, 1932 a, 129 (Tiburon Island).—van Rossem and Hachisuka, 1937 a, 325 (mouth of the Colorado River).

*Phaëthon aethereus* (not of Linnaeus) Goss, 1888, 240 (San Pedro Martir Island); 1889, 253 (ditto).—Brewster, 1902, 33 (ditto).—Bent, 1922, 187, part, (ditto).—Mailliard, 1923, 454 (Georges Island).—Bancroft, 1927 b, 191 (George Island; San Pedro Martir Island).—Grinnell, 1928, 69 (San Pedro Martir Island).

*P.[haëthon] aetherus* Coues, 1903, 972, part (San Pedro Martir Island).

Fairly common resident throughout the Gulf area, with breeding centers seemingly confined to the smaller and more precipitous islands. Within Sonora waters the only two known nesting localities are George and San Pedro Mártir Islands. There seems to be very little seasonal fluctuation in numbers since breeding evidently continues over the greater part of the year. Bancroft (1927 b) found fully grown young and also fresh eggs in early March, and Dickey (notes) observed the same condition in mid-June.

## Family PELECANIDAE Pelicans

*PELECANUS ERYTHORHYNCHOS* GMELIN

## WHITE PELICAN

*Pelecanus erythrorhynchus* Gmelin, Syst. Nat., 1, Pt. 2, 1789, 571 (in America septentrionale=Hudson Bay).—Price, 1899, 90 (lower Colorado River).—Stone and Rhoads, 1905, 687 (lower Colorado River).—van Rossem, 1933 b, 199 (Tepopa Bay; Estrada de Tasiola; El Golfo).—van Rossem and Hachisuka, 1937 a, 325 (Guaymas).

Winter visitant, apparently in some numbers, from the lower Colorado River southward, in coastal lagoons and bays, at least to Guaymas. The earliest seasonal record is "November" (El Golfo); the latest is April 22 (Guaymas).

*PELECANUS OCCIDENTALIS CALIFORNICUS* RIDGWAY

## CALIFORNIA BROWN PELICAN

*P.[elecanus] californicus* Ridgway, in Baird, Brewer, and Ridgway, Water Birds of North America, 2, 1884, 132, 143 (Coast of California, [etc.] = La Paz, Baja California, México).

*Pelecanus californicus* Jouy, 1894, 788 (Guaymas).—Mailliard, 1923, 441 (San Pedro Nolasco Island).

*Pelecanus occidentalis californicus* van Rossem, 1932, 139 (Tiburon Island; San Pedro Nolasco Island).—Huey, 1935, 250 (Punta Peñascosa).—Abbott, 1941, 417 (Guaymas).

*Pelecanus fuscus* (not of Gmelin) Evermann and Jenkins, 1888, 69 (Guaymas).—Salvin and Godman, 1901, 142, part (Guaymas).

Extremely common resident of the entire Gulf. The main nesting colony on the Sonora coast is located on San Pedro Nolasco Island where, in April, 1930, and in December, 1931, there were several thousand pairs present. A few pairs are usually to be found nesting on the smaller islands such as George, or even on off-shore rocks lying close to the mainland (van Rossem notes).

## Family SULIDAE Boobies and Gannets

*SULA NEBOUXII* MILNE-EDWARDS

## BLUE-FOOTED BOOBY

*Sula Nebouxii* Milne-Edwards, Ann. Sci. Nat. (Zool.), sér. 6, 13, 1882, Art. 4, 37, pl. 14 (la côté pacifique de l'Amérique=Chile).

*Sula nebouxii* Nelson, 1899 b, 31 (San Pedro Martir Island).—Bent, 1922, 197

(San Pedro Martir Island).—Grinnell, 1928, 69 (San Pedro Martir Island).—van Rossem, 1932, Guaymas; San Pedro Nolasco Island; Estrada de Tasiola; etc.).

*S.[ula] nebouxii* Brewster, 1902, 35 (San Pedro Martir, Georges, and Tiburon Islands).

*Sula nebouxi* Salvin and Godman, 1901, 148 (San Pedro Martir Island).—Reed, 1904, (San Pedro Martir Island).—Bancroft, 1927 b, 193, in text (San Pedro Martir Island).—Abbott, 1941, 417 (Guaymas).

*Sula gossi* "Ridgway MS" Goss, 1888, 241 (San Pedro Martir Isle).—Shufeldt, 1889, 67 (San Pedro Martir Island).

*Sula gossii* Bryant, 1889, 253 (San Pedro Martir Island).—Ridgway, 1896, 584, footnote (*S. gossii*=*S. nebouxii*).

Common resident of Gulf waters, with concentrations about the more precipitous islands and off-shore rocks where breeding apparently is continuous throughout the year. Due to an absence of suitable islands there are no colonies, on the Sonora side of the Gulf, south of Guaymas and San Pedro Mártir Island. The basis of Brewster's statement of breeding on Tiburón Island is obscure and is possibly a *lapsus*.

#### SULA LEUCOGASTER BREWSTERI GOSS

##### BREWSTER BOOBY

*Sula brewsteri* Goss, Auk, 5, No. 3, July, 1888, 242 (San Pedro Mártir Isle, [Sonora, México]).—Shufeldt, 1889, 67 (San Pedro Martir Island).—Townsend, 1890, 138 (Georges Island); 1923, 6 (Georges Island; San Pedro Martir Island).—A. O. U. Comm., 1895, 40 (Georges Island).—Brewster, 1902, 34 (San Pedro Martir Island; Georges Island).—Bent, 1922, 208 (ditto).—Mailliard, 1923, 454 (San Pedro Nolasco Island; Georges Island).—Grinnell, 1928, 70 (San Pedro Martir Island).—van Rossem, 1932, 129 (Tiburon Island.)—Huey, 1935, 251 (Punta Peñascosa).—Abbott, 1941, 417 (Guaymas).

*Sula leucogaster brewsteri* Wetmore, 1939 b, 2 (nomen.; crit.).

*Sula leucogaster* (not *Pelecanus leucogaster* Boddaert) Streets, 1887, 22 (Tiburon Island).

Common, even abundant, resident throughout the Gulf, though with local concentrations about islands. Breeding apparently continues throughout the year. Although still very common, there has been a marked decrease in numbers in recent years, due, probably, to the heavy drain on food supply by commercial fishermen. Additional localities where noted are El Golfo and Estero de Tasiota (Anthony notes); mouth of the Colorado River; San Estéban Island; Tóbari Bay; Agiabampo (van Rossem notes).

#### Family PHALACROCORACIDAE Cormorants

##### PHALACROCORAX AURITUS ALBOCILIATUS RIDGWAY

##### FARALLÓN CORMORANT

*Phalacrocorax dilophus albociliatus* Ridgway, Proc. Biol. Soc. Wash., 2, April 10, 1884, 94 (Farallon Islands to Cape San Lucas, etc.=Farallón Islands, California).

*Phalacrocorax auritus albociliatus* van Rossem, 1932, 129 (Tiburón Island; San Carlos Bay).—Huey, 1935, 251 (Punta Peñascosa).—van Rossem and Hachisuka, 1937 a, 325 (Guaymas; San Pedro Martir Island).—Abbott, 1941, 417 (Guaymas).

Common resident of Gulf waters, at least from Guaymas northward. Breeds in considerable numbers in some years (but apparently not in others) on San Pedro Nolasco and George Islands, and occurs generally at insular and coastal points. Breeding data for the two islands above mentioned were supplied by Mr. Randolph Leigh who secured colored slides and motion pictures there in February, 1941, at which time most nests contained half-grown young. The cormorants seen by Price (1899, p. 90) on the lower Colorado River in the winter of 1898 and listed under "*Phalacrocorax penicillatus* (?)" seem most likely to have been of this species.

*PHALACROCORAX OLIVACEUS CHANCHO* VAN ROSSEM AND HACHISUKA

SONORA CORMORANT

*Phalacrocorax olivaceus chanco* van Rossem and Hachisuka, Proc. Biol. Soc. Wash., 52, Feb. 4, 1939, 9 (Tesia, Sonora, México).

*Phalacrocorax mexicanus* (not *Carbo mexicanus* Brandt) Nelson, 1903, 139 (coastal lagoons of southern Sonora).

(?) *Phalacrocorax vigua mexicanus* Bent, 1922, 261, part (Guaymas).

Common in summer in extreme southern coastal lagoons and in the lower Mayo River valley. Has been observed at Tóbari Bay in late April, 1930, and at Agiabampo in mid-May, 1937 (van Rossem notes). Specimens have been collected at Camoa, in April, 1939 (Mus. Vert. Zool.), and at Tesia in late June, 1937 (Dickey collection). The bases of the Guaymas record of Bent and for the general statement of Nelson cannot be ascertained. According to F. C. Lincoln, the Biological Survey files provide no clues to either.

*PHALACROCORAX PENICILLATUS* (BRANDT)

BRANDT CORMORANT

*Carbo penicillatus* Brandt, Bull. Sci. Acad. Imp. Sci. St. Petersburg, 3, 1837, col. 55 (type loc. unknown = Vancouver Island).

*Phalacrocorax penicillatus* van Rossem, 1932, 130 (Tiburón Island).—van Rossem and Hachisuka, 1937 a, 325 (San Pedro Martir Island; San Esteban Island; San Pedro Nolasco Island; Guaymas).—Abbott, 1941, 417 (Guaymas).

Probably a fairly common resident about islands and along the mainland coast. Dates of record range from January 1 at Tiburón Island to

April 21 at Guaymas and San Pedro Nolasco Island. In April, 1925, there was a fairly populous breeding colony on the west end of San Pedro Mártir Island, and in April, 1930, certain off-shore rocks near Guaymas gave fairly good evidence of having at one time been used as nesting sites by Brandt Cormorants. The questionable record by Price (1899, p. 90) for the Colorado River most likely pertains to another species.

### Family FREGATIDAE Man-o'-war-birds

#### *FREGATA MAGNIFICENS ROTHSCILDI* MATHEWS

#### MEXICAN MAN-O'-WAR-BIRD

*Fregata minor rothschildi* Mathews, *Birds Australia*, 4, 1915, 280 (Aruba, Dutch West Indies).

*Fregata magnificens rothschildi* van Rossem and Hachisuka, 1937 a, 325 (Guaymas; Lobos Island).—Abbott, 1941, 417 (Guaymas).

*Fregata magnificens* (not *Fregata minor magnificens* Mathews) van Rossem, 1932, 130 (Tiburon Island).

*Fregata aquila* (not *Pelecanus aquilus* Linnaeus) Evermann and Jenkins, 1888, 69 (Guaymas).—Bryant, 1889, 265, in text (San Pedro Martir Island).—Mailiard, 1923, 454 (Pelican Island).

Present throughout the year in the entire Gulf area, although much more common southerly. There are no nesting colonies known within Sonora territory. Additional localities where observed are Estero de Tasiota; Kino Point (Anthony notes); San Pedro Nolasco Island; San Estéban Island; George Island; Tóbari Bay; Agiabampo (van Rossem notes).

## ORDER CICONIIFORMES HERONS, STORKS, IBISES, AND ALLIES

### Family ARDEIDAE Herons and Bitterns

#### *ARDEA HERODIAS TREGANZAI* COURT

#### TREGANZA HERON

*Ardea herodias treganzai* Court, *Auk*, 25, No. 3, July, 1908, 291 (Egg Island, Great Salt Lake, Utah).—Oberholser, 1912, 545, part (Cajon Bonito Creek; Sonoyta River; Santa Cruz River; San Bernardino Ranch; Colorado River at Mon. 204).—Bailey, 1928, 87, part (Sonora).—van Rossem, 1932, 130 (Tiburon Island).—Huey, 1935, 251 (Punta Peñascosa).

*Ardea herodias* (not of Linnaeus) Price, 1899, 91 (lower Colorado River).—Stone and Rhoads, 1905, 688 (lower Colorado River).

Common resident coastwise and on larger interior streams in the northern part of the State, where all definite records to date are from points on