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BIRDS OBSERVED IN SOUTHEASTERN TEXAS IN MAY, 1923

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At the suggestion of Mr. George Finlay Simmons, then Chief Deputy of the Game, Fish and Oyster Commission of Texas, as the guest of the Commission and with the help of Mr. Simmons and all of his Wardens and Deputies along the coast, I was given an unusual opportunity to make a thorough, but brief, survey of the bird life of the coast region between Galveston and Brownsville, together with some of the more inland counties.

Mr. Simmons met me at Galveston on May 4 and we spent three days exploring various islands in East Bay, after which he left me and I started down the coast on the Jim Duke, the commodious 50-foot power boat, belonging to the Commission and commanded by Captain Frank E. Bauer. Our course led us through numerous bays, intercoastal canals and other inland water ways as far as Corpus Christi, which we reached on May 18. We landed on numerous islands in the various bays, where we recorded large numbers of migrating land birds, as many as 37 species on one small island, and found many breeding colonies of gulls, terns, skimmers, pelicans, herons and egrets. Most of the islands were small, low, flat sand and shell reefs, with a scanty growth of grass or low herbage; but some were densely covered with tall weeds, sun-flowers and low shrubbery; and some supported thickets of huisache, willows or prickly-pear cactus.

The intercoastal canal between Galveston West Bay and Matagorda Bay led us for a long distance through the coastal plain, a broad flat expanse of prairie or marsh land dotted with many small lakes or muddy ponds and with occasional mottes or clumps of small live oaks. Herds of cattle were grazing on the prairies; the open marshy places were full of migrating shore-birds, chiefly yellow-legs, long-billed curlews and black-bellied plover; willets and black-necked stilts were breeding on

the grassy islands; and in the live-oaks mottes or scattered clumps of bushes were many breeding colonies of Ward herons.

From Corpus Christi, with Messrs. A. C. Thompson and R. E. Farley as guides, we made a three-day trip by automobile up into Refugio and Victoria Counties. On the extensive prairies of Refugio County we were shown the haunts of the Attwater prairie chicken and a large breeding colony of the white-faced glossy ibis in a tule lake. In the alluvial bottom lands of Victoria County we saw some of the finest hardwood forests I have ever seen, made up of live oak, Texas white oak, burr oak, American elm, pecan, sycamore, white and green ashes, shag bark hickory, cotton-wood, hornbeam, hackberry, red cedar, etc. These forests were the homes of hawks, owls and woodpeckers, not seen elsewhere. In the swampy lowlands and bayous, along the banks of the Guadalupe River, we found an entirely different type of heavy forests, containing cypress, swamp tupelo, sweet and black gums, water oak, magnolia and various willows. Here we found such birds as water-turkeys, wood ibises, yellow-crowned night herons, prothonotary warblers and parula warblers.

On our return to Corpus Christi, we started on May 22, in Mr. Simmons's car, for Brownsville, arriving there the next day. In our hurried trip through Nueces and Kleberg Counties we caught only a fleeting glimpse of the great cattle ranch country of the coastal plains, where wild turkeys abound and where whooping cranes are regularly seen. And in Hidalgo and Cameron Counties we passed some fine citrus fruit plantations and much good agricultural country.

At Brownsville, Captain R. D. Camp acted as our host and showed us some of the surrounding country, which was quite different from anything we had seen.

The chaparral of the Rio Grande plains is a pigmy forest of mesquite mixed with various thorny bushes, evergreen Texas ebony, retama or horse bean, fragrant cat's claw, round flowered devil's claw, granjena, Mexican persimmon, madrona, gum elastic or shittim wood, etc.; mixed in with it are numerous specimens of Spanish dagger, much prickly-pear cactus of large size and that thorniest of all thorny bushes the *Corona christi*. The most characteristic birds of the chaparral were Couch Kingbird, Texas sparrow, gray-tailed cardinal, small white-eyed vireo, curve-billed thrasher and verdin.

There was much open prairie around Brownsville, consider-

able cultivated land, tree claims, ponds and swamps, all of which attracted different birds; but perhaps the most interesting of all were the dense forests along the resacas or stagnant water courses, the old beds of rivers; these often contained large trees, mesquite, huisache, ebony, palms, etc., with a thick undergrowth of many shrubs and small trees such as granjena, persimmons, coffee bean, bush morning glory, etc. It was in the timber belts along these resacas that we could count on finding the characteristic birds of the lower Rio Grande valley, such as the chachalaca, red-billed pigeon, derby flycatcher, green jay and Audubon oriole. White-winged and western mourning doves fairly swarmed in these thickets and here we saw several other species not seen elsewhere. The chachalaca is one of the shiest and hardest of birds to see, but thanks to the expert guidance of Mr. E. W. Farmer, we did get a few glimpses of it and heard some of its interesting morning and evening concerts.

We left Brownsville by train on May 28, returned to Corpus Christi and visited Bird Island in Laguna Madre the next day, where we saw the wonderful colonies, to be found there, of gulls, terns, skimmers, pelicans, herons and egrets. Captain Camp had come to see this island and to visit the big rookery in Victoria County with Messrs. Thompson and Farley. On our previous visit to this region we had failed to find, though we had approximately located, what promised to be a big breeding colony of white ibises in the valley of the Guadalupe River. My last day in the field, May 30, proved to be a fitting climax of an eventful trip, for this large breeding colony of white ibises, roseate spoonbills, American egrets and other water birds far exceeded our expectations and was one of the most interesting colonies I have ever seen.

Following is an annotated list of the birds observed, which is the longest list I have ever made on any of the numerous interesting trips that I have taken. On such a hurried trip as this it was impossible to do much collecting. I have therefore relied on Mr. Simmons to outline the distribution of the different sub-species, based on his previous knowledge of the subject.

1. MEXICAN GREBE—*Colymbus dominicus brachypterus*.

Fairly common locally near Brownsville, nesting in certain small ponds partially overgrown with open growth of water huisache and small scattered clumps of flags, also in some small resacas with similar growth.

Typical grebe's nests, large for the size of the bird, 14" diam. and 5" thick, usually in plain sight in open situations, floating in water three to four feet deep, generally anchored to huisache, or flags, but sometimes drifting. Eggs usually covered. Birds very shy; saw only one and one downy young, able to dive and swim under water for about three or four feet. Took two sets of eggs on May 23.

2. PIED-BILLED GREBE—*Podilymbus podiceps*.
Fairly common around Brownsville, nesting in ponds and resacas with Mexican Grebe. One set of eggs taken on May 23. Saw two grebes on Matagorda Bay, near Port La Vaca, on May 12, that were probably this species.
3. HERRING GULL—*Larus argentatus*.
A few, mostly immature birds, were seen in the bays all along the coast.
4. LAUGHING GULL—*Larus atricilla*.
Abundant all along the coast, nesting in enormous colonies on some of the islands in Espiritu Santo, San Antonio, and Red Fish Bays, on Big Bird Island in Laguna Madre and at Bahia Grande near Brownsville. Between May 15 and 20 most of the nests contained incomplete sets; more full sets were found later, but no young. A number of immature birds, one year old were seen.
5. FRANKLIN GULL—*Larus franklini*.
Two seen on the bay near Port La Vaca on May 13.
6. GULL-BILLED TERN—*Gelochelidon nilotica*.
Common along the coast, occasionally seen inland, feeding on the inland marshes. Found nesting, with fresh eggs, on sandy or shell beaches on islands in Cedar Lakes in Intercoastal Canal, in Matagorda Bay, Espiritu Santo Bay, San Antonio Bay and Red Fish Bay. Also breeds abundantly at Bahia Grande. Nests usually mere hollows in sand or shells, sometimes with a few straws. No young seen. Eggs found May 7, 8, 15 and 18, in sets of two or three.
7. CASPIAN TERN—*Sterna caspia*.
Common all along the coast, nesting on islands in mixed colonies with Laughing Gulls and other terns. Nests usually hollows on open shell or sand beaches, rarely among low and scanty vegetation, usually unlined, but sometimes with a few straws. Eggs usually two, sometimes one. Eggs found May 15 on islands in San Antonio Bay and eggs and first young on May 29 on Bird Island, Laguna Madre. Breeds also at Bahia Grande.
8. ROYAL TERN—*Sterna maxima*.
Common all along the coast from Galveston Bay to the Rio Grande. Breeds in small numbers on islands in San Antonio Bay and abundantly, in enormous dense colonies, on Bird Island and at Bahia Grande. Nesting habits same as Caspian's. Probably lays later; no young seen up to May 29. This and the Caspian look much alike, but the Caspian has a heavier, redder bill and much more black in

- the primaries as seen from below; the Royal has a more orange colored bill and very little black in the wings.
9. CABOT TERN—*Sterna sandwichensis acuflavida*.
Breeding abundantly on Bird Island and at Bahia Grande, in dense colonies with the Royal Terns; nesting habits similar. Eggs and a few young found on Bird Island on May 29.
 10. FORSTER TERN—*Sterna forsteri*.
A few seen along the coast and on inland marshes and a number of immature birds seen near Port La Vaca. No breeding colonies seen, but said to breed at Bahia Grande.
 11. COMMON TERN—*Sterna hirundo*.
Three small colonies found breeding, 31 nests in one colony, on islands in Cedar Lakes, typical well built nests with two or three eggs each, on May 7.
 12. LEAST TERN—*Sterna antillarum*.
A small colony, 30 pairs, found breeding, with eggs, at Cotton Bayou, Matagorda Bay, on May 8. Breeds also on Green Island and at Bahia Grande.
 14. BLACK TERN—*Chlidonias nigra surinamensis*.
Very common all along the coast and in inland marshes from Galveston to Brownsville, often in flocks, all in full plumage, but said not to breed in Texas. locally called "sea pigeons." Seen up to time of leaving, May 30.
 15. BLACK SKIMMER—*Rynchops nigra*.
Seen occasionally in the Galveston Bays. Numerous colonies, preparing to breed or breeding, were seen from the intercoastal canal southwestward.
 16. WATER-TURKEY—*Anhinga anhinga*.
Seen only in the lowlands along the Guadalupe River in Victoria County, where we found it breeding in the big rookery of White Ibises and Roseate Spoonbills.
 17. FLORIDA CORMORANT—*Phalacrocorax auritus floridanus*.
Cormorants were common all along the upper coast, often in large flocks and sometimes associated with flocks of Roseate Spoonbills, a striking contrast. I assume that most of those seen on the coast were this species. No breeding colonies seen. Not seen south of San Antonio Bay.
 18. MEXICAN CORMORANT—*Phalacrocorax vigua mexicanus*.
First seen on May 17 on Puerta Tank, near Aransas Pass. A few pairs found breeding in a large colony of White Ibises and Roseate Spoonbills in Victoria County, near Bloomington. Nests in large trees, not examined for lack of time. Formerly bred around Brownsville and probably does still, but we did not locate them.
 19. AM. WHITE PELICAN—*Pelecanus erythrorhynchos*.
A few seen scattered along the coast from Galveston to Corpus Christi, but no breeding colonies were seen. A. C. Thompson and

R. E. Farley found them with nests and eggs on Bird Island earlier in the season, but they had all gone when we visited it on May 29.

20. BROWN PELICAN—*Pelecanus occidentalis*.
Common all along the coast, especially in Laguna Madre, where I saw a large flock fishing, circling and plunging like Gannets, a spectacular performance. A colony of some 20 or 30 pairs had attempted to nest on Pelican Island, a low flat sand bar in Pass Cavallo, but high tides had washed away most of the nests; only 7 remained with eggs. Breeding in large numbers on Bird Island, nests among and near the prickly pear cacti, with Ward Herons and Reddish Egrets. Young were seen of all ages up to fully grown, also many eggs, on May 29.
21. MAN-O'-WAR BIRD—*Fregata aquila*.
A few birds seen at various points along the coast. Not known to breed here.
22. MALLARD—*Anas boschas*.
Seen on the Intercoastal Canal on May 7. F. E. Bauer, an old duck hunter who knows the ducks well, saw a female with a brood of young near Aransas Pass on May 17.
23. MOTTLED DUCK—*Anas fulvigula maculosa*.
Fairly common from the intercoastal canal to Corpus Christi Bay. We found four nests with eggs on Dressing Point Island, in Matagorda Bay, on May 8, and one nest with eleven eggs in Chocolate Bay, near Port La Vaca, on May 12. The birds flushed from the nests in each case, which were all well hidden in long grass on dry land; the nests were made of dry grass mixed with a little down. Three of the nests contained several or many rotten eggs.
24. GADWELL—*Chauclasmus streperus*.
Seen on May 17 near Aransas Pass.
25. BALDPATE—*Mareca americana*.
Seen on May 7 and 8 in the Canal.
26. BLUE-WINGED TEAL—*Querquedula discors*.
Seen on the Canal May 7, near Aransas Pass on May 17, and near Brownsville on the 24th.
27. SHOVELLER—*Spatula clypeata*.
Seen on the Canal on the 7th and near Aransas Pass on the 17th.
28. PINTAIL—*Dafla acuta tzitzihoa*.
Seen near Aransas Pass on the 17th.
29. REDHEAD—*Nyroca ferina americana*.
A few cripples seen, the remnants of the large flocks seen here in winter, where it is the most abundant duck.
30. CANVASBACK—*Aristonetta valisineria*.
Seen on the Canal on the 7th and common around Port La Vaca and Karankawa Bay from the 9th to the 13th. Caught a crippled bird that could not fly.

31. LESSER SCAUP DUCK—*Nyroca marila affinis*.
Blue bills, probably this species, were seen on the canal, in the bays and on inland lakes, from the 9th to the 17th.
32. AMERICAN GOLDENEYE—*Glaucionetta clangula americana*.
A dead bird, being eaten by a Herring Gull, was seen on an island in Galveston Bay. A mounted bird, said to have been shot nearby, was seen in a store in Corpus Christi.
33. FULVOUS TREE DUCK—*Dendrocygna bicolor*.
Captain Camp showed us a resaca where he had seen this species this season, but we did not see it. He says that this has nearly, and the Black-bellied has entirely, disappeared from the Brownsville region.
34. AMERICAN FLAMINGO—*Phaenicopterus ruber*.
Captain Camp says he saw one each on October 15, 1912, and in September, 1915, at Bahia Grande, after a very severe Gulf storm.
35. ROSEATE SPOONBILL—*Ajaia ajaia*.
Locally called "fillimingo." We saw a large flock with a flock of cormorants on a sand spit in Karankawa Bay on the 9th. A large flock frequented, and could not be driven away from, the chain of islands between Mesquite and San Antonio Bays on the 15th and 16th; they are said to breed here in June, after most of the herons have left, building their nests on the ground among the sunflowers. They are also said to nest under similar circumstances in East Bay, Galveston. We found a breeding colony of perhaps 100 pairs in a large breeding colony of White Ibises in Victoria County near Bloomington. The large well made nests of coarse sticks, lined with dry and green leaves, were built in groups in the low trees. On May 30 many nests contained small young, but most of them had three and some four eggs.
36. WHITE IBIS—*Guara alba*.
The colony referred to above was the only breeding colony found and all the birds seen were within a few miles of it; it was by tracing their fly lines, from their feeding grounds in surrounding marshes, that we finally located the rookery, after three or four days work. It was located in the center of some extensive marshes near the Guadalupe River; in the dryer portions were groves of large live oaks and in the wetter portions were dense thickets of willows, button willows and other trees, growing where the water was often waist deep or more and where large alligators lived; fortunately we saw only their tracks in the mud and an occasional head above the water. Breeding here with the spoonbills and ibises were quite a number of American Egrets and Little Blue Herons and a few Ward Herons, Black-crowned Night Herons, Anhingas and Mexican Cormorants. We also saw perhaps twenty Wood Ibises flying over the rookery, but did not locate their nests. The White Ibises nests were thickly grouped from 5 to 12 feet up in the willows and button willows, often 12 or 15 nests in a tree. Young were seen, of all ages up to the flight stage, standing in dense

groups or scrambling through the brush. But some nests still contained three or four eggs.

37. SCARLET IBIS—*Guara rubra*.
 Captain Camp says he saw one of these birds also, on each of the dates when he saw the Flamingos, at Bahia Grande, probably blown in by the same storms.
38. WHITE-FACED GLOSSY IBIS—*Plegadis guarauna*.
 On May 19 we visited a large breeding colony, 2,000 pairs or more, of this species, previously located by A. C. Thompson and R. E. Farley, in a tule lake on the prairies of Refugio County. They had traced the birds to it from their feeding places in the surrounding country. The muddy water was breast deep and the tules were far above our heads. The nests were made of dead tules just above the water in the more open places. Most of them contained lively young almost up to the flight stage, but we found plenty with three or four eggs.
39. WOOD IBIS—*Mycteria americana*.
 The birds seen in the White Ibis rookery, referred to above, probably bred in some part of it, which we could not locate in the short time available.
40. AMERICAN BITTERN—*Botaurus lentiginosus*.
 One seen on the Intercoastal Canal on May 7.
41. LEAST BITTERN—*Ixobrychus exilis*.
 One seen on May 12 on a marsh in Chocolate Bay, near Port La Vaca. Common around Brownsville; several nests found there in the pond where the Mexican Grebes bred on May 23; some of these nests were made partly or wholly of fine twigs, others of flags, as usual.
42. WARD HERON—*Ardea herodias wardi*.
 Very common everywhere along the coast and on inland lakes, marshes and prairies. Numerous breeding colonies found, but no very large ones. South of Galveston Bay practically every heron colony contained at least a few nests of this species. On a small island in the Canal, on May 7, was a colony of 13 nests, containing everything from fresh eggs to nearly full grown young, built on the ground among grass and rank herbage. In other island colonies the nests were on the ground, in low bushes or trees or in the prickly pear cacti; the nests of this species generally occupied the commanding positions on the tops of the highest trees or bushes. In the White Ibis rookery near Bloomington the nests were 40 or 50 feet up in the big live oaks. Eggs, apparently fresh and young of all ages, up to the flight stage, were found as late as May 29 on Bird Island.
43. AMERICAN EGRET—*Casmerodius egretta*.
 First seen on the Canal on May 7. On the chain of islands between Mesquite and San Antonio Bays we found a small breeding colony of 5 or 6 pairs, nesting in a clump of willows in the centre of a colony of the smaller herons. The nests contained young,

some just hatching, some half grown and some nearly ready to fly. A small colony seen in a button willow swamp on Weed Prairie, in Victoria County, had a few nests with eggs on May 12, but most of the birds had evidently finished breeding and gone. A colony of 25 pairs or more was breeding in the White Ibis rookery referred to above; on May 30 the nests contained young of various ages and were placed from 10 to 20 feet up in the willows.

44. SNOWY EGRET—*Egretta candidissima candidissima*.
The best colony was found on Vingt-une Island in East Galveston Bay on May 5. Besides about 400 of this species it contained some 800 Louisiana Herons and 150 Black-crowned Night Herons. The nests were in prickly pears and huisache trees from two to eight feet up and all we examined contained eggs, three, four or five. Nesting more or less abundantly in practically all of the colonies of small herons except on Bird Island and in the White Ibis rookery, where we saw none. First young seen on the chain of islands on May 16.
45. REDDISH EGRET—*Dichromanassa rufescens*.
Breeding more or less abundantly from Karankawa Bay, at the lower end of Matagorda Bay, southward, in practically all of the coastal colonies, but not inland at all. Associated with Ward and Louisiana Herons most closely. The largest colony of all is on Green Island, near the lower end of Laguna Madre; it contains several thousands. But the colonies on the chain of islands, between Mesquite and San Antonio Bays, are large and densely populated; here we found our first young on May 16. On Bird Island, on May 29, we saw plenty of young, also some eggs. Their favorite nesting sites seem to be in the prickly pears, but they also nest on the ground, in the grass or low herbage, as well as on low bushes and small trees. We saw very few in the white phase, not over half a dozen in all, but Captain Camp says they are commoner on Green Island, where he has collected some interesting data on the subject.
46. LOUISIANA HERON—*Hydranassa tricolor ruficollis*.
The most abundant and most widely distributed of all the herons, breeding abundantly in all of the colonies along the coast from Galveston Bay to Brownsville. The largest colonies, containing several thousands were on Wolf Point in Karankawa Bay and on Rose's Point in La Vaca Bay, where they were associated with Ward and Snowy and a few Black-crowned Night Herons, as well as countless Great-tailed Grackles. Nests were placed in rank herbage, on prickly pears and in canes, but usually on low trees and bushes. Eggs ran from three to seven. The first young were seen on the chain of islands on May 16.
47. LITTLE BLUE HERON—*Florida cerula*.
Less common than the other herons. First seen on Caney Creek, Brazoria County, on May 8. Found breeding only in Victoria County, on Weed Prairie on May 20 and in the White Ibis rookery on May 30, only a few pairs at each place. No nests examined.

48. GREEN HERON—*Butorides virescens virescens*.
Common along the canal on May 7. Found breeding near Brownsville and seen at nearly all inland creeks and lakes.
49. BLACK-CROWNED NIGHT HERON—*Nycticorax nycticorax naevius*.
Fairly common all along the coast and breeding sparingly in nearly all of the rookeries visited. At Vingt-une Island in East Bay, Galveston, they were nesting in tall canes, with eggs and young on May 5. On Dressing Point Island, in Matagorda Bay they nested on the ground among tufts of long grass. In other places they were nesting in situations similar to those used by the other herons.
50. YELLOW-CROWNED NIGHT HERON—*Nyctanassa violacea*.
Apparently common along the Guadalupe River in Victoria County, but no breeding colony was located.
51. LOUISIANA CLAPPER RAIL—*Rallus crepitans saturatus*.
Seen on coastal marshes from Galveston Bay to Aransas Pass. It is common enough in suitable places, long grass salt marshes, but we had very little time to devote to it and found no nests.
52. SORA RAIL—*Porzana carolina*.
Saw one on a marsh near Galveston on May 6.
53. PURPLE GALLINULE—*Ionornis martinicus*.
Saw one at Puerta Tank, near Aransas Pass. It flew into a patch of tules, where I hunted in vain for its nest. It is said to breed in the marshes about here, where the "lotus" grows.
54. FLORIDA GALLINULE—*Gallinula chloropus cachinnans*.
We saw it only in the marshy ponds and resacas near Brownsville, where it is common. We found two nests with eggs, in small clumps of flags, on May 23.
55. AMERICAN COOT—*Fulica americana*.
Common on many of the ponds and lakes, particularly on Puerta Tank, May 17, and on Bellow Lake, May 20.
56. WILSON PHALAROPE—*Steganopus tricolor*.
Saw a few and shot one at Puerta Tank, May 17, and saw five at Cox Point, near Port La Vaca, May 13.
57. BLACK-NECKED STILT—*Himantopus mexicanus*.
First seen at the lower end of Galveston Bay; common along the Intercoastal Canal; found a breeding colony in a muddy slough on the prairie near Brownsville on May 24. Seen occasionally at other places.
58. LONG-BILLED DOWITCHER—*Limnodromus griseus scolopaceus*.
A few seen, probably this subspecies, on the Intercoastal Canal, May 7.
59. PECTORAL SANDPIPER—*Pisobia maculata*.
A few seen in Galveston Bay, May 7, and at Puerta Tank, Aransas Pass, May 17.
60. WHITE-RUMPED SANDPIPER—*Pisobia fuscicollis*.
A few seen at Puerta Tank on May 17.

61. LEAST SANDPIPER—*Pisobia minutilla*.
Small numbers seen along the coast from Galveston Bay, May 4, to Brownsville, May 24.
62. RED-BACKED SANDPIPER—*Pelidna alpina sakhalina*.
Common on the Canal, May 17, and at Puerta Tank, May 17; also seen at Flour Bluff, May 29.
63. SEMIPALMATED SANDPIPER—*Ereunetes pusillus*.
Seen, in small numbers only, from Galveston Bay, May 7, to Aransas Pass, May 17. Some of these may have been Western Sandpipers.
64. SANDERLING—*Crocethia alba*.
A few seen from Galveston Bay, May 6, to Aransas Pass, May 15.
65. HUDSONIAN GODWIT—*Limosa haemastica*.
Three seen, two shot, at Puerta Tank, on May 17.
66. GREATER YELLOWLEGS—*Totanus melanoleucus*.
Only one seen at Cotton Bayou, Matagorda Bay, on May 8.
67. LESSER YELLOWLEGS—*Totanus flavipes*.
Abundant all along the coast from Galveston Bay, May 4, to Aransas Bay, May 17, and at Puerta Tank.
68. SOLITARY SANDPIPER—*Tringa solitarius*.
One seen in Galveston Bay on May 4.
69. EASTERN WILLET—*Catoptrophorus semipalmatus semipalmatus*.
Abundant all along the coast from Galveston Bay, May 5, to Brownsville, May 24. Two nests found on Dressing Point Island, Matagorda Bay, on May 8. Only bird taken, at La Vaca Bay, is intermediate between *semipalmata* and *inornatus*, but nearer the former.
70. SPOTTED SANDPIPER—*Actitis macularia*.
Fairly common along the coast and on inland streams, from Galveston, May 4, to Brownsville, May 27.
71. LONG-BILLED CURLEW—*Numenius americanus*.
Very common, conspicuous and noisy, along the coastal meadows and marshes from the lower end of Galveston Bay, May 7, to Brownsville, May 24. Particularly abundant in flocks along the Canal on May 7. Last seen at Flour Bluff on May 29.
72. BLACK-BELLIED PLOVER—*Squatarola squatarola cynosurae*.
Abundant in flocks of full plumaged birds all along the coast, from Galveston Bay, May 5, to Aransas Bay, May 18.
73. AMERICAN GOLDEN PLOVER—*Pluvialis dominicus dominicus*.
Migrating flocks seen along the Intercoastal Canal on May 7.
74. KILLDEER—*Oxyechus vociferus*.
Seen near Galveston and at Puerta Tank. A pair found breeding at Port La Vaca on May 11.
75. SEMIPALMATED PLOVER—*Charadrius semipalmata*.
A migrating flock seen in Galveston Bay on May 5.
76. SNOWY PLOVER—*Charadrius nivosa*.
One seen near Aransas Pass, May 18.

77. WILSON PLOVER—*Pagolla wilsonia wilsonia*.
One or two birds seen at Cotton Bayou, Matagorda Bay, at Karan-kawa Bay and at Aransas Pass.
- Common all along the coast from Galveston Bay, May 6, to Aransas Pass, May 18. At the latter place a pair, apparently mated, were very tame.
79. AMERICAN OYSTERCATCHER—*Haematopus palliatus*.
Seen only in Galveston Bay, May 5, and at Cotton Bayou, Matagorda Bay, on May 8. Apparently not breeding.
80. TEXAS BOBWHITE—*Colinus virginianus texanus*.
Very common inland from Refugio and Victoria Counties to Cameron County.
81. CHACHALACA—*Ortalis vetula mcalli*.
Common in the dense brush near resacas or streams around Brownsville. Very shy, more often heard than seen. Very noisy in late evening and early morning. Two nests, each with three heavily incubated eggs, found on May 27. The small, frail nests of sticks, lined with dry and green leaves, were from 8 to 18 feet up in the thick top foliage of small trees; they were located by hearing, not seeing, the birds fly off.
82. RED-BELLIED PIGEON—*Columba flavirostris*.
Fairly common in the same localities as frequented by the Chachalaca. Found two nests, one with a fresh egg and one with a young bird, on May 27. The nests were frail platforms of twigs about ten feet up in the tops of saplings or in tangles of vines.
83. WESTERN MOURNING DOVE—*Zenaidura macroura marginella*.
Abundant everywhere on the mainland. Numerous nests found in usual situations, with eggs or young, all through May. Young able to fly seen as early as May 9 and fresh eggs found as late as May 27. One nest found on the ground and one was completely hidden among some thick clumps of tall grass on a treeless island. Birds seen near Galveston were probably the eastern form.
84. WHITE-FRONTED DOVE—*Leptotila fulviventris brachyptera*.
Common in the thick brush about Brownsville. Nests with eggs and with small young found on May 27. The nests were frail structures of twigs and straws, 9 or 10 feet up on the branches of trees in the thick brush.
85. WHITE-WINGED DOVE—*Melopelia asiatica*.
Very abundant in Hidalgo and Cameron Counties. Said to be the most abundant bird, next to the Great-tailed Grackle, about Brownsville. Nests with eggs and with small young were found on May 25 and 27. One nest was on top of a dead palm leaf, 30 feet from the ground. Other nests were in usual situations in thick brush. The monotonous cooing or hooting notes were constantly heard in the brush, especially in the early morning and towards night.

86. MEXICAN GROUND DOVE—*Chaemepelia passerina pallescens*.
Common from Victoria County to Cameron County. Nest and eggs found near Brownsville, on May 25, six feet up in a bush in thick brush.
87. INCA DOVE—*Scardafella inca*.
Common around Brownsville, nesting in trees near houses. No nests examined.
88. TURKEY VULTURE—*Cathartes aura septentrionalis*.
Fairly common on the mainland, but not so common as the Black Vulture. Seen at various places from Galveston to Brownsville. No nests found.
89. BLACK VULTURE—*Coragyps urubu*.
Much commoner than the preceding and evenly distributed all along the coast, and inland, from Galveston to Brownsville. Nests with eggs and nests with young found on May 7 and 8.
90. HARRIS HAWK—*Parabuteo unicinctus harrisi*.
Apparently the commonest hawk and universally distributed throughout the coastal counties. A nest, with dead young under it, found in a large prickly pear in the chaparral near Brownsville on May 24, probably destroyed by some animal.
91. RED-TAILED HAWK—*Buteo borealis subs.?*
One seen on Caney Creek, Brazoria County, on May 8, and one in Refugio County on May 19. J. J. Carroll (Auk, vol. 17, p. 342) says that *krideri* is the dominant form in Refugio County.
92. FLORIDA RED-SHOULDERED HAWK—*Buteo lineatus alleni*.
Heard in the heavily wooded river bottoms of Victoria County.
93. BALD EAGLE—*Haliaeetus leucocephalus leucocephalus*.
A nest seen, said to be this species, near the Guadalupe River in Victoria County. Birds not seen.
94. DUCK HAWK—*Falco peregrinus anatum*.
A pair of adults in full plumage seen at close range on a small island in Matagorda Bay, May 8.
95. AUDUBON CARACARA—*Polyborus cheriway*.
Fairly common inland from Refugio County to Cameron County. A nest seen in a Spanish dagger near Brownsville.
96. TEXAS BARRED OWL—*Strix varia helveola*.
Heard hooting in the heavily wooded river bottoms of Victoria County.
97. TEXAS SCREECH OWL—*Otus asio mcalli*.
A young bird taken from a nest was brought in to Captain Camp's shop.
98. WESTERN HORNED OWL—*Bubo virginianus pallescens*.
A nest with one large young bird was found near Brownsville, on May 24, in a Spanish dagger.
99. GROOVE-BILLED ANI—*Crotophaga sulcirostris*.
A single bird seen in some dense brush near Brownsville on May 25.

100. ROADRUNNER—*Geococcyx californianus*.
Seen occasionally in the chaparral from Refugio County southward.
101. YELLOW-BILLED CUCKOO—*Coccygus americanus americanus*.
Common in all the coastal counties from Galveston to Brownsville.
Nests with eggs found near Brownsville on May 25 and 27.
102. BLACK-BILLED CUCKOO—*Coccygus erythrophthalmus*.
Seen on Caney Creek on May 8 and at Port La Vaca on May 11.
103. BELTED KINGFISHER—*Ceryle alcyon*.
One seen on Caney Creek on May 8 and one near Brownsville on May 25.
104. TEXAS KINGFISHER—*Chloroceryle americana septentrionalis*.
Two or three seen on the resacas near Brownsville, May 25 and 27.
105. TEXAS WOODPECKER—*Dryobates scalaris symplectus*.
Fairly common in Cameron County; probably only overlooked elsewhere.
106. RED-BELLIED WOODPECKER—*Centurus carolinus*.
Noted only in Victoria County. A nest with three eggs found in a fence post near a house, on May 21.
107. GOLDEN-FRONTED WOODPECKER—*Centurus aurifrons*.
Common, noisy and conspicuous from Nueces County to Cameron County. Two nests with fresh eggs found near Brownsville on May 24.
108. FLORIDA NIGHTHAWK—*Chordeiles virginianus chapmani*.
Nighthawks were common all along the coast. This is the form which is found in the northeastern counties as far as West Galveston Bay. Two nests with eggs were found on an island in Galveston Bay on May 4.
109. ASERE NIGHTHAWK—*Chordeiles virginianus aserriensis*.
This is the form found from eastern Matagorda Bay southwestward. A nest with eggs was found on an island in Redfish Bay, below Aransas Pass, on May 18.
110. TEXAS NIGHTHAWK—*Chordeiles acutipennis texensis*.
Noted occasionally between Corpus Christi and Brownsville. No nests found.
111. CHIMNEY SWIFT—*Chaetura pelagica*.
Seen on Galveston Bay on May 4.
112. RUBY-THROATED HUMMINGBIRD—*Archilochus colubris*.
Seen at Caney Creek on May 8.
113. BUFF-BELLIED HUMMINGBIRD—*Amazilia chalconota*.
Said to be very rare in Cameron County, but we saw two or three and I positively identified one, perched at close range, near Brownsville on May 25.
114. SCISSOR-TAILED FLYCATCHER—*Muscivora forficata*.
A common and familiar bird, usually seen about the ranch houses and along the suburban roads, sitting on telegraph wires or flitting about the shade trees. Universally distributed but not abundant.

- A pair was seen building a nest on the wings of a windmill, which was upset every time the mill was put in motion.
115. KINGBIRD—*Tyrannus tyrannus*.
Seen on islands in Galveston Bay, May 4, 7, and 8, at Port La Vaca, May 11, and at Brownsville, May 23.
 116. COUCH KINGBIRD—*Tyrannus melancholicus couchi*.
Common in Hidalgo and Cameron Counties. Young, out of the nest, seen at Brownsville on May 23.
 117. ARKANSAS KINGBIRD—*Tyrannus verticalis*.
Seen on an island in Galveston Bay, May 5, at Puerta Tank, May 17, and at Flour Bluff, May 29.
 118. DERBY FLYCATCHER—*Pitangus sulphuratus derbianus*.
Fairly common in the dense thickets of tall trees along the resacas or where large trees grow about the ranches, in Cameron County. A large conspicuous bird with striking and characteristic notes. It builds a very large nest. One that I brought home measures 14 inches in height and 10 inches in diameter.
 119. CRESTED FLYCATCHER—*Myiarchus crinitus*.
Fairly common in the river bottoms of Victoria County.
 120. MEXICAN CRESTED FLYCATCHER—*Myiarchus magister nelsoni*.
Common in Cameron County. An empty nest found in a hole in a fence post near Brownsville.
 121. ASH-THROATED FLYCATCHER—*Myiarchus cinerascens cinerascens*.
Fairly common and evidently breeding in the timber belts along the resacas near Brownsville.
 122. PHOEBE—*Sayornis phoebe*.
A few migrants seen on the island in Galveston Bay on May 4 and 5.
 123. WOOD PEWEE—*Myiochanes virens*.
Seen near Galveston on May 4 and in Victoria County on May 20.
 124. TRAILL FLYCATCHER—*Empidonax trailli trailli*.
Birds, apparently this species, were seen on islands in Galveston Bay, May 4, and on Caney Creek, May 8.
 125. LEAST FLYCATCHER—*Empidonax minimus*.
Common on the islands in Galveston Bay on May 4.
 126. TEXAS HORNED LARK—*Otocoris alpestris giraudi*.
Fairly common on the prairies from Refugio County to Cameron County.
 127. FLORIDA BLUE JAY—*Cyanocitta cristata cristata*.
Seen, but not very common, in the river bottom forests along the Guadalupe River. This is the form that formerly was called *florincola*.
 128. GREEN JAY—*Xanthoura luxuosa glaucescens*.
This beautiful bird was fairly common in the timber along the resacas near Brownsville. In spite of its brilliant colors, it was surprisingly inconspicuous among the lights and shades of the thick foliage, where it was usually rather inactive. No occupied

nests were found, as the young were on the wing and mostly fully grown at that season.

129. WHITE-NECKED RAVEN—*Corvus cryptoleucus*.
A few seen in western Kennedy and Cameron Counties, May 22 to 24.
130. SOUTHERN CROW—*Corvus brachyrhynchos paulus*.
Two or three seen near Port La Vaca on May 13.
131. COWBIRD—*Molothrus ater ater*.
Cow birds seen migrating near Galveston on May 5 were this form.
132. DWARF COWBIRD—*Molothrus ater obscurus*.
This was the breeding form all along the coast where it was only fairly common.
133. RED-EYED COWBIRD—*Tangavius aeneus involucratus*.
A few seen and one shot near Brownsville, where it breeds.
134. FLORIDA REDWING—*Agelaius phoeniceus floridanus*.
Breeding abundantly in the coast region about Galveston.
135. RIO GRANDE REDWING—*Agelaius phoeniceus megapotamus*.
This is the form which breeds along the coast below Matagorda. It was breeding very abundantly about Brownsville, where we saw numerous nests with eggs on May 23.
136. RIO GRANDE MEADOWLARK—*Sturnella magna hoopesi*.
This form replaces the Southern Meadowlark from Refugio County to Brownsville.
137. SOUTHERN MEADOWLARK—*Sturnella magna argutula*.
Fairly common from Galveston to Matagorda Bay.
138. AUDUBON ORIOLE—*Icterus melanocephalus auduboni*.
Said to be common about Brownsville, but we saw very few and found no nests.
139. SENNETT ORIOLE—*Icterus cucullatus sennetti*.
Very common around Brownsville, nesting in the palm trees in the woods and about the ranches and towns. The nests are neatly woven of palm fibres and sewed to the under sides of the broad fan-like leaves. Nests with fresh eggs and with young found on May 24.
140. ORCHARD ORIOLE—*Icterus spurius*.
Common around Port La Vaca where I saw young males in full song. Not recorded elsewhere, but probably overlooked.
141. BALTIMORE ORIOLE—*Icterus galbula*.
An adult male was seen near Galveston on May 4, evidently a migrant.
142. BULLOCK ORIOLE—*Icterus bullocki*.
An adult male seen near Corpus Christi on May 22, and a nest with five fresh eggs was taken on the outskirts of Brownsville on May 24.
143. BRONZED GRACKLE—*Quiscalus quiscula aeneus*.
Common about Galveston.

144. BOAT-TAILED GRACKLE—*Megaquiscalus major major*.
Very abundant from Galveston to the head of Matagorda Bay.
145. GREAT-TAILED GRACKLE—*Megaquiscalus major macrourus*.
Astonishingly abundant from Matagorda Bay to the Rio Grande. This is unquestionably the most abundant species of bird all along the coast of Texas, as well as the noisiest and most conspicuous, almost a nuisance at times. It nests in enormous numbers in practically all of the heron colonies, especially where there are trees or shrubs, which are often filled with the nests, a score or more of nests in a tree. The nests are often built in the lower parts of the nests of the Ward Herons, in prickly pear cactus, Spanish daggers or even in long grass. Their dense colonies seem over crowded. Both eggs and young were found all through May.
146. SAVANNA SPARROW—*Passerculus sandwichensis savanna*.
This is the winter resident form on the prairies, where it was still common during the first half of May.
147. WESTERN GRASSHOPPER SPARROW—*Ammodramus savannarum bimaculatus*.
Mr. Simmons said that the small sparrows, seen in the prairie regions of Refugio and Victoria Counties, were mostly of this species.
148. TEXAS SEASIDE SPARROW—*Passerherbulus maritimus sennetti*.
Common in the coastal marshes from Galveston to Corpus Christi.
149. WESTERN LARK SPARROW—*Chondestes grammacus strigatus*.
Common in the prairie regions from Refugio County to Cameron County.
150. HARRIS SPARROW—*Zonotrichia querula*.
Noted as a migrant on an island in Galveston Bay, May 5.
151. BLACK-THROATED SPARROW—*Amphispiza bilineata bilineata*.
A few seen on the dry plains of Cameron County.
152. TEXAS SPARROW—*Arremonops rufivirgatus*.
Common in the chaparral and in the thickets around Brownsville, where its characteristic song is often heard and where it moves about quietly on or close to the ground and is usually sociable and unsuspecting, often quite inquisitive.
153. GRAY-TAILED CARDINAL—*Cardinalis cardinalis canicaudus*.
Fairly common in all suitable localities, generally in dense brush or chaparral, from Port La Vaca to Brownsville. A nest, with two incubated eggs, was found near Brownsville, on May 25.
154. ROSE-BREASTED GROSBEAK—*Hedymeles ludovicaina*.
A female, apparently this species, was seen on Caney Creek, on May 8.
155. WESTERN BLUE GROSBEAK—*Guiraca caerulea lazula*.
A few seen around Brownsville.
156. INDIGO BUNTING—*Passerina cyanea*.
Migrants were seen near Galveston on May 4 and on Caney Creek on May 8.

157. VARIED BUNTING—*Passerina versicolor versicolor*.
A few seen around Brownsville.
158. PAINTED BUNTING—*Passerina ciris*.
Seen in Refugio County on May 19.
159. SHARPE SEEDEATER—*Sporophila moreletti sharpei*.
We saw a bird near Brownsville, which we took to be this species,
on May 25.
160. DICKCISSEL—*Spiza americana*.
Common on the prairies of Victoria County.
161. LARK BUNTING—*Calamospiza melanocorys*.
Specimens seen in Captain Camp's collection, taken as migrants
in changing plumage, near Brownsville.
162. ENGLISH SPARROW—*Passer domesticus*.
Common in all the towns and cities and about the ranches.
163. SUMMER TANAGER—*Piranga rubra rubra*.
Common in the river bottom forests of Victoria County.
164. PURPLE MARTIN—*Progne subis subis*.
Summer resident about the towns.
165. CLIFF SWALLOW—*Petrochelidon lunifrons*.
Seen around Galveston Bay, May 4, and on Caney Creek, May 8.
166. BARN SWALLOW—*Hirundo erythrogastra*.
Seen along the coast from Galveston, May 4, to Corpus Christi,
May 29.
167. TREE SWALLOW—*Iridoprocne bicolor*.
Seen only near Galveston on May 5, probably migrating.
168. BANK SWALLOW—*Riparia riparia*.
Seen near Galveston, May 4, and on Caney Creek, May 8.
169. WHITE-EYED VIREO—*Vireo griseus griseus*.
Heard singing near Galveston, May 5, and observed in Victoria
County, May 20.
170. SMALL WHITE-EYED VIREO—*Vireo griseus micrus*.
Specimens collected near Brownsville, where it is common. A
new nest, about five feet up on a lower branch of an ebony tree,
was found on May 24, and another with four heavily incubated
eggs, in a thicket, on the next day.
171. BLACK AND WHITE WARBLER—*Mniotilta varia*.
Migrants seen on an island in Galveston Bay on May 4.
172. PROTHONOTARY WARBLER—*Prothonotaria citrea*.
Heard singing in the cypress swamps on the Guadalupe River in
Victoria County, on May 30.
173. PARULA WARBLER—*Compsothlypis americana americana*.
Heard in the same localities as the preceding species.
174. SENNETT WARBLER—*Compsothlypis pityayumi nigrilora*.
Fairly common around Brownsville, on the edges of the resacas
where the trees are covered with *usnea* moss. Specimens collected
on May 27.

175. YELLOW WARBLER.
Migrants common on an island in Galveston Bay on May 4.
176. MYRTLE WARBLER—*Dendroica coronata coronata*.
A few seen on Caney Creek, on May 8, must have been late migrants.
177. MAGNOLIA WARBLER—*Dendroica magnolia*.
On a small island in Galveston Bay, on which only grass and low shrubbery was growing, we recorded 37 species of birds, mostly small land birds on migration, on May 4. A strong wind was blowing and the little birds were seeking shelter in the shrubbery or long grass, in little gullies and hollows, or behind sand dunes or drift logs. This pretty little warbler was one of the most numerous.
178. CHESTNUT-SIDED WARBLER—*Dendroica pensylvanica*.
A few seen on the island referred to above, on May 4.
179. BAY-BREASTED WARBLER—*Dendroica castanea*.
One seen with the above.
180. BLACKBURNIAN WARBLER—*Dendroica fusca*.
One seen on the same island.
181. BLACK-THROATED GREEN WARBLER—*Dendroica virens*.
Common on the same island.
182. OVENBIRD—*Seiurus aurocapillus*.
One seen on the same island.
183. WATER THRUSH—*Seiurus noveboracensis noveboracensis*.
A few seen on the same island.
184. MOURNING WARBLER—*Oporonis philadelphia*.
A few seen on the island referred to above and one seen on an island in San Antonio Bay, on May 15.
185. MARYLAND YELLOWTHROAT—*Geothlypis trichas trichas*.
Migrants seen on islands near Galveston, May 4, and one heard near Brownsville on May 25.
186. YELLOW-BREASTED CHAT—*Icteria virens virens*.
Migrants seen on the island in Galveston Bay on May 4. A nest and three eggs found in a thicket near Brownsville on May 25; one shot here proved to be the eastern bird.
187. AMERICAN REDSTART—*Setophaga ruticilla*.
Common on the island in Galveston Bay on May 4.
188. MOCKINGBIRD—*Mimus polyglottos polyglottos*.
The birds seen near Galveston early in May were of the eastern form, which is common as far southwest as Brazoria County.
189. WESTERN MOCKINGBIRD—*Mimus polyglottos leucopterus*.
Very common in all suitable localities in all the other coastal counties. Nests with eggs were found at Port La Vaca on May 11 and near Brownsville on May 24.
190. CATBIRD—*Dumetella carolinensis*.
Migrants seen on the island in Galveston Bay on May 4.

191. SENNETT THRASHER—*Toxostoma longirostre sennetti*.
Abundant in Hidalgo and Cameron Counties. Several nests with eggs and young found near Brownsville from May 25 to 27.
192. CURVE-BILLED THRASHER—*Toxostoma curvirostre curvirostre*.
Common in Hidalgo and Cameron Counties, but no occupied nests found.
193. CAROLINA WREN—*Thryothorus ludovicianus ludovicianus*.
The resident form of the more eastern and northern counties. Seen near Port La Vaca on May 13 and heard in Victoria County on May 20.
194. LOMITA WREN—*Thryothorus ludovicianus lomitensis*.
The resident form of Hidalgo and Cameron Counties. Heard and seen near Brownsville on May 25 and 27.
195. TEXAS WREN—*Thryomanes bewicki cryptus*.
Common around Brownsville. A nest with young found there on May 24; it was behind a blind on a deserted house.
196. BLACK-CRESTED TITMOUSE—*Baeolophus atricristatus atricristatus*.
Common around Brownsville.
197. VERDIN—*Auriparus flaviceps flaviceps*.
Common around Brownsville in the dry chaparral. Two nests with eggs found on May 24.
198. RIO GRANDE BLUEBIRD—*Sialis sialis episcopus*.
A nest with broken egg shells, taken near Brownsville, was seen in R. D. Camp's collection.

ORNITHOLOGICAL IMPRESSIONS OF FIJI AND NEW ZEALAND

BY DAYTON STONER

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On the occasion of the visit of the scientific expedition from the University of Iowa to Fiji and New Zealand during the summer of 1922, it was my good fortune to be associated with the enterprise as ornithologist and entomologist. Very naturally, a trip involving about 18,000 miles of travel on both land and water afforded some opportunity for certain ornithological observations. While a limited amount of collecting was accomplished on both Viti Levu and Makaluya of the Fiji group and on North Island, New Zealand, the short stay in these places, four weeks in the former (June 5 to July 3) and five weeks in the latter (July 7 to August 15), precluded any intensive study of the birds inhabiting them. Therefore, it is my wish at this time, to point out only a few general impressions