

## OBSERVATIONS ON THE BIRDS OF SOUTHWESTERN TEXAS.

By CHARLES WICKLIFFE BECKHAM.

Southwestern Texas has always been regarded as one of the most prolific fields for zoological research comprised within the limits of the Nearctic region, and, as far as the birds are concerned, it affords some very interesting problems of faunal distribution.

It was my fortune to spend the latter half of the month of December, 1886, and all of the months of January, February, and March, 1887, at four different places in this region collecting and studying the birds found there. The localities were San Antonio and Leon Springs in Bexar County; Beeville in Bee County, and Corpus Christi in Nueces County, on Corpus Christi Bay, at the mouth of the Nueces River. By reference to a map it will be seen that these four points are located approximately on a line, trending northwest and southeast, of about 70 miles in length.

At first it was my purpose to record only the results of my own observations, but upon reflection it seemed better to embody the notes of the other observers who had collected in the same localities, and thus present a pretty fair picture of the avifauna along what I believe to be an important line of faunal inosculation, if such a term is permissible.

Mr. N. C. Brown, in the first of his papers on the Birds of Kendall County, which adjoins Bexar County on the northwest (Bull. N. O. C., 1880, p. 33), alludes to this remarkable intermingling of Eastern and Western Province birds, and remarks particularly the intergradation shown in the cases of the Song Sparrow and the Pipilos. This mixing up of geographical races which my material illustrates is by far the most interesting fact in connection with my observations in Texas that has come to my knowledge, although this occurrence of intermediate forms is just what was to have been expected. As examples I may cite the cases of *Melothrus ater*, and *M. ater obscurus*, *Chondestes grammacus*, and *C. grammacus strigatus*, *Pooecetes gramineus*, and *P. gramineus confinis*, etc., all of which are more fully explained in another place.

San Antonio, in Bexar County, 680 feet above the sea-level, where most of my observations were made, is a peculiarly favored locality for birds. The San Antonio River, a respectable stream for southwestern Texas, has its source a mile or two above the town in several very large springs which issue from a soft limestone belonging to the Cretaceous series of formations, and which is the surface rock in this region. These springs or fountains unite to form the river, which, after winding through the town in a very tortuous course, is joined some distance below by the San Pedro, a large creek having a source of supply similar to that of the river.

The surrounding country is principally "mesquite," with the poverty of vegetable growth which that expressive term usually implies, while along the river the vegetation flourishes with almost tropical luxuriance. As the influence of vegetation upon bird life is one of the most important elements of environment that go to modify habits, structure, and coloration, I can not do better than quote from the admirable report of Dr. V. Havard, U. S. A., on the Flora of Western and Southern Texas (Proc. U. S. Nat. Mus., VIII, 1885, pp. 449-533).

Speaking of the flora of the San Antonio Valley, he says:

"The flora of the valley of the San Antonio River, near its head, where stands the town of San Antonio, being typical of that of the many valleys which drain the surrounding country, I shall, at the risk of repetition, describe it in detail:

"Many trees and shrubs leaf in March, and during the same month many native flowers can be collected. In April the vegetation is in its prime; masses of luxuriant timber spread over the valley, thick shrubbery of various shades of green covers the uplands, and a sward of thin but nutritious grass carpets the ground. The pale green of the mesquit-clad hills, contrasting with the sombre foliage of the valley, is particularly striking. In May plants begin to suffer from the hot and dry atmosphere. Before August, when summer rains usually begin, the scant grass has become parched, the shrubbery temporarily withered, and the timber dimmed with dust. The first showers, however, quicken everything back to life. The winter temperature seldom falling below 20°, many ornamental shrubs prosper in gardens, and hardy rose-bushes blossom all winter.

"The homely but useful mesquit (*Prosopis juliflora*), here, as everywhere in South and Western Texas, is predominant; it is mostly a shrub, sometimes a stunted tree, and covers the slopes and many of the tablelands. Mixed with it are the hardly less common Lote-bush (*Zizyphus obtusifolius*) and Brazil or Blue Wood (*Condalia obovata*), two Rhamnaceous shrubs growing together and similar in appearance. To the same order belong also *Rhamnus Carolinianus*, a tall shrub in shady places, and *Colubrinia Texensis*, a low bush on higher ground near the head of the river.

"Perhaps the tree most characteristic of San Antonio, and the pride of its inhabitants, is the Huisache (*Acacia Farnesiana*) which thrives everywhere in the valley, filling the air in March and April with the delicate perfume of its capitate, yellow flowers. Pretty also are the shrubby *Acacia amentacea* and *Ræmeriana* growing on gravelly hills.

"The other ligneous Leguminosæ deserving mention are: The Frijolillo (*Sophora secundiflora*), a dark green shrub, on rocky grounds, with thick bunches of rank violet flowers early in the spring, and poisonous scarlet beans in summer; *Sophora affinis*, a small tree with green bark, loosely-clustered flowers (in March) and beaded pod, the Retama (*Parkinsonia aculeata*), an elegant ornamental tree, more common on the lower

Rio Grande; *Casalpinia pulcherrima*, a bush with gorgeous orange flowers, common in gardens, introduced from Mexico; the Honey Locust (*Gleditsia triacanthos*), mostly cultivated.

"Largest and most conspicuous of trees along the river is the lordly Pecan (*Carya oliviformis*), attaining here an enormous size, and the Cottonwood (*Populus monilifera*). Less common are Black Walnut (*Juglans nigra*), Bald Cypress (*Taxodium distichum*), Black Willow (*Salix nigra*), Green Ash (*Fraxinus viridis*, var., *Berlandieriana*).

"Of the Urticaceæ there are several members: The Common Hackberry (*Celtis occidentalis*), a rather handsome tree 1 to 2 feet in diameter, affecting several forms; the Thorny Hackberry or Granjeno of the Mexicans (*Celtis pallida* of Torrey), a stiff shrub bearing insipid yellow berries; the Red Mulberry (*Morus rubra*), growing everywhere and yielding luscious fruit; the Wild Mulberry (*Morus microphylla*), along the river; the Paper Mulberry (*Broussonetia papyrifera*), common in yards; the Water Elm (*Ulmus crassifolia*), a middle size tree along streams, and the only Elm seen about San Antonio; the Osage Orange (*Maclura aurantiaca*).

"The Live Oak (*Quercus virens*), a large tree, forms the main feature of the arboreal vegetation on the higher grounds of the valley. Another Oak, smaller and less common, a form of Red Oak is *Quercus rubra*, var. *Texana*. Post Oak (*Quercus stellata*) is also found on surrounding hills.

"Of the Maple Family, the Box-Elder (*Negundo aceroides*), a small tree near the water, is the only representative. To a closely allied order belongs the Wild China-tree or Soapberry (*Sapindus marginatus*.) The naturalized China-tree (*Melia azedarach*), on account of its hardiness and rapid growth, is a favorite shade tree.

"Of the Rose Family, the only notable arborescent members are a species of Hawthorn (*Crataegus subvillosa*) and a Plum (*Prunus Americana*, var. *mollis*). Of the Rutaceæ, two shrubs are common: the Hop-tree (*Ptelea trifoliata*) along the river, and the Prickly Ash (*Xanthoxylum Clava-Herculis* on hill-sides.

"Other shrubs deserving mention are: The Trefoil Barberry (*Berberis trifoliata*), a low, evergreen bush with glaucous, spiny leaves, yellow blossoms, and red, palatable berries; the well known Texas Persimmon (*Diospyros Texana*); the thorny *Bumelia lanuginosa*; a small Holly (*Ilex decidua*); a Dogwood (*Cornus Drummondii*); the pretty *Lippia lycioides* bearing many slender racemes of exquisitely fragrant white flowers; *Forestiera pubescens*, *Vitis bipinnata*, and *Sambucus Canadensis*.

"Of vines, we have the Poison Ivy (*Rhus Toxicodendron*) very common and of luxuriant growth; the Texas Virgin's Bower (*Clematis Drummondii*), a pretty climber with long-feathered fruit; the Virginian Creeper *Ampelopsis quinquefolia* and several Grapes, viz.: *Vitis candicans* and *estivalis* which yield a scant but good fruit; *Vitis incisa* and *indivisa*, neat, hardy climbers, but with useless berries."

Dr. Havard also enumerates a great many herbs as being found in

the San Antonio Valley, but it is not thought advisable to include a list of them here.

According to the United States Signal Office the mean annual rain-fall at San Antonio is 32.75 inches and the mean annual temperature is 69.24° Fahr.

During the entire time of my visit a very severe drought prevailed in southwestern Texas, the last heavy rain having occurred in the preceding month of August, and the effects of the unusual scarcity of water were observable on all sides. One result, I think due to this cause, was the crowding of the birds along the water-courses, for very few individuals or species were seen at any distance from them.

One of the most surprising facts that my observations at San Antonio brought out was the considerable number of species that Dresser apparently overlooked when he published his well-known paper on the Birds of Southwestern Texas. It will be remembered that by far the larger part of his notes were made near San Antonio; also there are other species which I found abundantly represented, but which he alluded to as rare or as occurring in small numbers. For instance, he does not appear to have met with *Harporynchus rufus*, *Parus bicolor*, or *Quiscalus quiscula aeneus*, species all of which I found very abundant. The Black-throated Sparrow (*Amphispiza bilineata*) he gives as a rare bird at San Antonio, where, according to my experience, it is anything but rare. Again, he states that Harris's Sparrow (*Zonotrichia querula*) "occurs near San Antonio in the spring when on its migration north," but I found it to be one of the most abundant and characteristic winter birds at that place. There are many other similar instances mentioned in detail farther on under the heads of the different species, all of which go to prove, I think, not that Mr. Dresser was a careless or superficial observer, but that the bird-fauna at this particular place has, since the time he wrote (1863-'64) been undergoing a very decided change. In this connection the following list of the birds found in Bexar County will doubtless prove interesting. It includes species observed at San Antonio, on the Medina and Attascosa Rivers, by Dresser, and at San Antonio and Leon Springs by myself.

*List of birds found in Bexar County.*

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| 1. <i>Colymbus nigricollis californicus.</i> | 14. <i>Chen hyperborea nivalis.</i>      |
| 2. <i>Podilymbus podiceps.</i>               | 15. <i>Anser albifrons gambeli.</i>      |
| 3. <i>Sterna hirundo.</i>                    | 16. <i>Branta canadensis.</i>            |
| 4. <i>Anhinga anhinga.</i>                   | 17. <i>Branta canadensis hutchinsii.</i> |
| 5. <i>Merganser americanus.</i>              | 18. <i>Tantalus loculator.</i>           |
| 6. <i>Lophodytes cucullatus.</i>             | 19. <i>Botaurus lentiginosus.</i>        |
| 7. <i>Anas boschas.</i>                      | 20. <i>Botaurus exilis.</i>              |
| 8. <i>Anas obscura.</i>                      | 21. <i>Ardea herodias.</i>               |
| 9. <i>Anas strepera.</i>                     | 22. <i>Ardea candidissima.</i>           |
| 10. <i>Anas carolinensis.</i>                | 23. <i>Ardea egretta.</i>                |
| 11. <i>Anas discors.</i>                     | 24. <i>Ardea rufescens.</i>              |
| 12. <i>Dafila aenta.</i>                     | 25. <i>Ardea pealei.</i>                 |
| 13. <i>Aix sponsa.</i>                       | 26. <i>Ardea tricolor ruficollis.</i>    |

*List of birds found in Bexar County—Continued.*

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| 27. <i>Ardea cœrulea.</i>                    | 79. <i>Falco columbarius.</i>                |
| 28. <i>Ardea virescens.</i>                  | 80. <i>Falco sparverius.</i>                 |
| 29. <i>Nycticorax nycticorax naevius.</i>    | 81. <i>Polyborus cheriway.</i>               |
| 30. <i>Nycticorax violaceus.</i>             | 82. <i>Strix pratineola.</i>                 |
| 31. <i>Grus americana.</i>                   | 83. <i>Asio accipitrinus.</i>                |
| 32. <i>Grus mexicana.</i>                    | 84. <i>Syrnium nebulosum.</i>                |
| 33. <i>Rallus virginianus.</i>               | 85. <i>Megascops asio mcCallii.</i>          |
| 34. <i>Porzana carolina.</i>                 | 86. <i>Bubo virginianus.</i>                 |
| 35. <i>Porzana noveboracensis.</i>           | 87. <i>Nyctea nyctea.</i>                    |
| 36. <i>Ionornis martinica.</i>               | 88. <i>Speotyto cunicularia hypogaea.</i>    |
| 37. <i>Fulica americana.</i>                 | 89. <i>Geococcyx californianus.</i>          |
| 38. <i>Phalaropus tricolor.</i>              | 90. <i>Coccyzus americanus.</i>              |
| 39. <i>Himantopus mexicanus.</i>             | 91. <i>Ceryle alcyon.</i>                    |
| 40. <i>Gallinago delicata.</i>               | 92. <i>Ceryle cabanisi.</i>                  |
| 41. <i>Macrorhamphus griseus.</i>            | 93. <i>Dryobates pubescens.</i>              |
| 42. <i>Micropalama himantopus.</i>           | 94. <i>Dryobates scalaris bairdi.</i>        |
| 43. <i>Tringa maculata.</i>                  | 95. <i>Sphyrapicus varius.</i>               |
| 44. <i>Totanus melanoleucus.</i>             | 96. <i>Ceophleus pileatus.</i>               |
| 45. <i>Totanus flavipes.</i>                 | 97. <i>Melanerpes erythrocephalus.</i>       |
| 46. <i>Totanus solitarius.</i>               | 98. <i>Melanerpes carolinus.</i>             |
| 47. <i>Symphemia semipalmata inornata.</i>   | 99. <i>Melanerpes aurifrons.</i>             |
| 48. <i>Bartramia longicauda.</i>             | 100. <i>Colaptes auratus.</i>                |
| 49. <i>Tryngites subruficollis.</i>          | 101. <i>Colaptes cafer.</i>                  |
| 50. <i>Actitis macularia.</i>                | 102. <i>Antrostomus carolinensis.</i>        |
| 51. <i>Numenius longirostris.</i>            | 103. <i>Phalacroptilus nuttalli nitidus.</i> |
| 52. <i>Numenius hudsonicus.</i>              | 104. <i>Chordeiles virginianus.</i>          |
| 53. <i>Numenius borealis.</i>                | 105. <i>Chordeiles texensis.</i>             |
| 54. <i>Charadrius dominicus.</i>             | 106. <i>Trochilus colubris.</i>              |
| 55. <i>Ægialitis vocifera.</i>               | 107. <i>Trochilus alexandri.</i>             |
| 56. <i>Ægialitis semipalmata.</i>            | 108. <i>Milvulus forficatus.</i>             |
| 57. <i>Ægialitis montana.</i>                | 109. <i>Tyrannus tyrannus.</i>               |
| 58. <i>Colinus virginianus texanus.</i>      | 110. <i>Myiarchus crinitus.</i>              |
| 59. <i>Cyrtonyx montezumæ.</i>               | 111. <i>Myiarchus mexicanus.</i>             |
| 60. <i>Meleagris gallopavo.</i>              | 112. <i>Sayornis phœbe.</i>                  |
| 61. <i>Zenaidura macroura.</i>               | 113. <i>Sayornis saya.</i>                   |
| 62. <i>Columbigallina passerina pallens.</i> | 114. <i>Contopus borealis.</i>               |
| 63. <i>Cathartes aura.</i>                   | 115. <i>Contopus virens.</i>                 |
| 64. <i>Catharista atrata.</i>                | 116. <i>Contopus richardsonii.</i>           |
| 65. <i>Elanoides forficatus.</i>             | 117. <i>Empidonax flaviventris.</i>          |
| 66. <i>Ictinia mississippiensis.</i>         | 118. <i>Empidonax acadicus.</i>              |
| 67. <i>Circus hudsonicus.</i>                | 119. <i>Empidonax pusillus traillii.</i>     |
| 68. <i>Accipiter velox.</i>                  | 120. <i>Empidonax minimus.</i>               |
| 69. <i>Accipiter cooperi.</i>                | 121. <i>Pyrocephalus rubinus mexicanus.</i>  |
| 70. <i>Parabuteo unicinctus harrisi.</i>     | 122. <i>Otocoris alpestris giraudi.</i>      |
| 71. <i>Buteo borealis.</i>                   | 123. <i>Cyanocitta cristata florincola.</i>  |
| 72. <i>Buteo harlani.</i>                    | 124. <i>Corvus corax sinuatus.</i>           |
| 73. <i>Buteo lineatus.</i>                   | 125. <i>Corvus americanus.</i>               |
| 74. <i>Buteo lineatus elegans.</i>           | 126. <i>Molothrus ater.</i>                  |
| 75. <i>Buteo swainsoni.</i>                  | 127. <i>Molothrus ater obscurus.</i>         |
| 76. <i>Buteo latissimus.</i>                 | 128. <i>Xanthocephalus xanthocephalus.</i>   |
| 77. <i>Haliaeetus leucocephalus.</i>         | 129. <i>Agelaius phœniceus.</i>              |
| 78. <i>Falco mexicanus.</i>                  | 130. <i>Sturnella neglecta.</i>              |
|  | 131. <i>Icterus spurius.</i>                 |
|  | 132. <i>Icterus galbula.</i>                 |

*List of birds found in Bexar County—Continued.*

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| 133. <i>Scolecophagus cyanocephalus</i> .                   | 178. <i>Vireo noveboracensis</i> .           |
| 134. <i>Quiscalus quiscula eximius</i> .                    | 179. <i>Vireo bellii</i> .                   |
| 135. <i>Spinus tristis</i> .                                | 180. <i>Mniotilta varia</i> .                |
| 136. <i>Calcarius ornatus</i> .                             | 181. <i>Helminthophila chrysoptera</i> .     |
| 137. <i>Rhynchophanes mecownii</i> .                        | 182. <i>Helminthophila ruficapilla</i> .     |
| 138. <i>Pooecetes gramineus confinis</i> .                  | 183. <i>Helminthophila celata</i> .          |
| 139. <i>Ammodramus sandwichensis</i><br><i>alaudinus</i> .  | 184. <i>Compothlypis americana</i> .         |
| 140. <i>Ammodramus savannarum</i> per-<br><i>pallidus</i> . | 185. <i>Dendroica aestiva</i> .              |
| 141. <i>Ammodramus leconteii</i> .                          | 186. <i>Dendroica caerulescens</i> .         |
| 142. <i>Chondestes grammacus</i> .                          | 187. <i>Dendroica coronata</i> .             |
| 143. <i>Chondestes grammacus striga-</i><br><i>tus</i> .    | 188. <i>Dendroica maculosa</i> .             |
| 144. <i>Zonotrichia querula</i> .                           | 189. <i>Dendroica castanea</i> .             |
| 145. <i>Zonotrichia leucophrys</i> .                        | 190. <i>Dendroica blackburniae</i> .         |
| 146. <i>Zonotrichia intermedia</i> .                        | 191. <i>Dendroica dominica albiflora</i> .   |
| 147. <i>Zonotrichia albicollis</i> .                        | 192. <i>Dendroica chrysoparia</i> .          |
| 148. <i>Spizella socialis</i> .                             | 193. <i>Dendroica virens</i> .               |
| 149. <i>Spizella pallida</i> .                              | 194. <i>Seiurus noveboracensis</i> .         |
| 150. <i>Spizella pusilla</i> .                              | 195. <i>Geothlypis formosa</i> .             |
| 151. <i>Junco hyemalis</i> .                                | 196. <i>Geothlypis philadelphia</i> .        |
| 152. <i>Junco hyemalis shufeldti</i> .                      | 197. <i>Geothlypis trichas</i> .             |
| 153. <i>Amphispiza bilineata</i> .                          | 198. <i>Sylvania mitrata</i> .               |
| 154. <i>Peucaea cassini</i> .                               | 199. <i>Sylvania pusilla</i> .               |
| 155. <i>Melospiza fasciata</i> .                            | 200. <i>Sylvania canadensis</i> .            |
| 156. <i>Melospiza lincolni</i> .                            | 201. <i>Setophaga ruticilla</i> .            |
| 157. <i>Passerella iliaca</i> .                             | 202. <i>Anthus pensilvanicus</i> .           |
| 158. <i>Pipilo maculatus megalonyx</i> .                    | 203. <i>Oroscoptes montanus</i> .            |
| 159. <i>Pipilo chlorurus</i> .                              | 204. <i>Mimus polyglottos</i> .              |
| 160. <i>Cardinalis cardinalis</i> .                         | 205. <i>Harporhynchus rufus</i> .            |
| 161. <i>Icteria ludoviciana</i> .                           | 206. <i>Catherpes mexicanus conspersus</i> . |
| 162. <i>Passerina ciris</i> .                               | 207. <i>Thryothorus ludovicianus</i> .       |
| 163. <i>Spiza americana</i> .                               | 208. <i>Thryothorus bewickii murinus</i> .   |
| 164. <i>Calamospiza melanocorys</i> .                       | 209. <i>Troglodytes aedon parkmannii</i> .   |
| 165. <i>Piranga erythromelas</i> .                          | 210. <i>Troglodytes hiemalis</i> .           |
| 166. <i>Piranga rubra</i> .                                 | 211. <i>Certhia familiaris americana</i> .   |
| 167. <i>Progne subis</i> .                                  | 212. <i>Sitta carolinensis</i> .             |
| 168. <i>Petrochelidon lunifrons</i> .                       | 213. <i>Sitta canadensis</i> .               |
| 169. <i>Chelidon erythrogaster</i> .                        | 214. <i>Parus bicolor</i> .                  |
| 170. <i>Clivicola riparia</i> .                             | 215. <i>Parus atricristatus</i> .            |
| 171. <i>Stelgidopteryx serripennis</i> .                    | 216. <i>Parus carolinensis agilis</i> .      |
| 172. <i>Ampelis cedrorum</i> .                              | 217. <i>Auriparus flaviceps</i> .            |
| 173. <i>Lanius ludovicianus excubito-</i><br><i>rides</i> . | 218. <i>Regulus satrapa</i> .                |
| 174. <i>Vireo olivaceus</i> .                               | 219. <i>Regulus calendula</i> .              |
| 175. <i>Vireo gilvus</i> .                                  | 220. <i>Polioptila caerulea</i> .            |
| 176. <i>Vireo solitarius</i> .                              | 221. <i>Polioptila plumbea</i> .             |
| 177. <i>Vireo flavifrons</i> .                              | 222. <i>Turdus aonalaschke</i> .             |
|   | 223. <i>Turdus aonalaschke pallasii</i> .    |
|   | 224. <i>Merula migratoria</i> .              |
|   | 225. <i>Sialia arctica</i> .                 |
|   | 226. <i>Sialia sialis</i> .                  |

Included in the foregoing list are the following species found by me in Bexar County (all but one at San Antonio) during the months of

December, January, February, and March, which were not met with by Dresser:

Ceryle cabanisi.	Melospiza fasciata.
Trochilus alexandri.	Passerella iliaca.
Cyanocitta cristata florineola.	Pipilo chlorurus.
Quiscalus quiscula venens.	Molothrus ater obscurus.
Anmodramus leconteii.	Vireo flavifrons.
Zonotrichia leucophrys.	Harporhynchus rufus.
Zonotrichia albicollis.	Troglodytes ædon parkmannii.
Junco hyemalis shufeldti.	Sitta canadensis.
Auriparus flaviceps.	

The following twelve species, occurring during the months of December, January, February, and March, were found by Dresser, but were not seen by me at all:

Trochilus colubris.	Zonotrichia intermedia.
Sayornis saya.	Calamospiza melanocorys.
Contopus borealis.	Petrochelidon lunifrons.
Corvus corax sinuatus.	Chelidon erythrogaster.
Calcarius ornatus.	Clivicola riparia.
Rhynchophanes mccownii.	Sialia arctica.

On account of the difficulty of collecting water-birds, and birds of prey, I made no special effort to get any of them, hence those contained in Dresser's paper are not included in the above list.

Of the birds in this list, it is not surprising, for reasons elsewhere stated, that I overlooked *Trochilus colubris*, the three species of swallows, and *Corvus corax sinuatus*, but, as I ransacked the immediate neighborhood of San Antonio, it is strange that the other seven species were not met with.

Beville, where I collected from February 12 to February 18, inclusive, is the county seat of Bee County, and is the metropolis of a rich and immense grazing district. It is on the San Antonio and Aransas Pass Railway, between San Antonio and Corpus Christi, about 100 miles south-southeast of the former place and about 60 miles north-northwest of Corpus Christi. With the exception of the unusual scarcity of water the country seemed well adapted to bird life. There were a good many scattered groves of live oak and hackberry trees, and the omnipresent mesquite, at this distance from the coast, had become decidedly arborescent. At the time of my visit, notwithstanding the great drought, all of the vegetation looked fresh and spring-like; the young leaves were putting forth very rapidly and the huisache and several other plants were in bloom. A great deal of this unexpected plant-vigor was to be ascribed to the remarkably heavy dews, which, while not as heavy as at Corpus Christi and other points on the coast, are of inestimable benefit in the general absence of rain. Although there had been no rain there since September, the grass, wherever it had been burnt over, was as fresh and green as on a Kentucky "blue-grass" farm in May.

Notwithstanding these favorable conditions birds were very scarce; some species like the Virginia Cardinal and the White-crowned Sparrow were abundantly represented, but of the other species found there there were comparatively few individuals to be seen. In the immediate vicinity of the village were several wind-engines used for pumping water from wells into storage tanks, troughs, etc., and there was a pond of very foul water near the railway line, of perhaps a quarter of an acre in extent, which had somehow escaped extinction in the general drying up, and about these favored places birds were always to be found when they were not to be seen anywhere else.

The following species were noted as occurring there, or in Bee County:

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| 1. Gallinago delicata.                 | 21. Ammodramus savannarum perpallidus. |
| 2. Ægialitis vocifera.                 | 22. Zonotrichia querula.               |
| 3. Colinus virginianus texanus.        | 23. Zonotrichia leucophrys.            |
| 4. Callipepla squamata castanogastris. | 24. Spizella pusilla.                  |
| 5. Meleagris gallopavo.                | 25. Melospiza lincolni.                |
| 6. Zenaidura macroura.                 | 26. Pipilo maculatus megalonyx.        |
| 7. Cathartes aura.                     | 27. Cardinalis carolinensis.           |
| 8. Catharista atrata.                  | 28. Pyrrhuloxia sinuata.               |
| 9. Geococcyx californianus.            | 29. Progne subis.                      |
| 10. Dryobates scalaris bairdi.         | 30. Dendroica coronata.                |
| 11. Melanerpes aurifrons.              | 31. Lanius ludovicianus excubitorides. |
| 12. Sayornis phæbe.                    | 32. Anthus pensilvanicus.              |
| 13. Sayornis saya.                     | 33. Oreoscoptes montanus.              |
| 14. Molothrus ater.                    | 34. Mimus polyglottos.                 |
| 15. Molothrus ater obscurus.           | 35. Thyrothorus bewickii murinus.      |
| 16. Sturnella neglecta.                | 36. Troglodytes ædon parkmannii.       |
| 17. Scolecophagus cyanocephalus.       | 37. Parus bicolor texensis.            |
| 18. Quiscalus quiscula æneus.          | 38. Parus atricristatus.               |
| 19. Quiscalus macrourus.               | 39. Parus atricristatus castaneifrons. |
| 20. Pooecetes gramineus confinis.      | 40. Regulus calendula.                 |

The above table is more remarkable for the species it does not contain than for those which are found therein. The absence of *Chondestes grammacus* and *Amphispiza bilineata* is especially to be noted.

I arrived at Corpus Christi on January 20 and left there February 12, and most of the time was devoted to collecting. But little attention was given to the water-birds, principally on account of the difficulty of getting at them and the knowledge that Sennett had devoted nearly all of his time to them on the occasions of his two visits to this place. The surrounding country is a dreary looking waste of cactus, chaparral, and mesquite, the total absence of anything that can be dignified by the name of timber giving the landscape a particularly uninviting aspect, and, as was to have been expected, comparatively few species of birds were found, and, with two or three exceptions, those that were seen were but poorly represented in point of numbers.

Like the other places visited, this locality was suffering greatly from the drought, but the dews compensated largely for the lack of rain,



They were so heavy that upon two occasions I could hardly convince myself that it had not rained during the night. A prominent physician of the town, who has a very large house covered by a metallic roof, informed me that the nightly condensation of vapor on the roof was sufficient to supply his family with drinking water.

Dr. Havard, in the paper previously referred to, says of the flora about Corpus Christi (Proc. U. S. Nat. Mus., VIII, p. 485):

"The vicinity of the sea does not appear to have any favorable influence on either the nature or vigor of the vegetation. From the mouth of the Rio Grande to Corpus Christi the coast is low, mostly bare, and unattractive. The trees or arborescent shrubs seen at the above town are Mesquite, mostly shrubby, extending to the very edge of the bay, Huisache and Retama, both of large size and much cultivated, Ebony (*Acacia flexicaulis*), Black Willow, Hackberry, Texas Persimmon. These trees, or some of them, with the addition of the Green Ash, the Water Elm (*Ulmus crassifolia*), Anaqua (*Ehretia elliptica*) and Nacahuite (*Cordia Boissieri*) are seen in thin fringes in many drains, arroyos, and creeks opening into the sea.

"Of the trees or shrubs introduced at Corpus Christi, the Tamarisk, 2 feet in diameter, China Tree (*Melia*), Red Mulberry, Osage Orange, and Oleander are quite thrifty.

"The scrubby chaparral, extending from the shore inward for several miles, consists mostly of Mezquit, Granjeno, Texas Persimmon, Junco, Coyotillo (*Karwinskia*), *Acacia amentacea* and *flexicaulis*, *Condalia obovata*, *Castela Nicholsoni*, *Xanthoxylum Pterota*, *Lippia lycioides*, *Berberis trifoliata*, *Lantana Camara*, and *Aster Palmeri*.

"The vines are *Anredera scandens*, *Vitis incisa*, *Serjania brachycarpa*, *Maximowiczia Lindheimeri*.

"Of Grasses, the most common are Bermuda Grass (*Cynodon Dactylon*), *Aristida purpurea*, *Bouteloua Texana*, *Eragrostis reptans*, and *Elysiue Egyptica*.

The following is a list of the birds found there, compiled from the papers of Sennett and Hancock, and from my own observations:

- |  |   |
|--|---|
| 1. <i>Urinator imber</i> .                 | 16. <i>Anas strepera</i> .                  |
| 2. <i>Larus delawarensis</i> .             | 17. <i>Anas americana</i> .                 |
| 3. <i>Larus argentatus smithsonianus</i> . | 18. <i>Anas carolinensis</i> .              |
| 4. <i>Larus atricilla</i> .                | 19. <i>Anas discors</i> .                   |
| 5. <i>Gelochelidon nilotica</i> .          | 20. <i>Spatula clypeata</i> .               |
| 6. <i>Sterna tschegrava</i> .              | 21. <i>Dafila acuta</i> .                   |
| 7. <i>Sterna forsteri</i> .                | 22. <i>Aix sponsa</i> .                     |
| 8. <i>Sterna maxima</i> .                  | 23. <i>Aythya americana</i> .               |
| 9. <i>Sterna sandvicensis acullavida</i> . | 24. <i>Aythya vallisneria</i> .             |
| 10. <i>Sterna fuliginosa</i> .             | 25. <i>Aythya affinis</i> .                 |
| 11. <i>Phalacrocorax mexicanus</i> .       | 26. <i>Glauconetta clangula americana</i> . |
| 12. <i>Pelecanus erythrorhynchus</i> .     | 27. <i>Chen hyperborea nivalis</i> .        |
| 13. <i>Pelecanus fuscus</i> .              | 28. <i>Ajaja ajaja</i> .                    |
| 14. <i>Lophodytes cucullatus</i> .         | 29. <i>Plegadis guaranna</i> .              |
| 15. <i>Anas boschas</i> .                  | 30. <i>Ardea herodias</i> .                 |

31. *Ardea egretta*.
32. *Ardea candidissima*.
33. *Ardea rufescens*.
34. *Ardea tricolor ruficollis*.
35. *Ardea cœrulea*.
36. *Ardea virescens*.
37. *Nycticorax nycticorax naevius*.
38. *Nycticorax violaceus*.
39. *Grus americana*.
40. *Grus mexicana*.
41. *Gallinula galeata*.
42. *Recurvirostra americana*.
43. *Himantopus mexicanus*.
44. *Gallinago delicata*.
45. *Macrorhamphus griseus*.
46. *Calidris arenaria*.
47. *Limosa fedoa*.
48. *Symphemia semipalmata inornata*.
49. *Numenius longirostris*.
50. *Charadrius dominicus*.
51. *Ægialitis vocifera*.
52. *Ægialitis semipalmata*.
53. *Arenaria interpres*.
54. *Hæmatopus palliatus*.
55. *Colinus virginianus texanus*.
56. *Meleagris gallopavo*.
57. *Zenaidura macroura*.
58. *Cathartes aura*.
59. *Catharista atrata*.
60. *Elanoides forficatus*.
61. *Circus hudsonius*.
62. *Accipiter velox*.
63. *Buteo borealis*.
64. *Buteo albicaudatus*.
65. *Aquila chrysaëtos*.
66. *Falco peregrinus anatum*.
67. *Falco sparverius*.
68. *Polyborus cheriway*.
69. *Asio accipitrinus*.
70. *Syrnium nebulosum*.
71. *Megascops asio mcallii*.
72. *Bubo virginianus*.
73. *Speotyto cunicularia hypogæa*.
74. *Geococcyx californianus*.
75. *Coccyzus americanus*.
76. *Ceryle alcyon*.
77. *Ceryle cabanisi*.
78. *Dryobates scalaris*.
79. *Melanerpes carolinus*.
80. *Melanerpes aurifrons*.
81. *Antrostomus vociferus*.
82. *Nyctidromus albigollis*.
83. *Trochilus colubris*.
84. *Milvulus forficatus*.
85. *Myiarchus cineritus*.
86. *Sayornis phœbe*.
87. *Sayornis saya*.
88. *Pyrocephalus rubineus mexicanus*.
89. *Otocoris alpestris girandi*.
90. *Molothrus ater*.
91. *Agelaius phœniceus*.
92. *Sturnella magna*.
93. *Sturnella magna neglecta*.
94. *Icterus spurius*.
95. *Icterus bullocki*.
96. *Scolecophagus cyanocephalus*.
97. *Quiscalus maerourus*.
98. *Pooecetes gramineus confinis*.
99. *Ammodramus sandwichensis savanna*.
100. *Ammodramus sandwichensis alaudinus*.
101. *Ammodramus savannarum perpallidus*.
102. *Chondestes grammacus strigatus*.
103. *Zonotrichia leucophrys*.
104. *Spizella pallida*.
105. *Spizella pusilla*.
106. *Melospiza lincolni*.
107. *Pipilo maculatus megalonyx*.
108. *Cardinalis cardinalis*.
109. *Pyrrhuloxia sinuata*.
110. *Passerina cyanea*.
111. *Passerina ciris*.
112. *Calamospiza melanocorys*.
113. *Piranga rubra*.
114. *Progne subis*.
115. *Tachycineta bicolor*.
116. *Clivicola riparia*.
117. *Ampelis cedrorum*.
118. *Lanius ludovicianus excubitorides*.
119. *Vireo olivaceus*.
120. *Vireo belli*.
121. *Mniotilta varia*.
122. *Helminthophila pinus*.
123. *Helminthophila celata*.
124. *Compsothlypis americana*.
125. *Dendroica coronata*.
126. *Dendroica dominica albiflora*.
127. *Dendroica virens*.
128. *Geothlypis trichas*.
129. *Setophaga ruticilla*.
130. *Anthus pensilvanicus*.
131. *Oroscoptes montanus*.
132. *Mimus polyglottos*.
133. *Harporhynchus longirostris*.
134. *Thryothorus bewickii murinus*.
135. *Troglodytes aëdon parkmannii*.
136. *Regulus calendula*.
137. *Polioptila caerulea*.
138. *Merula migratoria*.
139. *Merula migratoria propinqua*.

## Order PYGOPODES. Diving Birds.

## Family PODICIPIDÆ. Grebes.

## Genus COLYMBUS LINNÆUS.

1. *Colymbus nigricollis californicus* (HEERM.). American Eared Grebe.

Dresser states that he shot one specimen of this Grebe on Mitchell's Lake, near San Antonio, in December, 1863.

## Genus PODILYMBUS LESSON.

2. *Podilymbus podiceps* (LINN.). Pied-billed Grebe.

Brown records the Pied-billed Grebe as occurring at Boerne, in Kendall County, during the latter part of March, and Dresser found it not uncommon near San Antonio during the winter. Boerne, where Mr. Brown collected, is 30 miles northwest of San Antonio. (See Bibliographical Appendix.)

## Family URINATORIDÆ. Loons.

## Genus URINATOR CUVIER.

3. *Urinator imber* (GUNN.). Loon.

Sennett found the Loon "common near the Pass in Corpus Christi Bay during the last days of March."

## Order LONGIPENNES. Long-winged Swimmers.

## Family LARIDÆ. Gulls and Terns.

## Genus LARUS LINNÆUS.

4. *Larus argentatus smithsonianus* COUES. The American Herring Gull.

According to Hancock this Gull is common on the coast and about the bay. Sennett found them very numerous near the mouth of the Nueces River, ranking next to the Ring-billed in point of numbers.

5. *Larus delawarensis* ORD. Ring-billed Gull.

The longest and best shot I made in Texas was at one of these Gulls which was feeding on a mud-flat half a mile from the bay at Corpus Christi. They appeared to be very common there, although other species may have been mistaken for them. "In company with other Gulls and Terns, at the mouth of the Nueces River during March, and the most numerous among them." (Sennett.)

6. *Larus atricilla* LINN. Laughing Gull.

According to Sennett very abundant about Corpus Christi Bay, and they breed in great numbers in Lagoon Madre and about Padre Island, but 1st April they had not begun to lay.

## Genus GELOCHELIDON BREHM.

7. *Gelochelidon nilotica* (HASELQ.). Gull-billed Tern.

"Observed on the coast of the bay March 16. A set of three eggs was taken, together with the male bird on Bird Island, May 23." (Hancock.) Sennett found it (*Sterna anglica*) quite common about Nueces Bay and Corpus Christi Pass.

## Genus STERNA LINNÆUS.

8. *Sterna tschegrava* LEPECH. Caspian Tern.

Hancock saw the Caspian Tern about Corpus Christi Bay on March 16, and Sennett notes it as occurring all along the coast from Galveston to Padre Island. On March 27 he observed great numbers of them about one of the bird islands in Corpus Christi Bay, where they were mating and preparing to breed.

9. *Sterna maxima* BODD. Royal Tern.

Found in great numbers about the head of Padre Island by Sennett. They breed in that locality.

10. *Sterna sandvicensis acuflava* (CABOT). Cabot's Tern.

Sennett found this Tern common on the coast side of Corpus Christi Bay, where they breed.

11. *Sterna forsteri* NUTT. Forster's Tern.

Both Sennett and Hancock found this bird common about Corpus Christi Bay.

12. *Sterna hirundo* LINN. The Common Tern.

Dresser procured one specimen of the Common Tern at San Antonio in May, 1864. It is not recorded from Corpus Christi.

13. *Sterna fuliginosa* GMEL. Sooty Tern.

Hancock observed this Tern about the reef near Corpus Christi on March 26.

## Family RYNCHOPIDÆ. Skimmers.

## Genus RYNCHOPS LINNÆUS.

14. *Rynchops nigra* LINN. Black Skimmer.

According to Sennett the Skimmer is common on the shallows and flats about Corpus Christi Bay during the latter part of March, when they were in transitional plumage. He was informed that they bred there in great numbers later in the season, and Hancock obtained a set of five eggs on May 25.

## Order STEGANOPODES. Totipalmate Swimmers.

## Family ANHINGIDÆ. Darters.

## Genus ANHINGA BRISSON.

15. *Anhinga anhinga* (LINN.). Darter.

Brown records the capture of a female Darter at Boerne March 24 and Dresser shot one on the Medina River on the 5th of March. The Medina is a tributary of the San Antonio River, flowing through the southwestern part of Bexar County. Its nearest point is less than 20 miles from the city of San Antonio.

## Family PHALACROCORACIDÆ. Cormorants.

## Genus PHALACROCORAX BRISSON.

16. *Phalacrocorax mexicanus* (BRANDT). Mexican Cormorant.

Both Sennett and Hancock note this Cormorant as occurring at Corpus Christi, but as neither of them secured specimens the identification is subject to doubt.

## Family PELECANIDÆ. Pelicans.

## Genus PELECANUS LINNÆUS.

17. *Pelecanus erythrorhynchus* GMEL. White Pelican.

I noted two of these birds at Corpus Christi on February 12 while at "The Reef" at the mouth of the Nueces River, on the railway, and saw two splendid specimens of immature birds in dark plumage, several days before, which had been shot by a visiting sportsman. Sennett found it common about the northern end of Padre Island up to the last of March, and Hancock also records it as occurring at Corpus Christi.

18. *Pelecanus fuscus* LINN. Brown Pelican.

I found this Pelican quite common about Corpus Christi Bay, and there were three or four individuals that often came up right alongside of the docks to fish. Sennett found them breeding in great numbers on three small islands in the bay, March 30.

## Order ANSERES. Lamellirostral Swimmers.

## Family ANATIDÆ. Ducks, Geese, and Swans.

## Genus MERGANSER BRISSON.

19. *Merganser americanus* (CASS.). American Merganser.

At Boerne Brown saw small flocks of this duck in January, and Dresser records it as "found occasionally during the winter."

## Genus LOPHODYTES REICHENBACH.

20. *Lophodytes cucullatus* (LINN.). Hooded Merganser.

Mr. John Joydt, of Corpus Christi, described the Hooded Merganser to me very minutely, and stated that he had seen it at Corpus Christi with other ducks, but that it is uncommon. Dresser votes it as occurring on the Medina, Leona, and Nueces Rivers.

## Genus ANAS LINNÆUS.

21. *Anas boschas* LINN. Mallard.

A good many Mallards were shot at Corpus Christi by local and visiting sportsmen during my stay there. Brown records it as of occasional occurrence at Boerne, and Dresser says that it is "abundant during winter, frequenting inland streams and ponds."

22. *Anas obscura* GMEL. Dusky Duck.

Dresser notes but one specimen of this duck, which was shot by Dr. Heermann near San Antonio. At Boerne, Brown found small flocks infrequently in the creek.

23. *Anas strepera* LINN. Gadwall.

A common winter duck at Corpus Christi. Hancock observed it there as late as April 1 "in large numbers on the Nueces River," and Sennett also saw it there during the latter part of March. "Not uncommon near Eagle Pass during the winter, and on the ponds and streams between that place and San Antonio." (Dresser.)

24. *Anas americana* GMEL. Baldpate.

I saw a mounted specimen of this duck in a drug store at Corpus Christi, and was informed by Mr. Joydt that it occurs regularly there during the winter. Sennett saw it about the Nueces River in the latter part of March.

25. *Anas carolinensis* (GMEL.). Green-winged Teal.

This is another well known and common duck at Corpus Christi. It is rare at Boerne according to Brown, and Dresser states that it is "not common during the winter."

26. *Anas discors* (LINN.). Blue-winged Teal.

These Teal, according to Dr. Heermann, breed on the Atascosa, a stream tributary to the Rio Nueces and very near the Bexar County line on the southwest, as he "observed it in June." It is a common duck at Corpus Christi, well known to the sportsmen there.

## Genus SPATULA BOIE.

27. *Spatula clypeata* (LINN.). Shoveller.

The Shoveller is well known to the sportsmen at Corpus Christi. On April 1 Hancock obtained several individuals on the Nueces River.

## Genus DAFILA STEPHENS.

28. *Dafila acuta* (LINN.). Sprigtail.

Common in winter with other species of the family at Corpus Christi. Dresser records it as "common during the winter."

## Genus AIX BOIE.

29. *Aix sponsa* (LINN.). Wood Duck.

Two beautifully mounted specimens of this duck were seen in De Ryce's drug store at Corpus Christi, which had been shot in the vicinity and mounted by Mr. F. B. Armstrong, a collector staying there. Dresser found it "not uncommon near San Antonio during the summer."

## Genus AYTHYA BOIE.

30. *Aythya americana* (EYT.). Redhead.

Hancock found the Redhead at Corpus Christi as late as April 1, and Sennett noted several of them at the head of Lagoona Madre, near Corpus Christi Bay, during the last of March. "Not uncommon during the winter" (Dresser).

31. *Aythya vallisneria* (WILS.). Canvas-back.

This duck is often shot by the sportsmen at Corpus Christi—who do not have to consult the *carte du jour* of a Washington or New York restaurant to learn that the principal difference between a Canvas-back and a Redhead consists in the *bill*. It is not mentioned, however, in either Sennett's or Hancock's papers. "I shot two on the Nueces River in December and saw several on Turkey Creek" (Dresser).

32. *Aythya affinis* (EYT.). Lesser Blackhead.

A very abundant duck at Corpus Christi. Both Hancock and Sennett saw great numbers there up to the 1st of April. "Corpus Christi-Bay was filled with them" (Sennett).

33. *Aythya collaris* (DONOV.). Ring-necked Duck.

Brown saw three of these ducks at Boerne, February 27. It is not in Hancock's list or either of Sennett's two papers.

## Genus GLAUCIONETTA STEJNEGER.

34. *Glaucionetta clangula americana* (BONAP.). American Golden-eye.

I did not see this Duck, but was informed by a local sportsman at Corpus Christi, who seemed perfectly familiar with all of the game birds, that it occurred regularly there in winter.

## Genus CHEN BOIE.

35. *Chen hyperborea nivalis* (FORST.). Greater Snow Goose.

Dresser saw several large flocks of geese near San Antonio which he referred to this form. Sennett and Hancock both found it common about Corpus Christi during the latter part of March.

## Genus ANSER BRISSON.

36. *Anser albifrons gambeli* (HARTL.). American White-fronted Goose.

Dresser states that he shot several of these Geese during the winter on Mitchell's Lake, near San Antonio.

## Genus BRANTA SCOPOLI.

37. *Branta canadensis* (LINN.). Canada Goose

Dresser found the Canada Goose common near San Antonio during the winter.

38. *Branta canadensis hutchinsii* (Sw. & RICH.). Hutchins' Goose.

Dresser shot several of these birds on Mitchell's Lake, near San Antonio, during the winter. It was known there to the sportsmen as the "Prairie Goose," while *B. canadensis* was called the "Bay Goose."

## Order HERODIONES. Herons, Storks, Ibises, etc.

## Family PLATALEIDÆ. Spoonbills.

## Genus AJAJA REICHENBACH.

39. *Ajaja ajaja* (LINN.). Roseate Spoonbill.

I saw a mounted specimen of the Spoonbill in a drug store, and was informed that they usually arrived at Corpus Christi about the last of February. Dr. Burke, chief quarantine officer at Corpus Christi, told me that he had often seen them at the quarantine station in summer. Sennett saw four individuals on the mud flats at the mouth of the Nueces River during a storm.

## Family IBIDIDÆ. Ibises.

## Genus PLEGADIS KAUP.

40. *Plegadis guarauna* (LINN.). White-faced Glossy Ibis.

"While at the northern end of Padre Island on March 29, a flock of these Ibises were seen flying over the flats" (Sennett).

## Family CICONIIDÆ. Storks, etc.

## Genus TANTALUS LINNÆUS.

41. *Tantalus loculator* LINN. Wood Ibis.

"Not of uncommon occurrence near San Antonio" (Dresser). This was over twenty years ago, and I doubt very much if any Wood Ibises are to be found in that locality now.

## Family ARDEIDÆ. Herons, etc.

## Genus BOTAURUS HERMANN.

42. *Botaurus lentiginosus* (MONTAG.). American Bittern.

"Common and resident" (Dresser). Not in Sennett's or Hancock's papers.



43. *Botaurus exilis* (GMEL.). Least Bittern.

Dresser states that this Bittern is "occasionally seen at San Antonio," but it does not appear to have been met with by either Sennett, Hancock, or Brown.

## Genus ARDEA LINNÆUS.

44. *Ardea herodias* LINN. Great Blue Heron.

I saw several of these Herons on the mud flats at the mouth of the Rio Nueces. Hancock also notes its occurrence there, and Sennett says it is "very numerous about Corpus Christi Bay, breeding abundantly on the islands in the Nueces Bay and Lagoon Madre near the head of Padre Island." I did not observe the bird at any other place, but Brown states that it is occasionally seen at Boerne.

45. *Ardea egretta* GMEL. American Egret.

Dresser shot three of these Egrets on different occasions during his prolonged stay at San Antonio. "Common up the Nueces River near Corpus Christi. Breeding in company with the Great Blue and a few Reddish Egrets. \* \* \* On March 24 nests contained from one to four fresh eggs each." (Sennett.)

46. *Ardea candidissima* GMEL. Snowy Heron.

Dresser saw one or two of these herons near San Antonio in the spring of 1864, and Sennett saw it occasionally about Corpus Christi Bay, but did not find it breeding there.

47. *Ardea rufescens* GMEL. Reddish Egret.

Dresser, quoting Dr. Heermann, states that it is not uncommon near San Antonio and in eastern Texas during the summer months. Sennett found a few nests, March 24, on a small shell island at the mouth of the Nueces River, and in Lagoon Madre, some 25 miles from Corpus Christi, he found them breeding in great numbers. Hancock found the species common on the Nueces River flats, where he obtained a nest and five eggs.

48. *Ardea pealei* BONAP. Peale's Egret.

"Not uncommon near San Antonio and in eastern Texas during the summer months. A. L. Heermann" (Dresser).

49. *Ardea tricolor ruficollis* (GOSSE). Louisiana Heron.

"Common at Matamoros and also near San Antonio. \* \* \* At San Antonio I have shot them so late in the season that I think it not improbable that some few may remain there over the winter" (Dresser.) Sennett saw a few on the Nueces River flats, near Corpus Christi, during the latter part of March.

50. *Ardea cœrulea* LINN. Little Blue Heron.

Dresser observed one or two near San Antonio and Sennett saw a few about Nueces Bay during the last days of March.

51. *Ardea virescens* LINN. Green Heron.

"Common; breeding on all the larger rivers" (Dresser). Sennett saw two or three in the tall brakes near the mouth of the Nueces River.

Genus NYCTICORAX STEPHENS.

52. *Nycticorax nycticorax nævius* (BODD.). Black-crowned Night Heron.

Dresser found this Night Heron of rather common occurrence in all parts of Texas that he visited (*Nyctiardea gardeni* GMEL.), and Sennett saw large numbers flying about and feeding on the grass flats of Laguna Madre, near the head of Padre Island. Hancock found them on the flats north of Corpus Christi on March 27, and states that five eggs were obtained there in June, 1883. Brown shot an immature female at Boerne, in Kendall County, on February 2.

53. *Nycticorax violaceus* (LINN.). Yellow-crowned Night Heron.

According to Dresser this bird is more common than the preceding one. "Several were observed in swamps and thickets on Nueces Bay, near Corpus Christi, on the 8th of March. None were obtained, however, as they were shy and the thickets too difficult to penetrate" (Sennett).

## Order PALUDICOLÆ. Cranes, Rails, etc.

### Family GRUIDÆ. Cranes.

Genus GRUS PALLAS.

54. *Grus americana* (LINN.). Whooping Crane.

This Crane was seen near San Antonio on two or three occasions by Dresser, and Sennett saw it on the grass and mud flats near the head of Padre Island during the latter part of March.

55. *Grus mexicana* (MÜLL.). Sandhill Crane.

I saw several Sandhill Cranes wading about on the submerged flats of the Nueces River, and Hancock saw three there on March 29. One was noted by me at San Antonio on January 12, and Dresser found them abundant there during the winter, but all disappeared towards spring. Solitary individuals were occasionally seen near Boerne by Brown.

### Family RALLIDÆ. Rails, Coots, etc.

Genus RALLUS LINNÆUS.

56. *Rallus virginianus* LINN. Virginia Rail.

Dr. Heermann (in Dresser's paper), is the authority for the statement that this Rail is found at San Antonio. He states that it has been taken there several times.

Genus PORZANA VIEILLOT.

57. *Porzana carolina* (LINN.). Carolina Rail.

This bird is not uncommon near San Antonio in October and December according to Dresser.

58. *Porzana noveboracensis* (GMEL.). Yellow Rail.

“(Not uncommon at Mitchell’s Lake, near San Antonio, A. L. H.) When I visited this locality it was nearly dried up, and I found no Yellow Rails there, but all the gunners who resort thither assure me that in some seasons they are very numerous” (Dresser).

Genus *IONORNIS* REICHENBACH.

59. *Ionornis martinica* (LINN.). Purple Gallinule.

“Dr. Heermann had the skin of one shot near San Antonio” (Dresser).

Genus *GALLINULA* BRISSON.

60. *Gallinula galeata* (LICHT.). Florida Gallinule.

Sennett found the Florida Gallinule common about the mouth of the Nueces River in March.

Genus *FULICA* LINNÆUS.

61. *Fulica americana* GMEL. American Coot.

Dresser shot several of these birds near San Antonio late in the autumn of 1863.

## Order LIMICOLÆ. Shore Birds.

### Family PHALAROPODIDÆ. Phalaropes.

Genus *PHALAROPUS* BRISSON.

62. *Phalaropus tricolor* (VIEILL.). Wilson’s Phalarope.

Two of these birds were seen on the 4th of July by Dresser on some flooded lands near San Antonio, both of which he secured.

### Family RECURVIROSTRIDÆ. Avocets and Stilts.

Genus *RECURVIROSTRA* LINNÆUS.

63. *Recurvirostra americana* GMEL. American Avocet.

The Avocet was observed by Sennett in small flocks about Corpus Christi Bay up to April 1. All the specimens taken were in a transitional stage of plumage.

Genus *HIMANTOPUS* BRISSON.

64. *Himantopus mexicanus* (MÜLL.). Black-necked Stilt.

“A few were seen on the flats north of the city on various trips” (Hancock). On the 4th of July, after a heavy fall of rain, Dresser found them all over the flooded lands near San Antonio. Sennett saw a few during the last days of March at Corpus Christi in company with Avocets; they were all in transitional plumage.

## Family SCOLOPACIDÆ. Snipes, Sandpipers, etc.

## Genus GALLINAGO LEACH.

65. *Gallinago delicata* (ORD). Wilson's Snipe.

In December I found this bird in several wet places near the river at San Antonio, but it was not abundant, and at Beeville, on February 14, one was seen near a pond. It is not in Hancock's list, but it undoubtedly occurs at Corpus Christi, as I saw two mounted specimens which had been shot near that place. Brown did not find it abundant at Boerne, but Dresser found it very common at San Antonio, and shot one there as late as April 20.

## Genus MACRORHAMPHUS LEACH.

66. *Macrorhamphus griseus* (GMEL.). Dowitcher.

Hancock took two specimens of this Snipe at Corpus Christi on March 26. It was seen at San Antonio but once by Dresser, in July, 1864, after a heavy rain when several were noted about a pond.

## Genus MICROPALAMA BAIRD.

67. *Micropalama himantopus* (BONAP.). Stilt Sandpiper.

"When out snipe shooting on the 20th of November, 1863, near San Antonio, I shot one of these birds and saw another, which, however, I did not succeed in killing" (Dresser).

## Genus TRINGA LINNÆUS.

68. *Tringa maculata* VIEILL. Pectoral Sandpiper.

Brown obtained one specimen of this Sandpiper at Boerne on March 21. "In April, 1864, I observed several small flocks of four or five at the water holes near San Antonio, and in May shot three at Howard's rancho on the Medina" (Dresser).

69. *Tringa bairdii* (COUES). Baird's Sandpiper.

Brown obtained one specimen only at Boerne on March 16.

## Genus CALIDRIS CUVIER.

70. *Calidris arenaria* (LINN.). Sanderling.

Both Sennett and Hancock observed small groups of the Sanderling scattered along the beach at Corpus Christi. The former saw them there up to the time of his departure, April 1.

## Genus LIMOSA BRISSON.

71. *Limosa fedoa* (LINN.). Marbled Godwit.

This bird was observed near Corpus Christi by Sennett upon both of his visits to that locality. During the last days of March he found them in molt.

## Genus TOTANUS BECHSTEIN.

72. *Totanus melanoleucus* (GMEL.). Greater Yellowlegs.

Brown saw one at Boerne on January 1, and three more during the last week of March. "Common at San Antonio during the winter season, until the month of April, after which I saw none" (Dresser).

73. *Totanus flavipes* (GMEL.). Yellow-legs.

At San Antonio Dresser shot several of these birds in April and early in May, but he apparently did not find them common, although they were more abundant than at Matamoras.

74. *Totanus solitarius* (WILS.). Solitary Sandpiper.

Brown saw one of these Sandpipers at Boerne on March 25, and during the month of April Dresser often found them about the small pools and on the banks of streams near San Antonio.

## Genus SYMPHEMIA RAFINESQUE.

75. *Symphemia semipalmata inornata* BREWST. Western Willet.

Although I have seen no specimens of the Willet from southwestern Texas, it is very probable that those occurring there should be referred to the new form described by Mr. Brewster.

Sennett found the bird common about the margins of Corpus Christi Bay and the mud flats of Laguna Madre up to April 1, when he left.

## Genus BARTRAMIA LESSON.

76. *Bartramia longicauda* (BECHST.). Bartram's Sandpiper.

This bird was observed at Boerne by Brown on March 22, but he saw few of them there afterward. "On our journey from Brownsville to San Antonio in September, 1863, we found, on quitting the sand regions and entering into the grass country, the Grass Plovers very abundant. They do not go in flocks but are scattered singly all over the country" (Dresser).

## Genus TRYNGITES CABANIS.

77. *Tryngites subruficollis* (VIEILL.). Buff-breasted Sandpiper.

Dresser did not meet with this bird at San Antonio, but Dr. Heermann told him that they were to be found there in the spring and autumn.

## Genus ACTITIS ILLIGER.

78. *Actitis macularia* (LINN.). Spotted Sandpiper.

Found abundantly by Dresser, near San Antonio, in September and October.

## Genus NUMENIUS BRISSON.

79. *Numenius longirostris* WILS. Long-billed Curlew.

On January 24 I found three of these Curlews feeding in a dry upland pasture on the outskirts of Corpus Christi, and obtained two of

them. The cries of the first bird shot seemed to distress and excite the others very much, for they continued to circle around, uttering their loud cries, and a fourth came flying up from the flats to see what all the commotion was about. Sennett found it common about the shores and flats of Corpus Christi Bay. At San Antonio Dresser observed them in winter, and Brown saw two at Boerne on December 21.

80. *Numenius hudsonicus* LATH. Hudsonian Curlew.

"Found occasionally in the autumn and spring. I have two specimens shot near San Antonio" (Dresser). None of the other observers within the limits assigned to this paper appear to have met with the Hudsonian Curlew.

81. *Numenius borealis* (FORST.). Eskimo Curlew.

Brown notes his Curlew as rather common at Boerne; first seen there by him on March 9. Near San Antonio, in the spring, Dresser found it more abundant than *N. hudsonicus*, but not so common as *N. longirostris*.

### Family CHARADRIIDÆ. Plovers.

#### Genus CHARADRIUS LINNÆUS.

82. *Charadrius dominicus* MÜLL. American Golden Plover.

Hancock saw this Plover on the flats north of Corpus Christi March 16, and Sennett observed it there during a storm on March 20. It arrived at Boerne March 9, according to Brown, and was uncommon after that date. "Not uncommon near San Antonio in the autumn, but I saw none in the spring" (Dresser).

#### Genus ÆGIALITIS BOLE.

83. *Ægialitis vocifera* (LINN.). Killdeer.

The widely distributed Killdeer was seen at all of the places visited. It is an abundant resident at Boerne, according to Brown, and Dresser records it as common inland as well as on the coast.

84. *Ægialitis semipalmata* BONAP. Semipalmated Plover.

There is a mounted pair of this species of Plover in the U. S. National Museum, presented by Captain Bendire, and collected at Corpus Christi by a Mr. Benners, of New York.

"Pretty common about the pond holes near San Antonio in the autumn and spring" (Dresser.)

85. *Ægialitis montana* (TOWNS.). Mountain Plover.

Dresser found the Mountain Plover rather common near San Antonio from December to April. "Occurs uncommonly in the migrations. A flock of about twenty individuals encountered on January 2; two specimens taken on March 15, and a flock of a dozen or more seen on March 17" (Brown). I did not see the bird at all.

## Family APIIRIZIDÆ. Surf Birds and Turnstones.

Genus ARENARIA BRISSON.

86. *Arenaria interpres* (LINN.). Turnstone.

This cosmopolitan is common about the sand and shell beaches of the northern part of Padre Island, according to Sennett, and Hancock notes it as a common bird at Corpus Christi.

## Family HÆMATOPODIDÆ. Oyster-catchers.

Genus HÆMATOPUS LINNEUS.

87. *Hæmatopus palliatus* TEMM. American Oyster-catcher.

On both of Sennett's trips he found this bird common about Corpus Christi Bay, where they were breeding and were quite tame. Hancock also saw great numbers there.

## Order GALLINÆ. Gallinaceous Birds.

## Family TETRAONIDÆ. Grouse, Partridges, etc.

Genus COLINUS LESSON.

88. *Colinus virginianus texanus* (LAWR.). Texan Bob-white.

The intergradation of *Colinus ridgwayi* and *C. graysoni* has been ably sustained by both Mr. Allen and Mr. Brewster, but the suggestion that the latter may intergrade with *C. virginianus texanus* has not, I believe, found its way into print, although Mr. Ridgway, in a private letter, has advanced this idea. It is well known that the females are hardly, if at all, distinguishable, the characteristic differences between the two forms being in the plumage of the males. One of my Texas specimens (2854 ♂, Corpus Christi, Jan. 29) indicates this supposed intergradation very markedly, the chief point of similarity to *C. ridgwayi* consisting in a large and well-defined central black patch in the white of the throat. Dresser also procured examples similarly marked. He says: "I procured some specimens of this quail near San Antonio with the throat black surrounded by white instead of pure white, so that the white forms a narrow crescent pointing upwards, the black commencing from the bill. Some had the black patch very dark and clearly defined, and others had the black extending a very short distance below the bill and mixed with white spots. These varieties are not found by themselves, but in the same bevvies with birds of the usual type."

Whether this black in the white throat-patch is a case of "development" or merely the persistence of an ancestral type, can not with our present lights be determined.

All of the nine specimens of males of *C. ridgwayi* in the U. S. National Museum show white on the black of the throat; in two of them this feature is developed in a very marked degree, and in all of them the

cinnamon color of the under parts is far from being immaculate. Indeed, in six of the nine specimens the white and black markings so characteristic of *C. virginianus* and *C. virginianus texanus* extend up as far as, and on to, the lower third of the breast, and there are but two specimens where they are confined to the flanks. These two characters, I think, plainly indicate the unstability of the species and the probability of intergradation with the Texan bird. The fact of the similarity of the females, previously alluded to, would also tend to support this hypothesis, if we accept the biological dogma that "the history of the individual is the history of the species"—it being, of course, taken for granted that the young males are similar to the females.

Of course, this does not preclude the possibility of intergradation between *C. ridgwayi* and *C. graysoni*, which Mr. Allen has almost established (Cf. Auk., IV, 1887, p. 75). In fact, I venture to predict that the three forms will eventually be found to intergrade in a triangular sort of way, and it is possible that *C. pectoralis* may also be admitted to form a quadrilateral.

I found the Texan Bob White one of the most abundant birds in the territory under consideration, and I often flushed beves of them, as well as single birds, within the city limits of San Antonio, but as the said "limits" comprehend an area of 36 square miles, one-half of which is mesquite and the greater portion of the remainder vacant lots, the statement need not appear surprising. The bird seemed to inhabit indifferently all sorts of localities; in a dense river-side thicket, an open pasture, in the mesquite and cactus, or in a rocky arroyo, go where you would you would be pretty sure to find them. The Mexicans, who abound very extensively in these parts, trap and sell a great many. Seven of those in my collection were purchased alive from one of these blue-blooded Andalusians at 5 cents apiece.

Genus CALLIPEPLA WAGLER.

89. *Callipepla squamata castanogastris* BREWST. Blue Quail.

This bird, generally known in Texas as the "Mexican Quail," was not seen by me, but I heard a good deal of it, and did not expect that it would be found within the geographical limits assigned to this paper. However, the day before I left Beeville, I learned from Mr. P. L. Ward that he had recently seen a bevy of them near Mineral City, a small hamlet 16 miles northwest of Beeville. I do not think that the bird has heretofore been noted as occurring so far east.

Genus CYRTONYX GOULD.

90. *Cyrtonyx montezumæ* (VIG.). Massena Partridge.

I saw a mounted specimen of this bird in the possession of Mr. Dorsch, of San Antonio, which had been shot at Leon Springs by Mr. Max Aue. Afterwards I met Mr. Aue, who informed me that he knew of but two small beves in the neighborhood, both inhabiting wild rocky



places which, on account of their inaccessibility, I did not visit while at Leon Springs. In the report of the Mexican Boundary Survey the bird is mentioned as occurring near San Antonio (Vol. II, Birds, p. 23.) Dresser found it in the Bandera Hills 30 or 40 miles northwest of San Antonio. It is locally known as the "Black Quail."

Family PHASIANIDÆ. Pheasants, etc.

Genus MELEAGRIS LINNÆUS.

91. *Meleagris gallopavo* (LINN.). Wild Turkey.

I did not see or eat the Wild Turkey while in Texas, but heard of it from residents at all of the places visited, who all united in saying that it is much less numerous than formerly, particularly in Bexar County. The total extinction of this bird, through the agency of man, seems to be merely a question of time. Brown notes it as occurring near Boerne, and when Dresser wrote it was "common in all parts of Texas" that he visited. It is possible that the turkey found in Bexar, Bee, and Nueces counties is *M. gallopavo mexicana*, but as no specimens were secured this point can not be definitely settled.

Order COLUMBÆ. Pigeons.

Family COLUMBIDÆ. Pigeons.

Genus ZENAIDURA BONAPARTE.

92. *Zenaidura macroura* (LINN.). Mourning Dove.

I found this dove abundant at all of the places visited; generally in small flocks of four or five individuals. Brown reports it as occurring in great numbers at Boerne. It breeds at San Antonio and Corpus Christi, and doubtless wherever it is found. Dresser found a nest containing eggs as late as September 1. The following interesting note is from Hancock's paper:

"That evening (March 27) we pitched our camp by the side of a river about 20 miles from Corpus Christi. We were partly inclosed by large oak and ebony trees. Just after supper the whistling of the wings of the doves could be heard as they flew over our heads to alight on the side of the stream for a drink. In succession they came, some in pairs, while again single ones would come one after another only to stop long enough for a drink, when they would disappear as mysteriously as they came. This procession lasted until very late into the night, when by degrees it ceased."

Genus COLUMBIGALLINA BOIE.

93. *Columbigallina passerina* (LINN.). Ground Dove.

The only record of the occurrence of the Ground Dove within our limits is the statement of Dresser that he found one close to the Medina

River in April, 1864. The Medina is only about 29 miles from San Antonio.

## Order RAPTORES. Birds of Prey.

### Family CATHARTIDÆ. American Vultures.

#### Genus CATHARTES ILLIGER.

#### 94. *Cathartes aura* (LINN.). Turkey Vulture.

I saw a few of these vultures at San Antonio, but at Corpus Christi they were quite abundant, associating with the next. According to Brown it is a common resident at Boerne, and Dresser found it "one of the commonest birds throughout the country."

#### Genus CATHARISTA VIEILLOT.

#### 95. *Catharista atrata* (BARTR.). Black Vulture.

Seen at all of the places visited, and much more numerous represented than the last except at San Antonio. It was particularly abundant at Corpus Christi. Brown found it a common resident at Boerne.

### Family FALCONIDÆ. Falcons, Hawks, etc.

#### Genus ELANOIDES VIEILLOT.

#### 96. *Elanoides forficatus* (LINN.). Swallow-tailed Kite.

I did not see this Kite at any of the places visited, but Hancock saw a pair March 26, at Corpus Christi, and Sennett observed four individuals there, two of which he obtained. "About San Antonio de Bexar it is only occasionally seen, and is generally to be found late in July, before heavy rains" (Dresser).

#### Genus ICTINIA VIEILLOT.

#### 97. *Ictinia mississippiensis* (WILS.). Mississippi Kite.

Dresser says of this Kite: "This beautiful little hawk is by no means an uncommon bird in Texas, being generally found in the same localities as *Nauclerus furcatus*. Near San Antonio it is not very common, but is occasionally found there, and breeds there, as I procured both the old and young birds during the summer. In November, 1863, I noticed a pair flying about near Howard's rancho, on the Medina, but did not succeed in shooting them." Sennett, I believe, is the only other observer who appears to have met with the bird in southwestern Texas.

#### Genus CIRCUS LACÉPÈDE.

#### 98. *Circus hudsonius* (LINN.). Marsh Hawk.

I did not see this Hawk at any of the four localities visited, but according to Dresser it is abundant "throughout the whole country." In the neighborhood of San Antonio he used to meet with them on the

prairies, where they feed on the small green lizards which abound there, and which they caught with great dexterity. At Corpus Christi Hancock saw many of them "migrating northwards." Brown observed the species but twice at Boerne.

Genus ACCIPITER BRISSON.

99. *Accipiter velox* (WILS.). Sharp-shinned Hawk.

Brown notes the Sharp-shinned as a common winter visitant at Boerne, and Dresser says that it is common at San Antonio, remaining near there during the breeding season. Hancock saw several individuals at different times near Corpus Christi.

100. *Accipiter cooperi* (BONAP.). Cooper's Hawk.

Dresser states that this Hawk is not uncommon about San Antonio, where he procured several specimens, and that it breeds on the Atascosa and Medina Rivers.

Genus PARABUTEO RIDGWAY.

101. *Parabuteo unicinctus harrisi* (AUD.). Harris's Hawk.

Harris's Hawk was found by Dresser to be abundant "throughout the whole country, as far east as the Colorado River." He notes them as breeding in the neighborhood of the San Antonio, Medina, and Atascosa Rivers, laying their eggs in May.

Genus BUTEO CUVIER.

102. *Buteo borealis* (GMEL.). Red-tailed Hawk.

This Hawk is "common throughout Texas at all seasons of the year," according to Dresser, but neither Hancock nor Sennett appear to have observed it at Corpus Christi. I saw a mounted specimen in a drug store there, said to have been shot in the vicinity by Mr F. B. Armstrong. Brown found some half dozen pairs resident in the immediate vicinity of Boerne.

103. *Buteo harlani* (AUD.). Harlan's Hawk.

Dresser obtained one specimen of this *Buteo*, shot on the Medina River, but he noticed the species on several other occasions.

104. *Buteo lineatus* (GMEL.). Red-shouldered Hawk.

"This bird I noticed all through the country from the Nueces River eastward. It breeds in the heavily-wooded river-bottoms of the Medina, Guadalupe, Atascosa, etc." (Dresser).

105. *Buteo lineatus elegans* (CASS.). Red-breasted Hawk.

Not uncommon near San Antonio during winter, according to Dresser, but he was doubtful as to whether it remained there to breed.

106. *Buteo abbreviatus* CAB. Zone-tailed Hawk.

In the Bulletin of the Nuttall Ornithological Club for 1879, page 76, Mr. Brewster gives an account of the nesting of this hawk in Comal

County, which adjoined Bexar County on the northeast. The eggs were found on the 17th of May by Mr. Werner, who it seems never observed but two pairs of the birds in that locality.

107. *Buteo albicaudatus* VIEILL. White-tailed Hawk.

"On March 27, 1878, I shot a full plumaged female of this species as she was flying with her mate over a small island in Laguna Madre, near Corpus Christi Bay, the first specimen of this large Hawk taken within our limits" (Sennett).

108. *Buteo swainsoni* BONAP. Swainson's Hawk.

Dresser procured one specimen of this bird between San Antonio and the Medina River on April 9.

109. *Buteo latissimus* (WILS.). Broad-winged Hawk.

"Not uncommon from the Nueces River to the eastward. In September I noticed several near the Mission of San Patricio, and during the winter shot several specimens near San Antonio" (Dresser).

Genus AQUILA BRISSON.

110. *Aquila chrysaetos* (LINN.). Golden Eagle.

The Golden Eagle's title to a place in this paper rests on the following note by Hancock: "Just across the reef north of Corpus Christi a nest of this bird was seen. It was conspicuously placed in the top of a large oak, and was composed of large twigs loosely thrown together."

Genus HALLEETUS SAVIGNY.

111. *Haliaeetus leucocephalus* (LINN.). Bald Eagle.

Dresser states that this Eagle breeds on the Atascosa, a small stream 20 or 30 miles from San Antonio.

Genus FALCO LINNÆUS.

112. *Falco mexicanus* SCHLEG. Prairie Falcon.

"Common during the winter on the prairies near San Antonio, and still more common towards Bandera. A few remain to breed; but I did not succeed in procuring the eggs" (Dresser).

113. *Falco peregrinus anatum* (BONAP.). Duck Hawk.

"While cruising about Nueces Bay near Corpus Christi on March 24, we saw this Hawk in pursuit of a coot, which it captured and flew with to a shell island near by to devour. By means of our skiff and the cover of a few weeds on the island, we got within range and obtained it. It was a female with eggs undeveloped" (Sennett).

114. *Falco sparverius* LINN. American Sparrow Hawk.

This Falcon was observed at Corpus Christi and at San Antonio, but did not appear to be at all common. On December 18, while approaching San Antonio on the Southern Pacific Railway, we passed two of these birds at different times contentedly perched on the telegraph wires

alongside the line. They did not appear in the least concerned as the train thundered by within a few yards of them. Brown says it is a common winter visitant at Boerne, and Dresser found it common near San Antonio throughout the whole year.

Genus POLYBORUS VIEILLOT.

115. *Polyborus cheriway* (JACQ.). Audubon's Caracara.

A few of these curious birds, which the natives call "Mexican Eagles," were seen near San Antonio late in March, but Corpus Christi seemed to be their center of abundance. I counted twelve one day on a "flat" adjoining the town, feasting on the carcass of a horse. There were fifteen or twenty Turkey Vultures, and at least one hundred Black Vultures, disputing with them over the loathsome repast. All three species were very wild, and took care to keep out of gunshot range. In San Pedro Park, a suburban resort near San Antonio, there is a sort of zoological garden—on a very small scale, however—and amongst the "animals" were three of these "Mexican Eagles" in the same cage. During one of my visits to the place one of the birds became very much excited over the noisy antics of a raccoon and a wildcat, which were settling a dispute in an adjoining cage. It emitted a very peculiar harsh and intermittent note, more like a policeman's rattle than anything else I can think of, and when particular emphasis was desired it would throw its head so far back that the crown was downwards and horizontal, the bill pointing backwards. "Near San Antonio they are abundant, and in December, 1863, I counted upwards of twenty of these birds, together with a lot of Vultures and several Harris's Buzzards, all busy with the offal near the slaughter-house" (Dresser).

Family STRIGIDÆ. Barn Owls.

Genus STRIX LINNÆUS.

116. *Strix pratincola* BONAP. American Barn Owl.

Dresser obtained a single specimen of this owl, which was sent to Dr. Heermann as a great rarity. The place of capture is not given, but the context indicates that it was near San Antonio.

Family BUBONIDÆ. Horned Owls, etc.

Genus ASIO BRISSON.

117. *Asio accipitrinus* (PALL.). Short-eared Owl.

It is stated by Dr. Heermann, in Dresser's paper, that this Owl is "common at times near San Antonio during the winter months, keeping itself in the tall weeds and grass." I saw a mounted specimen in De Ryee's drug store at Corpus Christi, said to have been shot in the vicinity by Mr. Armstrong.

## Genus SYRNIUM SAVIGNY.

118. *Syrnium nebulosum* (FORST.). Barred Owl.

I saw a handsomely mounted specimen of this Owl in a drug store at Corpus Christi, near which place it had been shot. At San Antonio, in a thicket on the river bank, I found the desiccated remains of one which had evidently been dead a long time. Dresser says the bird is "very abundant at all seasons of the year in the wooded parts of the country."

## Genus MEGASCOPS KAUP.

119. *Megascops asio mcallii* (CASS.) Texan Screech Owl.

Hancock captured a pair of these Screech Owls near Corpus Christi on March 26; they were breeding, and the eggs were also secured. Dresser shot two of them, one in Bandera County, adjoining Bexar County on the northwest, and the other near San Antonio.

## Genus BUBO CUVIER.

120. *Bubo virginianus* (GMEL.). Great Horned Owl.

I did not see this bird, but at Leon Springs and Corpus Christi I learned from reliable sources of its occurrence at those places. Hancock states that it is common in the timber country north of Corpus Christi, and Dresser found it "common throughout the country."

## Genus NYCTEA STEPHENS.

121. *Nyctea nyctea* (LINN.). Snowy Owl.

This strigidine tramp's title to mention here rests solely upon the note of Dr. Heermann, quoted in Dresser's paper, where it is stated that "a single specimen was shot near San Antonio three years before the war."

## Genus SPEOTYTO GLOGER.

122. *Speotyto cunicularia hypogæa* (BONAP.). Burrowing Owl.

I did not find this Owl at all common at San Antonio; in fact, I saw it but once there; but Dresser intimates that it is not uncommon in that locality. In the immediate vicinity of Corpus Christi it seemed to be abundant, as I rarely went out without seeing one or more.

## Order COCCYGES. Cuckoos, Kingfishers, etc.

## Family CUCULIDÆ. Cuckoos.

## Genus GEOCOCYX WAGLER.

123. *Geococcyx californianus* (LESS.). Road-runner.

At all four of the places visited in Texas I heard of the "Paisano" (the name it is generally known by in southwestern Texas) as being an abundant and well-known bird, but it was not met with until March 9, at San Antonio, when one was surprised up in a small tree in a mesquite thicket near the river. While she was deliberating what to do (only

four or five yards distant) I promptly fired a charge of dust-shot from my cane gun at her, which only seemed to surprise her the more, for instead of getting away she stupidly remained in the same place until I had fired my pop-gun at her five times, when she tumbled out of the tree dead. The rearmost one-half of the auricular patch was bright orange; the anterior portion a delicate bluish white. Hancock found the bird more or less common in the chaparral near Corpus Christi, where it was breeding. Brown notes it as rare at Boerne, but Dresser records it as "abundant throughout the whole mesquite region," and obtained eggs as late as September 23.

Genus COCCYZUS VIEILLOT.

124. *Coccyzus americanus* (LINN.). Yellow-billed Cuckoo.

A bird I did not meet with in Texas at all; probably for the reason that none had arrived from the south at the time of my departure, March 29. Hancock obtained a female, with the nest and five eggs, near Corpus Christi, on April 23, and Dresser states that it is "very common near San Antonio, where it arrives about the middle of April, and immediately begins to build."

Family ALCEDINIDÆ. Kingfishers.

Genus CERYLE BOIE.

125. *Ceryle alcyon* (LINN.). Belted Kingfisher.

I saw a few individuals of this familiar species at Corpus Christi and San Antonio. It is doubtless resident at both places. Brown records it as occurring at Boerne, and Dresser found it common "throughout Texas."

126. *Ceryle cabanisi* (TSCHUDI). Texan Kingfisher.

I did not see this Kingfisher at San Antonio until March 25, when two were seen on the river within the town limits near a large brewery. As they were both out of range of my 22-caliber neither of them was secured. This was the only occasion upon which the species was observed by me. Hancock saw one near Corpus Christi, perched on a telegraph wire, on March 26, but much to my surprise Sennett does not mention the bird in either of his two faunal papers on Texan birds. Brown apparently did not find it in Kendall County, and Dresser makes no mention of its occurrence at or near San Antonio.

Order PICI. Woodpeckers, etc.

Family PICIDÆ. Woodpeckers.

Genus DRYOBATES BOIE.

127. *Dryobates pubescens* (LINN.). Downy Woodpecker.

A female of this species was taken at San Antonio on February 21, and another was seen there on the 27th. Both were in trees near the

river bank. It was not observed at any other place. Brown took one at Boerne on February 3. "Occasionally found about San Antonio, but it is a rare visitor there" (Dresser).

128. *Dryobates scalaris bairdi* (SCL.). Texan Woodpecker.

This little Woodpecker was the most abundant representative of the family I met with in Texas, which, however, is not saying a great deal for its abundance, as all of the *Picidae* seemed to be comparatively scarce at the places where I collected. Its habits appeared to be very similar to those of *D. pubescens*, but it is a much more cautious and shy bird, as I have several times had to follow one over a quarter of a mile to get a shot. Brown says it is "an abundant resident" at Boerne, and Dresser states that it "breeds abundantly about San Antonio." Hancock briefly notes its occurrence at Corpus Christi.

Genus SPHYRAPICUS BAIRD.

128. *Sphyrapicus varius* (LINN.). Yellow-bellied Sapsucker.

This Woodpecker is a rare winter resident at San Antonio, as it was noted there only three times—in the timber fringing the San Antonio River. I did not see it at Corpus Christi, Beeville, or Leon Springs. Brown says it is rare and irregular at Boerne. "Found near San Antonio at all seasons of the year, but rather rare than otherwise. I shot a couple on the Medina River, and Dr. Heermann procured the eggs there some years ago" (Dresser). This is evidently a mistake, as the bird does not breed so far south, and is not likely to be found there in summer.

Genus CEOPHLEUS CABANIS.

129. *Ceophlœus pileatus* (LINN.). Pileated Woodpecker.

"A few are found on the Medina, and the eggs have been taken there, but they are not common in that district" (Dresser). Neither Brown, Hancock, or Sennett make any mention of this bird as occurring in southwestern Texas, where it is evidently very rare. Merrill saw one individual near Santa Maria, in Cameron County.

Genus MELANERPES SWAINSON.

130. *Melanerpes erythrocephalus* (LINN.). Red-headed Woodpecker.

Neither Brown nor Hancock appear to have seen this red-headed cosmopolite at Boerne or Corpus Christi, and the writer only saw it twice, both times at San Antonio; once on January 12, when two were seen in a large pecan tree near the river, and again in a similar place I saw one on February 27. Dresser says it is resident near San Antonio and not uncommon.

131. *Melanerpes carolinus* (LINN.). Red-bellied Woodpecker.

As Woodpeckers go, this one was rather common in the large trees along the river near San Antonio, but I did not see it at Leon Springs



or at Beeville, while but two individuals were noted at Corpus Christi. I was surprised to find it at the latter place at all, for it is pre-eminently a timber-loving species, and, excepting those in town there are no trees worthy of the term "timber," within 20 miles. Brown found it rare at Boerne, as he mentions but three individuals, but Dresser records it as "common and resident."

132. *Melanerpes aurifrons* (WAGL.). Golden-fronted Woodpecker.

Dresser found this bird rather common near San Antonio, but not so numerous as the last species. So far as my observations went it is quite uncommon at that place, and but one was seen at Leon Springs, a male, which was shot from a live oak in an open field. I saw three individuals at Corpus Christi, but Hancock observed "many pairs" 15 miles north of that place. At Beeville they were comparatively common. Their notes and habits impressed me as being about identical with those of *M. carolinus*. Brown notes it as an "uncommon" resident at Boerne.

Genus COLAPTES SWAINSON.

133. *Colaptes auratus* (LINN.). Flicker.

I saw but one of these birds in Texas, at San Antonio, on March 2. "We procured a single specimen near San Antonio, early in June, this being the only one I saw during my stay in Texas" (Dresser).

134. *Colaptes cafer* (GMEL.). Red-shafted Flicker.

Apparently an uncommon bird, as I only saw six or eight individuals, all at San Antonio. As no specimens were taken it is possible that some or all of them may have been the so called "*C. hybridus*," which Brown found at Boerne. Dresser says it is "found occasionally near San Antonio, but is of uncommon occurrence."

Order MACROCHIRES. Whippoorwills, Humming Birds, etc.

Family CAPRIMULGIDÆ, Whippoorwills, etc.

Genus ANTROSTOMUS GOULD.

135. *Antrostomus carolinensis* (GMEL.). Chuck-wills-widow.

"Comes to the neighborhood of San Antonio in the spring and remains to raise its young," according to Dr. Heermann. Dresser noticed several on the Medina on April 26 and early in May, and on May 18 he found them quite numerous at New Braunfels, in Comal County, about 30 or 35 miles northeast of San Antonio.

136. *Antrostomus vociferus* (WILS.). Whippoorwill.

Dresser does not appear to have encountered the Whippoorwill at all, but Brown observed it at Boerne (one specimen, April 2), and Hancock found it not uncommon at Corpus Christi. Sennett and Merrill both found it on the lower Rio Grande.

## Genus PHALÆNOPTILUS RIDGWAY.

137. *Phalænoptilus nuttalli nitidus* BREWST. Frosted Poor-will.

Dresser obtained a single specimen of this bird shot near San Antonio, where it was of uncommon occurrence, and Dr. Heermann shot one on the Medina.

## Genus NYCTIDROMUS GOULD.

138. *Nyctidromus albicollis* (GMEL.). Parouque.

Hancock has the following note of the occurrence of this bird at Corpus Christi. "Two specimens, brought me by a friend, were shot in the Nueces River bottoms April 16."

## Genus CHORDEILES SWAINSON.

139. *Chordeiles virginianus* (GMEL.). Nighthawk.

Dresser notes the occurrence of the Nighthawk at San Antonio, where, however, it was uncommon.

140. *Chordeiles texensis* LAWR. Texan Nighthawk.

This bird was first noticed at San Antonio by Dresser on May 2, when he saw seven or eight flying about at noonday. A few days later they became very numerous. They remained in the vicinity until October 1

## Family TROCHILIDÆ. Humming Birds.

## Genus TROCHILUS LINNÆUS.

141. *Trochilus colubris* LINN. Ruby-throated Humming Bird.

"During the winter I observed one or two near San Antonio on warm days. Early in April, on the weather becoming warmer, they were very common near San Antonio, and generally to be found about the large cottonwood trees. I knew of two nests in low willows overhanging the San Pedro" (Dresser.) The San Pedro is a small stream, the greater part of which flows through the town of San Antonio. Hancock saw the bird quite often at Corpus Christi.

142. *Trochilus alexandri* BOURC. & MULS. Black-chinned Hummingbird.

I first saw this Hummer at Leon Springs on March 12, when one specimen was observed, evidently just arrived from the south. Within the next six days they became quite common, feeding on the brilliant red blossoms of a species of *Æsculus*, which grew luxuriantly in a dense grove a third of a mile from the post-office. The only other Texas record of the species is that of Brown, who procured a single specimen at Boerne on April 5.

## Order PASSERES. Perching Birds.

## Family TYRANNIDÆ. American Flycatchers.

## Genus MILVULUS SWAINSON.

143. *Milvulus forficatus* (GMEL.). Scissortail.

I saw one of these exquisite Flycatchers at San Antonio on March 21, and several more between that date and the day I left, March 29. "It

arrives in the neighborhood of San Antonio late in March, and remains until the middle or latter end of October. It breeds abundantly near San Antonio, building its nest in a wescatch [huisache] tree" (Dresser). At Boerne, according to Brown, it arrived March 24, and at once became common. Hancock notes its arrival at Corpus Christi on March 18.

Genus TYRANNUS CUVIER.

144. *Tyrannus tyrannus* (LINN.). Kingbird.

Not seen by Dresser himself at San Antonio, but he quotes Dr. Heermann to the effect that it is occasionally seen there in spring and autumn.

Genus MYIARCHUS CABANIS.

145. *Myiarchus crinitus* (LINN.). Crested Flycatcher.

This Flycatcher does not appear to be common within the faunal area under consideration, as Dresser saw but two specimens at San Antonio, and Brown but one at Boerne—March 30. Hancock procured two specimens at Corpus Christi March 21.

146. *Myiarchus mexicanus* (Kaup). Mexican Crested Flycatcher.

"Arrives at San Antonio at the latter end of April, the first that came under my notice being one I shot on the 23d of that month. It breeds near the Medina and San Antonio Rivers, making its nest in a hollow tree or taking possession of a deserted Woodpecker's hole" (Dresser).

Genus SAYORNIS BONAPARTE.

147. *Sayornis phœbe* (LATH.). Phœbe.

Contrary to Dresser's and Dr. Heermann's experience, I found the Phœbe during the whole winter at San Antonio, where it was rather common along the river. In Dresser's paper it is stated that the bird is only seen there on its migrations north and south, which would indicate that it had become a winter resident there since he wrote. I also found the species not uncommon at Corpus Christi, Beeville, and Leon Springs. Brown reports it rare at Boerne, while it is not in Hancock's Corpus Christi list at all.

148. *Sayornis saya* (BONAP.). Say's Phœbe.

I found this bird at both Corpus Christi and Beeville, but it was uncommon, only three specimens being secured. I did not see it at San Antonio or Leon Springs, but Dresser observed one individual at San Antonio in November. Brown saw the bird upon two occasions at Boerne in February, and Hancock notes one individual at Corpus Christi late in March.

Genus CONTOPUS CABANIS.

149. *Contopus borealis* (SWAINS.). Olive-sided Flycatcher.

Dresser found this bird not uncommon near San Antonio during the winter, but I did not see it there at all, and I hardly think it could have escaped me had it been "uncommon" while I collected there.

150. *Contopus virens* (LINN.). Wood Pewee.

According to Dresser this Flycatcher is "very common in the wooded river-bottoms near San Antonio during the summer, arriving late in April or early in May.

151. *Contopus richardsonii* (SWAINS.). Western Wood Pewee.

This Pewee was observed but once at San Antonio by Dresser, in May, 1864, when he secured one specimen.

Genus EMPIDONAX CABANIS.

152. *Empidonax flaviventris* BAIRD. Yellow-bellied Flycatcher.

"Common near San Antonio during the summer, arriving there in April" (Dresser).

153. *Empidonax acadicus* (GMEL.). Acadian Flycatcher.

"Not uncommon near San Antonio during the summer" (Dresser).

154. *Empidonax pusillus traillii* (AUD.). Traill's Flycatcher.

"Common during the summer season near San Antonio, and to the eastward. breeding there" (Dresser).

155. *Empidonax minimus* BAIRD. Least Flycatcher.

"Common near San Antonio during the summer" (Dresser).

Genus PYROCEPHALUS GOULD.

156. *Pyrocephalus rubineus mexicanus* (SCL.). Vermilion Flycatcher.

I did not see this Flycatcher, but Mr. John M. Priour, of Corpus Christi, informed me that he had observed it on the opposite (east) side of the Neuces River, a short time previous to my visit, and had secured several specimens. Dresser records the occurrence of three individuals at San Antonio at different times.

Family ALAUDIDÆ. Larks.

Genus OTOCORIS BONAPARTE.

157. *Otocoris alpestris giraudi* HENSHAW. Texan Horned Lark.

I found this Lark rather uncommon at San Antonio, as it was seen there but twice during the winter. It was not observed at Leon Springs, but Brown found it abundant at Boerne "up to the first week of March, after which none were seen until March 27." Boerne is only 10 or 12 miles northwest of Leon Springs. At Corpus Christi I obtained but one specimen, a female in very immature plumage, brought to me by a juvenile "Greaser," who had knocked it over with a stick. It was one of a very large flock. Hancock found the species very common on the flats north of Corpus Christi, and on May 27 a nest with four eggs was taken. "From October to the end of March the prairies near San Antonio swarm with Shore Larks, and great numbers are shot for the table" (Dresser).

## Family CORVIDÆ. Crows, Jays, etc.

## Genus CYANOCITTA STRICKLAND.

158. *Cyanocitta cristata florincola* COUES. Florida Blue Jay.

On March 11, 1887, while collecting at Leon Springs, I came up with a party of four or five Blue Jays in a grove of hackberry and live-oak trees. Supposing them to be the ordinary eastern bird, but one specimen was shot, and although they were seen several times at San Antonio no others were secured. Upon comparing my bird with typical examples of Doctor Coues' new Florida race in the U. S. National Museum; I find it to agree perfectly with them. The principal characters that distinguish the Florida bird from the specific form consist in the smaller size of the former and the much less amount of white on the secondaries and the two outer rectrices.

This Jay was sparingly represented at San Antonio during the winter; generally in parties of four or five, and perfectly silent. A mounted specimen was seen in a drug store at Corpus Christi, said to have been shot near the town. I did not see the bird at Beeville. It is not mentioned in either of the papers of Brown or Hancock. Dresser "was told by several hunters that the Blue Jay is found near San Antonio." It was not met with by either Sennett or Merrill on the Rio Grande.

## Genus CORVUS LINNÆUS.

159. *Corvus corax sinuatus* (WAGL.). Mexican Raven.

Dresser found the Raven "common at San Antonio, frequenting the slaughter-houses," but I did not see or hear of it there. "Uncommon; usually solitary, but on January 28 I noticed a flock of a dozen" (Brown).

160. *Corvus americanus* AUD. American Crow.

So far as my observations went, the Crow is a rare bird in the localities under consideration, as I did not meet with it but once—March 17—when a solitary individual was seen at Leon Springs. Brown records it as rare at Boerne, and Dresser states that it is "not common between San Antonio and the Mexican frontier."

## Family ICTERIDÆ. Blackbirds, Orioles, etc.

## Genus MOLOTHRUS SWAINSON.

161. *Molothrus ater* (BODD.). Cowbird.

I took about three different kinds of the Cowbird in Texas: first, typical *M. ater*; second, typical *M. ater obscurus*; and third, specimens intermediate between the two. Only six altogether were secured; one male, *M. ater*, at Beeville, three female *M. ater obscurus* at the same place, and two males, intermediate, one at Beeville and the other at San Antonio. The birds were very abundant, except at Leon Springs, where none were seen. At Corpus Christi I found them in large flocks

near town, but so wild that by no sort of subterfuge could I get within range of them. At Beeville, however, they were almost as tame as Brewer's Blackbirds, associating on the best of terms with them in the streets and about the houses. Dresser notes it as very common throughout the country. At Boerne, in March, Brown shot a few males out of flocks of *obscurus*.

162. *Molothrus ater obscurus* (Gmel.). Dwarf Cowbird.

See remarks under the last species. Brown also found this form at Boerne; he says: "On January 20 I shot the first females that I had observed, after which they became common. No males were detected until February 25, but from that time both sexes were found in abundance."

Genus XANTHOCEPHALUS BONAPARTE.

163. *Xanthocephalus xanthocephalus* (Bonap.). Yellow-headed Blackbird.

Mr. George L. Toppan, of Chicago, informed me that he saw a few specimens of the Yellow-headed Blackbird at San Antonio in the spring of 1884: "In the autumn of 1863 I shot a couple of this species which were the only specimens that I then saw, but on the 23d April, 1864, while taking my usual early morning walk outside San Antonio I found the prairie literally covered with these birds. During the ensuing week vast flocks remained near the town, after which they disappeared suddenly nor did I subsequently notice any more" (Dresser).

Genus AGELAIUS VIEILLOT.

164. *Agelaius phœniceus* (Linn.). Red-winged Blackbird.

At San Antonio this bird was abundant in the timber and marshy vegetation along the river, but during the early part of the winter not a single adult male was seen, but towards the last of February perhaps one-third of those seen were in the red and black plumage. This is in corroboration of Brown's experience with the species at Boerne. He says: "Abundantly represented during the winter, but by females only, so far as my observations went. The males are said by the villagers to occur rarely." The bird also occurs at Corpus Christi.

Genus STURNELLA VIEILLOT.

165. *Sturnella magna* (Linn.). Meadow Lark.

Hancock states that "this bird was found to be very abundant in fields" at Corpus Christi. I did not meet with it there at all, or at any other place in Texas. All of the birds shot at Corpus Christi were typical *neglecta*, and it is remarkable that I should have overlooked *magna*. I think it likely that Hancock is mistaken in pronouncing it abundant there; his note should doubtless apply to the western race, only one of which he took there. It is in neither of the papers of Dresser or of Brown.

166. *Sturnella magna neglecta* (AUD.). Western Meadow-lark.

One of the commonest birds I encountered in Texas. At Corpus Christi, Beeville, and San Antonio I often saw it in the streets and gardens, almost as much at home as Brewer's Blackbirds. The first song heard was on February 27 at San Antonio, after which time they sang a great deal. A specimen from Beeville is like typical *neglecta* in every respect except the coloration of the upper parts, which is quite indistinguishable from the eastern bird. "Very common in the winter at San Antonio and a few remain there to breed" (Dresser). Brown reports it as abundant at Boerne.

## Genus ICTERUS BRISSON.

167. *Icterus spurius* (LINN.). Orchard Oriole.

Dresser found this Oriole very common near San Antonio during the summer, arriving early in April, and Brown saw one individual at Boerne early in April. Hancock notes it as a "common resident" at Corpus Christi—but "summer resident" is evidently intended.

168. *Icterus galbula* (LINN.). Baltimore Oriole.

Dresser did not see this bird at San Antonio, but there is a record of its occurrence there in the report of the Mexican Boundary Survey, vol. ii, page 19. Dresser records it as abundant on the lower Rio Grande, but this is probably an error as Dr. Merrill records but two specimens as seen by himself at Brownsville.

169. *Icterus bullocki* (SWAINS.). Bullock's Oriole.

Hancock's list contains the only record of the occurrence of this species within the limits of this paper. He says: "A summer resident in suitable localities. A nest with five eggs was taken April 7."

## Genus SCOLECOPHAGUS SWAINSON.

170. *Scolecophagus cyanocephalus* (WAGL.). Brewer's Blackbird.

One of the most interesting bird acquaintances I made in Texas, where it was abundant at all of the places visited except Leon Springs. At Corpus Christi it shares with the Great-tailed Grackle the office of city scavenger. In the streets there and at Beeville it is as common as the European Sparrow in an eastern town, and quite as fearless and independent. While I do not think their services as a street-cleaning department are properly appreciated, still they are regarded with favor by the towns-people, and are not molested at all. Outside of the towns they were occasionally seen, but were as wary as Blackbirds usually are. Hancock makes no mention of their occurrence at Corpus Christi; a palpable oversight, as he could not have failed seeing them. At San Antonio they were common, but I only saw them in the suburbs and occasionally in the parks. Dresser also notes it as occurring there in winter. Brown found them in great abundance at Boerne.

## Genus QUISCALUS VIEILLOT.

171. *Quiscalus quiscula æneus* (RIDGW.). Bronzed Grackle.

This Grackle was one of the most abundant winter birds I saw at San Antonio and Beeville; at the former place it was particularly abundant in immense flocks along the river, and was very tame. Strange to say no other observer in southwestern Texas appears to have seen the bird at all. I did not observe it at Corpus Christi or Leon Springs. A few were seen at San Antonio up to within a day or two of my departure.

172. *Quiscalus macrourus* SWAINS. Great-tailed Grackle.

The habits of this clown-like bird have been so admirably "written up" by Sennett in the first of his Rio Grande papers, that I can add nothing to his interesting and accurate account. In the town of Corpus Christi they were very abundant and as much at their ease and as impudent as our avian Ishmaelite of the east and north, the always-with-us, never-to-be-got-rid-of European Sparrow. But with all this apparent tameness it is one of the most knowing and wary birds I ever had to do with. Of course, in town, if one had been permitted to fire a gun, dozens could have been killed at a shot, but out in the chaparral, where shooting was allowable, it was next to impossible to get within range. Their thieving propensities have given them rather a bad name at Corpus Christi amongst the people who overlook their great services as scavengers. I did not see it at any other place, but was informed by residents of Beeville that the Jackdaw is often seen there.

## Family FRINGILLIDÆ. Finches, Sparrows, etc.

## Genus SPINUS KOCH.

173. *Spinus tristis* (LINN.). American Goldfinch.

I found the Goldfinch a rather common winter bird at San Antonio, and Dresser, quoting Dr. Heermann, says that it is not uncommon there during the summer. Brown calls it a "common winter visitant" at Boerne. I did not see it at any place but San Antonio.

## Genus CALCARIUS BECHSTEIN.

174. *Calcarius ornatus* (TOWNS.). Chestnut-collared Longspur.

This bird is found in flocks early in the spring on the prairies near San Antonio, but is not common according to Dresser. Brown says: "This and the following species (*R. mccownii*) apparently do not winter here. I first met with them in the second week of February. They were often associated together, sometimes with the addition of a few Horned Larks. The present species, though not common, was the more numerous and lingered later, being taken up to March 2."

## Genus RHYNCHOPHANES BAIRD.

175. *Rhynchophanes mccownii* (LAWR.). McCown's Longspur.

"This bird is found in small flocks early in April near San Antonio. It is not very numerous, and I only procured two specimens during my



stay in that part of the country" (Dresser). At Boerne, Brown notes it as an uncommon migrant, observed between February 11 and 21.

Genus POOCÆTES BAIRD.

176. *Poocætes gramineus confinis* BAIRD. Western Vesper Sparrow.

The Vesper Sparrow is another bird that evidences the fact of the intergradation of eastern and western forms here. Only two of the eleven specimens taken in Texas—one at Beeville and the other at Leon Springs—appear to be typical *confinis*; all of the others are darker and in other respects are intermediate between the eastern and western forms. As to this point Brown says of his Boerne birds: "Several were taken in plumage intermediate between this and the eastern form; and one which can hardly be referred to anything but *gramineus* proper." I found the bird abundant at all of the places visited, and occasionally heard it singing throughout the winter. It was seen quite as often out in the mesquite as in cultivated fields near water. Dresser says it is "common near San Antonio in August and September, as well as in May and June; a few remaining to breed there."

Genus AMMODRAMUS SWAINSON.

177. *Ammodramus sandwichensis savanna* (WILS.). Savanna Sparrow.

Sennett and Hancock both report this bird as common at Corpus Christi, but it is possible that they refer to *alaudinus*. The latter, however, distinguishes both varieties as occurring there.

178. *Ammodramus sandwichensis alaudinus* (BONAP.). Western Savanna Sparrow.

Common at San Antonio and Corpus Christi; more so at the latter place. I did not see the bird at Beeville or Leon Springs. About one-half of the specimens collected (twelve of them) are typical *alaudinus*, the others are intermediate between this and *savanna*, the characteristic eastern province form. Hancock found it at Corpus Christi, and Brown records it as common at Boerne. "Early in April I found this bird very common on the San Pedro close to the town of San Antonio" (Dresser).

179. *Ammodramus savannarum perpallidus* RIDGW. Western Grasshopper Sparrow.

I found this Sparrow rather common in the mesquite pastures about Beeville, though very shy, but I did not see it at Corpus Christi, where Hancock observed it quite often. At San Antonio they were often seen during the winter, and they became very common there early in March. I noticed a good many at Leon Springs, but Brown, it seems, took but one specimen at Boerne, 10 or 12 miles distant. While out collecting one day near San Antonio I wounded one of these birds, which fluttered off a short distance, and was seized and carried off before my astonished eyes by a Shrike. A similar experience with one of these

winged freebooters happened to me afterwards at Beeville, an account of which is given in another place. "Not uncommon in the summer season near San Antonio, A. L. II" (Dresser).

**180. *Ammodramus leconteii* (AUD.).** LeConte's Sparrow.

I did not get a specimen of this bird, but on December 21, in a wet, boggy place, covered with a dense growth of dead weeds, near the San Antonio River, I saw several individuals, and at one time was within 6 or 8 feet of one, but their movements were so rapid, and they concealed themselves with such ease, that it was impossible to get a shot. The identification of the species was entirely satisfactory to me, and conclusive.

Genus *CHONDESTES* SWAINSON.

**181. *Chondestes grammacus* (SAY).** Lark Sparrow.

Upon my arrival at San Antonio, December 19, the Lark Sparrow was discovered to be one of the most abundant birds there, and continued so during the winter. They were most numerous in the fields near the river and irrigating ditches, but a good many were always to be found in the mesquite. They were generally associated with the Vesper Sparrow and other terrestrial finches. I often heard them singing at this season, but in a weak, desultory way, as if they were not in the least bit earnest about it. They were common at San Antonio up to the time I left there, March 29. On the 25th I shot a male and female at one discharge of my gun; the male was in full nuptial song, and upon examination I found the testicles very much enlarged, indicating that they were about to breed.

At Corpus Christi, where I collected from January 21 to February 11, I found it rather common in the chaparral and mesquite with other sparrows, and in song, but did not see the bird at all at Beeville. Hancock records "several specimens in bright plumage 20 miles north of Corpus Christi, March 27." At Leon Springs, March 10 to 18, I found it quite common, and Brown states that it is common at Boerne after March 11, but is rare during the winter. Dresser says: "Very abundant throughout Texas during the summer, arriving in the neighborhood of San Antonio late in March, and leaving early in October." It seems from this note that he did not find the bird there during the winter at all. This can only be explained in two ways; either he did not do any collecting to speak of about San Antonio during the winter, where the everpresent "norther" acts as a serious damper upon one's zeal for practical ornithology, or else that the birds were not there, but have since that time extended their winter habitat to include this place. Had they been one-tenth as numerous then as I found them, it is hardly possible that any collector could have overlooked them.

**182. *Chondestes grammacus strigatus* (SWAINS.).** Western Lark Sparrow.

I collected seven specimens of the Lark Finch in Texas; four at San Antonio, two at Corpus Christi, and one at Leon Springs. Upon com-

paring these with the series in the U. S. National Museum, I find that but two of the birds are typical *grammaeus*, both of which were taken at San Antonio, while the remaining five are easily referable to the paler western form. The remarks under the specific form will, therefore, apply equally well to this one.

Genus ZONOTRICHIA SWAINSON.

183. *Zonotrichia querula* (NUTT.). Harris's Sparrow.

Upon my arrival at San Antonio in December I found this sparrow one of the most abundant and conspicuous inhabitants of the luxuriant fringe of vegetation that bordered the San Antonio River, which I never visited without seeing and hearing very many of them. Dresser, to my surprise, merely states that it occurs there "in the spring when on its migration north." It is hardly possible to believe that he could have overlooked so common a winter bird, and the only inference I can draw from his statement is that, like the Lark Finch and many other species, it was not there in winter at the time he collected—another fact which goes to prove that our avifaunas are constantly undergoing geographical changes. The habits of these birds appear to be quite similar to those of other *Zonotrichia*, except that they seemed to be somewhat quicker and livelier in their movements, and their song is not so much like a funeral dirge as those of the White-throat and the White-crowned.

Only once did I see any of them in the mesquite, but they were always to be found in numbers up to the middle of March along the river. They were singing a great deal through the winter, but I think they were all young birds practicing and testing their vocal powers. The call note is a very sharp and metallic "clink," quite different from that of other members of the genus. All of those shot were young birds in immature plumage, but towards the last of February the specimens taken were almost in the adult spring plumage. I did not see any at Corpus Christi or Leon Springs, but saw a small party of them at Beeville on February 14. At Boerne, Brown found it very abundant during the winter.

184. *Zonotrichia leucophrys* (FORST.). White-crowned Sparrow.

This Sparrow was probably the most abundant bird I saw in Texas. In fact they were tediously common and interfered very much with the observation of other species. At San Antonio it seemed that every small thicket and patch of weeds along the river, and every clump of bushes in the mesquite gave shelter to a party of White-crowned Sparrows. They were almost as familiar as the European Sparrow—an unknown pest in western Texas—coming about the houses and gardens with the same here-I-am-at-home sort of air. At Beeville there was a flock of twenty or thirty which had taken up their quarters in the small back yard of the hotel there. They sang a good deal during the winter, but all of the thirty or forty specimens taken seemed to be young

birds. Some were in "high" plumage but the majority of them had not attained the mature stage, the head-markings exhibiting curious combinations of brown, black, and white. I took an albino at San Antonio, which was with a large party of normally colored birds, but it seemed to be very much harassed and persecuted by its companions, as they were continually chasing it about.

Brown states that it is "an uncommon winter visitant" at Boerne. It is possible that the "environment" there is not adapted to their wants, but at Leon Springs, 10 or 12 miles southeast, they are quite abundant.

185. *Zonotrichia intermedia* RIDGW. Intermediate Sparrow.

None of the specimens secured by me can be referred to this form, which is surprising, as Brown found it more common than *leucophrys* at Boerne. Dresser says that *Z. gambeli* is common at San Antonio, but of course he refers to *Z. intermedia* or possibly *Z. leucophrys*.

186. *Zonotrichia albicollis* (GMEL.). White-throated Sparrow.

This bird could not compare in point of numbers with Harris's or the White-crowned Sparrows, still it was not an uncommon winter resident at San Antonio, although Dresser makes no mention of its occurrence there at all. It was always found near the river and usually associated with the two other species, but it was much more terrestrial in its habits than either of them. I saw the bird at Leon Springs, but none were observed at Corpus Christi or Beeville. Of its occurrence at Boerne, Brown says: "One specimen taken March 9; others seen upon March 30 and April 6."

Genus SPIZELLA BONAPARTE.

187. *Spizella socialis* (WILS.). Chipping Sparrow.

I only saw this Sparrow at Leon Springs, and but two or three individuals were observed there. Brown states that it is "apparently common" at Boerne, and Dresser reports one specimen from San Antonio.

188. *Spizella socialis arizonæ* COUES. Western Chipping Sparrow.

"Rare during winter, more common after February 13" (Brown).

189. *Spizella pallida* (SWAINS.). Clay-colored Sparrow.

I did not see this bird until March 27, when one was shot and another seen at San Antonio. "In the month of April Dr. Heermann and I found this bird plentiful in the fields near San Antonio, consorting with *M. lincolni* and other Sparrows. They remained until about the middle of May, after which I noticed none. Dr. Heermann told me that he had never observed any near San Antonio before this year (1864)" (Dresser). Hancock saw a number of them on March 24, 2 miles southwest of Corpus Christi, in a scattered growth of chaparral.

190. *Spizella breweri* CASS. Brewer's Sparrow.

Brown took one specimen of Brewer's Sparrow on March 5, at Boerne, amongst some sterile hills.

191. *Spizella pusilla* (WILS.). Field Sparrow.

This was a very common winter bird at San Antonio, Leon Springs, and Beeville, but I did not see any at Corpus Christi, where, however, it was observed by Hancock. None of the specimens taken by me are referable to *S. pusilla arvenacea*, although I fully expected to meet with this new race. Brown found the Field Sparrow common at Boerne, and Dresser noticed a few near San Antonio.

## Genus JUNCO WAGLER.

192. *Junco hyemalis* (LINN.). Slate-colored Junco.

This Junco could hardly be called a common bird at San Antonio. I saw it on perhaps a dozen different occasions, but seldom were there more than three or four to be seen at a time. It was generally along the hedge rows and in the pastures near the San Antonio River, with other Sparrows. The species was last noted at Leon Springs, when female was shot March 10, out of a party of four or five. It was not seen at Corpus Christi or Beeville. Brown reports it as a common winter resident at Boerne. "Found occasionally at San Antonio.—A. L. H." (Dresser).

193. *Junco hyemalis oregonus* (TOWNS.). Oregon Junco.

Not seen by me. Of its occurrence at Boerne, Brown says: "Uncommon. In addition to the specimens typical of the two Juncos here given, I acquired a series of very puzzling examples intermediate between the two. Such connecting links between the accepted species are perhaps best accounted for under Mr. Ridgway's theory of hybridization, until it can be decisively shown that they are an effect of climatic causes." I also obtained several of these "very puzzling examples," plainly indicating intergradation between *hyemalis* and *oregonus*, *oregonus* and *shufeldti*, or *hyemalis* and *shufeldti*, but I do not think it necessary to invoke the already overburdened "hybridization theory" to explain results that are to be so easily accounted for by the ordinary laws of evolution, as it is a well known fact that this genus is one of exceeding plasticity.

194. *Junco hyemalis shufeldti* COALE. Shufeldt's Junco.

No. 2692 of the writer's collection, shot at San Antonio on December 30, is the only specimen of this new race that was obtained. It is a young female, and was shot from a flock containing many more of the same kind, and also representatives of *J. hyemalis*. This specimen was compared with the large number of Juncos in the U. S. National Museum, and appears to be quite typical of *shufeldti*.

## Genus AMPHISPIZA COUES.

195. *Amphispiza bilineata* (CASS.). Black-throated Sparrow.

This Sparrow was one of the commonest mesquite birds in the vicinity of San Antonio. I use the word "mesquite" advisedly, for with one exception I never saw a single individual anywhere else. The luxuriant

growth of weeds, shrubbery, and trees that bordered the San Antonio River often seemed to be "alive" with all sorts of birds, but never a Black-throat was to be seen in those assemblages, while a walk of three or four minutes' duration would take one into the mesquite where they were pretty certain to be found, sometimes a dozen or more together feeding on the ground. They began to sing about the beginning of the second week of March, the males always perched on top of a mesquite or other bush, and the song is so much like that of the Lark Sparrow that it was a long time before I became convinced that the music did not proceed from that bird. They were undoubtedly breeding at the time of my departure, but no eggs were found. On January 20, while en route to Corpus Christi, I saw a flock of four or five at a small station in Wilson County, 50 miles southeast of San Antonio, but much to my surprise I did not find the bird at Corpus Christi, Beeville, or Leon Springs, although conditions apparently favorable to their occurrence prevailed at all three places. It is in neither Hancock's or Brown's lists, and Dresser says that "at San Antonio it is quite a rare bird." This, of course, is in direct conflict with my observations, but it merely goes to prove that bird faunas, like most other things terrestrial, are subject to change.

Genus PEUCÆA AUDUBON.

196. *Peucæa cassini* (WOODH.). Cassin's Sparrow.

According to Dr. Heermann Cassin's Sparrow is not rare on the prairies near the Medina River "where they pass the season and breed," and Dresser also found it not uncommon near the same stream.

197. *Peucæa ruficeps eremœca* BROWN. Rock Sparrow.

I kept up a sharp lookout for this Sparrow at Leon Springs, which is only 10 or 12 miles from Boerne, where Brown discovered it, but although the locality was apparently favorable to its occurrence, being very hilly and stony, the bird was not seen.

"This beautiful Sparrow was uncommon though apparently resident at Boerne. I found it altogether in rocky localities, usually in close proximity to the creek, but occasionally upon barren hills, a mile or more from water" (Brown).

Genus MELOSPIZA BAIRD.

198. *Melospiza fasciata* (GMEL.). Song Sparrow.

The familiar Song Sparrow was a rather common bird at San Antonio in the immediate vicinity of the river; in fact, I hardly ever saw them except in the rank aquatic vegetation growing at the water's edge. The specimens secured are not typical *fasciata* but are a good deal like *montana*. It was not observed at Corpus Christi, Beeville, or Leon Springs. It is not in Dresser's list at all, but Brown notes it as rare at Boerne.

199. *Melospiza lincolni* (AUD.). Lincoln's Sparrow.

Lincoln's Sparrow, a winter resident of San Antonio, is one of the very few birds that I have ever grown actually tired of. It got to be

such an every-day occurrence for me to shoot one or more of these little birds, not knowing what they were when I fired, that finally I never shot at a small Sparrow at all unless it was identified before hand. Through this caution I am sure many a desirable bird escaped me. At San Antonio they were always to be found in the patches of dead weeds, thickets, meadows, etc., near the river. I never saw them at all out in the mesquite, but at Corpus Christi a good many were observed in the chaparral adjoining the town. It is evidently a late loiterer in that vicinity, as Hancock, who collected there from March 16 to April 1, saw it "occasionally on every trip." It was still at San Antonio when I left there, March 29. It is apparently not a winter resident at Boerne, for Brown says: "Arrives March 4; common thereafter." Dresser found it very abundant from March to May near the San Antonio River. He does not speak of finding it there as a winter resident.

Genus PASSERELLA SWAINSON.

200. *Passerella iliaca* (MERR.). Fox Sparrow.

This is evidently an uncommon winter resident at San Antonio, as I saw it there but twice, one on January 11 and four or five on January 18, in the dense weeds and bushes near the river. It is not in Dresser's list at all, and I did not see it at any other place. Brown saw but two or three individuals at Boerne.

Genus PIPILO VIEILLOT.

201. *Pipilo maculatus megalonyx* (BAIRD). Spurred Towhee.

My series of *Pipilos* can with as much propriety be called *arcticus* as *megalonyx*. Those taken by Brown in Kendall County appear to have been equally puzzling, but he also referred his birds to *megalonyx*, and more for the sake of uniformity than accuracy, I refer mine to the same race. Dresser calls the bird he found at San Antonio *arcticus*, and states that he procured several there during the winter, implying that they were not abundant, which is contrary to my experience, as it was one of the most numerously represented of all the *Fringillidæ* that wintered in that locality. However, I never saw it there in the mesquite, but always in weed fields, thickets, etc., near the river. At Leon Springs it was also rather common in the few suitable places there, but at Beeville very few were observed, and at Corpus Christi only three individuals came under my notice. The bird has a wren-like "screep," utterly dissimilar to any note of the eastern bird, which it constantly utters when alarmed.

202. *Pipilo chlorurus* (TOWNS.). Green-tailed Towhee.

On December 23, while collecting in the mesquite just west of San Antonio, I shot and winged one of these Towhees, but after chasing it until I was out of breath and temper through "cat's-claw," caeti, and other thorny things, it escaped me, and I never saw the species

afterward. I was several times within 10 or 15 feet of the bird, and my previous experience with the species in Colorado having made me quite familiar with its appearance and habits, it is very unlikely that my identification was incorrect. Neither Dresser, Brown, or Hancock make any mention of the bird in their respective papers, and Sennett found it only on the Rio Grande, where he observed very few of them. Merrill apparently did not find it at Brownsville.

Genus *CARDINALIS* BONAPARTE.

203. *Cardinalis cardinalis* (LINN.). Cardinal.

This bird was seen at all of the places visited, but was less at Corpus Christi than elsewhere. At Beeville one morning (February 17) I heard five males singing at the same time, but it was at San Antonio that they were found in the greatest abundance. On one occasion, in a particularly favored bird haunt near the river, I saw at least thirty in sight at the same instant. They were to be found everywhere—in the yards and gardens in town, in the thickets along the river, and in the mesquite. In December three-fourths of the birds observed were apparently females, but later in the season the discrepancy, while still existing, was not so marked. They seemed to be quite gregarious in their habits, as near San Antonio I never saw less than three or four together. According to Brown, it is an abundant resident at Boerne.

Genus *PYRRHULOXIA* BONAPARTE.

204. *Pyrrhuloxia sinuata* (BONAP.). Texan Cardinal.

I did not see many of these Cardinals at Corpus Christi, but Mr. Prior informed me that they were common in suitable places near town. At Beeville they were rather abundant in shrubbery, near ponds, etc., associating with the usual fringilline assemblages to be found in such places. No song was heard. Their alarm note is hardly distinguishable from that of the Virginia Cardinal. The females seemed to be more numerous than the males; out of fourteen specimens secured but three were males. The species was not observed at either San Antonio or Leon Springs, but it doubtless occurs at both places, as Brown took two specimens at Boerne—February 2 and April 5. It is not in Dresser's list, nor did Hancock apparently meet with it at Corpus Christi.

Genus *HABIA* REICHENBACH.

205. *Habia ludoviciana* (LINN.). Rose-breasted Grosbeak.

Dresser's paper contains the only record of the occurrence of this bird in southwestern Texas that I am aware of. It is merely a brief note by Dr. Heermann to the effect that it was "once noticed near San Antonio."

Genus *PASSERINA* VIEILLOT.

206. *Passerina cyanea* (LINN.). Indigo Bunting.

At Corpus Christi Hancock saw a few of these birds during his stay there. Dresser did not observe the species at all.



207. *Passerina ciris* (LINN.). Painted Bunting.

The "Nonpareil," or Painted Bunting is not known by either of these names in southwestern Texas, but the "Mexican Canary" is everywhere a well-known favorite. Whenever a native discovers that you are interested in birds, this is the first one he tells you about, and seems disappointed to find that you are not surprised, and that it is not new to science.

None had arrived at San Antonio up to the time I left there, March 29, but Dresser records it as a very common summer resident there.

## Genus SPIZA BONAPARTE.

208. *Spiza americana* (GMEL.). Dickcissel.

"Early in May I found numbers of these birds in the mesquite thickets near the San Antonio and Medina Rivers, and as I found them equally numerous in July, I may safely infer that they breed there" (Dresser).

## Genus CALAMOSPIZA BONAPARTE.

209. *Calamospiza melanocorys* STEJN. Lark Bunting.

I found this bird at Corpus Christi during my stay there—January 21 to February 12—but it is probable that only one flock was seen, as the birds were always in the same place—in some chaparral and cactus on the outskirts of the town. This flock contained perhaps a hundred individuals, the birds being exceedingly wary, it being almost impossible to get within range of them. All were in winter plumage. Hancock does not mention the species in his paper, but Sennett noted them at Corpus Christi as late as March 22, in flocks of thirty or forty. I did not see it at any other place. Brown saw but one individual at Boerne, March 14. "Common near San Antonio during the winter. \* \* \* in July (at Howard's rancho, on the Medina) I succeeded in shooting one in the full summer plumage" (Dresser).

## Family TANAGRIDÆ. Tanagers.

## Genus PIRANGA VIEILLOT.

210. *Piranga erythromelas* (VIEILL.). Scarlet Tanager.

Dresser mentions two instances of the occurrence of this brilliant Tanager near San Antonio—the only record of its being found in southwestern Texas that I am aware of.

211. *Piranga rubra* (LINN.). Summer Tanager.

This bird, according to Dresser, is common during the summer at San Antonio, arriving there about the middle of April. Brown took one specimen at Boerne early in April, and Hancock notes its arrival at Corpus Christi April 7.

## Family HIRUNDINIDÆ. Swallows.

## Genus PROGNE BOIE.

212. *Progne subis* (LINN.). Purple Martin.

I first saw this Swallow at Beeville where they arrived on February 14 and soon became common. I afterwards saw them at San Antonio on February 27, and again at Leon Springs in March. Brown reports it as a common summer resident at Boerne, arriving there February 17. It is common at Corpus Christi according to Hancock. "Common in all the parts of Texas that I visited during the summer" (Dresser).

## Genus PETROCHELIDON CABANIS.

213. *Petrochelidon lunifrons* (SAY). Cliff Swallow.

I did not see this bird at San Antonio, but according to Dresser it is common there during the summer. Brown records it as a common summer resident at Boerne, arriving there March 20.

## Genus CHELIDON FORSTER.

214. *Chelidon erythrogaster* (BODD.). Barn Swallow.

Brown states that this swallow is a common summer resident at Boerne, where it was first seen on March 4, but the "general arrival" took place on the 10th. Dresser found them common at San Antonio during the summer. I did not see the bird there or elsewhere.

## Genus TACHYGINETA CABANIS.

215. *Tachycineta bicolor* (VIEILL.). White-bellied Swallow.

Dresser does not appear to have observed this bird at San Antonio, nor did I see it there, but Mr. George L. Toppan, of Chicago, in a letter, informs me that he observed the species there in the spring of 1884. Hancock notes it as a common summer resident at Corpus Christi, where Sennett also saw it.

## Genus CLIVICOLA FORSTER.

216. *Clivicola riparia* (LINN.). Bank Swallow.

Hancock saw several flocks of Bank Swallows at Corpus Christi, and Dresser states that it is "common throughout the whole country."

## Genus STELGIDOPTERYX BAIRD.

217. *Stelgidopteryx serripennis* (AUD.). Rough-winged Swallow.

I found this bird at San Antonio upon two occasions only, February 24 and March 5. According to Dresser it is a very common summer resident at San Antonio. He found their eggs there as early as April 25. Brown saw but two at Boerne, March 3 and 4.

## Family AMPELIDÆ. Waxwings.

## Genus AMPELIS LINNÆUS.

218. *Ampelis cedrorum* (VIEILL.). Cedar Waxwing.

Apparently common about San Antonio, as I often saw them in the shade trees in town. But one individual was seen at Corpus Christi, where Hancock also noted the species. Brown found it uncommon at Boerne. "Very common during the winter at San Antonio and Eagle Pass, but I noticed none later than the middle of April" (Dresser).

## Family LANIIDÆ. Shrikes.

## Genus LANIUS LINNÆUS.

219. *Lanius ludovicianus excubitorides* (SWAINS.). White-rumped Shrike.

This Shrike was a familiar bird at all of the places visited, but more were seen at Corpus Christi than elsewhere. A very tame and daring bird. Twice I had them to rob me of my "game"—one of them carried off a wounded Grasshopper Sparrow for me at San Antonio, and at Beeville, on February 12, I wounded a White-crowned Sparrow, which as it flew off was seized upon and borne to the ground by a Shrike which had been concealed in a bush 10 or 15 yards distant. Before I could recover from my surprise the daring freebooter had made off with his prey, disappearing behind a clump of mesquite. I cautiously followed in the direction he had taken and soon had the satisfaction of seeing the bird in a mesquite bush busily engaged striking at something with his bill. After watching this interesting performance for a short time I fired with my .22 caliber case-gun, but missed. Upon approaching the place I discovered that instead of impaling its quarry upon a thorn, the Shrike had firmly wedged the sparrow's head in a small crotch of the bush, the body hanging suspended. The bird was quite dead, but was too badly mutilated by the Shrike to make a decent looking skin. Brown states that it is uncommon at Boerne. Dresser found it common during the summer near San Antonio.

## Family VIREONIDÆ. Vireos.

## Genus VIREO VIEILLOT.

220. *Vireo olivaceus* (LINN.). Red-eyed Vireo.

The Redeye was "met with occasionally in oak timber," near Corpus Christi, by Hancock. Dresser notes it as occurring near San Antonio in the spring and autumn.

221. *Vireo gilvus* (VIEILL.). Warbling Vireo.

"I first noticed this species on the 5th April in a mesquite thicket near San Antonio, where I noticed a pair, but only secured the male bird. \* \* \* Dr. Heermann has found this bird breeding near the Medina and San Antonio" (Dresser).

222. *Vireo flavifrons* VIEILL. Yellow-throated Vireo.

This Vireo was first seen at San Antonio on March 20, and again on the 23d. Only three individuals were observed, two males and a female; the males were in song. The bird is not included in Dresser's paper, but Brown took a pair at Boerne on March 25.

223. *Vireo solitarius* (WILS.). Blue-headed Vireo.

Brown procured a female of this species at Boerne on February 3, the only one observed. "I shot several of these birds near San Antonio late in autumn and early in the spring, but do not think any remain there to breed" (Dresser).

224. *Vireo atricapillus* WOODH. Black-capped Vireo.

This rare Vireo was apparently not seen at San Antonio by Dresser, and I left there before it was time for the bird to have arrived from the south, but Brown has the following note of its occurrence at Boerne: "One specimen March 27. Could I have remained a few days later other specimens would have undoubtedly been detected." He saw none at all on his second visit to this locality.

225. *Vireo noveboracensis* (GMEL.). White-eyed Vireo.

This bird put in its appearance at San Antonio on March 9, when a male in full song was secured. During the following week I found them abundant at Leon Springs. Dresser found the species common at San Antonio during the summer, and Brown also notes it as a common summer resident at Boerne, first seen there March 13. It is not in Hancock's list.

226. *Vireo bellii* AUD. Bell's Vireo.

A male and female of this species, together with a nest containing three eggs and one of the Cowbird, was secured by Hancock near Corpus Christi May 28. It is not uncommon during summer at San Antonio, and breeds there, according to Dresser.

## Family MNIOTILTIDÆ. Wood Warblers.

## Genus MNIOTILTA VIEILLOT.

227. *Mniotilta varia* (LINN.). Black-and-white Creeper.

Sennett met with this bird at Corpus Christi March 23, and Hancock also found it there on March 21. I saw but one during my stay in Texas, a male at San Antonio on March 23. Dresser also notes its occurrence at San Antonio, and states that Dr. Heermann found it breeding on the Medina River. At Boerne, in Kendall County, 30 miles northwest of San Antonio, Brown found it "rather common after March 13."

## Genus HELMINTHOPHILA RIDGWAY.

228. *Helminthophila pinus* (LINN.). Blue-winged Warbler.

"A male, secured April 7 on the bank of the Nueces River, was the only one seen" (Hancock.) Not in Brown's or Dresser's lists.

**229. *Helminthophila chrysoptera* (Linn.).** Golden-winged Warbler.

Dresser's is the only list which contains this bird, and he merely notes it as passing San Antonio in spring and autumn.

**230. *Helminthophila ruficapilla* (WILS.).** Nashville Warbler.

Neither Hancock nor the writer met with this Warbler, but Brown noted two individuals at Boerne, March 30 and April 11. Dresser briefly records it as a migrant at San Antonio.

**231. *Helminthophila celata* (SAY).** Orange-crowned Warbler.

I first saw this bird at Corpus Christi on January 24, when two were secured, in the chaparral and along a fence-row overgrown with shrubbery. Four or five were seen. Three or four more were observed the next day near the same place. I infer from this that the bird is a winter resident here. Hancock saw several near Corpus Christi in company with Parula Warblers, on March 27. Two were seen by me at San Antonio on February 27, at which place it was not again observed until March 24. Two were taken at Leon Springs on March 14. It arrived at Boerne "the first week in March, and thereafter was the most abundant of the Warblers," according to Brown. "Passes San Antonio in the spring and autumn" (Dresser.)

Genus *COMPSOTILYPIS* CABANIS.**232. *Compsotilypis americana* (LINN.).** Parula Warbler.

This diminutive Warbler was observed at Leon Springs on March 18, when a male in full song was shot out of a tree top. Three days later another male in song was seen at San Antonio. Dresser merely notes it as a spring and autumn migrant at that place, with no data as to its abundance. Hancock saw many of them at Corpus Christi on March 27. Brown gives it as rare at Boerne, arriving "March 20 in full song."

Genus *DENDROICA* GRAY.**233. *Dendroica æstiva* (GMEL.).** Yellow Warbler.

Dresser states that this bird is common near San Antonio in spring and autumn, and that it occasionally breeds near the Medina River.

**234. *Dendroica cærulescens* (GMEL.).** Black-throated Blue Warbler.

This Warbler is a transient at San Antonio according to Dresser.

**235. *Dendroica coronata* (LINN.).** Myrtle Warbler.

Upon my arrival at San Antonio, December 18, this was found to be one of the most abundant birds wintering in that locality, and their familiar "tsip" was to be heard at all times in the shrubbery and shade trees in town as well as in the mesquite and along the river. But they were rarely seen in the mesquite. They continued to be abundant there up to the date of my departure, March 29. "Some few pass the winter here, but most of them are only seen on their migration—A. L. H." (Dresser). I took one at Leon Springs on March 14, the only one seen.

It was very abundant at Corpus Christi during my stay there, January 21 to February 12; Hancock observed it there as late as March 26. At Boerne Brown found it an abundant winter resident.

236. *Dendroica maculosa* (GMEL.). Magnolia Warbler.

Dresser's note of this species merely records it as transient at San Antonio.

237. *Dendroica castanea* (WILS.). Bay-breasted Warbler.

"Passes San Antonio in the spring and autumn" (Dresser.)

238. *Dendroica blackburniæ* (GMEL.). Blackburnian Warbler.

This Warbler is common near San Antonio in the spring and autumn according to Dresser. Brown obtained a single specimen at Boerne, the only one seen, March 31.

239. *Dendroica dominica albilora* BAIRD. Sycamore Warbler.

The first of these birds was noticed March 17, in some low growth of mesquite and prickly pear on the side of an embankment in the city.

\* \* \* Between March 18 and 24 they appeared to be quite common, but after that date no specimens were seen." (Hancock.) Hancock calls the bird he saw at Corpus Christi *dominica*, but this is probably a mistake in identification, as *dominica*, so far as known, is exclusively an eastern form. Brown says it is an uncommon migrant at Boerne, first seen on March 19. "Passes San Antonio in the spring and autumn" (Dresser).

240. *Dendroica chrysoparia* SCL. & SALV. Golden-checked Warbler.

After spring had fairly set in at San Antonio, about March 1, I began to look out for this very rare Warbler, but it was not seen there at all, and it was only at Leon Springs, in a peculiarly favored bird haunt, a dense, well-watered grove of deciduous trees, that I met with the species at all. On March 12, while collecting in the place mentioned, my attention was attracted by a strange sylvicoline note, which, upon instinct, I at once referred to the Golden-checked, although it did not remind me in the least of the queer note of the Prairie Warbler to which Mr. Brown likens it. The sound was exceedingly difficult to locate, almost as much so as the song of Swainson's Warbler, but at length, after an exciting search, lasting perhaps ten minutes, during which time I had marched towards every point of the compass, the bird, a male in full spring livery, was seen in the top of a still leafless tree, and in a few seconds the prize was in my hand. There were several other Warblers in the same tree top with this one, but I was unable to obtain or identify any of them. The species was not again seen until the 18th, when, after a similar experience, I took another male. On this day, the last one of my stay at Leon Springs, I heard the notes of two or three more, all in the same grove, in tree tops, but was unable to get any more of them.

"It was a rare bird at Boerne, and my own series was not brought up to a total of seven without special exertion. The first individual made his

appearance on March 12; within forty-eight hours from that time, under the influence of a biting norther, the mercury sank to 29° and hovered about that figure for several days, so that in his semi-tropical habitat this little bird is sometimes called upon to endure pretty severe weather. The remaining examples were taken at intervals up to March 24, after which I saw none. I found them usually in cedar brakes; never more than a few rods distant from them. They were sometimes very shy, at other times easily approached, but almost always pursued their various avocations rather silently" (Brown). Dresser mentions the capture of but one specimen—taken on the Medina River.

Mr. W. H. Werner (Bull. Nutt. Orn. Club, IV, 77) found the species breeding in the mountainous districts of Comal County, adjoining Bexar County on the northeast. He says: "Their habits were similar to *D. virens*, they were very active, always on the alert for insects, examining almost every limb, and now and then darting after them while on the wing. \* \* \* I found them invariably in cedar timber or cedar brakes as the ranchmen call them. I was not fortunate enough to find a nest until the 13th of May."

**241. *Dendroica virens* (GMEL.).** Black-throated Green Warbler.

Two of these Warblers, the only ones seen, were taken at San Antonio, one on March 20, the other on the 25th. Both of these captures were distinctly disappointing, as each time when I fired it was believed that the bird aimed at was a Golden-cheeked. None were seen at any of the other places visited. Dresser states that it passes San Antonio in the spring and autumn, and Brown records it as uncommon at Boerne, arriving there March 13, and that it is found in hard wood growth and never in company with *D. chrysoparia*. "Seen and obtained at Corpus Christi the last of March" (Seunett). Hancock also saw a pair there.

Genus SEIURUS SWAINSON.

**242. *Seiurus noveboracensis* (GMEL.).** Water Thrush.

"(Found all the summer on the banks of the Medina.—A. L. H.). I shot one in December, but did not see any more until the 24th April, after which I noticed them daily" (Dresser). The statement that the bird is found here in summer is manifestly incorrect. Dr. Heermann probably had reference to the next species.

**243. *Seiurus motacilla* (VIEILL.).** Louisiana Water Thrush.

Brown took a male of this species at Boerne on March 25. Not in Dresser's or Hancock's lists.

Genus GEOTHYLPIS CABANIS.

**244. *Geothlypis formosa* (WILS.).** Kentucky Warbler.

This bird is merely transient at San Antonio, according to Dresser. He saw several on the Medina in May.

245. *Geothlypis philadelphia* (WILS.). Mourning Warbler.

Early in May Dresser shot five of these birds in the long weeds growing in the Medina River bottom. They were abundant, but shy.

246. *Geothlypis trichas* (LINN.). Maryland Yellow-throat.

The first bird I shot in Texas was a Yellow-throat, which was found in company with another in a dense tangle of shrubbery and vines on the banks of the river at San Antonio, December 21. These two must have formed the rear guard of the migrants, as I did not again see the bird in the State. Hancock noted it at Corpus Christi, March 26. Brown does not appear to have seen it at Boerne. "I noticed great numbers on the Medina early in May, and also shot several in September" (Dresser).

## Genus SYLVANIA NUTTALL.

247. *Sylvania mitrata* (GMEL.). Hooded Warbler.

This bird is found occasionally near San Antonio in spring and autumn according to Dresser. On December 21, while collecting along the river at this place, I saw a bird which I am sure was a female Hooded Warbler, a species I am perfectly familiar with. As I was upon the point of firing a Mexican came into the "line of fire" on the opposite side of the clump of bushes, and before he got out of the way the bird flew off, and I saw it no more.

248. *Sylvania pusilla* (WILS.). Wilson's Warbler.

Dresser states that this bird "passes San Antonio in spring and autumn."

249. *Sylvania canadensis* (LINN.). Canadian Warbler.

"Not uncommon near San Antonio in spring and autumn" (Dresser).

## Genus SETOPHAGA SWAINSON.

250. *Setophaga ruticilla* (LINN.). American Redstart.

Dresser states that the Redstart is very common near San Antonio in the spring and autumn. "A few were seen, March 26, 15 miles west of Corpus Christi. They were in dull plumage. No bright males were seen" (Hancock).

## Family MOTACILLIDÆ. Wagtails.

## Genus ANTHUS BECHSTEIN.

251. *Anthus pensilvanicus* (LATH.). American Pipit.

I found the Pipit a common bird during my stay at Corpus Christi, where it was generally to be seen in large flocks on the flats near the beach. As Hancock does not mention the bird it is probable that all had left for the north before his arrival there, March 16. At Beeville but two individuals were seen, one of which was shot February 18 in a pig-sty, in which unsavory place it appeared to be foraging with success.



The only one noted at San Antonio was seen on March 2. It was not met with at Leon Springs, but Brown found it an abundant winter resident at Boerne. "Not uncommon near San Antonio during the months of December and January" (Dresser).

**252. *Anthus spraguei* (AUD.).** Sprague's Pipit.

Brown notes this bird as arriving at Boerne March 16, and he met with individuals up to within a few days of his departure, April 4, but never in abundance. Not recorded by Dresser or Hancock.

Family TROGLODYTIDÆ. Wrens, Thrashers, etc.

Genus OROSCOPTES BAIRD.

**253. *Oroscoptes montanus* (SWAINS.).** Sage Thrasher.

I first saw this Thrasher at Corpus Christi on January 22, and up to the time I left there, February 12, they were exceedingly abundant in the chaparral near town. The only sound heard to proceed from them was a sort of "chuck" like one of the alarm notes of the Catbird. It is pre-eminently a terrestrial species, running along the ground with astonishing rapidity, and not at all shy, but apparently a close observer. When alarmed they fly to the top of the nearest bush or cactus and, if not disturbed, soon re-align on the ground. It is not in Hancock's list, and, as his observations were made subsequent to March 16, it is probable that all had left for the north before that time. A few were seen at Beeville February 14 and 15; two at San Antonio March 3, and one at Leon Springs March 15. It is not in Brown's list of species occurring at Boerne, nor was it met with by either Sennett or Merrill, but Dr. Butcher found it at Laredo on the Rio Grande. Dresser states that it was not uncommon at San Antonio during the winter months, but the bird was not seen there at all by me, except upon the occasion above mentioned.

Genus MIMUS BOIE.

**254. *Mimus polyglottos* (LINN.).** Mockingbird.

This species was found abundantly in all four of the places visited, but was particularly numerous at Corpus Christi. They were always to be seen in the trees and shrubbery in town, but out in the chaparral they were almost in swarms, but very few were singing. They were generally associated with the Sage Thrashers, with whom they seemed to be on the best of terms. Brown reports it as a rare resident at Boerne, and Dresser as very common at San Antonio.

Genus HARPORHYNCHUS CABANIS.

**255. *Harporhynchus rufus* (LINN.).** Brown Thrasher.

Rather a common inhabitant of the thickets that border the river near San Antonio, but they generally kept themselves so well concealed

that this fact was not always apparent. Two of the four specimens taken at San Antonio had curiously malformed bills. The lower mandible of one was split to the base, one piece of which was very short, hardly one-half the normal length, while the other was very long and bent sideways very abruptly. The deformity of the other was not so marked. I did not see the bird at Leon Springs, Beeville, or Corpus Christi, nor is it in either of the papers of Brown or Hancock. Dresser makes no mention of it at all, greatly to my surprise, and I do not believe it was there at the time he collected.

256. *Harporhynchus longirostris* (LAFR.). Long-billed Thrasher.

"On March 21 two birds were seen almost 6 miles west of Corpus Christi, among the ebony trees. Their wary habits would not allow us to approach within gunshot. April 8 a male and female, together with the nest, which contained three eggs, were taken, 2 miles west of the city. The nest was built a few feet from the ground, in a chaparral bush" (Hancock). I did not see the bird at all, nor is it in Dresser's list.

Genus SALPINCTES CABANIS.

257. *Salpinctes obsoletus* (SAY). Rock Wren.

Although I kept a sharp lookout for this Wren at Leon Springs, where I expected to find it, it was not seen. Its claim to a place here rests entirely upon Mr. Brown's recorded capture of a female at Boerne, on March 4. Dresser makes no mention of the species.

Genus CATHERPES BAIRD.

258. *Catherpes mexicanus conspersus* RIDGW. Cañon Wren.

This bird was only met with at Leon Springs, Bexar County, and but one individual was seen there, a male, which was taken on March 11. At 5 o'clock in the morning, the day after my arrival, I was awakened by one of the clearest and most attractive bird songs I ever heard. As it was entirely new to me, I got up to investigate, and soon discovered that it proceeded from a Cañon Wren, perched on the cornice of the piazza. In a few minutes it completed its serenade and flew off to a stone wall surrounding the yard, when it crept in and out of the crevices after the manner of its kind. The proprietor, Mr. Aue, informed me that a pair of them first made their appearance at the house about three years before, and the male always sang every morning at dawn from the top of the chimney or the comb of the roof, for ten or twenty minutes. The song is a very bold and ringing one, rivaling in volume and bell-like clearness some of the best efforts of the Carolina Wren. I did not know until after I had shot the bird that it was a sort of household pet, else its life would not have been sacrificed. Brown speaks of three pairs that he found in a cañon near Boerne, 10 or 12 miles northwest of Leon Springs. Dresser states that it is "not uncommon near San Antonio, remaining there to breed."

## Genus THRYOTHORUS VIEILLOT.

259. *Thryothorus ludovicianus* (LATH.). Carolina Wren.

This Wren is a common winter bird about San Antonio and Leon Springs, and it undoubtedly breeds at both places. It sang a good deal all through the winter. "Not uncommon near San Antonio, remaining there throughout the year" (Dresser.) It is an uncommon resident at Boerne, according to Brown. I did not see the bird at either Beeville or Corpus Christi, nor did Hancock meet with it at the latter place.

260. *Thryothorus bewicki murinus* (HARTL.). Baird's Wren.

This Wren was one of the most abundant birds I saw in Texas. It was observed in numbers at all of the places visited. Their favorite haunts were about houses and outbuildings, but a great many were always to be found in the mesquite, about the roots of the bushes. I heard them singing all through the winter. At Corpus Christi, on February 11, I saw a pair building a nest, and on the 17th saw a completed nest at Beeville. At Boerne it is also a very common resident, singing throughout the winter, according to Brown.

## Genus TROGLODYTES VIEILLOT.

261. *Troglodytes ædon parkmannii* (AUD.). Parkman's Wren.

Parkman's Wren was not very common at San Antonio, and was confined exclusively to the river banks, in the dense tangle of grasses, etc., that grew at the water's edge. In fact it was almost an aquatic species here. It was exceedingly shy and difficult to get, so I am not much surprised that it is not mentioned in Dresser's list. At Corpus Christi, however, where it was quite common, it was a bird of the chaparral and brush fences altogether, as I never saw one in that locality anywhere else. A few were seen at Beeville, but none at Leon Springs. I heard no note of any sort from the bird. Hancock records it as occurring at Corpus Christi.

262. *Troglodytes hiemalis* VIEILL. Winter Wren.

This bird is evidently a very rare winter resident in this part of Texas, as I saw but one individual, and Dresser vaguely notes the species as "only an occasional visitor to the neighborhood of San Antonio." My specimen was taken March 12, at Leon Springs. It was creeping in and out of the crevices of a stone fence, near a splendid spring, in a dense grove, and was perfectly silent.

## Family CERTHIIDÆ. Creepers.

## Genus CERTHIA LINNÆUS.

263. *Certhia familiaris americana* (BONAP.). Brown Creeper.

The Creeper was seen occasionally at San Antonio during the winter, and two were observed at Leon Springs on March 12. None were seen in the mesquite, but always in timber near water. Brown reports it as

rare at Boerne. I did not see it at Corpus Christi or Beeville, nor is it in Hancock's list. Dresser "often noticed it on the Medina and San Antonio Rivers."

### Family PARIDÆ. Nuthatches and Tits.

#### Genus SITTA LINNÆUS.

**264. *Sitta carolinensis* LATH.** White-breasted Nuthatch.

Dresser states that he saw this bird often on the Medina River late in April and early in May. None of the other observers seem to have met with it.

**265. *Sitta canadensis* LINN.** Red-breasted Nuthatch.

On December 19, the day after my arrival at San Antonio, I saw one of these birds in San Pedro Park, but did not again see any until January 18, when a female was seen and secured. Single individuals were noted twice afterwards at San Antonio, March 2 and 25, and on March 21, at Leon Springs, I secured a fine male, and saw another. This record is, I believe, unique for this section.

#### Genus PARUS LINNÆUS.

**266. *Parus bicolor* LINN.** Tufted Titmouse.

At San Antonio I found this Tit quite common, apparently more so than *P. atricristatus*. The two birds were generally found together. At Leon Springs I saw but one, while the black-crested species was abundant. Dresser did not find it at San Antonio, but shot one on the Medina River. Brown did not see it in Kendall County, nor did I meet with it at Corpus Christi or Beeville.

**267. *Parus bicolor texensis* SENNETT.** Texan Tufted Titmouse.

I expected to find this new race at Beeville, as the type specimens were secured by Mr. John M. Priour, on the Aransas River, about 15 miles southeast of this place, but it was not my luck to meet with it. (*Vide* Auk, IV, pp. 29, 30.)

**268. *Parus atricristatus* CASS.** Black-crested Titmouse.

Of the large series of this species, which was obtained at San Antonio, Leon Springs, and Beeville, there are six or eight specimens which have the frontlet distinctly chestnut, but without an opportunity of comparing them with typical examples of *castaneifrons* it is thought best to call all of them *atricristatus*. There is one specimen, taken at Leon Springs, which has the upper parts, including the crest, heavily washed with brown, and three others where the black of the crest extends some distance on the occiput. At San Antonio I found it a common bird, but not so numerous as *P. bicolor*, with which it generally associated, but at Leon Springs it was very abundant. During the short time I was there twenty-four specimens were secured without any

special effort. At Beeville only three were seen, all of which were obtained. Each one had the chestnut frontlet, but rather pale. The birds were generally found in pairs, the males whistling a good deal. None were seen at Corpus Christi. Brown found it a very abundant resident at Boerne, and Dresser notes it as very common near San Antonio where he found a nest late in April, containing young.

**269. *Parus atricristatus castaneifrons* SENNETT.** Chestnut-fronted Titmouse.

This new form was sought for near Beeville, and the three specimens mentioned above may be possibly referable to it, as they have a considerable amount of chestnut on the frontlet. The type specimens were taken in Bee County, about 15 miles south of Beeville, by Mr. Priour, in April, 1886. (*Cf. Auk*, IV, p. 28.)

**270. *Parus carolinensis agilis* SENNETT.**

This new Texan race of the Carolina Chickadee, which Mr. Sennett proposes to call "*agilis*," was a rather uncommon bird at San Antonio and Leon Springs, the only places where I observed it. It was not seen at the former place until February 21, when a single individual was noted in the town, and it was met with there but twice afterwards. I saw but two at Leon Springs, a male and female, both of which were obtained. Dresser states that the bird is not uncommon in the neighborhood of San Antonio, but Brown found it rare during his stay at Boerne, where it was usually seen in pairs. Mr. Brewster (*Bull. Nutt. Orn. Club*, IV, p. 76), quoting Mr. Werner, notes its occurrence in Comal County, where, however, but two pairs were seen.

Genus *AURIPARUS* BAIRD.

**271. *Auriparus flaviceps* (SUND.).** Verdin.

The Verdin was first met with on December 24, when three individuals were seen, two of which were secured. One was seen on December 25, two January 1, and two January 11, all in the mesquite. No others were observed at all. Their alarm note is very peculiar, otherwise their habits appeared to be quite Parine. One was seen hanging head downwards on a reed stalk, after the well known manner of *Parus carolinensis*. Sennett gives Hidalgo on the lower Rio Grande as its eastern limit, which, of course, must now give place to San Antonio. I did not see the bird at any other place, nor was it met with by Brown, Dresser, or Hancock. Mr. John M. Priour, of Corpus Christi, informed me that they were common along the Nueces River.

Family SYLVIIDÆ. Kinglets, Gnat-catchers, etc.

Genus *REGULUS* CUVIER.

**272. *Regulus satrapa* LICHT.** Golden-crowned Kinglet.

At San Antonio, on February 27, I shot a female of this species, and saw four or five more of the same sex in a bush near the river bank. They were in company with two or three Orange-crowned Warblers.

This was the only occasion upon which I observed it, but Dresser says it is "found at San Antonio during the winter months." Brown states that it is not uncommon about Boerne; last seen there March 25. It is not in Hancock's list, nor did I see it at Corpus Christi.

273. *Regulus calendula* (LINN.). Ruby-crowned Kinglet.

This Kinglet was found rather abundantly at all of the places visited, and was noted at San Antonio as common and in full song as late as March 21. Down here it seems to be a very unsocial little bird, as all of those seen were alone. It appeared to be equally common in the mesquite and in the timber along the streams. Brown reports it abundant at Boerne up to the last week of March. It is not in Hancock's list; all had probably left for the north before he began collecting at Corpus Christi, March 16. "Common at San Antonio during the winter" (Dresser).

Genus POLIOPTILA SCLATER.

274. *Polioptila cærulea* (LINN.). Blue-gray Gnat-catcher.

This bird was first noted at Corpus Christi on February 8, when one individual was seen; another was seen on the 10th. Both were doubtless recent arrivals from the south, as I do not believe that the species winters at this place. Hancock found them here in numbers; he says: "A number of these birds were taken March 21st in mesquite bushes, 4 miles west of the city. So numerous were they that I could scarcely look around without seeing the ends of the limbs borne down by the weight of their tiny bodies. The birds met with on this occasion seem to have been the bulk of a migratory flock, for, on visiting the locality several days later, not a single specimen could be seen." Sennett also saw great numbers at the same place on March 23. I did not see any at Beeville (February 12-19), but saw one at San Antonio on the 21st. They gradually increased in numbers there until March 8, when they were quite common. All of those shot previous to this date were in molt and consequently in very poor plumage. Only one was seen at Leon Springs, March 15. Brown says it is "an apparently common summer resident" at Boerne, arriving there March 8. Dresser notes the species as occurring at San Antonio.

275. *Polioptila plumbea* BAIRD. Plumbeous Gnat-catcher.

"I shot a fine male specimen of this bird on the San Antonio River on the 30th September, 1883, but, unfortunately, almost blew it to pieces, and thus was unable to make even a passable skin of it" (Dresser). Dresser calls this bird *Polioptila melanura*.

Family TURDIDÆ. Thrushes, Bluebirds, etc.

Genus TURDUS LINNÆUS.

276. *Turdus aonalaschkæ* GMEL. Dwarf Thrush.

This Thrush was only recognized at Leon Springs where four specimens were secured in March. Their habits appear to be identical with

those of the Eastern bird. Brown says it is an uncommon resident at Boerne, and that several of his specimens taken there closely approach the variety *auduboni*. Dr. Heermann, in Dresser's paper states that he once procured the eggs on the Medina, which is doubtless a mistake.

277. *Turdus aonalaschkæ auduboni* (BAIRD.). Audubon's Hermit Thrush.

None of the specimens of Hermit Thrushes secured by me can properly be referred to this subspecies. Of its occurrence at Boerne, Brown says (Bull. Nutt. Orn. Club, 1882, p. 127): "In a recent paper on a collection on birds made in southwestern Texas, I referred a series of *Hylocichla unalasce* to the restricted form with the remark that several specimens closely approached var. *auduboni*. Upon reading the article, an esteemed correspondent wrote me that one of these aberrant examples which had passed into his hands appeared to him to be true *auduboni*. In this opinion, after a re-examination of the specimen, I concur. The bird in question has a wing of 3.82 inches, which, though decidedly under the average of *auduboni* is more than should be allowed *unalasce* proper."

278. *Turdus aonalaschkæ pallasii* (CAB.). Hermit Thrush.

I took five examples of this Thrush at San Antonio in January and March, and would not call it an uncommon bird there, still it seemed to have escaped Dresser's attention entirely. I think it likely that this species, like others, did not winter there when he collected. A specimen taken at Leon Springs on March 14, seems to be intermediate between this form and *aonalaschkæ* proper, but it resembles the subspecies more than it does the latter. "A specimen taken March 16 from a small flock of apparently the same race. Examples approaching var. *auduboni* were taken at intervals" (Brown).

#### Genus MERULA LEACH.

279. *Merula migratoria* (LINN.). American Robin.

A good many Robins were seen during the winter and as late as March 20 at San Antonio, and they were quite common near Corpus Christi, but whether they were *migratoria* proper, or *propinqua*, I am unable to say. Of the three specimens collected at Corpus Christi, one only can be referred to the eastern form. No other specimens were taken. Brown found it "irregularly abundant" at Boerne, and Dresser states that it is not uncommon near San Antonio during the winter, and is found more abundantly during a severe "norther."

280. *Merula migratoria propinqua* RIDGW. Western Robin.

Two examples of this race were secured at Corpus Christi. See remarks under last.

#### Genus SIALIA SWAINSON.

281. *Sialia sialis* (LINN.). Bluebird.

I saw the Bluebird several times at San Antonio during the winter, but it is not common there. Dresser also notes it as occurring there in

winter, and states that they occasionally breed in that locality. Brown found it comparatively abundant at Boerne in winter. It is not in Hancock's list, but John M. Priour informed me that it is found at Corpus Christi.

**282. *Sialia mexicana* SWAINS.** Western Bluebird.

Brown met with this Bluebird upon but two occasions at Boerne, January 28 and March 1, when from their actions he inferred that they were merely passing through. I did not meet with the species, nor is it in Dresser's or Hancock's papers.

**283. *Sialia arctica* SWAINS.** Mountain Bluebird.

During the latter part of January and first part of February I saw three of these birds at Corpus Christi, and obtained two of them. They were in very dull plumage. It was not seen at any other place. Brown found it an abundant winter visitor at Boerne.

"Comes in the winter, but breeds abundantly farther north.—A. L. H." (Dresser).

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