

## GALEORHINIDÆ.

Genus SCOLIODON Müller &amp; Henle.

117. *Scoliodon terræ-novæ* (Rich.) Gill.—*Sharp-nosed Shark*.

Very abundant in the harbor.

## AMPHIOXIDÆ.

Genus AMPHIOXUS Yarrell.

118. *Amphioxus caribæus* (Sundevall) Jor. & Gilb.

Abundant in the harbor, on Bird Shoal; not, however, obtained by us.

DECEMBER, 1878.

## A PARTIAL LIST OF THE BIRDS OF CENTRAL CALIFORNIA.

By L. BELDING, of Stockton.

Edited by R. RIDGWAY.

The present paper is based upon observations extending through about twenty years' residence in California, and collections made chiefly during the last two years, which have, from time to time, been forwarded by Mr. Belding to the National Museum.\* The list is believed to be a tolerably complete one, Mr. Belding's long residence in the State and his active interest in ornithology having enabled him to become quite familiar with the bird-fauna of most parts of the interior of California. Still, observations made at a few outlying points, or extended for a longer period at localities already investigated, would, no doubt, add considerably to the number of the species. The editor's remarks are either enclosed in brackets or followed by his initials ("R. R."). He is responsible for the nomenclature adopted, and the determination of the species—although, as to the latter, Mr. Belding had correctly identified them all, with a very few exceptions among the difficult forms, whose correct determination is hardly possible in the field.

The asterisk before the number indicates that the species has been found breeding in Central California; and only those actually ascertained to do so are thus marked. In the list of specimens, the asterisk before the locality shows that the species breeds at that particular place. The number in these lists is that of the National Museum Register, in which the specimens sent by Mr. Belding are entered. Notes upon a few of the species collected by Mr. Belding have been published by the writer in the Bulletin of the Nuttall Ornithological Club for April, 1878, pp. 64-68, to which those interested are referred.—R. R.

\*The collections thus far received from Mr. Belding amount to about 180 species (not including races) and 600 specimens. Notes were sent on 38 additional species, making a total of 217 treated in this paper.—R. R.

CENTRAL CALIFORNIA, where the collections and observations upon which this paper is based were made, is divided naturally into three quite distinct parts: (1) the valleys near sea-level; (2) the chaparral belt, familiarly known to Californians as the "foot-hills"; and (3) the evergreen coniferous forests above the chaparral belt. The periods during which the collections were made are as follows:—At *Stockton* (valley region), March 6 to June 9, 1878, and during the succeeding autumn. At *Marysville* (valley region), from December 24, 1877, to March 5, 1878, and, incidentally, in June, 1878. At *Murphy's* (lower edge of pine region), from November 20, 1876, to May 3, 1877, November 22 to December 22, 1877, and August 27 to September 6, 1878. At the *Calaveras Big Trees* (pine region), from May 3 to June 8, and from July 4 to August 27, 1878. At *Soda Springs* (upper part of pine region), from August 25 to October 6, 1877, about a week of this time being spent at the *Summit Meadows*, near the summit of the Donner Lake Pass of the Sierra Nevada.

STOCKTON, SAN JOAQUIN Co. (lat. about 38°, alt. 30 ft.), is on the eastern margin of the extensive tule swamp through which the San Joaquin River flows. Many of the birds peculiar to the inland waters of the Pacific coast frequent this swamp in summer or winter, while others, among which are some of the water birds of the neighboring tule marshes, breed in the willows on the banks or natural levees of the river. During the spring migration, birds are truly abundant in the thickets by the river, and any one who has heard their songs at this time would not accuse California birds of being deficient in melody.

The valley east of Stockton is very level, and sparsely timbered, though the principal water-courses are marked by a narrow strip of oaks and willows. In ordinary winters, water is plentiful, but in summer only the waters of the principal rivers reach the ocean. Owing to this scarcity of water in the breeding season, birds are not numerous in this portion of the valley, while for this and other reasons few species are abundant in Central California.

The climate is genial and quite uniform, the heat of summer being usually agreeably tempered by the sea breeze. The winters are mild and the fields are green with short grass.

MARYSVILLE, YUBA Co., is in latitude 39° 8', the altitude being about 150 feet above tide-level. It is situated at the junction of the Yuba and Feather Rivers, surrounded by an extensive tract of level plains, most of which are under cultivation. Over the uplands are scattered a few oaks, both evergreen and deciduous, while in the river-bottoms are dense thickets of poplars and willows, with an undergrowth of grapevines, briars, weeds, and grass. These thickets afford shelter for the birds of the district, and in the breeding season nearly all the species are congregated in or near them.

The summers are warm and dry, and, as elsewhere in the interior of California, the annual plants are either ripe or blighted by the first of

June. The winters are mild; snow rarely falls, the plains after the first rains being covered with grass, which, however, does not grow much until March. Some of the species found at Marysville in winter are the following:—*Turdus navius*, *T. migratorius* (var. *propinquus*), *T. guttatus*, *Harporhynchus redivivus*, *Mimus polyglottus*, *Dendroica coronata*, *D. auduboni*, *Helminthophaga celata* (var. *lutescens*), *Geothlypis trichas*, *Vireo huttoni*, *Chrysomitris pinus*, *C. lawrencii*, *Eremophila alpestris* (both the typical form and var. *chrysolama*), *Sayornis nigricans*, *S. sayus*, *Picus pubescens*,\* *P. nuttalli*, *Sphyrapicus ruber*, *Melanerpes formicivorus*, *Asio accipitrinus*, *Spotyto "hypogaea,"* *Lanius borealis*, *L. ludovicianus*, *Melospiza "fallax,"* and *Pipilo chlorurus*. In June, the following, among others, were noticed:—*Turdus ustulatus*, *Thryomanes bewicki* (var. *spilurus*), *Lanivireo "cassini,"* *Vireo pusillus*, *Coccyzus americanus*, *Polioptila cerulea*, *Picus "gairdneri,"* *P. nuttalli*, *Trochilus alexandri*, and *Chamaea fasciata*.

MURPHY'S, CALAVERAS Co. (lat. 38° 7', alt. about 2,400 ft.), is situated at the line of junction of the chaparral belt and the pine region; that is, between the upper edge of the former and the lower limit of the latter, the line between these two districts being sharply drawn by the abrupt rise of the mountains on the east.

The climate of Murphy's is nearly the same as that of Stockton, notwithstanding the great difference of altitude (over 2,300 feet). The days are rather warmer, even in winter, if the sky is unclouded: it is more subject to cold storms, however; but if snow falls, it soon melts, and the hills are invariably covered with green grass after the fall rains. It is above the winter fogs of the valley. The average rainfall at Murphy's averages nearly twice as much as that at Stockton, the rainy season being longer, while the precipitation is more copious.

The following species may be said to find the upper limit to their breeding range in the vicinity of Murphy's:—*Harporhynchus redivivus*, *Chamaea fasciata*, *Polioptila cerulea*, *Lophophanes inornatus*, *Salpinctes obsoletus*, *Icteria longicauda*, *Phainopepla nitens*, *Carpodacus frontalis* (var. *rhodocolpus*), *Chrysomitris lawrencii*, *Cyanospiza amœna*, *Pipilo "crissalis,"* *Icterus bullocki*, *Tyrannus verticalis*, *Myiarchus cinerascens*, *Picus nuttalli*, *Melanerpes formicivorus*, *Lanius ludovicianus* (var. *excubitoroides*), *Geococcyx californianus*, and some others. This restriction, though not absolute, is nearly so, and is due mainly to the abrupt change in the character of the forest.

About a mile east of Murphy's, the road makes an unbroken ascent of ten or twelve hundred feet in two miles. For the next thirteen miles there is no material change in the altitude; but at this point there is another rise of about eight hundred feet. At the top of this rise is the "Big Tree" Grove.

\* Typical specimen sent from this locality!—R. R.

The following is a list of the birds observed at various times in the immediate vicinity of Murphy's:—

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| <p>1. <i>Turdus guttatus</i>.<br/>                 2. <i>Turdus naevius</i>.<br/>                 *3. <i>Harporhynchus ruficircus</i>.<br/>                 *4. <i>Sialia mexicana</i>.<br/>                 5. <i>Sialia arctica</i>.<br/>                 6. <i>Cinclus mexicanus</i>.<br/>                 7. <i>Regulus satrapa</i>.<br/>                 8. <i>Regulus calendula</i>.<br/>                 *9. <i>Poliophtila caerulea</i>.<br/>                 *10. <i>Lophophanes inornatus</i>.<br/>                 *11. <i>Psaltriparus minimus</i>.<br/>                 *12. <i>Sitta "aculeata."</i><br/>                 13. <i>Sitta canadensis</i>.<br/>                 14. <i>Certhia "americana."</i><br/>                 15. <i>Salpinctes obsoletus</i>.<br/>                 16. <i>Catherpes "conspersus."</i><br/>                 17. <i>Thryomanes "spilurus."</i><br/>                 18. <i>Authus ludovicianus</i>.<br/>                 19. <i>Helminthophaga ruficapilla</i>.<br/>                 20. <i>Helminthophaga "lutescens."</i><br/>                 *21. <i>Dendroeca aestiva</i>.<br/>                 22. <i>Dendroeca auduboni</i>.<br/>                 23. <i>Dendroeca coronata</i>.<br/>                 24. <i>Dendroeca nigrescens</i>.<br/>                 25. <i>Myiodiodes "pileolatus."</i><br/>                 *26. <i>Icteria "longicauda."</i><br/>                 *27. <i>Progne subis</i>.<br/>                 *28. <i>Petrochelidon lunifrons</i>.<br/>                 *29. <i>Hirundo "horreorum."</i><br/>                 30. <i>Stelgidopteryx serripennis</i>.<br/>                 *31. <i>Vireosyltria "swainsoni."</i><br/>                 *32. <i>Phainopepla nitens</i>.<br/>                 *33. <i>Lanius "excubitoroides."</i><br/>                 34. <i>Pyrranga ludoviciana</i>.<br/>                 35. <i>Carpodacus "californicus."</i><br/>                 *36. <i>Carpodacus "rhodocolpus."</i><br/>                 *37. <i>Chrysomitris psaltria</i>.<br/>                 *38. <i>Chrysomitris lawrencii</i>.<br/>                 39. <i>Chrysomitris pinus</i>.<br/>                 40. <i>Passerculus "alaudinus."</i><br/>                 *41. <i>Chondestes grammacus</i>.<br/>                 42. <i>Zonotrichia intermedia</i>.<br/>                 43. <i>Zonotrichia coronata</i>.<br/>                 44. <i>Junco oreganus</i>.<br/>                 45. <i>Amphispiza belli</i>.<br/>                 *46. <i>Spizella "arizonae."</i><br/>                 47. <i>Melospiza "guttata."</i><br/>                 48. <i>Melospiza lincolni</i>.<br/>                 49. <i>Peucaea ruficeps</i>.</p> | <p>50. <i>Passerella "megarhyncha."</i><br/>                 51. <i>Passerella "townsendi."*</i><br/>                 *52. <i>Hedymeles melanocephalus</i>.<br/>                 *53. <i>Cyanospiza amurensis</i>.<br/>                 *54. <i>Pipilo "megalonyx."</i><br/>                 55. <i>Pipilo chlorurus</i>.<br/>                 *56. <i>Pipilo "crissalis."</i><br/>                 *57. <i>Sturnella "neglecta."</i><br/>                 *58. <i>Icterus bullocki</i>.<br/>                 *59. <i>Scolecophagus cyanocephalus</i>.<br/>                 60. <i>Corvus americanus</i>.<br/>                 61. <i>Cyanocitta "frontalis."</i><br/>                 *62. <i>Aphelocoma californica</i>.<br/>                 *63. <i>Tyrannus verticalis</i>.<br/>                 *64. <i>Myiarchus cinerascens</i>.<br/>                 *65. <i>Sayornis nigricans</i>.<br/>                 66. <i>Sayornis sayus</i>.<br/>                 67. <i>Contopus borealis</i>.<br/>                 *68. <i>Contopus richardsoni</i>.<br/>                 *69. <i>Empidonax pusillus</i>.<br/>                 70. <i>Empidonax obscurus</i>.<br/>                 71. <i>Empidonax hammondi</i>.<br/>                 72. <i>Ceryle alcyon</i>.<br/>                 *73. <i>Trochilus alexandri</i>.<br/>                 *74. <i>Calyptis anna</i>.<br/>                 75. <i>Selasphorus rufus</i>.†<br/>                 76. <i>Stellula calliope</i>.<br/>                 77. <i>Picus "harrisi."</i><br/>                 78. <i>Picus "gairdneri."</i><br/>                 *79. <i>Picus nuttalli</i>.<br/>                 80. <i>Sphyrapicus "ruber."</i><br/>                 81. <i>Sphyrapicus thyroideus</i>.<br/>                 *82. <i>Melanerpes formicivorus</i>.<br/>                 83. <i>Melanerpes torquatus</i>.<br/>                 *84. <i>Colaptes "mexicanus."</i><br/>                 *85. <i>Scops asio</i>.<br/>                 86. <i>Glaucidium gnoma</i>.<br/>                 87. <i>Asio columbarius</i>.<br/>                 *88. <i>Tinnunculus sparverius</i>.<br/>                 89. <i>Accipiter fuscus</i>.<br/>                 *90. <i>Buteo "calurus."</i><br/>                 91. <i>Rhinogryphus anra</i>.<br/>                 92. <i>Columba fasciata</i>.<br/>                 *93. <i>Zenaidura carolinensis</i>.<br/>                 94. <i>Oreortyx picta</i>.<br/>                 *95. <i>Lophortyx californica</i>.<br/>                 *96. <i>Egialitis vocifera</i>.<br/>                 97. <i>Ardea herodias</i>.†<br/>                 98. <i>Herodias "egretta."</i></p> |
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\* In winter only.

† In spring only.

‡ This and the succeeding water birds visit us only in winter and spring. Probably none breed here.

99. *Butorides virescens*.
100. *Nyctiardea "navia."*
101. *Botaurus lentiginosus*.
102. *Ardetta exilis*.
103. *Gallinago wilsoni*.

104. *Tringoides macularius*.
105. *Anas boschas*.
106. *Marca americana*.
107. *Dytes "californicus."*
108. *Podilymbus podiceps*.

From August 27 to September 5, 1878, forty-two species were observed. Many of the summer residents had gone. Those remaining were—

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| <ol style="list-style-type: none"> <li>1. <i>Turdus migratorius</i> (var. <i>propinquus</i>).</li> <li>2. <i>Harporhynchus redivivus</i>, few.</li> <li>3. <i>Sialia mexicana</i>, common.</li> <li>4. <i>Polioptila caerulea</i> (only one).</li> <li>5. <i>Chamaea fasciata</i>, common.</li> <li>6. <i>Lophophanes inornatus</i>, common.</li> <li>7. <i>Psaltiriparus minimus</i>, common.</li> <li>8. <i>Salpinctes obsoletus</i>, common.</li> <li>9. <i>Sitta "aculeata,"</i> rare.</li> <li>10. <i>Troglodytes "parkmanni,"</i> rare.</li> <li>11. <i>Dendroica aestiva</i>, rare.</li> <li>12. <i>Hirundo "horreorum,"</i> common.</li> <li>13. <i>Petrochelidon lunifrons</i>, very rare.</li> <li>14. <i>Vireosylva "swainsoni,"</i> rare.</li> <li>15. <i>Phainopepla nitens</i>, rather rare.</li> <li>16. <i>Lanius "excubitorides."</i></li> <li>17. <i>Pyrauga ludoviciana</i>.</li> <li>18. <i>Carpodacus "rhodocolpus,"</i> very common.</li> <li>19. <i>Chrysomitris psaltria</i>, very common.</li> <li>20. <i>Chondestes grammacus</i>, very common.</li> <li>21. <i>Spizella "arizona,"</i> common.</li> </ol> | <ol style="list-style-type: none"> <li>22. <i>Pipilo "megalonyx,"</i> common.</li> <li>23. <i>Pipilo "crissalis,"</i> very common.</li> <li>24. <i>Sturuella neglecta</i>, common.</li> <li>25. <i>Scolecophagus cyanocephalus</i>, rare.</li> <li>26. <i>Aphelocoma californica</i>, common.</li> <li>27. <i>Cyanocitta "frontalis" (one)</i>.</li> <li>28. <i>Tyrannus verticalis</i> (four).</li> <li>29. <i>Myiarchus cinerascens</i> (one).</li> <li>30. <i>Sayornis nigricans</i>, common.</li> <li>31. <i>Contopus borealis</i> (two).</li> <li>32. <i>Contopus richardsoni</i>, rare.</li> <li>33. <i>Empidonax pusillus</i>, rare.</li> <li>34. <i>Calypte anna</i>, common.</li> <li>35. <i>Coccyzus americanus</i> (heard one).</li> <li>36. <i>Picus nuttalli</i>, common.*</li> <li>37. <i>Melanerpes formicivorus</i>, common.</li> <li>38. <i>Colaptes "mexicanus,"</i> common.</li> <li>39. <i>Rhinogryphus aura</i>, few.</li> <li>40. <i>Zenaidura carolinensis</i>, common.</li> <li>41. <i>Oreortyx picta</i> (one seen).*</li> <li>42. <i>Lophortyx californica</i>, abundant.</li> </ol> |
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BIG TREES, CALAVERAS CO. (lat. 38° 15', alt. 4,500 ft.), is in the heart of the coniferous forest of the Sierra Nevada. In this locality the pines, firs, cedars, and other conifers attain their largest size and most perfect growth. Deciduous oaks constitute a very small part of the forest, but they are mostly confined to the more barren spots. The climate at Big Trees is agreeably temperate during a portion of May, and throughout June, July, August, and September. The winters are mild, considering the altitude; but snow, to a depth of one to four or five feet, usually covers the ground, although some seasons the surface is bare for the greater portion of the time.

The summer avifauna of this locality resembles, to a considerable extent, that of Soda Springs and Summit Meadows, the more notable absentees being *Pinicola "canadensis,"* *Hesperiphona vespertina*, *Zonotrichia intermedia*, *Picicorvus columbianus*, and *Picoides arcticus*, all of which, however, probably visit Big Trees at some time of the year.

\*More were probably present, as a gentleman told me a flock had bred there the past season, on a level with Murphy's.

Birds seen at Big Tree Grove, Calaveras County, from July 4 to August 27, 1878.

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| <p>*1. <i>Turdus migratorius</i> (var. <i>propinquus</i>), abundant.<br/>                 2. <i>Mimus polyglottus</i>, very rare.<br/>                 *3. <i>Cinclus mexicanus</i>, common.<br/>                 *4. <i>Sialia mexicana</i>, common.<br/>                 5. <i>Sialia arctica</i>, rare.<br/>                 *6. <i>Regulus satrapa</i>, rare.<br/>                 *7. <i>Parus montanus</i>, common.<br/>                 8. <i>Psaltriparus minimus</i>, rather rare.<br/>                 *9. <i>Sitta "aculeata,"</i> common.<br/>                 *10. <i>S. canadensis</i>, decidedly abundant.<br/>                 11. <i>S. pygmaea</i>, rare.<br/>                 *12. <i>Certhia "americana,"</i> abundant.<br/>                 *13. <i>Troglodytes "parkmanni,"</i> rather rare.<br/>                 *14. <i>Helminthophaga ruficapilla</i>, common.<br/>                 *15. <i>Helminthophaga "lutescens,"</i> common.<br/>                 *16. <i>Dendroica aestiva</i>, common.<br/>                 *17. <i>Dendroica occidentalis</i>, very common.<br/>                 *18. <i>Dendroica nigrescens</i>, in July, rare.<br/>                 19. <i>Dendroica auduboni</i>, rare.<br/>                 *20. <i>Geothlypis macgillivrayi</i>, common.<br/>                 21. <i>Myiodiocetes "pileolatus,"</i> common in August.<br/>                 *22. <i>Hirundo "horreorum,"</i> common.<br/>                 23. <i>Petrochelidon lunifrons</i>, rare.<br/>                 24. <i>Tachycineta thalassina</i>, abundant.<br/>                 *25. <i>Vireosyltria "swainsoni,"</i> common.<br/>                 *26. <i>Lanius "cassini,"</i> common.<br/>                 *27. <i>Pyrranga ludoviciana</i>, common.<br/>                 *28. <i>Carpodacus "californicus,"</i> very common.<br/>                 29. <i>Chrysomitris psaltria</i>, rare.<br/>                 30. <i>Chrysomitris pinus</i>, rare.<br/>                 *31. <i>Spizella "arizonæ,"</i> abundant.<br/>                 *32. <i>Passerella "megarhyncha,"</i> common.</p> | <p>*33. <i>Hedymeles melanocephalus</i>, common.<br/>                 *34. <i>Pipilo "megalonyx,"</i> common.<br/>                 *35. <i>Pipilo chlorurus</i>, common.<br/>                 36. <i>Icterus bullocki</i>, very rare.<br/>                 37. <i>Scolecophagus cyanocephalus</i>, rare.<br/>                 *38. <i>Aphelocoma "frontalis,"</i> abundant.<br/>                 39. <i>Aphelocoma californica</i>, common.<br/>                 40. <i>Tyrannus verticalis</i>, very rare.<br/>                 41. <i>Myiarchus cinerascens</i>, very rare.<br/>                 42. <i>Sayornis nigricans</i>, rather common.<br/>                 *43. <i>Contopus borealis</i>, common.<br/>                 *44. <i>Contopus richardsoni</i>, common.<br/>                 45. <i>Empidonax pusillus</i>, rare.<br/>                 46. <i>Empidonax obscurus</i>, probably not rare.<br/>                 *47. <i>Empidonax hammondi</i>, common.<br/>                 48. <i>Empidonax "difficilis,"</i> very rare.<br/>                 49. <i>Calypte anna</i>, rare.<br/>                 50. <i>Trochilus alexandri</i>, rare.<br/>                 51. <i>Stellula calliope</i>, rare.<br/>                 52. <i>Selasphorus rufus</i>, common.<br/>                 *53. <i>Picus "harrisi,"</i> common.<br/>                 *54. <i>Picus "gairdneri,"</i> rather rare.<br/>                 *55. <i>Picus albolarvatus</i>, abundant.<br/>                 *56. <i>Sphyrapicus "ruber,"</i> quite abundant.<br/>                 *57. <i>Hylotomus pileatus</i>, not rare.<br/>                 58. <i>Melanerpes formicivorus</i>, very rare.<br/>                 *59. <i>Colaptes "mexicanus,"</i> common.<br/>                 *60. <i>Bubo "subarcticus,"</i> common.<br/>                 61. <i>Glauclidium gnoma</i>, rare.<br/>                 62. <i>Tinnunculus sparverius</i>, rather rare.<br/>                 *63. <i>Zenaidura carolinensis</i>, common.<br/>                 *64. <i>Caniace obscura</i>, rather rare.<br/>                 *65. <i>Oreortyx picta</i>, common.<br/>                 *66. <i>Lophortyx californica</i>, common.</p> |
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From May 3 to June 8, 1877, I found, in addition to most of those found in July and August, the following species:—

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| <p>1. <i>Lanius "excubitorides,"</i> rare.<br/>                 2. <i>Carpodacus cassini</i>, common.<br/>                 3. <i>Melospiza lincolni</i>, rare.</p> | <p>4. <i>Sturnella neglecta</i>, rare.<br/>                 5. <i>Corvus americanus</i>, irregular visitants.<br/>                 6. <i>Thryomanes "spilurus,"</i> rare.</p> |
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The Hawks and Owls peculiar to the mountains of California are probably as numerous here as in other parts of the Sierras, but the density and height of the forest make their capture difficult.

At Moran's and Dunbar's Meadows, two or three miles west, and about 800 feet lower, I found the following in July and August, 1878:—

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| <p>1. <i>Chondestes grammia</i>, common.<br/>                 2. <i>Xanthocephalus icterocephalus</i> (one juv. August 27).</p> | <p>3. <i>Sturnella neglecta</i>, common.<br/>                 *4. <i>Ceryle alcyon</i>, rare.<br/>                 5. <i>Tringoides macularius</i> (one), very rare.</p> |
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I arrived at Big Trees May 3, 1877, and by May 10 nearly all the summer residents had arrived. Some of them had preceded me. Many of them, especially the Warblers, were seen on the route from Murphy's to this place.

The spring of 1877 was earlier than that of 1878, the winter of the former year having been very dry and mild. This probably accounts for the difference in the arrivals of some of the birds, as shown by the following figures. Probably I did not see some of them until some time after their arrival, especially if rare.

Number.	Name of species.	Arrival of birds at—	
		Murphy's, 1877.	Stockton, 1878.
1	<i>Helminthophaga ruficapilla</i> .....	April 11	.....
2	<i>Helminthophaga "lutescens"</i> .....	20	April 22
3	<i>Dendroica nigrescens</i> .....	15	17
4	<i>Dendroica aestiva</i> .....	26	15
5	<i>Myiodynastes "pileolata"</i> .....	18	May 6
6	<i>Vireosylva "swainsoni"</i> .....	26	1
7	<i>Hirundo "horreorum"</i> .....	15	March 20
8	<i>Petrochelidon lunifrons</i> .....	15	17
9	<i>Stelgidopteryx serripennis</i> .....	15	.....
10	<i>Progne subis</i> .....	13	March 16
11	<i>Icterus bullocki</i> .....	24	April 1
12	<i>Hedymcles melanocephalus</i> .....	1	May 6
13	<i>Pyrranga ludoviciana</i> .....	April 30	.....
14	<i>Phainopepla nitens</i> (arrived at Jenny Lind, March 12, 1874) .....	March 13	.....
15	<i>Spizella "arizona"</i> .....	April 17	May 1
16	<i>Tyrannus verticalis</i> .....	12	March 20
17	<i>Myiarchus cinerascens</i> .....	17	April 27
18	<i>Empidonax obscurus</i> .....	28	.....
19	<i>Empidonax "hammondi"</i> .....	25	May 9
20	<i>Pipilo chlorurus</i> .....	17	.....
21	<i>Polyptila cerulea</i> .....	5	March 23

SODA SPRINGS, PLACER CO.—This place is on the North Fork of the American River, ten miles south of the Central Pacific Railroad, on the west side of the "divide," or crest-line, of the Sierra Nevada; Lake Tahoe being on the east side, ten or fifteen miles distant. Altitude of the springs, 6,009 feet; the latitude, 39° 11'. The mountains between this place and Lake Tahoe rise 2,500 or 3,000 feet higher. This is above the region of deciduous oaks, the trees being all evergreens, except a species of dwarf maple and a few alders, willows, and aspens, which grow along the river. It is a rugged, almost desolate, region, though an interesting one. Grouse and Mountain Quails are comparatively plentiful, and trout-fishing is quite good. The Warblers are well represented here: I have found here the young of *Dendroica auduboni*, *D. occidentalis*, *D. nigrescens*, *Helminthophaga ruficapilla*, *H. celata*, and other species.

On frosty mornings in September, birds were exceptionally numerous in a few of the more sunny glades along the river, consisting chiefly of *Junco oregonus*, *Spizella breweri*, *S. socialis*,\* *Zonotrichia intermedia*, *Passerella megarhyncha*, *Pipilo chlorurus*, *Parus montanus*, *Dendroica auduboni*, etc., etc. The Humming-birds fled when the first frost killed the flowers.

\* Certainly both species.—L. B.

[The following species, all of which are known to occur in some part of California, have not been met with by Mr. Belding in the central portion of the State. Many of them are very local, while others occur only in certain districts, at particular seasons.—R. R.]

*Polioptila melanura*,\* Lawr.

*Polioptila plumbea*,\* Baird.

*Parus occidentalis*,† Baird.

*Parus rufescens*,‡ Towns.

*Cotyle riparia*, (Linn.).

*Vireo vicinior*,\* Cones.

?*Loxia leucoptera*,§ Gmel.

*Egiothus linaria*,§ (Linn.).

*Leucosticte littoralis*,§ Baird.

?*Centropus lapponicus*,§ (Linn.).

*Passerculus anthinus*,‡ Bonap.

*Passerculus rostratus*,|| (Cass.).

*Coturniculus perpalidus*,¶ Ridgw.

*Molothrus ater*, (Bodd.).

*Corvus carnivorus*, Bartr.

*Corvus caurinus*,‡ Baird.

*Chatura cauxi*, (Towns.).

*Nephaetes borealis*, Kennerly.

*Calypte costae*,\* (Boarc.).

*Selasphorus alleni*,‡ Henshaw.

*Psaltriparus carolinensis*, Gmel.

*Astur atricapillus*,§ (Wils.).

*Squatrola helvetica*, (Linn.).

*Charadrius virginicus*, Börek.

*Egialitis semipalmata*, Bonap.

*Egialitis virosa*, Cass.

*Phalaropus fulicarius*, (Linn.).

*Ereunetes pusillus*.

*Tringa bairdi*, Cones.

*Tringa maculata*, Vieill.

*Colymbus torquatus*, Brünn.

*Colymbus pacificus*, Lawr.

*Colymbus septentrionalis*, Linn.

*Podiceps hötblöti*, Reinh.

Family TURDIDÆ: The THRUSHES.

\* 1. *Turdus migratorius*, β. *propinquus*, Ridgw.—*Western Robin*.

This bird visits the valleys only in winter, when it is sometimes abundant, especially during the coldest weather. In summer it is rarely seen out of the pine forests, though about the first of September, 1878, twenty-five or thirty were observed in an orchard at Murphy's.

It was first seen\*\* at Stockton, October 21, 1878.

73866	♂ ad.	*Murphy's.....	Apr. —, 1877
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2. *Turdus naevius*, Gm.—*Varied Thrush*.

This bird arrives at Stockton about the middle of November and leaves in March or April, according to the season. It arrived at Soda Springs, October 1, 1877.

It is usually a common winter sojourner of the foot-hills, and also of

\* Probably confined to the southern portion of the State.

† Found among the oaks of the plains east of Sacramento, in June, 1867, by the writer; common.

‡ Probably confined to the coast district.

§ Undoubtedly occur on the high Sierras in winter.

|| Found by Mr. Belding at Santa Cruz, September, 1870.

¶ Common at Sacramento, in June, 1867.

\*\* Sometimes, for the sake of variety, the word "arrived" is used. This, in all cases, must necessarily be but a substitute for the word "seen," or "first seen." Though, when constantly in the field, as was the case at Murphy's in the spring of 1877, and at Stockton in the spring of 1878, if *common*, a species was probably seen soon after its arrival. "Was seen," means by myself. The birds were all shot by me, unless credited to others.



the valley, in suitable localities, but I did not find it at Murphy's from the middle of November, 1876, to May, 1877, though the following November and December it was abundant there.

Its alarm-note is a short "chook," its call a prolonged, nearly monotonous "chee," or "yee," and I have heard it sing sweetly about March 1. I once mistook its call for the bleating of a distant lamb, although the bird was not far from me.

73867	♂ ad.	Soda Springs.....	Oct. 1, 1877
73868	♂ ad.	do.....	Oct. 1, 1877
73869	♂ ad.	Murphy's.....	Oct. 1, 1877
76533	♂ ad.	Stockton.....	Nov. 8, 1878
76534	♂ ad.	do.....	Nov. 8, 1878

\* 3. *Turdus ustulatus*, Nutt.—*Russet-backed Thrush*.

About a dozen of this species were seen in the willows at Marysville in June, 1878, and there were probably many more, as their songs were heard on several occasions in different parts of a thicket of willows, briars, etc. I am not aware of meeting it elsewhere. Its delicious song is not likely to be forgotten by one who has heard it.

74431	.....	*Marysville.....	June 22, 1878
76537	.....	do.....	June 14, 1878

4. *Turdus guttatus*, (Pall.).—*Dwarf Thrush*.

The Dwarf Thrush is probably a constant resident at Stockton, as it is common in winter and as late as June 8, 1878, at this time being confined to thickets near water. In winter it is more generally distributed, being often seen in gardens. It, or a near relative, is abundant at Murphy's in winter, and leaves that place in April.\*

It seems to be very rare in the Sierras in summer, during which I have not been able to find it at Big Trees. Two or three were noticed at Soda Springs, all of them on and after September 22, 1877.

73870	— ad.	Marysville?.....	Winter, 1877
76535	— ad.	Murphy's.....	Winter, 1877
76536	♀ ad.	Stockton.....	May 30, 1878

\* 5. *Mimus polyglottus*, (Linn.).—*Mocking-bird*.

A single bird of this species, in first plumage, was shot July 22, at "Big Tree Grove." It appears to be a constant resident of Marysville, where it has long been known to breed. A pair were often seen by a friend in Stockton during the past winter, and there are several young birds here that were taken from their nests at Hornitos, Mariposa Co. Still, it is by no means a common bird in this region.

A specimen was seen in a garden at Stockton on the 24th of December, 1878.

Nearly any citizen of the valley will, on being asked, say he knows the

\* Quite certainly the present species.—R. R.

Mocking-bird, but when asked to describe it, gives the description of the Sickle-bill Thrush or the Black-headed Grosbeak, or, occasionally, the Long-tailed Chat.\*

73609	— ad.	*Marysville.....	Dec. 26, 1877
76361	— juv.	*Big Trees.....	July 22, 1878

**6. Oreoscoptes montanus, (Townsend).—Sage Thrasher.**

About October 1, 1877, at Soda Springs, I saw a strange Thrush, which may have belonged to this species, as I do not know what else it could have been. I had a good view of it, but did not shoot, because too near. I began to walk away from it, when it went into the bushes by the river. It had been sitting six or eight feet from the ground on a dead limb of a tree. When it flew, its course was downward, toward the thicket, a few feet distant.

**\* 7. Harporhynchus redivivus, (Gamb.).—Sickle-bill Thrasher.**

The Sickle-bill Thrasher is a constant resident at Stockton, Murphy's, and Marysville, and is very common in the chaparral belt. It is rare at Stockton, for want of suitable ground.

73786	♂ ad.	*Marysville.....	Jan. —, 1878
74268	♂ ad.	*North American.....	Mar. 15, 1878
73871	— ad.	*Murphy's.....	Mar. 15, 1878

Family CINCLIDÆ: The WATER OUZELS.

**\* 8. Cinclus mexicanus, Swains.—American Water Ouzel; Dipper.**

This bird is in summer abundant in the clear streams of Calaveras Co., shunning those which have been muddied by mining operations.

I have several times seen it swim across the surface of one of the abandoned mining claims at Murphy's, and, while fishing for trout in the streams of the Upper Sierras, have often seen it swim on the surface—at times floating with the rapid current; but it is proper to mention that this is not its usual habit. It sometimes swims a distance of twenty or thirty yards in still water. It is an occasional winter visitant to Murphy's, below which I have never seen it.

73531	— ad.	*Soda Springs.....	Sept. —, 1877
73874	— ad.	*Murphy's.....	Winter, 1877

Family PTILOGONATIDÆ: The PTILOGONIES.

**\* 9. Myiadestes townsendi, (Aud.).—Townsend's Solitaire.**

This appears to be a habitual visitant to Soda Springs in the fall, if not a summer resident, as I have found it common during each of several

\* A similar confusion of names prevails to a considerable extent in many parts of the Eastern States, where, however, the bird most commonly confounded with the Mocking-bird is the Loggerhead Shrike, *Lanius ludovicianus*.—R. R.

visits I have made to the place in different years, and once shot a young one there as early as August 1.

It is a rather rare summer resident at Big Trees, owing, probably, to the absence of its favorite food, the juniper-berry. Once, while calling a companion with a policeman's whistle, I heard a shrill note in the small oak-tree under which I stood. Looking up, I discovered the author of the note, a male of this species, which had evidently been attracted by the whistle, and was answering my call.

73610	♂ ad.	*Big Trees.....	May 4, 1877
73872	— ad.	Soda Springs.....	Autumn, 1877
73873	— ad.	.....do.....	Autumn, 1877
75312	— juv.	Big Trees.....	July 13, 1875

\* 10. *Phainopepla nitens*, (Sw.).—*Black Ptilogony*.

This is a rather common summer resident of the chaparral belt, out of which I have not seen it. It was observed several times on July 4, between Milton and Murphy's. I shot a male near Jenny Lind, toward the close of the hunting season of 1874, not later than March 12. Early in April I have found it mated at Copperopolis, Calaveras Co.

Its manners are well described by Dr. Cooper in the Ornithology of California. The young in this collection was gorged with berries of the "wild coffee" of Murphy's, which differs slightly from that of Big Trees. This berry is about half an inch in diameter, very round, red just before ripe, black when ripe.

73534	♂ ad.	*Murphy's.....	Mar. 13, 1877
75313	— juv.	.....do.....	Aug. 29, 1878

Family SAXICOLIDÆ: The SAXICOLAS.

\* 11. *Sialia mexicana*, Sw.—*Californian Bluebird*.

The Californian Bluebird is a common constant resident of the valleys and foot-hills, and is also common as high at least as Big Trees in summer. It arrives at Big Trees about the middle of May. There it is principally confined to the fields or meadows and their borders.

73879	♂ ad.	*Murphy's.....	Winter, 1877
73880	♂ ad.	.....do.....	Winter, 1877
73881	♂ ad.	.....do.....	Winter, 1877
73882	♂ ad.	.....do.....	Winter, 1877
76362	♂ juv.	*Big Trees.....	Aug. 20, 1878
76363	♂ juv.	.....do.....	Aug. 20, 1878
76538	♂ ad.	Murphy's.....	Winter, 1877

\* 12. *Sialia arctica*, Sw.—*Rocky Mountain Bluebird*.

This bird is an irregular winter visitant to the foot-hills and valleys. It was first noticed at Stockton in the fall of 1878, on October 28. It was common in the following November, showing a partiality for fences along roads, sometimes perching on telegraph wires, seldom being seen on trees. A flock was seen March 12, 1878, thirty miles east of Stock-

ton, and a few, principally young of the year, visited Big Trees, August 20 of this year (1878). It was abundant in the middle of September at Summit Meadows, and was quite common during the same month at Soda Springs. I did not see it at Marysville in the winter of 1877-78.

[Respecting the two species of Bluebirds, Mr. Belding writes, under date of January 15, as follows:—"Is it not remarkable that *S. mexicana* is now in the mountains and *S. arctica* in the lowlands? The former more common than the latter, at least when I left the valley. As snow is now two feet deep at Big Trees, *S. mexicana* has probably left."—R. R.]

73883	♂ ad.	Murphy's.....	Feb. 15, 1877
76539	♀ ad.	Stockton.....	Oct. 28, 1878

Family SYLVIIDÆ: The TRUE WARBLERS.

13. *Regulus calendula*, (Linn.).—*Ruby-crowned Kinglet*.

This is a very common winter sojourner in the foot-hills and valleys. I have not seen it at Big Trees in summer, though abundant at Soda Springs the last of August and afterward.

By the middle of April, 1878, it was very rare at Stockton. The first seen the following fall was on the 3d of October.

73877	♂ ad.	Murphy's .....	— —, 1877
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\* 14. *Regulus satrapa*, Licht.—*Golden-crowned Kinglet*.

This bird was seen on several occasions at and near Big Trees in July and August, though not more than eight or nine in all. I had seen five or six at Soda Springs about October 1, 1877, and about the same number at Murphy's in December of the same year, but nowhere was it so numerous as at Stockton.

On the 15th of November, 1877, I found a flock of thirty or forty associated with a smaller number of *R. calendula*, and three days afterward saw a flock about as large about four miles from the spot where I had seen those on the 15th. These were also associated with a smaller number of *R. calendula*.

73535	♂ ad.	Stockton .....	— —, 1877
73298	— juv.	* Moran's (altitude 3,800).....	July 26, 1878
76540	♂ ad.	Stockton .....	Oct. 28, 1878
76541	♂ ad.	.... do .....	Nov. —, 1878

\* 15. *Pelioptila cœrulea*, (Linn.).—*Blue-gray Gnatcatcher*.

This is a rather common summer resident of Murphy's, and it was quite numerous at Marysville in June; at the former place frequenting the chaparral, at the latter, the willows. It was first seen at Murphy's April 5, 1878; at Stockton, March 23. It is rare at Stockton, and was not seen there during the breeding season. Several were seen here in August, 1877, but one was seen at Murphy's in parts of August and September.

Last spring I heard a pair uttering cries of distress, and found upon proceeding to the spot a Blue Jay about to rob their nest. I shot the Jay, which was only about fifteen or twenty yards from me, when the male Gnatcatcher immediately came and perched on a bush not more than five or six feet distant, a little above my head, and poured forth a loud, cheery, musical strain of thankfulness (as it seemed to me), such as I did not think the little bird capable of producing.

A nest found at Murphy's was in the forks of a small pine-tree about fifteen feet from the ground, or less.

73878	♂ ad.	*Murphy's.....	Apr. 5, 1877
73884	♂ ad.	do .....	Apr. 5, 1877
76546	♂ ad.	Stockton.....	Mar. 23, 1878
76547	♂ ad.	Marysville.....	June —, 1878

#### Family PARIDÆ: The TITMICE.

##### \* 16. *Lophophanes inornatus*, (Gamb.).—*Plain Titmouse*.

This bird is a common constant resident of the valleys and foot-hills. I have not seen it in the pine forests. A nest found at Stockton, May 29, was in the cavity of an elongated oak knot, eight feet from the ground. In drawing the nest out with a stick, the eggs were broken—the number was four, the color white.\* The bird had been sitting about a week. While the nest was being taken, the occupant, having retreated to the central hollow of the trunk of the large oak of which the knot formed a part, appeared a few feet above me, and silently watched the proceedings.

73885	— ad.	Murphy's.....	Apr. 5, 1877
74256	♂ ad.	Stockton.....	Apr. 17, 1878
74257	♂ ad.	.....do .....	Apr. 9, 1878

##### \* 17. *Parus montanus*, Gamb.—*Mountain Chickadee*.

This is a very common summer resident of Big Trees, and I have found it abundant at Soda Springs and Summit in the fall. Big Trees is nearly the lower limit of its breeding range.

I have found three nests, all in low, decayed stumps, two of them in a clearing, one in open forest. All were composed of wool, a considerable quantity of which had been used in their construction. The eggs are pure white.† Seven appears to be about the usual number. The young birds, when nearly ready to leave the nest, hiss, as their parents do, when disturbed on the nest.

In December, 1878, I saw a flock of this species at Copperopolis (alt. about 1,200 ft.), the first I have seen in the chaparral belt.

73886	— ad.	Big Trees.....	May —, 1877
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\* The eggs of this species, usually plain white, are sometimes, though rarely, spotted, like those of *L. bicolor*.—R. R.

† A curious fact; in all other American species of this genus, so far as known, they are heavily speckled with reddish brown.—R. R.

\* 18. *Psaltriparus minimus*, (Towns.).—*Least Tit*.

The Least Titmouse is a common constant resident of the valleys and foot-hills. A few flocks were seen at Big Trees in July and August, though only at rare intervals.\* I have not seen it above Big Trees.

73887	— ad.	*Murphy's .....	Apr. —, 1877
73888	— juv.	.....do .....	Apr. 20, 1877
74433	♀ ad.	*Stockton .....	May 8, 1878
75299	— ad.	Big Trees .....	July 13, 1878

Family SITTIDÆ: The NUTHATCHES.

\* 19. *Sitta carolinensis*, β. *aculeata*, Cass.—*Slender-billed Nuthatch*.

This Nuthatch has not been abundant at any place where I have made collections, though often seen at all of them, especially in the pine forests. It was quite common in the groves of deciduous oaks near Stockton in May and the first week of June, 1878, and I supposed they had nests, but was unable to find them.

73608	♀ ad.	*Marysville .....	Jan. 5, 1878
73889	♂ ad.	Calaveras County.....	— —, 1877
73890	♂ ad.	.....do .....	— —, 1877
73891	♀ ad.	.....do .....	— —, 1877
76258	♂ ad.	*Stockton .....	Apr. 9, 1878

\* 20. *Sitta canadensis*, Linn.—*Red-bellied Nuthatch*.

This bird is abundant at Big Trees in summer, probably outnumbering the Robins or Jays. I found it rather rare at Soda Springs in the fall of 1877. It is occasionally seen at Murphy's in winter, and is a very rare winter visitant to the valleys.

73034	♂ ad.	*Big Trees .....	May 19, 1878
73892	♀ ad.	Murphy's .....	Mar. 3, 1877
73893	♀ ad.	.....do .....	Mar. 3, 1877
76548	♀ ad.	Stockton.....	Nov. 5, 1878

\* 21. *Sitta pygmæa*, Vig.—*Pigmy Nuthatch*.

This bird seems to be very rare in Central California. I first met with it at Big Trees in July, having been drawn to it by its notes. It was then associated with *S. canadensis*.

I saw it only on two occasions, in July and August, the total number seen being only about a dozen.

75300	— juv.	*Big Trees.....	July 25, 1878
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Family CERTHIDÆ: The CREEPERS.

\* 22. *Certhia familiaris*, β. *americana*, Bonap.—*American Brown Creeper*.

This bird is an abundant summer resident at Big Trees, and is rather common in the fall at Soda Springs. It is a rare winter visitant to the

\* Probably this and other species after breeding in the foot-hills, seeking to escape from the heat and drouth of midsummer, enter the cool shades of the cañons and streams which lead eastward and upward.

valleys. I saw two of these birds at Marysville in January and February, 1878, and a pair was seen at Stockton October 27, 1878.

73899	— ad.	Murphy's.....	Spring, 1877
73900	— ad.	*Big Trees.....	Spring, 1877

Family CHAMÆIDÆ: The GROUND TITS.

\* 23. *Chamæa fasciata*, Gamb.—*Ground Tit*.

This bird is a constant resident at Murphy's, Stockton, and Marysville. At the two latter places it inhabits the willow thickets, where, however, it is not numerous. It is very common at Murphy's in the chaparral thickets.

Its perfect spring song consists of three loud, high, staccato notes, immediately followed by a trill, starting in the same key, gradually descending about a minor third, the whole song occupying six or eight seconds of time.

73876	— ad.	*Murphy's.....	Apr. —, 1877
74253	♀ ad.	*Stockton.....	Apr. 13, 1878
74254	♂ ad.	.....do.....	Apr. 2, 1878
74255	♂ ad.	.....do.....	Mar. 30, 1878

Family TROGLODYTIDÆ: The WRENS.

\* 24. *Salpinctes obsoletus*, (Say).—*Rock Wren*.

The Rock Wren is a common constant resident at Murphy's. I have also seen it at Copperopolis, Calaveras Co., in April and December. I have not seen it in the pine forests.

73895	— ad.	*Murphy's.....	Dec. —, 1877
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25. *Catherpes mexicanus*,  $\beta$ . *conspersus*, Ridgw.—*Cañon Wren*.

This Wren was quite common at Murphy's in February and the first half of March, 1877. It was much given to penetrating the piles of broken rocks in the abandoned mining claims, and was with difficulty shot, and then at close range only. I have not seen it on the dry hills frequented by *Salpinctes obsoletus*. I have observed it only at Murphy's, at the time stated, and not elsewhere, though there is but little suitable ground where I have been. There are many places on the Calaveras River, in the chaparral belt, where it should be found, but these localities I have not visited in many years.

73035	— ad.	Murphy's.....	Feb. 7, 1877
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\* 26. *Thryomanes bewicki*,  $\beta$ . *spilurus*, (Vig.).—*Californian Bewick's Wren*.

This Wren is an abundant constant resident at Marysville, where it inhabits the willow thickets along the streams. I have not found it

abundant elsewhere, though it is rather common in spring at Murphy's, where it is occasionally seen in winter also.

At Marysville, in the summer of 1878, a pair of these birds raised a brood of young in a seam of one of the timbers of a railroad trestling, notwithstanding frequent jars from passing trains. The nest was about two feet below the rails.

73602	— ad.	Calaveras County.....	Jan. 5, 1878
73895	— ad.	*Marysville.....	Winter, 1877-8
73896	— ad.	.....do.....	Winter, 1877-8
73897	— ad.	.....do.....	Winter, 1877-8
73898	— ad.	.....do.....	Winter, 1877-8
76542	— ad.	Stockton.....	May 8, 1877

\* 27. *Troglodytes aëdon*,  $\beta$ . *parkmanni*, Aud.—*Parkmann's Wren*.

I have not seen more than a dozen of these birds while making this collection. Most of these were at Big Trees.

76364	— juv.	*Big Trees.....	July —, 1878
76543	— juv.	Stockton.....	June 3, 1878
76544	— juv.	.....do.....	Oct. 28, 1878

28. *Troglodytes hyemalis*,  $\beta$ . *pacificus*, Baird.—*Californian Winter Wren*.

77078	— ad.	Murphy's.....	Jan. 6, 1879
77079	— ad.	.....do.....	Jan. 6, 1879

\* 29. *Telmatodytes palustris*,  $\beta$ . *paucicicola*, Baird.—*Western Long-billed Marsh Wren*.

This Wren is an abundant constant resident of the tule marshes near Stockton. In the breeding season I have examined more than twenty nests without finding an egg, though the anxious or angry owner or owners would follow me closely, constantly scolding, as I examined each nest, as though having an equal interest in all.

73839	— ad.	Marysville.....	Dec. —, 1877
74432	— ad.	*Stockton.....	June —, 1878
76545	— juv.	.....do.....	Sept. 29, 1878

Family MOTACILLIDÆ: The WAGTAILS and TITLARKS.

30. *Anthus ludovicianus*, Gmel.—*American Titlark*.

The Titlark is a common winter sojourner of the valleys and foot-hills. I saw a flock of these birds near Murphy's, 3,400 feet above the sea, on the 10th of December, 1877. It left Stockton about May 1, 1878, and returned September 18 of the same year, at which time it was only found in the edge of the tule swamp, but soon became distributed through the surrounding country. It has not, up to the present time (November 27), appeared in the streets, as is its usual custom in winter.

73875	— ad.	Murphy's.....	Mar. 3, 1877
76549	— ad.	Stockton.....	Sept. 18, 1878



## Family MNIOTILTIDÆ: The AMERICAN WARBLERS.

\*31. *Helminthophaga ruficapilla*, (Wils.).—*Nashville Warbler*.

This Warbler arrived at Murphy's April 11, 1877, and was rather common the remaining portion of the month, frequenting the deciduous oaks on sunny hillsides, outnumbering at that time any of the Warblers except *D. auduboni*. In the pine forests it frequents low bushes.

A nest found at Big Trees in May was built on the ground in a thick growth of an evergreen shrub. It was formed of pine-root fibres, and contained five eggs, white, thickly spotted with reddish brown, mostly concentrated on the large end, forming a prominent ring.

It does not breed much below Big Trees—I have not seen it in the valley, its range extending from 2,500 feet upward.

73036	♂	ad.	Murphy's.....	Apr. 1, 1877
72057	♂	ad.	do.....	Apr. 1, 1877
73038	♂	ad.	*Big Trees.....	May —, 1877
73624	♂	ad.	Soda Springs.....	Autumn, 1877
73536	♂	ad.	Murphy's.....	—
75308	—	juv.	Big Trees.....	July 16, 1878
75309	—	juv.	do.....	July 16, 1878

\*32. *Helminthophaga celata*,  $\beta$ . *lutescens*, Ridgw.—*Californian Orange-crowned Warbler*.

This bird was first noticed at Murphy's on the 20th of April, 1877, and was rather common until about May 1. A few were seen at Stockton April 22, 1878, after which time it was rarely seen—in no instance after May 10.\*

A few were seen on different occasions in January and February, 1878, in the wild-grape and brier patches of the bottom-lands near Marysville.

In spring it feeds among the deciduous oaks. Later in the season, in the pine forest, it is confined to low shrubbery.

It is a common summer resident of Big Trees,† and is abundant at Soda Springs in fall.

73613	—	juv.	*Big Trees.....	May —, 1877
73614	—	ad.	Marysville.....	Jan. 8, 1878
73925	—	ad.	Soda Springs.....	Autumn, 1877
73926	—	juv.	do.....	Autumn, 1877
74006	—	juv.	Big Trees.....	May —, 1877
73791	♂	ad.	Marysville.....	Feb. 13, 1878
76550	♀	ad.	Stockton.....	Apr. 22, 1878

\*33. *Dendroeca aestiva*, (Gmel.).—*Yellow Warbler*.

This well-known species is common in the valleys and foot-hills in summer, and is often met in the pine forests during the same time, where it is principally confined to the willows and aspens in and around meadows. It arrived at Murphy's April 26, 1877, and at Stockton April 15, 1878, at which time Mt. Diablo and the "Coast Range" were white

\*Under date of December 28, 1878, Mr. Belding writes that it was then found at Stockton, but was rare.—R. R.

†Its breeding range scarcely extends below this altitude.

with an unusually late fall of snow. It left Stockton previous to September 7, 1878.

73908	— ad.	*Big Trees .....	Spring, 1877
73909	— ad.	.....do .....	Spring, 1877

**34. *Dendroeca coronata*, (Linn.).—*Yellow-rump Warbler*.**

This species appeared to be quite abundant at Murphy's in December, 1877. *D. auduboni* was also present, but less numerous than this species, though their similarity at this season rendered their positive identification difficult. It was also found at Marysville in January and February, 1878, but it appeared to be less numerous than *D. auduboni*. In February it and many other small birds wore yellow throats and breasts, which they acquired by feeding among the willows, which had just blossomed.

73790	— ad.	Marysville.....	Feb. —, 1878
73912	— ad.	.....do .....	Feb. 15, 1878
73913	— ad.	Murphy's.....	Dec. —, 1877
73914	— ad.	.....do .....	Dec. —, 1877

**\*35. *Dendroeca auduboni*, (Town.).—*Audubon's Warbler*.**

This bird is a very common winter sojourner in the valleys and foothills. It undoubtedly breeds at Big Trees, where I have seen its young scarcely able to fly, though at this time rather rare. It was abundant at Soda Springs and Summit about October 1, 1877. It left Stockton during the first week of May, 1878, in very warm weather, and returned September 18. By October 6 it was common.

It appears to be unable to endure very cold weather, as during a freezing spell at Marysville, in January of this year (1878), it was often found unable to fly. One that I found in the streets in this condition was soon restored by being warmed. Several dead ones were found in the city.

73910	♂ ad.	Murphy's.....	Spring, 1877
73911	♂ ad.	.....do .....	Spring, 1877
74441	♂ ad.	Stockton.....	Apr. 25, 1878
76875	♂ ad.	*Big Trees.....	July 7, 1878

**\*36. *Dendroeca occidentalis*, (Town.).—*Yellow-headed Gray Warbler*.**

This species was more numerous at Big Trees in July, 1878, than all the other *Dendroeca* combined, and was rather common at Soda Springs in August and September, 1877. In July and August, at Big Trees, it was usually in the evergreens, though it was often, at all hours of the day, in a thin strip of willows in the meadow, having apparently been drawn there as much by the abundance of insects which swarmed in the willows as by the water that flowed through them. There they would allow me to go within a few yards of them, and were slow in learning to fear a gun.

At Big Trees, in May, 1877, this species frequented the deciduous oaks,

and I rarely saw it anywhere else: one was observed on the bare ground, moving deliberately about the end of a decayed log. In its movements it somewhat resembles the Nashville Warbler, and it is not shy, compared with most birds. At Soda Springs it was quite common, keeping generally under forty or fifty feet from the ground, though they sometimes go from the lower to the upper limbs of tall trees by short flights, especially if the sun is shining only on the tree-tops.

I recognized but two at Stockton: these were in the willows on the natural levee of the San Joaquin River.

73039	♂ ad.	*Big Trees.....	May 20, 1877
73040	♂ ad.	.....do.....	May 20, 1877
73920	♂ ad.	.....do.....	May 20, 1877
73921	♂ ad.	.....do.....	May 20, 1877
73922	♂ ad.	Soda Springs.....	Autumn, 1877
74439	♂ ad.	Stockton.....	May 9, 1878
74440	♂ ad.	.....do.....	May 18, 1878
75303	♂ ad.	Big Trees.....	July 8, 1878
75304	♂ juv.	.....do.....	Aug. 24, 1878
75305	♂ juv.	.....do.....	July 17, 1878
75306	♂ juv.	.....do.....	July 5, 1878
75307	♂ juv.	.....do.....	July 25, 1878
		.....do.....	July 16, 1878

**37. *Dendroeca townsendi*, (Nutt.).—Townsend's Warbler.**

I have not noticed anything peculiar in the habits of this bird. Those I have seen were unsuspecting, and rather slow in their movements, being much like *D. nigrescens* in this respect.

I shot what I supposed was a female of this species near Stockton, June 3, 1878, but did not find it.

The specimens in the collection are all I positively identified at Stockton in the spring of 1878.

73919	♂ ad.	Soda Springs.....	Autumn, 1877
74251	♂ ad.	Stockton.....	Apr. 29, 1878
74437	♂ ad.	.....do.....	Apr. 29, 1878
74438	♀ ad.	.....do.....	May 17, 1878

**\*38. *Dendroeca nigrescens*, (Towns.).—Black-throated Gray Warbler.**

This bird arrived at Murphy's April 15, 1877; at Stockton April 17, 1878. It is a summer resident of Big Trees, though far from abundant there or at any of the places where I have found it. It was more numerous in August than in July, though it seemed to be constantly present during both months. It disappeared from Soda Springs about the middle of September, 1877, or rather it was not seen after my return from the Summit, September 22, and was rare when I left on the 15th.

73915	♂ ad.	Soda Springs.....	Fall, 1877
73916	♂ ad.	.....do.....	Sept. —, 1877
73917	♂ ad.	Murphy's.....	Apr. 15, 1877
73918	♂ ad.	*Big Trees.....	June —, 1877
75301	♂ ad.	.....do.....	Aug. —, 1878
75302	♂ ad.	.....do.....	Aug. —, 1878
*76551	♀ ad.	Stockton.....	May 1, 1878

\*39. *Geothlypis trichas*, (Linn.).—*Maryland Yellow-throat*.

Two or more of these birds were seen at Marysville January 2, 1878, and occasionally thereafter until about the middle of the month, when their favorite cover was flooded by the Yuba River. It was not seen at Stockton during the following March, nor until April 12, soon after which it became abundant in the thickets near water and in the edges of tule swamps near sloughs. It was also found there in December, 1878, but was rare. I have not seen it in the mountains.

It became rare at Stockton after about November 1, 1878.

74263	♂ ad.	*Stockton.....	Apr. 13, 1878
76552	♂ juv.	.....do .....	Dec. 3, 1878

\*40. *Geothlypis macgillivrayi*, (Aud.).—*Macgillivray's Warbler*.

I have not seen this bird below an altitude of about 3,800 feet. It is rather common at Big Trees in the summer months, but was rare at Soda Springs in September. It is seldom, if ever, found out of low shrubbery in the Sierras.

73923	— ad.	*Big Trees.....	June 3, 1877
75310	— juv.	.....do .....	July 22, 1878
75311	— juv.	.....do .....	July 22, 1878

\*41. *Icteria virens*, *β. longicauda*, Lawr.—*Western Yellow-breasted Chat*.

This is a very common summer resident at Stockton, especially in the thickets along the rivers, which it follows into the mountains as high as Murphy's. I first noticed it at Stockton on May 9. It left previous to September 7.

73905	— ad.	*Murphy's.....	June 9, 1877
74434	♂ ad.	*Stockton.....	May 9, 1878
74435	♂ ad.	.....do .....	May 13, 1878

42. *Myiodiactes pusillus*, *β. pileolata*, (Pall.).—*Californian Black-capped Green Warbler*.

Arrived at Murphy's April 18, 1877. It was first seen at Stockton May 6, 1878. The last seen during the spring migration was on May 27. Between the dates given it had been abundant in the willows along the San Joaquin River.

At Big Trees it was common from about the middle of May to June 8, 1878, while at Soda Springs it was abundant in fall. I did not find it at Big Trees from July 4 to August 4, though after this it was common.

It is usually found among low bushes in the pine forests, but, like many other birds, frequents deciduous oaks when the leaves are young.

73906	— ad.	Murphy's.....	Apr. —, 1877
73907	— ad.	.....do .....	Apr. —, 1877
74436	♀ ad.	Stockton.....	May 9, 1878
76553	♂ ad.	Murphy's.....	Apr. —, 1877

## Family HIRUNDINIDÆ: The SWALLOWS.

\* 43. *Progne subis*, (Linn.).—*Purple Martin*.

Though common or even abundant in Stockton in the spring of 1878, it was seldom seen in the surrounding country, and then only when birds domiciled in town had wandered a short distance from home.

It arrived at Murphy's in 1877 on March 13; in 1878, at Stockton March 16. It left Murphy's previous to August 27, 1878, and Stockton previous to September 6, 1878. I have not seen it in the pine forests.

73973	♂ ad.	Murphy's .....	Mar. 15, 1877
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\* 44. *Petrochelidon lunifrons*, (Say).—*Cliff Swallow*.

A few of these birds were occasionally seen at Big Trees in July. It was rare at Murphy's about September 1, and I did not find it at Stockton on or after September 6. It is abundant at both the latter places during the breeding season.

At Stockton it builds under the eaves of buildings; at Murphy's, in the limestone boulders exposed by mining.

It arrived at Murphy's March 15, 1877; at Stockton March 17, 1878; and at North American Hotel March 12, 1878. On the morning of the 13th, at the latter place, four or five of them occupied a solitary old nest under the gable of the hotel, and forty or fifty of their fellows were flying and twittering around as though trying to dislodge them.

73974	— ad.	*Murphy's .....	Mar. 15, 1877
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\* 45. *Hirundo erythrogastra*, *β. horreorum*, Barton.—*Barn Swallow*.

The Barn Swallow is common at Stockton, Murphy's, and Big Trees in summer, many of them breeding at these places, and was the only Swallow seen at Stockton from September 6 until October 7, when a flock of *Tachycineta bicolor* was observed.

It arrived at Murphy's March 15, 1877, and at North American Hotel, 30 miles east of Stockton, March 12, 1878, while it was first noticed at Stockton, March 20, 1878. It disappeared from the latter place about October 15, 1878.

At Big Trees, Dunbar's, and Moran's Meadows, it frequented barns and other buildings, and did not seem to be generally distributed through the forest.

73977	♂ ad.	*Murphy's.....	Mar. 15, 1877
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\* 46. *Tachycineta bicolor*, (Vicill.).—*White-bellied Swallow*.

This bird was seen at Marysville February 1, 1878, and nearly every day thereafter until March 5. During the following March and April it was very abundant at Stockton, flying over the country in all direc-

tions, especially over the tule swamps. In May, when it was less abundant, I noticed two nests in casings over doors of private dwellings.

I have not recognized it at Murphy's or Big Trees. A large scattered flock was seen at Stockton as late as December 5, 1878.

73976	— ad.	*Marysville.....	Feb. —, 1878
76554	♂ ad.	Stockton.....	Oct. 15, 1878
76555	♀ juv.	.....do.....	Oct. 15, 1878
76556	— ad.	.....do.....	Oct. 15, 1878
76557	— ad.	.....do.....	Oct. 15, 1878
76558	♂ ad.	.....do.....	Oct. 12, 1878

\*47. *Tachycineta thalassina*, (Swains.).—*Violet-green Swallow*.

This beautiful bird was first recognized August 7, at Dunbar's Mill, where at least a hundred were in sight. Three days afterward it was seen flying over the meadows at Big Trees, and thereafter nearly every day until August 27, 1878.

They chose as a resting place the top branches of a tall dead pine near the hotel, out of shooting range, and often when flying were so high as to be seen with difficulty; occasionally, however, they mingled with the Barn Swallows near the ground.

75314	♂ juv.	*Dunbar's Mill (alt. 3,800 ft.)....	Aug. 7, 1878
75315	— juv.	.....do.....	Aug. 7, 1878
76559	♂ ad.	*Big Trees.....	Aug. 10, 1878

48. *Stelgidopteryx serripennis*, (Aud.).—*Rough-winged Bank Swallow*.

This bird arrived at Murphy's March 15, 1877, and remained until May 3, and probably later. They constituted only a fraction of the multitude of Swallows of the place, and were, perhaps, altogether not more than two dozen in number. I have not seen it elsewhere.

73975	— ad.	Murphy's .....	Mar, 15, 1877
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Family VIREONIDÆ: The VIREOS, or GREENLETS.

\*49. *Vireosylvia gilva*, *β. swainsoni*, Baird.—*Western Warbling Vireo*.

This bird I have found at all places where I have collected in summer, but nowhere abundant. It arrived at Murphy's April 26, 1877, and at Stockton May 1, 1878.

It was rare at Murphy's about September 1, and was not seen at Stockton on or after the 7th of that month.

73043	— ad.	*Big Trees .....	May —, 1877
73901	— ad.	*Murphy's.....	Spring, 1877
73902	— ad.	.....do.....	Spring, 1877
73903	— ad.	.....do.....	Spring, 1877
73904	— ad.	.....do.....	Spring, 1877
74442	♂ ad.	*Stockton.....	May 1, 1878

\*50. *Lanivireo solitarius*,  $\beta$ . *cassini*, Baird.\*—*Cassin's Vireo*.

This bird is a common and generally distributed summer resident at Big Trees. I have here found it more abundant than at any other place. I often saw it at Soda Springs in the last of August and the first half of September, and it was quite common in the willows near Marysville in June. At Stockton, it was seen in the willows along the San Joaquin River, about the middle of May only, the entire number being but four or five. In May and June, 1877, at Big Trees, its sweetly expressive song was more attractive to me than the song of any bird of that locality.

About the first of June I found a nest of this species at the Big Trees. The bird remained on it until my eye was within three feet of her head, so that I had a good view of her. I think large numbers breed at the Big Trees and vicinity, as they were very numerous June 8, when I left there.

73041	♂	ad.	*Big Trees.....	May 10, 1877
73042	—	ad.	do .....	May 10, 1877
73537	—	ad.	Big Trees .....	May —, 1877
74445	♂	ad.	*Marysville.....	June 13, 1878
74446	♂	ad.	do .....	June 14, 1878
74447	—	ad.	Stockton.....	May 9, 1878

51. *Vireo huttoni*, Cass.—*Hutton's Vireo*.

This bird appears to be very rare in Central California. I found five or six of them in the willows at Marysville, January 20, 1878, and a few days later saw two or three others.

73838	—	ad.	Marysville.....	Jan. 20, 1878
76368	—	ad.	Big Trees.....	Jan. 20, 1878

\*52. *Vireo pusillus*, Cones.—*Least Vireo*.

This very interesting little bird is common in summer in willow thickets at Stockton and Marysville. It arrived at Stockton about April 15, 1878, and left before September 7. It is active, restless, noisy or musical, and does not fail to make its presence known, occasionally giving its tail a side jerk, reminding one, in this respect, of the small Flycatchers. When a nest is being built, the male does all the singing and the female all the work, though the former encourages the latter with its presence as well as song.

A nest taken May 28 had three eggs in it; on the 24th or 25th it had two. I think this pair had a nest destroyed by cattle, though there could not have been more than one or two eggs in it; but those eggs

\* Having recently, in conjunction with Mr. Henshaw, carefully studied the Western specimens heretofore called by us and others *L. solitarius*, I have been unavoidably led to adopt Mr. Henshaw's conclusion that *L. solitarius* proper does not occur at all in the West, being replaced in the Pacific Province by *L. cassini*, and in the Middle Province by *L. plumbeus*. My note in the Bulletin of the Nuttall Ornithological Club (vol. iii, No. 2, pp. 65, 66), regarding the asserted occurrence of *solitarius* in California, based upon Mr. Belding's specimens, therefore refers solely to *cassini*. Mr. Henshaw's views, shortly to be published, will explain the matter more fully.—R. R.

should be added to these if my surmises are correct. When the lining of cattle hair had been placed in the nest I supposed the nest complete; the lining of down was added and finished in about an hour. They lingered near the spot long after the nest was taken.

74259	♂	ad.	*Stockton .....	Apr. —, 1878
74260	♂	ad.	.....do .....	Apr. —, 1878
74261	♂	ad.	.....do .....	Apr. —, 1878
74262	♂	ad.	.....do .....	Apr. —, 1878
74443	♂	ad.	*Marysville .....	June 12, 1878
74444	♂	ad.	Stockton .....	May 18, 1878
76562	♂	ad.	Marysville .....	June 13, 1878
76563	♂	ad.	Stockton .....	May 11, 1878

Family LANIIDÆ: The SHRIKES.

53. *Lanius borealis*, (Vieill.).—*Great Northern Shrike*.

This Shrike was comparatively common at Marysville in the winter of 1878. It was generally confined to willow thickets.

73615	—	ad.	Marysville .....	Jan. 2, 1878
73616	—	ad.	.....do .....	Jan. 8, 1878
76564	—	ad.	.....do .....	Feb. 5, 1878

\*54. *Collurio ludovicianus*, (Linn.).—*Loggerhead Shrike*.

This Shrike was rather common at Marysville in January and February, and appeared to be the prevailing type of the species at that time and place.

The only Shrike seen at Summit Meadows (fall of 1877) was the juv. in this collection.

NOTE.—The Loggerhead Shrikes collected by Mr. Belding include two forms: a dark-colored style, like true *ludovicianus* of the Gulf States, only, in some specimens, even darker, and one with lighter colors generally, and nearly white upper tail-coverts. None of the latter, however, are the true "*excubitorides* type."—R. R.

73617	—	ad.	Marysville .....	Jan. —, 1878
73618	—	ad.	.....do .....	Jan. —, 1878
73972	—	juv.	*Summit Meadows .....	Sept. 16, 1877

54 a. *Collurio ludovicianus*, β. *excubitorides*, (Swains.).—*White-rumped Shrike*.

This appears to be the form which is resident at Stockton and Murphy's, and is very common in the intervening country.

In May, 1877, two White-rumped Shrikes were seen at Big Trees.

73971	—	ad.	*Murphy's .....	Dec. —, 1877
76575	♂	ad.	Marysville .....	Feb. 20, 1878
76576	♂	ad.	.....do .....	Feb. 22, 1878
76577	—	ad.	Stockton .....	Apr. 1, 1878
76578	♂	ad.	.....do .....	Apr. 9, 1878
76579	—	ad.	.....do .....	Nov. 8, 1878

Family AMPELIDÆ: The WAX-WINGS.

55. *Ampelis cedrorum*, (Vieill.).—*Cedar Wax-wing*.

The Cedar-bird is sometimes found in the extensive orchards of Marysville, and may also visit those of Stockton, but I have not seen it at the latter place.



Dr. Davenport, of Stockton, has ten specimens, which he got about June 1 at Camp Seco, Calaveras County.

The people of Camp Seco say that these birds visit that place only when the cherries are ripe, when they come down from the mountains.

76560	♂ ad.	Camp Seco.....	} Last of May, 1878*
76561	♀ ad.	.....do .....	

Family TANAGRIDÆ: The TANAGERS.

\*56. *Pyrranga ludoviciana*, (Wils.).—*Western Tanager*.

This handsome bird is a common summer resident of Big Trees, where it is generally distributed through the forest. It is quite common at Soda Springs in August and September, less common in the latter than in the former month. About September 1, I noticed several flocks or families of three or four, all of them females or young of the year, at Murphy's. These were in the scattered oaks in the chaparral, feeding on the "wild coffee." It breeds but little below Big Trees.

73982	♂ ad.	Murphy's.....	Apr. 30, 1877
73983	♂ ad.	*Big Trees.....	June —, 1877
73984	♂ ad.	.....do .....	June —, 1877
73985	♀ ad.	.....do .....	June —, 1877

Family FRINGILLIDÆ: The FINCHES.

57. *Loxia curvirostra*, *β. americana*, Wils.—*American Red Crossbill*.

October 7, 1877, I saw at Summit Meadows what I am tolerably certain was a flock of these birds, and shot one, which I did not get, as it lodged in a tree; do not think I have seen it at any other time.

58. *Hesperiphona vespertina*, (Cooper).—*Evening Grosbeak*.

A flock of these birds was observed at Soda Springs, August 25, 1877, and flocks were occasionally seen in September, though they were not numerous. A few years since I saw a fine adult male at Lake Tahoe, previous to August 1. Except upon these occasions, I do not remember having met with it.

73538	♂ ad.	Soda Springs.....	†Sept. —, 1877
73792	♀ juv.	.....do .....	Sept. 10, 1877

\*59. *Pinicola enucleator*, *β. canadensis*, (Briss.).—*Pine Grosbeak*.

A few of these birds were at Soda Springs in September, 1877. This is the only place where I have seen them.

73539	♂ juv.	Soda Springs.....	Sept. 22, 1877
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\* These specimens, shot from a flock of 16, were collected by Dr. E. C. Davenport.

† The latter part of the month.

\* 60. *Carpodacus cassini*, Baird.—*Cassin's Purple Finch*.

This bird probably sometimes breeds at Big Trees, as I found it there from May 3, 1877, to June 8, though it was apparently not there in July or August of 1878. It was abundant at Summit Meadows, August 25 and September 21, 1877, and was often seen at Soda Springs in August and September of the same year. I have not seen it below Big Trees.

73048	♂ ad.	*Big Trees.....	June 8, 1877
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\* 61. *Carpodacus purpureus*, *β. californicus*, Baird.—*Californian Purple Finch*.

This is an abundant species at Murphy's in winter, and at Big Trees in summer. I did not see it at Soda Springs nor at Summit Meadows in the fall of 1877. It rarely visits the valleys in winter. A flock of thirty or forty visited Marysville in February, 1878, snow at that time lying unusually low on the mountains.

It left Murphy's about the last of March, 1877; but a few returned April 17, during a slight fall of snow. At Murphy's it frequents chaparral in the pine forest—the evergreens usually—though sometimes it is on the ground feeding on seeds of plants.

73829	— ad.	Marysville .....	Feb. —, 1878
73927*	♂ ad.	Murphy's .....	Apr. —, 1877
73928	♂ ad.	*Big Trees.....	May —, 1877
73929	♂ ad.	.....do .....	May —, 1877
73930	♂ ad.	.....do .....	May —, 1877
73931	♂ ad.	.....do .....	May —, 1877
74269	♂ ad.	Stockton.....	May 1, 1878
76571	♂ ad.	Big Trees.....	July —, 1878

\* 62. *Carpodacus frontalis*, *γ. rhodocolpus*, Caban.—*Californian House Finch*.

This is an abundant constant resident of the valleys and foot-hills of this region. I have seen a large flock in December during very mild weather, nearly a thousand feet above Murphy's, although very few breed above that place.

73932	♂ ad.	*Murphy's.....	Spring, 1877
73933	♂ ad.	.....do .....	Spring, 1877
73934	♂ ad.	.....do .....	Spring, 1877
74448	♂ ad.	*Stockton.....	June 8, 1878
76570	♂ ad.	.....do .....	Oct. 9, 1878

\* 63. *Chrysomitris tristis*, (Linn.).—*American Goldfinch*.

The Thistle-bird is a common constant resident of Stockton and Marysville, being quite abundant at the latter place in winter. I have not seen it above Murphy's.

73630	— ad.	Murphy's.....	Jan. —, 1878
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\* 64. *Chrysomitris psaltria*, (Say).—*Green-backed Goldfinch*.

This bird is an abundant constant resident of Murphy's. It was constantly present at Big Trees in July and August, though not numerous. It was also seen at Dunbar's and Moran's Meadows (altitude 3,800 feet)

during the same time. In the pine forest I have seen it only in and near cultivated fields.

It seems to be a rather rare winter sojourner of the valleys and an accidental summer visitant to them. A small flock was observed in Stockton May 16, 1878.

73937	♂ ad.	*Murphy's.....	Feb. 6, 1877
73794	♂ ad.	Marysville.....	—, 1878
73795	♂ ad.	.....do.....	—, 1878
73796	♂ ad.	.....do.....	—, 1878

\* 65. *Chrysomitris lawrencii*, Cass.—*Lawrence's Goldfinch*.

This does not seem to be an abundant species in any part of this region. It was first noticed at Murphy's March 21, 1877, from which time until May 3 flocks of three or four were occasionally seen, but the total number was not more than fifty.

At Marysville, winter of 1877-78, only a dozen or less were seen. I have not seen it above Murphy's, where it was generally found in the chaparral, sometimes in low trees (pines or oaks), occasionally on the ground.

73629	— ad.	*Marysville.....	Jan. 9, 1878
73935	♂ ad.	*Murphy's.....	Mar. 12, 1877
73936	♂	.....do.....	Mar. 12, 1877

\* 66. *Chrysomitris pinus*, (Wils.).—*Pine Goldfinch*.

A few of these birds were probably breeding at Big Trees in July and August, 1878, and I noticed it at Soda Springs August 28, 1877.

At Murphy's, in December, 1877, I found a flock of a dozen or more familiarly associated with a larger number of *C. psaltria*, feeding on the ground on a rocky hill. They were seen for six or seven consecutive days, or as long as I remained at Murphy's, and appeared to associate in perfect harmony. At Marysville I found, a few weeks later, both species again as familiarly associated. In this case there were but three *C. pinus*, with about twice their number of *C. psaltria*, all sitting on a telegraph wire along the railroad track. They soon alighted on the track near me, four of them forming a group by themselves not covering more than a square foot of ground. Two of this group were *C. pinus*, which I shot, leaving a single survivor of this species among those remaining.

A few days after this, near the same spot, on February 23, I saw a single specimen of *C. pinus* familiarly associated with a flock of *C. tristis*, feeding among the short grass in a pasture about two hundred yards from a willow thicket; perhaps this was the surviving *C. pinus* above mentioned.

I am pretty certain they were breeding there, for many times I saw single birds come to a spring, and depart in the direction from which they came.

73540	— ad.	.....	—, 1877
73793	— juv.	Marysville.....	—, 1878
76366	♀ ad.	*Big Trees.....	Aug. 10, 1878

67. *Passerculus sandwichensis*,  $\gamma$ . *alaudinus*, (Bonap.).—*Western Savannah Sparrow*.

This appears to be the only *Passerculus* found in this region. At Stockton its first and last resorts appear to be the margins of the tule swamps, though nearly all the time while remaining it is distributed throughout the country, in stubble-fields, closely grazed pastures, on fences, often in trees—in fact, everywhere.

It left Stockton about May 1, 1878, and returned September 18. It is a common winter sojourner at Murphy's.

73625	— ad.	Summit of Sierra Nevada, lat. 39°	.....
73626	— ad.	Marysville?	— —, 1878
73627	— ad.	.....do	— —, 1878
73651	ad.	Murphy's	Apr —, 1877
74264	ad.	Stockton	Apr. 27, 1878
74265	ad.	.....do	Apr. 27, 1878
73799	ad.	Marysville	— —, 1878
73800	— ad.	.....do	— —, 1878
76572	— ad.	Stockton	Sept. 18, 1878
76573	— ad.	.....do	Sept. 24, 1878

68. *Poecetes gramineus*,  $\beta$ . *confinis*, Baird.—*Western Grass Bunting*.

This appears to be a rare species in Central California. A few individuals were scattered in the pastures at Summit Meadows in September, 1877. I have not recognized it elsewhere.

73542	— ad.	Summit Meadows	Sept. —, 1877
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\*69. *Chondestes grammica*, (Say).—*Lark Bunting*.

This bird is a common constant resident of the valleys and foot-hills, as high as Murphy's. It was seen in the meadows near Big Trees (altitude 3,800 feet) in July and August, 1878.

73541	— ad.	*Murphy's	Feb. —, 1877
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70. *Zonotrichia leucophrys*, (Forst.).—*White-crowned Sparrow*.

While collecting near Summit Meadows in September, 1877, I found a flock of fifteen or twenty of these birds. Something in their movements, perhaps their tameness (for *Z. intermedia* was unaccountably wild), induced me to survey them through a field-glass, which resulted in their identification. I saw them nearly every day of the following week, at nearly the same spot, at times associated with *Z. intermedia*, but usually separated from them.

73543	— ad.	Summit Ice Lakes	Sept. 16, 1877
73928	— ad.	Summit Ice Lakes, 1 mile south of Summit Meadows.	Sept. 16, 1877
73929	— ad.	.....do	Sept. 16, 1877

71. *Zonotrichia intermedia*, Ridgw.—*White-lored White-crowned Sparrow*.

This bird was very abundant at Summit Meadows and Soda Springs in the fall of 1877. I have not seen it at Big Trees in summer.

This appears to be the form of the White-crowned Sparrow which is abundant at Murphy's in winter. It left there about the middle of April in 1877.

73926	— ad.	Murphy's.....	Winter, 1877
73927	— ad.	do.....	Winter, 1877
76585	— ad.	Stockton.....	Apr. 13, 1878
76586	— ad.	do.....	Apr. 26, 1878
76587	— ad.	do.....	Apr. 26, 1878

**72. *Zonotrichia coronata*, (Pall.).—Golden-crowned Sparrow.**

This bird is an abundant winter sojourner of the valleys and foot-hills. It left Stockton about May 1, 1878, and returned about October 21, soon after which it was abundant. It departed from Murphy's about the 15th of April in 1877.\* I have not seen it in the pine forests, though it probably migrates through them.

73950	♂ ad.	Murphy's.....	} Winter, 1877-78
73951	♀? ad.	do.....	

**\*73. *Junco oregonus*, (Townsend).—Oregon Snowbird.**

This bird is very common at Stockton, Murphy's, and Marysville in winter, and breeds at Big Trees, but not much below that point. It was first noticed at Stockton on the 25th of October in 1877. It was last seen at the latter place April 25, 1878, but during this month it was rare.

73952	♂ ad.	Stockton?.....	Nov. —, 1877?
73953	♀ ad.	Murphy's?.....	Spring, 1877

**74. *Amphispiza belli*, (Cass.).—Bell's Sparrow.**

The specimen in the contribution of February 11, 1879, is one of a pair of these birds, shot at Murphy's February 1, 1879. They were on a high, steep hill, which was thickly covered with a stunted growth of cedar chaparral, or chemisal, the same hill where I found the specimen of *Peucaea ruficeps*. As soon as I saw them I knew they were strangers to me, and thought they were *A. belli*. This species is a good singer.

**75. *Spizella socialis*, *β. arizonæ*, Coues.—Western Chipping Sparrow.**

This bird arrived at Murphy's April 11, 1877, soon after this time becoming very common. I first found it feeding in the deciduous oaks on the hillsides, but a few days later it was seen in gardens.

Many breed at Big Trees, where, in 1877, they arrived previous to May 15.

It was unexpectedly rare at Stockton in the spring and summer of 1878. The first seen at this place in the spring of this year was on May 1. None were seen in the fall after September 6.

73344	— ad.	Soda Springs.....	Sept. —, 1877
73628	— ad.	*Calaveras County.....	Spring, 1877
74449	♂ ad.	*Stockton.....	Apr. 30, 1878
73938	— ad.	Calaveras County.....	Spring, 1878
76589	— juv.	Marysville.....	June 15, 1878

\* The spring of 1877 was considerably earlier than that of 1878.

76. *Spizella breweri*, Cass.—*Brewer's Sparrow*.

Brewer's Sparrow is undoubtedly abundant in the higher Sierras in summer, though I did not find it at Big Trees in July and August.

I saw but two specimens at Stockton during the spring of 1878.

73939	— ad.	Soda Springs .....	Sept. —, 1877
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77. *Melospiza fasciata*,  $\gamma$ . *guttata*, (Nutt.).—*Rusty Song Sparrow*.

This was an abundant species at Marysville in the winter and spring of 1878, as late as March 5, and probably later. It was quite generally distributed among the weeds and grass of corn-fields in the bottom-lands, as well as along sloughs, being strikingly different from *M. heermanni* in this respect. It is a winter sojourner of Murphy's, where it is restricted to edges of ponds.

It was first seen at Stockton (in the fall of 1878) on November 14. Here I saw no more than one specimen of this species in the spring (1878), and three or four in the fall of the same year (to November 28). The latter appeared to be migrating, and one of them was found in wheat stubble two or more miles from a slough:

73619	— ad.	Marysville .....	Jan. —, 1878
73650	♂ ad.	Murphy's .....	Mar. 20, 1877
76574	— ad.	Marysville .....	Feb. —, 1878
76575	— ad.	.....do .....	Winter, 1878

77 a. *Melospiza fasciata*,  $\delta$ . *fallax*, Baird.—*Rocky Mountain Song Sparrow*.

While collecting at Marysville in winter, I often at first glance mistook for *M. lincolni* what may have been this species. This confusion lasted but two or three weeks, however. Later in the season I tried to duplicate the specimens I had shot, but was unable to do so.

73621	— ad.	Marysville .....	Jan. —, 1878
76576	— ad.	.....do .....	Jan. —, 1878
76577	— ad.	.....do .....	Jan. —, 1878
76578	— ad.	.....do .....	Feb. —, 1878
76579	— ad.	Stockton .....	Mar. 22, 1878
76580	— ad.	.....do .....	Nov. 17, 1878

\*77 b. *Melospiza fasciata*,  $\zeta$ . *heermanni*, Baird.—*Californian Song Sparrow*.

This is an abundant resident of Stockton, and appears to be equally abundant in summer and winter. I have seen two nests in the tule marshes made entirely of flags, while those I found on solid ground were made of grass or weeds, lined with fine grass.

It is the only *Melospiza* found here in summer, and almost the only one in winter.

73620	— ad.	Stockton .....	July —, 1877
74271	♂ ad.	.....do .....	Apr. 27, 1878
74272	— ad.	.....do .....	Mar. 29, 1878
74273	— ad.	.....do .....	Nov. —, 1877
74274	♂ ad.	.....do .....	Apr. 20, 1878
73797	— ad.	.....do .....	.....
73798	— ad.	.....do .....	.....
76581	— ad.	.....do .....	Nov. 17, 1878
76582	— ad.	Murphy's .....	Dec. 18, 1877
76583	— juv.	Stockton .....	Sept. 19, 1878

78. *Melospiza lincolni*, (Aud.).—*Lincoln's Sparrow*.

This bird was common at Marysville in the winter and spring of 1878. It frequented the thick dead grass at the edge of sloughs.

The first I had seen the previous fall at Soda Springs was on the 2d of October. It was found at Summit Meadows October 7, 1877. At Big Trees I have seen it in May. At Stockton it has not been seen up to November 28, this year.

This is the only *Melospiza* I have found in the pine forests.

73545	— ad.	Soda Springs.....	Oct. 2, 1877
73622	— ad.	Marysville?.....	
73623	— ad.	.....do.....	
73624	— ad.	.....do.....	
73940	— ad.	Murphy's.....	Mar. 2, 1877

79. *Peucea ruficeps*, (Cass.).—*Rufous-headed Sparrow*.

Only a single specimen of this species has been recognized while making this collection. It was shot while drinking from a spring in a growth of our largest species of fern, on a "cedar-chaparral" hill.

73941	— ad.	Murphy's.....	Dec. 13, 1877
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80. *Passerella iliaca*,  $\beta$ . *townsendi*, (Aud.).—*Townsend's Sparrow*.

A few of these birds were found in the willow-thickets at Marysville in the winter of 1877-78. Only one was seen at Stockton after March 6. This was in the edge of the tules, and was evidently migrating.

73942	— ad.	Murphy's?.....	Spring, 1877
73923	— ad.	Marysville.....	Mar. 2, 1878
74266	♀ ad.	Stockton.....	Apr. 8, 1878
73943	— ad.	Marysville.....	Mar. 2, 1877

80a. *Passerella iliaca*,  $\gamma$ . *schistacea*, Baird.—*State-colored Sparrow*.

77081	— ad.	Murphy's.....	Jan. 4, 1879
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\*80b. *Passerella iliaca*,  $\delta$ . *megarhyncha*, Baird.—*Thick-billed Sparrow*.

This bird is a very common summer resident at Big Trees, below which but few are seen in the breeding season. I found it abundant at Soda Springs and Summit Meadows in the fall of 1877. This or the preceding species, perhaps both, is common at Murphy's in winter.

73949	♂ ad.	*Big Trees.....	May —, 1877
73944	— ad.	.....do.....	Spring, 1877
73945	— ad.	.....do.....	Spring, 1877

\*81. *Hedymeles melanocephalus*, (Swains.).—*Black-headed Grosbeak*.

This bird is a common summer resident of all parts of this region. It arrived at Murphy's about May 1, 1877, and was first seen at Stockton May 6, 1878.

A few were still at Big Trees August 27, but it was not seen in the ten succeeding days at Murphy's, nor did I find it at Stockton September 7 and later.

It was abundant in the willows by the San Joaquin River in May. On the 21st of the latter month I found a nest containing two young and an egg, and on June 3 full-fledged young were seen.

73954	♂ ad.	*Big Trees.....	May 10, 1877
73955	♂ ad.	.....do .....	May 10, 1877

\*82. *Guiraca cœrulea*, (Linn.).—*Blue Grosbeak*.

The males of this species arrived at Stockton May 6, 1878, the first females being seen on the 13th of that month. It was very common in the willows by the San Joaquin River, and was unexpectedly tame. A nest found there May 18 was in the forks of a willow, fourteen or fifteen feet from the ground. It left Stockton before September 7.

74450	♂ ad.	*Stockton.....	May 9, 1878
74451	♂ juv.	.....do .....	May 23, 1878
74452	♀ ad.	.....do .....	May 23, 1878
76588	♂ ad.	.....do .....	May 9, 1878
76589	♀ ad.	.....do .....	May 14, 1878

\*83. *Cyanospiza amœna*, (Say).—*Lazuli Bunting*.

The "Blue Linnet" was rarely seen at Stockton in May and June, 1878, though it is sometimes a common summer resident of this place. It was first seen here May 8, 1878, and departed before September 7. I have found it common at Murphy's in June; it left there previous to August 28.

76591	♂ ad.	*Stockton.....	June 3, 1878
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\*84. *Pipilo maculatus*, ♂. *megalonyx*, Baird.—*Long-clawed Towhee*.

This is a common constant resident of the valleys and foot-hills as high as Murphy's, and is a common summer resident of the pine forest up to the summit of the Sierras.

73962	♂ ad.	*Marysville.....	Feb. —, 1878
76590	— juv.	.....do .....	June —, 1878

\*85. *Pipilo chlorurus*, (Townsend).—*Green-tailed Towhee*.

This bird is a common summer resident at Big Trees, Soda Springs, and Summit Meadows. It does not breed much below Big Trees. A few were seen at Murphy's April 17, 1878, after a slight fall of snow. I have seen but one in the valleys; this was at Marysville on February 12, 1878. It was in a burr-patch near the Yuba River, which was at this time flooding the thickets on its banks, and had perhaps driven the bird from its winter home.



One specimen was seen at Murphy's on the 12th of February: this, also, was in a burr-patch, in the corner of a hog-coral.

73963	— ad.	*Big Trees.....	May 19, 1877
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\*86. *Pipilo fuscus*, *β. crissalis*, (Vig.).—*Brown Towhee*.

This is a common or abundant constant resident of the foot-hills, and is found in the valleys in suitable localities. It does not breed much above Murphy's.

73956	— ad.	*Marysville.....	Mar. 2, 1878
73957	— ad.	.....do.....	Mar. 2, 1878
73958	— ad.	.....do.....	Mar. 4, 1878
73959	♂ ad.	.....do.....	Mar. 4, 1878
73960	♂ ad.	.....do.....	Mar. 2, 1878
73961	♂ ad.	.....do.....	Mar. 1, 1878
74275	♂ ad.	North American*	Mar. 12, 1878

#### Family ICTERIDÆ: THE AMERICAN STARLINGS.

\*87. *Xanthocephalus icterocephalus*, (Bonap.).—*Yellow-headed Blackbird*.

This is an abundant summer resident of the tule marshes of the valleys: a few may remain in winter, but I do not remember seeing any at that time.

It arrived at Stockton April 6, 1878, and was rather rare until May. But few have been seen since October 15, those mostly young of the year, mixed with Red-wings (*Agelai*). The only one seen after the first of November of this year (1878) was on the 19th instant, when a young bird was noticed in a flock of Red-wings:

Late in the summer and fall it daily visits the grain-fields east of Stockton, returning at evening to the tules.

74276	♂ ad.	*Stockton.....	Apr. 17, 1878
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88. *Agelæus phœniceus*, (Linn.).—*Red-and-buff-shouldered Blackbird*.†

This form of the Red-wing was very abundant at Stockton in the spring of 1878 up to about May 10, when it disappeared during summer-like weather that followed. I have not seen any of the Red-wings in the mountains.

73835	♂ ad.	Marysville.....	Feb. 14, 1878
73836	♂ ad.	.....do.....	Feb. 14, 1878
73837	♂ ad.	.....do.....	Feb. 14, 1878
76594	♂ ad.	Stockton.....	Apr. 4, 1878

\*88 a. *Agelæus phœniceus*, *β. gubernator*, (Wagl.).—*Red-and-black-shouldered Blackbird*.

This is an abundant constant resident of Stockton. The unmistakable adults mated early, while the immature of this species and *A. phœ-*

\* Thirty miles east of Stockton.

† The specimens sent by Mr. Belding are perfectly typical of the species, and not distinguishable from examples from more eastern portions of the country.—R. R.

*nicus* kept in flocks. Young birds able to fly were observed May 20, 1878.

73830	♂	ad.	Marysville.....	Feb. 14, 1878
73831	♂	ad.	.....do.....	Feb. 14, 1878
73832	♂	ad.	.....do.....	Feb. 14, 1878
73833	♂	ad.	.....do.....	Feb. 14, 1878
73834	♂	ad.	.....do.....	Feb. 14, 1878
74277	♂	ad.	*Stockton.....	Mar. 29, 1878
74278	♂	ad.	.....do.....	Apr. 17, 1878
76592	♂	ad.	.....do.....	Apr. 4, 1878
76593	♂	ad.	.....do.....	Spring, 1878

**89. *Agelæus tricolor*, (Nutt.).—Red-and-white-shouldered Blackbird.**

The *A. tricolor* appeared to avoid Stockton in the spring of 1878. I recognized but four during the spring and summer. Two of these were seen March 22 and two on April 5.

73987	♂	ad.	Stockton.....	Spring, 1875
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**\* 90. *Sturnella neglecta*, Aud.—Western Meadow Lark.**

This bird is an abundant constant resident of the valleys and foot-hills as high as Murphy's. It is also a summer resident of some of the more suitable localities of the Upper Sierras.

73989	♂	ad.	*Murphy's.....	Spring, 1877
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**\* 91. *Scolecophagus cyanocephalus*, (Wagl.).—Brewer's Blackbird.**

This is an abundant constant resident at Stockton, probably equaling, possibly exceeding, in numbers the Red-wings, especially in autumn. It is also a constant resident at Murphy's, and in summer is found in suitable localities in the pine forests. It was very common at Summit Meadows in September, 1877. At Stockton many breed in closely-trimmed ornamental evergreens.

73988	♂	ad.	*Murphy's.....	Spring, 1877
76595	♂	ad.	Stockton.....	Sept. 30, 1878
76596	♀	ad.	.....do.....	Sept. 30, 1878

**\* 92. *Icterus bullocki*, (Swains.).—Bullock's Oriole.**

This Oriole is a common summer resident of the valleys and foot-hills. An adult male was shot at Big Trees July 13, 1878. This is the only one I have seen in the pine forests.

The males arrived at Murphy's March 24, 1877; at Stockton April 1, 1878. On April 6, 1878, the first female was seen. The species' left Murphy's previous to August 27 and Stockton previous to September 7.

A nest found May 11 in a willow, eight feet from the ground, contained two eggs.

73986	♂	ad.	*Murphy's.....	Mar. 24, 1877
74453	♂	ad.	*Stockton.....	Apr. 1, 1878

## Family CORVIDÆ: The RAVENS, CROWS, and JAYS.

\*93. *Corvus americanus*, (Aud.).—*Common Crow*.

[Mr. Belding states that this species (which, however, he mistakes for *C. caurinus*) is "an abundant resident of Central California." The specimen he sends is true *americanus*, and not *C. caurinus*. The Crows which the writer observed in the Sacramento Valley, in June, 1867, were certainly *C. americanus*, their notes and habits in no wise differing from those of the Eastern birds of this species. It is probable that *C. caurinus* is, like the Eastern *C. ossifragus*, a strictly littoral species, never found away from tide-water.—R. R.]

76597	— ad.	Stockton.....	Nov. —, 1878
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\*94. *Picicorvus columbianus*, (Wils.).—*Clarke's Nutcracker*.

This species is very common at Soda Springs and Summit Meadows in the fall, and is said to be a rare winter visitor to the Big Trees.

\*95. *Pica nuttalli*, Aud.—*Yellow-billed Magpie*.

This Magpie is a common constant resident of Marysville, and, during some years, at Stockton also, but I did not see it at the latter place from April 1, 1878, to October 18 of the same year, though it was seen in June at many places on the route between Stockton and Marysville. On December 22, 1877, I saw it at Salt Spring Valley, between Milton and Murphy's (altitude about 1,200 feet). It probably occasionally breeds at Murphy's.\*

73818	♂ ad.	Marysville.....	Feb. —, 1878
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\*96. *Cyanocitta stelleri*, *β. frontalis*, Ridgw.—*Californian Mountain Jay*.

This Jay is very common in the pine forests in summer, and is a winter sojourner of the chaparral belt, especially that part nearest the pine forest. A few breed down to an altitude of 3,000 feet or a little less. It is an occasional winter visitant to the live-oak groves in the Sacramento Valley, ten or twelve miles north of Marysville.

73890	— ad.	Murphy's.....	Apr. 12, 1877
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\*97. *Aphelocoma californica*, (Vig.).—*Californian Valley Jay*.

This is a common constant resident of the valleys and foot-hills, and appears to be quite numerous in the pine forests in summer, as high as Big Trees, where I found it in July and August, 1878; also at Gardiner's Meadow, three miles east of Big Trees, the altitude the same as that of Big Trees; and at Dunbar's and Moran's Meadows (altitude 3,800 feet). In the pine forests above Murphy's it was confined to the thickets in

\* I lived at Murphy's from the spring of 1857 to 1860, but in summer only. Think I have seen it there formerly, but not recently.

and around meadows. It is more abundant in the valleys in winter than in summer.

Once, having shot a Quail which fluttered violently, one of these birds pounced upon it and began to tear it.

73829	— ad.	*Marysville.....	Feb. —, 1878
76598	— juv.	Big Trees.....	July —, 1878

98. *Perisoreus canadensis* (*γ. obscurus*, Ridgw. ?).—*Oregon Gray Jay*.

On October 7, I saw at Summit Meadows what I supposed to be this bird. It is said to breed in the high parks of Castle Peak, a few miles north of the Summit Meadows.

Family ALAUDIDÆ: The TRUE LARKS.

99. *Eremophila alpestris*, (Forst.).—*Horned Lark*.

The Horned Lark was common at Marysville in the winter of 1877-78, in flocks of not more than twenty-five or thirty, generally less. A small flock was seen at Summit Meadows in the fall of 1877.

73788	♂ ad.	Marysville.....	Feb. —, 1878
73789	♂ ad.	.....do.....	Feb. —, 1878
73970	— ad.	Summit Meadows.....	Oct. 6, 1877

\*99 a. *Eremophila alpestris*, *β. chrysolæma*, (Wagl.).—*Southern Horned Lark*.

This form of the Horned Lark is an abundant resident at Marysville, in summer frequenting the dry plains, especially those near the low, rolling hills on the eastern margin of the valley, where the growth of vegetation is meagre. In December, 1878, it was abundant on the low, rolling hills east of Stockton, on the road to Copperopolis.

The difference in appearance between a flock of these while on a field of short, green grass in bright sunshine, and that of a flock of the northern variety is so great that any collector could not fail to observe it.†

73787	♂ ad.	*Marysville.....	Feb. —, 1878
73964	— ad.	*Calaveras County (at Milton) ..	Spring, 1877
73965	— ad.	.....do.....	Spring, 1877
73966	♂ ad.	Marysville.....	Feb. —, 1878
73967	♂ ad.	.....do.....	Feb. —, 1878
73968	♂ ad.	.....do.....	Feb. —, 1878
73969	♂ ad.	.....do.....	Feb. —, 1878
76599	♂ ad.	.....do.....	Feb. —, 1878
76600	♀ ad.	.....do.....	Feb. —, 1878

\* It is somewhat uncertain whether the birds alluded to above are of the Oregon form (*obscurus*) or the Rocky Mountain race (*β. capitalis*, Baird). Judging from analogy, however, in the cases of *Cyanocitta* and *Aphelocoma*, they should be the former, a probability strengthened by the fact that Mr. Henshaw obtained specimens of *obscurus* at Camp Bidwell, in the northern Sierra Nevada.—R. R.

† The fine series of this very strongly marked race, sent by Mr. Belding, shows unusual uniformity of characters for birds of this genus, there being little variation among individuals. The light pinkish gray tints of the more northern and eastern forms (*alpestris* and *leucolama*) are replaced by a very deep cinnamon color, or rusty brown, while the size is decidedly smaller. They agree quite closely with Mexican examples, as described in *History of North American Birds* (vol. ii, p. 144).—R. R.

## Family TYRANNIDÆ: The TYRANT FLYCATCHERS.

\*100. *Tyrannus verticalis*, (Say).—*Western Kingbird*.

This bird arrived at Murphy's April 12, 1877, and at Stockton March 20, 1878. It is an abundant summer resident at Stockton, Murphy's, and Marysville. Two were seen at Big Trees in May, 1877, and one at the same place August 10, 1878. It was very rare at Murphy's August 27, 1878, and had left there before September 7.

73991	— ad.	*Murphy's.....	Apr. 12, 1877
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\*101. *Myiarchus cinerascens*, Lawr.—*Ash-throated Flycatcher*.

The Ash-throated Flycatcher was first seen at Murphy's April 17, 1877; at Stockton April 27, 1878, where it was abundant in the thickets by the San Joaquin River during the first half of May. A few were seen there afterward, and these may have had nests, although I have generally found them during the breeding season *in oak groves*.

It is quite a common summer resident at Stockton and Murphy's, and a young one was shot at Big Trees August 10, 1878. It was very rare at Murphy's August 27, 1878. It was not seen at Stockton on or after September 7.

73546	♂ ad.	*Murphy's.....	Apr. 17, 1877
73992	— ad.	.....do.....	Apr. 17, 1877
74281	♂ ad.	*Stockton.....	Apr. 27, 1878

\*102. *Sayornis nigricans*, (Swains.).—*Black Pewee*.

This bird is a common constant resident of Stockton, Murphy's, and Marysville. It frequented the willows by the streams in the meadows at and near Big Trees in July and August, 1878. Since it was oftener seen in August than in July, it may have made a short vertical migration from lower down after the breeding season.

73611	— juv.	*Stockton.....	*July —, 1877
74000	— ad.	*Murphy's.....	Winter, 1877
74279	♂ ad.	Stockton.....	Apr. 9, 1878
74280	♂ ad.	.....do.....	Apr. 1, 1878

103. *Sayornis sayus*, Bonap.—*Say's Pewee*.

This Pewee is a winter sojourner at Stockton, Murphy's, and Marysville, where, however, it is rarely, if ever, common. It was first noticed at Stockton in the fall of 1878, on October 17.

73999	— ad.	Stockton.....	Nov. —, 1877
76601	— ad.	.....do.....	Oct. 17, 1878

\*104. *Contopus borealis*, (Swains.).—*Olive-sided Flycatcher*.

This is a very common and generally distributed summer resident at Big Trees. I shot one July 7, 1878, which had materials for a nest in

\*Albinescent

its bill. About a week later I found a young bird which could scarcely fly, and which, on being caught, proved very pugnacious. Its song is a loud prolonged "three deer," the last syllable being much shorter than the first. Both are occasionally prefaced with a short note in a lower key. Its other very common, not unmusical notes, I once copied with the syllables "chu-chu-chu"; again, "pu-pu-pu"; again, "pip-pip", the notes apparently varying with the individual. These notes follow each other rapidly, sometimes consisting of groups of two, usually of three, occasionally of four, a call almost invariably ending with groups of the same number as that with which it began. It is usually uttered from the top of a dead tree, often two hundred feet from the ground. It appears to prefer the tops of the tallest dead trees as a foraging centre. They utter notes while chasing one another, which I once described as resembling those of Flickers, but I am not now satisfied with that description.

73993	—	ad.	*Big Trees.....	May 25, 1877
73316	♀	ad.	do.....	July 7, 1878
73317	♂	ad.	do.....	July 16, 1878

\*105. *Contopus richardsoni*, (Swains.).—*Western Wood Pewee*.

This species was first noticed at Stockton during the spring of 1878, on May 9, soon after which it became common in all suitable localities. It is common in the pine forests in summer. It was rare at Murphy's August 27, and was not seen at Stockton in September or later.

73547	.....	*Murphy's.....	— —, 1877
73994	.....	*Big Trees.....	May 25, 1877
73995	.....	do.....	Spring, 1877
74454	.....	*Stockton.....	May 15, 1878
76602	.....	Murphy's.....	Sept. —, 1878

\*106. *Empidonax difficilis*, Baird.\*—*Western Yellow-bellied Flycatcher*.

Only two of these birds were recognized at Stockton in the spring of 1878, the first being noticed on May 1. Two or three were seen at Big Trees in July and August. These were in willows at the head of ravines, near springs. Those seen at Stockton were in open oak groves.

75318	♂	ad.	Big Trees.....	July 27, 1878
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\*107. *Empidonax pusillus*, (Swains.).—*Little Flycatcher*.

This is a common summer resident at Stockton and Marysville. It seems invariably confined to willow thickets, and to occur wherever they do, whether in valleys or mountains.

\*In my report on the Ornithology of the U. S. Geological Exploration of the 40th Parallel (Clarence King), p. 544, I considered this bird as specifically distinct from *E. flaviventris*, chiefly on account of supposed great differences in the location and character of the nest and eggs. Facts subsequently brought to light, however, by Messrs. H. A. Purdie and S. D. Osborne (see *Bull. Nutt. Orn. Club*, Oct. 1-78, pp. 166, 187), show that the two do not differ in these particulars. Notwithstanding this, the difference between the two forms in coloration and proportions is so marked that there should never be any difficulty in easily distinguishing them.—R. R.

†That is, not darkly shaded, the trees scattering, and with no undergrowth.

It was first noticed at Stockton April 30, 1878, and was not seen here in September or October.

73044	♂	ad.	*Stockton .....	July —, 1877
73936	—	ad.	do .....	July —, 1877
74435	♂	ad.	do .....	May 11, 1878
75321	—	ad.	*Big Trees.....	Aug. 3, 1878

\*108. *Empidonax obscurus*, (Swains.).—*Wright's Flycatcher*.

This bird was first seen at Murphy's on April 28, 1877, at which time it was rather common. It perched on the lower dead limbs of small trees which grew on hillsides, from which it would make short flights over the valley below, and return to the same perch. I have not recognized it in the valleys.

75319	♂	ad.	*Big Trees .....	July 8, 1878
73047	♂	ad.	Murphy's .....	Apr. 28, 1877
73997	—	ad.	do .....	.....
75320	—	juv.	Big Trees.....	July —, 1878

\*109. *Empidonax hammondi*, Xantus.—*Hammond's Flycatcher*.

This small Flycatcher is a common summer resident of the pine forests, out of which I have not seen it except when migrating. It arrived at Murphy's April 25, 1877, and at Stockton May 9, 1878.

At the latter place it was rare, and confined to the willow thickets on the river-banks.

73045	♂	ad.	Murphy's .....	Apr. —, 1877
73046	♂	ad.	do .....	Apr. 28, 1877
73998	—	ad.	Soda Springs .....	Sept. —, 1877
76603	♂	ad.	Stockton.....	May 9, 1878

Family TROCHILIDÆ: The HUMMING-BIRDS.

\*110. *Stellula calliope*, Gould.—*Calliope Humming-bird*.

While making this collection I have seen but two of these birds in spring plumage: these were at Murphy's, in April. It was very rare at Big Trees in July and August. I have never seen it in the valleys.

At Soda Springs, in the fall of 1877, Humming-birds were abundant. I shot a number of them. They were young or moulting, and so did not preserve them. They were principally *Selasphorus rufus*, but perhaps the present species was among them.

74005	♂	ad.	Murphy's.....	Apr. —, 1877
75325	♀	ad.	Big Trees.....	Aug. 1, 1878

\*111. *Trochilus alexandri*, Bourc. & Muls.—*Black-chinned Humming-bird*.

This bird was common in the open parts of the willow thickets at Marysville in June, 1878. It was not observed at Stockton from March 6 to June 8, though not more than five Humming-birds were seen during that time, and five or six are all I have seen at Stockton during the pres-

ent season. I do not know whether this is usually the case or not, as this was my first spring and summer collecting here. Nearly every one seems to know the Anna Humming-bird, but I did not see it here last spring.

*T. alexandri* must have been rare at Big Trees, as I did not see an adult male in spring plumage, and was not certain of the species to which the one which I shot there belonged.

74462	♂ ad.	*Marysville.....	June 21, 1878
74463	— juv.	.....do .....	June 22, 1878
75323	♂ juv.	Moran's Meadow .....	July 24, 1878
75324	— juv.	Big Trees.....	July —, 1878

\*112. *Calypte annæ*, (Less.).—*Anna Humming-bird*.

This Hummer is abundant at Murphy's and in the hills below during a large portion of the year. It was seen at Copperopolis\* on the 12th of December of the present year. There were no wild flowers, excepting those of the "Manzanita." Specimens shot there were very fat, and had been feeding on a sweet gummy substance exuding from perforations made by Woodpeckers in the bark of an evergreen oak.

74001	♂ ad.	*Murphy's.....	Jan. 30, 1877
74002	♂ ad.	.....do .....	Spring, 1877
74003	♂ ad.	.....do .....	Spring, 1877
74004	♂ ad.	.....do .....	Spring, 1877
75322	♂ ad.	Big Trees.....	Aug. 1, 1878

\*113. *Selasphorus rufus*, (Gmel.).—*Rufous-backed Humming-bird*.

This species is common at Big Trees in summer, and abundant at Soda Springs in the fall. I have seen a few at Stockton and Murphy's in spring.

74267	♀ ad.	Stockton.....	Apr. 30, 1878
75326	— juv.	Big Trees.....	July 25, 1878

Family CAPRIMULGIDÆ: The GOATSUCKERS.

114. "*Antrostomus*" *nuttalli*, (Aud.).—*Poor-will*.

The specimen in the collection is the only one I have seen in two years.

73978	— ad.	Stockton.....	July —, 1877
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\*115. *Chordeiles popetue* (Vicill.) (*β. henryi*, Cass. ?).—*Night Hawk*.

The Night Hawk is abundant at Soda Springs in July and August and during the first part of September.

I suppose a few occur at Big Trees in July or August, as (in 1878) I heard of "Whippoorwills" there which roosted on trees, but I could not find any.

\* Copperopolis is in the pine belt, about 1,200 feet above sea-level.



## Family PICIDÆ: The WOODPECKERS.

\*116. *Picus villosus*, *ε. harrisi*, Aud.—*Harris's Woodpecker*.

This is a common summer resident of Big Trees. It is also numerous at Soda Springs and Summit Meadows in the fall. I have seen it at Murphy's in winter, but not in summer. It breeds but little below Big Trees. I have not seen it in summer below an altitude of 3,500 feet, nor have I ever seen it at Stockton or Marysville.

73856	♂	ad.	.....	*1877
73857	♂	ad.	.....	1877
73858	♂	ad.	.....	1877
73859	♀	ad.	.....	1877

117. *Picus pubescens*, Linn.—*Downy Woodpecker*.

A single individual of this species was shot at Marysville, as below recorded.

73606	♂	ad.	Marysville.....	Dec. 27, 1877
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\*117 *a. Picus pubescens*, *β. gairdneri*, Aud.—*Gairdner's Woodpecker*.

This bird was abundant in the willows at Marysville in the winter of 1877-78, and was often seen at the same place the following June.

It appears to be generally distributed in the pine forest, but I have not found it abundant nor even scarcely common.

73607	♀	ad.	*Marysville.....	Dec. 27, 1877
73806	♂	ad.	do .....	Feb. —, 1878
73807	♂	ad.	do .....	Feb. —, 1878
73808	♂	ad.	do .....	Feb. —, 1878
73809	♂	ad.	do .....	Feb. —, 1878
73860	♂	ad.	Murphy's.....	Feb. —, 1877
73861	♂	ad.	do .....	Feb. —, 1877
74259	♂	ad.	Marysville.....	June 14, 1878
76360	—	juv.	*Big Trees.....	July 26, 1878

\*118. *Picus nuttalli*, Gamb.—*Nuttall's Woodpecker*.

This is a common constant resident at Stockton, Murphy's, and Marysville. I have not recognized it in the pine forests. One seen at Marysville in June was red from bill to nape. It was too near to shoot.† The iris of all I shot at Marysville was dark blood-red.

73033	♂	ad.	*Murphy's .....	Apr. —, 1877
73801	♂	ad.	*Marysville .....	Feb. —, 1878
73802	♂	ad.	do .....	Feb. —, 1878
73803	♂	ad.	do .....	Feb. —, 1878
73804	♂	ad.	do .....	Feb. —, 1878
73805	♂	ad.	do .....	Feb. —, 1878
73855	♂	ad.	Murphy's .....	Apr. 20, 1877
76695	♂	ad.	Stockton.....	Nov. 13, 1878

\*119. *Picus albolarvatus*, (Cass.).—*White-headed Woodpecker*.

I have found this bird abundant at Big Trees in summer, and common at Soda Springs and Summit Meadows in fall. In December, 1877,

\* Mr. Belding writes in regard to these specimens that one was from Big Trees, one from Murphy's, and two from Summit Meadows.—R. R.

† Probably a young male.—R. R.

one was seen near Murphy's at an elevation of about 3,000 feet, the lowest point at which I have observed it.

It breeds in low stumps, fallen and standing trees, rarely more than fifteen feet from the ground, often but three or four. When chasing one another around the trunks or through the branches of trees, their cry is "wick-wick-wick-wick-wick-wick," syllable rapidly following syllable. However, they do not often indulge in play.

75854	♂ ad.	*Big Trees.....	May —, 1877
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**120. *Picoides arcticus*, (Swains.).—Black-backed Three-toed Woodpecker.**

In the fall of 1877 I shot one of these birds at Soda Springs and one at Summit Meadows. It was very rare at both places. I have not seen it at Big Trees, nor below that altitude.

73862	♀ ad.	Soda Springs.....	Sept. —, 1877
76706	♀ ad.	Summit Meadows.....	Sept. —, 1877

**\*121. *Sphyrapicus varius*, *β. ruber*, (Gmel.).—Red-breasted Woodpecker.**

Next to *P. albolarvatus*, this is the most common Woodpecker at Big Trees in summer. I also found it common at Soda Springs in fall, and shot two young birds, which were probably hatched there. It is a rather rare winter sojourner at Marysville and Murphy's.

73851	— ad.	Murphy's.....	} Winter and } spring, 1877
73852	— ad.	.....do.....	
73853	— ad.	.....do.....	
76607	— juv.	Big Trees.....	July —, 1878

**122. *Sphyrapicus thyroideus*, (Cass.).—Black-breasted Woodpecker.**

I saw five or six of these birds at Soda Springs in the fall of 1877, and in December of the same year shot one at Murphy's (altitude about 2,400 feet). These are all I have recognized.

73849	♀ ad.	Murphy's.....	Dec. —, 1877
73850	♀ ad.	Soda Springs.....	Sept. —, 1877
73548	♂ ad.	.....do.....	Sept. —, 1877
73549	♀	.....do.....	Sept. —, 1877

**\*123. *Hylotomus pileatus*, (Linn.).—Pileated Woodpecker.**

This bird is often seen at Big Trees in summer, and some years ago I observed that it was quite common in the Coast Range of mountains on the North Fork of Eel River in Mendocino County. It does not appear to be abundant in any part of Central California.

73848	♀ ad.	*Big Trees.....	Spring, 1877
76359	♂ ad.	.....do.....	July 28, 1878

\*124. *Melanerpes torquatus*, (Wils.).—*Lewis's Woodpecker*.

This is a common resident of Stockton and Marysville, and appears to be more numerous in the valleys than in the foot-hills or the Upper Sierras, where, however, it occasionally occurs.

Those I have seen in the pine forests were apparently traveling in straggling scattered flocks. I have not found it at Big Trees in breeding season.

73823	—	ad.	*Marysville.....	Feb. —, 1878
73824	—	ad.	.....do.....	Feb. —, 1878
74282	♂	ad.	*Stockton.....	Mar. 27, 1878
74283	♀	ad.	.....do.....	Apr. 9, 1878

\*125. *Melanerpes formicivorus*, (Swains.).—*Californian Woodpecker*.

This is an abundant constant resident of the valleys and foot-hills. I shot one at Big Trees in August, but considered it a straggler.

73825	♂	ad.	*Marysville.....	*Feb. —, 1878
73826	♂	ad.	.....do.....	Feb. —, 1878
73827	♂	ad.	.....do.....	Feb. —, 1878
73828	♂	ad.	.....do.....	Feb. —, 1878
73865	♂	ad.	*Murphy's.....	Spring, 1877
76708	♂	ad.	Marysville.....	Winter, 1878

\*126. *Colaptes auratus*, *β. mexicanus*, Swains.—*Red-shafted Flicker*.

This is a common constant resident at Stockton, Murphy's, and Marysville, and is a common summer resident of the pine forests.

73601	♂	ad.	*Marysville.....	Dec. 29, 1877
73605	♂	ad.	.....do.....	Dec. 29, 1877
73810	♂	ad.	.....do.....	Winter, 77-78
73820	♂	ad.	.....do.....	Feb. —, 1878
73821	♂	ad.	.....do.....	Feb. —, 1878
73822	♂	ad.	.....do.....	Feb. —, 1878
76609	♀	ad.	Stockton.....	Oct., 3, 1878
76610	♀	juv.	Marysville.....	June —, 1878

\*126 a. *Colaptes auratus*, *γ. hybridus*, Baird.—*"Hybrid" Flicker*.

The plumage of probably half the numerous Flickers which I shot in January and February, 1878, at Marysville was variously intermediate between that typical of the supposed species *C. mexicanus* and *C. auratus*. Those with uniformly golden shafts were unquestionably the rarest of all. Quite a large number of those I had the good fortune to shoot in January had well-developed red nuchal crescents, and the iris was usually dark blood-red.† No trace of black in the cheek-patches was observed in any of them. At Stockton, in March, 1878, I found it somewhat difficult to find a specimen in which the shafts were all yellow, or in which this color even predominated, though the number of specimens taken here at different times satisfied me that "hybrids" were not

\* "Iris milky white, tinged with pale pink or carmine; feet pale pea-green."—Note to one of the above specimens.—R. R.

† This is frequently the color of the iris in very adult specimens of both *mexicanus* and *auratus*, and is, perhaps, a mark of high maturity, possibly a mere individual peculiarity.—R. R.

uncommon residents. It occurred to me while in Marysville, in June, that by shooting more young from a family, some light might be thrown on the subject,\* but in no case did I succeed in getting more than one.

[This series is one of great interest, as showing that the so-called "Hybrid Flicker" is by no means confined to the region where the ranges of the true *auratus* and *mexicanus* join or blend. Dr. Cooper records (Orn. Cal. i, p. 412, note) "two or more specimens" from near Oakland, Cal.; and the writer observed, on several occasions, in the extreme western portion of Nevada, Flickers having pure yellow shafts, and so much resembling, at the distance from which they were observed, the *C. auratus* or *C. chrysoides*, that they were doubtfully referred to one or the other of these species (see Orn. 40th Parallel, p. 557). This probable error was based upon geographical considerations, the chances against their being the *C. hybridus* being the assumed scarcity of this species west of the Missouri region, taken together with the known tendency of strictly Eastern species to straggle westward, even to the very frontiers of California (*e. g.*, *Tyrannus carolinensis* and *Ectopistes migratoria* in western Nevada), and the possible northward extension of the range of *C. chrysoides* to the district indicated.

None of the specimens collected by Mr. Belding have black moustaches, and he says that he has seen none thus marked. He considers the occurrence of the scarlet occipital crescent quite frequent, however, as is also the admixture of yellow feathers in the wings and tail, or the entire replacement of the red of the one species and the pure yellow of the other by a tint more or less intermediate between the two. One specimen corresponds very nearly to *C. "ayresi"* of Audubon, having red moustaches, gray throat, and yellow shafts; the latter have a decided orange cast, however, while there is merely a trace of the occipital crescent. The most interesting specimen of all is one of which, unfortunately, only the wings and tail were sent. In this, the remiges and rectrices are deep red as in typical *mexicanus*, with the exception of the middle pair of the latter and one secondary (the corresponding one) of each wing, which are pure gamboge-yellow, without a trace of orange, the contrast being thus very striking. Another specimen, of which only the tail was sent, is similar, except that the middle tail-feathers are pale pinkish instead of yellow.

It may be remarked, as a noteworthy fact, that in all the specimens sent by Mr. Belding, the pattern of coloration is perfectly symmetrical, so far as opposite sides of the bird are concerned; that is, when there are one or more feathers of "abnormal" color in one wing or in one-half of the tail, these are represented by corresponding ones on the opposite side. How far this rule will hold good when other specimens are examined I do not know, but my opinion, based upon my recollection of

\* The securing of the *entire family*—that is, both the parents and their young—when ever the occasion offers, is a much needed aid to the determination of the real character of these so-called "hybrid" Flickers.—R. R.

many other specimens, is that it will be found of nearly universal application.\*—R. R.]

73602	♂	ad.	Marysville.....	Dec. 29, —	Tail only. Do.
73603	—	ad.	.....do .....	Dec. 29, —	
73604	—	ad.	.....do .....	Dec. 29, —	
73811	—	ad.	.....do .....	Dec. 29, —	
73819	♂	ad.	.....do .....	Feb. —, 1878	Wings and tail.
73863	♂	ad.	.....do .....	Mar. 1, 1877	
73864	♂	ad.	.....do .....	Mar. 1, 1877	
74458	♂	ad.	*Stockton.....	June 8, 1878	
76611	♂	ad.	.....?	May 18, 1878	

#### Family ALCEDINIDÆ: The KINGFISHERS.

\* 127. *Ceryle alcyon*, (Linn.).—*Belted Kingfisher*.

The Kingfisher is a common resident at Stockton. It is also occasionally seen at Murphy's, at all seasons. It is rarely found in the mountains of this region.

74284	♀	ad.	*Stockton.....	Apr. 15, 1878
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#### Family CUCULIDÆ: The CUCKOOS.

\* 128. *Geococcyx californianus*, (Less.).—*Road Runner; Chaparral Cock*.

The Road Runner is a rare resident of the chaparral only. Many years ago I saw one between Vallecita and Angel's (altitude about 2,000 feet), and I have seen a few others in Calaveras County, below this elevation, three in Marysville buttes, one in the hills east of Marysville—in all about a dozen—in twenty or more years, though I have hunted a great deal in the foot-hills—lived at Murphy's and San Andreas from the spring of 1857 to October 1862.

\* 129. *Coccyzus americanus*, (Linn.).—*Yellow-billed Cuckoo*.

The Yellow-billed Cuckoo was common in the willow and poplar thickets at Marysville in June, 1878, but whether generally distributed in the extensive thickets of like character so abundant along the rivers of Northern California, I am unable to say. I heard one at Murphy's about September 1, 1878.

74457	♀	ad.	*Marysville.....	June 22, 1878
76604	♂	ad.	.....do .....	June 13, 1878

\* Mr. Henshaw informs me that he examined a specimen taken at San Francisco, which had all the rectrices of one side of the tail red, those of the other half being yellow!—R. R.

Family STRIGIDÆ: The OWLS.\*

\*130. *Strix flammea*, β. *pratinnola*, Bonap.—*American Barn Owl*.

The Barn Owl is a common resident of the valleys, especially in the willow thickets near Stockton. I have not seen it in the mountains.

76612	— ad.	*Stockton.....	Wing only.
76613	— ad.	.....do.....	Do.

131. *Asio accipitrinus*, (Pall.).—*Short-eared Owl*.

This Owl is common at Stockton and Marysville in winter. It left the former place about the first of April of the present year, and reappeared on or before September 30 following.

74298	— ad.	Summit Meadow.....	Sept. 16, 1877
74299	♂ ad.	Stockton.....	Mar. 30, 1878

132. *Asio wilsonianus*, (Less.).—*Long-eared Owl*.

I have seen this Owl at Marysville in former years, but do not think I have seen it anywhere within the last two years. †

\*133. *Bubo virginianus*, δ. *subarcticus*, Hoy.—*Western Great Horned Owl*.

This Owl is very common at Big Trees in summer and is occasionally seen in the valleys in winter. I do not remember seeing it in the valley during summer, nor did I see or hear it at Soda Springs or Summit Meadows in the fall of 1877, though I was informed that it is sometimes found there. There is one mounted at the Big Trees, which I shot there several years ago. It is often seen at Marysville, especially in winter.

\*134. *Scops asio*, (L.).—*Little Mottled Owl*; *Screech Owl*.

This Owl is quite abundant at Stockton. I have seen it among the foot-hills, but not in the pine forests. [These specimens, like all others from California and the Western Province in general, so far as known, are in the gray plumage.—R. R.]

76614	♀ ad.	Stockton.....	Nov. 12, 1878
76615	♂ ad.	.....do.....	Nov. 13, 1878
76616	— ad.	.....do.....	Oct. —, 1878

\* I have never shot a bird of the genus *Syrnium* in California, though on October 25, 1878, I saw in an oak grove two large ash-colored Owls, which may have belonged to a species of this genus. They were nearly as large as the Great Horned Owl, and appeared to see well in the bright sunlight. No ear-tufts were noticed. At Big Trees I tried several nights to shoot a large Owl, which may have been a *Syrnium*, but did not succeed. One evening it flew, at a sharp angle, to the top of a dead pine-tree, out of the reach of shot, where it sat silently for about half an hour. [NOTE.—In the absence of any other known species to which the above description will apply, and allowing for the circumstances under which the birds were seen, it is quite possible that they were the grayish variety of *Bubo virginianus*.—R. R.]

† While attached to the U. S. Geological Exploration of the 40th Parallel, I found this Owl very abundant in the willow thickets at Sacramento City, in June, 1867.—R. R.

‡ Found dead.

\*135. *Speotyto cunicularia*,  $\gamma$ . *hypogæa*, (Bonap.).—*North American Burrowing Owl*.

This is an abundant resident species of the valleys, out of which I have never seen it.

76617	— ad.	Stockton.....	Nov. —, 1878
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136. *Glaucidium gnoma*, (Wagl.).—*Californian Pigmy Owl*.

This Owl was oftener seen at Murphy's in winter than any other. There it was sometimes found during the day, on or near the ground, in low chaparral, but quite as often in lone leafless trees; once, at least, in bright sunshine. The specimen in the collection was seen to catch and eat a *Parus montanus*.

73845	— ad.	Soda Springs.....	Sept. 13, 1877
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Family FALCONIDÆ: HAWKS, EAGLES, KITES, ETC.

137. *Falco communis*,  $\beta$ . *nævius*, Gmel.—*American Peregrine Falcon*.

The Duck Hawk is a somewhat rare winter sojourner in the valleys of Central California. I have not seen it in the mountains.

[The two specimens sent are in very dark plumage, being quite uniformly black above and very heavily marked beneath. They are quite identical, however, with Eastern specimens which I have seen, and are fully as large.—R. R.]

76618	♀ juv.	Stockton.....	*Oct. 27, 1878
76619	♀ juv.	.....do.....	Oct. 29, 1878

138. *Falco mexicanus*,  $\beta$ . *polyagrus*, Cass.—*Prairie Falcon*.

I saw a few specimens of this Falcon at Marysville in the winter of 1877-78. I think that I saw one at Stockton, November 19, 1878. The one in the collection is the only specimen seen at the Summit Meadows in the fall of 1877.

[The single specimen in the collection is in the very rare perfect adult plumage. This is *transversely barred* above with pale reddish umber and bluish gray, quite unlike any other American Falcon.—R. R.]

76620	♂ ad.	Summit Meadows.....	Sept. 16, 1877
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139. *Æsalon columbarius*, (Linn.).—*American Merlin; Pigeon Hawk*.

The Pigeon Hawk is occasionally seen in the valleys and foot-hills in winter. I have never seen it in any part of this country in summer.

76621	♂ juv.	Stockton.....	Nov. 2, 1878
76622	♂ juv.	.....do.....	Oct. 27, 1878

\* Weight  $2\frac{1}{2}$  pounds; feet pale greenish yellow.

\*140. *Tinnunculus sparverius*, (Linn.).—*American Kestrel*.

This is a very common constant resident of the valleys and foot-hills as high as Murphy's, and is a common summer resident of the pine forests.

74290	♂	juv.	*Soda Springs.....	Fall, 1877
74291	♂	ad.	*Murphy's.....	Spring, 1877
74292	♀	ad.	.....do.....	Spring, 1877

141. *Pandion haliaëtus*, *β. carolinensis*, (Gm.).—*American Osprey; Fish Hawk*.

I do not remember seeing this bird in California. This may be owing to the fact that so many of the streams are muddied by the extensive mining operations in the mountains. I have known it well since a boy, consequently it could not have escaped my observation. I am told, however, that it inhabits the Upper San Joaquin Valley, and it is quite likely that it does the Upper Sacramento also.

\*142. *Elanus leucurus*, (Vieill.).—*White-tailed Kite*.

This is a common constant resident of Stockton, where I have seen as many as twenty at the same moment within a circle of half a mile. I have seen it at Marysville in winter. It is rarely out of the tule marshes.

The specimens I sent were stained by falling in muddy water or from catching mice in a large alfalfa field in the "reclaimed" tule ground. Some of them I tried to wash, but with indifferent success.

*73841	—	ad.	*Stockton.....	Mar. —, 1878
73842	—	ad.	.....do.....	Nov. —, 1877
74293	♂	ad.	.....do.....	Apr. 17, 1877
74294	♂	ad.	.....do.....	Apr. 20, 1877
74295	♀	ad.	.....do.....	Apr. 14, 1877

143. *Circus hudsonius*, (Linn.).—*Marsh Hawk*.

The Marsh Hawk is a very common resident of the valleys, but is most numerous in winter. The adult plumage of the male is quite common.

76630	♀	ad.	Stockton?.....	.....
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144. *Accipiter cooperi*, (Bonap.).—*Cooper's Hawk*.

This Hawk seems to be rare in the interior of California, since I have seldom recognized it within the last two years. I was well acquainted with it in Pennsylvania nine or ten years ago. In the fall of 1877 I winged, at Soda Springs, what I think was a specimen of this bird, and in December, 1878, I shot one at Copperopolis.

145. *Accipiter fuscus*, (Gmel.).—*Sharp-shinned Hawk*.

This Hawk is common during summer in the upper Sierras, and is occasionally seen in the foot-hills and valleys in winter. I did not see it at Big Trees in July and August, nor do I remember having seen it at Marysville last winter.



The one in the contribution of December, 1878, is all I have seen at Stockton since September 6. It was often seen at Soda Springs and Summit Meadows in fall.

73843	♂ juv.	Soda Springs.....	.....
73844	♀ juv.	.....do.....	.....
76623	♂ juv.	Stockton.....	Sept. 24, 1878
76624	♀ juv.	Murphy's.....	Spring, 1877

\*146. *Buteo borealis*,  $\beta$ . *calurus*, (Cass.).—*Western Red-tailed Hawk*.

This Hawk was oftener seen at Soda Springs in the fall of 1877 than any other species of the genus. Two of the four which were shot there were young birds, nearly grown. I have seen one specimen, which was shot at Marysville about November 1.

Red-tailed Hawks are very common constant residents of the valleys, and in summer are quite as common in the mountains.

74296	— juv.	Soda Springs.....	Sept. 15, 1877
76625	— juv.	Big Trees.....	July —, 1878
76626	♂ juv.	Stockton.....	Oct. 29, 1878
76627	♀ ad.	.....do.....	Oct. 25, 1878

\*147. *Buteo lineatus*,  $\beta$ . *elegans*, (Cass.).—*Red-bellied Hawk*.

*Buteo elegans* is very common at Stockton in summer. It was quite abundant as late as October 1, 1878, but was rarely seen after the 15th, although individuals were observed November 10 and 16. † A nest seen June 8, in nearly horizontal limbs of an oak, was forty or fifty feet from the ground, irregular in shape, about eighteen inches thick, and, judging by the leaves attached to some of the twigs, was built of dead and living twigs and sticks. The cavity of the nest must have been shallow, as its occupant could be seen at a short distance from the base of the tree.

74297	♂ ad.	*Stockton.....	May 1, 1878
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148. *Archibuteo lagopus*,  $\beta$ . *sanctijohannis*, (Gmel.).—*American Rough-legged Hawk*.

The Rough-legged Hawk is the only *Archibuteo* I have been able to shoot at Stockton this season, and I think this is the first I have seen since September 6. It had a larger companion. I saw two of these Hawks in a cage at Marysville last winter; both had been slightly winged. They were very tame. I have seen only three or four black-plumaged specimens in the past three years. One of these was at Big Trees last August, and one at Stockton April 1, 1878.

76628	— juv.	Stockton.....	†Nov. 23, 1878
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\* Weight 3 pounds 5 ounces. Iris brownish-orange.

† In a letter dated December 28, Mr. Belding observes that it had been rare up to that date at Stockton.—R. R.

‡ Iris pale brownish yellow; web of mouth rich lemon-yellow.

149. *Archibuteo ferrugineus*, (Licht.).—*California Squirrel Hawk*.

I saw a splendid specimen of this fine Hawk at Marysville last winter. It was shot about January 1.

\*150. *Aquila chrysaëtus*, *β. canadensis*, (Linn.).—*American Golden Eagle*.

This Eagle is rarely seen in Central California. I saw one near Stockton May 14, 1878, and two young ones that were caught in the mountains of Tuolumne County in 1877 by Indians; also one at Soda Springs in 1876. These are probably all I have seen in three years. Formerly it was more numerous in the valleys.

151. *Haliaëtus leucocephalus*, (Linn.).—*White-headed Eagle*; *Bald Eagle*.

The Bald Eagle was formerly common in the valleys, particularly in winter. It now rarely visits Stockton or Marysville, but is said to be common in the southern part of the San Joaquin Valley.

Family CATHARTIDÆ: The AMERICAN VULTURES.

\*152. *Rhinogryphus aura*, (Linn.).—*Turkey Buzzard*.

The Turkey Buzzard is a common resident of Central California, being found as high up in the mountains as Murphy's. It was seen nearly every day at the Big Trees in July and August.

76629	— ad.	Murphy's.....	Spring, 1877
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153. *Pseudogryphus californianus*, (Shaw).—*California Condor*.

The California Condor appears to be very rare in this region. I have seen it on no more than two or three occasions in Yuba County in winter, and do not think I have seen it at any other place. They probably visit the vicinity of Marysville only in winter, and are never common.

Family COLUMBIDÆ: The PIGEONS or DOVES.

\*154. *Columba fasciata*, Say.—*Band-tailed Pigeon*.

I have seen but few of these birds in the Sierras in summer, though it probably breeds there, as I have occasionally shot young birds at Big Trees, apparently about a month old. They were at that age excellent food, which cannot be said of it at any other time, its flesh being very bitter from eating acorns in winter and oak-buds in spring.

It is sometimes common in the foot-hills in winter, but never abundant as compared with the abundance of the Passenger Pigeon of the Atlantic States.

76631	♂ ad.	Murphy's.....	Dec. —, 1877
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\*155. *Zenædura carolinensis*, (Linn.).—*Mourning Dove*.

The Mourning Dove is abundant in all parts of the valleys and foothills in summer, at which time it is rather common between Murphy's and Big Trees, though found principally in the open places of the forest.

It is rare at Stockton in winter, though quite common at Marysville during the same time. Flocks of fifty or a hundred may be found every winter at the latter place, although not nearly so abundant at that time as in summer.

At Murphy's, August 29, 1878, I found two nests, both of which contained eggs. Two days later I found young birds in one of them.

## Family TETRAONIDÆ: The GROUSE.

\*156. *Canace obscura*, (Say).—*Dusky Grouse*.

This fine game bird is quite abundant near the summit of the Sierra Nevada, latitude 39°, and a few breed at Big Trees, where I once found a nest containing seven eggs, which is about as many as they ever lay, judging by the many flocks of young birds of less number which I have seen. They utter, from a tree, when alarmed, the same "kuk, kuk," as nearly as I remember, a Prairie Chicken (*Cupidonia cupido*) does under similar circumstances. In August and September the males keep by themselves, and are generally found singly. Toward the last of September I have had much difficulty in finding this bird at places where it had previously been common. The explanation may be that they are then in the tall, dense evergreens, or have, as they are said to do, gone well up the adjacent peaks, or, possibly, lower down; but this last is not likely, as they do not appear to be more numerous at Big Trees or the lower portion of their range in winter than in summer. I have not seen it at or several hundred feet above Murphy's.

It is said to remain in particular trees much of the time in winter, and to be found by hunters by its droppings on the snow.

## Family PERDICIDÆ: The PARTRIDGES and QUAILS.

\*157. *Oreortyx picta*, (Douglas).—*Californian Mountain Quail*.

This Quail is a common summer resident of the Sierra from an elevation of about 4,000 feet to 8,500 feet, and is generally distributed through the forest except where there is unusual scarcity of water or where the herbage is closely grazed by sheep. A few breed near Murphy's and between that place and Big Trees. Every winter it is common in the upper edge of the chaparral belt in Calaveras County, and it is usually common in November in Yuba County at an altitude of six hundred feet or less; while near Oroville and on the Honey Creek, I have seen it nearly on a level with the Sacramento Valley.

When scattered, their call is much like that of young turkeys. In breeding season, the male has a loud, modulated, very agreeable note. They hatched at Big Trees about July 8, 1878. Their eggs are cream-

colored, unspotted, and the usual number is about fifteen. This bird is easily shot when not quite grown, and appears to become confused when migrating, especially in fall, when they are inexperienced; but when grown, and have learned to fear the hunter, they are bagged with difficulty. When making their vertical migrations, the Indians catch many of them in compact brush fences about two feet high, running obliquely from a creek or cañon over a hill. Occasional holes are left in the fence in which snares of hair or twine are placed. Some of these fences are more than a fourth of a mile long. Many of the birds are taken alive from the snares and sold to the "whites." They soon become tame in cages, and could probably be domesticated with little trouble. The Indians claim to distinguish sex by the length of the plume, but I have reasons for doubting their ability to do so.

A nest found at Big Trees in July, 1878, contained 13 eggs, was built on the ground in a thick growth of "Rock Rose," an evergreen shrub about two feet high, without branches until near the top; leaf very minutely divided. I did not see the nest until the eggs were nearly hatched.

[Mr. Belding observes in one of his communications that these birds are very fond of the service-berry (fruit of the *Amelanchier canadensis*), and adds: "Mountain Quail are very plentiful, and easily shot, at Soda Springs, in September and October, and when travelling from one locality to another."—R. R.]

73979	♂	ad.	*Murphy's .....	Dec. —, 1877
73980	♂	ad.	.....do .....	Mar. —, 1877

\*158. *Lophortyx californica*, (Shaw).—*Californian Valley Quail*.

This is an abundant constant resident of the valleys and foot-hills. It is also common in summer in the pine forests as high as Big Trees, where, however, it is found only in and around the fields and meadows near human habitations, returning, at the approach of winter, to the chaparral belt.

In the mating season I have seen the males fight fiercely, much as turkeys do, the others of the flock appearing to take a great interest in the combat, in the mean time making a great outcry. In the first of the hunting season they are not very wild, and run a great deal, but when they have been shot at, scattered, persistently followed, and thoroughly frightened, they lie very close, especially if driven from their thickets to stubble-fields and ploughed ground. They do not increase much in the foot-hills after a dry winter. This Quail is attached to certain localities,—drinks, feeds, and hides in its own favorite places. The latest broods are hatched in the early part of September.

73981	♂	ad.	*Murphy's .....	Spring, 1877
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## Family CHARADRIIDÆ: The PLOVERS.

159. *Ægialitis montana*, (Townsend).—*Mountain Plover*.

This species, known here as the "Bull-head Snipe," usually arrives at Stockton and Marysville in November, and I have seen a few in October. It frequents the dry plains, but is oftener found in fields that have been prepared for or sown with wheat than any other localities. It sometimes visits the low, rolling, gravelly hills to the east of the valley, and is often abundant, especially previous to the severe rains of winter. Some winters, however, I have not seen it at all in California. It was unusually abundant at Stockton in December, 1878.

76637	— juv.	Stockton .....	Nov. 3, 1878
76632	— juv.	.....do .....	Nov. 3, 1878

\*160. *Ægialitis vocifera*, (Linn.).—*Kill-deer Plover*.

The Kill-deer is a common resident of the valleys and foot-hills. I have not seen it higher up than Murphy's.

## Family RECURVIROSTRIDÆ: The AVOCETS and STILTS.

161. *Recurvirostra americana*, Gm.—*American Avocet*.

The Avocet is very rare in the interior valleys. It is occasionally seen at Marysville in spring. I have not yet observed it at Stockton.

\*162. *Himantopus mexicanus*, (Müller).—*Black-necked Stilt*.

The Stilt is a common summer resident at Stockton. It was first seen here April 13, 1878, and had left by September 7. It breeds both here and in Sutter County.

76633	♀ ad.	Stockton .....	Apr. 13, 1878
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## Family SCOLOPACIDÆ: The SNIPES, SANDPIPERS, etc.

163. *Gallinago wilsoni*, (Temm.).—*Wilson's Snipe*.

This bird is a common winter resident of Central California, being found in suitable localities in the foot-hills as high up as Murphy's. It sometimes remains as late as May 15, and was seen at Stockton as early this year as September 7.

A few are said to breed here, but this is very doubtful.

74287	— ad.	Stockton .....	Spring, 1878
76638	— ad.	.....do .....	Oct. —, 1878

164. *Macrorhamphus griseus*, (Gmel.).—*Red-breasted Snipe*.

This bird was first seen at Stockton April 20, 1878. The first seen in the following fall was on November 5. It is sometimes, though rarely, quite common, but it appears to be very irregular in its movements.

74285	♀ ad.	Stockton .....	Apr. 25, 1878
74286	ad.	.....do .....	Apr. 25, 1878
76639	♀ ad.	.....do .....	Nov. 5, 1878

165. *Tringa minutilla*, (Vieill.).—*Least Sandpiper*.

An abundant winter resident of the valleys. Is found at Stockton from about September 18 till the first of April.

76640	— juv.	Stockton.....	Fall, 1877
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166. *Gambetta melanoleuca*, (Gm.).—*Tell-tale*.

The Tell-tale is rather common in spring and fall. I shot one May 23. It was first seen at Stockton April 15. I have not observed it since the first of November.

76635	— ad.	Stockton.....	Head only.
76636	— ad.	.....do.....	Do.

167. *Gambetta flavipes*, (Gm.).—*Yellow-legs*.

Of this bird I can only say that I shot one September 13, and a few days afterward saw what I thought was another.

76634	— ad.	Stockton.....	Sept. 13, 1878
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168. *Tringoides macularius*, (Linn.).—*Spotted Sandpiper*.

This seems to be a rare bird in Central California. I saw three at Stockton in the spring of 1878, and the same number the following fall. It was first noticed at Stockton May 1. None were seen after October 3. It appears to stay with us about a month in spring and the same time in fall.

A bird of this species nightly visited a pond in the rear of the hotel at Murphy's in September, 1878. It came about dusk, after the Swallows and Flycatchers had retired and Bats had taken their places, and circled over the water as if catching flies, although it never made an abrupt curve or checked its rapid flight. It kept usually about three feet from the water, but went as high as six or eight feet occasionally.

75327	— juv.	Big Trees.....	Aug. 3, 1878
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169. *Numenius longirostris*, Wils.—*Long-billed Curlew*.

I shot one of these birds at Stockton May 23. It is seen at rare intervals in winter, fall, and spring, but I do not know that it remains here all summer. I do not think I have seen it in this State later than May 23.

170. *Numenius hudsonicus*, Lath.?—*Hudsonian Curlew?*

In the spring of 1871, I shot at Marysville a small grayish Curlew, which was not *N. longirostris*, and may have been *N. borealis*.\* It must be rare in this part of California. It was in a flock composed of others like it.

\*As *N. borealis* has not yet been recorded from west of the Rocky Mountains, the species was probably *N. hudsonicus*.—R. R.

## Family ARDEIDÆ: The HERONS.

**\*171. *Ardea herodias*, Linn.—Great Blue Heron.**

An abundant constant resident.

**\*172. *Herodias alba*, *β. egretta*, (Gm.).—American Egret.**

This species was first noticed at Stockton, in the spring of 1878, on the 1st day of April. It is common in summer, and my impression is that it is a constant resident, as it remained here this year up to the 5th of December.\* On the 7th of December, 1878, I saw a flock of forty or fifty at Stockton.

76641	— ad.	Stockton.....	Sept. 24, 1878
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**\*173. *Garzetta candidissima*, (Gm.).—Lesser Egret.**

The first of this species observed after March 6, 1878, was a flock of seven or eight on May 21. It was rarely seen after October 4, and I supposed it had gone, but on the 20th of November I saw a flock of nearly a hundred. I have not noticed it since that time, though it may have gone to the centre of the tule swamps. It is an abundant summer resident at Stockton.

76642	— ad.	*Stockton.....	July —, 1877
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**\*174. *Butorides virescens*, (Linn.).—Green Heron.**

The Green Heron is an abundant summer resident of the valleys. It was first seen at Stockton April 15, 1878, and disappeared in the first week of October.

Many built their nests in the willows by the San Joaquin River. I examined three nests. In one of them were six eggs; in the other two, four eggs each.

74300	♂ ad.	*Stockton.....	Apr. 15, 1878
74301	— ad.	Murphy's.....	May —, 1877

**\*175. *Nyctiardea grisea*, *β. nævia*, (Bodd.).—Black-crowned Night Heron.**

This Heron is a common resident of the valleys. I noticed it at Marysville in the winter of 1877–78.

74302	♂ ad.	*Stockton.....	May 1, 1878
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**\*176. *Botaurus lentiginosus*, (Montag.).—American Bittern.**

The Bittern is a very abundant resident in the vicinity of Stockton. I also saw it at Marysville last winter.

76643	♂ ad.	*Stockton.....	Apr. 13, 1878
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\*The date of writing.—R. R.

177. *Ardetta exilis*, (Gm.)—*Least Bittern*.

The Least Bittern is very rare,—certainly not often seen. I saw a straggler or migrant at Murphy's in the spring of 1877, and one at Stockton during the fall of 1878. These are all I have met with in two years.

76644	♀ juv.	Stockton..	Sept. 14, 1878	Taken from a <i>Buteo elegans</i> .
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Family IBIDIDÆ: The IBISES.

178. *Plegadis guarauna*, (Linn.).—*White-faced Glossy Ibis*; *Bronzed Ibis*.

The Glossy Ibis was first seen at Stockton in the spring of 1878, on June 9, when three were noticed. A small flock was observed here on September 18.

I have shot it here, some years ago, as early as July or the first of August, and have seen several flocks July 25, 1870, in Sutter County. It is at times quite common in Sutter County in spring.

Family GRUIDÆ: The CRANES.

179. *Grus canadensis*, (Linn.).—*Sand-hill Crane*.

A common winter resident of the valleys, arriving the last of September and leaving about the first of May. I shot one at the Summit Meadows in August.

Family RALLIDÆ: RAILS, GALLINULES, and COOTS.

180. *Rallus virginianus*, Linn.—*Virginian Rail*.

This Rail appears to be a rare bird in California, though occasionally seen in winter.

76645	♀ ad.*	Stockton.....	Apr. 9, 1878
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181. *Porzana carolina*, (Linn.).—*Sora Rail*.

I have seen but five or six of this species in California. One of them was shot in winter at Marysville.

182. *Porzana jamaicensis*, (Gm.)?—*Little Black Rail*.

I remember shooting a very small dark Rail at Stockton more than twenty years ago, and suppose it was this bird. It must be very rare.

\*183. *Gallinula galeata*, (Licht.).—*Florida Gallinule*.

A rare constant resident in the vicinity of Stockton. I have seen on an average about three annually.

76646	— juv.	*Stockton.....	Sept. 16, 1878
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\* Web of mouth, eyelids, or iris (or both) vermilion.



\*184. *Fulica americana*, Gm.—*American Coot*.

The Coot is an abundant constant resident of the valleys. The only place where I have seen it in the foot-hills is Salt Spring Valley reservoir, between Milton, Calaveras County, and Murphy's, altitude about 1,200 feet, and there only in winter and spring.

76647	♂ ad.	*Stockton.....	Apr. 24, 1878
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## Family ANATIDÆ: The SWANS, GEESE, and DUCKS.

185. *Cygnus americanus*, Sharpless.—*Whistling Swan*.

I saw *C. americanus* in market November 6, 1878, and a few Swans flying in November, 1878.

The American Swan is the only Swan I have shot in California. I may add, however, that I have not shot many. Ten years ago I hunted all winter in Mason County, Illinois, and saw and heard Swans there which impressed me as being different from Swans I had shot here.\*

186. *Chen hyperboreus*, (Pallas).—*Snow Goose*.

The Snow Goose is abundant in California in winter. It arrives in the valleys in October. Was first seen this year (1878) on the 12th of that month. It usually remains until about May 1.

187. *Chen albatus*, Cass.—*Lesser Snow Goose*.

Regarding this obscurely known species, which appears to bear to *C. hyperboreus* about the same relation that *Branta hutchinsi* does to *B. canadensis*, Mr. Belding's notes give the following valuable information:

“Shot at Stockton, Oct. 18, 1878. Weight, 3 lbs., 1 oz. Flesh light colored; iris bluish brown; bill deep black. No companion of its kind with it, but accompanied by a small flock of Mallard Ducks. I preserved the wings of one of this species at Marysville in the winter of 1874. It was killed during unusually cold weather, and the person who shot it said that it was alone. I left the wings with a shooting club, and last winter was told they had not been able to duplicate them! I was attracted by the dark centres of the tertials, their silky texture and their length. The color of the tarsi, their slenderness, and the color of the flesh—to say nothing of the plumage†—makes me think it a very different bird from *A. hyperboreus* (perhaps *A. albatus*). The tarsi were pale dirty blue, or bluish clay-color.”

76654	— juv.	Stockton.....	Oct. 18, 1878
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188. *Chen rossi*, (Baird).—*Ross's Snow Goose*.

[Mr. Belding says that according to the information of a friend, a sportsman residing in Stockton, this Goose is “quite common” on the San

\* The latter were probably *C. buccinator*.—R. R.

† The last character, however, is of no importance, the young of *C. hyperboreus* having exactly the same colors.—R. R.

Joaquin River, coming south with other Geese in the fall. It is said to become very tame when winged, following its captor after being kept a little while.—R. R.]

77163	— ad.	Stockton market.....	Dec. —, 1878
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189. *Anser gambeli* (Hartlaub).—*American White-fronted Goose.*

The White-fronted Goose was first seen at Stockton September 7, 1878, though rare until October. It is more abundant than any other of the Geese which visit California, usually coming first and leaving last.

Geese, in the aggregate, are very abundant in the valleys, and are in some localities so destructive to young wheat that farmers resort to various expedients to protect their grain from their ravages; among others, that of hiring hunters to ride over their fields and drive them away.

76651	— ad.	Stockton?.....	Head only.
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190. *Branta canadensis*, (Linn.).—*Canada Goose.*

This species usually arrives and departs at about the same time as the *Anser gambeli*. Toward the middle of March, when hunting in the foothills, sometimes not far below the snow-line, on pleasant sunny mornings, flocks of "Honkers" have often been seen, high above the hills, going toward the summit of the mountains, probably on their way to the valleys and lakes east of the Sierra Nevada.

76648	— ad.	Stockton?.....	.....
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191. *Branta hutchinsi*, *β. leucoparia*, (Brandt).—*White-checked Goose.*

[In regard to this species, Mr. Belding writes:—"I send head and wing of a 'brant,' which I cannot match with any of the descriptions in vol. ix, Pacific R. R. Reports. You must be well acquainted with it, as it is abundant in California in winter. It is by some called the 'Squawking Goose.' Tail-feathers 16."—R. R.]

76650	— ad.	Stockton.....	.....	Head only.
76649	— ad.	.....do.....	Dec.—, 1878	Head, wing, and tail.*

192. *Dendrocygna fulva*, (Gm.).—*Fulvous Tree Duck.*

This Duck is rarely seen in the interior at or north of Stockton. I have seen one in market here; also a fine specimen shot at Marysville last winter. It is said to be more common in the southern part of the San Joaquin Valley.

\*193. *Anas boschas*, (Linn.).—*Mallard; Green-head.*

The Mallard is a common constant resident of the valleys, and a few breed in the lakes of the Upper Sierras. It is sometimes abundant in

\* "Squawking Goose. Rarely grows any larger."

the valleys in winter, and is at that time an occasional visitant to the creeks and ponds in the foot-hills. A brood of young was noticed at Stockton May 9, 1878.

\*194. *Chaulelasmus streperus*, (Linn.).—*Gadwall*.

The Gadwall is a common constant resident of the valleys. Its favorite haunts are the tule swamps, both in summer and winter.

195. *Nettion carolinensis*, (Gm.).—*Green-winged Teal*.

The Green-winged Teal is a common, sometimes abundant, winter sojourner of the valleys, where it remains from about September 15 to April 15. It is an occasional winter visitant to the foot-hills, as high as Murphy's.

\*196. *Querquedula cyanoptera*, (Vieill.).—*Cinnamon Teal*.

This Duck begins to arrive about March 1, and from about April 1 to October is quite common in the tule marshes. A few remain as late as October 15.

74204	♂ ad.	*Stockton.....	Apr. 13, 1878
74205	♂ ad.	.....do.....	Apr. 8, 1878
74206	♀ ad.	.....do.....	Apr. 8, 1878

197. *Mareca americana*, (Gm.).—*Bald-pate; American Widgeon*.

The Widgeon is an abundant winter sojourner of the valleys, at which time it occasionally visits the foot-hills. A pair were seen at Stockton as late as May 28, 1878.

198. *Dafila acuta*, (Linn.).—*Sprig-tail; Pin-tail*.

The Sprig-tail is a common winter sojourner of the valleys. A pair was observed on May 28, 1878, at Stockton. There was at that time a slight rise in the river. Few, if any, breed here.

199. *Spatula clypeata*, (Linn.).—*Shoveller; Spoon-bill Duck*.

The Spoon-bill Duck is a common, though never abundant, sojourner of the valleys in winter. It was not seen at Stockton after May 9 in the spring of 1878, though it generally remains as long as any of the winter ducks—in fact, is usually the last of them to leave.

\*200. *Aix sponsa*, (Linn.).—*Summer Duck; Wood Duck*.

The Wood Duck is a common resident of Central California. I have shot it in winter as high up as Murphy's.

201. *Fulix marila*, (Linn.).—*Scaup Duck; Greater Black-head*.

The Scaup Duck is a rather rare winter sojourner in the valleys.

76652	♂ ad.	Stockton.....	Apr. 1, 1878
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202. *Fulix affinis*, (Eyton)?—*Lesser Black-head*.

I am not certain in regard to this species, but think I have seen many of them on the sloughs near Marysville in winter only.

I can say nothing of *F. collaris*. Have shot it, I believe, at Stockton and Marysville.

203. *Aythya vallisneria*, (Wils.).—*Canvas-back Duck*.

The Canvas-back is quite common at Stockton and Marysville in winter, especially when the streams are high and gales prevail on the coast.

204. *Aythya americana*, (Eyton).—*Red-head*.

The Red-head is rather a rare winter visitant to the interior valleys of California.

205. *Bucephala clangula*, *β. americana*, (Bp.).—*American Golden-eye*.

Two of these Ducks were found in the Stockton market, February 5, 1879. It is a rare winter visitant here.

77165	♀ ad.	Stockton market .....	Feb. 5, 1879
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206. *Bucephala albeola*, (Linn.).—*Buffle-head; Butter-ball*.

The Butter-ball is a somewhat rare winter sojourner at Marysville and Stockton.

207. *Erismatura rubida*, (Wils.).—*Buddy Duck*.

The Ruddy Duck is usually common at Stockton in winter.

76653	♀ ad.	Stockton.....	Oct. 11, 1878	Head, wing, tail, and foot.
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208. *Mergus castor*, *β. americanus*, (Cass.).—*American Sheldrake*.

209. *Mergus serrator*, (Linn.).—*Red-breasted Sheldrake*.

[Mr. Belding does not mention these species separately, or either of them, by name, but a note headed "*Mergus* ——" is to the effect that he "has shot *two species* of Fish Ducks" in California. They were most probably these species.—R. R.]

210. *Lophodytes cucullatus*, (Linn.).—*Hooded Sheldrake*.

The Hooded Merganser was quite often seen at Marysville last winter, but it was not numerous, nor have I ever seen it so. It is a winter sojourner of the valleys.

Family PELECANIDÆ: The PELICANS.

211. *Pelecanus erythrorhynchus*, Gm.—*American White Pelican*.

Pelicans are irregular winter visitors to Stockton and Marysville. I shot one at the former place, March 15, nearly three years ago, which was probably an adult male.

Family GRACULIDÆ: The CORMORANTS.

212. *Graculus dilophus*, *β. floridanus*, Aud.—*Double-crested Cormorant*.

Four Cormorants shot at this place in the spring of 1878 appeared to belong to the same species, and to resemble the Cormorant so common here (Stockton) in spring.

They have probably sought more suitable ground. No Cormorants have been seen from September 6 to the present date (December 3), but formerly they were abundant at all seasons, particularly where sloughs penetrated the oaks of the uplands.

[NOTE.—I cannot distinguish these specimens, nor, indeed, other Californian ones, from Eastern examples referable to the so-called "*floridanus*."—R. R.]

76656*	♀ ad.	Stockton? .....	Apr. 6, 1878	Head only.
76655†	♀ ad.	.....do .....	Mar. 22, 1878	

**213. *Graculus violaceus*, (Gm.).—Violet-green Cormorant.**

I have seen *G. violaceus* at Marysville in the spring.

Family LARIDÆ: The GULLS and TERNS.

**214. *Larus californicus*, Lawr.—California Gull.**

Gulls rarely visit the vicinity of Stockton, and then only when there is a gale from the coast. The specimen sent is different from the Gulls which usually visit us. It was alone.

76657	— ad.	Stockton.....	; Oct. 15, 1878
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**\*215. *Sterna forsteri*, Nutt.—Forster's Tern.**

Forster's Tern was first seen at Stockton April 17, 1878, two days after which it became common. It left Stockton previous to September 7.

74289	♀ ad.	*Stockton.....	Apr. 17, 1878
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**\*216. *Hydrochelidon nigra*, (Linn.).—The Black Tern.**

The Black Tern was first seen at Stockton April 24, 1878. It was abundant from that date until June 8, and probably later. It left Stockton before September 7.

74288	♀ ad.	*Stockton.....	Apr. 25, 1878
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Family PODICIPIDÆ: The GREBES.

**217. *Æchmophorus occidentalis*, (Lawr.).—Western Grebe.**

I have seen four of these Grebes at Stockton during the present season (1878). I have shot four of them, two in spring, two in fall. Those

\* "Iris green; eyelids bordered with rounded spots of bluish white."

† "Eyes sea-green; eyelids bordered with rounded spots of pale blue; interior of mouth metallic cobalt-blue, extending far down the throat, where it assumes a blackish hue."

‡ "Iris blue, or brown-blue; web of mouth and eyelids orange-red, like spot on mandible; legs and feet pale clay-fleshy."

found in fall were shot with much less difficulty than the spring birds, perhaps because they were young. I do not know whether they breed here.

74460	♂ ad.	Stockton.....	June 3, 1878
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218. *Æchmophorus clarki*, (Lawr.).—*Clark's Grebe*.

[There are no notes concerning this species.—R. R.]

74203	— ad.	Stockton.....	Apr. 26, 1878
76659	— ad.	.....do.....	Oct. 3, 1878
76658	— ad.	.....do.....	*Sept. 24, 1878

219. *Dytes auritus*, *β. californicus*, (Lawr.).—*American Eared Grebe*.

The bird shot at Murphy's and the one shot at Stockton are all I have seen of this species in two years.

73846	— ad.	Murphy's.....	Apr. 16, 1877	"Iris and eyelids red." Do.
74461	♂ ad.	Stockton.....	May 9, 1878	

220. *Podilymbus podiceps*, (Linn.).—*Thick-billed Grebe*.

The specimen sent was the only one seen at Murphy's in the spring of 1877. It was apparently only a visitant. I have seen them in the small lakes near the summit in fall, and they are not rare in the sloughs in the valleys in winter.

73847	— ad.	Murphy's.....	Spring, 1877
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**CATALOGUE OF A COLLECTION OF BIRDS OBTAINED IN GUADELOUPE FOR THE SMITHSONIAN INSTITUTION, BY MR. FRED. A. OBER.**

**By GEORGE N. LAWRENCE.**

Mr. Ober collected in Guadeloupe during August and September, 1878, and sent to the Smithsonian 132 specimens of birds; in his notes he enumerates 45 species.

Early in October he engaged his passage to New York, and went on board the vessel, but she was detained in port for over two weeks by adverse winds, and did not arrive here until November 13. Mr. Ober left the United States in December, 1877, making an absence of nearly two years. The result of his explorations has proved to be quite as satisfactory as was expected.

While in Guadeloupe, Mr. Belanger gave him a copy of Dr. L'Herminier's catalogue of the birds observed in Guadeloupe; it enumerates 135 spe-

\* "Bill bright yellow, except ridge; space before eye white; ridge of bill brown; iris orange. Length, 24.00."