THE
NEW AND HERETOFORE UNFIGURED SPECIES OF
THE BIRDS
OF
NORTH AMERICA.

BY
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P R E F A C E .

SINCE the time of WILSON and AUDUBON, no work has been published upon American Ornithology, containing life-size representations of the various species that have been discovered since the labors of those great men were finished. The valuable productions of CASSIN, as well as the revised edition of the ninth volume of the Pacific Rail Road Report, the joint labor of Messrs. BAIRD, CASSIN and LAWRENCE had indeed appeared, affording in their plates beautiful illustrations in miniature of various species not before figured; but no attempt had been made to continue the works of the first great American Naturalists, in a similar manner.

And yet, by the discoveries made through the agency of the various government expeditions, which were always accompanied by a collector of specimens of natural history, as well as from different private sources, material continued to accumulate, until numerous members of our Avi fauna were obtained, which had never been illustrated in any work, many of them, indeed, known only by short descriptions, scattered throughout various publications.

It occurred to me that perhaps it might serve in some degree the cause of this favorite branch of science, if these unfigured birds should be brought together in one work, their claims for specific rank investigated, and their relationship to other, longer and better known forms discussed.

It was, therefore, with the desire to contribute, as might be in my power, towards the elucidation of the comparatively little known species of the BIRDS OF NORTH AMERICA, their habits and economy, as well as to render their forms familiar so far as life-size representation of them might serve to do, that I undertook the present publication.

North America, as I have employed the term, designates the region north of the Rio Grande; comprising the peninsulas of Lower California and Florida, and extending to the Arctic Ocean. Greenland is not included.

The intention, announced in my prospectus, to comprise within the work only those species which had not heretofore been figured in any American book exclusively devoted to Ornithology has been steadfastly adhered to, but all such inhabiting our continent, it is believed, have been included. From the rapid discovery of new forms, after the work was commenced, of which it was desirable to give representations, the author soon found that if in every instance one species should alone occupy an entire plate, it would be impossible to contain the material that was accumulating within the limits stated in the prospectus; therefore, in some cases it was necessary that species which were closely allied, should be figured upon the same plate; this, however, in no way interfering with the final arrangement of the parts, nor disturbing the harmony of the complete work. In some instances, where species (?) have presented few and unreliable characters from others that were well-established, I have deemed it sufficient to give representations, in the Introduction, of the heads, feet, etc., and also, wherever it appeared profitable, the head of the species to which the doubtful one was closest allied, has also been introduced, so that comparisons might be easily and satisfactorily made.

I have been fortunate in receiving assistance at various times from different Institutions, as well as individuals, and by these many species have been entrusted to me, otherwise not obtainable, for the purpose of illustration. In the majority of instances, I have acknowledged my obligations at the time the plate of the species was published, but in some cases, when many specimens came at different periods from a single source, I preferred to express my indebtedness here. Prominent among those who have thus contributed toward the progress of this work, I desire to mention the Secretaries of the Smithsonian Institution, who placed in my hands a large proportion of the rarer species represented in my plates, and who have at all times evinced that interest and desire for the successful prosecution of this work, which might be expected from those who have under their control the finest ornithological collection of American species extant.

I desire particularly to express my thanks to the Officers of the Philadelphia Academy of Natural Sciences, who have at all times allowed me every facility for examining and illustrating such specimens as I desired, that were contained in the magnificent collection under their charge.

To the Officers of the Chicago Academy of Natural Sciences, and to Dr. WHITNEY for the loan of unique specimens, I am greatly obliged. Also to Dr. PHILIP LUTLEY SELATER, the distinguished Secretary of the London Zoological Society, I am greatly indebted for assistance at all times cheerfully rendered. To the Officers of the British Museum I am under many obligations for allowing drawings

to be made of the unique and rare birds contained in the grand collection under their control, in order that I might represent them in this work. And I would always hold in grateful remembrance the kindly interest taken in this production by the late Mr. JOHN CASSIN, in whose sudden and unexpected death this science has lost the services of one of her most distinguished followers, and who gave to the finishing of the plates in this work all the benefits of his knowledge, acquired by the experience of many years.

To GEORGE N. LAWRENCE, Esq., I would acknowledge my indebtedness incurred for the loan at various periods of several of the types of his species from his own collection, and who at all times was ready to afford me such aid as was in his power. Also to Dr. ELLIOTT COUES I am greatly obliged for several interesting accounts of the habits of various species observed by him in Arizona and elsewhere.

Messrs. BOWEN & Co., to whom was entrusted the production of the plates, have fully sustained their high reputation, and it is with much pleasure I acknowledge the skillful execution displayed by them.

The heads, feet,, wings, &c., which adorn the Introduction, were drawn on wood, with the greatest care and accuracy, by Mr. EDWIN SHEPPARD, of the Philadelphia Academy of Natural Sciences, and were engraved by Mr. W. J. LINTON, who, as is well known, occupies the highest rank in his profession, and whose abilities are everywhere acknowledged. It is unnecessary for me to call attention to the skill here exhibited by this artist, it needs but to be seen to be appreciated.

The impressions are all India proofs, issued by the University Press, under the supervision of Mr. LINTON.

And now, in conclusion, the Author would especially remember those who, aiding him with their patronage, have more than any others contributed toward the completion of this, the most extensive of his ornithological works; and who, by continuing with him, throughout the years during which this publication has extended, have encouraged him to persevere in his labors, and rendered to him that assistance, without which no effort of this character could ever result successfully.

NOTE.—On account of his instructions not having been complied with, the Author was obliged at the last moment to remove the blocks of the engravings from the hands of the proprietors of the University Press.

Messrs. D. Appleton & Co. kindly allowed them to be printed at their establishment, and the manner in which it has been accomplished, the Author is happy to think, leaves nothing to be desired.

INTRODUCTION.

ORNITHOLOGY, to the lover of the beautiful, to him who delights in the gay and bright beings of nature, is one of the most attractive of the various branches of natural science. He, who passes through life without a knowledge of the feathered creatures constantly surrounding his path in the fields and woods, rendering vocal with bursts of melody the groves and sombre places of the forest, pleasing the eye as they flit in dresses of many colors around the habitation, or teaching the much needed lesson of ceaseless effort and patient care, as they watch over and provide for, the helpless nestlings,—loses one of the chief means by which his own existence might be made more cheerful and contented, and fails to understand one of the most pleasing and attractive of all the creations of Omnipotence.

That person whose life is devoted to agricultural pursuits, and by his ignorance of the habits of his feathered friends, is led to a blind, indiscriminate slaughter of the very beings whose instincts teach them to work for his benefit,—probably only learns the error he has committed, after failing crops and barren fields prove to him that the death of his little winged help-mates has but given new life and vigor to the hurtful grub and destructive insects which have passed over the land, leaving but a desert behind.

Investigation of ornithological science has progressed rapidly within the last half century, and much light has been thrown upon many difficult and perplexing subjects, encouraging the worker to persevere, although so much still uncomprehended lies beyond. One great evidence of progress is, that Ornithologists are more and more turning their attention to the study of the anatomy of their subjects, and in the bony structure and formation of the soft parts find truths which no investigation of the outside covering, however minute, to which so many confine themselves, can possibly reveal.

The want of knowledge in that perplexing problem: What constitutes a species? the seeming impossibility to afford some explanation of this mystery which may be acceptable to all—the apparently hasty manner in many cases, in which birds are described as distinct from all those heretofore known—the general shunning of varieties, those unwelcome facts which are met with when least expected or desired, bringing to naught some of the most plausible theories—all together warn us that it is best to proceed with caution towards our conclusions, lest our labors should be but vanity, our castles only built in the air.

Of the *making* of species, even as was said of books, by the Wise man of old, there is no end.

Every naturalist, although perhaps unable to give a definition of what a species is, which may be acceptable to his fellow-laborers, has nevertheless some idea of what may be necessary for an animal to possess in order to occupy such a rank, and completes his own work guided, in the majority of cases, from his individual view of the matter. Thus various methods of treating a subject, and much confusion, not infrequently arise.

Genera and species are, in many instances, arbitrary terms, founded at times not so much upon information received, from which a decision has been satisfactorily reached, as upon a supposition that allowed an opinion to be hastily formed without a sufficient knowledge of the subject having been first attained, to prove that the conclusion arrived at was entirely correct.

A species may be defined as that being, which has the power of reproducing itself, of transmitting its prominent peculiarities regularly to its descendants, and at the same time presenting characters radically distinct from those found elsewhere.

And although in the majority of instances perhaps, some such idea as that just expressed, has influenced the action of Ornithologists, yet however, specimens have been given specific rank, which presented but the slightest variation from well-known forms, and this refining process has occasionally been carried to such an extreme, that the merest difference of shade in color has been deemed sufficient to constitute a species—nay, a still greater step has been taken, and examples have been described as distinct which so closely resembled others, that, should the labels which indicated them, be lost, the describer himself would be unable to distinguish one from the other. Such manner of procedure admits of no defense.

Varieties occur in every class of created beings, and are the result of various causes, usually originating in the parent stock; and by seizing upon one of these, which may exhibit only a trifling divergence in form, or color of plumage, from that which has perhaps been long known and accepted as a species, and elevating it to a separate rank, the describer at best but anticipates, as a fixed fact, a result which the variety, under the most favorable auspices, would have probably been a long period in reaching, and which also might never have progressed farther towards a radical difference than was then presented, but might have indeed returned again in its descendants to the similitude of the stock from which it sprung.

Hybridism among birds in a wild state is not infrequently the source from which many varieties arise, and oftentimes these are designated as species, their origin not having either been detected, or at least acknowledged. But several causes intervene to prevent the long continuance of these forms, one of which is the general infertility of such individuals; or, if in any instance this should not be the case, then the inability to keep themselves separated from the allied species from which they derived their existence, would, in a few generations, necessarily return these varieties to the likeness of one of the species to which they owed their being. Their individual peculiarities would be swallowed up by one or the other of the dominant races.

The following fact may in a measure illustrate this. A pair of *Phasianus Versicolor* were brought to England from Japan, and placed in the menagerie of the Earl of Derby at Knowsley. Before any offspring were produced, the female died, and the male was then mated with a hen of *Phasianus Colchicus*. By judicious breeding, their descendants, (which proved fertile, as is often the case when birds are semi-domesticated,) were gradually brought back to the likeness of the Japanese species, until it was impossible to distinguish them from the imported birds,—the foreign stain which was introduced, having been apparently entirely expunged.*

Varieties, descendants of sexes of the same species, as understood by the definition already given of that term, would, of course, be the result of different causes than those in the foregoing illustration; but whatever these shall have been, whether physical or otherwise, it may safely be asserted that, should they not be continued in the same degree as when they originated the differences exhibited by the subject, the variety would be unable to transmit its peculiarities to its descendants, and would not be a disturbing element to its race.

Magnifying casual differences and bestowing upon slight variations specific values, does not advance the science of Ornithology, but confuses and perplexes the student, who meets on the threshold of his investigations so-called *species*, between which and other forms he is unable to detect any difference, and attributes the reason—not always correctly—to his own want of discrimination.

The emulation to be first, which in many instances is so commendable, should, in the description of species, be tempered with moderation, and the desire for the fullest research greater than that of publishing incomplete investigations, as sometimes seems to be the case, lest a more expeditious contemporary, with perhaps no more knowledge of the subject, should take the precedence.

FESTINA LENTE, must of necessity be the motto of all disciples of nature, who seek only to learn the truth through their studies, and desire to gather up the productive grains which so often lie hidden in the chaff.

The *Furor Specificus*, even more than the *Furor Genericus*, so prevalent in these later days, is to be deplored, as tending more to embarrass and perplex, than to throw the much needed light upon the subject, which those imbued with the passion doubtless intended.

But if the definition of a species already given, be not the correct one, what may we consider the true explanation of the term? If to possess specific value does not necessarily require an animal to have characters radically distinct from all others, and a few slight and imperfectly defined variations are alone sufficient for the establishment of such a rank, then, indeed must naturalists be at fault, dependent upon the variable and oft changed opinions of every writer. A bird which requires a closely written page of explanation, in order that the slight difference it may possess from other forms, may be understood and seen, is oftentimes more likely to have undergone changes from its parent form produced by local effects, than to be an independent species, but, at all events, is hardly entitled to the same rank with that one which bears the mark of its separate origin distinctly upon it, and which can be recognized at once. Physical causes, such as food, climate and soil, produce greater alterations than they are usually accredited with, not only in the shapes of the body and its auxiliaries, but also in the color of plumage, and many a so-called species is only a local race, changed from the parent form by the force of circumstances.

It will be acknowledged by every naturalist, that all variations, no matter how trivial they may appear, which may be detected in any specimen, should be noticed and reported. To omit this would indeed be to lessen materially the value of scientific labors; but at the same time it may with equal force be asserted that to elevate these individuals which present such slight variations from allied forms, into a separate, distinctive rank, is far more likely to be pregnant with evil, than would be to omit mentioning the differences perceived, altogether.

Should a well-balanced restraint be placed upon the desire to describe as distinct those examples which so often carry with them the conviction of only being offshoots from other forms, from which they vary in no important characters;—should a difference in shade of color or a slight alteration in size, not be considered entirely sufficient in itself to establish specific rank,—and a patient waiting for knowledge to confirm a supposition, take the place of the habit which is sadly prevalent, of announcing as a definite conclusion a judgment arrived at from suspicions frequently made on a most imperfect basis; we might assuredly hope that, although species (!) would not multiply so fast, yet our knowledge of Ornithological science would increase as rapidly, investigations would be carried on with equal earnestness, fewer errors would arise to baffle and perplex, and more real progress eventually be made.

It is apparent in these later days, that there is an inclination among some, to classify as distinct every specimen which may differ in any degree from others, and on a critical examination of the birds contained in this work, I find some to which it seems unwise to consider even as local races, while others do not appear to possess sufficient claims for separation, which should entitle them to any consideration.

Very many have been the systems of classification for birds, nearly all of which have contained some commendable points, but no one of which has been sufficiently perfect to cause its adoption to the exclusion of the rest. Indeed, in this, like the belief as for that which may be necessary to constitute a species, it would seem that naturalists have their individual opinions, and arrange the groups of their respective branches according to their own ideas. In Ornithology, the practice has universally been, until lately, to place the birds of prey, on account of their strength and power of flight, at the head of the system. Might may make right, but it assuredly does not intellect, or that which, in the dumb animal, is its substitute, and possessing which in a greater or less degree, elevates or lowers the subject; therefore it seems far more plausible to give the first rank to those birds which are most sensitive to outward impressions, whose abilities to express their feelings of joy and sorrow, greatest and easiest of comprehension, and whose nervous organization is most delicate and perfect.

The heavy and cowardly eagle, the repulsive and sluggish vulture, whose food is carrion, and whose custom is to gorge itself until incapable of locomotion, and then remain stupidly inactive until relieved by nature, certainly are not fit subjects to outrank those species whose active life is a delight to all who meet with them, whose instinct and ingenuity approach closely to reason, and whose courage, that God-like virtue, fails not even unto death.

All, indeed, accomplish that for which they were summoned into shape; but if there is any classification in nature, and we are not simply, in aid of our own lack of knowledge, fashioning one to enable us to comprehend each other, then, assuredly, it would seem most proper that the dull, inert, and stupid, should not take precedence of all that is gay, and bright, and joyous.

The system which has been mainly accepted in the following arrangement, and which has very deservedly found great favor with Ornithologists, is the one proposed by Prof. LILLJEBORG of Upsala. He, in his synopsis, preferring the progressive method, as more in correspondence with the physiological and geological development, commences with the lowest forms and finishes with the highest.

* Selater. Wolf. Zool. Sketches. Vol. I. Vide P. Versicolor.

Irritability, used in the sense of vivacity and activity, is considered to be the most distinguishing character, and judged by this test, the Passerine birds naturally assume the first rank. In conjunction with the above, the nature of the upper wing coverts and the carotides communes, are deemed of great importance in ascertaining the relative affinity of birds, and aiding towards the formation of a connected system, as far as it may be possible with so many links in the chain wanting.

Birds are included in the following arrangements: All those which have the large upper wing coverts on the first row of the eubitus so short as not to reach beyond the middle of the cubital quills, are possessed of only one carotis communis, the sinistra. Those, on the contrary, which have the same coverts, forming several rows, and extending beyond the middle of the cubital quills, have two carotides communes, one dextra and one sinistra. There are some exceptions to this rule, such as *Cypselus*, *Trochilus*, *Merops*, *Psittacus*, *Rhea*, *Phoenicopterus*, *Podiceps* and *Pelecanus*; of which genera, although the wing coverts are long, the various species have only one carotis communis.

Beginning with the highest or lowest forms is a mere matter of preference, and does not in any way interfere with the arrangement.

"The eagle, then, in these pages is dethroned; the nightingale reigns in his stead. In that moral *crescendo* where the bird continuously advances in self-culture, the apex and the supreme point are naturally discovered, not in brutal strength so easily overpassed by man, but in a puissance of art, of soul, and of aspiration, which man has not attained, and which beyond this world, transports him in a moment to the further spheres."

I commence the recapitulation of the birds necessary to be considered in this work with the

PASSERES.—OSCINES.

FAMILY I.—TURDIDÆ.

SUB-FAMILY TURDINÆ.

GENUS TURDUS.

Turdus. Linn. *Syst. Nat.* (1735.)

1. TURDUS AUDUBONI.—T. PALLASII.

TURDUS AUDUBONI. BAIRD. *Rev. Am. Birds*. p. 16.

MERULA SILENS. SWAIN. *Philos. Mag.* Vol. I. (1827). p. 369.

HAVING carefully examined the type, No. 10,886, kindly sent to me by Prof. BAIRD, I am unable to distinguish any characters sufficient to cause its separation from *T. Pallasii*. The back is slightly more inclined to an olivaceous hue and paler than in most specimens of *T. Pallasii*; the rump also paler. The wing is about half an inch, and the tail a quarter of an inch longer than the ordinary lengths of the common species, but as Prof. BAIRD chose the largest of his specimens for his type, as stated in his Review, it may, with perfect propriety, be deemed an extreme size, and not to be taken as a specific character. The lengths of the bill, tarsi, and toes, agree with those of *T. Pallasii*.

2. TURDUS CONFINUS.—T. MIGRATORIUS.

The typical example of this bird having also been placed in my hands for examination, it appears to be a *Turdus Migratorius*, in worn and faded plumage; the latter circumstance not infrequently occurring with birds which exist exposed to the rays of a tropical sun in sandy districts; although this peculiarity in plumage is not always confined to such localities, for during the period in which this type was in my hands, I had the opportunity of comparing it with a robin in faded plumage, shot upon the Hudson river, and received by Mr. J. G. BELL, which resembled Prof. BAIRD's specimen so closely as to be distinguished from it only with difficulty. The type was obtained at Todos Santos, Cape St. Lucas.

GENUS HARPORHYNCHUS.

Harporhynchus. Cabanis. *Wiegmann's Archiv.* (1848). Vol. I. p. 98.

3. HARPORHYNCHUS CINEREUS.

Vol. I. Plate I.

FAMILY II.—PARIDÆ.

SUB-FAMILY PARINÆ.

GENUS PARUS.

Parus. Linn. *Syst. Nat.* (1735.)

4. PARUS OCCIDENTALIS.—P. ATRICAPILLUS.

PARUS OCCIDENTALIS. BAIRD. *Birds of N. Am.* p. 391.

I am unable to distinguish any characters possessed by this Tit, which should entitle it to be separated from the *P. Atricapillus*. The very slight difference in the hue of the plumage from that of the common species, as pointed out by its describer, is not sufficient to warrant the establishment of a specific rank.

5. PARUS MONTANUS.

Vol. I. Plate II.

6. — LITTORALIS.—P. HUDSONICUS.

BRYANT. Proc. Bost. Nat. Hist. Soc. (1863). p. 368.

Specimens of this Tit, both from Hudson's Bay and Nova Scotia, now lying before me, while exhibiting a trifling difference in size, possess the same style of coloring and hue of plumage. The fact that Dr. BRYANT's chief reason for describing the Nova Scotian bird was, not so much that it presented characters distinctive enough to give to it specific rank, as because the various forms of P. Atricapillus had been so improperly designated, does not appear sufficiently forcible to cause it to be considered otherwise than a true P. Hudsonicus, to which species it undoubtedly belongs.

GENUS LOPHAPHANES.

Lophaphanes. Kaup. Entw. Gesch. Europ. Thierwelt (1829).

7. LOPHAPHANES INORNATUS.

Vol. I. Plate III.

FAMILY III.—TROGLODYTIDÆ.

SUB-FAMILY CAMPYLORHYNCHINÆ.

GENUS CAMPYLORHYNCHUS.

Campylorhynchus Spix. Av. Brasil. (1824). Vol. I. p. 77.

8. CAMPYLORHYNCHUS AFFINIS.

Vol. I. Plate IV.

FAMILY IV.—SYLVIDÆ.

SUB-FAMILY SYLVINÆ.

GENUS HELMINTHOPHAGA.

Helminthophaga. Cab. Mus. Hein. (1850.) p. 20.

9. HELMINTHOPHAGA LUCIÆ.

Vol. I. Plate V.

GENUS DENDRÆCA.

Dendraca. Gray. Gen. Birds (1841). p. 32. 2nd ed.

10. DENDRÆCA GRACIÆ.

Vol. I. Plate VI.

11. — CHRYSOPAREIA.

DENDRÆCA CHRYSOPAREIA. SOLAT. & SALV. Ibis. (1865.) p. 89.

Two specimens of this rare warbler were procured by my friend, the late Dr. A. L. HEERMANN, "On the Medina river, Howard's Ranch, San Antonio, Texas," and were by him given to Mr. DRESSER, who took them to England, where they were described by Messrs. SOLATER and SALVIN, as above. The specimens were adult and young, or, "probably an immature male." The example of the adult having been unfortunately mislaid, I am unable to give a representation of it, which I the more regret, as there is no figure of the species yet published, and I do not know of any other specimens than those mentioned above. Dr. SOLATER's description is as follows:

"Mas. Dorso et pilco toto supra nigris, stria angusta verticali flava, capitis lateribus flavissimus, stria per oculos nigra: gutture ad medium pectoris nigro: abdomine albo, lateribus nigris flammulatis. Fem. Supra olivacea gutture et pectore albidis, nigro variegatis."

FAMILY V.—VIREONIDÆ.

SUB-FAMILY VIREONINÆ.

GENUS VIREO.

Virco Vieill. Ois. Amer. (1807.) p. 83.

12. VIREO PLUMBEUS. }
13. — VICINIOR. }
14. — SWAINSONI. }
15. — PUSILLUS. }

Vol. I. Plate VII.

FAMILY VI.—FRINGILLIDÆ.

SUB-FAMILY FRINGILLINÆ.

GENUS CHRYSOMITRIS.

Chrysomitris. Boie, *Isis*. (1828) p. 322.

16. CHRYSOMITRIS LAWRENCEI.

Vol. I. Plate VIII.

GENUS ÆGIOTHUS.

Ægiothus Cab. Mus. Hein. (1851) p. 161.

17. ÆGIOTHUS EXILIPES.

Vol. I. Plate IX.

18. FUSCESCENS.

Vol. I. Plate X.

19. ROSTRATUS.—A. FUSCESCENS.

Ægiothus Rostratus. Coues. *Proc. Acad. Nat. Scien.* (1861). p. 378.

A figure of the head and foot of this bird is here given, of the size of life, its close resemblance to *A. Fuscescens* rendering a full length portrait unnecessary. The chief distinction upon which it rests its claim for specific rank, appears to be the greater size of the bill (a not always reliable character), and being also generally larger. When two birds are almost precisely similar in the coloration of their plumage, as is the case with this one and *A. Fuscescens*, it seems very doubtful whether a difference of size alone is sufficient to constitute them separate species. The specimen from which the drawing of the head and foot was made, bore upon its label the number 20,557, locality Greenland, and was kindly lent to me by the Secretary of the Smithsonian Institution.

GENUS LEUCOSTICTE.

Leucosticte. Swain. *Faun. Bor. Am. Vol. II.* (1831). p. 493.

20. LEUCOSTICTE GRESEINUCHA.

Vol. I. Plate XI.

GENUS PASSER.

Passer. Briss. *Ornith.* (1760). Vol. III. p. 71.

21. PASSER DOMESTICUS.

Vol. I. Plate XII.

SUB-FAMILY ZONOTRICHINÆ.

GENUS PASSERCULUS.

Passerculus. Bonp. *Comp. List. Birds.* (1838). p. 33.

22. PASSERCULUS ALAUDINUS.

Vol. I. Plate XIII.

23. ANTHINUS.

The last named bird being almost precisely similar to the *P. Alaudinus*, it is unnecessary to give a figure of it. The two so-called species here enumerated present so little variation from the *P. Savanna*, that it seems to be the far more natural conclusion to consider them all as only one.

GENUS ZONOTRICHIA.

Zonotrichia. Swain. *Faun. Bor. Am. Vol. II.* (1831) p. 493.

24. ZONOTRICHIA BELLI.

Vol. I. Plate XIV.

GENUS PIPILO.

Pipilo. Vieill. *Analyse.* (1816.)

25. PIPILO ALBIGULA.—P. MESOLEUCUS.

Vol. I. Plate XV.

Although I have devoted a plate to this bird, upon further investigation I do not consider it should be separated from *P. Mesoleucus*, the difference being so exceedingly slight as to be distinguished with difficulty.

SUB-FAMILY SPERMOPHILINÆ.

GENUS CARDINALIS.

Cardinalis. Bon. Saggio. distribur. Metod. Animal. Vetebr. (1831).

26. CARDINALIS IGNEUS.=C. VIRGINIANUS.

Vol. I. Plate XVI.

This bird, in lacking the black at the base of the culmen, is an imperfectly developed C. Virginianus, and can only be considered as a local race of that species.

FAMILY VII.—CORVIDÆ.

SUB-FAMILY GARRULINÆ.

GENUS CYANURA.

Cyanura. Swain. Faun. Bor. Amer. Vol. II. (1831) p. 495.

27. CYANURA MACROLOPHUS.

Vol. I. Plate XVII.

PASSERES.—CLAMATORES.

FAMILY VIII.—TYRANNIDÆ.

SUB-FAMILY TYRANNINÆ.

GENUS CONTOPUS.

Contopus. Cab. Journal für Ornith. Vol. III. (1855), p. 479.

28. CONTOPUS PERTINAX.

Vol. I. Plate VIII.

GENUS METREPHERUS.

Metrepherus. Sclat. Proc. Zool. Soc. (1859), p. 44.

29. METREPHERUS FULVIFRONS.

Vol. I. Plate XIX.

STRISORES.

FAMILY IX.—CYPSELIDÆ.

GENUS NEPHÆCETES.

Nepheccetes. Baird. B. N. Am. p. 142.

30. NEPHÆCETES NIGER.

Vol. I. Plate XX.

FAMILY X.—TROCHILIDÆ.

SUB-FAMILY TROCHILINÆ.

GENUS ATTHIS.

Atthis. Reichenbach. Jour. für Ornith. 1853, 1854.

31. ATTHIS HELOISÆ.

Vol. I. Plate XXI.

GENUS HELIOPÆDICA.

Heliopædica. Gould. Mon. Trochil. Introd. p. 60.

32. HELIOPÆDICA XANTUSI.

Vol. I. Plate XXII.

GENUS STELLULA.

Stellula. Gould. Mon. Trochil. Introd. p. 90.

33. STELLULA CALLIOPE.

Vol. I. Plate XXIII.

ZYGODACTYLI.

FAMILY I.—PICIDÆ.

SUB-FAMILY PICINÆ.

GENUS PICUS.

Picus. Linn. Syst. Nat. (1748.)

34. PICUS LUCASANUS.

PICUS LUCASANUS XANT. *Proc. Acad. Nat. Scien.*

PICUS LUCASANUS.

PICUS SCALARIS.

Representations of the head and foot of this bird, together with those of its near ally, the *P. scalaris*, are here given, so that the close resemblance which they bear to each other, may be easily perceived, and the difficulty of finding sufficient grounds for separating them, understood. *P. lucasanus* has the bill and feet a little stouter than the other, but otherwise they do not appear to differ. I deem it exceedingly probable that they are one and the same species.

GENUS XENOPICUS.

Xenopicus. Baird. B. of N. Am. p. 83.

35. XENOPICUS ALBOLARVATUS.

Vol. I. Plate XXIV.

GENUS SPHYRAPICUS.

Sphyrapicus. Baird. B. N. Am. p. 101.

36. SPHYRAPICUS THYROIDEUS.

Vol. I. Plate XXXV.

GENUS COLAPTES.

Colaptes. Swain. Zool. Jour. Vol. III. (1827). p. 353.

37. COLAPTES CHRYSOIDES.

Vol. I. Plate XXVI.

ACCIPITRES.

FAMILY I.—STRIGIDÆ.

SUB-FAMILY BUBONINÆ.

GENUS SCOPS.

Scops. Savigny. Nat. Hist. Egypt. Vol. I. p. 105 (1809.)

38. SCOPS KENNICOTTI,

Vol. I. Plate XXVII.

39. — FLAMMEOLA,

Vol. I. Plate XXVIII.

SUB-FAMILY ATHENINÆ.

GENUS MICRATHENE.

Micrathene. Coues. P. A. N. S. (1866.) p. 51.

40. MICRATHENE WHITNEYI.

Vol. I. Plate XXIX.

FAMILY II.—FALCONIDÆ.

SUB-FAMILY FALCONINÆ.

GENUS FALCO.

Falco. Linn. Syst. Nat. Vol. I. (1766.) p. 124.

41. FALCO CANDICANS.

42. — ISLANDICUS.

43. — AURANTIUS.

Vol. II. Plate XXX.

Vol. II. Plate XXXI.

Vol. II. Plate XXXII.

SUB-FAMILY ACCIPITRINÆ.

GENUS ACCIPITER.

Accipiter. Briss. Ornith. (1760.) Vol. I. p. 310.

44. ACCIPITER MEXICANUS=A. COOPERI.

ACCIPITER MEXICANUS. Swain's Faun. Bor. Am. p. 45.

Mr. Cassin has designated the three members which constitute this genus in North America, as "A group in which size is a specific character." As nothing is so liable to mislead an ornithologist in his investigation of species, as the variation in measurement of his examples, it seems most unwise to establish a species whose only qualification is size. Particularly does this objection appeal with force, when it is applied to the great family of hawks, whose members are notorious for variations in size. I have examined carefully specimens of acknowledged A. Mexicanus, and compared them with those of A. Cooperi, and they appear evidently to belong to one and the same species.

It is impossible to define characters which would enable the two birds to be distinguished from each other.

SUB-FAMILY BUTEONINÆ.

GENUS BUTEO.

Buteo. Cuv. Anatom. Comparée. (1799).

45. BUTEO MONTANUS=B. BOREALIS.

BUTEO MONTANUS. Nutt. Man. Ornith. Vol. I. (1840). p. 112.

This is the western representative of B. Borealis, or is generally so considered, and it might be deemed a local race if a distinct range of locality could be assigned to it. The finest specimen I ever saw, was killed at Carlisle, Pennsylvania, and is now, or was when I saw it, in the collection of the Smithsonian Institution, proving that this form is not exclusively western. The specimens from the west of the Rocky Mountains appear to be slightly larger than are those from the eastern part of the continent, but examples constantly occur there which cannot be recognized from the common species of the Atlantic States. The variations among individuals belonging to *Buteo Borealis* both in color of plumage and measurement of their parts, are so great and extensive, that to admit the style called B. Montanus to specific rank, would of necessity entail the acknowledgment of many more forms to the same privilege, as is very conclusively proved by Dr. Bryant in his able paper upon "The variations in Plumage of B. Borealis and B. Harlani," published in the Proceedings of the Boston Natural History Society, (1861) p. 107. And as these different forms appear not to be restricted to any particular section of country, for many a western "Red-tail" is identical with eastern examples, nor to vary in any way that is peculiar to themselves as a class, it would seem the far more reasonable conclusion to consider them as all members of one species, until further information could prove that such decision was incorrect.

46. BUTEO ZONOCERCUS.

Vol. II. Plate XXXIII.

SUB-FAMILY AQUILINÆ.

GENUS HALIÆTUS.

Haliætus. Savig. Descrip. de l'Egypt. Zool. p. 85,

47. HALIÆTUS PELAGICUS.

48. — ALBICILLA.

Vol. II. Plate XXXIV.

Vol. II. Plate XXXV.

At the time the article on this species was published I believed that an example had been obtained upon this continent, but having been unable to verify this, Greenland being the nearest locality where it has been procured, I regret to state that as yet North America has no claim to this noble bird.

FAMILY III.—VULTURIDÆ.

SUB-FAMILY CATHARTINÆ.

GENUS CATHARTES.

Cathartes. Illig. Prodr. p. 236. (1811.)

49. CATHARTES BURROVIANUS.

Vol. II. Plate XXVI.

P U L L A S T R Æ.

FAMILY I.—COLUMBIDÆ.

SUB-FAMILY ZENAINIDINÆ.

GENUS SCARDAFELLA.

Scardafella. Bon. Consp. Av. Vol. II. (1854.) p. 85.

50. SCARDAFELLA INCA.

Vol. II. Plate XXXVII.

G A L L I N Æ.

FAMILY I.—PHASIANIDÆ.

SUB-FAMILY MELEAGRINÆ.

GENUS MELEAGRIS.

Meleagris. Linn. Syst. Nat. (1735.)

51. MELEAGRIS MEXICANA.

Vol. II. Plate XXXVIII.

G R A L L Æ.

FAMILY I.—CHARADRIIDÆ.

SUB-FAMILY CHARADRIINÆ.

GENUS PODASOCYS.

Podasocys. Coues. P. A. N. S. (1866.) p. 96.

52. PODASOCYS MONTANUS.

Vol. II. Plate XXXIX.

FAMILY II.—SCOLOPACIDÆ.

SUB-FAMILY SCOLOPACINÆ.

GENUS MACRORHAMPHUS.

Macrorhamphus. Leach, *Catal. Brit. Birds*. (1816.)

53. MACRORHAMPHUS SCOLOPACEUS.

Vol. II. Plate XL.

GENUS PELIDNA.

Pelidna. Cuv. (1817).

54. PELIDNA PACIFICA.=P. CINCLUS.

PELIDNA PACIFICA. COUES. *Mod. Tring. Proc. A. N. S.* (1861.) p. 189.

After very careful examination of specimens of this bird from the Pacific and Atlantic coasts, I find them apparently identical. The bills vary in all; but not more between Western and Eastern examples, than do individuals of the same locality among themselves; and some from the most widely separated localities agree with each other. I have retained the name *Cinclus*, as there do not appear to be any characters, common only to the American or European forms, to separate them into distinct species.

GENUS ACTODROMUS.

Actodromus. Kaup. *Sk. Ent. Europ. Thierw.* (1829).

55. ACTODROMUS BAIRDII.=

ACTODROMUS BAIRDII. COUES. *Proc. Ac. Nat. Sc.* 1861. p. 194.

This bird, very closely resembling the *A. Bonapartei*, differs from that species principally in the following characters. The upper tail coverts are more lengthened and, with the rump, are blackish, edged with brown, instead of white streaked with black. Although considered by Dr. COUES as a Western species, it is apparently the same as the specimen figured by AUDUBON in the attitude of flying, in his plate of *Tringa Schinzii*, and which was procured by him at St. Augustine, Florida.

GENUS EREUNETES.

Ereunetes. Illiger. *Prodromus*. (1811). p. 262.

56. EREUNETES OCCIDENTALIS.

Vol. II. Plate XLI.

LAMELLIROSTRES.

FAMILY I.—ANATIDÆ.

SUB-FAMILY ANSERINÆ.

GENUS ANSER.

Anser. Briss. *Ornith.* (1760). Vol. VI. p. 261.

57. ANSER FRONTALIS.=A. GAMBELII.

ANSER FRONTALIS. BAIRD, B. of N. Am. p. 762.

This bird, described by Prof. BAIRD in the work above quoted, is, without doubt, the common A. Gambelii.

GENUS CHEN.

Chen. Boie. *Isis*. (1822). p. 563.

58. CHEN ALBATUS.

Vol. II. Plate XLII.

59. — CÆRULESCENS.

Vol. II. Plate XLIII.

GENUS EXANTHEMOPS.

Εξανθημα Ωψ.

60. EXANTHEMOPS ROSSII.

Vol. II. Plate XLIV.

GENUS CHLŒPHAGA.

Chlœphaga. Eyton. Mon. Anat. (1838.) p. 13.

61. CHLŒPHAGA CANAGICA.

Vol. II. Plate XLV.

SUB-FAMILY FULIGULINÆ.

GENUS BUCEPHALA.

Bucephala. Baird. B. N. Am. p. 795.

62. BUCEPHALA ISLANDICA.

Vol. II. Plate XLVI.

GENUS LAMPRONETTA.

Lampronetta. Brandt. Mém. Acad. St. Pet. 6th. Ser. Sc. Nat. VI. (1849). p. 5.

63. LAMPRONETTA FISCHERI.

Vol. II. Plate XLVII.

GENUS PELIONETTA.

Pelionetta. Kaup. (1829). Entw. Europ. Thierw.

64. PELIONETTA TROWBRIDGII.

PELIONETTA TROWBRIDGII. BAIRD. N. Am. B. p. 806.

This bird, if distinct, is the South-western representative of the common *P. Perspicillata*, having been procured in this form on the shores of California. The size of the two birds is about equal, and the only difference observable between them is, that the one now under consideration has a rather longer, narrower, and less swollen bill; with the white patch on the head smaller and anterior to the eye. The accompanying engraving exhibits these peculiarities.

GENUS SOMATERIA.

Somateria. Leach. Fleming's Philos. Zool. (1822.)

64. SOMATERIA V-NIGRA.

Vol. II. Plate XLVIII.

STEGANOPODES.

FAMILY I.—PELECANIDÆ.

SUB-FAMILY GRACULINÆ.

GENUS GRACULUS.

Graculus. Linn. Syst. Nat. (1735.)

66. GRACULUS BAIRDII.

Vol. II. Plate XLIV.

67. — PERSPICILATUS.

Vol. II. Plate L.

68. — CININNATUS.

Vol. II. Plate LI.

LONGIPENNES.

FAMILY I.—LARIDÆ.

SUB-FAMILY LARINÆ.

GENUS LARUS.

Larus. Linn. Syst. Nat. (1735.)

69.	LARUS CALIFORNICUS.	}
70.	— OCCIDENTALIS.	
71.	— BRACHYRHYNCHUS.	}
72.	— HUTCHINSII.	
73.	GLAUCESCENS.	

Vol. II. Plate LII.

Vol. II. Plate LIII.

The Glaucus Gulls resemble each other in many particulars, and one might be excused if the supposition should occur, that they but presented different stages of plumage of the same species. Thus we have the *L. Hutchinsii*, which is pure white, succeeded by *L. Glaucus*, also white, with a mantle of the lightest possible blue; then *L. Leucopterus*, pearly blue on mantle and primaries, the latter tipped with white; this followed by *L. Chalcopterus*, which resembles the previous species, but has the wings of *L. Glaucescens*, which has a pearl-blue mantle and blackish primaries, spotted and tipped with white. Slight variations between these different forms would easily establish an unbroken chain from the white *L. Hutchinsii* to the dark *L. Glaucescens*.

As the principal differences between *L. Glaucescens* and *L. Glaucus* consist in the primaries and dark mantle of the former, it did not seem necessary to devote a plate to represent it, and therefore I give illustrations of the primaries of the natural size of the two species for comparison. The specimen of *L. Glaucescens* came from Puget sound, and was numbered 27,084. I am indebted to the Secretaries of the Smithsonian Institution for the loan of the example to be figured in this work.

LARUS GLAUCESCENS.

LARUS GLAUCUS.

74. LARUS BOREALIS.—L. ARGENTATUS.

LARUS BOREALIS. BRANDT. Mus. Petropolit. Bruch. Monogr.

LAR. in Journal für Ornith. (1853). p. 101. sp. 19.

This is the Herring Gull of the West coast, and judging from the specimens I have been able to examine, I should consider it to be identical with the *Larus Argentatus* of the Eastern shores of the continent.

GENUS RISSA.

Rissa. Leach. Steph. Gen. Zool. Vol. XIII. (1825.) p. 180.

75.	RISSA KOTZEBUI.	}
76.	— NIVEA.	

Vol. II. Plate LIV.

SUB-FAMILY LESTRIDINÆ.

GENUS STERCORARIUS.

Stercorarius. Briss. Orn. (1760). Vol. VI. p. 149.

77. STERCORARIUS CATARRACTES.

Vol. II. Plate LV.

SUB-FAMILY STERNINÆ.

GENUS THALASSEUS.

Thalasseus. Boie. Isis. 1822. p. 563.

78. THALASSEUS CASPIUS.

Vol. II. Plate LVI.

GENUS STERNA.

Sterna. Linn. *Syst. Nat.* (1748).

79. STERNA FORSTERI.

STERNA FORSTERI. Nutt. Man. Vol. II. (1834). p. 274.

The chief difference between this species and its ally, *S. Hirundo*, which it very closely resembles, is exhibited in the different distribution of white upon the webs of the tail feathers, and the relative lengths of the outer feathers, as represented in the accompanying engraving.

STERNA FORSTERI.

GENUS HALIPLANA.

Haliplana. Wagl. *Isis* (1832.) p. 1124.

80. HALIPLANA DISCOLOR.

Vol. II. Plate LVII.

FAMILY II.—PROCELLARIIDÆ.

SUB-FAMILY DIOMEDEINÆ.

GENUS DIOMEDEA.

Diomedea. Linn. *Syst. Nat.* (1758.) p. 132.

81. DIOMEDEA CHLORORHYNCHUS.

Vol. II. Plate LVIII.

SUB-FAMILY PROCELLARINÆ.

GENUS FULMARUS.

Fulmarus. Leach. *Steph. Gen. Zool.* (1825). Vol. XIII. p. 233.

82. FULMARUS PACIFICUS.—FULMARUS GLACIALIS.

PROCELLARIA PACIFICA. Aud. B. Am. Vol. VII. (1844). p. 208. Lawr. B. N. Am. (1858). p. 826.

Closely allied to *F. Glacialis*, and may be considered as a local race of that species, inhabiting the Pacific coast. The differences between the two birds, to use the words of Dr. COUES, "might be held as indicative of the extreme of variation of a single changeable type," although he seems inclined to consider it as a species.

GENUS THALASSOICA.

Thalassoica. Reichenb. *Syst. Av.*

83. THALASSOICA GLACIALOIDES.

PROCELLARIA GLACIALOIDES. SMITH. *Illust. S. Afric. B.* Vol. I. p. 51.

PROCELLARIA TENUIROSTRIS. Aud. B. Am. Vol. VII. (1844). p. 210.

The very slight differences existing between this bird and its near ally, the *F. Glacialis*, are exhibited in the engraving here presented of the head, the size of life.

GENUS OSSIFRAGA.

Ossifraga, Homb. et Jacq. (1844.)

84. OSSIFRAGA GIGANTEA.

Vol. II. Plate LIX.

GENUS ÆSTRELATA.

Æstrelata, Bonp. Cons. Av. Vol. II. p. 188.

85. ÆSTRELATA HESITATA.

Vol. II. Plate LX.

GENUS PRIOFINUS.

Priofinus, Hombron & Jacq. (1844.)

86. PRIOFINUS CINEREUS.

Vol. II. Plate LX.

GENUS CYMOCHOREA.

Cymochorea, Coues. P. A. N. S. (1864). p. 75.

87. CYMOCHOREA HOMOCHROA.

CYMOCHOREA HOMOCHROA. COUES. Mon. Procell. Proc. Acad. Nat. Scien. (1864). p.

THALASSIDROMA MELANIA. LAWR. B. of N. Am. pl. fig. nec. text.

A figure of this species having been introduced in plate XCIX of the B. of N. Am. by BAIRD, CASSIN and LAWR. under the title of Thalassidroma Melania, it did not appear necessary to illustrate it in this work.

88. CYMOCHOREA MELANIA.

Vol. II. Plate LXI.

GENUS HALOCYPTENA.

Halocyptena, Coues. P. A. N. S. p. 78. (1864.)

89. HALOCYPTENA MICROSOMA.

Vol. II. Plate LXI.

GENUS FREGETTA.

Fregetta, Bon. Cons. Av. Vol. II. p. 197.

90. FREGETTA LAWRENCEI.

THALASSIDROMA FREGETTA. LAWR. Ann. Lyc. Nat. Hist. N. Y. (1851). p. 117.

FREGETTA LAWRENCEI. BON. Consp. Av. Vol. II. (1855). p. 198.

The unique example of this species having been lost, I am unable to introduce a figure of it in this work. I append the original description by Mr. LAWRENCE.

"Head and wings black; neck, breast and back, dark plumbeous, or dull bluish-ash; wing coverts brown, the tail white at the base, with the terminal half and the two central feathers black; abdomen, inside covering of wings, and rump, white; bill and legs black; Tail even, claws flattened and of an oval form.

"Length, about 8 inches; wing, 6; tail, 3; tarsus, 1½. Habitat, Florida coast."

GENUS PUFFINUS.

Puffinus, Briss. Orn. (1760). Vol. VI. p. 130.

91. PUFFINUS CREATOPUS.

PUFFINUS CREATOPUS. COOPER. Mss. COUES. Mon. Procell. Proc. Acad. Nat. Scien. p. 131. (1864).

I have never seen this bird, and the unique example, like the preceding, appears to be lost. Dr. COUES' diagnosis is as follows: "*P. Puffini majoris statura, nec ei coloribus perdisimilis; sed rostro multo brevior, crassiore, tubulis nasalibus inflatis; fere omnino nisi ungue flavescens carneis; pedibus brevioribus, gracilioribus, carneis; tectricibus caudae superioribus et inferioribus ex toto brunneo nigris; remigibus primariis spatio albo basin versus interni pogonii carentibus.*

Habitat. Specimen typicum et unicum ex insula "San Nicholas" prope California.

Length, 19.00; extent of wings, 45.00. Bill along culmen, 1.60; gape, 2.30; from feathers on side of lower mandible, 1.50; height at base, .60; Nasal tubes .40; wing from flexure, 12.50; tail, 5.00; tarsus, 2.10; middle toe and claw, 2.65.

92. PUFFINUS OPISTHOMELAS.

PUFFINUS OPISTHOMELAS. COUES. Proc. Acad. Nat. Scien. (1864), p. 139.—Mon. Procell.

This species, an engraving of the head of which is here given of the natural size, resembles somewhat the *P. Anglorum*, but is much smaller than that species, and has other marks of difference. COUES' diagnosis is as follows:

P. Puffino obscuro nec perdisimilis; sed major, rostro longiore, robustiore, alis pedibusque longioribus, cauda brevior, minus rotundata; et tectricibus caudæ inferioribus fere omnino fuliginoso-nigris.

Habitat. South Pacific coast of North America. The specimens were obtained by Mr. Xantus at Cape St. Lucas. Bill along culmen, 1.40; commissure, 2.00; height at base, .42; wing from the carpus, 9.00; tarsus, 1.80; middle toe and claw, 2.10; tail, 3.75.

GENUS NECTRIS.

93. NECTRIS FULIGINOSUS. }
94. — AMAUROSOMA. }

Vol. II. Plate LXII.

It is not a very easy matter to always distinguish the various species of "Black Puffins," as they naturally closely resemble each other, and give the impression, that although we can consider them as having received their full growth, still they may not have as yet assumed the adult livery, and therefore only be in a certain stage of plumage incidental to the corresponding bicolor species.

P Y G O P O D E S.

FAMILY I.—COLYMBIDÆ.

SUB-FAMILY COLYMBINÆ.

GENUS COLYMBUS.

Colymbus. Linn. Syst. Nat. (1735).

95. COLYMBUS ADAMSI.
96. — PACIFICUS.—C. ARCTICUS.

Vol. II. Plate LXIII.

COLYMBUS PACIFICUS. LAWR. B. N. Am. p. 889.

This bird was characterised as distinct by Mr. LAWRENCE, who formed his opinion upon two immature specimens. Since his description was published, many examples have been received at the Smithsonian Institution, from various collectors in Arctic America, in all stages of plumage; and, judging from these, it does not appear to be distinct from *C. Arcticus*. The color and style of markings are precisely similar, and although the bill in some examples is weaker and more slender, yet this member varies very materially among individuals from the same locality.

GENUS PODICEPS.

Podiceps. Lath. Ind. Orn. (1790.) p. 780.

97. PODICEPS CALIFORNICUS.

98. — AFFINIS.

Vol. II. Plate LXIV.

SALVAD. Des. di Nouve Spec. Mus. Torin.

Dr. SALVADORI, having kindly sent me a drawing of the head of this bird, I am enabled to give a life-size engraving of it. It is immature, and appears to have considerable affinity to *P. Cooperi*, Lawr. Without seeing the two together to compare, it would be impossible to decide upon the specific value of the present bird, and I therefore introduce it here under Dr. SALVADORI's name, merely suggesting the species to which it seems to be nearest allied.

The original description is as follows:

"*Podiceps supra nigricans, genis superne cinereo—griseis, inferne ac gula albis, rostro valde incurvo.* Rostr. 0.053. Ala, 0.195. Tars. 0.055. Long tot. 0.520."

FAMILY II.—ALCIDÆ.

SUB-FAMILY ALCINÆ.

GENUS FRATERCULA.

Fratercula. Briss. Ornith. (1760).

99. FRATERCULA GLACIALIS.

Vol. II. Plate LXV.

GENUS LOMVIA.

Lomvia. Ray. Syn. Meth. Av. p. 120.

100. LOMVIA CALIFORNICA.—L. TROILE.

CATARRACTES CALIFORNICA. BRYANT. Proc. Bost. Soc. N. H. (1861.) p. 11.

This bird, separated by Dr. BRYANT from the common *L. Troile*, rests its entire claim for specific rank upon the shape and size of its bill. There is no difference perceptible in the color of the plumage or general dimensions of the birds, and the slightly larger bill of the specimen from the Pacific coast—a character so unreliable as not to be deemed worthy of consideration in many Ornithological groups—should not entitle it to the position in which its describer placed it. Engravings of the natural size of the heads of this bird and *L. Troile* are here given for comparison. The example from the Pacific was loaned to me by the Secretaries of the Smithsonian Institution, to whom I take this opportunity of expressing my thanks, and bore upon its label the number 3,944; the other was from a specimen in the collection of the Academy of Natural Sciences in Philadelphia, whose officers have at all times given me every facility for pursuing my investigations, and to whom I am much indebted.

LOMVIA TROILE.

LOMVIA CALIFORNICA.

GENUS SAGMATORRHINA.

Sagmatorrhina. Bonp. Proc. Zool. Soc. (1851.) p. 202.

101. SAGMATORRHINA LATHAMI.

Vol. II. Plate LXVI.

GENUS CERATORHYNCHA.

Ceratorhyncha. Bonp. Syn. U. S. Birds. (1828.) A. N. Y. Lye. Nat. Hist. p. 428.

102. CERATORHYNCHA SUCKLEYI.—C. MONOCERATA.

CERORHINA SUCKLEYI. CASS. B. of N. Am. p. 906.

We have here a bird which has been somewhat of a puzzle to Ornithologists, since the first specimen was obtained by Dr. SUCKLEY. In all respects, save the horn at the base of the upper mandible, the dried skin is identical with the well-known and long established *C. Monocerata*. The type was obtained at Puget Sound.

The following extract of a letter addressed to me by Dr. SUCKLEY, sets at rest the question as to whether or not this bird had any "knob" at the base of the upper mandible during LIFE.

NEW YORK, 17th March, 1869.

* * * The bird CASSIN described as *Cerorhina Suckleyi*, I killed on Puget Sound nearly opposite the mouth of the Puyallup river. I was returning from an Indian reservation, and when the bird—which had been under water, diving—came to the surface close by the canoe, I shot it. The Indians who paddled the canoe said "*Heloima*" (Chinook for stranger or strange). There was a black or blackish-gray "knob" on the bill. The presence of that horn or knob caused me to be anxious to preserve the skin. I had seen, about twenty months before, the *C. Monocerata*, of which a pair were brought to me alive, by the late Gov. MASON of Washington Territory. They were obtained by him near Port Townsend, Puget Sound. Their "knobs" were, say three lines high, of a wax color. My specimen, described by CASSIN, appeared to be an old bird. The *C. Monocerata* generally leave Puget Sound for more genial climes during the winter. It frequently makes its home during that season at the Faralones.

The dark, dusky, nearly black knob on the bill was about half the size of that of *C. Monocerata*, and softish, so that much must be allowed for shrinkage.

Yours truly,

GEORGE SUCKLEY.

The above is conclusive evidence that during life Dr. SUCKLEY's bird had a knob upon the bill, no matter whether it may be present on the dried skin or not, and all efforts to explain away what may be an unwelcome fact, must of necessity fail. The chief, indeed we may say the only, difference between this bird and *C. Monocerata*, was the absence of the knob, for as regards the variation in the outline of the bills, I would merely state that of the many specimens of the well-known species which I have examined, I have never seen that member in any two of them alike. The examples from which the drawings of the heads here represented were made, are in the Smithsonian collection. The adult is No. 31,908, and came from San Diego, California, collected by Dr. COOPER; its measurements are: Length, 14.50; wing, 7.25; tail, 4.50; tar, $1\frac{3}{8}$; bill, 1.50. The young (?) No. 21,439, was procured at the Faralone Islands by AMOS CLEFT, and on the label was written, apparently in the collector's handwriting, "Young horn-bill Guillemot." Now here is an apparent contradiction, for the bird has no horn, at least as yet. The thoughts that naturally arise are: If this is the young of the *C. Monocerata*, then there is a period in their lives when they are without the indication of a horn or knob at the base of the mandible, and at that age belong to the form denominated as *Suckleyi*; but if it is not the young of this species, but of *C. Suckleyi*, then we have the strange spectacle of birds so closely allied, breeding together in great numbers, yet keeping distinct, although resembling each other so entirely that the collector was unable to distinguish them, even when in the midst of their nests. The horns in adult *C. Monocerata* are of all sizes and shapes, and rarely are two seen to resemble each other. I have been thus particular in describing this specimen of the young, and its locality, since it appears to me a matter of very great doubt if as yet we have any sufficient reason for separating these two birds specifically, and save the absence of the horn in this skin, which, however, was present in life, I am unable to perceive any characters which cause either of the examples called *Suckleyi*, to be "conspicuously different" from the well-known species; and the absence of the horn in one or two specimens, may be accounted for in too many ways (such as an injury to the member in its early growth, or a want of development from physical causes) for us to conclude—as has been somewhat hastily done—that *C. Suckleyi* is entirely worthy of specific distinctness.

CERATORHYNCHA MONOCERATA.

CERATORHYNCHA SUCKLEYI, AD.

CERATORHYNCHA SUCKLEYI, (?) YOUNG.

GENUS PHALERIS.

Phaleris. Temm. Man. Orn. Vol. II. (1820.)

SIMORHYNCHUS. MERREM.

103. PHALERIS KAMTSCHATICUS.

ALCA KAMTSCHATICA. LEPECHIN. Nova Acta Petrop. XII. (1801.) p. 369. pl. 8.

I give a drawing of the head of this species of the natural size. The bird may be described as follows: Entire upper parts dark brown; under parts cinereous, becoming nearly white on the abdomen. At the base of the upper mandible, and on the neck, are numerous white slender feathers, becoming quite long on the latter. Bill, orange red, feet brown. Length, $7\frac{1}{2}$ inches; wing, $4\frac{1}{2}$; tail, $1\frac{1}{2}$ inches.

104. PHALERIS TETRACULA.

Vol. II. Plate LXVII.

105. — CASSINI.

SIMORHYNCHUS CASSINI. COUES. P. A. N. Scien. (1868.) p. 45.

This bird was described as distinct by COUES, in his Monograph of the Alcidae. It is probably immature, and was procured August 3, 1866, at Ounimak Pass, Russian America. The following is the description:

S. rostro parvo, breve, valde compresso, longitudine vix altitudinem excedente, latitudine dimidi altitudinis; fere triangulare a spectu laterale; simplice, nec ullis additamentis corneis instructo; culmine leviter declinato-convexo, rictu recto, carina fere recta, a scendente; supra nigro-plumbeus, vertice, alis caudaque nigerrimus; subtus griseo-plumbeus, abdomine crissoque sensim albicantibus; longitudo tota corporis 7.75 (poll. Ang.); alae 4.25; caudae 1.40; tarsi .80; digiti medii cum ungue 1.20; rostri .40; alt. 30., lat. 15, rictus 60.

106. PHALERIS PUSILLUS.

Vol. II. Plate LXVIII.

GENUS PTYCHORHAMPHUS.

Ptychorhamphus. Brandt. Bull. Acad. Sc. St. Petersb. Vol. II. (1837). p. 347.

107. PTYCHORHAMPHUS ALEUTICUS.

Vol. II. Plate LXIX.

GENUS OMBRIA.

Ombria. Eschscholtz Zool. Atlas IV. (1831). p. 3.

108. OMBRIA PSITTACULA.

Vol. II. Plate LXX.

GENUS BRACHYRHAMPHUS.

Brachyrhamphus. Brandt. Bull. Acad. St. Petersb. II. (1837). p. 345.

SYNTHLIBORAMPHUS BRANDT.

109. BRACHYRHAMPHUS TEMMINCKII.

Vol. II. Plate LXXI.

APOBAPTON BRANDT.

110. BRACHYRHAMPHUS WRANGLEII.

This bird having been figured by AUDUBON as the adult of *B. Marmoratus* (*Uria Townsendii* of his plate) it is unnecessary to publish a representation of it in this work. From recent investigations mentioned by Dr. COUES in his monograph of the Alcidae, it seems that there can be but little doubt that the heretofore considered adult of *B. Marmoratus*, is this species of BRANDT, up to the present time always a troublesome subject to American Ornithologists.

A recently described bird, with the same habitat and general appearance of *B. Hypoleucus*. It is not at all unlikely that they may prove to be the same when we obtain further information regarding this one. The drawing was made from a sketch sent by Dr. SALVADORI to Prof. BAIRD, to whom I am much indebted for the privilege of copying it for this work. The original description is as follows:

"Juv. ?—*Uria minima*, crassitie MERGULI ALLE; supra fusco-nigra, dorso ac alis nonnihil griseo-tinctis. Subtus alba; rostro valde elongato, subulato, nigro; tarsi, postice nigris, antice viride-luteis, unguibus nigris."

"Long tot., 0.245.; al., 0.125; caud., 0.018; rostri a rictu, 0.037; tarsi, 0.022; dig. med. cum ungue, 0.024.

ANOBAPTON.

Bon. Compt. Rend. Vol. XLII. (1856.) p. 774.

113. BRACHYRHAMPHUS BRACHYPTERUS.

114. — KITTLITZII. Juv.?

BRANDT. Bull. Acad. St. Petersb. Vol. II. (1837.) p. 346.

These two species described by BRANDT, as above cited, are unknown to American Ornithologists. They are stated to come from Unalasehka and Kamtschatka respectively, and the only noticeable character is that the tarsus of *B. Brachypterus* is said to be longer than the middle toe, a circumstance entirely at variance with all the members of this family, none of whom have a middle toe shorter than the tarsus.

In the foregoing pages are included all the birds which the scope of this work required should be contained within it. I have designated the species, good, bad or indifferent, as they seemed to be in my judgment, never hastily, but always after careful and patient investigation; in all cases desiring to accord full credit to my fellow-ornithologists. It is always unpleasant to be obliged to differ from those who are working in the same field, and striving for the same end; but my duty would not have been fully accomplished had I not honestly expressed the conclusions, which my researches led me to believe were correct, although at times they might conflict with those promulgated by others.

As the *furor specificus* still rages, and our boundaries do not appear to have yet attained their farthest verge, future volumes will probably be required to make known the discoveries in the Avi-fauna of our country; and when another shall arise to portray the forms and relate the habits of the new members of the feathered tribes inhabiting our limits, no one will be more ready to accord to him a hearty greeting and give such assistance as can be rendered, than he who now lays down his pen and pencil, having finished his work; albeit it may not, in some degree, be altogether such as he could wish it might have been.

EXPLANATION OF THE ABBREVIATIONS,

AND

LIST OF AUTHORS AND WORKS REFERRED TO.

- AUD. B. OF AMERICA. *Audubon in Birds of America.*
AUD. ORN. BIOG. *Audubon in the Ornithological Biography.*
BAIRD, B. OF N. AM. *Baird in Birds of North America.*
BAIRD, REV. N. AM. BIRDS. *Baird in Review of North American Birds.*
BELL, ANN. LYC. NAT. HIST. *Bell in Annals of the Lyceum of Natural History in New York.*
BOIE ISIS. *Boie in the Isis.*
BON. COMPT. REND. *Bonaparte in Compte Rendue.*
BON. COMP. LIST. *Bonaparte in Geographical and Comparative List of the Birds of Europe and North America.*
BON. CONSP. AV. *Bonaparte Conspectus Generum Avium.*
BRANDT MEM. ACAD. ST. PETERSB., 6TH. SER. SC. NAT. *Brandt in Mémoires de l'Académie Impériale des Sciences de St. Petersbourg.*
Sixième série Sciences Naturelles.
BREHM VOG. DEUTSCH. *Brehm Vogel Deutschlands.*
BRISS. ORN. *Brisson, Ornithologie ou Méthode contenant la division des Oiseaux en Ordre, Sectiones, &c.*
CAB. & HEIN. MUS. HEIN. *Cabanis & Heine. Museum Heineanum.*
CAB. WEIGM. ARCHIV. *Cabanis, Wiegmann Archives.*
CAB. JOUR. FUR ORNITH. *Cabanis Journal für Ornithologie.*
CASS. PRO. ACAD. NAT. SCIEN. *Cassin in Proceedings of the Academy of Natural Sciences of Philadelphia.*
CASS. JOUR. ACAD. NAT. SCIEN. *Cassin in the Journal of the Academy of Natural Sciences of Philadelphia.*
CASS. ILL. *Cassin, Illustration of the Birds of California and Texas.*
COOP. PROC. ACAD. NAT. SCIEN. *Cooper in the Proceedings of the Academy of Natural Sciences of Philadelphia.*
COOP. & SUCKL. NAT. HIST. WASH. TERR. *Cooper & Suckley, Natural History of Washington Territory.*
COUES PROC. ACAD. NAT. SCIEN. *Coues in the Proceedings of the Academy of Natural Sciences of Philadelphia.*
COUES MON. PROCELL. PROC. ACAD. NAT. SCIEN. *Coues' Review of the Procellariidae in the Proceedings of the Academy of Natural Sciences of Philadelphia.*
COUES IBIS. *Coues in the Ibis.*
COUES REV. LARID. PROC. ACAD. NAT. SCIEN. *Coues' Review of the Laridae in the Proceedings of the Academy of Natural Sciences of Philadelphia.*
CUV. REG. ANIM. *Cuvier Regne Animal.*
ELLIOT PRO. ACAD. NAT. SCIEN. *Elliot in the Proceedings of the Academy of Natural Sciences of Philadelphia.*
ESCHSH. ZOOL. ATLAS. *Eschscholtz Zoologischer Atlas.*
EYTON MON. ANAT. *Eyton Monograph of the Anatidae.*
GAMB. PROC. ACAD. NAT. SCIEN. *Gambel in the Proceedings of the Academy of Natural Sciences of Philadelphia.*
GAMB. JOURN. ACAD. NAT. SCIEN. *Gambel in the Journal of the Academy of Natural Sciences of Philadelphia.*
GIRAUD B. OF TEXAS. *Giraud, Birds of Texas.*
GMEL. SYST. NAT. *Gmelin, Systema Naturæ.*
GOULD PROC. ZOOL. SOC. *Gould in Proceedings of Zoological Society of London.*
GOULD VOY. SULP. *Gould in the Voyage of the Sulphur. Zoology.*
GOULD B. OF AUST. *Gould in the Birds of Australia.*
GOULD HANDB. B. OF AUST. *Gould in Handbook of the Birds of Australia.*
GOSSE B. OF JAMAICA. *Gosse in Birds of Jamaica.*
GRAY GEN. OF BIRDS. *Gray and Mitchell in the Genera of Birds.*
GRAY PROC. ZOOL. SOC. *Gray in the Proceedings of the Zoological Society of London.*
GRUBER MSS. *Gruber Manuscript.*
GUND. ANN. LYC. NAT. HIST. *Gundlach, Annals of the New York Lyceum of Natural History.*
HEARNE JOURN. NOR. OCEAN. *Hearne, Journal to the Northern Ocean.*
HEERM. PROC. ACAD. NAT. SCIEN. *Herrmann in the Proceedings of the Academy of Natural Sciences of Philadelphia.*
ILLIG PRODR. *Illiger Prodromus Systematis Mammalium et Avium, &c.*

- KENNERLY PROC. ACAD. NAT. SCIEN. *Kennerly, Proceedings of the Academy of Natural Sciences of Philadelphia.*
- KEYS. & BLAS. WIRBELT. EUROP. *Keyserling und Blasius, Wirbelthiere Europas.*
- KITTLITZ KUPF. NAT. VOG. *Kittlitz Kupfertafeln zur Naturgeschichte der Vogel.*
- LATH. IND. ORNITH. *Latham, Index Ornithologicus.*
- LAWR. ANN. LYC. NAT. HIST. *Lawrence, Annals New York Lyceum of Natural History.*
- LAWR. B. OF N. AM. *Lawrence in Birds of North America.*
- LAWR. PROC. ACAD. NAT. SCIEN. *Lawrence in Proceedings of the Academy of Natural Sciences of Philadelphia.*
- LEACH, CATAL. BRIT. BIRDS. *Leach, Catalogue of British Birds.*
- LEACH, STEPH. GEN. ZOO. *Leach in Stephens' General Zoology.*
- LESS. TRAITE D'ORNITH. *Lesson, Traité d'Ornithologie.*
- LINN. SYST. NAT. *Linnaeus, Systema Naturæ.*
- MALH. MON. PICIDAE. *Malherbe, Monographie des Picidae.*
- MALH. REV. ET MAG. ZOO. *Malherbe Revue et Magasin de Zoologie.*
- NAUM. ISIS. *Naumann in the Isis.*
- NEWTON ZOO. *Newton in the Zoologist.*
- NEWTON IBIS. *Newton in the Ibis.*
- PALLAS ZOOG. ROSSO-ASIAT. *Pallas, Zoographica Rosso-Asiatica.*
- PALLAS SPICIL. ZOO. *Pallas, Spicilegia Zoologica.*
- RAY SYN. METH. AV. *Ray, Synopsis Methodica Avium et piscium opus posthumum.*
- REICHENB. JOUR. FUR ORNITH. *Reichenbach, Journal fur Ornithologie*
- SAY LONG EXPED. *Say in Long's Expedition to the Rocky Mountains.*
- SCHLEG. MON. PROCELL. MUS. PAYS BAS. *Schlegel, Monographie des Procellaridae Musée de Pays Bas.*
- SCLAT. PROC. ZOO. SOC. *Sclater, Proceedings of the Zoological Society of London.*
- SCLAT & SALV. EX. ORNITH. *Sclater and Salvin in Exotic Ornithology.*
- SPIX AV. BRASIL. *Spix, Avium Species novæ quas in itinere per Brasiliam.*
- STELLER, MSS. PALL. *Steller, Manuscript of Pallas.*
- STEPH. SHAW. GEN. ZOO. *Stephens in Shaw's General Zoology.*
- STRICKL. PROC. ZOO. SOC. *Strickland, Proceedings of the Zoological Society of London.*
- SW. & RICH. FAUN. BOR. AM. *Swainson and Richardson, Fauna Boreali Americana.*
- TEMM. FAUN. JAP. *Temminck and Schlegel, Fauna Japonica.*
- TEMM. PLAN. COLOR. *Temminck Planches Coloriées des Oiseaux.*
- TEMM. MAN. D'ORNITH. *Temminck Manuel d'Ornithologie.*
- TOWN. JOUR. ACAD. NAT. SCIEN. *Townsend, Journal of the Academy of Natural Sciences of Philadelphia.*
- VIEILL. OIS. AM. *Vieillot, Histoire Naturelle des Oiseaux de l'Amérique Septentrionale.*
- VIEILL. ANALY. *Vieillot, Analyse d'une Nouvelle Ornithologie élémentaire.*
- WILS. AM. ORN. *Wilson, American Ornithology.*
- XANT. PROC. ACAD. NAT. SCIEN. *Xantus in the Proceedings of the Academy of Natural Sciences of Philadelphia.*

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HARPORHYNCHUS CINEREUS.

CINEREOUS THRUSH.

HARPORHYNCHUS CINEREUS. XANTUS. Proc. Acad. Nat. Scien. (1859), p. 298. BAIRD. Ib., p. 303. Id., Rev. N. Am. Birds, p. 46.

THE Cinereous Thrush is one of the novelties which rewarded Mr. XANTUS's rescarches at Cape St. Lucas, in Lower California. It resembles very closely the Mountain Mocking Bird (*Oroscoptes Montanus*), but is somewhat larger and rather differently marked.

All we know of its habits and economy is contained in the following short account given by Mr. XANTUS:

"This species is very abundant at the Cape, and its nests are found among the cactuses in large numbers. The eggs resemble those of the Mocking Birds much more than those of the rest of the genus."

Upper parts cinereous brown, rufous on the rump. Primaries darker brown than the back. Under parts pale yellowish white, changing to a buff on the under tail coverts. Breast and sides thickly marked with blackish brown sagittate spots, these somewhat lengthened on the sides. Tail dark brown, the lateral feathers tipped with white. Two narrow indistinct bands of white on the wings. Bill and feet brownish black.

The figures are life-size.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philada.

HARPORHYNCHUS CINEREUS.

PARUS MONTANUS.

ROCKY MOUNTAIN TITMOUSE.

PARUS MONTANUS. GAMBEL. Proc. Acad. Nat. Seien. (1843), p. 259.
BAIRD, B. of N. Amer., p. 394.

THE Rocky Mountain Titmouse was discovered by the late Dr. GAMBEL, near Santa Fé. It is nearly allied to the *P. atricapillus*, but may be distinguished from it by the lines of white running over the eye, and white front. Dr. GAMBEL gives the following account of this bird: "This new and distinct species I first observed about a day's journey from Santa Fé, in New Mexico, and from thence in all the ranges of the Rocky Mountains, nearly to California. Its manners and notes are very much like those of the common Chickadee, but the latter are more weak and varied. It keeps, also, much in low bushes, where, from morning to night, with untiring patience and activity, it may be seen hopping from bush to bush, searching them minutely for small insects. It also frequently descends to the ground, to pick up small seeds; when thus occupied, it occasionally stops, looks around, and utters a slender *tē-dē-dē-dē*, then, altering to *dē-dē-dāit*, flies off to some other bush. On the Rio Colorado, it kept much in the cotton-wood trees which grew along its banks, and its notes, which became familiar, were almost the only ones heard in the winter, when we were there, to cheer our course. This species is sometimes seen in company with the *P. minimus* and *Regulus calendula*, which at this time are roving in large and busy flocks along the small streams.

"Although so very abundant in the western ranges of the Rocky Mountains, particularly near the Great Salt Lake, where, in some of the high wooded mountains, the trees were almost alive with them, yet I never saw them on the other side of the Californian ridge—much to my surprise—where the other species of Titmice so abound."

Dr. COUES found this Tit. resident throughout the Territory of Arizona, particularly in the pine tracts, but nowhere very numerous.

Head, upper part of neck, throat, and upper portion of breast—black. Forehead, line above the eye, and also one below it, auriculars and sides of neck—white. Entire upper parts, ash; under parts, lighter; flanks, tinted with a rufous brown; bill and feet, black.

The Figures are life-size.

Drawn from Nature by D. G. Elliot, F. Z. S.

Bowen & Co. lith. & col. Philada.

PARUS MONTANUS.

LOPHOPHANES INORNATUS.

PLAIN-CRESTED CHICADEE.

PARUS INORNATUS. GAMB. Proc. Acad. Nat. Scien., Phil., (1845,) vol. II, p. 265. Ib. Journ. Acad. Nat. Scien., Phil., 2d Ser., (1847,) vol. I, p. 35.

LOPHOPHANES INORNATUS. CASSIN. Ill., vol. I, p. 19. BAIRD. B. of N. Amer. p. 386.

THIS plainly colored little bird was first brought to the notice of Ornithologists by Dr. WM. GAMBEL, who discovered it near Monterey, and afterwards found it very common in Upper California where it was in the habit of frequenting the evergreen oaks in company with other Western species of the family.

Dr. GAMBEL in his account of this species, says that the first time he saw the bird it "was actively flitting about among the evergreen oaks of the vicinity, in company with large flocks of the Chestnut-backed and Least Titmouse, all in restless activity, searching every branch for insects. Among the busy throng I could not well distinguish its notes, but they appeared to resemble very much those of the common Black-cap, and on my following it up, uttered a loud scold, erecting its high and pointed crest, and looking as angry as possible at the intrusion. I afterwards found it common, frequenting in small flocks tall bushes and branches of small trees, uttering a weak and slender *tsee day day, tsee day day dait.*"

The L. Inornatus bears some resemblance to the L. Bicolor, but besides being considerably less, it differs in having a whitish instead of a black front, no rufous upon the flanks, and in having the back more of an olive color.

Upper part of the body dark olive; under part whitish. Head and crest similar to the back, forehead whitish. Bill and feet lead color.

The figures are life-size.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philad.

LOPHOPHANES INORNATUS.

CAMPYLORHYNCHUS AFFINIS.

ALLIED WREN.

CAMPYLORHYNCHUS AFFINIS. Xantus. Proc. Acad. Nat. Scien. (1859), p. 303.

Who is not familiar with the sprightly Wren, that active, busy, daring little fellow, who builds his nest in the garden, in the porch, nay, beneath the very windows of our country houses, and carols forth his sweet song in the early spring time, cheering his mate in her duty of incubation? Never at rest, but continually darting from place to place, now snapping up an unwary insect, now peering inquisitively into some sheltered nook; creeping through some old decayed log, no sooner seen at one end than out at the other; ever fearless, chattering, lively, and friendly, he is altogether one of our most charming feathered visitors.

Many species are found in the United States, some of which sometimes remain with us throughout the year, braving the severity of the winter's blast, and may be seen on a clear sunny day, actively employed about the wood-pile, darting in and out among the logs, incessantly on the move, and apparently as happy and cheerful as when in the spring they seem likely to split their little throats pouring forth their love-song from some swaying twig.

But the species now under consideration is a native of warmer climes, and never ventures far to the northward. It was discovered by Mr. Xantus, a zealous naturalist, at Cape St. Lucas, in Lower California, and at first sight would very likely be confounded with its relative, the *A. Brunneicapillus*, figured by Mr. Cassin in his work on the Birds of California and Texas, but it has sufficient characters to separate it from that species.

Although Mr. Xantus was successful in procuring several species of birds, when at Cape St. Lucas, which were new to science, he has not yet, I believe, published any account of their habits; consequently, regarding those of the bird now under consideration, we have nothing better than conjectures. Still, we may feel assured they would not differ materially from those of its near ally mentioned above, of which Dr. Heermann, in the Journal of the Philadelphia Academy, Vol. II. p. 263, thus writes: "I found this bird in the arid country back of Guaymas, on the Gulf of California. The country itself is the picture of desolation, presenting a broken surface, and a confused mass of volcanic rocks, covered by a scanty vegetation of thorny bushes and *Cacti*. In this desert I found several interesting species which enter into our fauna as birds of Texas, and this species was one of the number. It appeared to be a lively, sprightly bird, uttering at intervals a clear, loud, ringing note. The nest, composed of grasses and lined with feathers, was in the shape of a long purse, laid flat between the forks or on the branches of a cactus. The entrance was a covered passage, varying from six to ten inches in length. The eggs, six in number, are of a delicate salmon color, very pale, and often so thickly speckled with ash, and darker salmon-colored spots, as to give a rich cast to the whole surface of the egg."

The principal difference between these two species appears to be that the spots of the under parts in this one are larger and more nearly of the same size. The tail feathers of *C. Affinis* are uniformly banded with white from the base, while the lateral tail feathers of its relative are black, with a subterminal band of white. The following is Mr. Xantus' description of the type specimen:

"Above greyish olive, each feather on the back streaked with white, bordered externally by black. Upper tail coverts and upper surface of tail grayish with indistinct transverse black bars much broken, quills with a marginal row of rounded whitish spots on each web. Beneath white, sometimes very faintly tinged behind with yellowish brown; the whole under surface quite uniformly marked with rounded spots (more elongated anteriorly), and of much the same size. On the breast these spots are rather angular, and generally do not cross both webs; posteriorly, however, they are more central, and several are sometimes strung along the shaft of the feather. These spots are larger and rounder on the under tail coverts. Tail feathers, excepting the two central, black, each web banded from the base with alternating bars of white, six or more in each series. Top of the head uniform cinnamon brown, perhaps slightly paler towards the edges of the feathers; a white line from the nostrils over the eye to the nape, the white, however, streaked with black. Bill and legs dark brown, base of under mandible paler."

The figures are of the natural size.

Drawn from Nature by D.C. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philada.

CAMPYLORHYNCHUS AFFINIS.

HELMINTHOPHAGA LUCIÆ.

LUCY'S WARBLER.

HELMINTHOPHAGA LUCIÆ. COOPER. Cal. Acad. Scien. (1861), p. 120.

BAIRD. Rev. B. of N. Am., p. 178.

COUES. IBS. (1866.) p. 260.

This beautiful Warbler is as yet known only as a native of Arizona, and I am not aware that it has been discovered without the limits of that Territory. Its peculiarly marked head and rump serve readily to distinguish it from all the rest of the family. My friend, Dr. COUES, whose residence in Arizona has made him familiar with the habits of the birds of that Territory, has kindly furnished me with the following interesting account of this species :

"Lucy's Warbler has, thus far, been found only in two localities, both in Arizona. Dr. J. G. COOPER discovered it at Fort Mojave, on the Great Colorado, and I detected it at Fort Whipple, in the interior of the Territory. It is obviously impossible to define its geographical distribution with more than approximate accuracy. It will probably be found in time in California, New Mexico, and perhaps Texas, as well as in Arizona. This species reaches the mountainous parts of Arizona during the second or third week in April, and remains during the summer, and through part of September. It is not, however, a common bird; and the naturalist who would study its habits must be on the alert. Its small size and dull colors conspire to render it inconspicuous, so much so, that, were it not for its active and restless habits, and shrill notes, it would pass almost unnoticed. It appears to shun heavy pine woods, preferring groves of deciduous trees, and particularly coppices of willow and cottonwood, such as fringe the course of the streams in Arizona. Its general appearance, and its motions, as it skips incessantly among the leaves, remind one strongly of a Gnat-catcher of the genus *Poliophtila*. The colors are very similar, and it has much the same tremulous motion of the wing and tail. Its ordinary note is a sharp, shrill, wiry chirp, pitched in a key almost as high as the squeak of a mouse, and this "tsip" is constantly uttered as the bird forages for the tiny insects that form its food. I have never heard it sing; but Dr. COOPER says, in the spring-time, it has a pleasing song.

"This species must mate very shortly after its arrival, for I have found fully-fledged young birds as early as the 24th May. I was making my way through a thick clump of young willows, when my attention was drawn by hearing the notes of this bird, as if with alarm and anxiety, and I shortly saw the mother-bird fluttering close by, in great distress. The nest was somewhere in the clump of bushes, but I did not succeed in finding it. One of the young birds, however, was discovered, tottering on a slender spray, the others had probably not yet left the nest. This little one I managed to capture, after considerable difficulty; and I found that it was colored almost precisely like the adults. The chestnut brown of the rump was present, but the patch on the crown was wanting; the wing coverts were edged and tipped with pale rufous, and the throat and breast were pure milk-white, without the yellowish suffusion that is found in the adults. I think that the nest, when discovered, will be found in the crotch or fork of a low bush, and not on the ground.

"I have never seen this species dart out into the air to capture passing insects; but I presume that, occasionally at least, it does so. Like others of its genus, it is entirely insectivorous; and the times of its arrival and departure are determined mainly by the supply of the minute winged insects upon which it feeds. Dr. COOPER is of opinion that it does not breed in the Colorado Valley, from the circumstance of his not finding it there in summer; but this is only negative evidence."

This pretty species was named by Dr. COOPER, in honor of the amiable daughter of Prof. S. F. BAIRD.

There does not appear to be any difference in the plumage of the sexes.

The species may be described as follows :

Top of head and upper tail coverts, dark chestnut brown. Upper plumage cinereous. Quills and tail-feathers brown, edged externally with gray, the outer feather of the latter having a white patch on the inner web, near the end. Beneath, whitish, tinged with buff on the throat, breast, and flanks. Iris brown. Tarsi blue. The figures are life-size.

The plant is the *Flox Drummondii*.

Drawn from Nature by D.G. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philada.

ECELMINTHOPELAGA LUCIAE.

DENDRÆCA GRACIÆ.

GRACE'S WARBLER.

DENDRÆCA GRACIÆ. COUES. Proc. Acad. Nat. Scien., p. 67 (1866).

THIS beautiful little warbler is very unlike any other known to inhabit the United States. It was discovered by my friend, Dr. ELLIOTT COUES, when stationed at Fort Whipple, in Arizona. His account of it is as follows. "First met with July 2d, 1864, in the pine woods covering the summit of Whipple's Pass of the Rocky Mountains. I saw no more on my journey into Central Arizona, till again among the pines at Fort Whipple, where it is a very common bird, being, in fact, as abundant as *vireus* or *striata* in our eastern forests. It will doubtless be found in the forests of the San Francisco Mountains. Its range seems to include all the pine tracts of New Mexico and Arizona, from near the Valley of the Rio Grande to that of the Great Colorado. It breeds about Whipple; how far south it may go in winter into Mexico, I am unable to say.

"Arrives at Fort Whipple April 20th, and remains until third week in September. Almost exclusively pinicoline. An active, industrious, noisy species, possessing marked muscieapine habits, flying out from its perch to capture passing insects. Like many other diminutive birds, it ambitiously prefers to inhabit the tallest trees. It has several notes, one of which is the ordinary 'tsip,' emitted at all times by both old and young of most small insectivorous birds. Its song proper, only heard in spring, consists of two or three loud, sweet whistles, somewhat slurred, followed by several continuous notes resembling 'chir-r-r,' in a wiry but clear tone. This note is of much power for the size of the bird. Another song, uttered when pairing, is much like that of *Setophaga ruticilla*. The birds mate as early as May 1st, and doubtless raise two broods, as I have found newly-fledged young as late as the middle of August."

Dendroeca Graciæ has also been found by Mr. C. WOOD, at Belize, Honduras, where it is quite common. Dr. COUES says that "they are rather smaller than my Arizona specimens, but otherwise quite identical."

The species may be described as follows:—

Entire upper parts ash-gray; back and upper tail-coverts indistinctly streaked with black. A bar of black from the bill to near the back of head; centre of the crown spotted with black. A yellow line from the bill over the eye, terminating in pure white. A black spot between the eye and the bill. Greater wing-coverts broadly tipped with white. Primaries brown, with light edges. Chin, throat, and upper part of breast bright yellow. Rest of under parts pure white. Flanks streaked with numerous black lines. Middle tail-feathers dark brown; next has a small spot of white on the inner web; the third has nearly half the outer web white,—and the remainder are pure white, except the shafts, which are brownish. Bill and feet black. The figures are of the natural size.

The plant is the *Rubus Occidentalis*—Wild Black Raspberry—and was drawn from studies kindly furnished me by my friend, Mr. W. J. HAYS.

Drawn from Nature by D. G. Elliot, F. Z. S.

Bowen & Co. lith. & col. Philada.

DENDROICA GRACEAE.

than the sixth, but a little longer than the seventh. I have introduced it in my plate, not for its claim to be deemed a species, but in order to render the representation of the members of this family obtained by Dr. Cores, in Arizona, as complete as possible. "It reaches," writes my friend, "the latitude of Fort Whipple toward the latter part of April and remains until October, the precise time of its departure varying somewhat with the state of the season. It is a common species in this locality, though not so abundant as *V. Plumbeus*. The country affords the high open dry forests which it is fond of inhabiting, and which indeed seem a necessary condition of its existence. Pine woods are much resorted to, as well as the groves of spreading cottonwoods, which border the water courses of the Territory. I have never seen it in shrubbery or tangled undergrowth, and doubt if it frequents these situations, which the white-eyed Bell's and the Least Vireo are so fond of. Its song is sweet and melodious, hardly, if at all, differing from that of the warbling Vireo, to which it is intimately related in most other points of habit. It pairs shortly after its arrival, and young birds are abundant in June. The latter speedily acquire a plumage which is almost indistinguishable from that of the adults, though the colors may be slightly brighter, and more decidedly yellowish beneath. Both old and young often become exceedingly fat in the early fall, when their insect food is very abundant and easily secured."

Upper parts a dark olive. A white streak from the bill, above the eye. Below the eye white. Flanks washed with pale yellow; rest of under parts pure white. Bill black; feet black.

The figure is the natural size.

VIREO PUSILLUS.

LITTLE VIREO.

VIREO PUSILLUS. Cores. Proc. Acad. Nat. Scien., (1866), p. 76.

VIREO PUSILLUS. Baird. Rev. N. Am. Birds, p. 360.

The present bird is an inhabitant of the southwestern portion of the United States, and the following account, furnished by Dr. Cores, contains all that is known of its habits. "This is a rather common species of Lower and Southern California, and Arizona, at least during the summer. It has not been observed to the north or east of the last mentioned country, and I believe it hardly reaches the northern boundary of that Territory. I never observed it at Fort Whipple, though it occurs in the lower country a few miles south or west of that locality. It appears chiefly a bird of the Colorado Valley, where Dr. J. G. Cooper has found it. Mr. Xantus procured it at Cape St. Lucas. In its general habits it resembles the white-eyed Vireo (*V. noveboracensis*) of the East, and particularly Bell's Vireo (*V. Belli*) of the middle province, to which last it is most closely allied in form, size, and color. It appears to shun high open forests, and to be, like the two species just named, an inhabitant of thickets, copses, and clumps of bushes. It is a shy and timid species, and one rather difficult to observe or capture from the nature of the places it inhabits, which enable it readily to evade pursuit, by hiding in impenetrable brush. The song of the species is different from that of any other with which I am acquainted, though not without a certain resemblance to that of Bell's. The notes are very sweetly warbled, and skillfully modulated, producing an effect almost as pleasing as the soft strains of the warbling Vireo. It breeds in June, as I had an opportunity of ascertaining, though I was not fortunate enough to discover the nest. Upper mandible light bluish brown, which fades in drying into dull reddish brown. Iris brown. Legs and feet dull leaden blue. Dr. Cooper has recorded this species from Fort Mojave, under name of *V. Belli*, in the Proceedings of the California Academy of Natural Sciences. The latter species, so far as known, does not extend so far west."

Head ashy grey; upper parts greyish olive. A narrow superciliary streak, white; as are also the eyelids, two bands on the wings, and outer margins of wings and tail. Beneath pure white, faintly washed with greyish brown upon the breast. Bill has the upper mandible a light brown color; lower mandible yellowish white. Feet bluish black. The figure is life size.

The plant is the Nuttalia Malviflora—Mallow—flowered Nuttalia.

VIREO PLUMBEUS.

LEAD-COLORED VIREO.

VIREO PLUMBEUS. COUES. Proc. Acad. Nat. Scien., (1866), p. 74.

VIREOSYLVA PLUMBEA. BAIRD. Rev. N. Am. Birds, p. 349

DR. COUES, whose opportunities for observing these new species of Vireos, have been greater than any other Ornithologist, and I am indebted to him for the privilege of being able to publish in this work, the information he has obtained concerning them. He thus writes me regarding this bird:

"In reply to your inquiries of this species, I have to say that the Plumbeus Vireo is by far the most abundant of the three which I discovered in Arizona, and is the characteristic species of the Territory. It represents the solitary or blue-headed Vireo (*V. Solitarius*) in the whole Rocky Mountain region, although the last named species has been found on the Pacific coast. It seems chiefly a bird of the Middle Province. Its northernmost recorded locality is Laramie Peak, and the southernmost Colima, though it may proceed northward beyond our limits. In the Middle States it is only a summer resident, retiring to Mexico, or perhaps to Central America to pass the winter. It arrives at Fort Whipple the second or third week in April, and remains through part of October. It is a woods-loving species, preferring tall open forests, and rarely descending into tangled thickets. Though I saw more in pine woods than elsewhere, still it was quite common in the oak openings and the cottonwood tracts, and it is everywhere a conspicuous feature in the scenery of the woods, as viewed by any ornithologist's eye. It is a very active and restless bird, and may be seen at all times during the day, industriously pursuing its insect food, even during the midday heat, when most other small birds are taking a siesta after their morning meal. While foraging in the trees, its loud voracious notes are constantly uttered, but carelessly, as it were, the songster having, it would seem, too close an eye to business to pay much attention to the quality of the music. Besides the greatly varied song proper, the species has another very different note, a harsh, disagreeable, grating '*tshay-tshay*', which is uttered when the bird is angry or alarmed. Notes something like these last are almost the only ones uttered by the young for some time after they leave the nest."

Upper parts lead color, a slight tinge of olivaceous is perceptible upon the rump. A white streak from the nostril runs over the eye, but not beyond it; the lower eyelid also white. Loros blackish. Primaries and secondaries are edged with white, and the rectrices have also the same upon both the exterior and interior margins, decreasing in width until almost wanting on the central feathers. Entire under parts pure white; flanks washed with pale olive. Bill bluish black; feet leaden blue.

The figure is life size.

VIREO VICINIOR.

COUES' VIREO.

VIREO VICINIOR. COUES. Proc. Acad. Nat. Scien., (1866), p. 75.

VIREO VICINIOR. BAIRD. Rev. N. Amer. Birds, p. 361.

This interesting little bird was obtained by my friend, Dr. Coues, in Arizona. In reply to my inquiries regarding it he kindly sends me the following:—

"I regret to state that I can give but very little information of this species. The type specimen which you figure, remains as yet unique. I only met with the species on one occasion, when an adult male was procured, May 24th, at Fort Whipple, Arizona. It was discovered in high open woods, associated with *V. Plumbeus*, which is common in that locality, and is probably a very rare bird, at least within our limits. I have no doubt it is a summer visitant to Arizona from Mexico, though it may possibly winter in the warmer southern portions of the Territory. How far north it proceeds in summer, or how wide a range it has in the United States, are at present matters of conjecture.

Entire upper parts plumbeous, tinged with olive on the rump; under parts pure white; a narrow white ring around the eye; greater wing coverts are tipped with white, and some of the primaries are edged with the same; bill and feet bluish black.

The figure is the size of life.

VIREO SWAINSONI.

SWAINSON'S VIREO.

VIREO SWAINSONI. COUES. Proc. Acad. Nat. Scien. (1866), p. 73. BAIRD. B. of N. A., p. 336.

VIREO GILVUS. COOPER & SUCKLEY. Nat. Hist., Wash Terr. (1860), p. 183.

VIREOSYLVA SWAINSONI. BAIRD. Rev. N. Am. Birds, p. 343.

SWAINSON'S VIREO so closely resembles the Warbling Vireo (*V. Gilvus*), that it seems very doubtful if it has any claim to be considered as distinct. The chief and perhaps only differences are that while the *V. Gilvus* has the third primary longest, with the fourth and fifth a little shorter, and the second a little longer than the sixth, the present bird has the fourth primary longest, third and fifth equal, and the second shorter

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. Lith. & Col. Philada.

1. VIREO PLUMBEUS. 2. V. VICINIOR. 3. V. SWAINSONI. 4. V. PUSILLUS.

CHRYSOMITRIS LAWRENCEI.

LAWRENCE'S GOLDFINCH.

CARDUELIS LAWRENCEI. CASSIN. Proc. Acad. Nat. Scien. Phila. (1850), p. 105.

CHRYSOMITRIS LAWRENCEI. BON. Comptes Rendus (1853), p. 913. BAIRD. B. of N. Am., p. 424. COUES. Proc. Acad. Nat. Scien. Phil. (1864), p. 83.

This pretty little bird was first discovered by Mr. J. G. BELL, in California, and described by Mr. CASSIN, who named it in honor of our mutual friend Mr. G. N. LAWRENCE, so well and favorably known for his attainments in American Ornithology. Mr. BELL's account of this species is as follows: "This bird I first observed at Sonoma. In habits it much resembled our common Goldfinch (*C. Tristris*). The flock out of which I shot these two was feeding, in company with the small black-headed species (*C. Psaltria*), on the seeds of plants growing near the ground, and when disturbed alighted upon the nearest bushes. When flying, they keep up a constant chattering or calling, like our common species. I also saw this bird at San Diego, feeding as above in company with the crimson-fronted Bullfinch (*Corpodacus Frontalis*), in the open prairie. I never saw it in the mountains."

Dr. COUES, who procured this bird also in Arizona, says that it was "abundant; probably resident. My numerous examples of this species, so widely dissimilar from any other, were all taken at Fort Whipple in winter. Although I never noticed it at any other season, I have little doubt that it is a permanent resident, breeding in the mountains of Northern Arizona. I have seen examples from Fort Tejon, Cal. The differences between winter and spring or summer specimens consists in little else than the replacing of the yellow dorsal spot by olive gray, either pure or a little mixed with yellowish. The yellow of the other parts is as bright as in spring, and the black frontlet remains intact."

The male has the top of the head, space between the eye and bill, and upper portion of the throat black. Back, sides of head and body, abdomen, and upper tail coverts ash-color. Breast, rump, lesser wing coverts, and outer edge of primaries yellow. Wings black, the inner webs margined with white, increasing in width toward the bases of the feathers. Tail black, with a broad white patch on the inner webs of the feathers. Under tail coverts white. Bill and feet flesh-color.

The female wants the black of the head and throat, which is replaced with ash, and the yellow of the breast and rump is only faintly indicated; otherwise similar to the male. The figures are life-size.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philada.

CHRYSOMITRIS LAWRENCEI.

ÆGIOTHUS EXILIPES.

AMERICAN MEALY RED-POLL.

ÆGIOTHUS EXILIPES. COUES. Proc. Phil. Acad. (1861), p. 385.

This Linnet, so closely allied to the *A. Linarius*, is a native of Northern America, and has never to my knowledge been observed within the limits of the United States. It was elevated to a specific rank by Coues in his able Monograph of this family, published in the Proceedings, as above quoted, and differs from its relative in the shape of its bill, white rump, and particularly small, weak feet, from which latter circumstance it derives its scientific name.

The type specimen, an adult male, was obtained at Fort Simpson, on the 30th of April, 1860, but no record of its habits or economy has been given by its discoverers.

It may be described as follows:

A patch on fore-part of head, crimson. Occiput, and upper parts, yellowish, streaked with dusky. Rump, white. Primaries and secondaries, dark brown: the first, narrowly; the latter, broadly tipped with white. The greater coverts also tipped with the same, forming transverse bars. Upper-tail coverts, dusky in their centres; under-tail coverts, white. Under parts, white; the throat and upper part of breast, in some specimens, tinged with rose. Flanks, streaked with dusky. Bill, horn-color at the base, blackish at the tip. Feet, black.

The figures are life-size.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philada.

AEGITHUS EXILIPES.

ÆGIOTHUS FUSCESCENS.

DUSKY RED POLL.

ÆGIOTHUS FUSCESCENS. COUES. Ornith. Lab. Proc. Acad. Nat. Sci. Phil. (1861), p. 222.
IDEM. Mon. Gen. Ægiothus, Proc. Acad. Phil. (1861), p. 380.

THIS bird, raised to specific rank by Dr. COUES, as above referred to, appears to be half way between *A. Rostratus* and *A. Linarius*, the differences consisting in size of body and bill, and length of primaries. In color, it is very similar to the former species. It was obtained by its describer in Labrador, who gives the following account of its habits :

“ This interesting bird, though by no means so common as the Tit-lark, or White-crowned Sparrow, is yet abundant along the coast of Labrador, where, apparently, it replaces the allied *Chrysomitris Tristis*, its southern representative. It is a remarkably familiar and unsuspicious species, showing no signs of fear, even when very closely approached. It frequents almost exclusively the scrubby juniper, which grows everywhere in open places, in thick, almost impenetrable patches. I do not think I ever observed it in more densely wooded districts. Its flight is performed in an irregular, desultory manner, rising and falling in cycloidal curves, and is seldom protracted to any great distance. While passing overhead, it utters continually a peculiar rattling chirp impossible to describe, yet once heard never to be mistaken ; and while seated on a twig, or engaged in searching for food, it has all the plaintive and varied modulations for which the *C. Tristis* is so noted, and from which the latter derives its specific name. I never heard anything that could, with any propriety, be called a song. The food of this species consists entirely of the seeds of various grasses, and when shot while feeding, it will be found to have the throat crammed with them. In this respect, as well as in voice, flight, and general manners, I could not but be struck with the similarity which exists between this bird and the common goldfinch.”

Upper parts chocolate brown. Rump tinged with rosy-red, streaked with dusky-brown. Ocular space and patch on throat brownish black. Wings and tail dark brown, margined with whitish. Throat and breast rosy-red. Sides thickly marked with narrow lines of dark brown. Under parts white. Bill brown.

Female resembles the male, but wants the red on breast.

The figures are of natural size, and are placed on a branch of the apple-tree in blossom.

Drawn from Nature by D. G. Elliot, F. Z. S.

Bowen & Co lith. & col. Phila. da.

AEGIOTHUS FUSCENS.

LEUCOSTICTE GRISEINUCHA.

GRAY-HEADED FINCH.

LINARIA GRISEINUCHA. BRANDT. Orn. Ross. 1842.

LEUCOSTICTE GRISEINUCHA. BONAP. Consp. (1850), p. 537. BAIRD. B. of N. Am., p. 430.

LEUCOSTICTE GRISEOGENYS. GOULD. Proc. Zool. Soc. (1843), p. 104. Ib. Voy. Sulphur (1844), Vol. I., p. 42, Plate XXII.

THIS rare bird was described over twenty years ago by Mr. GOULD, in the "Proceedings of the Zoological Society of London," and figured in the "Voyage of the Sulphur." Nothing was recorded of its habits at that time, it being merely stated that it came from Russian America. It has only lately been received in any American collection, one specimen having been obtained by the naturalists connected with the Overland Telegraph Expedition at Sitka, and sent to the Smithsonian Institution. This example, through the kindness of the Secretaries of that Institution I have been enabled to represent upon the accompanying plate. I much regret that nothing further is known of this handsome species than when it was first described.

Head gray; forehead and throat rich dark brown. Wing coverts, upper and under tail coverts, flanks, and abdomen conspicuously marked with rosy-red. Primaries and tail feathers brown margined with red. Rest of plumage a rich umber-brown. Bill yellow, feet black. The figures are life-size.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philada.

LEUCOSTICTE GRISEINUCHA.

PASSER DOMESTICUS.

EUROPEAN HOUSE SPARROW.

FRINGILLA DOMESTICA. LINN. Syst. Nat., tom. I., p. 323.

PYRGITA DOMESTICA. CUV. Rég. Anim., 2d edit., tom. I., p. 439.

PASSER DOMESTICUS. RAY. Syn., p. 36.—MEYER. Brit. Birds., Vol. III., p. 69.—GOULD. B. of Gt. Brit., Part IV.

THIS familiar little bird, generally distributed throughout Great Britain and Europe, is also found in Algeria, Egypt, Asia and Persia. Within the last few years it has also become a naturalized citizen of the United States, and is seen in considerable numbers in some of our large sea-board cities, where it has been the means of freeing the trees from those pests the inch-worm, (*Ennomos subsignaria*), which destroyed the foliage, and by their habit of hanging from the branches in myriads, and attaching themselves to the dresses of those passing by, rendered the streets anything but pleasant.

This sparrow is a fearless, indeed an impudent little fellow, and evidently considers himself to be on very intimate terms with every one about him, and does not hesitate to avail himself of any favorable spot upon the dwelling-house to place his nest; where, totally unconcerned with whatever may be occurring in his vicinity, he, with his energetic mate, bring up their chattering brood.

Jersey City was the first residence of this little foreigner in the western world, and for several years I saw them in the streets picking up seeds and crumbs, or clustering in the winter around the little houses, thatched with straw, which had been placed in the trees for their protection. They rapidly increased, and as they thrived, the worms decreased in number, until, at the present time, in the particular location in which I usually saw them, but few of these pests are found.

The House Sparrow feeds upon seeds, grain, worms, insects, larvæ, &c., and is consequently prying into every crevice in search of any creeping thing which may have hidden itself therein. Mr. GOULD mentions some instances in his article on this species in the Birds of Great Britain, which show the daring effrontery of this bird. "It is not a little amusing to watch closely the ways and doings of our constant attendant, the Sparrow, who as if presuming upon our friendship, sets no bounds to his impudence towards his feathered brethren, and with great effrontery frequently seizes upon the hole selected by the Starling wherein to form its nest, and continues to hold possession until the Starling, losing all patience, takes him by the neck, and with main force draws him from the hole. This little altercation ended, and the stronger bird in possession, matters grow more amicably. It not unfrequently happens that the fairy Martin, which constructs her mud nest under the eaves of our houses, has scarcely finished her labors ere the sparrow seizes on the building. The Martin is said to revenge itself upon the intruder in a curious way. To fight so powerful a bird would answer no end, she therefore plasters up the entrance to the nest with mud, and thus keeps him a prisoner."

It is only very lately (August, 1868) that as I was passing an undertaker's shop in Jersey City, I saw one of these birds hopping about in the glass window, which had been left open, inspecting in every way the caskets which were on exhibition.

The nest of the Sparrow, when built among the branches in the natural way, is an enormous structure, composed of grasses firmly wound together, and lined with feathers, &c. The eggs, about six in number, are white spotted with dark brown. In this city (New York) the Sparrow appears to congregate in the greatest numbers in Union and Madison Squares, where houses have been placed for their accommodation upon high poles, and baths scattered over the grounds, where at almost any time during the day, the little fellows can be seen plunging into the water, and splashing about until thoroughly wet, when they betake themselves to the neighboring trees to dry. In the spring the male is very active and fussy, flying about the female and strutting around her with drooping wings even in the centre of the streets. The young, as soon as fledged, are in the habit of sitting around the door, or on the roof of their little houses, where the parents feed them.

The male has the upper part of the head and the nape slate-color. Lores, chin, throat and upper part of breast black. Ear-coverts grayish white. A broad band of chestnut extends over the eye. Back and scapulars deep chestnut, with a black central streak. Lesser wing-coverts chestnut, tipped with white, forming a bar. Primaries and Secondaries black, edged with chestnut. Upper tail-coverts gray. Tail-feathers blackish brown, edged with light brown. Entire under parts cinereous gray. Bill black. Feet and Tarsi light brown.

The female differs from the male by having the crown and upper parts light brown, each feather on the back with a central dusky streak. Entire under parts yellowish brown; no black upon head or throat.

The figures are life-size. The branch is the wild cherry (*Cerasus Virginiana*) in blossom.

Drawn from Nature by D. G. Elliot, F. Z. S.

Bowen & Co. Lith. & col. Philada.

PASSER DOMESTICUS.

PASSERCULUS ALAUDINUS.

LARK SPARROW.

PASSERCULUS ALAUDINUS. BONN. Compt. Rend. XXXVII. (1853.) P. 918. BAIRD. B. of N. A., p. 446.

This species, so closely resembling the *P. Savanna* as to make it very doubtful if it should really be considered distinct, is a native of California and Texas. On comparing this bird with the *P. Anthinus* and *P. Savanna*, the variations are indeed so slight that one might easily be pardoned if he should refer them all to one and the same species. The *P. Anthinus* is a little smaller, and some specimens possess a greater number of spots upon the under parts, but this does not appear to be constant in all examples, and the variations between the three species (?) are not greater than can be found among other species of birds which extend over a large tract of country. I do not believe that the science of Ornithology is in any way advanced, by instituting species so closely allied as to make their recognition impossible, without having a large number of specimens for comparison, which are not often attainable; and this custom, which appears to be increasing, is to be deprecated, as tending more to confuse than to elucidate this beautiful study.

The species of this genus confine themselves chiefly to the ground, run with great agility, are seldom seen upon the wing, and hide themselves in the grass on the approach of danger. The nest is placed upon the ground, and is formed of grasses. The eggs, four to six in number, are bluish-white, faintly mottled with brown.

The present bird has the crown brown spotted with black; a broad median stripe of yellowish-gray. A superciliary streak from the bill to the back of head, and eyelids, yellow. A white stripe on the ear coverts, margined on each side with brown. Upper parts, grayish-brown, each feather with a central stripe of blackish-brown. Entire under parts, white; somewhat thickly spotted with brown, on the throat, sides of neck, upper part of breast, and flanks. Tail, brown; the two central feathers, blackish-brown, edged with whitish. Primaries, brown; the outer one, edged with white. Upper mandible, dark brown; under mandible, horn-color. Legs and feet, flesh-color.

The specimen from which the above description was taken came from California, and, except in its smaller size, can hardly be distinguished from the *P. Savanna*.

The figures are life-size.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. lith & col Philada.

PASSERCULUS ALAUDINUS.

ZONOTRICHIA BELLI.

BELL'S FINCH.

EMBERIZA BELLI. CASS. Proc. Acad. Nat. Scien. Phila. (1850), p. 104; pl. IV.

POOSPIZA BELLI. SCLAT. Proc. Zool. Soc. (1857), p. 7. BAIRD. B. of N. Amer., p. 470.

CALIFORNIA is the native country of this pretty little sparrow, and in the vicinity of Sonoma it is rather common. It is easily recognizable from our other Finches, the black spot upon its white breast being one of the most noticeable markings.

It was first discovered by my friend Mr. J. G. BELL, during his visit to California, and he relates the following few facts regarding it: "This bird I shot first near Sonoma, and afterwards at San Diego; its habits much resemble those of the painted bunting (*S. Ciris*). I observed several of them amongst the wormwood at the edge of the hills, sitting on the tops of the small bushes, singing, and when disturbed would dart downwards. The song is quite unlike that of any of our Finches, rather low and plaintive, and perhaps most resembles that of the swamp sparrow (*A. palustris*). It is neither a very active nor a shy bird, and was not rare at the localities mentioned."

This species has also been observed in the valley of the Gila and Colorado rivers as far as Fort Thorn. I have placed this sparrow in the genus *Zonotrichia*, as it seems to possess more of the characters of that genus, than of *Poospiza*, to which it has been referred by Dr. SCLATER.

Upper parts bluish-ash. A small spot from bill to the eye white. A stripe on each side of the throat, and spot on the breast, black. Feathers of the wing edged with yellowish brown. Under parts white. Flanks and under tail-coverts light brown. Tail dark brown, lighter on the edges. Bill dark brown. Feet and tarsi light brown.

The figures are life-size. The plant is the *Mimus Cardinalis* from California.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philada.

ZONOTRICHIA BELLI.

PIPILO ALBIGULA.

WHITE-THROATED FINCH.

PIPILO ALBIGULA. Baird, Proc. Acad. Nat. Scien., (1859), p. 305.

This Finch very closely resembles the *P. Mesoleucus*; indeed, so much alike are they, that most persons would not probably notice any difference. The variations are, that the present bird has rather more white in the centre of the abdomen, and the dusky spots which border the chin and throat do not extend quite so far, and are better defined, while the yellowish hue of the chin is followed on the throat by whitish.

This bird was obtained by Mr. Xantus, at Cape St. Lucas, in Lower California, and was sent by him, in a collection containing many novelties, to the Smithsonian Institution. The region in which it was procured is one not very promising for bird-life, being generally sterile in character and forbidding in aspect. The following account of it is from Prof. Baird's paper, published in the Proceedings, as quoted above: "The shore is sandy for about a quarter of a mile inland, whence a cactus desert extends for a width of about six miles up to the high mountains on the West and North. The *Cereus giganteus* is a prominent feature in this peculiar vegetation, rising occasionally to a height of sixty or more feet. The ground is covered for miles with an efflorescence painful to the eye, into or through which the feet sink to a considerable distance. There is no fresh water nearer than San José, a distance of twenty-eight miles. The region, though in the spring and summer inhabited almost exclusively by land-birds, is said in the rest of the year to be the resort of innumerable water-fowl and waders."

From this forbidding district, however, many new and curious species were added by Mr. Xantus to our avi-fanua.

Upper part of head, chestnut. Back, brownish-ash. Wings and tail, dark-rufous; outer edge of primaries, light grey. Chin, yellow; throat, white, both bordered by a row of dusky spots. Lower part of breast and belly, white; flanks, light brown. Under tail-coverts, dark buff. Bill, upper mandible, black; lower, dark brown. Legs and feet, brown.

The figures are life-size.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philada.

PIPILO ALBIGULA.

CARDINALIS IGNEUS.

FIERY CARDINAL.

CARDINALIS IGNEUS. BAIRD. Proc. Acad. Nat. Scien. p. 305 (1859).

THIS species was obtained by Mr. Xantus at Cape St. Lucas, and described by Prof. Baird, as above quoted. His remarks upon it are as follows: "A Cardinal, very abundant at the Cape, appeared at first sight to be the same with the *C. Virginianus*. A comparison, however, of a large number of males with as many from the eastern United States and Texas, shows a difference in the entire absence of black on the forehead between the nostrils, the red of the head coming down to the base of the culmen. The black of the side of the bill extends to the nostrils, but not between them on the forehead, as in *Virginianus*. The bill is larger and decidedly more tumid. The size, shape, and colors are as in *Virginianus*, the bill, too, being red instead of white, as in *Phœnicus*."

No account of the habits is given, and whether the male possesses the musical powers of his eastern relative, causing the thickets to echo with his sweet notes, poured forth to cheer his patient mate, as she undergoes the weary duty of incubation; or whether, with equal courage and pertinacity, he attacks all other members of the feathered race which may venture too near the place where the nest is hidden, perchance upon some low bush or tree, near to a running brook, we cannot say; but we may feel assured that his brilliant plumage, and lively, graceful movements, as he flits rapidly from twig to twig,—now in full view, the sun glancing in fiery rays from his scarlet livery, now half hidden behind some leafy screen,—would attract the attention of the most unobservant person, and gratify even those who may take but little interest in the beings that compose one of the most beautiful and attractive of the Almighty's creations.

The female closely resembles that of *C. Virginianus*, but may be distinguished by its very much larger bill.

The figures are of the size of life.

Drawn from Nature by D. C. Elliot, F.Z.S.

Bowen & Co lith & col Philada.

CARDINALIS IGNEUS.

CYANURA MACROLOPHA.

LONG-CRESTED JAY.

CYANOCITTA MACROLOPHA. Baird, Proc. Acad. Nat. Scien., Phil., Vol. VII, (1854), p. 118.

CYANURA MACROLOPHA. Baird, B. of N. Amer., p. 582.

CLOSELY allied to the *C. Stelleri*, the present species may, however, be readily distinguished by its much longer crest, white instead of blue streaks on the forehead, and the white patch over the eye, which is absent in its relative.

It is a native of the Rocky Mountains and the table-lands of Mexico, and doubtless is as noisy, and possesses as many thieving propensities, as we are accustomed to find in better known members of this genus.

The type-specimen was procured by Dr. Kennerly in 1854, near Albuquerque, New Mexico, and described by Prof. Baird as mentioned above. No account of its habits has been recorded, but we probably will not err if we suppose that they would resemble those of its relatives which are more familiar to us.

Head and crest, black. Back, light brown. Wings and tail, bright blue, banded with black. Under parts, greenish blue. Fore-head marked with whitish streaks, and a white patch over the eye. Bill, legs, and feet, black.

The figures are of the natural size.

Drawn from Nature by D. C. Elmer, F. Z. S.

Bowen & Co. lith. & col. Philada.

CYANURA MACROLOPHA.

CONTOPUS PERTINAX.

PERSISTENT FLYCATCHER.

CONTOPUS PERTINAX. Cab. Mus. Hein., Vol. II., 1859, p. 72. Id. COUES, Proc. Acad. Nat. Scien. (1866) p. 60.

THIS species is common in Mexico, and in some of the countries still farther south, but was not known to be an inhabitant of any portion of our territory, until Dr. COUES obtained it in Arizona. He says that it is a "very rare summer resident at Fort Whipple, a single specimen, taken August 20th, in good plumage, though most other Flycatchers were in moult. The bill was black, the lower mandible and mouth rich orange yellow. The present species is one of the several Mexican and Peninsular birds which are found in upper Arizona, doubtless following the valley of the great Colorado." We have no account of its economy and habits.

Upper part of head, blackish brown. Entire upper parts, dark green. Throat, ash. Flanks and upper part of breast, ashy brown. Abdomen, yellowish white. Wings, brown; secondaries, tipped with whitish. Primaries and tail, dark rufous brown. Under tail coverts, yellowish white. Upper mandible, black; under mandible, horn color. Feet, black.

The figures are the natural size. The plant is the Podophyllum Peltatum. May Apple.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philada.

CONTOPUS PERTINAX.

METREPHORUS FULVIFRONS.

GIRAUD'S FLYCATCHER.

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- MUSCICAPA FULVIFRONS. GIRAUD, B. of Texas, pl. II., fig. 2.
EMPIDONAX FULVIFRONS. SCLAT. Proc. Zool. Soc. (1858), p. 301.
EMPIDONAX RUBICUNDUS. Cab. & Hein. Mus. Hein. Vol. II., p. 70.
MITREPHORUS FULVIFRONS. SCLAT. Proc. Zool. Soc. (1859), p. 40. Id. Ibis. (1859), p. 442.
EMPIDONAX PYGMAEUS. COUES. Ibis. (1865), p. 537.
MITREPHORUS PALLESCENS. COUES. Proc. Acad. Nat. Scien. Phil. (1866), p. 63.
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THIS little bird, properly a native of Mexico, though sometimes penetrating within our borders, was first described by GIRAUD, among his new species of birds from Texas. It was afterwards obtained by Dr. COUES, during his sojourn at Fort Whipple, in Arizona, who, supposing his specimens as undescribed, gave them the name of Pallescens, from their light color. The differences, however, in the hue of the plumage, from that of those figured in my plate, are caused, probably, as Dr. COUES supposed might be the case, by "age or season."

Three species of this genus, as restricted by Dr. SCLATER, are now known—the present one, together with *M. Phæcerus*, and *M. Aurantiventris*, all of them closely allied.

I know nothing of their habits.

The figures are life-size. The plant is the *Centredemia Rosea*, Rose-flowered Centredemia.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philada.

MITREPHORUS FULVIFRONS.

NEPHOCAETES NIGER.

NORTHERN SWIFT.

CYPSELUS NIGER. GOSSE. Birds of Jamaica (1847), p. 63.—Gund. & Law. Ann. N. Y. Lyc. (1858), Vol. VI. p. 268.
CYPSELUS BOREALIS. KENNERLY. Proc. Acad. Nat. Scien. Phila. (1857), Vol. IX. p. 202.
NEPHOCAETES NIGER. BAIRD. B. of N. Amer., p. 144.

DR. KENNERLY, who was attached to the Northwestern Boundary Survey as Surgeon and Naturalist, observed this Swift on Puget Sound, at Simiahmo Bay. He says that "a number of these birds were seen for several evenings flying near our camp, in company with large numbers of *Cypselus Vauxii*. They kept for the greater part near the edge of the forest, and generally flew so high as to be out of the reach of shot of any usual size. One specimen was obtained, which is a male, in apparently adult plumage." In a recent interesting publication by Mr. J. K. Lord, styled, "The Naturalist in British Columbia," the following account of this species occurs: "Among the earliest of these visitors I noticed the Northern Swift (*Nephocaetes Niger*, Baird). It was a foggy day, early in June, and, the insects being low, the birds were hovering close to the ground. I shot four. The next day I searched in vain, but never saw the birds again until the fall of the year, when they a second time made their appearance in large numbers—birds of the year as well as old ones. From their habit of flying at a great height it is extremely difficult to obtain specimens. I believe I again saw this Swift at Fort Colville. In June I observed a very large number of Swifts, in company with about an equal number of Goat-suckers (*Chordeiles Popetue*); they were hovering at a great altitude. After waiting a very long time, I succeeded in obtaining one Goat-sucker. The Swifts never came within shot, neither did I ever after see them. On opening the Goat-sucker, its stomach was perfectly gorged with winged ants. I have no doubt this was the attraction which delayed the Swifts on their northern route; and from the fact of their disappearing here, as they did at Sumass, I imagine they go far north to nest; had they bred anywhere along the Boundary line, I am sure I must have discovered them."

General color of this Swift is a dark brown, sometimes glossed with green, but becoming lighter on the breast. Primaries rather lighter than the back, with their inner webs ashy brown. Bill and feet black.

Drawn from Nature by D. G. Elliot, F. Z. S.

Bowen & Co. lith. & col. Philada.

NEPHROCETES NIGER.

ATTHIS HELOISÆ.

HELOISA'S HUMMING-BIRD.

ORNYSMIA HELOISA. LESS. et DE LATT. Rev. Zool., 1839, p. 15.
MELLISUGA HELOISA. GRAY & MITCH. Gen. of Birds, Vol. I., p. 113.
TRYPLÆNA HELOISA. BONP. Rev. et Mag. de Zool. (1854), p. 257.
SELASPHORUS HELOISÆ. GOULD. Mon. Troch., Vol. III., pl. exli.
ATTHIS HELOISÆ. GOULD. Introd. Mon. Trochil., p.

THE temperate regions of Mexico are the resort of this beautiful species of humming-bird. M. DE LATTRE, its discoverer, obtained the first specimens between Jalapa and Quatepee, and he says that the male rises very early, does not search for food after nine o'clock in the morning, seldom leaves the female and young, and confines himself to the forests, but does not disdain field flowers.

In the Introduction to his Monograph of the Trochilidæ, Mr. GOULD has instituted a new genus for this bird, as it seemed to possess characters separating it from Calothorax and Selasphorus, to whose members it was nearest allied, and his term *Atthis*, I have retained.

Although it is now generally represented in collections, nothing more is known of its economy and habits than the few facts already given below.

The male has the head and upper surface golden green; wings brown. Throat glistening lilaceous red, the feathers considerably lengthened on the sides. Flanks buff. Upper part of breast, abdomen and under tail-coverts white. Tail has the central feathers bright green, the remaining ones are red at base, succeeded by a band of black, and terminating with an oval white spot. Bill is black, feet flesh-color.

Female similar to the male, but is destitute of the brilliant gorget, the throat being white spotted with brown.

The figures are life-size. The plant is the *Begonia Biserrata*.

Drawn from Nature by D. G. Elliot, F. Z. S.

Bowen & Co. lith. & col. Philada.

ATTHIS HELOISAE.

HELIOPÆDICA XANTUSI.

XANTUS' HUMMING-BIRD.

AMAZILIA XANTUSI. LAWR. Ann. Lyc. Nat. Hist. in N. Y. (1860).

HELIOPÆDICA CASTANEOCAUDA. LAWR. Ann. Lyc. Nat. Hist. in N. Y. (1860).

HELIOPÆDICA XANTUSI. GOULD. Mon. Trochil., Vol. II., pl. 65.

THIS beautiful little creature was obtained by Mr. XANTUS during his residence at Cape St. Lucas, and was one of the most interesting of his ornithological discoveries. It was described by Mr. LAWRENCE, one of our best Trochilidists, and named in honor of the gentleman who has, by his investigations, added so many species to our avi-fauna. Unfortunately, we have nothing to relate concerning its economy or habits, as the bird is still rare in collections, and apparently no notes have been taken of its mode of life by those who have been so fortunate as to meet with it in its native haunts. This is to be much regretted, as everything relating to such a brilliant, fairy-like bird would always be interesting and acceptable. This species, although closely allied to the *H. Melanotis*, from Mexico and Guatemala, can readily be distinguished from it by several characteristics not necessary to enumerate here.

The male has the head black, with a white line extending backward from behind the eye. Upper parts grass green. Tail chestnut red, with an edging of gold around the central feathers, but a narrow line of blackish on the ends of the lateral ones. Throat brilliant green. Wings purplish brown. Sides and under wing coverts grass green. Abdomen, and under tail coverts, rufous. Bill flesh-color, with the end black.

Female.—Crown ash, variegated with purple and green; over the eye a line of rufous, terminating in white; below the eye, and extending under the white line, is another of brown. Upper plumage light green. Upper tail coverts edged with rufous. Tail chestnut red, central feathers golden green; the lateral feathers have black spots on both webs near the ends, decreasing in size towards the outermost ones. Under parts pale rufous; vent white. Upper mandible black; under, flesh-color for half its length, tip black.

The figures are life-size. Plant is the *Cuphea Cordata*.

Drawn from Nature by D. G. Elliot, F. Z. S.

Bowen & Co. lith. & col. Philada.

HELIOPAEDICA XANTHUSII.

STELLULA CALLIOPE.

MEXICAN SATELLITE.

TROCHILUS CALLIOPE. GOULD. Proc. Zool. Soc., part XV., p. 11.

CALOTHORAX CALLIOPE. GRAY & MITCH. Gen. of Birds, Vol. I., p. 110.—GOULD. Mon. Troch., Vol. III., pl.

STELLULA CALLIOPE. GOULD. Introd. Mon. Troch., p. 90.

THIS elegant little bird was first discovered on the table lands of Mexico, by Signor DAMIANO FLORESI, in the neighborhood of the Real del Monte mines, which region it occasionally visits. It is quite a rare bird, and comparatively few collections contain examples of it. It is not confined to Mexico however, but in its wanderings has penetrated northward even within the boundaries of the State of California, specimens having been procured from thence by Prof. BAIRD, and it is upon these that I include the species among the Birds of North America.

Nothing has been recorded of its habits, or economy. Upper parts shining green; feathers of throat somewhat lengthened, rich pink with their bases white. Wings and tail light brown. Flanks green, rest of under parts white. Bill and feet blackish-brown.

Female differs materially from the male, and has the upper surface golden green; tail black, greyish at base, two outer ones tipped with white. Under surface white. Throat specked with brown, without any of the rich color so conspicuous in the male. Abdomen and under-tail coverts shaded with buff.

My drawing was made from a specimen kindly loaned to me by Mr. G. N. LAWRENCE.

The figures are life-size. The plant is the *Gesneria Purpurea*.

Drawn from Nature by D. G. Elliot, F. Z. S.

Bowen & Co. lith. & col. Philada

STELLULA CALLIOPE.

XENOPICUS ALBOLARVATUS.

WHITE-HEADED WOODPECKER.

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- LEUCONERPES ALBOLARVATUS. CASS. Proc. Acad. Nat. Scien. (1850), p. 106.
MELANERPES ALBOLARVATUS. CASS. Jour. Acad. Nat. Scien. (1853), p. 257. pl. 22.
PICUS ALBOLARVATUS. BAIRD, B. of N. Am., p. 96.
XENOPICUS ALBOLARVATUS. BAIRD, B. of N. Am., p. 83. Malh. Mon.
Picidæ, vol. II. p. 222 (texte), pl. CL, fig. 314, vol. IV.
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THIS very singular Woodpecker is a native of California, and other States on the Pacific. It was described by Mr. CASSIN, who gave to the species the appropriate name of *Albolarvatus*, or White-Masked, from the peculiar distribution of white over the head and upper portions of the neck.

Mr. JOHN G. BELL discovered this species in California, near a place called Sutter's Mill. He says: "I shot this bird at the Oregon Cañon, near Georgetown, about twelve miles from Sutter's Mill. It seemed to prefer the tall pine trees, and generally kept very high. In habits it appeared very much like the *P. Villosus*. Its note is clear and sharp, and it is very active and lively in its movements.

This Woodpecker seems to be very abundant in the vicinity of Fort Crook, in California, where the late Capt. J. FEILNER, U. S. A., procured many specimens, which he sent to the Smithsonian Institution. It is one of the most conspicuous in appearance of all the woodpeckers inhabiting our territory, and, until lately, among the rarest.

Head, throat, and upper portion of the breast—pure white. Occipital band, scarlet. Basal portion of the primaries, also white. All the rest of the plumage, black.

The female is same as the male, but without the scarlet band on the occiput. The figures are life-size.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co. lith. & col. Philada.

XENOPICUS ALBOLARVATUS.

SPHYRAPICUS THYROIDEUS.

"The note of this species is very peculiar, and is appreciably different from that of any other of its family with which I am acquainted. It is loud and of much volume, but very guttural in tone, consisting of two or three short harsh syllables, quickly repeated, and followed by a succession of rapidly pronounced trilling notes, in the same guttural tone. Mr. Nuttall would probably have likened it to some such combination of letters as ' *kuk, kuk, k'r-r-r-r.*'

"Some specimens have a few reddish feathers intercalated among the brownish ones of the chin, forming an imperfect spot something like that of *S. Williamsoni*. In the majority of specimens, however, there is no red upon the head or neck. The black pectoral spot varies greatly in its purity and extent, being sometimes scarcely appreciable. The iris of both sexes is clear light brown. The bill, legs, and feet are deep-leadened bluish-black."

Head and throat reddish brown, with obscure lines and spots of black; the male (?) has a small red spot on the chin. Back, wing-coverts, flanks, and lower tail-coverts yellowish, striped transversely with white and black. A broad transverse band of black on the upper part of the breast. Rump and upper tail-coverts white; middle of abdomen yellow. Primaries and tail black, irregularly spotted with white. Bill black; feet and tarsi bluish-black. The figures are of the natural size.

SPHYRAPICUS THYROIDEUS.

BLACK-BREASTED WOODPECKER.

MELANERPES THYROIDEUS. CASSIN. Ill. 1854, p. 201, pl. 32.

PICUS THYROIDEUS. Id. Proc. Acad. Nat. Scien. (1851), p. 349.

THIS pretty species was first discovered in California by Mr. John G. Bell, our well-known taxidermist, who informed me that one morning, as he was going to the place where he was engaged looking for gold, his attention was attracted by hearing the note of some bird close at hand, which he did not recognize.

He soon caught sight of the present species, as it was busy searching for food in the bark of a tree near by, and shot the only specimen there was; subsequently, in another locality, he procured a second.

Dr. Heermann, who also obtained this species in California, says that, in the southern mines of that State, it frequents more especially the pine trees. He never saw it alight on the oaks, although they are abundant in that locality, and considers it as one of the most rare of the Woodpeckers of that country.

My friend, Dr. Elliott Cones, so well known by his various able Monographs of North American birds, had many opportunities for observing this Woodpecker during a recent sojourn at one of the government posts in the far West, where he was attached to the command in his medical capacity; and has kindly sent me the following interesting account of the species, which is the more valuable, as up to this time nothing has been known of either its economy or habits, and I am happy to be able to produce in this work, for the first time, the history of the Black-breasted Woodpecker, derived from so reliable a source.

“FORT WHIPPLE, ARIZONA, August 14, 1865.

“This interesting and elegant Woodpecker is still a comparatively rare bird in collections, and though of quite extensive distribution in the Western portions of the United States, appears to be nowhere very abundant. It is known to extend from as far North at least as Oregon and Washington Territories, along both slopes of the Rocky Mountains, to the valleys of the Rio Grande and Colorado. Its southern limit is not well ascertained, but it probably goes into Sonora, passing along the mountain ranges of Arizona. In this territory, where I have had an opportunity of studying its habits, it is chiefly a pinicoline species; that is, inhabiting the more elevated portions of the country where pines form the characteristic features of the sylvia. But it is by no means confined to these trees; for I have found it also on open hill-sides, in the chaparral formed by the scrub oaks of the region; and, especially during the Autumn, it may often be seen among the tangled undergrowth of creeks and rivulets, feeding upon various fruits and berries.

“The Thyroid Woodpecker has been referred to various genera. In its general pattern of coloration it somewhat resembles *Colaptes*, but in many points of anatomical structure it is very dissimilar from that genus. Of all the Woodpeckers, the species of *Colaptes* have perhaps the most protrudable and vermiform tongues, the bones of which, extremely long and almost filamentous, curve far around the vertex of the skull. As I have already asserted (*vide* Pr. A. U. S. Ph. Mar. 1 sec. p. ,) this species is entirely congeneric with *S. Varius*, with which it closely agrees in the anatomical peculiarities of its tongue, and in the habits which are induced by the structure of this organ. The cornua of the *os hyoides* are so short as to scarcely reach beyond the tympano-maxillary articulation, and the muscles by which the movements of the tongue are effected, are proportionately diminished in size and power. The tongue cannot be protruded far beyond the bill, nor is it strongly barbed. In shape it is more flattened; its apex is obtusely rounded and thickly beset with hairs. Although I have never actually *seen* wood from which the bark had been denuded by this species, for a space of several square inches, yet I have not the slightest doubt that such is the habit of the bird, and that it is truly lignivorous, feeding upon the soft inner bark of live trees. It may, and certainly does, also eat insects; but the shape of its tongue and the movements of which the latter is capable, preclude the possibility of its extracting them from deep holes in the wood, as is the wont of most other species of the family. In the Autumn particularly, the Thyroid Woodpecker feeds to a considerable extent upon wild fruits, berries, grapes, &c., and often becomes exceedingly fat.

“I have always found it a rather shy and wary bird, and experienced more difficulty in procuring specimens than is usually found to be the case with species of *Picus*, *Melanerpes*, etc. This is particularly the case in early Spring, when the birds are pairing; but in the Fall, when grown fat and lazy through abundance of food, and nothing to do but eat it, they are much less watchful. Their flight does not differ from that of the common Yellow-bellied Woodpecker of the Eastern States; the bird alternately rising and falling in long beautifully regular cycloidal curves; during the descent along which the wings are nearly closed, to be again opened and vigorously flapped, as it ascends at the termination of the cycloid. Almost all Woodpeckers, I believe, thus *festoon* themselves from tree to tree, although in going long distances their flight may be more firm and direct.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co lith. & col. Philada.

SPHYROPICUS THYROIDEUS.

COLAPTES CHRYSOIDES.

MALHERBE'S GOLDEN-WINGED WOODPECKER.

GEOPICUS CHRYSOIDES. MALH. Rev. et Mag. Zool. (1852), p. 553.—Ib. Mon. Piciidæ.
COLAPTES CHRYSOIDES. BAIRD. B. of N. Amer., p. 125.

ALTHOUGH combining in its plumage the characteristic markings of *C. Auratus* and *C. Mexicanus*, yet the present species is distinct from both, and rather inferior to each of its relatives in size. MALHERBE first described the bird, from a specimen of a female contained in the Paris Museum, and although he was led to believe it came from America, he was unable to learn the locality where it was killed. It was obtained by Mr. SCHOTT, on the line of the Mexican boundary survey, but here, also, the precise locality was not given. Mr. XANTUS, however, procured it at Cape St. Lucas in Lower California, where he reported it to be very abundant.

No account whatever has been recorded of either its economy or habits, but without doubt, in both respects, it resembles those species to which it is so intimately related.

It may be described as follows: Top of head light reddish brown; upper parts ashy brown, barred transversely with black. Rump white; upper tail-coverts white, conspicuously barred with black. Shafts of wing feathers, and entire under part of wing gamboge-yellow. Throat ash, a broad mustache of red on side of throat; a broad band on upper part of breast, and round spots on feathers of under parts black. Under parts light brown. Tail black, basal portions yellow. Bill black. Female without mustache. The figures are size of life.

Drawn from Nature by D. G. Elliot, F.Z.S.

Bowen & Co lith & col Philada.

COLAPTES CHRYSOIDES.

SCOPS KENNICOTTI.

KENNICOTT'S SCREECH-OWL.

SCOPS KENNICOTTI. ELLIOT. Proc. Acad. Nat. Scien., (1867), p. 99.—SELAT. & SALV. Ex. Ornith. Part VII., p. 102.

This new form of Screech-Owl was obtained in Sitka by the naturalists attached to the expedition engaged in stretching the lines which are to place in telegraphic communication the two great continents of America and Asia; and is a most interesting addition to our Avi-fauna. KENNICOTT'S Owl is intermediate in size with the Scops Asio and Otus Wilsonianus, but is very different from both of these; one of its most distinctive characters being a concealed tuft of white feathers just above the ears.

The specimen whose portrait is here presented, is unique, and forms one of the attractions of the Chicago Academy of Natural Sciences, and was kindly loaned to me, for the purpose of being introduced into this work, by the officers of that institution.

Nothing is known regarding this bird, the single specimen sent to us being the only evidence we have of its existence, and I cannot even state if it is rare in the locality where it is found.

I quote from my article on this bird, published in the proceedings of the Philadelphia Academy.

"In bestowing on this Owl the name which I trust it is ever destined to bear, I simply express the desire which I am sure is felt by all ornithologists, to render honor to him, who, combining the intrepidity of the explorer with the enthusiasm of the naturalist, twice penetrated the forbidding cheerless districts of the far north, in order to extend the knowledge of his favorite science; and who perished in his early manhood, in the full tide of his usefulness, on the banks of the Yukon. Ornithology has met no greater loss, in these later days, than in the death of Robert Kennicott."

The specimen may be described as follows: Head and upper parts light-rufous brown, each feather having a central streak of brownish-black, and also barred with the same color. Outer feathers of the inter-scapulars have the outer webs light buff, forming a distinct bar. Wings same color as the back. Primaries dark brown, outer webs marked with distinct spots of light buff, slightly discernible on the inner. Secondaries blackish-brown, outer webs distinctly spotted with dark buff. Tertiaries mottled with light buff and black. Ear-tufts light buff, with a central streak of black, and barred with the same; broadest on the outer webs. Feathers of the disk reddish-brown; those covering the nostrils, soiled white with black shafts. Concealed patches of white equi-distant between the ear-tufts and the ears. Upper part of breast light buff; the feathers having black central streaks. Flanks light buff, with a central black streak on each feather and a bar of yellowish-white near their tips. Abdomen and under-tail coverts yellowish-white, a few indistinct brown bars on the latter. Tarsi reddish-brown, feet yellowish-white. Bill black, white at tip; claws chestnut at base, remainder black.

The figure is life-size.

Drawn from Nature by J. Wolf, London, 1867.

Bowen & Co. lith. & col. Philada.

SCOPS KENNICOTTI.

SCOPS FLAMMEOLA.

FLAMMULATED OWL.

SCOPS FLAMMEOLA. LICH. In Mus. Berol., Nomencl. p. 7.—KAUP. Trans. Zool. Soc., Vol. IV., p. 226.—SCH. et SALV. Ex. Ornith. Part VII., pl. L.

MORE properly belonging to the southern portions of this continent, as Mexico, Guatemala, etc., this species has however been obtained at Fort Crook in California, by the late Capt. FEILNER, U. S. A., and this specimen was deposited in the collection of the Smithsonian Institution.

It is one of the most diminutive of our American Owls, not much larger indeed than the *Micrathene Whitneyi*, but is very differently marked, and the toes are entirely denuded of feathers.

No accounts of its habits have been obtained. I am indebted to the secretaries of the Smithsonian Institution for the loan of the specimens represented in the accompanying plate.

The species may be described as follows: Entire upper parts dark brown, the feathers mottled with ashy white and rufous. Front, line over the eye, narrow band at occiput, and one parallel on upper part of back greyish-white. Outer web of scapulars rufous, forming a very conspicuous line above the wing. Wing brown, with six white spots on outer web of primaries; secondaries spotted with buff on their inner webs. Tail dark-brown, mottled with buff. Two white rows on the wings, formed by spots on outer webs of the feathers. A rufous brown ring around the eye. Throat light brown. Entire under parts white, with longitudinal black stripes, bordered with reddish on some feathers, and crossed with black and dark-brown on others, presenting a confused and mottled appearance. Bill dark brown, horn-color at tip. Feet dusky.

The figure is life-size.

Drawn from Nature by Edwin Sheppard.

Bowen & Co. lith. & col. Philada.

SCOPS FLAMMULA.

MICRATHENE WHITNEYI.

WHITNEY'S PIGMY OWL.

ATHENE WHITNEYI. COOPER. Proc. Cal. Acad. Nat. Scien. (1861), p. 118.

MICRATHENE WHITNEYI. COUES. Proc. Acad. Nat. Scien. Phil. (1866), p. 51.

This extraordinary little Owl was obtained by Dr. J. G. COOPER at Fort Mojave, on the Colorado river, 35° N, on the 26th April, 1861, and this specimen, the one from which my drawing was made, is at the present time, I believe, the only one in any collection.

Among the smallest of the known species of owls, more diminutive even than the *Glaucidium Gnomia*, this bird yet resembles in its size and style of markings the *Athene Brodiei* of Burton from Asia, much more indeed than any species of owl as yet discovered in North America. It differs from the *G. Gnomia*, by having a smaller and more feeble bill, longer wings, and a shorter tail. The tarsi are not feathered, while the claws are small and weak.

The naked tarsi would seem to indicate that this owl, like the species of the genus *Athene*, was terrestrial in its habits, although, on the other hand, the lengthened middle toe, which with its claw is as long as the tarsus, would naturally lead us to suppose that it was more at home among the trees.

Coues, as quoted above, has formed a new genus for this bird, and although it resembles *Athene* in the naked tarsus, yet it has so many points of difference, it is probably more correct to classify it in a genus by itself. Nothing I believe is known of its habits, but it certainly is the most interesting of the many additions lately made to our Avi-fauna.

I am indebted to Prof. WHITNEY, of the Academy of Natural Sciences of San Francisco, whose name this species bears, for the loan of the type to be figured for this work.

Front, light rufous, entire upper parts dark brown, with numerous small spots of light rufous brown. Outer web of scapulars white. Primaries dark brown, the outer webs having spots of rufous, some of which are white near the edge. Tail dark brown, both webs barred with rufous, the bars not reaching the shaft. Feathers of the disk, light rufous. Throat and upper part of breast white mottled with light rufous. Rest of under parts white, the centre of the feathers light brown. The entire plumage beneath presents a confused mottling of white and light brown, the white predominating upon the abdomen and lower tail-coverts. Tarsi and toes covered with yellowish hair-like feathers. Bill black, horn-color at tip. Figures are life-size. The tree is the Iron wood, *Carpinus Astrya*.

Drawn from Nature by D. G. Elliot, F. Z. S.

Bowen & Co. lith. & col. Philada.

MICRATHENE WHITNEYI.

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Elliot, Daniel Giraud,
1835-1915,
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