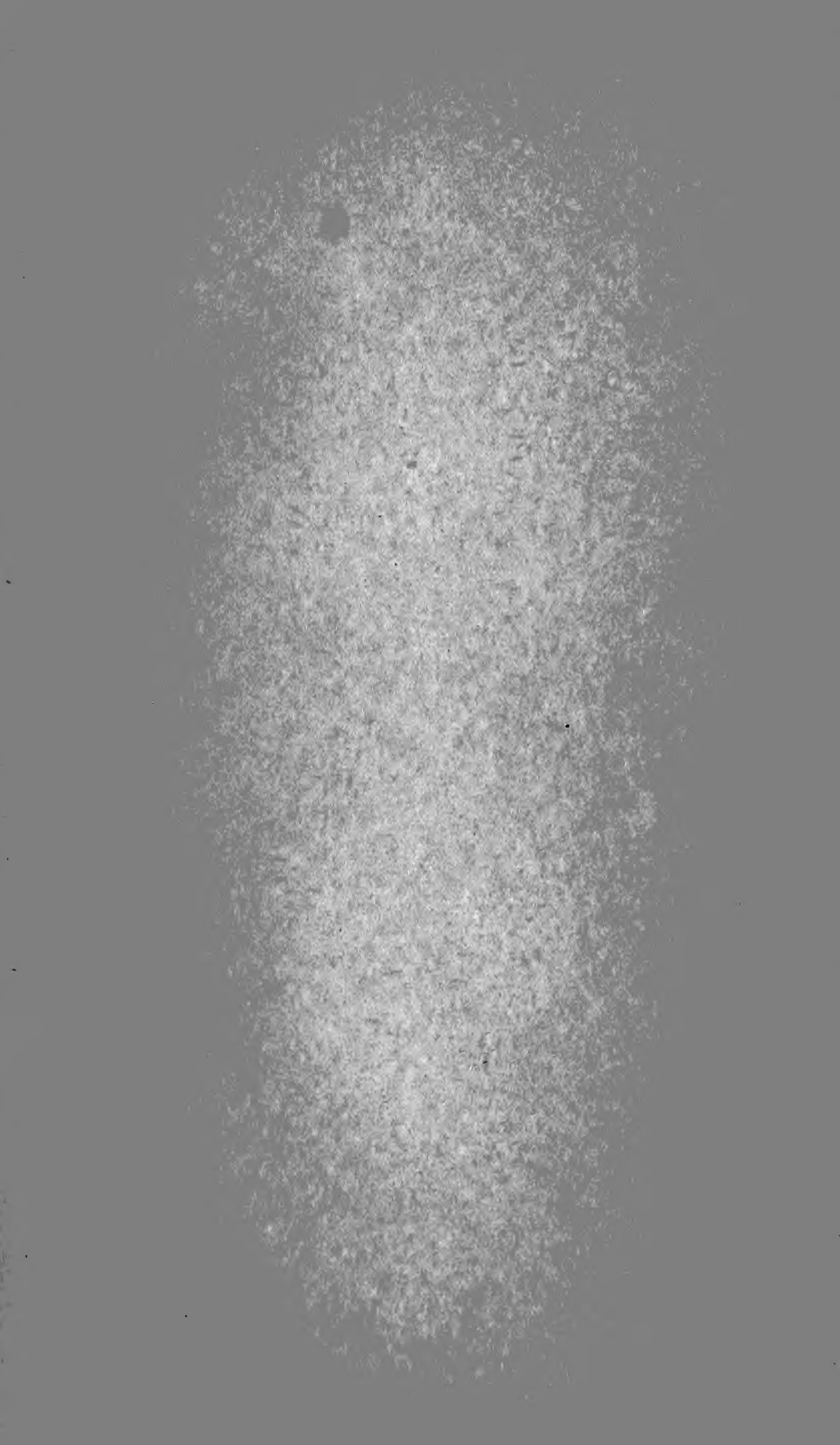

CONTRIBUTIONS

OF THE

MACLURIAN LYCEUM

TO THE

ARTS AND SCIENCES.

VOL. I. JANUARY, 1827. No. 1.

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PHILADELPHIA:

SOLD FOR THE MACLURIAN LYCEUM BY J. DOBSON, 108 CHESNUT STREET; G. & C. CARVILL, BROADWAY, NEW YORK; JOHN MILLER, LONDON; AND J. B. BAILLIERE, PARIS.

J. RICHARDS, PRINTER.

1827.

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VOL. I. PHILADELPHIA, JANUARY, 1827. No. 1.

IN consequence of an increasing taste for scientific pursuits, it was thought advisable to form another institution in this city, which should afford additional facilities for the acquisition of knowledge. With this view, a society was established in May, 1826, and in commemoration of the invaluable aid afforded by William Maclure, Esq. to the cultivation of the Sciences in our country, we were induced to adopt, entirely unknown to him, the name of the Maclurian Lyceum.

It was designed to include within its range all the *Natural* and *Physical Sciences*, together with those Arts most intimately connected with them: to institute regular courses of lectures, to publish a journal, and by holding frequent meetings facilitate the interchange of scientific information. As indispensable auxiliaries, a library, museum, and philosophical apparatus were commenced, to which valuable additions have already been made.

Sufficient materials have been collected to authorize us in publishing, thus early, the first number of our "Contributions." The frequency of this publication will, however, entirely depend upon the matter presented.

As we are happy to be the means of disseminating knowledge, all essays directed to us for publication will receive due attention—it being distinctly understood that the society do not hold themselves responsible for the accuracy of declared facts. It is, moreover, our desire to establish a mutual intercourse with scientific societies and individuals, by inviting an exchange for such duplicates of books and specimens of natural objects as we may have in our possession, and of which we shall from time to time furnish catalogues.

An account of some new species of Salamanders. By Jacob Green, A. M. Prof. of Chem. in Jefferson College. Read October 23, 1826, by John T. Sharpless, M. D.

Salamandra Porphyritica—cauda mediocri—corpore supra fusco, maculis albidis—subtus albido.

Porphyritic Salamander.—*Length* between five and six inches—*tail* the length of the body, tapering, much compressed and slightly carinated on the lower half of its upper and under edges—*head* rather large—skin much folded under the neck—*eyes* small—a slight ridge, formed by the superior part of the upper maxillary bone, extending from the anterior angle of the eye to the nostril—*snout* obtuse—*teeth* minute—upper part of the body, head, tail, and legs, light or dark brown, thickly interspersed with irregular whitish spots—on the sides these spots may be traced into two or three pretty regular rows—beneath entirely white—anterior feet four toed—posterior, five toed.

Cabinet of the Maclurian Lyceum—my collection.

These animals are numerous in French creek, near Meadville, Crawford county, Pa. The colour on the back varies very much in different specimens—some being dark chocolate, others of a much lighter colour, and others again of a pale brown. I have a young animal of this species nearly four inches long—the *branchiæ* still remaining—its colour is nearly white, a few brownish marks only appearing. There is also a reddish line on the sides, extending from the anterior to the posterior legs, similar to that in the Proteus Neo Cæsariensis. (Journ. of Acad. Nat. Scien. vol. 1, p. 358.)

SALAMANDRA JEFFERSONIANA—CAUDA MEDIOCRI—CORPORE SUPRA FUSCO, MACULIS CŒRULIIS—SUBTUS FUSCO.

BLUE SPOTTED SALAMANDER—*Length* about 7 inches—*tail* as long as the body, tapering, slightly compressed and pointed—*head* remarkably large—*eyes* entirely black, remote and very prominent—*nostrils* large—*skin* a light brown colour, rather darker above than beneath, with beautiful azure blue points scattered irregularly over the whole surface—on the upper part of the tail and legs, these points are grouped so as to form small blue spots; but on the under part of the body and along the spine, they are scarcely perceptible—anterior feet four toed—posterior, five toed—all the toes remarkably long, and terminated with a callosity.

Cabinet of the Maclurian Lyceum—my collection.

This animal was found in the marshy ground near Chartier's creek, in the vicinity of Jefferson College at Cannonsburg, Pa. It is remarkably well proportioned, and creeps with much facility on land, being greatly assisted in its motions by the peculiar construction of its feet, the toes of which are much longer than those of any other species of Salamander with which I am acquainted. Both the pupil and the iris of the eye are entirely black; and I observed on exposing the head of the animal to the sun, that a thin film or nictating membrane, originating from beneath the lower lid, quickly rose and covered about one half of the cornea, thus protecting the eye from intense light. Though this remarkable and delicate structure in the anatomy of these animals has never to my knowledge been noticed before, I have little doubt that it is common to the whole genus. The large size of the animal enabled me on this occasion to detect it. In the above singular organization of the eyes, the Salamander is allied to the Owl and some other animals.

SALAMANDRA INTERMIXTA—CAUDA LONGIUSCULA, CORPORE SUPRA FUSCO, MACULIS UNDULATIS, SUBTUS INTERMIXTO.

SPECKLED SALAMANDER.—*Length* of full grown specimens between five and six inches—*tail* rather longer than the body, tapering, slightly compressed and pointed—*snout* oval and a little truncated—*eyes* dark, protuberant and approximate—*teeth* small and numerous—*back* brownish or slate coloured, with dark undulating marks or intercepted stripes, seen most distinctly in old individuals when swimming in the water—the *sides*, *underpart of the body* and *legs*, are sprinkled with umber, clear white and yellowish white dots, pretty equally intermixed, which, when the animal is in a favourable light, have somewhat the appearance of dew on its sides. In some specimens may be seen a row of small white points along the sides; when the animal is old the speckled appearance on the under part of the body in a great measure disappears. In some young specimens there is a reddish colour along the whole of the spine. The posterior legs are proportionably thicker than the others—fore feet four toed—hind feet five toed—toes short.

Cabinet of the Maclurian Lyceum—my collection.

These animals are found in numbers throughout the United States. I have received fine large individuals from South Carolina—have found them on the borders of Ohio, and nearly as far north as Vermont. In the spring-houses and shallow streams about Philadelphia they are quite common, and seem here to arrive at a larger size than in most other situations. Though exceedingly plain in its general appearance, and though the markings are by no means striking, yet there is perhaps no animal of the Salamander tribe which varies more in the arrangement of its colours than the Intermixta. Sometimes the undulating

stripes on the back are imperceptible, and the whole upper surface appears of a uniform brownish colour—sometimes these stripes cover the whole upper surface—sometimes a broad reddish stripe extends along the back from the snout to the extremity of the tail—in some specimens the umber, white, and yellowish spots are almost entirely wanting, and in others they are very numerous—different localities almost always produce different appearances; yet, notwithstanding these differences, there is a strong family resemblance, and the species may be very readily identified.

It may be worth while to notice in this place, that the length of the tail of the Salamander ought not to be relied upon as a distinct specific character—for the tail when it is re-produced after amputation, is perhaps never as long as it was before. I have an individual of the S. Intermixta, perfect to all appearance, the tail of which is scarcely more than half the ordinary length.

The skin of this animal, when properly prepared, forms a most splendid and interesting object for the microscope. This species of Salamander I first indicated in the Port Folio for August, 1825.

Salamandra Glutinosa Var.

In addition to the remarks on this animal in the Journ. of the Acad. Nat. Sciences, I have to state that there are some striking varieties of it. I am informed by a friend that he detected one in which the white spots had a silvery lustre, very much as if minute pieces of silver leaf had been scattered over the skin. In Washington county, Pa. these animals are exceedingly abundant. Near the Chartier's creek, in shady situations, almost every old log and loose stone conceals numbers of them. The white spots on the sides and upper part of the body are variously arranged—in some they are pretty regularly scattered over the whole,

and in others they are confined principally to the sides of the animal. The glutinous fluid secreted by the skin of this, and perhaps all other species of Salamander, seems to vary in quantity at different seasons of the year. Those taken in the spring in New Jersey were very remarkable in this particular, while those which I discovered in Washington county, Pa. in August, had scarcely any of this gummous exudation.

Cabinet of the Maclurian Lyceum—my collection.

SALAMANDRA SUBVIOLACEA—*Barton.*

This species in the neighbourhood of Philadelphia, where it is rarely found, sometimes grows to the length of seven inches—is of a dark purplish colour, and has other peculiarities noticed by Dr. Barton. In the vicinity of Albany, N. Y. the Subviolacea is found in considerable numbers under stones and old logs, in moist situations. It here very rarely attains the length of more than four inches, and differs in some other particulars from its more southern congener. The following is the description of a very fine specimen I observed in that place:

S. SUBVIOLACEA VAR.—*Length* about four inches—*tail* as long as the body, slightly compressed and a little enlarged near its base—*head* oval and larger than the neck—*eyes* protuberant and approximate—*colour above*, dark greenish slate, with a row of large, circular, bright gamboge yellow spots on each side of the spine—these spots commonly commence immediately over the eyes and run to the tip of the tail—they vary, however, in different individuals, a little both in size and position, but always preserve a linear direction—there is sometimes a spot or two on each of the legs—the *under side* is of a uniform greenish slate colour.

Note.—In the same locality where the S. Jeffersoniana was found, I also observed a new species of Helix, of which the following is a description:

Helix Pennsylvanicus.—Shell subglobose—spire elevated—whorls six or seven, with numerous oblique wrinkles or striæ—sutures deeply impressed—epidermis smooth and of an olive brown colour like most of the American Helices—umbilicus closed or masked—aperture slightly contracted at the base—a small callosity on the inner margin of the other lip, near its lower angle—shell rather more than half an inch in diameter.

This shell somewhat resembles the H. Clausa of Mr. Say, but may very readily be distinguished from that species by the closed umbilicus, the number of its whorls, and its general form.

This shell is not uncommon in the moist ground near Chartier's creek, in Washington county, Pa. I obtained five or six specimens with but very little trouble at that locality, associated with the H. Solitaria, Profunda, and Paliata.

Catalogue of the Birds of the United States, systematically arranged in Orders, Families, Genera, *and* Subgenera. By Charles L. Bonaparte. Read November 7, 1826.

The following catalogue was originally drawn up for the conclusion of our "Observations on the Nomenclature of Wilson's Ornithology," but was omitted on account of our determination to publish a "Synopsis of the Birds of the United States." Part of this, including the first three orders, has already appeared in the Annals of the Lyceum of Natural History of New York. But as circumstances beyond our control are likely to delay for several months the publica-

tion of the two latter orders, containing by far the greater number of the birds unnoticed by Wilson, we yield to the wishes of our scientific friends in publishing the catalogue as first intended. This, as far as relates to the land birds, is a repetition of the Synopsis, which, when completed, will contain the characters and diagnoses of all the water birds here enumerated.

As we have stated in the introduction to the Synopsis, we have admitted no species that has not been verified by Wilson or ourselves. Notwithstanding, we regard this catalogue as complete; and if any species not mentioned here should be discovered, we take this opportunity of inviting the discoverer to communicate it to us for the benefit of American Ornithology.

The left column contains the names we adopt, arranged according to our classification; the right refers to the work of Wilson when the bird is given by him, or, if not, to that of another author, the most eminent, or first discoverer; and a figure is always quoted whenever it exists. Wilson's species are printed in Roman characters; those published in my first volume in italics, and those that will appear in my subsequent volumes in small capitals. An asterisk is prefixed to those birds common to North America and Europe; and we have placed a ‖ before those that Wilson indicated in his posthumous catalogue, that he may not be deprived of any part of the credit due to him.

ORDER 1. *ACCIPITRES, L.

FAMILY I. *VULTURINI, Ill.

GENUS 1. *CATHARTES, Ill.

SUBGENUS CATHARTES, Nob.

1. CATHARTES CALIFORNIANUS, Ranz. Vultur californianus, Lath. Cathartes vulturinus, Temm. pl. col. 31.

2. CATHARTES GRYPHUS, Temm. Vultur gryphus, L.—Temm. pl. col. 133.

3. CATHARTES PAPA, Ill.	Vultur papa, L.—Buff. pl. enl.
4. Cathartes aura, Ill.	Vultur aura, Wils. 9. p. 96, pl. 75, fig. 1.
5. Cathartes jota, Nob.	Vultur atratus, Wils. 9. p. 104, pl. 75, fig. 2.

FAMILY II. *RAPACES, Nob.

GENUS 2. *FALCO, L.

SUBGENUS I. *AQUILA, Briss.

6. *Falco fulvus, L.	Falco fulvus, Wils. 7. p. 13, pl. 55, fig. 1, young.

SUBGENUS II. *HALIÆTOS, Sav.

7. *Falco leucocephalus, L.	Falco leucocephalus, Wils. 4. p. 89, pl. 36, adult. Falco ossifragus, Wils. 7. p. 16, pl. 55, fig. 2, young.

SUBGENUS III. *PANDION, Sav.

8. *Falco haliætus, L.	Falco haliætus, Wils. 5. p. 13, pl. 37, fig. 1.

SUBGENUS IV. *FALCO, Bechst.

9. *Falco peregrinus, Gm.	Falco peregrinus, Wils. 9. p. 120, pl. 76.
10. Falco sparverius, L.	Falco sparverius, Wils. 2. p. 47, pl. 16, fig. 1, fem. & 4. p. 57, pl. 32, fig. 2, male.
11. Falco columbarius, L.	Falco columbarius, Wils. 2. p. 107, pl. 15, fig. 3.

SUBGENUS V. *ASTUR, Bechst.

12. *Falco palumbarius, L.	Falco atricapillus, Wils. 6. p. 80, pl. 58, fig. 3, old. Falco palumbarius, Nob. 2. pl. 10, fig. 1, young.
13. Falco pensylvanicus, Wils.	Falco pensylvanicus, Wils. 6. p. 92, pl. 54, fig. 1.
14. Falco velox, Wils.	Falco velox, Wils. 5. p. 116, pl. 45, fig. 1, young. Falco pensylvanicus, Wils. 6. p. 13, pl. 46, fig. 1, adult.

SUBGENUS VI. ICTINIA, Vieill.

15. Falco plumbeus, Gm.	Falco mississippiensis, Wils. 3. p. 80, pl. 25, fig. 1, male.

SUBGENUS VII. ELANUS, Sav.

16. FALCO MELANOPTERUS, Daud.	Falco melanopterus, Nob. 2. pl. 11, fig. 1, female.
17. Falco furcatus, L.	Falco furcatus, Wils. 6. p. 70, pl. 51, fig. 2, male.

SUBGENUS VIII. *BUTEO, Bechst.

18. *Falco lagopus, L.	Falco lagopus, Wils. 4. p. 59, pl. 33, fig. 1.
19. Falco sancti-johannis, Gm.	Falco niger, Wils. 6. p. 82, pl. 53, fig. 1, adult—p. 84, pl. 53, fig. 2, young.
20. Falco borealis, Gm.	Falco borealis, Wils. 6. p. 75, pl. 52, fig. 1, adult. Falco leverianus, Wils. 6. p. 78, pl. 52, fig. 1, young.

SUBGENUS IX. *CIRCUS, Bechst.

21. Falco hyemalis, Gm.	Falco hyemalis, Wils. 4. p. 73, pl. 35, fig. 1, adult male. Falco lineatus, Wils. 6. p. 86, pl. 53, fig. 3, young male.
22. *Falco cyaneus, L.	Falco uliginosus, Wils. 6. p. 67, pl. 51, fig. 1, young female. Falco cyaneus, Nob. 2. pl. 12, fig. 1, adult male.

GENUS 3. *STRIX, L.

SUBGENUS I. *SURNIA, Dumeril.

23. *Strix funerea, Gm.	Strix hudsonia, Wils. 6. p. 64, pl. 50, fig. 6.
24. *Strix nyctea, L.	Strix nyctea, Wils. 4. p. 53, pl. 31, fig. 1, male.
25. *Strix cunicularia*, Molina.	Strix cunicularia, Nob. 1. p. 68, pl. 7, fig. 2.
26. Strix asio, L.	Strix nævia, Wils. 3. p. 16, pl. fig. adult. Strix asio, Wils. 5. p. 83, pl. fig. young.

SUBGENUS II. *ULULA, Cuv. (Nob.)

27. Strix virginiana, Gm.	Strix virginiana, Wils. 6. p. 52, pl. 50, fig. 1.
28. *Strix otus, L.	Strix otus, Wils. 6. p. 73, pl. 51, fig. 3.
29. *Strix brachyotos, Gm.	Strix brachyotos, Wils. 4. p. 64, pl. 33, fig. 3, male.

30. *Strix nebulosa, L. — Strix nebulosa, Wils. 4. p. 61, pl. 33, fig. 2.

31. *Strix acadica, Gm. — Strix passerina, Wils. 4. p. 66, pl. 34, fig. 2.

SUBGENUS III. *STRIX, Sav.

32. *Strix flammea, L. — Strix flammea, Wils. 6. p. 57, pl. 50, fig. 2.

ORDER 2. *PASSERES, L.

TRIBE 1. **SCANSORES, Ill.*

FAMILY III. PSITTACINI, Ill.

GENUS 4. PSITTACUS, L.

SUBGENUS PSITTACUS, Vieill.

33. Psittacus carolinensis, L. — Psittacus carolinensis, Wils. 3. p. 89, pl. 26, fig. 1.

FAMILY IV. *AMPHIBOLI, Ill.

GENUS 5. COCCYZUS, Vieill.

34. Coccyzus americanus, Nob. — Cuculus carolinensis, Wils. 4. p. 13, pl. 28, fig. 1.

35. Coccyzus erythrophthalmus, Nob. — Cuculus erythrophthalmus, Wils. 4. p. 16, pl. 28, fig. 2.

FAMILY V. *SAGITTILINGUES, Ill.

GENUS 6. *PICUS, L.

36. Picus auratus, L. — Picus auratus, 1. p. 45, pl. 3, fig. 1, male.

37. Picus principalis, L. — Picus principalis, Wils. 4. p. 20, pl. 29, fig. 1, male.

38. Picus pileatus, L. — Picus pileatus, Wils. 4. p. 27, pl. 29, fig. 2, male.

39. Picus erythrocephalus, L. — Picus erythrocephalus, Wils. 1. p. 142, pl. 9, fig. 1, adult—and Nob. 2. pl. 13, fig. 3, young.

40. Picus carolinus, L. — Picus carolinus, Wils. 1. p. 113, pl. 7, fig. 2, male.

41. Picus varius, L. — Picus varius, Wils. 1. p. 147, pl. 9, fig. 2, adult male—and Nob. 1. p. 75, pl. 8, fig. 1, 2, young in diff. states.

42. Picus villosus, L. — Picus villosus, Wils. 1. p. 150, pl. 9, fig. 3, male.

43. Picus pubescens, L. — Picus pubescens, Wils. 1. p. 153, pl. 9, fig. 4, male.

44. Picus querulus, Wils. — Picus querulus, Wils. 2. p. 33, pl. 15, fig. 1, male.

45. Picus torquatus, Wils. — Picus torquatus, Wils. 3. p. 31, pl. 20, fig. 3.

46. *Picus tridactylus, L. — Picus hirsutus, Vieill. Ois. pl. 124, ad. male. Nob. 2. pl. 13, fig. 2. male.

*TRIBE 2. *AMBULATORES, Ill.*

FAMILY VI. *ANGULIROSTRES, Ill.

GENUS 7. *ALCEDO, L.

47. Alcedo alcyon, L. — Alcedo alcyon, Wils. 3. p. 59, pl. 23, fig. 1.

FAMILY VII. *GREGARII, Ill.

GENUS 8. *STURNUS, L.

48. Sturnus ludovicianus, L. — Alauda magna, Wils. 3. p. 20, pl. 19, fig. 2.

GENUS 9. ICTERUS, Briss.

SUBGENUS II. ICTERUS.

49. Icterus baltimore, Daud. — Oriolus baltimore, Wils. 1. p. 23, pl. 1, fig. 3, male—and 6. p. 88, pl. 53, fig. 4, female.

50. Icterus spurius, Nob. — Oriolus mutatus, Wils. 1. p. 64, pl. 4, fig. 1, female, fig. 2, male 2 years old, fig. 3, male 3 years old, fig. 4, adult male.

SUBGENUS III. XANTHORNUS.

51. Icterus phœniceus, Daud. — Sturnus prædatorius, Wils. 4. p. 30, pl. 30, fig. 1, male, fig. 2, female.

52. *Icterus xanthocephalus*, Nob. — Icterus icterocephalus, Nob. 1. p. 27, pl. 3, fig. 1, male, fig. 2, female.

SUBGENUS IV. EMBERIZOIDES.

53. Icterus pecoris, Temm. — Emberiza pecoris, Wils. 2. p. 145, pl. 18, fig. 1, male, fig. 2, female, fig. 3, young.

54. Icterus agripennis, Nob. — Emberiza oryzivora, Wils. 2. p. 48, pl. 12, fig. 1, male in spring, fig. 2. female.

GENUS 10. QUISCALUS, Vieill.

55. Quiscalus ferrugineus, Nob.	Gracula ferruginea, Wils. 3. p. 41, pl. fig. adult male in spring.
56. Quiscalus versicolor, Vieill.	Gracula quiscala, Wils. 3. p. 44, pl. 21, fig. 4, male. Quiscalus versicolor, Nob. 1. p. 42, pl. 5, fig. 1, female.
57. *Quiscalus major*, Vieill.	Quiscalus major, Nob. 1. p. 35, pl. 4, fig. 1, male, fig. 2, female.

GENUS 11. *CORVUS, L.

SUBGENUS I. *CORVUS, Briss.

58. *Corvus corax, L.	Corvus corax, Wils. 9. p. 113, pl. 75, fig. 3.
59. *Corvus corone, L.	Corvus corone, Wils. 4. p. 79, pl. 36, fig. 3.
60. Corvus ossifragus, Wils.	Corvus ossifragus, Wils. 5. p. 27, pl. 37, fig. 2.
61. Corvus columbianus, Wils.	Corvus columbianus, Wils. 3. p. 27, pl. 20, fig. 2.

SUBGENUS II. *PICA, Briss.

62. *Corvus pica, L.	Corvus pica, Wils. 4. p. 75, pl. 35, fig. 2.

SUBGENUS III. *GARRULUS, Briss.

63. Corvus cristatus, L.	Corvus cristatus, Wils. 1. p. 11, pl. 1, fig. 1.
64. CORVUS FLORIDANUS, Bartr.	Garrulus cyaneus and cœrulescens, Vieill.—Nob. 2. pl. 13, fig. 1.
65. Corvus canadensis, L.	Corvus canadensis, Wils. 3. p. 33, pl. 21, fig. 1.

FAMILY VIII. *SERICATI, Ill.

GENUS 12. *BOMBYCILLA, Vieill.

66. Bombycilla carolinensis, Briss.	Ampelis americana, Wils. 1. p. 107, pl. 7, fig. 1.

FAMILY IX. *CHELIDONES, Vieill.

GENUS 13. *CAPRIMULGUS, L.

67. Caprimulgus carolinensis, Gm.	Caprimulgus carolinensis, Wils. 6. p. 95, pl. 54, fig. 2.
68. Caprimulgus vociferus, Wils.	Caprimulgus vociferus, Wils. 5. p. 71, pl. 41, fig. 1, male, fig. 2, female, fig. 3, chicken.

69. Caprimulgus virginianus, Briss. [nec Vieill.	Caprimulgus americanus, Wils. 5. p. 65, pl. 40, fig. 1, male, fig. 2, fem.

GENUS 14. *CYPSELUS, Ill.

70. Cypselus pelasgius, Temm.	Hirundo pelasgia, Wils. 5. p. 48, pl. 39, fig. 1.

GENUS 15. *HIRUNDO, L.

71. Hirundo purpurea, L.	Hirundo purpurea, Wils. 5. p. 58, pl. 39, fig. 1, male, fig. 2, female.
72. Hirundo rufa, Gm.	Hirundo americana, Wils. 5. p. 34, pl. 38, fig. 1, male, fig. 2, female.
73. *Hirundo fulva,* Vieill.	Hirundo fulva, Nob. 1. p. 63, pl. 7, fig. 1.
74. Hirundo bicolor, Vieill.	Hirundo viridis, Wils. 5. p. 44, pl. 38, fig. 3.
75. *Hirundo riparia, L.	Hirundo riparia, Wils. 5. p. 46, pl. 38, fig. 4.

FAMILY X. *CANORI, Ill.

GENUS 16. *MUSCICAPA, L.

76. Muscicapa tyrannus, Briss. [nec L.	Muscicapa tyrannus, Wils. 2. p. 66, pl. 13, fig. 1.
77. Muscicapa crinita, L.	Muscicapa crinita, Wils. 2. p. 75, pl. 13, fig. 2.
78. *Muscicapa verticalis,* Nob.	Muscicapa verticalis, Nob. 1. p. 18, pl. 2, fig. 2.
79. *Muscicapa savana,* Nob.	Muscicapa savana, Nob. 1. p. 1, pl. 1, fig. 1.
80. *Muscicapa forficata,* Gm.	Muscicapa forficata, Nob. 1. p. 15, pl. 2, fig. 1.
81. *Muscicapa saya,* Nob.	Muscicapa saya, Nob. 1. p. 20, pl. 2, fig. 3.
82. Muscicapa fusca, Gm.	Muscicapa nunciola, Wils. 2. p. 78, pl. 13, fig. 4.
83. Muscicapa virens, L.	Muscicapa rapax, Wils. 2. p. 81, pl. 13, fig. 5.
84. Muscicapa acadica, Gm.	Muscicapa querula, Wils. 2. p. 77, pl. 13, fig. 3.
85. Muscicapa ruticilla, L.	Muscicapa ruticilla, Wils. 1. p. 103, pl. 6, fig. 6, adult male; and 5. p. 119, pl. 45, fig. 2, young.

GENUS 17. ICTERIA, Vieill.

86. Icteria viridis, Nob.	Pipra polyglotta, Wils. 1. p. 90, pl 6, fig. 2.

GENUS 18. VIREO, Vieill.

87. Vireo flavifrons, Vieill.	Muscicapa sylvicola, Wils. 2. p. 117, pl. 7, fig. 3.
88. Vireo solitarius, Vieill.	Muscicapa solitaria, Wils. 2. p. 143, pl. 17, fig. 6.
89. Vireo noveboracensis, Nob.	Muscicapa cantatrix, Wils. 2. p. 166, pl. 18, fig. 6.
90. Vireo gilvus, Nob.	Muscicapa melodia, Wils. 5. p. 85, pl. 42, fig. 2.
91. Vireo olivaceus, Nob.	Muscicapa olivacea, Wils. 2. p. 55, pl. 12, fig. 3.

GENUS 19. *LANIUS, L.

92. Lanius septentrionalis, Gm.	Lanius excubitor, Wils. 1. p. 74, pl. 5, fig. 1.
93. Lanius ludovicianus, L.	Lanius carolinensis, Wils. 3. p. 57, pl. 22, fig. 8.

GENUS 20. MYIOTHERA, Ill.

94. *Myiothera obsoleta*, Nob.	Myiothera obsoleta, Nob. 1. p. 6, pl. 1, fig. 2.

GENUS 21. *TURDUS, L.

95. Turdus polyglottos, L.	Turdus polyglottus, Wils. 2. p. 13, pl. 10, fig. 1.
96. Turdus felivox, Vieill.	Turdus lividus, Wils. 2. p. 90, pl. 20, fig. 3.
97. Turdus migratorius, L.	Turdus migratorius, Wils. 1. p. 35, pl. 2, fig. 2.
98. Turdus rufus, L.	Turdus rufus, Wils. 2. p. 83, pl. 14, fig. 1.
99. Turdus mustelinus, Gm.	Turdus melodus, Wils. 1. p. 29, pl. 2, fig. 2.
100. Turdus minor, Gm.	Turdus solitarius, Wils. 5. p. 95, pl. 43, fig. 2.
101. Turdus wilsonii, Nob.	Turdus mustelinus, Wils. 5. p. 98, pl. 43, fig. 3.

GENUS 22. *SYLVIA, Lath.

SUBGENUS I. *SYLVIA.

102. Sylvia aurocapilla, Nob.	Turdus aurocapillus, Wils. 2. p. 88, pl. 14, fig. 2.
103. Sylvia noveboracensis, Lath.	Turdus aquaticus, Wils. 3. p. 66, pl. 23, fig. 5.
104. Sylvia coronata, Lath.	Sylvia coronata, Wils. 2. p. 138, pl. 17, fig. 4, summer dress; and 5. p. 121, pl. 45, fig. 3, winter pl.

105. SYLVIA PALMARUM, Lath.	Sylvia palmarum, Nob. 2. pl.10, fig. 2, adult male in spring.
106. Sylvia maculosa, Lath.	Sylvia magnolia, Wils. 3. p. 63, pl. 23, fig. 3, male.
107. Sylvia maritima, Wils.	Sylvia maritima, Wils. 6. p. 99, pl. 51, fig. 8, male; and Nob. 1. p. 32, pl. 3, fig. 3, female.
108. Sylvia pardalina, Nob.	Muscicapa canadensis, Wils. 3. p. 100, pl. 26, fig. 2, male.
109. Sylvia mitrata, Lath.	Muscicapa cucullata, Wils. 3. p. 190, pl. 26, fig. 3, male.
110. Sylvia pensilis, Lath.	Sylvia flavicollis, Wils. 2. p. 54, pl. 12, fig. 6.
111. Sylvia virens, Lath.	Sylvia virens, Wils. 2. p. 127, pl. 17, fig. 3.
112. Sylvia blackburniæ, Lath.	Sylvia blackburniæ, Wils. 3. p. 64, pl. 28, fig. 3.
113. Sylvia icterocephala, Lath.	Sylvia pensylvanica, Wils. 1. p. 99, pl. 14, fig. 5.
114. Sylvia castanea, Wils.	Sylvia castanea, Wils. 2. p. 97, pl. 14, fig. 4.
115. Sylvia striata, Lath.	Sylvia striata, Wils. 4. p. 40, pl. 30, fig. 9, male—and 6. p. 110, pl. 54, fig. 4, female.
116. Sylvia varia, Lath.	Certhia maculata, Wils. 3. p. 23, pl. 19, fig. 3.
117. Sylvia pinus, Lath.	Sylvia pinus, Wils. 3. p. 25, pl. 19, fig. 4.
118. Sylvia parus, Wils.	Sylvia parus, Wils. 5. p. 114, pl. 44, fig. 3, male.
119. Sylvia tigrina, Lath.	Sylvia montana, Wils. 5. p. 113, pl. 41, fig. 2, male.
120. Sylvia rara, Wils.	Sylvia rara, Wils. 3. p. 119, pl. 27, fig. 2.
121. Sylvia discolor, Vieill.	Sylvia minuta, Wils. 3. p. 87, pl. 25, fig. 4.
122. Sylvia æstiva, Lath.	Sylvia citrinella, Wils. 2. p. 111, pl. 15, fig. 6.
123. Sylvia petechia, Lath.	Sylvia petechia, Wils. 4. p. 19, pl. 28, fig. 4, adult male in spring.
124. Sylvia americana, Lath.	Sylvia pusilla, Wils. 4. p. 17, pl. 28, fig. 3.
125. Sylvia canadensis, Lath.	Sylvia canadensis, Wils. 2. p. 115, pl. 15, fig. 7.
126. Sylvia agilis, Wils.	Sylvia agilis, Wils. 5. p. 64, pl. 39, fig. 4.
127. Sylvia formosa, Wils.	Sylvia formosa, Wils. 3. p. 85, pl. 25, fig. 3.

128. Sylvia autumnalis, Wils.	Sylvia autumnalis, Wils. 3. p. 65, pl. 23, fig. 4.
129. Sylvia trichas, Lath.	Sylvia marylandica, Wils. 1. p. 88, pl. 6, fig. 1, male—and 2. p. 163, pl. 18, fig. 4, female.
130. Sylvia philadelphia, Wils.	Sylvia philadelphia, Wils. 2. p. 101, pl. 14, fig. 6.
131. Sylvia sphagnosa, Nob.	Sylvia pusilla, (leucoptera) Wils. 5. p. 100, pl. 43, fig. 4.
132. Sylvia azurea, Stephens.	Sylvia cœrulea, Wils. 2. p. 141, pl. 17, fig. 5, male—and Nob. 2. pl. 11, fig. 2, female.
133. Sylvia cœrulea, Lath.	Muscicapa cœrulea, Wils. 2. p. 164, pl. 18, fig. 5.
134. Sylvia minuta, Nob. nec Wils.	Muscicapa minuta, Wils. 6. p. 62, pl. 50, fig. 5, (not his Sylvia minuta.)
135. Sylvia wilsonii, Nob.	Muscicapa pusilla, Wils. 3. p. 103, pl. 26, fig. 4.

SUBGENUS II. DACNIS, Cuv. (Cassicus.)

136. Sylvia vermivora, Lath.	Sylvia vermivora, Wils. 3. p. 74, pl. 24, fig. 4.
137. Sylvia protonotarius, Lath.	Sylvia protonotarius, Wils. 3. p. 72, pl. 24, fig. 3.
138. Sylvia solitaria, Wils.	Sylvia solitaria, Wils. 2. p. 109, pl. 15, fig. 4.
139. Sylvia chrysoptera, Lath.	Sylvia chrysoptera, Wils. 2. p. 113, pl. 15, fig. 5, male—and Nob. 1. p. 12, pl. 1. fig. 3, female.
140. Sylvia peregrina, Wils.	Sylvia peregrina, Wils. 3. p. 83, pl. 25, fig. 2.
141. Sylvia rubricapilla, Wils.	Sylvia ruficapilla, Wils. 3. p. 120, pl. 27, fig. 3.
142. *Sylvia celata*, Say.	Sylvia celata, Nob. 1. p. 45, pl. 5, fig. 2.

GENUS 23. *SAXICOLA, Bechst.

143. Saxicola sialis, Nob.	Sylvia sialis, Wils. 1. p. 56, pl. 3, fig. 3, adult male.

GENUS 24. *ANTHUS, Bechst.

144. *Anthus spinoletta, Nob.	Alauda rufa, Wils. 5. p. 89, pl. 42, fig. 4.

GENUS 25. *REGULUS, Vieill.

145. Regulus calendula, Stephens.	Sylvia calendula, Wils. 1. p. 83, pl. 5, fig. 3.
146. *Regulus cristatus, Ray.	Sylvia regulus, Wils. 1. p. 126, pl. 8, fig. 2, male; and Regulus cristatus. Nob. 1. p. 23, female.

GENUS 26. *TROGLODYTUS, Vieill.

SUBGENUS I. *TROGLODYTES, Vieill.

147. Troglodytes ædon, Vieill. — Sylvia domestica, Wils. 1. p. 129, pl. 8, fig. 3.

148. *Troglodytes europæus, Leach. — Sylvia troglodytes, Wils. 1. p. 139, pl. 8, fig. 6.

SUBGENUS II. THRYOTHORUS, Vieill.

149. Troglodytes ludovicianus, Nob. — Certhia caroliniana, Wils. 2. p. 61, pl. 12, fig. 5.

150. Troglodytes palustris, Nob. — Certhia palustris, Wils. 2. p. 58, pl. 12, fig. 4.

FAMILY XI. *TENUIROSTRES, Ill.

GENUS 27. *CERTHIA, L.

151. *Certhia familiaris, L. — Certhia familiaris, Wils. 1. p. 122, pl. 8, fig. 1.

GENUS 28. *SITTA, L.

152. Sitta carolinensis, Briss. — Sitta carolinensis, Wils. 1. p. 40, pl. 2, fig. 3.

153. Sitta canadensis, L. — Sitta varia, Wils. 1. p. 43, pl. 2, fig. 4.

154. Sitta pusilla, Lath. — Sitta pusilla, Wils. 2. p. 105, pl. 15, fig. 2.

FAMILY XII. ANTHOMYZI, Vieill.

GENUS 29. TROCHILUS, L.

SUBGENUS MELLISUGA, Briss.

155. Trochilus colubris, L. — Trochilus colubris, Wils. 2. p. 26, pl. 10, fig. 3, male, fig. 4, female.

FAMILY XIII. *ÆGITHALI, Vieill.

GENUS 30. *PARUS, L.

156. Parus bicolor, L. — Parus bicolor, Wils. 1. p. 137, pl. 8, fig. 5.

157. Parus atricapillus, L. — Parus atricapillus, Wils. 1. p. 134, pl. 8, fig. 4.

FAMILY XIV. *PASSERINI, Ill.

GENUS 31. *ALAUDA, L.

158. *Alauda alpestris, L. — Alauda alpestris, Wils. 1. p. 85, pl. 5, fig. 4.

GENUS 32. *EMBERIZA, L.

SUBGENUS PLECTROPHANES, Meyer.

159. *Emberiza nivalis, L.	Emberiza nivalis, Wils. 3. p. 36, pl. 21, fig. 2, female.

GENUS 33. TANAGRA, L.

SUBGENUS PYRANGA, Vieill.

160. Tanagra rubra, L.	Tanagra rubra, Wils. 2. p. 42, pl. 11, fig. 3, male, fig. 4, female.
161. Tanagra æstiva, Gm.	Tanagra æstiva, Wils. 1. p. 95, pl. 6, fig. 3, male, fig. 4, female.
162. Tanagra ludoviciana, Wils.	Tanagra ludoviciana, Wils. 3. p. 27, pl. 20, fig. 1.

GENUS 34. *FRINGILLA, L.

SUBGENUS I. SPIZA, Nob.

163. *Fringilla amœna*, Nob.	Fringilla amœna, Nob. 1. p. 61, pl. 6, fig. 4, male.
164. Fringilla cyanea, Wils.	Fringilla cyanea, Wils. 1. p. 100, pl. 6, fig. 5, male—Nob. 2. pl. 14, fig. 4, female.
165. Fringilla ciris, Temm.	Emberiza ciris, Wils. 3. p. 68, pl. 24, fig. 1, male, fig. 2, female.
166. Fringilla americana, Nob.	Emberiza americana, Wils. 1. p. 54, pl. 3, fig. 2.
167. Fringilla leucophrys, Temm.	Emberiza leucophrys, Wils. 4. p. 49, pl. 31, fig. 4.
168. *Fringilla grammaca*, Say.	Fringilla grammaca, Nob. 1. p. 47, pl. 5, fig. 2.
169. Fringilla pensylvanica, Lath.	Fringilla albicollis, Wils. 3. p. 51, pl. 22, fig. 2.
170. Fringilla graminea, Gm.	Emberiza graminea, Wils. 4. p. 51, pl. 31, fig. 5.
171. Fringilla melodia, Wils.	Fringilla melodia, Wils. 2. p. 125, pl. 16, fig. 4.
172. Fringilla savana, Wils.	Fringilla savana, Wils. 4. pl. 72, pl. 34, fig. 4, male; and 3. p. 55, pl. 22, fig. 3, female.
173. Fringilla hyemalis, L. nec auct.	Fringilla nivalis, (hudsonia) Wils. 2. p. 129, pl. 16, fig. 6.
174. Fringilla passerina, Wils.	Fringilla passerina, Wils. 3. p. 76, pl. 24, fig. 5.
175. Fringilla canadensis, Lath.	Fringilla arborea, Wils. 2. p. 123, pl. 16, fig. 3.
176. Fringilla socialis, Wils.	Fringilla socialis, Wils. 2. p. 127, pl. 16, fig. 5.

177. Fringilla pusilla, Wils.	Fringilla pusilla, Wils. 2. p. 121, pl. 16, fig. 2.
178. Fringilla palustris, Wils.	Fringilla palustris, Wils. 3. p. 49, pl. 22, fig. 1, adult male.
179. Fringilla caudacuta, Wils. nec [Lath.	Fringilla caudacuta, Wils. 4. p. 70, pl. 34, fig. 3.
180. Fringilla maritima, Wils.	Fringilla maritima, Wils. 4. p. 68, pl. 31, fig. 2.

SUBGENUS II. *CARDUELIS, Briss.

181. Fringilla tristis, L.	Fringilla tristis, Wils. 1. p. 20, pl. 1, fig. 2, adult male in spring dress. Nob. 1. p. 57, pl. 6, fig. 4, female.
182. *Fringilla psaltria*, Say.	Fringilla psaltria, Nob. 1. p. 54, pl. 6, fig. 3, male.
183. Fringilla pinus, Wils.	Fringilla pinus, Wils. 2. p. 133, pl. 17, fig. 1, winter plumage.
184. *Fringilla linaria, L.	Fringilla linaria, Wils. 4. p. 42, pl. 30, fig. 4, male.

SUBGENUS III. *FRINGILLA, Vieill.

185. Fringilla iliaca, Merrem.	Fringilla rufa, (ferruginea) Wils. 3. p. 53, pl. 22, fig. 4.
186. Fringilla erythrophthalma, L.	Emberiza erythrophthalma, Wils. 2. p. 35, pl. 10, fig. 5, male—and 6, p. 90, pl. 53, fig. 5, female.

SUBGENUS IV. *COCCOTHRAUSTES, Briss.

187. Fringilla cardinalis, Nob.	Loxia cardinalis, Wils. 2. p. 38, pl. 11, fig. 1, male, fig. 2, female.
188. FRINGILLA VESPERTINA, [Cooper. (a)	Fringilla vespertina, Nob. 2. p. 14, fig. 1.
189. Fringilla ludoviciana, Nob.	Loxia rosea, (ludoviciana) Wils. 2. p. 135, pl. 17, fig. 2, male—Nob. 2, pl. 14, fig. 2, female.
190. Fringilla cœrulea, Nob.	Loxia cœrulea, Wils. 3. p. 78, pl. 24, fig. 6.
191. Fringilla purpurea, Gm.	Fringilla purpurea, Wils. 1. p. 119, pl. 7, fig. 4, male, summer dress; 5. p. 87, pl. 42, fig. 3, male, winter plumage.

GENUS 35. *PYRRHULA, Briss.

192. *Pyrrhula frontalis*, Nob.	Pyrrhula frontalis, Nob. 1. p. 49, pl. 6, fig. 1, male, fig. 2, female.
193. *Pyrrhula enucleator, Temm.	Loxia enucleator, Wils. 1. p. 80, pl. 5, fig. 2, young male.

(a) A beautiful new species, discovered in the North Western Territory, and accurately described by Mr. W. Cooper in the Annals of the New York Lyceum of Natural History.

GENUS 36. *LOXIA, Briss.

194. *Loxia curvirostra, L. (a)	Curvirostra americana, Wils. 4. p. 44, pl. 31, fig. 1, young male? fig. 2, adult male?
195. Loxia leucoptera, Gm.	Curvirostra leucoptera, Wils. 4. p. 48, pl. 31, fig. 3, young male—Nob. 2, pl. 14, fig. 3, female.

FAMILY XV. *COLUMBINI, Ill.

GENUS 37. *COLUMBA, L.

SUBGENUS I. *COLUMBA, Stephens.

196. *Columba fasciata*, Say.	Columba fasciata, Nob. 1. p. 77, pl. 8, fig. 3.
197. COLUMBA LEUCOCEPHALA, L.	Columba leucocephala, Nob. 2. pl. 15, fig. 1, female.
198. COLUMBA ZENAIDA, Nob.	Columba zenaida, Nob. T. Ac. & Am. Orn. 2. pl. 15, fig. 2, female.
199. Columba carolinensis, L.	Columba carolinensis, Wils. 5. p. 91, pl. 43, fig. 1.
200. Columba migratoria, L.	Columba migratoria, Wils. 5. p. 102, pl. 44, fig. 1, adult male.

SUBGENUS III. GOURA, Stephens.

201. Columba passerina, L.	Columba passerina, Wils. 6. p. 15, pl. 46, fig. 2, male, fig. 3, female.

ORDER 3. *GALLINÆ, L.

FAMILY XVI. *GALLINACEI, Ill.

GENUS 38. MELEAGRIS, L.

202. *Meleagris gallopavo*, L.	Meleagris gallopavo, Nob. 1. p. 79, pl. 9, male and female. Turkey of Wilson's posthumous list.

GENUS 39. *PERDIX, Briss.

SUBGENUS ORTYX, Stephens.

203. Perdix virginiana, Lath.	Perdix virginiana, Wils. 6. p. 21, pl. 47, fig. 2, male.
204. PERDIX CALIFORNICA, Lath.	Tetrao californicus, Nat. Misc. tab. 345.

(a) *Loxia pytiopsittacus, Bechst. is also almost undoubtedly an inhabitant of these states, probably confounded with L. curvirostra, from its great resemblance; but we have not yet met with it.

GENUS 40. *TETRAO, L.

SUBGENUS II. *BONASA, Nob.

205. Tetrao umbellus, L. — Tetrao umbellus, Wils. 6. p. 45, pl. 49.

SUBGENUS III. TETRAO, Vieill.

206. Tetrao cupido, L. — Tetrao cupido, Wils. 3. p. 104, pl. 27, fig. 1, male.

207. TETRAO CANADENSIS, L. — Tetrao canadensis (m.) and canace, (f.) L.—Buff. pl. enl. 131, male; pl. enl. 132, female. Nob. 2. p. 18, male.

208. TETRAO PHASIANELLUS, L. — Tetrao phasianellus, Say. Cat. of Birds in Long's Exp. (a) Edw. tab. 117. Nob. 2. pl. 17, female.

209. TETRAO OBSCURUS, Say. — Tetrao obscurus, Say in Long's Exp. female. Nob. 2. pl. 16, female.

ORDER 4. *GRALLÆ, L.

FAMILY XVII. *PRESSIROSTRES, Cuv.

GENUS 41. *CHARADRIUS, L.

SUBGENUS I. *CHARADRIUS, L.

210. Charadrius semipalmatus, [Nob. — Charadrius (tringa) hiaticula, Wils. 7. p. 65, pl. 59, fig. 3, adult. Charadrius semipalmatus, Nob. 3. pl. young.

211. Charadrius melodus, Ord. — Charadrius hiaticula, Wils. 5. p. 30, pl. 37, fig. 3, adult. Charadrius melodus, Nob. 3. pl. young.

212. Charadrius wilsonius, Ord. — Charadrius wilsonius, Wils. 9. p. 77, pl. 73, fig. 5.

213. Charadrius vociferus, L. — Charadrius vociferus, Wils. 7. p. 73, pl. 59, fig. 6.

214. *Charadrius pluvialis, L. — Charadrius pluvialis, Wils. 7. p. 71, pl. 59, fig. 5.

SUBGENUS II. *SQUATAROLA, Cuv.

215. *Charadrius helveticus, Nob. — Charadrius apricarius, Wils. 7. p. 41, pl. 57, fig. 4.

(a) The credit of having first made this bird known as an inhabitant of the territory of the United States, is due to Say, though naturalists are accustomed to see it usually quoted as an inhabitant of Virginia: but this is through an awkward mistake. This is the long-tailed Grous, which is stated by Edwards, and by others on his authority, to inhabit Virginia; an error which led Wilson into the erroneous belief that it was the same bird with Tetrao umbellus. It was erroneously considered by Linne in his 12th ed. as the Tetrao urogallus, an European species.

GENUS 42. *STREPSILAS, Ill.

216. *Strepsilas interpres, Ill. — Tringa interpres, Wils. 7. p. 32, pl. 57, fig. 1.

GENUS 43. *HÆMATOPUS, L.

217. *Hæmatopus ostralegus, L. — Hæmatopus ostralegus, Wils. 8. p. 15, pl. 64, fig. 2.

FAMILY XVIII. *HERODII, Ill.

GENUS 44. *GRUS, Pallas.

218. Grus americana, Nob. — Ardea americana, Wils. 8. p. 20, pl. 64, fig. 3.

†219. GRUS CANADENSIS, Nob. — Ardea canadensis, L. Canada crane of Wilson's list. Nob. 3. pl. Edw. pl. 133.

GENUS 45. *ARDEA, L.

SUBGENUS I. *ARDEA.

220. Ardea herodias, L. — Ardea herodias, Wils. 8. p. 28, pl. 65, fig. 2.

221. *Ardea alba, L. — Ardea egretta, Wils. 7. p. 106, pl. 61, fig. 4.

222. ARDEA PEALII, Nob. (Nov. sp.) — Ardea pealii, Nob. 3. pl.

223. Ardea candidissima, Gm. — Ardea candidissima, Wils. 7. p. 120, pl. 62, fig. 4.

224. Ardea ludoviciana, Wils. nec [Lath. — Ardea ludoviciana, Wils. 8. p. 13, pl. 64, fig. 1.

SUBGENUS II. *BOTAURUS.

225. *Ardea nycticorax, L. — Ardea nycticorax, Wils. 7. p. 101, pl. 61, fig. 2, adult, fig. 3, young.

226. Ardea violacea, L. — Ardea violacea, Wils. 8. p. 26, pl. 65, fig. 1.

227. Ardea cœrulea, L. — Ardea cœrulea, Wils. 7. p. 117, pl. 62, fig. 3.

228. Ardea minor, Wils. — Ardea minor, Wils. 8. p. 35, pl. 65, fig. 3.

229. Ardea virescens, L. — Ardea virescens, Wils. 7. p. 97, pl. 61, fig. 1.

SUBGENUS III. *ARDEOLA.

230. *Ardea exilis? Gm. — Ardea exilis, Wils. 8. p. 37, pl. 65, fig. 4.

GENUS 46. ARAMUS, Vieill.

231. ARAMUS SCOLOPÀCEUS, Vieill. — Ardea scolopacea, Gm.—Buff. pl. enl. 848. Aramus scolopaceus, Nob. 3. pl.

FAMILY XIX. *FALCATI, Ill.

GENUS 47. TANTALUS, L.

232. Tantalus loculator, L. — Tantalus loculator, Wils. 8. p. 39, pl. 66, fig. 1.

GENUS 48. *IBIS, Lacep.

233. Ibis rubra, Vieill. — Tantalus ruber, Wils. 8. p. 41, pl. 66, fig. 2, adult. Nob. 3. pl. young.

234. Ibis alba, Vieill. ? — Tantalus albus, Wils. 8. p. 43, pl. 66, fig. 3.

235. *IBIS FALCINELLUS, Vieill. — Tantalus falcinellus, L.—Buff. pl. enl. 819, ad. Nob. 3. pl.

FAMILY XX. *LIMICOLÆ, Ill.

GENUS 49. *NUMENIUS, Lath.

236. Numenius longirostris, Wils. — Numenius longirostris, Wils. 8. p. 23, pl. 64, fig. 4.

237. Numenius hudsonicus, Lath. — Scolopax borealis, Wils. 7. p. 22, pl. 66, fig. 1.

238. NUMENIUS BOREALIS, Lath. [nec Ord. — Numenius borealis, Lath. (excl. syn.) Nob. 3. pl.

GENUS 50. *TRINGA, Briss.

SUBGENUS I. *HEMIPALAMA, Nob.

239. TRINGA HIMANTOPUS, Nob. (Nov. sp.) — Tringa himantopus, Nob. 3. pl.

240. Tringa semipalmata, Wils. — Tringa semipalmata, Wils. 7. p. 131, pl. 63, fig. 4.

SUBGENUS II. *TRINGA.

241. *TRINGA SUBARQUATA, Temm. — Scolopax subarquata and Africana, Gm.—Naum. Vog. Deut. tab. 21, fig. 28, young, tab. 20, fig. 27, ad.

242. *Tringa alpina, L. — Tringa alpina, Wils. 7. p. 25, pl. 56, fig. 2, summer dress. Tringa cinclus, Wils. 7. p. 39, pl. 57, fig. 3, winter dress.

243. *TRINGA SCHINZII, Brehm. — Pelidna cinclus, var. Say in Long's Exp.—Nob. 3. pl.

244. TRINGA PECTORALIS, Nob.	Pelidna pectoralis, Say in Long's Exp.—Nob. 3. pl.
245. *Tringa islandica, L.	Tringa rufa, Wils. 7. p. 43, pl. 57, fig. 5, summer dress. Tringa cinerea, Wils. 7. p. 36, pl. 57, fig. 2, winter dress.
246. *TRINGA MARITIMA, Brunn.	Tringa maritima, Gm. Lath. Temm. Trans. of the Linn. Soc. 4. p. 40, pl. 2, fig. 2.
247. *TRINGA PLATYRHINCA, [Temm. (?)	Numenius pygmæus, Lath.—Naum. Vog. Nachtr. pl. 10, fig. 22.
248. *TRINGA TEMMINCKII, [Leisler. (?)	Tringa pusilla, Bechst.—Temm. pl. col. 41, fig. 1.
249. *TRINGA MINUTA, Leisler.	Tringa minuta, Temm.—Naum. Vog. pl. 21, fig. 30.
250. Tringa pusilla, Wils.	Tringa pusilla, Wils. 5. p. 32, pl. 37, fig. 4.

SUBGENUS III. *CALIDRIS, Ill.

251. Tringa arenaria, L.	Charadrius calidris, Wils. 7. p. 68, pl. 59, fig. 4, winter dress. Charadrius rubidus, Wils. 7. p. 129, pl. 63, fig. 3, summer dress.

GENUS 51. *HIMANTOPUS, Briss.

252. Himantopus nigricollis, Vieill.	Recurvirostra himantopus, Wils. 7. p. 48, pl. 58, fig. 2.

GENUS 52. *TOTANUS, Bechst.

253. *Totanus semipalmatus, [Temm. (a)	Scolopax semipalmata, Wils. 7. p. 131, pl. 63, fig. 4.
254. Totanus melanoleucus, Vieill.	Scolopax vociferus, Wils. 7. p. 57, pl. 58, fig. 5.
255. Totanus flavipes, Vieill.	Scolopax flavipes, Wils. 7. p. 55, pl. 58, fig. 4.
256. *Totanus bartramius, Temm.	Tringa bartramia, Wils. 7. p. 63, pl. 59, fig. 2.
257. Totanus chloropygius, Vieill.	Tringa solitaria, Wils. 7. p. 53, pl. 58, fig. 3.

(a) Temminck in his Manual, at the article of this species, speaks of another North American species, larger, perfectly similar to this, but easily distinguished from it by not having the toes semipalmated, but a single one so, and the other only connected by a rudiment of membrane. We do not know such a bird, neither do we know, as an American, the Totanus fuscus of Europe, which he positively gives as such, nor the Grand Chevalier aux pieds rouges of Cuvier, which Temminck equally states to be a new N. Am. species, with which we must be utterly unacquainted. Vieillot also enumerates several other N. Am. Totani, of which some can be proved nominal, and none admitted in this catalogue.

258. *Totanus macularius, Temm. [Vieill. — Tringa macularia, Wils. 7. p. 60, pl. 59, fig. 1, adult. Nob. 3. pl. young.

GENUS 53. *LIMOSA, Briss.

259. Limosa fedoa, Vieill. — Scolopax fedoa, Wils. 7. p. 30, pl. 56, fig. 4, female.

260. *Limosa melanura, Leisler. (ægocephala) — Scolopax limosa, L.—Buff. pl. enl. 874. Nob. 3. pl.

GENUS 54. *SCOLOPAX, L.

SUBGENUS I. *MACRORAMPHUS, Leach.

261. *Scolopax grisea, Gm. — Scolopax noveboracensis, Wils. 7. p. 45, pl. 58, fig. 1.

SUBGENUS II. *SCOLOPAX, Vieill.

262. Scolopax Brehmii? Kaup. (a) — Scolopax gallinago, Wils. 6. p. 18, pl. 47, fig. 1.

SUBGENUS III. *RUSTICOLA, Vieill.

263. Scolopax minor, Gm. — Scolopax minor, Wils. 6. p. 40, pl. 48, fig. 2.

FAMILY XXI. *MACRODACTYLI, Ill.

GENUS 55. RALLUS, L.

SUBGENUS I. *RALLUS, Ill.

264. Rallus crepitans, L. — Rallus crepitans, Wils. 7. p. 112, pl. 62, fig. 2.

265. Rallus virginianus, L. — Rallus virginianus, Wils. 7. p. 109, pl. 62, fig. 1.

SUBGENUS II. *CREX, Ill.

266. Rallus carolinus, L. — Rallus carolinus, Wils. 6. p. 27, pl. 48, fig. 1.

267. Rallus noveboracensis, Nob. — Fulica noveboracensis, Gm. Gallinula nov. Lath. Nob. 3. pl.

GENUS 56. *GALLINULA, Briss.

268. Gallinula martinica, Lath. — Gallinula porphyrio, Wils. 9. p. 67, pl. 73, fig. 2.

269. *Gallinula chloropus, Lath. — Fulica chloropus, L.—Buff. pl. enl. 877. Nob. 3. pl.

(a) We cannot admit here the Sc. major, nor Sc. gallinago, as American, though we could adduce the best authorities for their introduction.

GENUS 57. *FULICA, L.

270. Fulica americana, Gm. — Fulica atra, Wils. 9. p. 61, pl. 73, fig. 1.

FAMILY XXII. *PINNATIPEDES, Nob.

GENUS 58. *PHALAROPUS, Briss.

SUBGENUS I. *PHALAROPUS, Cuv. nec Vieill.

271. *Phalaropus fulicarius, Nob. — Phalaropus hyperboreus, Wils. 9. p. 75, pl. 73, fig. 4.

SUBGENUS II. *LOBIPES, Cuv.

272. *PHALAROPUS HYPERBOREUS, [Lath. — Tringa lobata and hyperborea, L. Buff. pl. enl. 766. Phalaropus hyperboreus, Nob. 3. pl.

273. PHALAROPUS WILSONII, Sabine. — Phalaropus lobatus, Wils. 9. p. 72, pl. 73, fig. 3: wretched indication. Phalaropus wilsonii, Nob. 3. pl.

FAMILY XXIII. *HYGROBATÆ, Ill. (a)

GENUS 59. *RECURVIROSTRA, L.

274. Recurvirostra americana, L. — Recurvirostra americana, Wils. 7. p. 126, pl. 63, fig. 2.

GENUS 60. *PLATALEA, L.

275. Platalea ajaja, L. — Platalea ajaja, Wils. 7. p. 123, pl. 63, fig. 1.

GENUS 61. *PHŒNICOPTERUS, L.

276. *Phœnicopterus ruber, L. — Phœnicopterus ruber, Wils. 8. p. 45, pl. 66, fig. 4.

ORDER 5. ANSERES, L.

FAMILY XXIV. *LONGIPENNES, Ill.

GENUS 62. RHYNCHOPS, L.

277. Rhynchops nigra, L. — Rhynchops nigra, Wils. 7. p. 85, pl. 60, fig. 4.

GENUS 63. *STERNA, L.

278. STERNA CAYANA, Lath. — Sterna cayana, Nob. add. Orn. U. S. J. Ac. Nat. Sc. Ph. Buff. pl. enl. 988.—Nob. 4. pl.

(a) Each genus may perhaps form a family!

279. *Sterna aranea, Wils.	Sterna aranea, Wils. 8. p. 143, pl. 72, fig. 6.
280. *Sterna hirundo, L.	Sterna hirundo, Wils. 7. p. 76, pl. 60, fig. 1.
281. *Sterna arctica, Temm.	Sterna arctica, Temm. Nob. 4. pl.
282. *Sterna minuta, L.	Sterna minuta, Wils. 7. p. 80, pl. 60, fig. 2.
283. *Sterna nigra, L.	Sterna plumbea, Wils. 7. p. 83, pl. 60, fig. 3, young. Sterna nigra, Nob. 4. pl. adult.—Buff. pl. enl. 33, adult summer dress; id. 924, young.
284. Sterna fuliginosa, Gm.	Sterna fuliginosa, Wils. 8. p. 145, pl. 72, fig. 7.
285. Sterna stolida, L.	Sterna stolida, Lath.—Buff. pl. enl. 997. Nob. 4. pl.

GENUS 64. *LARUS, L.

286. *Larus glaucus, Brunn.	Larus glaucus, Gm. Lath. Temm. Naum. Vog. pl. 35.
‖287. *Larus marinus, L.	Black-backed Gull of Wilson's list. Buff. pl. enl. 990, adult; id. 266, young.—Nob. 4. pl.
288. *Larus argentatus, Brunn. ‖289. Larus fuscus, L.	One of the two is the Herring Gull of Wilson's list.—Buff. pl. enl. 253. Naum. Vog. f. 36. f. 51. B.
290. *Larus eburneus, Gm. (?)	Larus eburneus, Temm. Brehm.—Buff. pl. enl. 994.
‖291. *Larus canus, L.	Common Gull of Wilson's list.—Buff. pl. enl. 977.
‖292. *Larus tridactylus, L.	Kiltiwake Gull of Wilson's list.—Buff. pl. enl. 387.
293. *Larus atricilla, L.	Larus ridibundus, Wils. 9. p. 89, pl. 74, fig. 4.
294. *Larus capistratus, Temm. (a)	Larus capistratus, Temm.—Nob. 4. pl.
295. *Larus minutus, Pallas. (?)	Larus minutus, Gm. Lath. Sabine. Naum. Vog. Nachtr. f. 36. f. 72.

GENUS 65. *LESTRIS, Ill.

‖296. *Lestris cataractes, [Temm. ‖297. *Lestris pomarinus, [Temm.	One of the two is the Skua Gull of Wilson's list.—Penn. Brit. Zool. p. 140, f. L. 6. Lestris parasiticus, Meyer.—Vog. Deut. fol. v. 2. heft. 21, adult.

(a) I believe that authors who have reckoned Larus ridibundus amongst the Am. species, have mistaken the present for it, as they are very similar, and the former has never fallen under my observation.

298. *Lestris parasiticus, Boie. Larus parasiticus, L.—Buff. pl. enl. 762, adult; id. 991, young.

GENUS 66. *PROCELLARIA, L.

SUBGENUS I.*

299. *Procellaria glacialis, L.(?) Petrel de l'ile Saint-Kilda, Buff. pl. enl. 59.

SUBGENUS II. *puffinus, Briss.

†300. *Procellaria puffinus, L. Shear-water Petrel of Wilson's list. Buff. pl. enl. 962.

301. *Procellaria obscura, Gm. Procellaria obscura, Lath. Temm. Storia degli uccelli, v. 5. pl. 538.

SUBGENUS III.*

302. Procellaria wilsonii, Nob. Procellaria pelagica, Wils. 7. p. 90, pl. 60, fig. 6.

303. *Procellaria leachii, Temm. Procellaria leachii, Nob. Journ. Ac. Nat. Sc. Ph. vol. 6. p. 229, pl. 9, upper fig.

GENUS 67. DIOMEDEA, L.

†304. Diomedea exulans, L. Albatros of Wilson's list.—Buff. pl. enl. 237.

FAMILY XXV. *LAMELLOSODENTATI, Ill.

GENUS 68. *ANAS, L.

SUBGENUS I. *anser, Briss.

305. *Anas hyperborea, Gm. Anas hyperborea, Wils. 8. p. 76, pl. 68, fig. 5, male; p. 89, pl. 69, fig. 5, young.

306. *Anas albifrons, Gm. Anas albifrons, Say in Long's Exp. Nob. 4. pl. Edw. Glean. pl. 153.

307. *Anas segetum, Gm. (?) Anser sylvestris, Briss.—Buff. pl. enl. 985.

308. Anas canadensis, L. Anas canadensis, Wils. 8. p. 53, pl. 67, fig. 4.

309. *Anas leucopsis, Temm. Anas erythropus, L.—Buff. pl. enl. 855.

310. *Anas bernicla, L. Anas bernicla, Wils. 8. p. 131, pl. 72, fig. 1.

SUBGENUS II. *cygnus, Bechst.

†311. *Anas cygnus, L. Swan of Wilson's list.—Edw. Glean. pl. 150. Nob. 4. pl.

SUBGENUS III. *ANAS, Brehm.

312. *Anas clypeata, L.	Anas clypeata, Wils. 8. p. 65, pl. 67, fig. 7.
313. *Anas boschas, L.	Anas boschas, Wils. 8. p. 112, pl. 70, fig. 7.
314. *Anas strepera, L.	Anas strepera, Wils. 8. p. 120, pl. 71, fig. 1.
315. *Anas acuta, L.	Anas acuta, Wils. 8. p. 72, pl. 68, fig. 3.
316. Anas americana, Gm.	Anas americana, Wils. 8. p. 86, pl. 69, fig. 4.
317. Anas obscura, Gm.	Anas obscura, Wils. 8. p. 141, pl. 72, fig. 5.
318. Anas sponsa, L.	Anas sponsa, Wils. 8. p. 97, pl. 70, fig. 3.
319. Anas discors.	Anas discors, Wils. 8. p. 74, pl. 68, fig. 4.
320. *Anas crecca, L.	Anas crecca, Wils. 8. p. 101, pl. 70, fig. 4.

SUBGENUS IV. *FULIGULA, Nob.

321. *Anas mollissima, L.	Anas mollissima, Wils. 8. p. 122, pl. 71, fig. 2, male; p. 125, pl. 71, fig. 3, female.
322. *ANAS SPECTABILIS, L.	Platypus spectabilis, Brehm.
323. *Anas nigra, L.	Anas nigra, Wils. 8. p. 135, pl. 72, fig. 2.
324. *Anas fusca, L.	Anas fusca, Wils. 8. p. 137, pl. 72, fig. 3.
325. *Anas perspicillata, L.	Anas perspicillata, Wils. 8. p. 49, pl. 67, fig. 1.
326. Anas rubida, Wils.	Anas rubida, Wils. 8. p. 128, pl. 71, fig. 3, male; p. 130, pl. 71, fig. 6, young.
327. Anas labradora, Gm.	Anas labradora, Wils. 8. p. 91, pl. 69, fig. 6, male. Nob. 4. pl. female.
328. Anas valisneria, Wils.	Anas valisneria, Wils. 8. p. 103, pl. 70, fig. 5.
329. *Anas ferina, L.	Anas ferina, Wils. 8. p. 110, pl. 70, fig. 6.
330. *Anas marila, L.	Anas marila, Wils. 8. p. 84, pl. 69, fig. 5.
331. Anas rufitorques, Nob.	Anas fuligula, Wils. 8. p. 60, pl. 67, fig. 5, male. Nob. 4. pl. female.
332. *Anas clangula, L.	Anas clangula, Wils. 8. p. 62, pl. 67, fig. 6.

333. Anas albeola, L.	Anas albeola, Wils. 8. p. 51, pl. 67, fig. 2, male, fig. 3, female.
334. *Anas glacialis, L.	Anas glacialis, Wils. 8. p. 93, pl. 70, fig. 1, male; p. 96, pl. 70, fig. 2, female.
335. Anas histrionica, L.	Anas histrionica, Wils. 8. p. 139, pl. 72, fig. 4.

GENUS 69. *MERGUS.

336. *Mergus merganser, L.	Mergus merganser, Wils. 8. p. 68, pl. 68, fig. 1, male; p. 71, pl. 68, fig. 2, female.
337. *Mergus serrator, L.	Mergus serrator, Wils. 8. p. 81, pl. 69, fig. 2, male.
338. Mergus cucullatus, L.	Mergus cucullatus, Wils. 8. p. 79, pl. 69, fig. 1, male.
339. *Mergus albellus, L.	Mergus albellus, Wils. 8. p. 126, pl. 71, fig. 4, male.

FAMILY XXVI. *STEGANOPODES, Ill.

GENUS 70. *PELECANUS, L.

‖340. *Pelecanus onocrotalus, L.	Great white Pelican of Wilson's list. Buff. pl. enl. 87, adult; id. 965, young. Nob. 4. pl.
‖341. Pelecanus fuscus, Gm. Lath. (excl. syn.) (a)	Brown Pelican of Wilson's list. Buff. pl. enl. 957. Nob. 4. pl.

GENUS 71. *PHALACROCORAX, (b) Briss.

‖342. *Phalacrocorax, carbo.	Corvorant of Wilson's list. Buff. pl. enl. 927.
‖343. *Phalacrocorax graculus.	Shag of Wilson's list. Buff. pl. enl. 974, young.
344. *Phalacrocorax cristatus.	Carbo cristatus, Temm. pl. col. 322, adult fall plumage.
345. *Phalacrocorax pygmæus.	Pelecanus pygmæus, Gm. Lath.

(a) Probably the same with their P. carolinensis, (young) and P. trachyrhincos, (adult.) Other Pelecani are given by authors as N. Am. such as P. erythrorhincos, Gm. (trachyrhincos, Lath.) Pelecanus carolinensis, &c. but we have but little doubt that, when properly examined, these will prove to be referable to the above in different states. We are at all events pretty certain that the two species inserted in this catalogue, are the only ones that inhabit the United States.

(b) This name is certainly barbarous, and rightly objected to as such by the refined Illiger. But as authors disagree as to the name which is to be adopted, (Lacepede, Meyer, Temminck, and Brehm call it Carbo, whilst Illiger calls it Halieus, and Vieillot Hydrocorax) we think this confusion shows that we must, with Cuvier and Dumeril, retain the prior name however barbarous.

GENUS 72. TACHYPETES, Vieill.

‖346. TACHYPETES AQUILUS, Vieill. Frigate Pelican of Wilson's list.—Buff. pl. enl. 961. Nob. 4. pl.

GENUS 73. *SULA, Briss.

‖347. *SULA BASSANA. Gannet of Wilson's list—his Brown Booby (Pelecanus fiber, L.) is probably the very young, (chicken.) Buff. pl. enl. 278, adult; id. 986, young.

GENUS 74. PHAETON, L.

‖348. PHAETON ÆTHEREUS, L. Tropic bird of Wilson's list.—Buff. pl. enl. 919, adult; id. 998 & 339, young.

GENUS 75. PLOTUS, L.

349. Plotus anhinga, L. Plotus melanogaster, Wils. 9. p. 79, pl. 74, fig. 1, male; p. 82, pl. 74, fig. 2, female.

FAMILY XXVII. *LOBIPEDES.

GENUS 76. PODOA, Ill.

350. PODOA SURINAMENSIS, Ill. Plotus surinamensis, Gm. Lath.—Buff. pl. enl. 893.

GENUS 77. *PODICEPS, Lath.

‖351. *PODICEPS CRISTATUS, Lath. Crested Grebe of Wilson's list.—Buff. pl. enl. 400, adult; id. 944 et 941, young.

352. *PODICEPS RUBRICOLLIS, Lath. Podiceps rubricollis, Sabine in Franklin's Exp.—Buff. pl. enl. 931.

353. *PODICEPS CORNUTUS, Lath. Colymbus cornutus, Gm.—Buff. pl. enl. 404, fig. 2, adult; id. pl. enl. 942, young.

‖354. PODICEPS CAROLINENSIS, [Lath. (a) Colymbus podiceps, Gm.—Buff. pl. enl. 943, young.

FAMILY XXVIII. *PYGOPODES, Ill.

GENUS 78. *COLYMBUS, L.

355. *Colymbus glacialis, L. Colymbus glacialis, Wils. 9. p. 84, pl. 74, fig. 3.

(a) Podiceps ludovicianus, Lath. is the young. This species is undoubtedly the Little Grebe of Wilson's list, as that bird (Podiceps minor, Lath.) seems not to be found in N. Am. notwithstanding the statements of authors to the contrary.

356. *Colymbus arcticus, L. (?) Colymbus arcticus, Lath. Temm.—Buff. pl. enl. 914, young.

‖357. *Colymbus septentrionalis, [L. Speckled Diver of Wilson's list.(a) Buff. pl. enl. 308, adult; id. 992, young.

GENUS 79. *URIA, Briss.

SUBGENUS I. *URIA.

358. *Uria troile, Lath. (b) Colymbus troile, L.—Buff. pl. enl. 903, adult summer dress.

359. *Uria grylle, Lath. Colymbus grylle, L.

SUBGENUS II. *CEPHUS, Cuv.

360. *Uria alle, Temm. Alca alle, Wils. 9. p. 94, pl. 74, fig. 5.

GENUS 80. *MORMON, Ill.

‖361. *Mormon arctica, Nob. Puffin of Wilson's list.—Buff. pl. enl. 275.

GENUS 81. *ALCA, L.

‖362. *Alca torda, L. Razor-bill of Wilson's list.—Buff. pl. enl. 1104, adult winter dress; id. 1103, adult summer dress.

RECAPITULATION.

Species given by Wilson, -	270	(179 land,	91 water birds)
Species given in my first volume,	16	(16 "	00 " ")
Species to be given in my subsequent volumes, - -	76	(14 "	62 " ")
Of which ‖ twenty-four were indicated by Wilson.			
	362	(209 land,	153 water birds.)
*Species common to the United States and Europe, - -	116	(27 land,	89 water birds)
Species not found in Europe,	246	(182 "	64 " ")
	362	(209 land,	153 water birds.)

Of the 81 genera in which the 362 species inhabiting the U. States are classed in our system, 63* are common to Europe and America, whilst 18 have no representative in the former country.

Out of 37 natural families that we admit in the class of birds, North America possesses 28, of which two only are not found also in Europe.

(a) This name (Colymbus stellatus, auct.) belongs exclusively to the young; we have never met with the adult in the United States.

(b) Here ought to be placed Uria brunnichii, Sabine, so common in Baffin's Bay and other high northern latitudes; but we have not been able to trace it along the coast of the United States.

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An improvement on Reed's double acting Stomach Pump—Caleb B. Matthews, M. D. July 3rd. Published in Medical Recorder, October No. 1826.

Various Lectures on Natural History—Caleb B. Matthews, M. D.

Various Lectures on Natural History and Physiology—John T. Sharpless, M. D.

Catalogue of Birds of the United States—Charles L. Bonaparte, Nov. 6, 1826.

New Species of Salamander, by Jacob Green, A. M.—Read by John T. Sharpless, M. D. Nov. 6, 1826.

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The Society is highly indebted to the kindness of Titian R. Peale and William Mason for the beautiful designs of the Salamanders from which the engravings were made.

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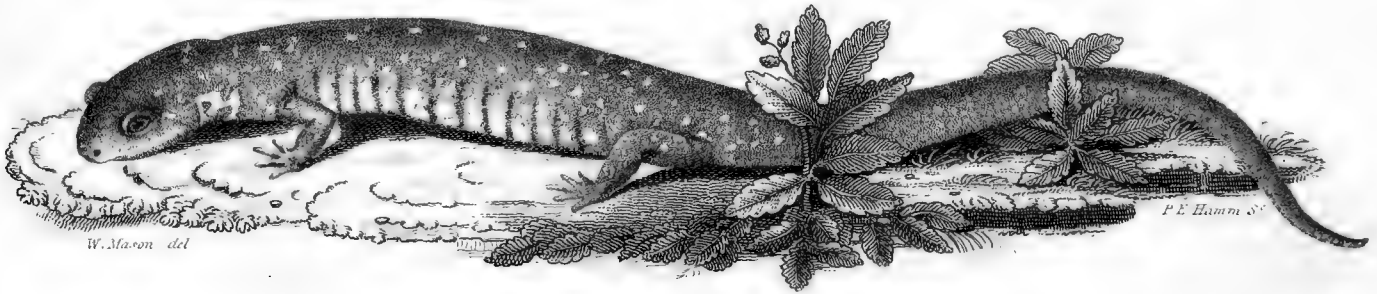

S. GLUTINOSA _VAR.

CONTRIBUTIONS

OF THE

MACLURIAN LYCEUM

TO THE

ARTS AND SCIENCES.

VOL. I. JULY, 1827. No. 2.

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PHILADELPHIA:

SOLD FOR THE MACLURIAN LYCEUM BY J. DOBSON, 108 CHESNUT STREET; G. & C. CARVILL, BROADWAY, NEW YORK; JOHN MILLER, LONDON; AND J. B. BAILLIERE, PARIS.

J. RICHARDS, PRINTER.

1827.

CONTRIBUTIONS

OF THE

MACLURIAN LYCEUM

TO THE

ARTS AND SCIENCES.

VOL. I. PHILADELPHIA, JULY, 1827. No. 2.

Remarks on some REPTILIA *described by Richard Harlan, M. D. in the Journal of the Academy of Natural Sciences of Philadelphia.* BY THOMAS SAY. Read April 23, 1827.

I HAVE examined the specimen of SCINCUS described as new in pages 286, 287, vol. iv. of the Jour. Acad. Nat. Sc. Phil. and believe it to be no other than an aged individual of the *Quinquelineatus;* all the specific characters, so far as I can judge, are the same; even the dorsal line, when viewed in a particular light, is very obvious on the posterior part of the body.

The animal described in pages 284, 285, vol. iv. of the same work, belongs to the genus BIPES of Lacepede.

The *toes are not corneous,* as stated in the description, but are very distinctly clothed with imbricate scales like other parts of the body; these scales are continued to the very extremity of the toes, but are there adpressed so closely together as to resemble a very short incurved nail; its

conformation may be compared to that of the termination of the tail of some COLUBERS.

The AGAMA described in page 299 et seq. if not the *Orbicularis*, Linn. is I think the *Tapayaxin* of Hernandez;* the figure which the latter author has given of it, though by no means an accurate representation of its characters, certainly indicates this species as decidedly as the other figures of the same work indicate the animals for which they were intended. The late Professor Barton was decidedly of this opinion, notwithstanding the greater length of the tail in the figure, and in his Medical and Physical Journal for the year 1806, he applied the specific name of *Tapayaxin* to the very individual represented in Mr. Ord's excellent plate. Whatever therefore may be the question relative to its identity with the AGAMA figured by Hernandez, and that of Clavigero, no one can hesitate to admit that the name selected by Dr. Barton has the priority, and consequently, bad as it is, the exclusive right.

* This opinion is strengthened, if not confirmed, by a letter recently received by Dr. Hays, from a gentleman in Mexico, to whom he sent the engraving and account of the animal, published in the Journal of the Academy, and who writes that the animals are quite common in the immediate neighbourhood of that city.—*Pub. Com.*

Note on Capt. Le Conte's paper on "New Coleopterous Insects of North America," published in the first volume of the Annals of the Lyceum of Natural History of New York. By THOMAS SAY. Read April 23, 1827.

COLASPIS *infuscata*, Le C. is the C. *quadrinotata*—See Journal of the Acad. Nat. Sc. P. vol. iii. p. 444.

ANTHICUS *murinipennis*, Le C. is the A. *bicolor*—See American Entymology, vol. i. pl. x. It is very closely allied to NOTOXUS *scrricornis* of Panzer, No. 31.

MOLORCHUS *affinis*, Le C. is the M. *bimaculatus*—See Journal Acad. Nat. Sc. P. vol. iii. p. 428.

CHRYSOMELA *scalaris*, Le C. may possibly prove to be the C. *decipiens* of Weber, p. 52, notwithstanding Weber's description of the suture, which he says is "brunneus"; a specimen in my collection has a tinge of that colour, and another has a slight appearance of the lateral thoracic indentations, which Weber attributes to his species. At any rate, I referred the species to that description until another insect could be found better adapted to it.

There can be no doubt respecting priority in relation to the above names.

Reply to a Note in Harlan's Synopsis of American Reptiles. By JACOB GREEN, A. M. Prof. of Chem. in Jeff. Med. College. Read May 14, 1827.

Dr. Harlan in his Synopsis of North American Reptiles, published in a separate form, and also in the Jour. Acad. Nat. Sc. vols. v. vi. states that in a paper published in the "Contributions of the Maclurian Lyceum," I have described two animals as new which were before known to Naturalists. In a note to his Catalogue, &c. he remarks, "the SALAMANDRA *intermixta* of this author is identical with the species previously known to naturalists as the S. *picta*"—Jour. Acad. Nat. Sc. Phil. vol. v. June, 1825—Idem of this Synopsis, p. 333, (read p. 17.) In turning to the June No. of the Journal above referred to, I find no notice of the S. *picta*, but in the *December* No. it is mentioned.* Now as I published an account of this animal in the Port Folio some months before this, if Dr. H. would invert the paragraph

* I am informed that by the reference to the Jour. Acad. Nat. Sc. *June*, that Dr. H. intended to notice merely the date when his paper was read.

just quoted, it would be precisely correct; thus—"The S. *picta* of this author (Dr. H.) is identical with the species previously known to naturalists as the S. *intermixta.*" It is not my intention to enter into any controversy on this subject, but in justice to myself I must state that the S. *intermixta* was long known to be a species described by me to almost every gentleman in this city who paid any attention to this subject; and in two cabinets at least, besides my own, the specimens of these animals were labelled with that name—This was known to Dr. H. himself before he published or wrote his description.

With regard to the other animal, Dr. Harlan observes—"S. *Jeffersoniana*, Green, was previously described as a variety of S. *variolata*, at page 334 of this Synopsis;" (for p. 334, read p. 18.) I am at a loss to discover the Doctor's object in this note. The variety of the S. *variolata* was not described before the S. *Jeffersoniana*, according to his own showing—for upon turning to the date of his paper it will be seen that it was "read December 12, 1826"—whereas my paper was "read October 23, 1826." His paper was published in February, 1827, and mine in January, 1827. By what rule of arithmetic he makes out a priority of claim I cannot determine. But suppose the Dr. to be correct in his calculation, I contend that the animals are wholly different. Before describing the S. *Jeffersoniana*, I compared it not only with a number of specimens of the *Variolata*, but also with the very animal to which he alludes; and both in my own judgment, and in that of some friends who were present, the two species were distinct. The truth is, that there is perhaps no species better characterized than the S. *Jeffersoniana*—those who are curious on this subject may see the descriptions and *figures* of both—The S. *variolata* will be found in the Jour. Acad. Nat. Sc. vol. i. p. 460, pl. 18, the other in the first No. of the Contributions, &c. plate 1.

But this is not all.—Dr. H. has committed another error in this unfortunate note. The animal to which he refers us as a variety of the S. *variolata*, has no relation to that species whatever—it is a variety of the S. *glutinosa*, and is the very animal which I noticed as being found in this state by a friend, who informed me that the spots, when the animal was alive, were of a silvery hue. (See Contributions, p. 6.) The colour of this animal, like that of many others of this Genus, is entirely changed by the alcohol in which it is preserved—and hence the absolute necessity of describing only from living specimens. No one is more fully aware of the perplexities which embarrass this interesting subject than myself—and none who more justly appreciates the merit, the labour, and the assiduity of Dr. Harlan.

Some remarks on the Unios *of the United States, with a description of a new species.* By Jacob Green, A. M. Prof. of Chem. in Jeff. Med. Col. Read April 23, 1827.

There is perhaps no genus in Conchology more perplexed and uncertain in its species than that of the Unio. The shells which belong to this genus are exceedingly abundant in all our fresh water streams; and many of the species assume such a variation in shape, colour, and marking, and even in the position and structure of the teeth, that it is exceedingly difficult to decide upon those characters which should determine a species and those which mark merely varieties. If we take for example the Unio *fluviatilis*,*

* I have no doubt that the species known commonly by the name of Unio *purpureus*, is the same with the Mytilus *fluviatilis* figured by Lister, t. 157, fig. 12, and described by Dillwyn, from Gmelin, under that name.—I have, therefore, been obliged by the rules of Nomenclature, now so strictly observed in Natural History, to restore the original specific name of Gmelin to this interesting shell, so well known by the name of *Purpureus*.

which is perhaps the most numerous of the species in the Atlantic States, we have noticed that different localities produce very different appearances; even those which inhabit different parts of the same river, within a short distance of each other, are thus characterized. In the Delaware this shell is found sometimes ovate, elongated, cylindrical, arcuate, and flattened. The species in the Ohio river called U. *gibbosus*, and which is probably the U. *fluviatilis*, presents us also with many varieties of external shape.

The colour of the nacre of the *Fluviatilis* is purple, pink, or orange, of every shade, and not unfrequently bluish, or pearly white. The thickness of these shells differ, some specimens are thin and fragile, while others are strong and ponderous. In some individuals the periostracha or epidermis, is marked with broad and narrow dark coloured rays, diverging from the beaks,* while in most others it is of a plain horn colour, or of a dark brown hue. The beaks of the U. *fluviatilis* have, very frequently, very different relative situations—but without entering more at large into these discrepances, it will be sufficient to remark that it would be impracticable to select any specific characters that might properly be applied to every individual of this Protean race—yet notwithstanding all these anomalies, from the vast multitude of specimens which have been obtained, and from the facility with which their habits can be observed, little or no difficulty is ever experienced in identifying the U. *fluviatilis*—yet we may safely say that if but three or four specimens of each of the most prominent varieties were to be sent to the most eminent conchologist in Europe, we should have them returned to us with distinct specific

* I have noticed the radiating lines on the U. *fluviatilis* particularly, because the fact has been doubted by some very careful and diligent observers. In the neighbourhood of this city these radiated shells are very abundant.

names.—Lamark has made three or four species in this manner of the U. *fluviatilis.*

There is also a striking resemblance between some of the UNIOS of the Atlantic States and some species found in our Western waters; thus the U. *nassutus* of the Delaware, approximates so nearly the U. *rectus* Lam., often called U. *prœlongus*, of the Ohio, that on comparing a number, we have been almost led to the conclusion that they are merely varieties of the same species, produced by difference of food and locality—they are certainly as much like each other as the U. *fluviatilis* of the two rivers. That one should be a much thicker and larger shell than the other is no objection; for we find that those specimens of the UNIO taken from deep water, are generally thin and fragile, while individuals of the same species found in shallow and sluggish streams, are much more ponderous—Again, the U. *carinifera* of Lamark, which is a true *Fluviatilis*, very much resembles some specimens of the U. *alatus* in its wing like appendage, though there can be no doubt that this last shell belongs to a distinct species, if not to another Genus. If we were authorized to adopt the theory that some of the described species of UNIO generated promiscuously together, most of our present difficulties might be very readily removed. Certain varieties in the contour of many species we know take place in consequence of a preternatural enlargement of the shell in certain directions, owing probably to a disease of the animal, which has produced an elongation of his mantle in that direction. The amount of this monstrous growth can be readily determined by the configuration of the impression made by the mantle of the animal on the surface of the nacre, near the margin of the shell. Besides the above regular but preternatural formation, many singular distortions of the UNIO frequently occur. Not to mention others, in my cabinet there is a

specimen of the *Fluviatilis* so much twisted as not to be very unlike the ARCA *tortuosa*. These malconformations are produced when the young shell becomes fastened between hard substances, and as it increases in size it assumes in some degree the figure of the substance.

No genus of bivalve shells is more liable to have the periostracha eroded or carious, than the UNIO. This decortication always commences round the beaks, and seems to arise from two causes. In those cases where the carious part appears channelled or grooved, some parasitic animal has no doubt occasioned the defect, for these animals have been found making their depredations under the periostracha. They always penetrate into the solid calcarious portion of the shell, but perhaps never perforate it. Those perforations which we often see both in the recent and fossil species of some marine bivalves, are produced by a very different parasite. But the principal cause of the decortication of the UNIOS seems to be the following—These shells are commonly about half imbedded in the mud of the streams which they inhabit—the foot and basal margin of the shell are of course downwards, and the beaks above the surface of the mud, where they are more exposed to the influence of light and to the changes in the temperature of the water, which causes are sufficient to produce a slow decomposition in the exposed part—the motion of the water may also tend to hasten the decay. In confirmation of this opinion, we find that those shells which inhabit very shallow water, where the first mentioned causes operate most powerfully, are much more carious than those found in deeper streams. The full grown specimens of the U. *peruvianus* (called sometimes U. *plicatus* or *undulatus*) seem peculiarly liable to this defect—These shells are commonly found in the shallowest parts of the Ohio.

Very few regular pearls have been found in our UNIOS.* Calcarious deposits are frequently made on the nacre around any foreign matter, such as gravel, sticks, and mud, which the animal cannot easily eject. The U. *alatus* is peculiarly liable to this kind of deposit on its nacre. It may be here remarked, that while the periostracha or epidermis appears to be secreted by the mantle of the animal, these pearly depositions seem to arise from a fluid exuded from the body.

It is a curious subject of speculation what circumstances occasion the splendid colours which often embellish the interior surface or nacre of the UNIOS. These colours are perhaps never characteristic of any species; at least there are many of the species which are marked with the same varieties of colour. Thus we have the purple and the white *Alatus*, though this last variety rarely occurs—we have the purple and the white *Fluviatilis*—every shade of pink and orange is also common in this last species. The *Rectus* is both pink and white—the *Cylindricus* pink and white—the *Orbicularis* red and white; the same changes might be noticed in other species. These different colours cannot depend on the food of the animal, as they are often found in the same species in the same locality.†

Having carefully examined the rivers in the neighbourhood of Pittsburg, I found that the *Alatus*, *Ovatus*, *Peruvianus*, *Crassus*, and *Rectus*, were very abundant, and commonly associated. They are usually imbedded in the soft

* I have seen some very beautiful pearls taken from the VENUS *Mercenaria* and the ANODONTÆ.

† The difference of colour noticed above may be seen in some marine bivalves, particularly the VENUS *Mercenaria*, or common clam—some of which are perfectly white, while others are of a deep brilliant blue, round the inner margin. The whole surface, it has been said, is sometimes blue; but this must be an exceedingly rare occurrence, as many thousands have been examined without success.

mud or clay along the shores of the Monongahela and Ohio; few of them occur in the gravelly banks of the Alleghany. The *Alatus* and *Ovatus*, owing to their large and muscular foot, adhere so firmly to the bottom that it is quite difficult to remove them—so far from withdrawing the foot into the shell, as most other Unios, on being grasped by the hand, they seem to exert all their power to adhere more firmly to the bottom. When captured after such an effort, the foot always projects an inch or two beyond the shell, and often remains exposed till the death of the animal.

Notwithstanding the difficulties and discouragements in settling what ought to be considered true specific characters in the genus Unio, I shall now describe a supposed new species, found in some abundance during my late examination of this rich locality.

UNIO *Æsopus.*

Testa ovata, antice undato angulata, compressa, postice orbiculata, transversem suliata et rugosa; rugis prope margines obsoletis, serie nodulorum a natibus versus margines, inferiorem decurrente, instructis; natibus decorticalis et leviter erosis; periostracha nitida, luteo fusca; intus alba indescente; dentibus, crassis, striatis. Plate 3.

Hunched Unio—Shell oval—compressed, thin and slightly angular at the anterior end or margin—regularly rounded—convex and thick at the posterior margin—beaks near the posterior margin slightly incurved and but a little eroded—from the beaks over the disk and near the middle of the shell there is a remarkable gibbosity or nodulous ridge, produced by the striæ becoming in this place remarkably thick and tuberculated. There appears also in some speci-

mens the indication of a second ridge near the anterior end; both these ridges are alternately raised and depressed—periostracha much wrinkled by the striæ, of a light horn colour, and remarkably glabrous—in old and young specimens it is darker than in the perfect shell—and the young are often beautifully rayed and spotted with brown—nacre commonly white, pearly, and undescent—teeth moderately thick—length about two inches—breadth about four.

This shell inhabits probably all our western waters; and it is a little remarkable that Prof. Rafinesque, who has described and figured so many of the UNIONIDÆ, should have omitted this remarkable species. I found eight or ten of these shells in the rivers in the neighbourhood of Pittsburg. In old shells the anterior margin is often produced and truncated—and the young specimens seem to be peculiarly liable to a preternatural enlargement of some portions of the shell, more than others.

Description of two new species of ACHATINA, *from the Sandwich Islands—with some remarks on the* TI, *the plant on which these shells are commonly found.* BY J. GREEN, A. M. Prof. of Chem. in Jeff. Med. College. Read May 14, 1827.

ACHATINA *Stewartii.*

A testa sinistrorsa—ovato—oblonga—lutescente, minutissime striata—colore varia, nunc unicolore, nunc diversissime faciata—collumella rosea—labro tenui—intus albido.—Plate 4, figs. 1, 2, 3, 4.

STEWART'S ACHATINA.—*Shell* heterostophe—conical—oblong—about one inch in length and half an inch in diameter—*whorls* six or seven, rounded and marked with numerous oblique and delicate striæ—*apex* rather obtuse and

not eroded—a deeply impressed line along the upper part of the whorls, parallel with the suture—*periostracha* smooth and very glossy—*colour* and *markings* exceedingly various—the ground colour is usually greenish or some shade of yellow—sometimes a single blackish coloured band accompanies the suture—sometimes this band is double and of different shades—and on many specimens there are two bands, one at the suture and one in the middle of the whorls. In some varieties the base of the body whorl is dark brown, the rest of the shell being of a dark fawn, and not unfrequently the whole shell is without any markings whatever; in which case the colour is yellow—the *aperture*, when inverted, is ear shaped—the truncation of the *collumella* is rounded and thickened in a remarkable manner at its edge; along the inner margin of the *outer lip* there is a strong callous ridge, as in most of the species of this genus, which gradually attenuates towards the edge of the lip, which is thin and sharp *inside*—white and pinkish round the *collumella.*

This splendid little ACHATINA was brought from Oahu, (Woahoo) one of the Sandwich Island, by the Rev. C. S. Stewart. He informs me that it is found in considerable numbers in the deep vallies of Oahu, at all seasons, adhering to the under surface of the large leaves of a plant called in the language of the natives Ti, and from the roots of which they brewed an intoxicating liquor, which was in general use before the arrival of the missionaries. Though the leaves of the Ti are the favourite resort of this ACHATINA, it is by no means confined to that plant. The Islanders sometimes eat the animal which inhabits this shell, as they frequently do fish, without cooking—but a favourite mode of preparing it, is to tie up in the large leaves of the Ti, considerable numbers of them at once—bake them thus with heated stones, and then pick out the animal with a small pointed

instrument. The beautiful and shining colours of this ACHATINA, and the manner of their arrangement, forcibly remind us of the HELIX *nemoralis* or *hortensis*, so common in the woods and hedges throughout France and England.

There are two very distinct varieties of A. *Stewartii*—one dextral, or with whorls revolving from right to left. In the numerous specimens which I have received, there is no individual of single uniform colour—they are all greenish, with a single brown band at the sutures. The columella in this, as in the first variety, has the remarkable thick plait or callosity resembling the TORNATELLA *fasciata*.—The other variety is more globose and much depressed, being three fourths of an inch in length, and half an inch in diameter; this shell is almost always dextral, and of a light yellowish colour—and the callous ridge along the inner margin is peculiarly striking. The contour of this variety resembles that of the VOLUTA *fasciata*, Linn. the lip of that species however is reflected.

ACHATINA *Oahuensis.*

A testa oblonga—tenuissime striata—colore ferugineo rufescente—collumella rosea—apertura alba et rosea—labro tenui.—Plate 4, fig. 5.

OAHU ACHATINA.—*Shell* dextral—oblong—about three fourths of an inch in length, and one fourth of an inch in diameter—*whorls* seven or eight, slightly rounded—*sutures* deeply impressed and crenulated—*periostracha* finely striated and of a light dirty reddish brown colour—*body whorl* with an obsolete carina—*apex* chesnut colour—*collumella* plaited, as in A. *Stewartii*—*outer lip* thin—*inside* pinkish, darker near the edge.

This ACHATINA is a native of the Sandwich Islands. It does not appear to be so common as the A. *Stewartii*, which it resembles a little; but it differs from that species in being much more elevated in proportion to its diameter—in the number of its whorls—in the absence of the impressed line near the suture, and in many other characters.

Note—In addition to what we have already said respecting the plant on which these ACHATINA's are commonly found, the following remarks may perhaps be interesting—This shrub, called by the natives TI, (often improperly spelled Tee) is no doubt the DRACENA *terminalis*, (Jaquin) and seems to have been first noticed by Capt. Cook. Sir J. E. Smith, in the New Encyclopedia, remarks that the Islanders consider this a sort of sacred shrub, planting it about places of worship and burial. I am informed, however, by Mr. Stewart, who has resided more than two years at the Sandwich Islands, that it is held in no superstitious reverence whatever. The shrub, from its peculiar growth, is pretty well adapted for hedges, and is thus used not only as a kind of fence about their sacred places, but for every kind of enclosure. Like our olive branch, it is, as has been stated, their emblem of peace. The root of the Ti may be considered as one of the luxuries of Oahu and most of the South Sea Islands; besides being useful in making a kind of beer, when baked it is exceedingly sweet and luscious—much more so even than the sugar cane, so that very small quantities only can be eaten at once. When taken in this way its effects on the system have been said to be narcotic; this, however, is probably incorrect. As before hinted, an intoxicating liquor was formerly made from the juice of this root by distillation; but at present, by the influence of the missionaries and the good sense of the chiefs, this process has been *tobooed*, or prohibited.

On Pyroxene. By G. Troost, M. D. of New Harmony—Professor of Mineralogy to the Philadelphia Museum. Read April 23, 1827.

The word Schorl has very properly been abandoned by most mineralogists, excepting Werner and some of his followers, as Jameson, and our countryman Cleaveland. A word which has caused so much confusion in the science, ought to have been discarded long since, as it conveys no idea; and its etymology is unknown, even in the language in which it was first employed.

Among the mineral substances to which this name was formerly applied, is Pyroxene, then known by the name of Volcanic Schorl, the Augite of Werner and Cleaveland. It is unnecessary to dwell on the term Pyroxene, which signifies, according to Hauy, a guest, or stranger in the dominion of fire;* every mineralogist knows what is meant by it.

As this species has now become the type of a large mineral family, and which is, as yet, but imperfectly understood, I shall offer a description of the substances now considered varieties of Pyroxene, though some still think them different species. In my arrangement, I shall principally follow *Lemar.* These substances are the *Alkalite*, or *Diopside*, *Baikalite*, *Coccolite*, *Fassaite*, or the *Pyrgons*, *Sherzolite*, *Mussite*, and *Sahlite*.

Pyroxene may be easily mistaken for Amphibole, as the former is an assemblage of substances, which, at first sight, seems to be very unlike, compared with each other, but is distinguished from Amphibole, by the primitive nucleus of its crystals, in all its varieties. This is an oblique rhomboidal prism, in which the inclinations of the sides of the prism are to each other 87° 42′ and 92° 18′; the

* Hote ou etranger dans le domain de feu.

base forms, with the edge of the prism, corresponding with the two obtuse angles, angles of 106° 6′ and 73° 54′. In the primitive nucleus of the Amphibole, which is also an obtuse rhomboidal prism, the inclinations of the planes of the prism are to each other 124° 34′ and 55° 26′, a difference so great as to be easily recognized. In the nucleus of the PYROXENE, the smaller diagonal of the base is to the length of one of the edges of the prism, nearly as 18 to 5; in the Amphibole, on the contrary, it is nearly as 4 to 1. The nucleus of the PYROXENE is divisible, in the direction of the two diagonals of the base, into four oblique triangular prisms.

The *varieties* of PYROXENE, which have been considered as so many different *species*, have given to Hauy the same primitive nucleus.*

PYROXENE is generally black or green, or offers intermediate shades between these two colours; it is also whitish green or greenish white, sometimes grey, rarely white; its longitudinal fracture is lamellar, and this fracture is more or less apparent, according to the varieties; its transverse fracture is granular, uneven, or conchoidal. It is seldom transparent, mostly translucent on the edges, or opaque. When transparent, it is endowed with the double refracting power. It is hard enough to scratch glass. Forms a dark green, or greyish green powder. In general, its sp. gr. varies from 3.223 to 3.373. It melts before the blow pipe with difficulty, into a brownish or whitish glass.

The varieties of PYROXENE have given, by analysis, nearly one half silex; lime and magnesia, in a quantity equal

* This departed sage, in whom I deplore the loss of a true friend, has made investigations of these different varieties the subject of many memoirs which were published in the *Annales* and *Memoirs* of the Museum of Natural History; where those who wish to study the manner in which the laws of crystallization are explained, and the results that are to be deduced, may satisfy themselves.

to little better than a tenth for every one, particularly as to the lime, which amounts sometimes to a fourth. Alumine is always present, though in small quantity. Iron varies from 1 to 14 hundredths. Manganese is also found, and even traces of potash and chrome. Of these analyses we shall speak more particularly hereafter.

PYROXENE is nearly always crystallized; its forms are sometimes very much complicated and difficult to determine. They are prisms whose summits, mostly obtuse, offer faces which by the obliquity of the primitive nucleus, and the extent which some of the faces acquire at the expense of the others, seems unequally disposed. The difficulty of determining these forms is besides sometimes augmented by the property which these crystals have to form various hemitropic varieties, by which are formed crystals with one projecting and a re-entering pyramid. The forms of PYROXENE are varied and numerous. M. Hauy describes 27, and remarks that the different varieties of PYROXENE, which are considered different species, all offer crystals proper to the family of PYROXENE; and the different aspects given to these varieties have assisted to distinguish them. The surface of these crystals is generally smooth and shining in case they are translucent or transparent, but dull and even rough to the touch when they are opaque. The following is an enumeration of some of the secondary forms, which are most common, according to Hauy.

1. *Primitive* PYROXENE.* The crystals having this form belong to the variety known by the name Mussit.

2. *Perihexædral* P.† A hexædral prism with an oblique base; it is the first mentioned form having the two obtuse

* Hauy, tab. comp. et Mem. Mus. 1, p. 283, pl. 14, fig. 23.

† Traite 3, p. 83, fig. 139.

edges replaced by two faces with an inclination of 133° 51′ to the primitive plane.

3. *Perioctædral* P.* An eight sided prism with oblique base. Here the sharp edges are replaced by two planes, forming, with the plane of the primitive prism, angles of 136° 9′.

It must be here remarked, that it often happens that the pyroxene having the eight sided prism for form, offers a four sided prism nearly rectangular, having the alternate four sides merely linear. Sometimes even these are wanting entirely—which, nevertheless, has never been observed in the volcanic variety.

4. *Equivalent* P.† A prism with twelve faces with oblique bases. The former form augmented by four faces placed to the right and left of the two secondary faces of the *Perihexædral*, having angles with the primitive planes of 152° 59′.

5. *Bisunitary* P.‡ The variety *Perihexædral*, with a diedral summit.

6. *Dihexædral* P.‖ The former having the terminal edge of the pyramid replaced by a single face.

7. *Sexoctonal* P.§ The same form with an eight sided prism.

8. *Triunitary* P.¶ The same as *Bisunitary*, having an eight sided prism.

* Mem. Mus. 1, p. 284, fig. 26.
† Annal. Mus. vol. ix. et Jour. Min. vol. xxiii. p. 152, pl. 3.
‡ Traite 3, p. 84, fig. 140.
‖ Mem. Mus. 1, p. 283, fig. 26.
§ Traite 3, p. 84. ¶ Traite, fig. 141.

9. *Subtractive* P.* The *Bisunitary*, or the preceding, having the sharp angle of the summit replaced by a triangular face, being sometimes undulated or curvilinear.

10. *Ambiguous* P.† The former, in which the triangular face is so much enlarged as to make the two faces of the summit disappear.

11. *Dioctædral* P.‡ The variety *Triunitary*, having the edges of the terminal faces emarginated.

12. *Epimeridal* P.‖ An eight sided prism, with a summit with five faces. This is the form of the white PYROXENE of the United States.

13. *Octo-duodecimal* P.§ An eight sided prism, with a summit of eight faces.

14. *Trioctonal* P.¶ An eight sided prism, with a summit of eight faces—from Connecticut, United States.

15. *Stenomonal* P.** Eight sided prism, with summits of eight faces.

16. *Octo-vigesimal* P.†† An eight sided prism, having

* Traite, fig. 142. † Mem. Mus. 1, p. 284, fig. 27.

‡ Traite 3, p. 85, fig. 143.

‖ Annal. Mus. vol. xix. p. 257—vol. xiv. fig. 1.

§ Annal. Mus. vol. ix. et Jour. Min. vol. xxiii. p. 152, pl. 3, fig. 5.

¶ Jour. Min. vol. xxiii. p. 152, pl. 3, fig. 6.

** Mus. 1, p. 289, pl. 14, figs. 31, 32. The varieties *Epimeridal* and *Stenomonal* show the truth of the remarks of Mr. Hauy regarding the var. *Octo-vigesimal*, in the Jour. the Museum.—This crystal offers a remarkable instance of those whims of crystallization happening in consequence of certain faces being more or less distant from the centre—the deviation originating in some of the faces having increased in size at the expense of others, which change the entire aspect or physiognomy of the crystal, so that it is with difficulty that we recognize the same type of the crystal.

†† Annal. Mus. vol. ix. et Mem. Mus. 1, p. 290, pl. 14, fig. 33.

the four primitive sides very narrow, with summits of ten faces. This is the habitual form of the PYROXENE *diopside.*

17. *Senobisunitary* P.* A six sided prism, with summits of three faces. This is the form of the P. *baikalite.*

18. *Senoquaternary* P.† The physiognomy of this crystal differs entirely from the former varieties. It is a short four sided prism, terminated by long sharp pyramids with four faces. This, and the following form, belongs to the P. *fassaite.*

19. *Duovigesimal* P.‡ The former, having the pyramid emarginated.

To which number may be added the

20. *Periorthogonal* P.
21. *Stomonomal* —
22. *Analogical* —
23. *Quadrioctonal* —
24. *Binotriunitairy* —
25. *Bisoctonal* —
26. *Bisunibinairy* —
27. *Trisubtractive* —

and those of which I have given the description in the Journal of the Academy of Natural Sciences of Philadelphia.

28. *Pyramidal* P. An eight sided prism, terminated by a four sided pyramid—from Franklin, N. J.

29. *Uniternary* P. A flat six sided prism, with sharp diedral summits—from Franklin, N. J.

* Mem. Mus. vol. iii. p. 130, pl. 3, fig. 6.
† Mem. Mus. 3, p. 124, fig. 2.
‡ Mem. Mus. p. 126, fig. 4.

30. *Triuniternary* P. The *Sexoctonal*, augmented by two faces at the summit. This variety was also discovered at Franklin, near Sparta, N. J. and belongs to that variety of PYROXENE which was described by W Keating as a new mineral, under the name of *Jeffersonite*. (See Jour. Acad. Nat. Sc. Phil. vol. ii. p. 194.)

31. *Epointed* P. A four sided prism, the primitive faces of the prism having disappeared, terminated by a four sided pyramid having the apex truncated—from Compton Hill, N. J.

Such are the crystaline forms of the PYROXENE which I have though proper to exhibit; a great number of them forming varieties known by the name of *Hemitrope*, made by the revolution of one half of the crystal upon the other, which we suppose to have remained at rest. We know such hemitropes formed by crystals which have not yet been found as simple crystals. In general, the hemitropes are not rare among the PYROXENE, though as yet a small number has been described. The most known are,

Triunitary hemitropal P.* An eight sided prism, terminated at one of the extremities by a summit with four faces, and at the other extremity by a summit also with four faces, but forming a re-entering angle, and differing from the former summit, which has a projecting angle—as the *Subtractive hemitropal* P.

Hemitrope Cross P. Formed by a junction of crystals in such manner as to form a right angle with each other.

The PYROXENES do not offer always distinct determina-

* Traite, vol. iii. p. 86, fig. 144.

ble crystals. It offers various forms which are proper to this substance—we have

Cylindroid P. The crystals of the *Sahlite*, *Diopside*, and *Mussite*, are often marked by longitudinal striæ or small channels, which give them a cylindrical appearance.

Lamellar P. The *Sahlite* is remarkable by its lamellar structure—It occurs in great or small lamellæ. It offers also very small lamellar particles, in which case it belongs to the *Grano-lamellar* variety. The *Augite* P. is also sometimes lamellar.

Compressed P. The crystals of the *Mussite* exhibit often this form.

Granular P. This structure is proper to the variety *Coccolite*. It occurs also in the green *Volcanic* Pyroxene, and in the *Augite*.

Fibro granular P. This is the variety *Mussite*.

Fasciculated radiated P. In masses formed by the union of prisms as bundles or rods, fascicular—This occurs in the Island of Elba with the *Yenite*, and in the *Mussite*.

Fibrous P. This variety differs from the former in the prisms being more slender, which make it resemble some varieties of Asbestos.

Shistose P. Formed by a lamellar accumulation, as in the *Mussite*, and a variety found at Franklin, called *Jeffersonite*.

Resinoid P. This variety is black, having the appearance of pitch, and is void of all appearance of any crystaline structure. It belongs to the *Volcanic* Pyroxene.

Having now exhibited the different characters and manners in which the Pyroxene offers itself to our observation,

we shall proceed to give an account of the different species that have been formed from this family. We will call them

Volcanic Pyroxene.
Augite ————
Coccolite ————
Sahlite ————
Baikalite ————
Fassaite ————
Sherzolite ————
Diopside ————
Mussite ————
White ————

1. *Volcanic* P.* It occurs in small and moderately sized regular crystals, or in grains which are sometimes insulated or sometimes combined and dispersed, or disseminated through lava or rocks. Different analyses have been made of it.—It is composed

	Etna. Vauquel.	Frascati. Klaproth.	Rhinberg. Klaproth.
Silex,	52.50	48	52
Magnesia,	10	8.75	12.75
Alumine,	3.30	5	5.75
Lime,	13.20	24	14
Iron,	14.66	12	12.25
Manganese,	2	1	0.25
Potash,	0	trace	0
Water,	0	0	0.25
Loss,	4	0	0

Tromsdorf found in the Pyroxene of the Etna 5.18 potash. Klaproth detected also a small quantity in those of

* Schorl noir en prisme octaedre Rome de L. Schorl volcanique, Bergm. *Volcanite* and *Virescite*, Lamethric. *Augite*, Werner. *Augite*, Jameson.

Frascati, and found also a trace in an analysis made of a variety of Rhinberg.

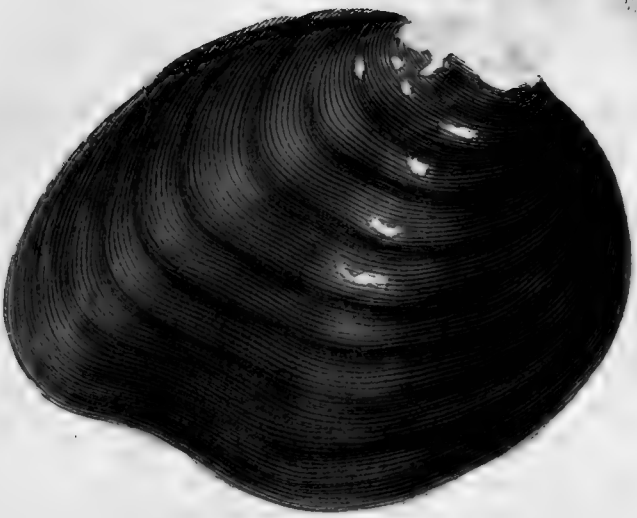
The regular forms which occur in this variety are the

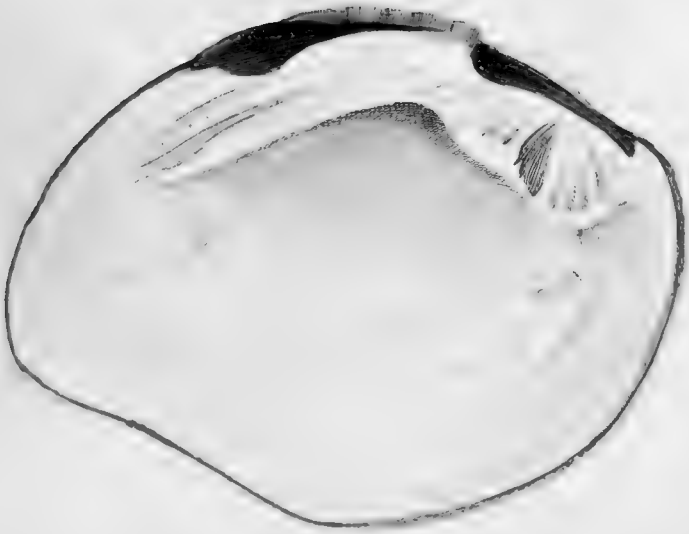
Bisunitary,
Triunitary,
Subtractive,
Dioctædral,
Ambiguous,
Hemitropal.

The size of the crystals is from less than one-twelfth of an inch to nearly an inch.

1. *Black Volcanic* P. Its colour is perfectly black, or dark green, approaching to black. It is sometimes magnetic. It melts with more difficulty than the other varieties, and is more brittle. Its external surface is generally rough; its fracture intermediate between glassy and fibrous. It occurs mostly in the true lava—in those which have run, and in the scoriæ, which are a mere modification of the former. It occurs also, 1st, in Basalt; it is known that a volcanic origin is attributed to Basalt by most mineralogists; and 2ndly, in transition or other rocks, of which also a volcanic origin is suspected, as in the Wacke, Amygdaloides, &c.

The rocks of Theis, near Fassa in Tyrol, which are supposed to have a volcanic origin, contain crystals of Pyroxene; the Klinkstein or Phonolite, a species of petrosiliceous lava, includes sometimes a large quantity. The porphyric rock of Oberstein, in which the Agate occurs, and those of Tyrol, which are of the same nature, include also the black Pyroxene. Finally, we find it sometimes in those substances which have been ejected unaltered by Vesuvius and other volcanos. But in this case it has seldom a black colour, though this substance is nowhere so abundant





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OF THE

MACLURIAN LYCEUM

TO THE

ARTS AND SCIENCES.

VOL. I. JANUARY, 1829. No. 3.

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PHILADELPHIA:

SOLD FOR THE MACLURIAN LYCEUM BY J. DOBSON, 108 CHESNUT STREET; G. & C. CARVILL, BROADWAY, NEW YORK; JOHN MILLER, LONDON; AND J. B. BAILLIERE, PARIS.

J. RICHARDS, PRINTER.

1829.

as in the lava. Mr. Cordier has pointed out that PYROXENE, in very minute grains, and felspar, formed the constituents of lava. Those known by the name of Basalt lava, lithoide trappeenes, or argilo-ferruginous varieties, are those in which PYROXENE is in greater proportion than the felspar. Currents of lava of this nature, offer merely scoriæ, and these are nothing more than a kind of half vitrified substance, not being changeable into glass; or in other words, does not form Obsidian, owing to the infusibility of the PYROXENE. It is from the surface and even from the interior of these scoriæ, that the most perfect crystals are taken, which are found where these substances are decomposed; another time they are thrown up, sometimes in immense quantities, during certain eruptions of the volcano, of which Etna and Vesuvius have given many instances.

Etna, Vesuvius, Teneriffe, the Isle of Bourbon, Guadeloupe, &c. furnish fine isolated crystals of PYROXENE; they are found in many parts of Cantal, Velay, at Puy de Corent, de la Rode, de la Vache and Mural, in Auvergne, in Provence, in Saxony, Bohemia, Russia, Hungary, and at Cap de Gate in Spain.

The ferruginous volcanic sands of Pouzzole near Naples, which are melted there, contain large quantities of very minute granular PYROXENE, owing to the disintegrations of the lavas, which the sea washes to the shore. The sands and ashes which the volcanoes throw up are loaded with this substance.

2. *Green* P. (Rirescite.) This variety has commonly a yellowish green or brownish colour, and is half translucent, or of a dark dull green. It occurs mostly in the unaltered rocks which are thrown up by the volcanos, or in the volcanic sands. In the ancient lavas it is found

sometimes in granular or imperfect lamillar nodules, having a vitreous lustre; it exists also in small crystals or grains disseminated in the modern lavas.

This PYROXENE offers various appearances in the different volcanic substances which have not been altered by fire. At Vesuvius, where the masses thrown out of the volcano are very abundant, this PYROXENE is sometimes in small brilliant crystals in the cavities of these substances; sometimes it forms granular masses intermixed with Isocrase, Garnet, Mica, Carb. of Lime, Amphigene, Sodalite, Metonite, &c. Among substances of the same origin, which exist in the volcanic tufas near Rome, at Frescati, and Tivoli, this PYROXENE is in large rough crystals of a dark green colour, and agglutinated with Mica or Amphigene, of which the stone cutters of Rome form small ornamental vases, which are sometimes very pretty, owing to the chatoyant occasioned by the Mica. The volcanic sands of the shores of the lakes Albano, Nemi, Braciano, &c. abound with small crystals of green PYROXENE often so transparent as to be mistaken for pondota; they are not rare in the volcanic sands near Andernan.

3. *Resinous* P. PYROXENE *Resinoide*, Hauy; *Conchoidal Augite*, Jam. It is black, greenish brown, or brownish olive green, with a resinous lustre—its fracture is imperfectly conchoidal, it is opaque, or sometimes slightly translucent. It occurs mostly in Basalt and ancient lavas; it is in grains of various sizes, seldom larger than a hazle nut. These small grains when black are easily mistaken for the ferruginous oxide of titanium, which substance also occurs in ancient lavas. It is found in the Basalt of Fulda in Stessia, and in the volcanic substances of the Vogelgeberge, and Basalt of Kaisersthal in Suabia, &c. The Schlackenblende of Mr. Noze, which

is found in the Basalt of the neighbourhood of Cologne, seems to belong to this variety. The properties of this substance differ much from the former; it is amorphous, black with a tinge of green and a resinous lustre—it is opaque, or sometimes slightly translucent. Its sp. gr. is 2.666. It melts with intumescence before the blow-pipe, into a black or brown glass. According to Klaproth it contains

Silex,	55
Alumine,	16.50
Magnesia,	1.75
Lime,	10
Ox. of iron,	13.75
Manganese,	trace
Water,	1.50
	98.50

It is this analysis which has given it a place in the Pyroxene family. It is besides found in the form of small fragments in a bed of Carb. of Lime at Ginliana in Sicily. Dolomieu found it in Val di Noto of a greyish green or brownish colour.

4. *Altered Volcanic* P. This Pyroxene offers three modes of alteration, which it is of interest to point out. When the lavas have been exposed a long time to the action of the sulphureous acid vapours, which rise continually from the solfutara and the craters of the volcanos, their nature is changed, and this is also the case with the Pyroxene which is imbeded in these lavas. The Pyroxene becomes opaque, white, and the constituent parts, with exception of the Silex, enter into combination with the acid vapours, forming soluble salts, which are

sublimed or washed away. We may observe in nearly all the craters, and particularly in the solfutara, decomposed lavas which contain crystals of PYROXENE perfectly well formed, also in a state of decomposition.

The calcinations which the lavas undergo continually around the burning craters, does not act so effectually upon the crystals of PYROXENE. These are often in a perfect and unaltered state at the same time that the lavas are crumbling to dust. Dolomieu has collected in the crater of Monte Roso, a yellow resinoid Obsidian, containing PYROXENE covered with a thin white pellicle; he collected in the same crater, red scoriæ containing the same crystals. This scoriæ, which is very brittle, is formed by the natural calcinations of the glassy lava; this is easily ascertained by the blow-pipe, which converts this lava into the same scoriæ. Dolomieu saw specimens which presented the two varieties. It is besides known that unaltered crystals of PYROXENE occur in vitrified lava; it is only by a long continued action of heat that they crack and fall at last to dust.

Even the other atmospheric agents, only after a very long exposure, have a slight action on PYROXENE; and it is to this circumstance that we ascribe the perfect conservations of the currents of ancient lava which are yet in existence, and have all the appearance of having been recently formed. The Basalt and other volcanic productions having PYROXENE as a base, are in the same case.

PYROXENE offers, nevertheless, two different states of decomposition; in the one, it becomes of a rusty or earthy yellow. It preserves partly its lamillar structure, and is friable. Some naturalists have made of it a species under the name of Limbilite. The lava of Teneriffe, Bourbon, Brisgau, offer instances of this kind; the decomposed PYROXENE occurs here with perfect unaltered crystals,

which would induce the belief that lava contained two different varieties of PYROXENE, the one easily decomposible, and the other not, which is also the case with felspar.

The other state of decomposition the PYROXENE undergoes, is this—it becomes green, with an earthy aspect, loses its internal structure and other characters, but preserves its form. This kind of decomposition we observe particularly in transition rocks of the nature of Wacke, or in those constituting the Amygdaloids, which contain the Zeolite varieties. One of the most remarkable instances is found in the rocks composing the Mount Pazza, in the valley of Fassa Tyrol. The rock is a Wacke which contains crystals of PYROXENE, variet. *Bisunitary*—thus altered and transformed into a kind of green earth, which the German mineralogists have considered sometimes as crystals of green earth or Chlorite of Verona, sometimes as a peculiar substance under the name of green fossil, (grœn fossil W.) The same rock contains the green earth of Verona, (chlorite baldoque, or talc zographique.)

The variety of PYROXENE which has been described as Jeffersonite as I have mentioned, offers also an instance of decomposed PYROXENE, (see Jour. Acad. Nat. Science, vol. 2, part 2, p. 194.) This PYROXENE corresponded with what is called Limbilite. We find it of an ochre yellow colour of an earthy appearance, and sufficiently soft to be scratched with the finger nail, having nevertheless, preserved its lamillar structure. By dividing mechanically a crystal in order to detect the direction of the lumina, I cut with a common knife upwards of 1-8 of an inch deep without injuring the edge of the knife, it then became harder and harder, and at last hard enough to scratch glass; in all these stages the structure was preserved. Those varieties which are only slightly decompo-

sed, have all the appearance of a variety of earthy oxide of Manganese, the structure and form excepted, a dull black earthy appearance soiling the fingers as in the oxide of manganese.

The different varieties of which we have spoken, and the PYROXENE *Augite* of which we shall speak immediately, constituted the species Augite of Werner. This philosopher confounded with his granular and lamellar Augite *(Koernger* and *Blattriger Augite)* a substance which was called by Stephens, Keraphillite, and which Hauy has discovered to be Amphibole.

(To be Continued.)

Remarks on the ACHATINA *Stewartii.* By J. GREEN, A. M. Prof. of Chem. in Jeff. Med. College. Read September 29th, 1828.

On a late visit to the British Museum I had an opportunity of examining in the vast and valuable library of that noble institution, the descriptions and figures of most of the objects in natural history collected by Freycinet in his voyage round the world. Among the shells brought from the islands in the Pacific Ocean by that enterprising voyager, there seems to be two or three varieties of the ACHATINA *Stewartii.* These are described by Ferrussac in the work alluded to, under the names of HELIX *Lorata,* H. *Luteolata,* and H. *Vulpina.* By the indulgence of my friend Mr. Gray, of the Museum, I had an opportunity of minutely examining these shells, and I think them all varieties of the same species as that to which the A. *Stewartii* belongs, and all different from those figured on the fourth plate of the "Contributions." There is, therefore, no doubt with me that if the species of Ferrussac just noticed, are to be received, that the A.

Stewartii, as I have figured it, will also remain. Chemnitz, however, has described a shell which he calls HELIX *Lugubris*, and which is figured by Ferrussac in the splendid work just mentioned—this also is a variety of the same species as our shell, and of course has the priority in name. If therefore the nomenclature is to be changed, it should stand as follows:—

ACHATINA *Lugubris*

Synonyms

HELIX *Lugubris*, Chemnitz.
—— *Lorata*, Ferrussac.
—— *Luteolata*, Do.
—— *Vulpina*, Do.
ACHATINA *Stewartii*, Green.

It may not be uninteresting to some, to mention, that Chemnitz informs us that so high a value was placed by the shell dealers on the Achatina *Lugubris*, when first brought to Europe, that he was obliged to give two guineas for his specimen.

Descriptions of new species of HYMENOPTERA *of the United States.* BY THOMAS SAY. Read March 3, 1828.

AULACUS. JURINE.

A. *fasciatus.* Wings violaceous with a hyaline band. *Inhab.* Ohio.

Body black; *thorax* confluently punctured almost in transverse grooves; *wings* violaceous with a hyaline band on the middle, hardly reaching the anal margin; *abdomen* much compressed; *oviduct* longer than the abdomen, much incurved at tip.

Length half an inch.

ICHNEUMON. Linn. Fabr.

1. I. *parata.* Antennæ black with a whitish annulation; tergum yellow, with five or six blackish bands.

Inhab. Indiana.

Head yellow; disk of the vertex and of the occiput black; *antennæ* black; basal and second joints beneath and 15, 16, 17, 18, 19 and 20 joints pale yellowish; *thorax* black; band on the collar, line each side extending to the wings, and interrupted before, and small quadrate spot on the disk, yellow; *scutel* and small spot behind it, yellow; *metathorax*, posterior disk, yellow; *wings* somewhat dusky with fuscous nervures; *stigmata* pale brownish; *central cellule* pentangular and transverse, not at all oblique, the superior side very short; *tergum*, basal segment with the basal incisure, and spot on the disk near the tip, black; remaining segments with a blackish band at their bases more or less emarginated in their middles; *beneath* yellow; *pectus* and *postpectus* with the transverse incisure, black; *posterior* feet, coxæ above excepting at tip, thighs excepting at base, tibiæ at tip and first and second joints of the tarsi, black; *venter* with paler and less perfect bands than those of the tergum.

Var. a. Intermediate thighs black on their middles above.

Length two-fifths of an inch.

2. I. *concinnus.* Antennæ black with a white annulation; tergum white with six or seven broad black bands.

Inhab. Indiana.

Head white; a broad black vitta extending from the antennæ to the black occiput, two black abbreviated lines beneath the antennæ, each terminating near an indented point; *mandibles* brown at tip, a black line from their base to the tip; *antennæ* black: 9 to the 17 joints inclu-

sive, white; *collar* yellow, anterior portion black; *thorax* with a narrow line before the wings widely interrupted before; a double much abbreviated white line in the middle; *scutel* and small transverse line behind it, white; *metathorax* with two longitudinal white lines, on each of which is a spine, and a lateral white line interrupted above; *tergum* yellow; terminal half of the first segment, and basal two-thirds of each of the others, black; *pectus* black; *feet* honey-yellow; *coxæ* white; *posterior feet*, coxæ with a wide much indented black band; thighs blackish at base; *venter* somewhat dusky; *central cellule* of the wings as in the preceding.

♀ A single line beneath the antennæ and an irregular line above the mouth, black; double white line of the thorax widely separated; an abbreviated, oblique white line from the angles of the scutel towards the superior wings; *tergum* with the black band of the first segment not terminal; *feet* honey-yellow; coxæ, excepting the posterior pair, white; tips of the tarsi black; *oviduct* blackish, piceous, less than half the length of the abdomen.

Length over two-fifths of an inch.

Second joint of the maxillary palpi dilated as in PELTASTES, Illig.

3. I. *otiosus.* Antennæ black with a white annulation; tergum black with a white band on the basal segment.

Inhab. Indiana.

Body black; *head* with a white orbital line, broader before and obsolete above; *antennæ*, 9 to the 14 joints, inclusive, white; *thorax* with a line before the wings, interrupted before, and two abbreviated lines on the disk slightly diverging anteriorly, white; *scutel* and transverse spot behind it, white; *central cellule* of the wings

as in the preceding, but the superior side is somewhat shorter; *tergum*, first segment with a triangular band at tip; *pleura* with a white, longitudinal, abbreviated line beneath the wings, and one or two spots behind; *beneath* with a white spot before the anterior and intermediate coxæ; *tibiæ* white line on their exterior sides; *posterior tarsi*, first and second joints with a white line above.

Length more than half an inch.

Second joint of the maxillary palpi dilated as in PELTASTES, Illig.

4. I. *vinctus*. Black; abdomen rufous.

Inhab. Indiana.

Body black; *head* above the antennæ and occiput, black; orbital line interrupted behind, and all beneath the antennæ except the incisures, white; *antennæ*, basal joint beneath, white; *collar* with a white line; *thorax* with a short white line above the anterior wing and another below it, from the anterior extremity of these lines, a white line proceeds, and is interrupted before; two impressed dorsal lines obsolete behind; *scutel* and obsolete point behind it, white; *wings*, central cellule pentangular, transverse; *metathorax* with somewhat elevated rugæ, enclosing a pentangular space, from the angles of which abbreviated lines diverge, the two posterior of which terminate at the short tubercles; *feet*, anterior and intermediate pairs, pale whitish yellow, the coxæ white with a black spot behind, the thighs with a black line and tibiæ of the anterior pair also with a black line; *posterior* pair black, 2nd, 3rd, and 4th joints of the tarsi, white; *abdomen* bright rufous, immaculate.

Length ♂ half an inch.

5. I. *inquisitor.* Black; feet honey-yellow; posterior tibiæ white, biannulate with black.

Inhab. Indiana.

Body black; *palpi* whitish; *thorax* with a white spot at the anterior base of the superior wings; *wings*, central cellule quadrangular, longitudinal, narrowed a little to the tip; *feet* honey-yellow; posterior tibiæ white, a black annulus near the base and another somewhat larger at tip; joints of the posterior tarsi whitish, blackish at their tips; *oviduct* nearly as long as the abdomen.

Length one-fourth of an inch.

Preys upon the larva (of a Bruchus?) that feeds on the seeds of the Clematis.

6. I. *pterelas.* Black; feet honey-yellow; oviduct elongated.

Inhab. Indiana.

Body black, immaculate; *antennæ* piceous beneath; *palpi* whitish; *wings*, central cellule subquadrangular, almost triangular, rather longitudinal; *posterior tibiæ* and *tarsi*, dusky; *oviduct* nearly as long as the body, aculeus piceous.

Length three-fifths of an inch.

Belongs to the genus Pimpla, Fabr.

7. I. *hilaris.* Yellowish; head black, beneath the antennæ yellowish.

Inhab. Indiana.

Body yellowish, approaching honey-yellow; *head* above the antennæ and occiput, black; beneath the antennæ and mouth yellow, a transverse black line above the mouth; *antennæ* dusky yellowish beneath, and still darker above, shorter than the body; *thorax* with an obsolete, double, paler yellowish line; *wings* hyaline; cen-

tral cellule small, quadrangular, longitudinal, somewhat oblique, not distinctly narrowed at either end; *posterior tarsi* at their tips dusky; *abdomen* depressed; *venter* with a dusky spot near the tip.

Length ♂ nearly three-tenths of an inch.

8. I. *malacus.* *Body* black; *antennæ* annulate with white, beginning at the tenth joint and terminating at the eighteenth; joints very distinct; *wings* blackish; small cellule with one bulla, larger anal cellule with three bullæ and two short processes; *metathorax* with elevated lines; *abdomen* with an impressed line each side.

Length more than half an inch.

9. I. *pectoralis.* Black; abdomen rufous; antennæ blackish, whitish near the middle.

Inhab. Indiana.

Body black; *orbits* and all beneath the antennæ, yellow; *antennæ* blackish, 13, 14, 15, 16 joints white; *thorax* with a white line before the wings, interrupted before; *scutel* and transverse line beneath it, yellow; *wings* hyaline, central cellule pentangular, transverse; *pleura* black; *pectus* black, with a large yellow spot between the intermediate and posterior feet; *feet* yellow; posterior thighs tinged with rufous; posterior tibiæ rufous at tip; *abdomen* rufous, with black incisures.

Length over one-fifth of an inch.

10. I. *bifasciatus.* Ferruginous; wings dusky, bifasciate.

Inhab. Indiana.

Body ferruginous; *antennæ* somewhat tinged with whitish beyond the middle and fuscous at tip; *thorax* circumscribing incisure black; *wings* dusky with a hya-

line band hardly beyond the middle and an abbreviated one nearer the tip; stigma pale ferruginous; *inferior wings* dusky, with a semifasciate on the middle with hyaline; *oviduct* black; *pectus* incisures black; *posterior tibiæ* blackish at tip.

Length two-fifths of an inch.

11. I. *morulus.* Black; antennæ with a white annulation.

Inhab. Indiana.

Body black; *antennæ* with a white annulation beginning at the tenth or eleventh joint and ending at the sixteenth or seventeenth; *wings* violet-black; recurrent nervures of the small cellule, with each a sallient angle; on the anterior one a whitish dot and on the posterior one two whitish dots; a dot also on the posterior nervure of the small cellule; *metathorax* with elevated lines and each side behind an acute angle; *abdomen* with a short petiole, which is lineated; second segment opaque with confluent punctures, larger towards the base; colour blue-black; *oviduct* hardly obvious.

Length three-fifths of an inch.

Second joint of maxillary palpi dilated as in PELTASTES, Illig.

12. I. *residuus.* Yellowish; antennæ white in the middle and black at tip.

Inhab. Indiana.

Body yellowish, tinged with rufous; *antennæ* not longer than the thorax, the 10 basal joints colour of the body, 11 to 16 whitish, the remaining joints black; *wings* hyaline; central cellule pentangular; *posterior tibiæ* at tip, and *posterior tarsi*, dusky.

Length more than one-fourth of an inch.

ANOMALON. JURINE.

1. A. *sexlineata.* Black; feet rufous; metathorax with six raised lines.

Inhab. Indiana.

Body black; *antennæ* piceous beneath, rather shorter than the body; *palpi* yellowish; *thorax* subtrilobate, the impressed lines being deep and wide; *wings* a little dusky, a small whitish spot on the beginning of the carp; central cellule none; *metathorax* densely punctured, with six longitudinal, slightly elevated lines, two of which are on the sides; *feet* rufous; posterior tibiæ and their tarsi dusky; *tergum*, first segment densely and finely punctured; *oviduct* hardly as long as the abdomen.

Length three-twentieths of an inch.

2. A. *humerale.* Black; antennæ with a white cinctus.

Inhab. Indiana.

Body black, punctured; *antennæ*, 12, 13, 14 and 15th joints white; *thorax* with an acute tubercle on the humerus; somewhat elongated before the wings; *metathorax* with two acute tubercles each side at tip; *tergum*, second segment with an impressed oblique line each side at the basal angles; *oviduct* longer than the abdomen; *knees* white.

Length ♀ more than half an inch.

3. A. *mellipes.* Black; feet honey-yellow.

Inhab. Indiana.

Body black, polished; *palpi* whitish; *wings* hyaline, with a slight fuliginous tinge; larger middle cellule with three white bullæ; *oviduct* as long as the body; *feet* honey-yellow.

Length more than two-fifths of an inch.

OPHION. Fabr.

1. O. *bilineatus*. Honey-yellow; head yellow; thorax with two darker lines.

Inhab. Indiana.

Head yellow; *antennæ* honey-yellow; *mandibles* blackish at tip; *thorax* with two somewhat reddish-brown lines almost obsolete; *wings* with fuscous nervures; costal nervure and carpal spot honey-yellow; the latter dilated conspicuous; larger central cellule acutely angulated at tip; smaller central cellule angulated at the superior basal angle and with a very slight process, its terminal nervure almost obliterated on the outer half, its outer nervure almost obliterated in the middle and white in that part; the two terminal connecting nervures forming an acute angle; *pleura* paler than the thorax; *abdomen*, second segment hardly as long as the first and longer than the third.

Length seven-twentieths of an inch.

2. O. *analis*. Reddish-brown; head above black, beneath the antennæ yellow; abdomen black at tip.

Inhab. Indiana.

Head above the antennæ black; beneath the antennæ yellow; *occiput* black, reddish-brown each side; *antennæ* dark reddish-brown almost black, at base black; beneath somewhat paler, darker towards the base, radical joint yellow at base; *thorax* reddish-brown, with a large blackish disk, divided into three wide lines by two impressed lines; sutures of the scutel and metathorax black; *wings* the larger central cellule obtuse at tip; smaller central cellule with a small angle at tip, where it is widest, very obtusely rounded at the superior basal angle; do not meet and form an angle, carpal spot slender; *pectus* black; *posterior thighs* blackish at base, their coxæ with

a black spot, their tibiæ dusky at tip and their tarsi yellow; *abdomen* black at tip and on the superior edge of the second segment, which is at least as long as the first segment.

Length ♀ nearly three-fifths of an inch.

3. O. *geminatus.* Yellowish; vertex with a black spot; larger central cellule of the wings obtuse at tip.

Inhab. Indiana.

Body dull yellowish; *head* yellow; *vertex* black; *antennæ* somewhat shorter than the body, tinged with brown, the first joint yellow; *wings* hyaline, with fuscous nervures and honey-yellow somewhat dilated carpal spot; larger central cellule obtuse at tip, the nervure of the tip double; smaller central cellule very obtusely rounded at the superior basal angle; *pleura* and *pectus* pale yellowish; *abdomen*, second segment obviously shorter than the first, and not longer than the third.

Length about two-fifths of an inch.

This species closely resembles O. *bilineatus*, Nob. but is much smaller, and the arrangement of the wing-nervures prove it to be a different species.

4. O. *emarginalus.* Black; antennæ fuscous; feet honey-yellow.

Inhab. Indiana.

Body black, sericaous with short hair; *head* convex beneath the antennæ, at the base of which the head is much more prominent than immediately above the antennæ where the head is indented; *antennæ* short, above dark fuscous, beneath paler, first joint rather large; *palpi* white; *thorax* immaculate; *metathorax* with four longitudinal slightly raised lines; *wings* hyaline with fuscous nervures and carpal spot; larger central cellule obtuse or

rather truncated at tip, and emarginated by the curvature of the radial cellule; smaller central cellule with a small angle at tip, where it is widest, and gradually tapering to its opposite extremity without any curvature; *feet* honey-yellow, short, anterior coxæ with a whitish reflexion; *abdomen* short, almost sessile, not compressed.

Length about one-fifth of an inch.

ALYSIA. Latr.

1. A. *ridibunda.* Rufous; head, wings and tip of the tergum, black.

Inhab. Indiana.

Body yellowish-rufous; *head* black, a rufous spot each side of the mouth; *antennæ* longer than the body; *wings* blackish; central cellule large, longitudinal, acute before, nervure connecting with the carpal spot placed obviously behind the middle of the cellule; *feet* black; tibiæ and tarsi more or less tinged with dull rufous; *tergum* depressed, near the tip a large black spot.

Length ♂ nearly one-fifth of an inch.

2. A. *pallipes.* Black; feet, abdomen at base and antennæ at base, white.

Inhab. Indiana.

Body black, polished; *antennæ* fuscous, first and second joints whitish; *mandibles* piceous; *wings* hyaline, central cellule in length equal to double its greatest width; *feet* white; *abdomen* white at base.

Length one-twentieth of an inch.

BRACON. Jur. Fab. Latr.

1. B. *exhalans.* Black; abdomen sanguineous.

Inhab. Indiana.

Head black; *palpi* whitish: *antennæ* shorter than the

body; *thorax* black; *wings* blackish, second cubital cellule longitudinal, quadrangular, acute at base, nervure connecting with the carpal spot placed obviously before the middle of the cellule; *feet* blackish; *abdomen* sanguineous; *oviduct* shorter than the body, blackish; *metathorax* simple pale reddish.

Length more than three-twentieths of an inch.

2. B. *honestor*. Yellowish-rufous; wings blackish, with a whitish band and tip.

Inhab. Indiana.

Body rufous, slightly tinged with yellow; *antennæ* rather longer than the body; *thorax* somewhat trilobate, the posterior segment being canaliculate; *wings* dusky, with black nervures and rather large carpal spot; a narrow, transverse, whitish band beyond the middle, and whitish tip; *posterior tibiæ* dusky, whitish at base and at the terminal incisure; *abdomen* clovate, almost pedunculated; *oviduct* longer than the abdomen.

Length one-fifth of an inch.

Second cubital cellule elongated.

3. B. *truncator*. Pale honey-yellow; vertex with a black spot.

Inhab. Indiana.

Body pale honey-yellow, polished, impunctured; *antennæ* fuscous, honey-yellow at base; *stemmata* in a black spot; *palpi* whitish toward the tip; *metathorax* slightly punctured; *abdomen* much compressed, truncate.

Length nearly one-fourth of an inch.

PERILAMPUS. Latr.

1. P. *triangularis*. Green and blue; tarsi yellow: wings dusky at tip.

Inhab. Indiana.

Body polished; *head* green with a violaceous reflection, each side before vertically striate; *occiput* transversely striate; *antennæ*, flagellum fuscous; *thorax* transversely and longitudinally striated, violaceous, the collar punctured, green; *scutel* much elongated, entire; *wings* dusky on the apicial half; *abdomen* very short, wide, triangular, very convex above and beneath; anterior half, violaceous, posterior half, green with a violaceous reflection; *tarsi* yellow.

Length one-fifth of an inch.

2. P. *hyalinus.* Green; wings hyaline.

Inhab. Pennsylvania.

Body green, punctured; *scutel* much elongated, slightly emarginate; *wings* hyaline, immaculate; *abdomen* very short, wide, triangular, very convex above and beneath, violaceous; *tarsi* yellowish; *anterior* tibiæ honey-yellow.

Length less than one-fifth of an inch.

Differs from the preceding in being destitute of the dusky wing tips and in having punctures instead of striæ.

SPALANGIUS, Latr.

S. *politus.* Bluish-green; tergum with a cupreous band at base.

Inhab. Virginia.

Body bluish-green, varied with violaceous, densely punctured; *front* grooved to receive the basal joint of the antennæ; *flagellum* fuscous; *wings* hyaline, slightly dusky; *scutel* somewhat prominent; *abdomen* a little depressed; first segment brilliant cupreous; incisures glabrous; *terminal* segment longer than the others together, forming at tip a narrowed, carinated black pro-

cess for the reception of the tip of the oviduct beneath; *feet* dull honey-yellow.

Length ♀ seven-twentieths of an inch.

I found this species on the sea beach of Senipuxent Island.

CODRUS. Jur.

C. *pallidus.* Pale honey-yellow.

Inhab. Indiana.

Body pale honey-yellow; *antennæ*, excepting the basal joint, fuscous; *stethidium*, incisures black; *wings* hyaline; stigma distinct, pale brown.

Length nearly three-tenths of an inch.

SERLION. Latr.

S. *terminalis.* Antennæ, terminal joint white; wings unifasciate.

Inhab. Indiana.

Body somewhat piceous; *head* yellowish; *antennæ* broken, blackish; first joint nearly as long as the others together; terminal joint dilated, compressed, subtriangular, white; *wings* with a broad dusky band; intermediate tarsi white except at tip.

Length more than one-twentieth of an inch.

PSILUS. Jurine.

1. P. *ciliatus.* Black; feet whitish; hairs of the wings elongated.

Inhab. Indiana.

Body black, polished; *antennæ* with an oblong-oval acute club, at base honey-yellow; *petiole* of the abdomen and *feet* honey-yellow; *wings* deeply ciliated, the hairs longer than the transverse diameter of the wings.

Length less than one-twentieth of an inch.

2. P. *obtusus.* Black; feet whitish, thighs black in the middle.

Inhab. Indiana.

Body black, polished; *antennæ* fuscous; *anterior wings* wide and very obtuse, finely ciliated, ciliæ very short; *feet* whitish; *thighs* black, white at base and tip; *coxæ* black.

Length nearly one-twentieth of an inch.

PLATYGASTER. Latr.

P. *pallipes. Body* black; *antennæ* fuscous, moniliform; basal joint honey-yellow; *wings* hyaline; *abdomen* polished, much depressed; widest near the tip and obtuse, gradually and rectilinearly a little narrowed to the base; *feet* whitish-yellow.

Length one-thirtieth of an inch.

BETHYLUS. Latr.

B. *armiferus.* Black; tergum with elongated white hairs.

Inhab. Indiana.

Body entirely black, immaculate, with short hairs; *head* covered with discoidal punctures; *tergum* polished, with a few elongated, rigid, white hairs, as long as two of the segments taken together.

Length seven-twentieths of an inch.

DRYINUS. Latr.

D. *bifasciatus.* Yellowish; wings bifasciate.

Inhab. Indiana.

Body honey-yellow, varied with blackish; *anterior thighs* dilated; *wings* with two fuscous bands, the apical one broader.

Length rather more than one-fifth of an inch.

CHRYSIS. Linn. Latr.

1. C. *pacifica.* Green; anal segment mutic; tarsi fuscous.

Inhab. Indiana.

Body green with a slight bluish tinge, with short hairs: *antennæ*, five or six terminal joints fuscous; *wings* hyaline, a little brownish on the costal margin beyond the stigma; *tergum* more particularly tinged with bluish; anal segment rounded, subtruncate, unarmed; *tarsi* fuscous, basal joint above green.

Length about three-tenths of an inch.

2. C. *carinata.* Bluish; abdomen subtridentate.

Inhab. Indiana.

Body greenish-blue varied with purplish; *front*, from the antennæ to the middle, with numerous whitish hairs; *antennæ* fuscous, green at base; *metathorax* lateral tubercles acute; middle termination subacute; *tergum*, anal segment carinate, the carina extending beyond the edge into an acute tooth; lateral angles acute; *tarsi* fuscous.

Length three-tenths of an inch.

HEDYCRIUM. Latr.

H. *sinuosum.* Reddish-coppery; wings fuliginous at tip.

Inhab. Indiana.

Body reddish-coppery, polished, punctured; *front* concave, greenish; *antennæ* fuscous, green at base; *metathorax* acute at the posterior angles; *wings* beyond the middle fuliginous; *tergum* blue-purple; terminal segment hardly as long as the penultimate, with a sinus at tip; *beneath* green; *tarsi* fuscous.

Length about one-fifth of an inch.

TIPHIA. Fabr. Latr.

T. *transversa.* Blue-black, somewhat hairy.

Inhab. Indiana.

Body black, with a slight bluish or purplish reflection; with numerous whitish hairs; immaculate, punctured; *antennæ* black, opaque; *mandibles* piceous at tip; *palpi* fuscous; *wings* a little dusky, hyaline; nervures black; apicial line of the second cubital cellule transverse, rectilinear; *metathorax* each side striated, above with three slightly elevated longitudinal lines and a posterior transverse one; *abdomen,* first segment narrower than the second, somewhat gibbous above and flat beneath, the incisure indented; remaining segments more hairy, ciliated; *tibiæ* and *tarsi* with silvery hairs.

Length nearly half an inch.

(*To be continued.*)

The Lyceum intends giving illustrations, as fine specimens offer, of North American Reptiles, so that in time a complete monograph may be presented. Plate No. 5, is from a drawing very kindly made by Mr. Titian Peale from an individual taken by Mr. Jacob Gilliams last summer, in Maryland, being rather farther north than usual. It is the Coluber *getulus,* Lin. Syst. Nat. idem Gmelin, Syst. Nat. p. 1106. *La Chaine,* Daub. En. Method, idem Lacepede, Hist. des Serpens in 12 tom. tom. ii. p. 89. *La Couleuvre Chaine,* Latr. Hist. Nat. des Serpens in 18 tom. tom. iv. p. 174. The *Chain Snake,* Catesby, Hist. of Carolina, pl. lii. *La Couleuvre Gitule,* Daud. pl. lxxvii. fig. 1.

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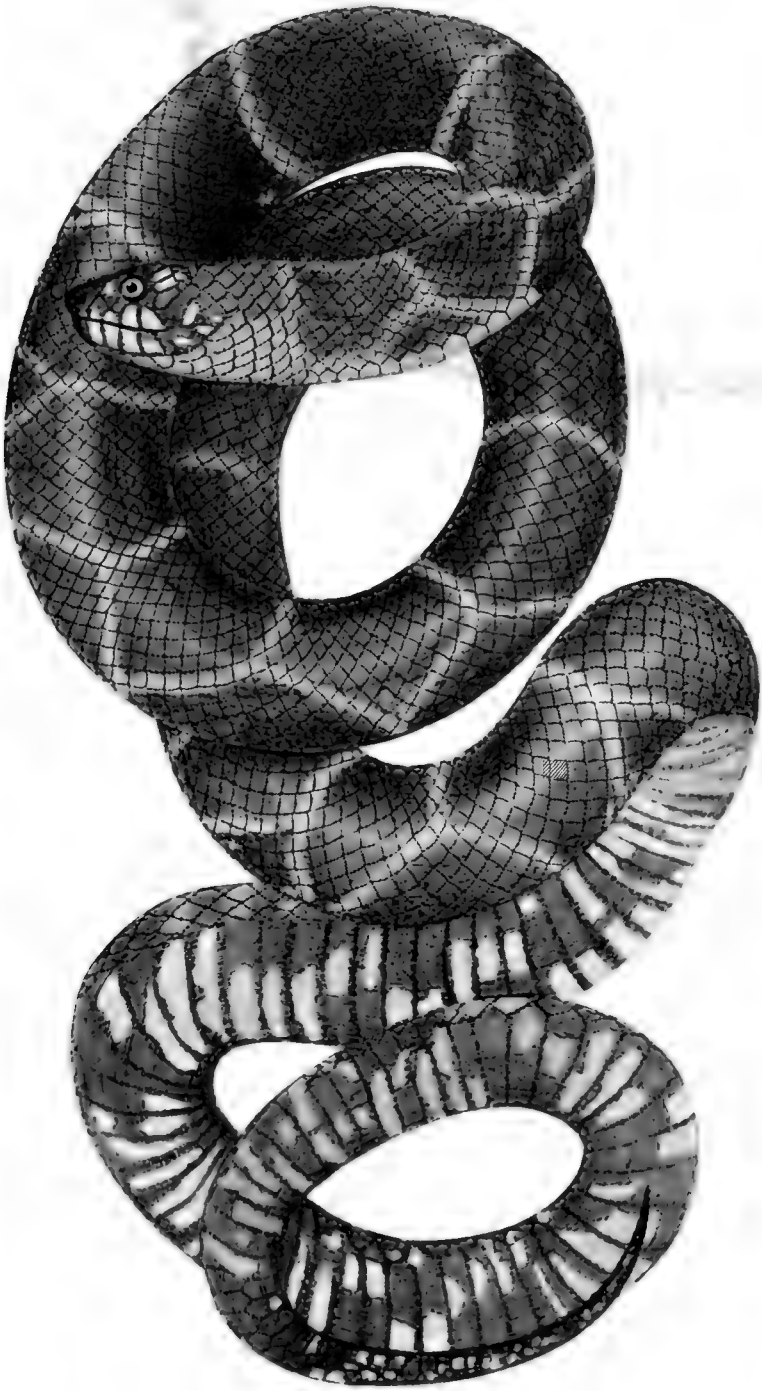

Drawn by Titian Peale

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COLUBER GETULUS.