Robert, J. S.

Diary of St. Louis and Lake country, 1880.

(1880)

A-R [oberts,
T.S.]
St. Louis
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VIII.

ORNITHOLOGY.

REPORT OF DR. P. L. HATCH.

Prof. N. H. Winchell—

DEAR SIR: The increased facilities for extending my observations over new sections of the State, which your considerations afforded me, have enabled me to achieve more satisfactory results than in the preceding year.

I not only visited remote points of great interest, but have thus succeeded in enlisting competent assistants who have entered into the exploration of their special localities with great enthusiasm. Several such have given me carefully prepared reports of what they have accomplished, which I reserve to draw upon in making up my final report. I have held several such over the last year from Messrs. T. S. Roberts, C. L. Herrick, R. L. Williams and E. L. Hood, which, but for a little misapprehension, I should have handed you a year ago.

I am gratified, however, to know that they do not regret the omission. I am under renewed obligations to these young and enthusiastic naturalists for their hearty co-operation. They will pardon my constitutional caution in not publishing observations in natural history prematurely: they are better, sometimes, like wine, for having been kept a time. It is often the case that but *half* of the truth is a *whole* falsehood. I am anxious to gather data from more than half of the field before attempting to extract reliable truth for the whole. However, I have a paper from your assistant, Prof. C. W. Hall, prepared by Mr. T. S. Roberts, his assistant, in a Geological and Natural History exploration of the north-west shore of Lake Superior, that is so complete in itself and covers a hitherto unexplored region of such interest to ornithologists, that I cannot withhold it for my completed report without injustice, not only to those gentlemen, but to all who are interested in the fauna of that interesting region. You will find it inclosed herewith. With renewed assurances of my interest in the work I have undertaken and my sincere acknowledgments for your official and personal kindness uniformly manifested to me, I remain,

Yours very truly,

P. L. HATCH.

No. 818 Nicollet Av., Minneapolis, March 5, 1880.

55.669.

Dr. P. L. Hatch, State Ornithologist—

SIR: I transmit to you herewith a list of birds collected by Mr. Thomas S. Roberts. During the past summer a geological and collecting corps of the Geological and Natural History Survey of this State was sent by the State Geologist to the northwest shore of Lake Superior for studying certain geological and mineralogical characters along the coast, and for making collections of the fauna and flora of that region, that the same might be represented in the General Museum of the University.

Mr. Roberts was my assistant on that expedition, and I am pleased to have an opportunity here to bear record to his untiring industry and patience, to his quickness and exactness in observation, and to the thoroughness with which he followed out the details of every examination.

The skins of the birds collected and the sterna and parts of the viscera of many of them are in the Museum of the University, where yourself and all others interested in Ornithology can have free access to them for study and comparison.

Very truly yours,

C. W. HALL.

THE UNIVERSITY OF MINNESOTA, Feb. 25, 1880.

A PARTIAL LIST

OF THE

BIRDS OF ST. LOUIS AND LAKE COUNTIES, MINN.

These two counties, St. Louis and Lake, form the triangle which projects eastward from the northern half of the State of Minnesota, between Lake Superior and the British possessions. Each is of large dimensions, and together they form an extensive tract of country, representing the wild, heavily timbered area of the State. This list of birds, however, relates only to a narrow strip along the lake shore, between the mouths of the St. Louis and Devil's Track Rivers—a general coast line of about one hundred and twelve miles. From Grand Marais, one hundred and eight miles below Duluth, a collecting trip was made six or eight miles inland to a sheet of water known as Devil's Track Lake. This proved to be a quite large and pretty lake, with low, rocky shores and timber growing to the very water's edge. From its eastern end flows the river of the same name, a considerable stream, which, after receiving several affluents and making a descent of over a thousand feet, enters Lake Superior about four miles below Grand Marais.

This whole extent of country is covered with a dense forest, consisting for the most part of evergreens, white birch and poplar, which everywhere encroaches close upon the water's edge, whether it be along the banks of the rivers or the shore of the lake. Indeed, it is alone the action of the

water that establishes the line beyond which the trees cannot advance, and owing to the abrupt, rocky character of the entire shore this line is close to the water and very sharply defined. It is but a step from the gloomy forest to the bare rock or shingle beach, and usually but a half dozen more down over the water-worn rock to the icy waters of the lake itself. The rivers, entering the lake, between rocky walls, and with scarcely an opening among the trees, vary but little the general uniformity of the forest line. About the only breaks in this monotony are "burns," small areas from which the timber has been cut, and now and then a hard-earned clearing which has most likely been abandoned to grow up in saplings and brush. Aside from the low ground about the mouth of the St. Louis River, only two small marshes, scarcely worthy of mention, were seen. One of these constitutes the *marais* from which Grand Marais takes its name, and the other, of somewhat greater dimensions, lies just above Stewart River. Neither is directly connected with the lake.

Every field ornithologist is aware that birds, as a rule, do not like the deep, sombre forest, but frequent by preference the edges of woods or open spots where they can get air and sun-light as well as suitable food. This is well illustrated on the "North Shore;" for the vicinity of towns, abandoned clearings, and old burnt sections were found to be by far the best collecting grounds. A long walk through the forest, resulted generally in hearing only a few Red-eyed Vireos singing high up among the trees, encountering perhaps a noisy, roving troop of Chickadees or a few warblers, stragglers from the outside, flitting about among the tree-tops.

Near Duluth are marshes and a number of cultivated fields, and we find that such birds as the Yellow-winged and Savanna Sparrows, Grass Finch, Bobolink, etc., are to be found. But other than in these two localities there is little or no cultivated ground within the region examined. At Grand Marais, which was our headquarters, there are two or three large partial clearings and a low shaped peninsula, which bears only bushes and stunted trees, conditions which make this a fair locality for the bird-collector.

Considerable disappointment was felt at not finding several species of birds that were confidently looked for, and which, in all probability, do occur. Among these may be named the Mourning Warbler, Canada Jay, White-winged Crossbill, Banded Three-toed Woodpecker, Pileated Woodpecker and two or three species of owls. The Canada Jay and Pileated woodpecker were known to residents, and the former said to be common and noticeable in the fall and winter. Owls appeared to be scarce. We ourselves noted but few, though camping along the shore for over five weeks, and little could be learned of them from resident hunters.

The work of the present season (1879) was included between the dates July 26th and September 2d. In July, 1877, the writer spent a few days collecting at Duluth, and as the notes taken at that time have never been published, they are incorporated in this list in order to render it as full as possible. All matter introduced from this source is inclosed in brackets, as the work was done independent of the survey.

One hundred and twenty-five (125) skins representing fifty-five (55) species, were taken the present season. Seven (7) additional species are represented in the University Museum, and the writer's collection by speci-

mens previously taken on the north shore, which makes sixty-two (62) species that rest on the capture of specimens. The remainder were seen and well identified by the writer with the exception of a single species,—the White-headed Eagle, which is included upon hearsay.

The name of a locality accompanied by only a date signifies that the species was taken at that time and place. These records of capture have been introduced quite frequently as giving a degree of definiteness to the observations.

1. [*Turdus migratorius*, *Linn.* Robin.—Common at Duluth in July, 1877,]

2. [*Turdus swainsoni*, *Cab.* Olive-backed Thrush.—A specimen (var. *swainsoni*) was taken at Duluth, July 16, 1877.]

3. [*Sialia sialis*, (*Linn.*) *Hald.* Blue-bird.—Several pairs seen at Duluth in July, '77.]

4. *Parus atricapillus*, *Linn.* Black-capped Chickadee.—Common. Found often in the deep woods where few other birds live.

5. *Sitta canadensis*, *Linn.* Red-bellied Nuthatch.—Not very common. Its trumpet like notes betraying its presence much oftener than a sight of the bird itself. Poplar River, Aug. 6.

6. *Certhia familiaris*, *Linn.* Brown Creeper.—Noted quite frequently. Seen at Grand Marais July 28 and on Minnesota Point, Sept. 1.

7. *Troglodytes aedon parkmani*, Western House Wren.—Taken at Grand Marais, where several were seen. I am at a loss to account for the apparent scarcity of this species along the shore as I found it in July, 1877, very common among the burnt and fallen timber about the Northern Pacific Junction and Duluth. A number of specimens taken at that time show a very light coloration; and in fact all the wrens of this species that I have taken in Minnesota are noticeably light colored. In view of this fact I recently sent a small series of skins from different localities in the State to Mr. Robt. Ridgway for identification. His reply was that the specimens were all *parkmani*, and extremely typical of that form. Again in a subsequent letter he says "Your wrens surprised me very much, as I was prepared to find them *aedon*. They are the *most* typical specimens of *parkmani* I ever saw."

Mr. T. M. Trippe in his paper* upon the birds of central Minnesota gives Bewick's Wren as common and breeding, and includes the House Wren only with doubt. Yet in this same general region I have found only the House Wren abundant during the breeding season and have never seen Bewick's Wren.

8. [*Mniotilta varia*, (*Linn.*) *Vieill.* Black and White Creeper:—Seen on Minnesota Point, July 11, 1877.]

9. *Helminthophaga ruficapilla*, (*Wils*) *Bd.* Nashville Warbler.—Common in latter part of August. Devil's Track Lake, Aug. 18. Beaver Bay, Aug. 28, etc.

10. *Helminthophaga peregrina*, (*Wils*) *Cab.* Tennessee Warbler.—Very common; forming often the greater part of the rambling companies of migrants found in open places and on the edges of the timber after the second week in August. In full song at Devil's Track Lake on Aug. 16. Grand Marais, Aug. 13. Beaver Bay, Aug. 27, etc.

*Proc. Ess. Inst. VI. 1871, p. 115.

11. [*Dendroeca æstiva*, (Gm) Bd. Yellow Warbler.—Several noted at Duluth in July, 1877.]

12. *Dendroeca virens*, (Gm) Bd. Black-throated Green Warbler.—Grand Marais; two specimens taken July 28 and Aug. 13. [Duluth, July 16, '77.]

13. *Dendroeca coerulescens*, (Linn) Bd. Black-throated Blue Warbler.—Two males taken at Poplar River, Aug. 6. From the anxiety displayed by one of these it seemed that the young were still under the care of the parents. The second male was in full song.

14. *Dendroeca coronata*, (Linn) Gray. Yellow-rumped Warbler.—Common at Devil's Track Lake, Aug. 16-18. Three specimens (young) taken the 16th.

15. *Dendroeca blackburniæ*, (Gm.) Bd. Blackburnian Warbler. A female accompanied by her brood of young was found on Aug. 10 among the dense underbrush of an old clearing at Grand Marais. They kept close to the ground, chirping constantly, and were very difficult to start from their place of concealment. Two of these were secured. Devil's Track Lake, Aug. 18.

16. *Dendroeca striata*, (Forst.) Bd. Black-poll Warbler.—Beaver Bay, Aug. 27, '79 (a young bird).

17. *Dendroeca castanea*, (Wils.) Bd. Bay-breasted Warbler.—Devil's Track Lake, Aug. 16. Seen also at Black Point Aug. 24.

18. *Dendroeca maculosa* (Gm.) Bd. Black and Yellow Warbler.—Common. Found in small companies during the first part of August, the broods having not yet broken up. Moulting at this time. Devil's Track Lake, Aug. 16. Beaver Bay, Aug. 27.

19. *Dendroeca palmarum*, (Gm.) Bd. Yellow-red-poll Warbler.—Apparently not common. Beaver Bay, Aug. 27.

20. *Dendroeca tigrina*, (Gm.) Bd. Cape May Warbler.—Taken at Grand Marais, Aug. 13, and believed to have been seen at Devil's Track Lake, Aug. 16.

21. [*Siurus auricapillus*, (Linn.) Sw. Golden-crowned Thrush.—Several noted at Duluth in July, '77.]

22. *Siurus naevius*, (Bodd.) Coues. Small-billed Water Thrush.—Common at Devil's Track Lake. A thick growth of evergreens and birches, growing close to the water's edge and projecting out low over the water for a number of feet, formed a most congenial haunt for this bird. Though so late in the season (Aug. 15-18) they were uttering their ringing, emphatic song with seemingly all the vigor of spring. They sang chiefly in the morning, from daylight until eight or nine o'clock, and then again for a short time in the evening. As stated by several authors, the song bears a striking resemblance to that of the Mourning Warbler (*Geothlypis philadelphia*). Seen on the lake shore only at Black Point, Aug. 24.

23. *Geothlypis trichas*, (Linn.) Cab. Maryland Yellow-throat.—Seen only once, near Stewart river, Aug. 30. [Common at Duluth, in July, '77.]

24. *Geothlypis philadelphia*, (Wils.) Bd. Mourning Warbler.—Common about Duluth in July, 1877. The following extract from a paper contributed by the writer to the Linnean Society of New York City, in February, 1879, may be of interest in this connection. In the vicinity of Minneapolis it [*G. philadelphia*] has been met with very rarely and only during the migrations. Its capture, several years ago, by Dr. P. L. Hatch and Mr. W. L. Tiffany; the taking of two males on May 18, 1877, by Mr. R. S. Williams,

and a male of the year on Sept. 2, 1876, by the writer, about comprises its history in this locality. Dr. Hatch's words, "rare and unnoted," convey a correct idea of its occurrence here.

"Leaving Minneapolis we will pass due north about one hundred and twenty-five miles, into Carlton and St. Louis counties. Here is one vast extent of forest, largely of pines and other evergreens, but with hardwood ridges and tamarack swamps interspersed. In many sections extensive fires have raged on the low grounds during dry seasons, completely killing the timber, especially in white-birch regions. The fallen, charred timber, piled promiscuously among the dense tangled undergrowth that springs up, forms as pathless and impenetrable a place as one can well imagine, and the dead and blasted trees which remain standing on all sides, give to the country a most desolate appearance. Among several features rendering these barren wastes attractive to the ornithologist, is their being the summer home of the Mourning Warbler. During the second and third weeks of July, 1877, we found this warbler about the Northern Pacific Junction (Carlton Co.) and Duluth (St. Louis Co.) in such numbers as to fully warrant its being called common. It was at that time in song and breeding. The males were conspicuous from their habit of sitting on the dead trees to sing; but the females were seldom seen, as they kept down in the thick cover. The males would sit for a long time on the limb of a dead tree, motionless, but for the occasional utterance of their brief song. In quality their singing is much like that of the Maryland Yellow-throat; but the song, as I heard it, consists of five notes, the first three just alike, followed by two others, louder and fuller. The whole is loud, clear and ringing and forms an interesting song, but I suspect its attractiveness is due, in great measure, to the fact that it is the utterance of the Mourning Warbler. When the singer is disturbed he either flies to another tree, near by, to continue his performance or dives into the thickets below, where he is safe until he may see fit to reappear.

"The nest we did not find, though we greatly excited several pairs by our close approach to it. When thus disturbed, both male and female would utter forcible sparrow-like chirps, move actively from bush to bush, frequently passing nervously over every limb and twitching their bodies much in the manner of the Yellow-throat (*G. trichas*) under similar circumstances. A few, at least, had young upon our arrival (July 6), and we several times saw them (male as well as female) carrying large green caterpillars, such as one could scarcely imagine a young Mourning Warbler swallowing. On July 18th, at the N. P. Junction I came upon a brood of young out of the nest, but not able to fly above a few yards. They were in a dense place and kept close to the ground, only appearing for an instant now and then, when beaten from some bush. They chirped loudly, very much like the old birds. As late as July 18, at the date of our departure, the males were still in song.

"T. M. Trippe found this warbler abundant and breeding through the central part of this State in the summer of 1870, and to him is due the credit of ascertaining that the timber wilds of Minnesota are so eminently its home.

"It is a strange fact that the Morning Warbler should be so rare about Minneapolis during the migrations and yet so common all the season little more than a hundred miles farther to the north. It would seem that they must certainly pass by here; yet in what manner is something of a mystery.

The unsuitable character of the country is the evident explanation of their absence during the summer."}

Contrary to expectation nothing was seen of the species the present season, but the vicinity of Duluth was examined scarcely at all. Though why certain burned areas about Grand Marais and elsewhere were not inhabited by this bird is not quite evident.

25. *Myiodioctes pusillus*, (*Wils.*) Bp. Wilson's Blackcap.—Noticed several times in the latter part of August. In song. Beaver Bay, Aug. 27.

26. *Myiodioctes canadensis*, (*Linn.*) *Aud.* Canadian Flycatcher.—Common; frequenting the undergrowth. During the early part of August its actions indicated that it was still looking after its young. In song at Devil's Track Lake, Aug. 15-18. Taken at Poplar River, Aug. 4; Grand Marais, Aug. 13.

27. *Setophaga ruticilla*, (*Linn.*) Sw. Redstart.—Common. A pair seen at Poplar River, Aug. 6, feeding young not more than two or three days from the nest. Grand Marais, Aug. 9.

28. [*Pyrranga rubra*, (*Linn.*) *Vieill.* Scarlet Tanager.—A male, seen at Duluth, July 16, '77.]

29. [*Tachycineta bicolor*, (*Vieill.*) *Cab.* White-bellied Swallow.—Common at Duluth in July, '77.]

30. *Hirundo horreorum*, *Barton.* Barn Swallow.—A single male flew around the boat between Poplar and Cascade rivers on Aug. 4 and [several were seen at Duluth in July, '77.]

31. *Petrochelidon lunifrons*, (*Say*) *Scl.* Cliff Swallow.—One seen between Beaver Bay and Duluth.

32. *Progne purpurea*, (*Linn.*) *Boie.* Purple Martin.—Common. Mr. Thos. Mayhew, of Grand Marais, told us that they occupied his Martin box last season; but none were present this year. The last week of August many large loose flocks were seen flying south-westward and keeping over the water a short distance from shore.

33. *Ampelis cedrorum*, (*Vieill.*) *Cab.* Cedar Bird.—One of the commonest birds of this region. They occurred both in small flocks and in pairs, and some evidently had nests in the latter part of August. No young of the year were seen. At Devil's Track Lake in particular they were observed to display their ability as fly-catchers to an extent not before noticed by the writer. Regularly each morning and evening they were perched on the tops of the tallest trees about the lake shore, making sallies in all directions after passing insects and returning again to their station, almost like so many pewees or King Birds.

34. *Vireo olivaceus* (*Linn.*) *Vieill.* Red-eyed Vireo.—Common, and one of the few birds found regularly in the deep forest, where its song was often the only sound to break the stillness. Beaver Bay, Aug. 28.

35. [*Vireo solitarius*, (*Wils.*) *Vieill.* Solitary Vireo.—A single individual seen at Duluth, July 16, '77.]

36. [*Carpodacus purpureus*, (*Gm.*) *Gray.* Purple Finch.—A young bird taken at Duluth, July 16, '77, and others seen.]

37. *Loxia curvirostra, americana*, (*Wils.*) *Coues.* Red Crossbill.—Common all along the shore, but noticed more particularly at Poplar River and Grand Marais. They were in pairs or small parties of six or eight individuals, and gave evidence of a restless, roving disposition. Alighting, they would feed.

industriously about the tops of the evergreens for a short time, when all of a sudden, at the sound of a few sharp notes, uttered by one of the party, they were off over the forest with wayward, erratic flight, sounding their call note as they went. They are not at all shy, but on the contrary are tame and unsuspecting birds. The roof of a house, the immediate doorway, a tree standing close beside a dwelling are as likely resorts as other equally suitable localities. A tall, isolated pine, standing but a few feet from our shanty at Grand Marais, was a favorite stopping place for birds of this kind, and on several occasions they descended to feed about the very door, giving but little heed to the presence of the inmates.

The adults were frequently found paired and the evidence afforded by dissection seemed to indicate that they were breeding. Yet this could scarcely have been the case, since this bird is known to be one of the earliest to nest. Much attachment existed between these mated birds. On one or two occasions the male of a pair being shot first, the female flew only a short distance and remained calling loudly, until the gun was recharged and the tragedy ended by placing her beside her mate.

Only once was the species heard to sing and then (Aug. 5) it was but snatches of an apparently pleasing song.

38. *Chrysomitris pinus*, (Wils.) Bp. Pine Linnet.—Common. A tame, familiar species, going at this season of the year in small flocks. They fed about a fish house occupied by our party at Grand Marais, and frequently ventured *under* the building in their search for food.

39. [*Chrysomitris tristis*, (Linn.) Bp. Thistle Bird.—Found at Duluth in July, 1877.]

40. [*Passerculus savanna*, (Wils.) Bp. Savanna Sparrow.—Rather common about the fields below Duluth in July, '77.]

41. [*Pooecetes gramineus*, (Gm.) Bd. Grass Finch.—Common at Duluth, July, '77.]

42. [*Melospiza palustris*, (Wils.) Bd. Swamp Sparrow.—Duluth, common, July, '77.]

43. *Melospiza meloda*, (Wils.) Bd. Song Sparrow.—Abundant in every suitable locality. Minnesota Point, Sept. 1. Grand Marais, July 28; Aug. 13, etc.

44. [*Junco hyemalis*, (Linn.) Sel. Snow Bird.—Found common at Duluth in July, '77; but not noted at any point this summer.]

45. *Spizella socialis*, (Wils.) Bp. Chipping Sparrow.—A common species all along the shore and abundant at some more than usually suitable localities, as on Minnesota Point and about Grand Marais. Attending to young in early part of August. Grand Marais, Aug. 13.

46. *Zonotrichia albicollis*, (Gm.) Bp. White-throated Sparrow.—Common; rather shy; frequenting the thick brush and raspberry patches of burnt areas. A brood of young just able to fly and accompanied by the parent, was found at Grand Marais, Aug. 21. This, however, was exceptionally late. In song quite generally during the first week of August. From this time onward the singing gradually decreased until during the last week of the month it was only occasionally that the full song was heard.

47. *Goniaphea ludoviciana*, (Linn.) Bowd. Rose-breasted Grosbeak.—A single individual seen a short distance below Burlington Bay, Aug. 30.

48. [*Cyanospiza cyanea*, (*Linn.*) *Bd.* Indigo Bird.—Seen several times at Duluth, July, '77.]

49. *Dolichonyx oryzivorus*, (*Linn.*) *Sw.* Bobolink.—Heard flying over at Beaver Bay, Aug. 27, and [a male seen near Duluth, July 17, '77.]

50. *Molothrus pecoris*, (*Gm.*) *Sw.* Cow Blackbird.—A single specimen taken at Grand Marais, July 29. It was flying high in the air and alighted in the very top of a tall pine.

51. *Agelæus phoeniceus*, (*Linn.*) *Vieill.* Red-winged Blackbird.—Small flocks of immature birds were seen occasionally. They must have been bred elsewhere, as this region is entirely unsuited to their nesting habits. First seen at Poplar River, Aug. 4-7; two taken at Grand Marais Aug. 19, and common at Beaver Bay, Aug. 26-29.

52. *Quiscalus purpureus*, (*Bart.*) *Licht.* Purple Grackle.—Noted but twice, once at Beaver Bay and once at Duluth.

53. *Corvus corax*, *Linn.* Raven.—Common. Residents say they are very numerous during the winter.

54. *Corvus americanus*, *Aud.* Crow.—Common at Duluth, Aug. 31—Sept. 2; but seen only occasionally further down the shore. Duluth, Sept. 1.

55. *Cyanurus cristatus*, (*Linn.*) *Sw.* Blue Jay.—Apparently uncommon. Seen near Cascade River, and again near Stewart River, and heard several times at Devil's Track Lake.

The Canada Jay (*Perisoreus canadensis*) is reported both by the white residents and the Indians, as common here, but none were seen by us.

56. *Tyrannus carolinensis*, (*Gm.*) *Temm.* King-bird.—Observed first at Grand Marais, Aug. 20, where two specimens were taken and several others seen. At Beaver Bay, but not common. [Common at Duluth in July, 1877.]

57. *Sayornis fuscus*, (*Gm.*) *Bd.* Phoebe Bird.—One taken at Grand Marais, Aug. 20, and a pair seen at Duluth, Aug. 31.

58. *Contopus borealis*, (*Sw.*) *Bd.* Olive-sided Flycatcher.—First seen Aug. 19 at Grand Marais. Five shot Aug. 20, when it was common on tops of tall trees in an old partial clearing. This species, together with the king-bird, appeared suddenly in a locality which had been under close inspection for some time previously.

59. *Empidonax traillii*, (*Aud.*) *Bd.* Traill's Flycatcher.—Taken at Beaver Bay, Aug. 27. [A female, whose actions seemed to indicate that it had young, was shot in a willow thicket at Duluth, July 13, '77.]

60. *Empidonax minimus*, *Bd.* Least Flycatcher.—Apparently common. Poplar River, Aug. 5. Grand Marais, Aug. 20.

61. *Empidonax flaviventris*, *Bd.* Yellow-bellied Flycatcher.—A pair taken at Poplar River, Aug. 6.

62. *Chordeiles virginianus*, (*Gm.*) *Bp.* Night Hawk.—Common in the latter part of August, when they were migrating in loose flocks.

63. *Chetura pelagica*, (*Linn.*) *Bd.* Chimney wift.—Generally distributed, but nowhere observed to be common, except at Duluth, in July, 1877. Aug. 5, a nest containing three young birds about two days old, was found in an abandoned house at Poplar River. The birds entered through a stove-pipe hole in the roof, and had glued their nest to the vertical boards of one end of the attic. Seen at Devil's Track Lake, Aug. 16. It must breed almost exclusively in the hollow trees.

64. *Trochilus colubris*, *Linn.* Ruby-throated Humming-bird.—Taken at Grand Marais, July 29, and seen at Beaver Bay, Aug. 29.
65. *Coccygus erythrophthalmus*, (*Wils.*) *Bp.* Black-billed Cuckoo.—Grand Marais, Aug. 13 and 19. One seen at Beaver Bay, Aug. 27.
66. *Picus villosus*, *Linn.* Hairy Woodpecker.—Occasional. Grand Marais, Aug. 20.
67. *Picus pubescens*, *Linn.* Downy Woodpecker.—Rather common. Grand Marais, July 29.
68. *Picoides arcticus*, (*Sw.*) *Gray.* Arctic Woodpecker.—Taken at Grand Marais, Aug. 21, and seen at Black Point, Aug. 24. [Duluth, July 16, '77.]
69. [*Melanerpes erythrocephalus*, (*Linn.*) *Sw.* Red-headed Woodpecker.—A single individual seen at Duluth, July 11, '77.]
70. *Colaptes auratus*, (*Linn.*) *Sw.* Golden-winged Woodpecker.—Duluth, Sept. 1. Not noticed elsewhere; but its occurrence at Grand Marais during the migrations is reported by residents.
71. *Bubo virginianus*, (*Gm.*) *Bp.* Great Horned Owl.—Heard at night on several occasions, and a specimen secured at Grand Marais, Aug. 20.
72. *Syrnium nebulosum*, (*Forst.*) *Boie.* Barred Owl.—A medium sized owl, seen at Poplar River on the evening of Aug. 4, may have been this species.
73. [*Aceipiter fuscus*, (*Gm.*) *Gray.* Sharp-shinned Hawk.—Seen at Duluth, July 16, '77.]
74. *Astur atricapillus*, (*Wils.*) *Jard.* American Goshawk.—A single (female?) bird of the year taken at Little Marais, on Aug. 26.
75. *Falco communis*, *Gm.* Peregrine Falcon.—At a point about two miles below Poplar River, where the shore of the lake is a rocky cliff surmounted by thick trees, a pair of these birds was seen Aug. 4. As we passed the place in a boat they circled about over the woods and water, uttering repeatedly short, harsh screams and seemed greatly agitated by our presence. Was it possible for them to have had young at that late date? Their actions certainly indicated that they had. A second pair, which, upon our intrusion upon their domain, acted in much the same excited manner, was seen Aug. 25 on the summit of Carlton's Peak, and a single individual was observed Aug. 24 about the high, jagged precipice of the "Saw-tooth" at Black Point.
76. *Falco columbarius*, *Linn.* Pigeon Hawk.—Taken at Grand Marais Aug. 13, and seen at Beaver Bay.
77. *Falco sparverius*, *Linn.* Sparrow Hawk.—Very common; especially numerous in burnt localities, where it perches on the dead trees. Feeds here largely on grasshoppers, as is its habit elsewhere.
78. *Buteo pennsylvanicus*, (*Wils.*) *Bp.* Broad-winged Hawk.—Grand Marais, Aug. 19, (young bird.)
79. *Pandion haliaëtus*, (*Linn.*) *Cuv.* Fish Hawk, Osprey.—Seen at Grand Marais, Poplar river and Duluth. These birds lived apparently in the range of hills back from the shore, and came to the lake at intervals to catch fish.
80. *Aquila chrysaëtus*, *Linn.* Golden Eagle.—A fine adult specimen, killed at Grand Marais in the fall of 1877, was presented to the survey this summer by Messrs. Thomas and Henry Mayhew, of Grand Marais.
81. *Haliaëtus leucocephalus*, (*Linn.*) *Sav.* Bald Eagle.—None seen, but a pair reported to have bred the present season at a point a number of miles inland from Grand Marais.

82. *Cathartes aura*, (*Linn.*) *Ill.* Turkey Buzzard.—A specimen procured by Prof. C. W. Hall, at Grand Marais, in Oct. 1878, is in the University Museum. Not noted this year.

83. *Ectopistes migratoria*, (*Linn.*) *Sv.* Wild Pigeon.—An occasional pair noted during the early part of August, and flocks of considerable size toward the last of the month. Grand Marais, Aug. 9.

84. *Bonasa umbellus*, (*Linn.*) *Steph.* Ruffed Grouse.—Several covies seen. In the middle of August the young were little more than half grown. Devil's Track Lake, Aug. 16.

85. [*Ægialites vocifera*, (*Linn.*) *Bp.* Killdeer Plover.—Noted at Duluth in July, '77.]

86. *Lobipes hyperboreus*, (*Linn.*) *Cuv.* Northern Phalarope.—A single female, taken Aug. 29, by Prof. N. H. Winchell, a few miles above Beaver bay. It was alone, swimming in the lake, at some distance from the shore.

87. *Ereuntes pusillus*, (*Linn.*) *Cass.* Semipalmated Sandpiper.—Mouth of Devil's Track river, Aug. 21.

88. *Tringa minutilla*, *Vieill.* Least Sandpiper.—Common; frequenting in place of the unsuitable shingle beaches, the perfectly bare and smooth rocky shore.

89. *Tringa bairdii*, *Coues.* Baird's Sandpiper.—Two specimens taken at Grand Marais, Aug. 22. Together with one or two others of the species and several Least Sandpipers, they were feeding on the wet rocks, seeming to find abundant food in the path of every retreating wave.

90. *Tringa alpina americana*, *Cass.* Black-bellied Sandpiper.—A single individual seen on Aug. 30, near Agate bay.

91. *Totanus flavipes*, (*Gm.*) *Vieill.* Lesser Teltale.—Common; in small flocks on the beaches. Grand Marais, July 28.

92. *Totanus solitarius*, (*Wils.*) *Aud.* Solitary Sandpiper.—Rather common. A small shallow pond, full of fallen trees and brush, was their favorite resort at Grand Marais. Grand Marais, July 29.

93. *Tringoides macularius*, (*Linn.*) *Gray.* Spotted Sandpiper.—Common. Seen at Devil's Track Lake, Aug. 18. Duluth, Sept. 1.

94. [*Botaurus Minor*, (*Gm.*) *Boie.* American Bittern. Seen at Duluth in July, '77,] and heard of at Grand Marais this year.

95. *Porzana carolina*, (*Linn.*) *Cab.* Carolina Rail.—Common, though the almost entire absence of marshes forces the species to frequent what seem very unsuitable places. For instance, the dense raspberry patches of burnt sections, thick brush, a pea patch, the rank grass about abandoned habitations, and like curious localities. Once I found three quietly reposing several feet from the ground in an evergreen tree standing in a perfectly dry, stoney location; and on another occasion shot a specimen from the smaller branches of a tree, where it had alighted upon being flushed from a weed-patch on a dry hill side. Grand Marais, Aug. 20. Poplar River, Aug. 5. Beaver Bay, Aug. 27.

97. *Anas boschas*, *Linn.* Mallard.—Mouth of Devil's Track River, Aug. 20.

98. *Querquedula discors*, (*Linn.*) *Steph.* Blue-winged Teal.—Two seen in Grand Marais harbor, Aug. 22.

99. [*Aix sponsa*, (*Linn.*) *Boie.* Wood Duck.—Flock of six seen in Superior Bay, Duluth, July 13, '77.]

100. *Mergus merganser*, *Linn.* Goosander.—Apparently common. A large brood seen several times on Devil's Track Lake. When alarmed they fluttered along over the surface of the water for a long distance, uttering loud cries. They retreated occasionally down the river and probably came up to the lake for the purpose of fishing. (Possibly *serrator*, as no specimen was secured.)

101. *Mergus cucullatus*, *Linn.* Hooded Merganser.—A single female seen at Grand Marais, July 28.

102. *Larus argentatus*, *Brünn.* Herring Gull.—Abundant. They are said to breed on two small rocky islands near Grand Marais. Stomach of one specimen found full of grasshoppers which it had probably picked up from the surface of the water for these insects perish in the lake in countless numbers. Grand Marais, Aug. 12.

103. *Larus delawarensis*, *Ord.* Ring-billed Gull.—Common. Grand Marais, Aug. 19.

104. *Colymbus torquatus*, *Brünn.* Loon.—Common.

105. *Podilymbus podiceps* (*Linn.*) *Lawr.* Pied-billed Grebe.—A specimen taken by Prof. Hall in the fall of 1878. A species of grebe, probably *P. podiceps*, was occasionally seen on the lake the present season.

T. S. ROBERTS.

MINNEAPOLIS, MINN., Dec., 1879.

APPENDIX A.

[FROM THE AMERICAN JOURNAL OF SCIENCE, VOL. XIX, FEBRUARY, 1880.]

On Lintonite and other forms of Thomsonite: A preliminary notice of the Zeolites of the vicinity of Grand Marais, Cook County, Minnesota;

BY S. F. PECKHAM AND C. W. HALL.

Grand Marais is situated on the northwest coast of Lake Superior, one hundred and eight miles northeast of Duluth. It is the site of an early French trading or mission station, and was later a station of the Hudson Bay Company. Its beautiful land-locked bay furnishes the only good harbor between Duluth and Pigeon Point.

The rocks, for several miles east and west, as well as at the Marais, are classed in general as igneous, and have often a basaltic structure. They present, however, great diversities of character both to the chemist and lithologist; and while the mineral species are perhaps altogether old, the forms are in some cases new. It was our original intention to confine this research to one or two peculiar forms that first attracted our attention, but in the progress of our examination the subject has outgrown its earlier proportions, both as regards its extent and the time required for its successful completion. We have therefore concluded to give in the present paper some general observations with such details as are at present in hand, reserving others until further study and analyses shall have rendered the work more complete.

At Good Harbor Bay, about four miles to the westward of Grand Marais, there begins a bed of dark colored rock, highly decomposed at surface, and related to diabase in its lithological characters. This bed extends westward along the coast for several miles, sloping gently from the wooded hilltops a mile or two inland, and disappearing beneath the waters of the lake. In its fresher parts the rock is somewhat mottled where coarsest, and nearly black with a greenish tinge where finest in texture. It is only from the talus, under the wall of rock rising above an underlying sandstone outcrop in Good Harbor Bay, that this fresh material can be easily obtained. Even here the mottled appearance discloses the partial decomposition of the most perishable of the constituents, and the formation of some new viriditic mineral. The lower layers are firm and compact, while the upper are extensively jointed and fractured, and filled with amygdaloidal cavities. These cavities, in whatever manner they were originally formed, have

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