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THE BIRDS OF A GARDEN

By A. C. TYNDALL.

The garden is a tangle of evergreens, forest trees, and ornamental shrubs grown wild ; with a few sturdy perennials which grow in the sod beneath them with, apparently, the fixed determination not to be overcome by difficulties. Lest anyone take exception to the term "garden" as applied to such a wilderness, I may say here, that in the bygone time when the name was given to the half acre or so of ground it covers, the perennials were not as now the neglected children of the soil, but the pride and joy of their careful owners.

Garden or wilderness, as you will, it is a favorite place of resort and residence with the lesser fowls of the air, and while there is a bird to be found in the neighborhood it is to be found here. Here may be seen the tiny kinglet, with his voice like the note of an elfin horn ; here the scarlet tanager flashes his military looking figure across the open spaces ; and in the silence of the night it has been my privilege to hear an owl of some species unknown to me, holding forth in a manner impressively suggestive of a prediction of all kinds of woe and misfortune for the inmates of the darkness enveloped abode close by.

Chief among the birds who spend their summers in the garden, however, as a bird almost always to be found when he is looked for, is the catbird, whose longtailed, blue-drab figure is to be seen in the mulberry thickets any hour in the day. The catbird comes of good family, numbering among other connections scarcely less desirable, the famous mocking-bird as first cousin. He is a fair songster himself, but he might be better, if he would give up the mistaken idea that he is gifted in the same way as his farfamed kinsbird. The great songster of the south

might be flattered if he knew there is a bird with such an admiration for his genius as the catbird evidently has ; who indulges himself with the hope, apparently, that some day success and fame will reward his efforts also. I have known that bird to arouse himself in the middle of the night in order to render his much practised imitations of other bird's notes, just, it would appear, because it was the other bird's custom so to do—with, I fancy, much the same idea that Napoleon the Third had in believing that he was following the lead of the same destiny when he said and did the same things in ordinary everyday life as his great uncle.

Another familiar figure is that of the robin who for some years past has occupied for the season that " desirable residence " known as the big spruce in the fence corner. The American substitute for the Robin Redbreast of nursery rhyme fame, has few points in common with his English name sake, and when the New Englanders gave the big thrush the name by which he has since been known, it was not so much on account of his brick dust colored front, as that his preference for the ploughed fields and gardens of the settlements reminded them of the friendly ways of the aimiable bird they had left over the seas. They had yet to learn, that so far from having any notions of sentiment on the subject he was influenced solely by the superior advantages the newly ploughed fields and gardens afforded for his favorite diet of earth worms. Another *habitué* of the place, but who is also a resident, is Jim the crow.

Jim is a bachelor bird, the misfortune of a wing broken while he was yet a callow youth, preventing him from taking the place in life he might otherwise occupy. But even if Jim were responsible for the well being of a family, he would never I feel sure, show the lack of confidence in his friends, which the robin displays in his every movement. The latter's ideas of the dangers to which that nest is exposed are precisely the same as on that first day he deposited the beakful of mud which formed its cornerstone ; and from break of day till dark of night it does nothing but worry over anticipated difficulties, and threatened dangers. I was moved one day, by hearing shrieks of wrath which betokened a

robin in a state of mind fast approaching the hysterical, to go forth to his aid. Jim crow is not infrequently guilty of abstracting the contents of a nest when his fancy leads him to desire fresh eggs for luncheon, but Jim I could see afar off with some black-coated chums, busy catching frogs down at the meadow pond. The trouble I found to be that one of his young hopefuls had fallen from the nest. I duly replaced it, but only to find that instead of calming his fears, it made him think dangers thickened; and his frantic shrieks brought every bird in the neighborhood to see what had happened. The indigo bird who has a nest in the adjoining shrubbery, was there, looking on in silent watchfulness, the goldfinch who seems to be everywhere at once, swung himself to and fro on a bough, mocking the larger bird with gay carolings and taunting callnotes until a wrathful movement on the part of the object of his attention, caused him to take a speedy departure—and the catbird, who had been hidden in the recesses of the mulberry thicket, practising a series of notes which he firmly believed would impress everybody as being an exact reproduction of the notes of the woodthrush, came out at the top, looked about him for a moment, then with a whisk of the tail which was meant to say—"That fool bird again!"—disappeared as suddenly as he had come. All this does not mean that Robin is without his good points—he is a hardworking, painstaking bird; devoted to his family, and a songster of no mean order, though as generally heard, snatching a moment's time from his pressing cares to gratify his love of the divine art,—singing a hurried matin song while four or five insatiable youngsters are demanding daily bread, in the shape of earthworms, or when at any other time of the day, he is obliged to keep a sharp look out for the enemies of him and his; while he gives his impressions of life musical utterance—it is not often he is heard at his best. Few bird songs would be more missed than his as he sits outlined against the sky on the ridge of a roof through the April evenings, and his voice is ever the first to be heard after a summer storm, in clear far sounding notes announcing that the rain is over and gone.

LIST OF FRESH-WATER FISHES OF THE GASPÉ
PENINSULA, P. Q., WITH NOTES ON THEIR DIS-
TRIBUTION IN THE MARITIME PROVINCES.

By PHILLIP COX.

1. PERCA AMERICANA, Schranck. *Yellow Perch.*

Metapedia River and Lake. Does not occur in the peninsula proper. Common in the Maritime Provinces.

2. COTTUS RICHARDSONII, Agassiz. *Miller's Thumb.*

In all the Gaspé rivers, except those emptying into Gaspé, Basin. A very variable form. Northern N. B.

3. COTTUS RICHARDSONII, Agassiz.

A peculiar variety from Bonaventure River, distinguished by its black colour, tad-pole shape, and wide separation of the dorsals.

4. URANIDEA GRACILIS, (Heckel) Putnam. *Miller's Thumb.*

Metapedia and Nouvelle, P. Q., Green River, Victoria Co., N. B.

5. URANIDEA BOLEOIDES (Girard) Jordan. *Miller's Thumb.*

Metapedia, with the last, from which it is scarcely specifically separate. Miramichi and St. John rivers, N. B.

6. CERATICHTHYS PLUMBEUS, Gunther. *C. prothemius, Cope.*

Metapedia River and Lake. A heavy stout form peculiar also to the lakes in St. John Co., N. B.

7. CERATICHTHYS PLUMBEUS, var.—

Grand Cascapedia; Nouvelle Lakes, New Carlisle; Grand Palbos. Differs from the type in the marked posterior insertion of the dorsal, short head, absence of barbel, scale formula, and crimson lateral band. An exceedingly handsome fish.

8. CERATICHTHYS PLUMBEUS, Gunther.

Little Cascapedia. Temiscouata Lake and the St John River, and Black River, Northumberland Co., N. B. The most usual type.

9. PHOXINUS NEOGŒUS, Cope. *Minnnow.*

Nouvelle Lakes, near New Carlisle; its only station in the peninsula. Small lakes St. John, Kings and Sunbury counties, N. B.

10. CHROSOMUS ERYTHROGASTER, Agassiz. *Red-bellied Dace.*

Nouvelle Lakes, New Carlisle. In all respects typical except that the dorsal has uniformly *eight* rays instead of *seven*, a feature marking all our *chrosomi*. Hence there seems a good reason for dropping *erythrogaster* and adopting a new term, unless there was some mistake in Agassiz' count. Golden Grove and Clear Lakes, St. John Co., N. B.

11. CHROSOMUS ERYTHROGASTER, var.—

Harriman's Lake, Grand Cascapedia; and Goose Lake, Little Cascapedia. A small, graceful and highly coloured form, with two extra dorsal bands, lateral line entirely wanting or represented by a few pores, body very slender, head and depth less in proportion to length. Close to the last, but easily distinguished from it, especially when fresh. This form does not occur in N. B.

13. LEUCISCUS CORNUTUS, Gunther. *Shiner, Red-fin.*

Grand Cascapedia. The only station east of Metapedia differs slightly from the type in the Restigouche and throughout N. B., in having but *eight* rays in the anal instead of *nine*, the free margin of the dorsal straight, not concave; greater compression of head, smaller size, and larger number of scales in front of dorsal.

14. RHINICHTHYS CATARACTÆ (Val.) Jordan. *Long-nosed Dace.*

Typical, but the scale formula is 12-62-7 or 8, instead of 13-64-8. Lake Metapedia. Generally distributed in N. B.

15. RHINICHTHYS ATRONASUS (Mitch.) Ag. *Black nosed Dace.*

Cascapedia and Bonaventure rivers. Differs from the last in its broader and shorter snout, fin rays are D. 8, A. 7 as in *R. cataractæ*; undoubtedly our type of *R. atronasus*. N. B., N. S., (J. M. Jones.)

17. *FUNDULUS DIAPHANUS*, (Lac.) Agassiz. *Spring Minnow*.
Bonaventure and Grand Pabos. Rustico and Hillsboro
River, P. E. I.; St. John River, and Mir, N. B.

19. *GASTEROSTEUS PUNGITIUS*, L. *Nine-spined Stick'back*.
Cascapedia. New Brunswick and P. E. I.

20. *GASTEROSTEUS ACULEATUS*, L. *Stick'back*.
Common on the Gaspé coast and lower courses of rivers.
Like many others of our smaller species, it shows a departure
from the ordinary type, for its fin formula is D. II-I, 11; A. I. 8;
whereas *aculeatus* has D. II-I. 13; A. I. 9. Hence ours ap-
proaches in this respect *A. microcephalus*, but in all other features
is *A. aculeatus*. The typical form, however, occurs generally in
N. B. Common in N. S., (J. M. Jones.)*

21. *NOTEMIGONUS CHRYSOLEUCUS* (Mitch.) Jordan. *Golden Shiner*.
Lac à Canard and Murphy's Lake, Grand Pabos. Also
occurs in Metapedia River and Lake. Alton Lake, P. E. I., the
only fresh water fish Roy Vanwart found on that island.

22. *SEMOTILUS ATROMACULATUS*, Mitch. *Horned Dace*.
Cascapedia and other streams. Slightly aberrant. D.
generally 8 rays instead of 7, as is the rule in N. B. Snout
more pointed. Size, small. Generally distributed in N. B.,
Lake Metapedia fish are closer to N. B. type.

CATOSTOMUS COMMERSOHNII (Lac.) Jordan. *Common Sucker*.
Cascapedia and Bonaventure rivers. Metapedia. Scale
formula 9-60-7 instead of 10-64-9 said to be typical of this form,
though N. B. fish always show a reduction. In all other
respects typical. Size large—18 inches long, generally distri-
buted in N. B. Also in N. S., (J. M. Jones, N. S., In. of Nat., Sc.
Vol. V. pt. I, 1879.)

COREGONUS LABRADORICUS RICH.? *White-fish*.

One species occurs sparingly in the Grand Cascapedia, but
I heard of it nowhere else. Could not procure a specimen, but
from descriptions concluded it was this species.

*The last two species not strictly fresh-water fishes.

WINTER BIRDS OF THE OKANAGAN DISTRICT B. C.,

By Allan Brooks.

During two seasons spent hunting and collecting in the Okanagan district I was very much surprised to note the abundance of bird life in winter as compared with Central Ontario, which has a correspondingly severe winter. Not only were there a greater number of species actually wintering there, but the numerical strength of representative species was greatly in excess of such species allies in Ontario.

I might also have included in the list such species as Western Robin, and Varied Thrush as I noticed these several times at a very late date, after the snow had fallen.

I spent most of my time between Okanagan and Arrow Lakes in lat. 50 a district including every variety of country from sage brush to bunch grass and scattered pines (*Pinus ponderosa*) to the heavily timbered mountains.

The altitude of Vernon is about 1240 ft.

WINTER RESIDENTS OF THE OKANAGAN DISTRICT, B. C.,

ECHMOPHORUS OCCIDENTALIS. Western Grebe. A few remain all winter.

COLYMBUS HOLBELLII. Holbells Grebe. Common.

COLYMBUS AURITUS. Horned Grebe. Common.

LARUS GLAUDESCENS. Glaucous-winged Gull.

“ *CALIFORNICUS*. California “

“ *DELAWARENSIS*. Ring-billed “

These were the only gulls identified during the winter months.

PHALACROCORAX. Sp? I noticed an immature cormorant on Okanagan Lake, January '98.

MERGANSER AMERICANUS. American Merganser. Abundant.

MERGANSER SERRATOR. Red-breasted Merganser. Rare. “ “

LOPHODYTES CUCULLATUS. Hooded Merganser. Scarce during winter months.

ANAS BOSCHAS. Mallard. A few Mallards winter in neighborhood of Vernon; no other fluviatile ducks observed during winter months, though Widgeon and Pintail may remain.

AYTHYA VALLISNERIA. Canvas-back.

“ *AMERICANA*. Red-head.

“ *MARILA NEARCTICA*. American Scaup.

“ *AFFINIS*. Lesser Scaup.

“ *COLLARIS*. King-necked duck.

All of the above were identified, and associate together on Okanagan Lake.

GLAUCIONETTA CLANGULA AMERICANA. American Golden-eye. Abundant.

Barrow's Golden-eye is a common summer resident, but I never observed it during winter.

CHARITONETTA ALBEOLA. Buffle-head. Rather scarce.

OIDEIA DEGLANDI. White-winged Scoter.

" PERSPICILLATA. Surf Scoter.

Both remain on Okanagan Lake throughout the winter.

BRANTA CANADENSIS. Canada Goose. A flock of Canada geese winters every year on Shuswap lake.

CYGNUS BUCCINATOR. Trumpeter Swan. Swans (apparently only this species) winter in suitable localities in the district.

RALLUS VIRGINIANUS. Virginia Rail. Winters.

GALLINAGO WILSONI. American Snipe. A few winter.

DENDRAGAPUS O. RICHARDSONII. Richardson's Grouse.

" FRANKLINI, Franklin's Grouse.

BONASA UMBELLUS TOGATA. Canadian Ruffed Grouse.

" " UMBELLOIDES. Gray " "

LAGOPUS LEUCURUS. White-tailed Ptarmigan.

PEDICOCETES PH. COLUMBIANUS. Columbia Sharp-tailed Grouse.

All the above Grouse occur in suitable localities.

CIRCUS HUDSONIUS. Marsh hawk.

BUTEO BOREALIS CALURUS. Western Redtailed Buzzard.

ARCHIBUTEO SANCTI-JOHNIS. American Rough-legged Buzzard.

The first of the above was fairly common and the other two rare during winter months.

ACCIPITER ATRICAPILLUS. American Goshawk, Goshawks, probably the typical form are occasionally seen during winter; the Western form breeds in the district.

AQUILA CH. CANADENSIS. Golden eagle. Not common.

HALIAETUS ALBICILLA. Bald Eagle. Common.

FALCO PEREGRINUS ANATUM. Peregrine Falcon. This was the only large Falcon observed, though both Prairie and gyrfalcons winter west of the Cascades.

FALCO COLUMBARIUS. Pigeon Hawk.

" RICHARDSONII. Richardson's Merlin.

Both were seen once or twice during winter of '97-98.

FALCO SPARVERIUS DESERTICOLUS. Desert Kestrel. A few remain all winter.

ASIO WILSONIANUS. Long-eared Owl.

" BRACHYOTUS. Short-eared "

The latter much the commoner.

SCOTIAPTEX CINEREUM. Great Gray Owl. Rare.

NYCTALA RICHARDSONII. Richardson's Owl. Rare.

NYCTALA ACADICA. Saw-whet Owl. Common.

BUBO VIRGINIANUS. Great Horned Owl.

" VIRG. SUBARCTICUS. Western Horned Owl.

" " SATURATUS. Dusky " "

All three races of Great Horned Owls occur, as well as every possible intergrade between them.

NYCTEA NYCTEA. Snowy Owl.

SURNIA U. CAPAROCH. American Hawk Owl. Rare.

GEAUCIDIUM GNOMA CALIFORNICUM. Pigmy Owl. Common.

CEKYLE ALCYON. Belted King-fisher. Quite a number stay all winter.

CEOPHILEUS PILEATUS. Pileated Wood-pecker. Tolerably common.

DRYOBATES V. LEUCOMELAS. Northern Hairy Woodpecker.

" P. ORCÆCUS. Batchelder's Woodpecker.

Both common.

XENOPICUS ALBOLARVATUS. White-headed Woodpecker. I heard of this species but never came across it.

PICOIDES ARCTICUS. Arctic 3-toed Woodpecker. Common in suitable localities.

COLAPTES CAFER. Red-shafted Flicker. Fairly common during winter months.

OTOCORIS SP? Horned Lark. On January 10th, '98, I saw a flock of shorelarks, most probably *merrilli*, but they may have been *strigata* as both species occur and are common, the latter only on migrations, but the former breeds.

PICA HUDSONICA. American Magpie. Abundant.

CYANOCETTA S. ANNECTENS. Black-headed Jay. Common.

PERISOREUS C. CAPITALIS. Rocky Mt. Jay. Common at high elevations.

CORVUS C. PRINCIPALIS. Northern Raven. Tolerably common.

CORVUS AMERICANUS HESPERIS. California Crow. A few crows stay around the towns, but the bulk leave rather early in the fall.

PICICORVUS COLUMBIANUS. Clarke's Nutcracker. Common during winter of '97-'98, but entirely absent the next winter. Many remained to breed in '98 and they also bred in '97; they lay in February.

AGELAI VS PH. SONORIENSIS. Sonoran Redwing.

SCOLECOPHAGUS CYANOCEPHALUS. Brewer's Blackbird.

A few of both the above species of Blackbirds remain throughout the winter.

STURNELLA NEGLECTA. Western Meadow Lark. A number remain about the stacks and barnyards.

COCCOTHTRAUSTES VESP. MONTANUS. Western Evening Grosbeak. Tolerably common.

PINICOLA E. CANADENSIS. Pine Grosbeak. Scarce during winter of '97-'98, but common during '98-'99. Breeds.

LOXIA C. MINOR. American Crossbill. Abundant during winter of '97-'98, but apparently entirely absent the next season. I never positively identified the white-winged Crossbill, but I have no doubt it occurs as I have taken it west of the Cascades.

LEUCOSTICTE TEPHROCOTIS. Gray-crowned Leucosticte. A large flock seen once or twice in mountains to west of Okanagan Lake; these may have been *littoralis* as I have taken both species in lower Fraser River Valley.

ACANTHIS LINARIA. Redpoll. Common during both winters I spent in the district. I saw nothing of *exilipes*, though I kept a good look out for it and have taken it nearer the coast.

SPINUS TRISTIS. American Goldfinch. Common during early part of winter of '97-'98; never seen since. This is probably the western form.

SPINUS PINUS. Pine Finch. Abundant.

- PLECTROPHANAX NIVALIS*. Snowflake. Common.
- ZONOTRICHIA INTERMEDIA*. Intermediate Sparrow. Two seen 16th Dec., '98.
- SPIZELLA M. OCHRACEA*. Western Tree Sparrow. A few stay all winter.
- JUNCO OREGONUS SHUFELDTII*. Rocky Mountain Junco. Abundant.
- MELOSPIZA GUTTATA*. Rusty Song Sparrow. Tolerably common throughout the winter.
- AMPELIS GARRULUS*. Northern Waxwing. Abundant during winter of '97-'98 and less so the next winter. Breeds.
- LANIUS BOREALIS*. Butcher-bird. Tolerably common.
- CINCLUS MEXICANUS*. Dipper. Common. Sings all winter.
- TROGLODYTES PACIFICUS*. Western winter wren. Tolerably common throughout the winter.
- CISTOTHORUS P. PALUDICOLA*. Tule wren. A few stay all winter.
- CERTHIA A. MONTANUS*. Rocky Mountain Creeper.
- SITTA ACULEATA*. Slender-billed Nuthatch.
- “ *CANADENSIS*. Red-breasted Nuthatch
- “ *PYGMAEA*. Pygmy Nuthatch.
- All of the above common in neighborhood of Okanagan Lake, associated with Chickadees, etc.
- PARUS A. SEPTENTRIONALIS*. Long-tailed Chickadee.
- “ *GAMBELL*. Mountain Chickadee.
- “ *RUFESCENS*. Chestnut backed Chickadee.
- “ *HUDSONICUS COLUMBIANUS*. Columbian Chickadee.
- The two former are abundant nearly everywhere, but the only place where I saw all four species associated, was the mountains to west of Arrow Lake, where by imitating the call of the Pigmy Owl, I had all four species within ten feet of me at once. Probably in no other part of America could four species of true *Parus* be seen together. I also took *Columbianus* on the divide between Nicola and Okanagan valleys, the most westerly point I have observed it.
- REGULUS S. OLIVACEUS*. Western Kinglet. Common throughout the winter.
- MYAESTES TOWNSENDI*. Townsend's Solitaire. Tolerably common. Sings throughout the winter; feeds on fruit during cold weather.

SUB-EXCURSION.

The excursion to Chelsea, Sept. 9th, was one of the most enjoyable ever made under the auspices of the Club. The attendance was very large, at least one hundred Normal School students besides members of the Club and their friends being present. Addresses were delivered in the afternoon by Mr. S. B. Sinclair and Prof. John Macoun who described the plants found during the afternoon. Among the rare plants found were *Aster ptarmacoides* and *Rhyncospora capillacea*, the latter an addition to the local flora.

SOME PLANTS FROM THE NORTHWEST SHORE
OF HUDSON BAY

By M. L. FERNALD.

Shortly before his death the late Professor D. C. Eaton sent to the Gray Herbarium for determination a small parcel of plants secured for him by Mr. George Comer on the northwest shore of Hudson Bay. Mr. Comer collected these specimens during the summers of 1893 and 1894 on Depot Island (lat. $63^{\circ} 55' N.$, long. $90^{\circ} 20' W.$) and at Whale Point (lat. about $64^{\circ} 30' N.$, long. $90^{\circ} 00' W.$) The number of species represented is small, and most of the plants were also collected by Mr. J. W. Tyrrell* about Chesterfield Inlet, but as the collection contains some species of unusual interest it is thought well to record all the species brought back from that little known region.

ASPIDIUM FRAGRANS, Swartz. Whale Point, very abundant.

LYCOPODIUM SELAGO, L. Whale Point and mainland near Depot Island.

ERIOPIHORUM SCHEUCHZERI, Hoppe. Whale Point. The cotton of this plant is used by the Eskimo as wicking in their stone lamps.

BETULA GLANDULOSA, Michx. Mainland near Depot Island. Used by the natives as a matting between their bedding and the snow.

SILENE ACAULIS, L. Whale Point.

STELLARIA HUMIFUSA, Rottb. Whale Point.

STELLARIA LONGIPES, Goldie, var. *EDWARDSII*, Watson. Depot Island.

SAGINA NIVALIS, Lindl. Whale Point

RANUNCULUS AFFINIS, R Br. Depot Island.

DRABA ALPINA, L. Whale Point.

*For a list of Mr. Tyrrell's plants see Ann. Rep. N. S. Geol. Surv. Can. ix (1896), part F. App. iii.

DRABA NIVALIS, Liljeblad. Whale Point and Depot Island.

EUTREMA EDWARDSII, R. Br. Depot Island.

SAXIFRAGA SILENÆFLORA, Sternb. Whale Point, July and August, 1894. Formerly known only on the Pacific coast from Vancouver to Behring Straits.

SAXIFRAGA NIVALIS, L. Depot Island.

SAXIFRAGA HIRCULUS, L. Whale Point.

SAXIFRAGA TRICUSPIDATA, Retz. Whale Point.

RUBUS CHAMÆMORUS, L. Depot Island.

DRY ASOCTOPETALA L., var. INTEGRIFOLIA C. and S. Whale Point.

PATENTILLA VAHLIANA, Lehm. Whale Point July 1894. According to Rydberg, collected by Mr. Tyrrell on Marble Island.

OXYTROPIS ARCTICA, R. Br. Depot Island, June, July, 1894. These plants are confidently identified with authentic specimens from the Benthalian herbarium of *O. arctica*. In some individuals the upper leaflets, though generally in two's are occasionally in threes' suggesting that the little-known *Spiesia Belli*, Britton, described from Digges Island and the mouth of Chesterfield Inlet, may belong here.

EMPETRUM NIGRUM, L. Depot Island,

LEDUM PALUSTRE, L. Whale Point.

CASSIOPE TETRAGONA, Don. Depot Island. Much used by the natives for fuel.

ARCTOSTAPHYLOS ALPINA, Sprengel. Whale Point.

VACCINIUM ULIGINOSUM, L., var. MICROPHYLLUM, Lange Consp. Fl. Grœnl. 91. Whale Point, July, 1894. Described by Lange from Greenland, and apparently never before collected on the American continent. Mr. Comer's plant is identical with Greenland specimens.

MERTENSIA MARITIMA, Don, Whale Point and Depot Island.

ERIGERON UNIFLORUS, L. Depot Island, Sept., 1893. Collected by Tyrrell near the forks of Telzoa River.

MATRICARIA INODORA, L., var. NANA, Hook. Whale Point, July, 1894. Collected by Tyrrell at Fort Churchill.

CHRYSANTHEMUM ARCTICUM, L. Depot Island, Sept., 1893. Previously known on Hudson Bay at York Factory (*Drummond*) and Churchill River (*Bell*.)

SENECIO PALUSTRIS, Hook., var. CONGESTA, Hook. Depot Island. Formerly collected by Tyrrell at Fort Churchill.

FOUR RARE PLANTS FROM ALASKA.

By M. L. FERNALD.

Among some plants collected during July and August, 1898, on the Sushitna and Kuskawim rivers in Alaska, by Mr. Frank C. Hinckley of Bangor, Maine, were four species of great interest.

VIOLA BIFLORA, L., a common plant of northern Europe and Asia, (Japan, Kamtschatka, &c.), has been known on the American continent only from the mountains of Colorado, although it has naturally been expected to occur further north.

Mr. Hinckley found this delicate species, with clear yellow flowers, a common plant in July on the rich wooded slopes of mountains on the headwaters of the Sushitna and Kuskakwim,

PEDICULARIS HIRSUTA, L. A species well known from Arctic Europe and Asia but more rare on our own Arctic coast. Found by Mr. Hinckley on the mountain summits.

BRYANTIUS TAXIFOLIUS, Gray, was also collected on these mountain summits. This, the "Phyllodoce" is common in Arctic Europe and Asia, but in America, according to the Synoptical Flora, has been known only on the alpine summits of Maine and New Hampshire, and in Labrador.

CHRYSANTHEMUM BIPINNATUM, L., growing from Lapland through northern Asia, has been known from only two American stations, Cape Espenburg and the Yukon valley. Mr. Hinckley found it along the middle and lower valley of the Kuskakwim, thus extending its known range considerably southward.

BOOK NOTICE.

"THE BUTTERFLY BOOK": A Popular Guide to a Knowledge of the Butterflies of North America; by W. J. Holland, Ph. D., D. D., etc., New York, (also issued by Wm. Briggs, Toronto), 1898. Price \$3.

There are, I believe, few works which have appeared of late years in America which are destined to mark such an epoch in the development of American boys and girls as Dr. Holland's beautiful Butterfly Book. A most noticeable difference between the youths of Europe and America is that in the old world it is very exceptional to find any young man or woman who has not some hobby or special study to which they devote a large proportion of their spare time during the years they are at school. This extra occupation of the mind acts as a relaxation from the regular prescribed studies and has a very beneficial effect upon the development of students both mentally and physically. Some branch of natural history or athletic sports are the two directions particularly to which this energy is generally turned. Fortunately for boys and girls in Britain, France and Germany there were always well-illustrated, cheap and comprehensive works available by means of which they could identify, and learn the habits of, the insects, birds, plants and animals they wished to study. In America until quite recently there were with the exception of books on plants none of these elementary but comprehensive works and as a consequence natural history studies have been almost confined to the plant world. Recently Dr. A. S. Packard and Dr. S. H. Scudder have published delightful books on insects which have been eagerly read by our boys and girls; but Dr. Holland's Butterfly Book surpasses easily anything which has preceded it in the way of a help for those who knowing little of natural history have yet had their attention caught and wish to know about the bright coloured butterflies which are always so attractive to everyone for their beauty of form and colour as well as for their graceful movements. The delight to be derived from a study of their habits while breeding them from the egg to maturity is at everybody's disposal but has been enjoyed by very few.

The Butterfly Book at \$3 a copy is a marvel of cheapness. In 48 beautiful plates, coloured life-like photographs are given of almost every butterfly in the United States and Canada and with it a butterfly collector will hunt for many years before he finds a species which he cannot identify. Of course, even in a large 8vo of 382 pages with 48 crowded plates there are some things which might occur to one as desiderata, e.g. a few more undersides, or rather longer descriptions of the species; but let such a one think for a moment what the author has given us, and the almost nominal price at which we get it. The Butterfly Book is a magnificent work, exquisitely printed and illustrated, comprehensive and remarkably accurate. It can hardly fail to do for American boys and girls what its much humbler predecessor, Coleman's British Butterflies, has done for their thousands of brothers and sisters in Great Britain, who have to thank that little blue cloth 12mo of 175 pages with its 16 plates for many hours of fascinating study, out door exercise and innocent elevating amusement instead of much wasted time and degrading useless inactivity. J. F.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The forty-eighth meeting of this Association was held at Columbus, Ohio, on Aug. 21-26th, last.

The Canadians who attended it were Rev. Louis C. Wurtele and J. Hunter Wurtele, of Actonvale, P. Q., Mrs. A. H. Moore, of Sawyerville, P. Q., Dr. W. Saunders, (of the Experimental Farm,) A. P. Saunders, F. A. Saunders, and J. F. Whiteaves (of the Geological Survey Department), Ottawa.

At the opening general meeting, the President, Dr. Edward Orton, State Geologist, made the following graceful and kindly reference to the Canadian visitors:

No organization ever visits an American city that has a better claim on the appreciation and respect of all its people. In the first place, you can hardly expect to entertain an organization of larger range, so far at least as its name is concerned. It is the *American Association*. It transcends not only all state limits, but national boundaries as well. An organization that represents the United States takes in a respectable part of the land areas of the planet; but this

is not merely a United States organization. It especially includes that potent and ambitious neighbor of ours to the northward that owns more than 3,000,000 square miles, or a full half of the North American continent. The association always counts with all confidence on its Canadian contingent. You can hear this afternoon an address from the honored Canadian vice president of one of our sections.

In the section of Geology and Geography, the Vice-President and Chairman, Mr. Whiteaves, gave an address "on the Devonian system in Canada," which will appear "in extenso" in the next number of *Science* and in the Transactions of the Association.

Mr. F. B. Taylor's paper on "The Galt Moraine and Associated Drainage" is an important contribution to our knowledge of the glacial geology of southern Ontario. And, in the same section (Geology and Geography), Miss Mary A. Fleming read a paper on the "Pot Holes of Foster's Flats, now called Niagara Glen," on the Canadian side of the Niagara River.

Besides a paper on "the Arboretum and Botanic Garden of the Central Experimental Farm, Ottawa," read before the Botanical Club of the Association, Dr. Saunders read two papers before the Botanical Section, one entitled "The Breeding of Apples for the Northwest Plains," and the other "Useful Trees and Shrubs for the Northwest Plains of Canada."

In the section of Physics, Mr. F. A. Saunders read a paper entitled a "Bolometrical Study of the Radiation of an Absolute Black Body."

The Botanical Section devoted one day (Wednesday, called "Sullivant Day" in the programme) to a commemoration of the scientific labours of the late William S. Sullivant and Leo Lesquereux, who lived at Columbus, two of the earliest students of and authorities on North American mosses and hepaticæ.

The members of the Geological Section united with the Geological Society of America in giving one day, (Thursday) to an examination of the glacial phenomena in the neighborhood of Lancaster.

The weather was everything that could be desired, the general attendance at the meetings fairly large, the excursions both instructive and enjoyable, and the social functions brilliant and most successful.