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CLARK NUTCRACKER

Those who love the higher mountains of the interior of British Columbia are greatly attracted by the two species of birds commonly known as "Camp Robber". Both species, the Clark nutcracker and the Canada jay, are omnivorous, and ready to swoop down upon the prospector's fare while his back is turned.

Our Clark crow is an active and very noisy fellow. His normal food is largely of seeds chiselled out of the cones of fir and pine. A group of these boisterous birds very soon turn the silent mountainside into an area of bustle and noise.

In the autumn both these birds descend into the valley benchlands, where their jay-like, magpie-like, or crow-like activities can be watched and enjoyed.

J.O.C.

DR. MARGARET NEWTON

Miss Newton, one of our own members, is a pioneer in wheat rust research. She is the first woman ever to receive the Flavelle Medal at the Royal Society of Canada for outstanding research in biological sciences. She has won other honours for work at the Dominion Research Laboratory at Winnipeg which threw new light on fungi which attack growing plants — notably wheat rust.

Dr. Newton is currently making a visit to Arizona where the dry climate relieves an asthmatic condition, incurred by her 20-year research with rust spores.

A dinner is being held in her honour at the University of Minnesota on February 24th, where she will receive the University's Outstanding Achievement Award. Fellow members of the Natural History Society join in offering congratulations.

OUR SKYLARKS

By Eric H. Garman

The return of spring will remind us that we have a notable small resident on the Saanich Peninsula who so likes his home that he soon will be filling the air with a song that is a delight, especially to those who have heard his liquid notes above the fields that hide the nest of the skylark in his native country. Readers of the Naturalist may like to know why this songster remains with us.

It seems that Professor A. C. Twomey at the University of Illinois has been busy trying to solve the problem of the obvious success or equally obvious failure of certain introduced species of birds, and has published some interesting results in the journal <u>Ecology</u>, (vol.17:p.122). Apparently the climatic factors of temperature and rainfall form the chief control.

In order to analyze the conditions under which different birds are living, climographs have been employed. These show the range of temperature and humidity conditions within the range of the species involved. By this method the range of these climatic conditions in any place can be readily compared with the optimum conditions as shown on the same chart.

A climograph is a chart made by plotting twelve points, each one representing the average temperature and average rainfall for one month of the year at the place under consideration. The graphs of Figures 1 & 2 are drawn with the vertical scale representing 0 to 75°F, for average monthly temperatures, and the horizontal scale for average monthly precipitation from 0 to 8 inches. Climographs made for the best natural conditions for the species studied are used as the basis for comparison with the conditions into which the introduced species are projected.

The European skylark (Alaudia arvensis) was introduced on Vancouver Island in April 1913, and is an example of a very local success in America. It has been brought to other places on this continent and freed, but it has failed to become established for reasons which will be shown. The skylark is a common bird in England and Germany. The climograph shows a range of temperature from 23 to 66°F. and monthly precipitation ranging from 0.2 to nearly 8 inches for the habitat of the lark in those countries.

Those who have heard the skylark near the Uplands Golf Course cannot doubt that this bird likes the locality after being resident here for over 40 years. A glance at the climograph for the vicinity of Victoria (Figure 1b) shows clearly that the temperature and rainfall for all the critical months of the year fall within the native optimum range, only August (month No.8) is slightly outside. This, it is claimed, explains the successful introduction of the skylark to Vancouver Island.

It is interesting to note other plantings of the skylark and compare the results with climatic limitations of the localities where the birds were planted, and so better understand the relationship between our weather and the adaptability of these birds to the neighborhood of Victoria.

At Portland, Oregon, where it was introduced in 1889, the skylark spread locally, and apparently flourished for twenty years, then passed out of the picture. Reference to the graph (Figure 1c) shows that the greater part of the year falls within the optimum range of climate for the skylark. That January, July, and August fall outside the optimum indicates a precarious situation, however.

When they were planted near San Jose, California, in 1896, these birds survived only a few years. This would be expected when it is observed that the critical period from May to September is hotter than the most suitable climate for skylarks (see Figure 2c).

They were also introduced into Brooklyn, N.Y., about 1870, where these birds did well for twenty years, but had disappeared by 1899, as the result, it is supposed, of a severe blizzard in February 1888. They were fairly successful in Brooklyn because the temperature and rainfall during the critical breeding period and nesting months of May and June are similar to the climate that larks are accustomed to in Europe, though the subsequent semi-critical months and three of the winter months fall outside the limits of safety (Figure 2b).

From this evidence it is safe to conclude that we have the skylarks here for our enjoyment because our climate favors their survival.

Diagram showing climatic requirements for skylarks will be found on page 100. (over)

by G. A. Hardy

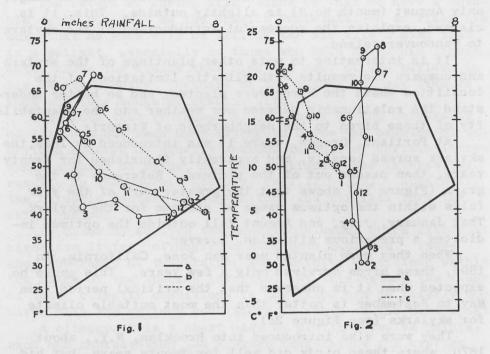
One hot summer's day we were enjoying a ramble in the shade of the forest, along a tiny stream of sparkling water banked by cool mosses and ferns. At the edge of the water a small dead branch was lying with part extending along the surface and then turning abruptly upwards, to a height of about six inches above the water level; the vertical part of the twig was thus connected with the bank by only a narrow bridge of the stem lying along the surface of the water.

At the top of the vertical twig, was a large brown centipede (Julus sp.?) curled up round and round in a tight knot.

Just below the twig was a red-legged frog with head and half of the body protruding above the surface of the water; the frog was gazing intently at the centipede. Presently the latter ventured down the twig apparently with the intention of getting back to the shelter of the bank, but as soon as it was a little way down toward the horizontal section of the branch the frog made a leap missing it by a hair's breadth. The centipede immediately beat a hasty retreat back to the top of the twig, further accelerated by another leap from the frog which could not jump quite high enough. The centipede was safe provided that it curled up at the very tip of the twig. After a minute or so the centipede crawled around itself waving the antennae exploringly but apparently afraid to venture down again. The frog in the meantime sat alert and silent with every nerve and muscle ready to make another leap, should the opportunity offer. Presently the centipede concluded that all was well and proceeded to unwind itself and to crawl down towards the "bridge", only to be rudely jolted back to its former position by the alert frog, whose best efforts, however, failed to quite reach its intended prey. This situation continued as long as we kept still, the frog making several ineffectual springs, thus confining the centipede to its "knotted" position at the extreme tip of the twig.

After about 15 minutes the frog became aware of the on-lookers, and decided to withdraw; whereupon the centipede uncoiled itself and with many hesitant advances and retreats came down, and crossed the bridge to the safety of the bank.

From the actions of the centipede we concluded that it acted according to trial and error for it could hardly have seen the frog at that distance.



Climographs for European Skylark

- Fig. (a) European optimum
 - (b) Victoria, British Columbia
 - (c) Portland, Oregon.
- Fig. 2 (a) European optimum
 - (b) Brooklyn, New York
 - (c) San Jose, California.

VARIATION IN BIRD BEHAVIOR

By Morris Jackson, Fanny Bay, B. C.

Sooner or later the bird watcher will become aware that birds do not always automatically respond to given circumstances in stereotyped, predictable ways. It is this uncertainty which makes scientific pronouncement on bird behavior so difficult and the scientist so cautious and yet so willing to listen to even an amateur student of bird life.

We have all noted the indications given by small birds of the presence of a questing hawk. Usually no birds are to be seen, though here and there some alarm notes may be heard; often the intensity of bird silence will indicate trouble is near.

Recently, a Cooper's hawk killed a hen pheasant within 25 yards of our cottage. The hawk saw me when I came to a window. It at once abandoned its prey and flew off. I walked over to where I had seen it on the ground, and immediately ten or twelve towhees came from cover to solicit peanuts. I threw some peanuts to them and they accepted them unconcernedly. A fox sparrow eating oats had looked down at the hawk from the bird feeder only 10 feet away. The birds seemed to treat the whole affair with the greatest sang-froid. Did they feel safe because the hawk had already killed?

Only the rump of the pheasant had been eaten and the bird, which had been sharing the small birds' oats ever since it had hatched, was splendidly plump. I had momentarily an unworthy impulse to rob the hawk. But I don't shoot pheasants, therefore I suppose I am not entitled to eat them; also it seems repugnant to me to rob a bird of its food. I have seen it baldly stated that "hawks" will not return again and again to a carcass but will make a fresh kill for each meal. This may be true in hot weather, or it may be true of certain species. However, it is not applicable to the accipiters.

A goshawk that had killed a hen pheasant in our unused chicken run returned to the carcass early each morning for a week, by the end of which it had eaten all but one foot and its tarsus. A Cooper's hawk, last autumn, was disturbed while feasting on the very scanty remains of a ruffed grouse; it returned the next day and carried away what was left. And, though so near our windows, this present carcass is diminishing — the hawk feasts while we sleep at dawn.

At one time it seemed to me extremely wasteful that such a light bird as a Cooper's hawk should kill a heavy bird like a pheasant and leave the greater part to rot. However, it now appears to me that one pheasant's death may save many songbirds.

Scientific explanations of bird behavior, while fascinating to read, sometimes leave much to be explained. There is, for example, the "food target"—the coloration of a nestling's "gape" which induces the parent to deposit its beakful of food therein. Without this food target, we are told, the parent would have no compulsion to feed its young in an orthodox manner. A robin's gape is yellow. But we have had a young robin suddenly slip half a dead locust in our red mouth when we were not looking. Was this bird unusually precocious?

WESTERN EXTENSION OF RANGE OF COWBIRD

by A. L. Meugens

Having noted the article in the September 1955 issue of the Victoria Naturalist on the appearance of the cowbird at Cadboro Bay I would like to add the following record.

On the 2nd of July 1939 in company with Walter Maguire and Harry Middleton on a collecting trip at the far end of Sea Island, Vancouver, I had the luck to find a Yellow Warbler's nest containing 3 of the bird's eggs and one cowbird egg. The nest was in a wild rosebush about 12 feet from the ground in a bunch of bushes adjoining a farm yard, where there were a number of redwings, Brewer blackbirds and one cowbird.

I have this egg-set in my collection.

At that time it appeared the most westerly record for this bird and there seemed to be no other records this side of the Coast Range. Since then I have not heard of any other record until the one in the Naturalist.

Another interesting record from the same place was in April of that year when we noted the appearance of two yellow-headed blackbirds, evidently passing through on their way north, using the Fraser Valley flyway instead of the Nicola or Okanagan lanes.

A PLANNED VISITATION

The Vancouver Natural History Society is planning a trip to Victoria over the week-end of April 15, mainly to see and hear our famous skylarks. Keep the date open!

A WINTER FIELD BIRD MEETING

A field meeting of the bird group under the leadership of Mr. J.O. Clay was held on Saturday, February 11th, at Sidney. In spite of the bleak winds and lowering clouds fourteen members turned out. Birds were scarce and hard to find. The one good area was around Resthaven Hospital, surrounding which are sheltered waters and extensive mud flats which are the regular wintering quarters of a varied group of sea and shore birds. Seen here in abundance were whitewinged and surf scoters, American goldeneye (some of which were engaged in their curious courtship behaviour) western grebe, and ruddy ducks. Also present were a few pintail, canvasback and green-winged teal. One only red-backed sandpiper was seen, and it a wounded bird. The absence of this sandpiper was unusual, as it generally can be seen in considerable numbers. The previous week, some of our members were in this locality, and estimated there were at least a thousand to be seen scattered over the flats.

At noon the party went on to Towner Park, where they were entertained by Mr. and Mrs. Walker Taylor. After the chill of the morning, the comfort and warmth of the house, supplemented by hot tea, coffee and lunch, were much appreciated. Afterwards a tour of the beautiful point of land on which this house is situated was made; then the members covered the territory north of Shoal Harbour, past Randle's boat landing, and went on to the house of Mr. & Mrs. Sherman on Inwood Road, which is on the waterfront of Canoe Bay, where they had afternoon tea.

In spite of the cold winds, paucity of birds and time spent enjoying the warm hospitality of the members who lived in this area, fifty species were identified, including in which were one Barrow's goldeneye, three black oyster catchers, and a few herring gulls and pigeon guillemots. On the return journey one group of members, still looking for birds, saw four European starlings and an immense flock of at least five hundred Brewer's blackbirds, including in which were a few red-winged.

A.R.D.

BIRD BEHAVIOUR

On Sunday, February 19, I had a phone call from the home of Frank Waring, whose house is situated on the beach at Cadboro, to say that some western bluebirds were paying them a visit. Naturally, I went down at once, as these

birds are not often seen nowadays.

While watching for the bluebirds out of the large window facing the sea, a flock of about fifteen glaucous-winged gulls were seen hovering over the water, attracted by something which we could not identify. However, we all kept them under observation, and it was not long before we found they were attacking a horned grebe which apparently had been seeking food very close to the shore. One after another of the gulls pounced down on the grebe whenever it surfaced. Every once in a while one of the gulls would pick it up and endeavour to fly off with it, but it was too heavy for them and they had to drop it back into the water. This happened so many times we feared the grebe had been killed, but Mr. Waring went out and picked it up from the beach where the waves had finally thrown it. Bringing it back into the house. it was found to still have life, so after allowing it to rest for a while, it was fed with small pieces of fish, and before long had perked up considerably. Mrs. Waring told me that the day previous a gull had attacked a full grown shoveller on the water, and, holding it by the neck, had attempted to kill it. However, the gull was scared off and the shoveller flew away unharmed. Apparently at this time of year food for the gulls is scarce and they have to resort to this method of obtaining food, which I believe is rather unusual.

While watching for the bluebirds this Sunday morning, an Audubon warbler came up to the feeding tray in front of the window and fed along with the juncos, the latter making no attempt to scare the smaller bird away. This warbler was noticed here first during the last week in December, and is obviously wintering there.

A.R.D.

UNUSUAL BIRDS FOR FEBRUARY

- February 12: One Townsend's solitaire on Killarney Road.
 - 13: Two European starling on St. Patrick Street.
 - " 14: One slate-coloured junco on St. Patrick "
 - 19: Three western bluebirds and one Audubon warbler on Waring Place, Cadboro Bay.

The following are some interesting, and contrasting, figures taken from the above count:

| Redwinged blackbirds | 7,831,370 |
|-----------------------|-----------|
| Pintail ducks | 1,369,631 |
| European starlings | 1,206,124 |
| Purple grackle | 1,203,842 |
| Mallard ducks | 988,577 |
| Baldpate ducks | 290,544 |
| Crows | 268, 240 |
| House sparrows | 194,609 |
| Robins | 155, 226 |
| Brewers blackbirds | 120,886 |
| Black Oyster catchers | 9 |
| Harlequin ducks | 5 |
| Ancient murrelets | 3 |
| Marbled murrelets | none |
| Western tanagers | 1 |
| | |

The total for the count was 473 species and 17,357,452 individuals.

VANCOUVER BIRD COUNT: December 1955

The Vancouver Natural History Society had eleven groups in the field last Christmas, and among the more unusual birds listed were the following:-

| Trumpeter swans | 3 |
|-------------------------|----|
| Horned larks | 31 |
| House wren | 1 |
| Long-billed marsh wrens | 4 |
| Russet-backed thrushes | 2 |
| Bohemian waxwings | 11 |
| Crested mynahs | 47 |
| Slate coloured juncos | 4 |
| | |

As reported last month, 99 species were identified, the total number of birds seen being 37,953.

JUNIOR NATURAL HISTORY PAGE

Gerry Skinner --- Editor

THE VALENTINE EGG: The courtship of our two canaries turned out to be quite successful. Both canaries were caught in our back garden quite readily. After they settled down (they are domestic) we decided to breed canaries. We bought a breeding cage and a wire-mesh nest. With the nesting material supplied, the birds energetically went about building a prefabricated nest.

After much fussing, they finally finished it. With no more ado, our friend sat down and laid an egg - light blue in colour, about the size of a marble. This was not discovered until Valentine Day.

For further details, watch for your next magazine.

by Gerry Skinner.

FROM GEORGE MERRICK OF PORTLAND:

During the early summer of 1954 I found a strange case of a bird nesting in the territory of an English sparrow's nest. The nests were about twenty feet up in a fir tree. About six feet out on a large branch was an English sparrow's nest. Within inches was the nest of a house finch.

Both birds seemed quite friendly to one another. The sparrow's nest contained young about five days old while the house finches nest contained fledglings.

THE EDITOR THANKS GEORGE MERRICK for his contribution and hopes to get any natural history news you members have for this page. Leave it at the Museum general office for him.

See you at the Saturday movies on April 10th.

NOTICES OF MEETINGS

1956

Tuesday MARINE BIOLOGY GROUP

Mar.6: Provincial Museum at 8:00 p.m.

Dr. Donald Quayle

"The Distribution of Molluscs Introduced into

British Columbia."

Tuesday SPECIAL NOTICE

Mar. 13: The Annual General Meeting will take place

at 7:30 p.m. at the Provincial Museum

followed by:

Mr. Theed Pearse,

"W.W. Ellis, Naturalist-Artist with Capt, Cook's

Last Expedition - The Marbled Murrelet."

Tuesday MAMMAL GROUP

Mar. 20: Provincial Museum at 8 p.m.

Speaker: C.J. Guiguet

Tuesday BOTANY GROUP

Mar. 27: Speaker: Prof. C. W. Lowe.

Subject: "Further Studies of Fresh-water Algae."

Provincial Museum at 8 p.m.

FROM THE EDITORS: The Society's year ends with the Annual
Meeting which will be held on the second Tuesday in March, so may we remind our members that
dues for the ensuing year are now payable.

Please pay same to the Treasurer, Mrs. Gladys E. Soulsby. These dues, including subscription to the magazine are \$3.00 for Family Membership, and \$2.00 for individuals.

The Junior's Annual Fee is \$1.00.

SPEAKERS FOR THE JUNIOR MEETINGS: Previously acknowledged, September 27 to November 22. We now wish to thank those more recent speakers who gave their time to the little group of Junior Naturalists.

Nov.29, Mrs. J. Hobson, "Six Indian Insects"; Dec.6, Mr. J.R. Grant, "Rocks and Infra-red ray"; Dec.13, Mr.J.H. Hamilton, "Seagulls"; Jan.10, Mrs. G. Soulsby, party day; Jan.18, Inspector G.Stevenson of the B.C.Game Commission, "B.C.Animals"; Jan.24, Mr. Ches.Lyons (Forestry) "Our Province"; Jan.31, Mr.Chas.Guiguet (Museum) "The Beaver"; Visual Education, Vancouver, film, "Grey Owl and his Friends"; Feb. 7, Mr.Ches Lyons (Forestry) "Our Province", part 2; Feb.14, Mr.J.O.Clay, "How I got Interested in Birds".

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To