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Vol. 26, No. 3November 1969

COVER PICTUREBLACK-BELLIED PLOVER
IN WINTER PLUMAGE

by Ralph Fryer

COVER STORY

BLACK-BELLIED PLOVER

by Ruth Stirling

The black-bellied plover, called Gray Plover in Europe, breeds on the tundra of Canada and Siberia. The eggs, usually four in number, are laid in a shallow nest on the ground.

Like many of its relatives, this bird is a long distance migrant wintering as far south as Brazil, South Africa and Australia. Many thousands, however, winter in temperate parts of the northern hemisphere. In Victoria they can be found on grassy slopes and upper beaches. The University campus and the grassy area at Clover Point are favorite haunts.

Black-bellied plovers leave our shores for the North during May resplendent in their spring feathers of black, white and gray; and return to us in their dull winter plumage. They usually arrive here from their summer nesting grounds in late August or early September. To me, the first plaintive whistle of these returning plovers presages the end of summer and the coming of the dull wet days of the winter.

About fifty black-bellied plovers are recorded annually on our Christmas count. In winter they are sometimes confused with the smaller rarer Golden Plover but in flight the black "armpits" of the black-bellied are distinctive.

The bird on the cover of this month's magazine was photographed at Clover Point.

BINARY FISSION AND CONJUGATION

The term "single celled animals" sounds simple, but even these creatures have an interesting internal organization. Many marine forms even sport calcareous or siliceous shells or skeletons by which they can be identified. Although small in size, they are very numerous and chalk deposits hundreds of feet thick are composed chiefly of these remains.

The genus Amoeba furnishes us with good examples of these primitive animals and they can be studied by anyone with a good microscope. Moreover they are easily obtained as they may be found in most fresh-water ponds. On the microscope slide they appear as formless blobs, and it is fascinating to watch them as they move about with their characteristic flowing movements, their contents sloshing about in apparently aimless fashion. But soon a definite pattern of movement can be discerned. However, I digress. We are here mainly concerned with the reproduction of these animals. There are no males or females and the reproduction is therefore called asexual, and is accomplished in the following manner. When the amoeba reaches its full growth the nucleus divides and the halves separate.

A constrictive band forms in between, becomes thinner and thinner and eventually breaks, thus leaving two parts, each of which develops into another amoeba.

This, the simplest form of asexual propagation, is called binary fission.

Under certain conditions many amoeba and other protozoa - including those of medical importance - undergo a period of encystment. Here the trophozoite (motile form) ceases feeding and becomes spherical. Inside, the nucleus divides a number of times, according to the species. The unstained cysts appear as refractile shining objects on the slide. It is rather fortunate that this is so as sometimes when we have difficulty in identification of the trophozoite, we are more successful with that of the cyst in differentiation between pathogenic and other less harmful protozoa.

Also easily obtainable from ponds is the Paramecium. While it is still unicellular, it has a definite shape which is why it is sometimes called a slipper animal.

Like amoeba, they multiply by fission. But occasionally they also practice conjugation. This appears at first sight to be similar to the copulation of higher animals, for which it was once mistaken. It is, however, quite different. Two individuals come together and an exchange of nuclear material takes place, after which they separate again and continue to propagate again by fission for many generations. The urge for conjugation seems to be governed by environmental conditions, mostly unfavorable. It would seem to serve the purpose of revitalizing the stock.

Anthony Dehen

STRUCTURE OF A MOSS

"A moss consists of two distinct parts, the gametophyte and the sporophyte. The gametophyte is the leafy green plant, attached to the substrate by rhizoids. If the plant produces female sex organs, these are usually protected by leaves, termed perichaetial leaves. The leaf consists of several distinct regions: at the base, near the margin, are the alar regions. The cells of this region are sometimes different in size, shape, or colour from the remainder of the leaf. The edge of the leaf is termed its margin; the midrib is the costa. In the illustration are shown also gemmae on the leaf apex. These are small masses of cells that fall off readily and can grow into a new leafy gametophyte if they reach a suitable environment.

The sporophyte grows partly as a parasite upon the gametophyte. In most mosses it is made up of a stalk or seta and a capsule at the apex of the seta. The capsule is usually partially covered by a little cap, the calyptra. The capsule often has a swollen base, the apophysis, and a lid, the operculum. When the calyptra and operculum are shed, the peristome is revealed; this is the opening at the apex of the capsule and it usually has a ring of peristome teeth around it."

Reprinted from the introduction to the British Columbia Provincial Museum's Handbook No.28 Some Common Mosses of British Columbia by W.B. Schofield.

PELAGIC BIRDING OFF TOFINO

Some things go together such as apple pie and cheese, gulls and dumps, and Jack and Jill, but have you ever heard of puffed wheat and albatross?

On September 13 of this year, Ralph Fryer and I joined a party of eight Vancouver birdwatchers, organized by Wayne Campbell, for a trip after pelagic birds off Tofino. This was a "pilot" trip, for although pelagic bird watching is old stuff out of Westport, Washington, and Monterey, California, an organized trip like this off the coast of British Columbia had not been tried before.

We left Tofino at 7:30 a.m. under sunny skies in Ernie Bach's 30-foot boat "Chica" but a freshening north-west wind foretold of rough seas ahead. There was the usual "stuff" inshore and it was not until we were about six miles out on the 20 fathom line that the birds we had hoped for appeared. Sooty shearwaters on stiff wings swept past and then increasing numbers of pink-footed shearwaters arrived. Small flocks of strikingly marked Sabine's gulls milled around on the pelagic pastures.

Birding reached its peak about 16 miles out on the 70 fathom line. Here we idled around in a circle in very rough seas and watched a fascinating show of birds of the blue waters. We had brought along quantities of "chum" in the form of stale bread, popcorn and puffed wheat. Puffed wheat, in addition to being cheap and staying afloat, seems to be relished by albatross and fulmar. At one time we had seven black-footed albatrosses, three fulmars, several California gulls, assorted shearwaters, many Sabine's gulls and a parasitic jaeger milling around in the trail of breakfast food.

Heavy seas prevented us from going further out but when we arrived back in port that evening, after a side trip to see 250 sea-lions on the rocks in Wickaninnish Park and an approach to within 100 feet of two gray whales feeding, we all agreed that this had been an exciting and memorable day.

Our list of birds of the high seas was roughly this: Black-footed albatross - 16 (10 in one lot); sooty shearwaters - 800; pink-footed shearwaters - 125; New Zealand shearwaters - 3; pale-footed shearwaters - 2; fork-tailed petrels - 4; fulmars - 7 (both light and dark phases); Sabine's gulls - 800; black-legged kittiwakes - 9; parasitic jaegers - 6; pomarine jaegers - 3; phalaropes - 50

(both red and northern); Cassin's auklets - 2; tufted puffin - 2; rhinoceros auklets - 6. As well as these species a few small loons, California, herring and glaucous-winged gulls were seen.

It is hoped that these pelagic birding trips may become a regular feature for both Vancouver and Victoria birdwatchers. Fog, storms and winds will always be a problem, but with luck one or two trips could be run between late August and the end of September and again in May. If you do decide to take a pelagic birding trip be sure you wear warm, waterproof clothing, take plenty of sea-sickness pills, and, most important, don't forget the puffed wheat!

David Stirling

NATURE AS DESIGNER

This book by Bertel Bager was included in the May magazine's library list. Doctor Bager, chief surgeon at one of Sweden's largest hospitals, describes this book as a Botanical Art Study, and he has stressed the beauty not of flowers but of the fruit cases of flowering plants. The photographs in elegant black and white are often highly magnified but all stress the lovely forms of different fruit cases which Doctor Bager has collected assiduously for years. I'm sure that any member who borrows this book from the library will be impressed by the quality of the photographs. Doctor Bager's notes on the pictured fruit cases read like delightful miniature essays. This book, borrowed from the library, has given me great pleasure and made me look at fruit cases of wild and cultivated flowers more carefully than I ever did before. I hope that by drawing attention to this book I can pass on at least a little of the pleasure to other members of our Society.

R.C.

AN UNUSUAL VISITOR

On September 8, when we phoned Mr. A.R. Davidson, he told us that the day before he and Mrs. Davidson had seen a marbled godwit which had been reported at Cadboro Bay Beach. He said that dogs were chasing the bird from one end of the beach to the other, so there was no guarantee that it would still be there.

On looking up Munro and Cowan's "Bird Fauna of British Columbia" we noted that one was reported in Victoria on September 23, 1892, and our own records showed that the last marbled godwit we had seen here was at Clover Point on October 6, 1960. A check with Mr. Davidson's records showed that the last one here was on October 20, 1966.

As it was near noon, Mrs. Jarvie and myself decided to grab a bit of lunch and have it down at Cadboro Bay and look for the bird ourselves. On our arrival we took a quick look up and down the beach, but all we could see was a small flock of peeps some distance away, and a number of northwestern crows. As it was a lovely bright warm day we decided to walk down the beach to our right, and eventually found a nice log seat in the shade of a large maple tree.

We were half-way through our repast when Mrs. Jarvie looked up and saw a large shore bird come flying in and land on the beach in front of us. "What bird is that?" she said. "I think it is the one we are after". And indeed it was - a large light brown bird with a long slightly upturned beak with some red showing near the base.

It was directly in front of where we were sitting and only about 50 feet away, where it proceeded to feed by pushing its long bill vertically down into the sand, quite often right up to the base. Sometimes it waded into the water almost up to its belly and would probe the sandy bottom with its head completely submerged.

The books give its food as aquatic insects and mollusks, but in the prairie provinces where it breeds it is a great help to the farmer as it consumes large quantities of grasshoppers and locusts.

We sat spellbound, watching its every movement, and as it was a new bird for Mrs. Jarvie's life list she was particularly interested.

It is hard to say from where this "Wrong Way Corrigan" bird came, but it is reported that often non-breeding birds of this species are seen in the Okanagan Valley and that may be the answer.

Once it gave its piercing cry of "Godwit" which we thought was for our benefit, but, on looking round, we saw a woman with a dog approaching, and realized it was an alarm cry. It flew when the lady got near it, but as this dog took no notice it only went a short distance down the beach. As we rose and came away, the bird gave another of its loud cries as if saying goodbye.

We had seen the bird at close range feeding, had heard its call and noted the rich, mottled buff-brown colour of its back and wings as it flew.

A most fascinating and interesting interlude as the result of a phone call.

J.M. Barnett

WATCH OUT FOR THIS ONE!

A common marine animal that nearly always fools a person who sees it for the first time is one of our sea snails that goes under the melodious name of Melibe leonina.

Despite the fact that it is a mollusc (in fact a snail) it has no shell. The whole animal is almost transparent like a jellyfish except the shape is quite different. The head-end is enclosed in a mane-like hood; extending out from the body are appendages shaped like leaves; and on the underside is a narrow foot that serves as a sucker.

Usually Melibe swims free, drifting with the current while performing a series of writhing movements but it also rests by anchoring itself to seaweed by means of the ventral foot.

Melibe is likely to be seen in local waters any time of the year and sometimes very abundantly. Its looks are so unusual, however, it often attracts attention when first observed. One specimen spotted in Saanich Inlet a number of years ago even made Ripley's "Believe It or Not!"

HOPS

If you drove through the Fraser Valley in the past few weeks, you may have smelled the sweet, pungent odour of the drying hops.

Hops were grown here on the Saanich Peninsula many years ago. Perhaps the earliest of all hop-growing industries was located on the Old West Road. There, at one time, the foundations of the old drying kilns could be found. These drying kilns were called "oast-houses".

The oast-houses were circular in form, about 30 to 40 feet tall and had a cupola at the top which could be turned for the wind. The kilns were built of brick which had been hauled around the Horn in the 1850's.

In 1854, a William Turner came out from Kent in England by way of California. There he saw hops growing as in his native land. He brought some "sets" to North Saanich and started a hop farm at Deep Cove, where Downey Road is now.

He built several oast-houses in the years 1871 to 1873. These houses were built of wood which was plastered on the outside, while in England they were built of brick. After the hops were picked, they were placed on racks and heated by wood-burning stoves which had pipes circulating around the inside of the house. The wood used was alder or maple.

Most of the produce was bought by the old Phoenix Breweries, but some was shipped to California where it found a ready market.

Hops have been grown from the earliest recorded time. Traces of hops have been found in Babylonian remains. The plant belongs to the nettle family and the young shoots can be cooked and eaten like asparagus.

Local hop-growing went out of business when the plants became infested with a weevil. The old oast-houses on Downey Road were torn down about 1947. What a shame that they could not have been saved to show the way of life of some of our old time pioneers, and how they earned their living.

Freeman King

THE BLACK SHEEP AMONG US: About sixty of our otherwise respectable members have failed to pay their current dues. As they are still on the mailing list these members have been receiving the magazine. But this is the last one they'll receive. Our Treasurer, Mr. Bridgen, can tell you whether you have paid. He has his little list!

BOOK NEWS FOR NATURALISTS

Muirden, James	Amateur astronomer's handbook
Gardner, R.M.	The Alchemists: fathers of practical chemistry
Mavor, J.W.	Voyage to Atlantis
Matthews, G.V.T.	Bird navigation
Land, Barbara	The telescope makers
Middleton, W.E.K.	History of the theories of rain
Rue, L.L.	Sportsman's guide to game animals
Schoonmaker, W.J.	World of the woodchuck
Olsen, S.F.	Open horizons
O'Brien, T.P.	Plant structure and development
Moore, P.A.	The Sun
Tomikel, John	Handbook of minerals
Worrall, Eric	Making friends with animals
Schoonmaker, W.J.	World of the grizzly bear
Van Wormer, Joe	World of the coyote
Vayda, A.P.	Peoples and cultures of the Pacific
Federmann, Reinhard	Royal art of alchemy
Gould, John	Birds of Asia
Coulson, C.A.	Waves
Northern, H.T.	Introductory plant science (3rd ed.)
Guyer, M.F.	Animal biology (5th ed.)

List supplied by G. McBride

Circulation Department, Greater Victoria Public Library

MUSHROOMS, MOLDS AND MIRACLES: This fascinating book by Lucy Kavalier has been mentioned in the magazine before. But at this season and in view of our program this month, some members would be interested in reading this book.

The Greater Victoria Public Library has one copy in the Circulation Department, and if that copy is out, you'll find another in the Reference Department. This copy, naturally, is always in the library.

BIRDS FOR THE RECORD

by G.N. and G. Hooper, 2411 Alpine Crescent (477-1152)		
Franklin's gull (1 imm.) - Witty's Lagoon -	Aug.17 -	Allan Schutz
Knot (1) - Witty's Lagoon -	Sep.13 -	
Whimbrel (2) -		Allan Schutz, Bird Field Trip
Sandhill crane (7) - Hovey Road -	Sep.13 -	A.R. and Eleanore Davidson
American golden plover (2) - Bowker Avenue -	Sep.14 -	Allen Poynter
Short-eared owl (1) - Brighton Avenue -	Sep.19 -	A.R. and Eleanore Davidson
Lapland longspur (2) - Cattle Point -	Sep.20 -	
Horned lark (2) -		R. Mackenzie-Grieve
Marbled godwit (1) - Witty's Lagoon -	Sep.21 -	Enid Lemon
Black-throated gray warbler (2) - Alpine Cres. -	Sep.22 -	Gwennie Hooper
Skua (1) - Clover Point -	Sep.23 -	Ralph Fryer and David Stirling
Long-tailed jaeger (2) - Gibraltar Point -	Sep.26 -	
Goshawk (1) - UVic -	Sep.27 -	A.R. and Eleanore Davidson
Barn owl (1) - Sayward Road -	Sep.28 -	Jeremy Tatum and Allen Poynter
Golden eagle (2 adult, 1 imm.) - Francis Park -	Oct. 2 -	Freeman King
Turkey Vulture (13) - Burnside Road -	Oct. 6 -	Freeman King
(108) - Cadboro Bay -	Oct. 7 -	Ralph Fryer
(20 more seen same day by other observers between Cadboro Bay and Oak Bay)		
Slate-colored junco (1) - Sayward Road -	Oct. 7 -	
(1) - UVic -	Oct.13 -	
Lincoln's sparrow (1) - Ascot Drive -	Oct.13 -	Jeremy Tatum
Sabine's gull (1) - Swartz Bay Terminal -	Oct. 8 -	Allen Poynter
Common scoter (1) - Resthaven -	Oct. 4 -	Ralph Fryer
(15) - Parksville -	Oct.13 -	Allen Poynter

Snow goose (120) - Foul Bay -	Oct. 9 -	
(340) - Martindale -		
Solitary sandpiper (1) - Tatlow Road -		
European widgeon (3) - Bazan Bay -	Oct.9,10 -	Ralph Fryer
(1) - Esquimalt Lagoon -	Oct.12 -	Jeremy Tatum

Winter residents

Golden-crowned sparrow - Vic. Golf Course (ARD) -	Sep. 3 -	
Bufflehead (1) - Clover Point (AP) -	Sep. 8 -	
Fox sparrow (1) - St. Patrick Street (GMB) -	Sep.11 -	
Varied thrush (2) - Arbutus Road (MC and GMB) -	Sep.12 -	
Old squaw (1) - Bowker Avenue (ARD) -	Sep.14 -	
Ring-necked duck (6) - Beaver Lake (ARD) -	Sep.27 -	
Ancient murrelet (2) - Active Pass (AP) -	Oct. 4 -	
Northern shrike (1) - Island View Beach (ARD) -	Oct.11 -	
(1) - UVic (JT) -	Oct.13 -	

Summer resident

Violet-green swallow (1) - Oak Bay G.C. (AP) -	Sep.14 -	
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JUNIOR JOTTINGS

September was a successful month. Turnouts were good, and the weather was lovely. The Intermediates had a "clean up" bee at Francis Park. Our next excursion was to Uplands Park to survey the recent fireburn.

At the beginning of October we spent an enjoyable afternoon at Goldstream and followed the stream down to the salt flats.

The Juniors have also had some exciting afternoons, the first of which was along the Cave Trail at Francis Park. We later had a hike along the Centennial Trail where we observed many signs of autumn.

We are looking forward to Thanksgiving weekend when we shall be having a Nature Camp at Sylvan Acres, the Baptist Church Camp near Swartz Bay. We shall be working on an extensive ecological survey. A few weeks ago, the Leader Group had a cookout to look over the camp grounds. We all enjoyed the day.

A number of Intermediates ushered at the Audubon Wildlife film, "Down South up the Nile" which was presented in early October by Dr. Bristol Foster.

Genevieve Singleton

PROGRAM FOR NOVEMBER 1969

- Executive Meeting 8:00 p.m. at home of Mrs. S. Prior,
Tuesday November 4 1903 Shotbolt Road.
- Annual Fungus Foray Meet at Douglas and Hillside
Saturday November 8 10:00 a.m. for trip to Francis
Park. Bring lunch.
Leader: Miss M.C. Melburn 384-9052
- General Meeting Douglas Building Cafeteria 8 p.m.
Tuesday November 11 Dr. Bristol Foster presents:
"The Queen Charlotte Islands"
- Audubon Wildlife Film Edgar T. Jones presents:
Thurs., Fri., Sat. "Fabulous Africa", 8:00 p.m.
November 13, 14, 15 Newcombe Auditorium, Provincial
Museum (South Entrance)
- Bird Field Trip Meet at Clover Point 9:30 a.m. for
Saturday November 22 a tour of the waterfront.
Bring lunch.
Leader: A.C. Schutz 386-0541
- Botany Meeting 8:00 p.m. Room 216 Oak Bay Junior
Tuesday November 25 High School.
Program: "Fun with Fungus"
Leader Mrs. J.M. Woollett 384-4836
- Junior Group Meet every Saturday 1:30 p.m. at
Douglas and Hillside for Field
Trip.
Leader: Freeman King 479-2966

BLACK AND WHITE PHOTOGRAPHS The magazine is always looking for good black and white photographs that can be used for covers. Basic cover policy, as I see it, is to be as fair as possible among the different branches of natural history. There are nine covers in a volume. Ideally, botany, birds, mammals, marine biology, entomology, geology, anthropology should be among the nine. So, if you have a good black and white that will reproduce well, please remember the magazine.

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Dues and changes of address should be sent to the Treasurer.